

MOTORCRAFT MODELS 2700 & 7200 VV 2-BARREL

CARBURETOR APPLICATION

FORD MOTOR CO. (MODEL 2700)

Application	Ford Carb. No. ①
302" V8	
Federal	EOAE-AAA, ACA, APA, AVA, ZA

① — Ford basic part number is 9510.

FORD MOTOR CO. (MODEL 7200)

Application	Ford Carb. No. ①
302" V8	
California	EOAE-ADA
351" W	
Federal	EOAE-AHA, BA, LA
California	EOAE-AHA, PA

① — Ford basic part number is 9510.

CARBURETOR IDENTIFICATION

Carburetor Part number identification is stamped on top of carburetor on flat surface of venturi valve cover plate.

DESCRIPTION

Motorcraft models 2700 and 7200 variable venturi carburetors differ from other standard type carburetor units in that they have the ability to change the area of the venturi for varying demands of the engine. This assembly uses a dual-element venturi valve that moves in and out of the air stream flowing into 2 carburetor throats. Valve is controlled by throttle position and engine vacuum.

Systems on the 2700 unit include a fuel inlet, main metering, control vacuum, cranking and cold enrichment, idle trim and accelerator pump systems. Carburetor is also externally vented to a carbon canister. Choke is the heated air type.

Systems on the 7200 unit are basically the same as the 2700 with the following differences: The 7200 unit is equipped with a "Feedback" control system. The system works in conjunction with an on-board electronic engine control computer. The "Feedback" system provides a more precise metering of the air/fuel ratio as dictated by the computer through a series of sensors. The 7200vv is also equipped with an electric dual-stage choke and an improved cold enrichment system.

ADJUSTMENTS

NOTE — When performing any adjustment requiring that the engine be running, make sure wheels are blocked and parking brake is engaged. If vehicle is equipped with a vacuum parking brake release, disconnect line to parking brake control and plug line. Engine must be at normal operating temperature for all engine running adjustments.

HOT (SLOW) IDLE RPM

See appropriate article in TUNE-UP SERVICE PROCEDURES.

IDLE MIXTURE

See appropriate article in TUNE-UP SERVICE PROCEDURES.

COLD (FAST) IDLE RPM

See appropriate article in TUNE-UP SERVICE PROCEDURES.

ACCELERATOR PUMP LEVER LASH

1) Make sure curb idle speed is correctly adjusted. Measure clearance between accelerator pump stem and pump operating link with a feeler gauge. See Fig. 1.

2) If clearance is not to specification, tighten or loosen nut on end of link to obtain specified clearance.

NOTE — This adjustment must be checked whenever curb idle speed is adjusted.

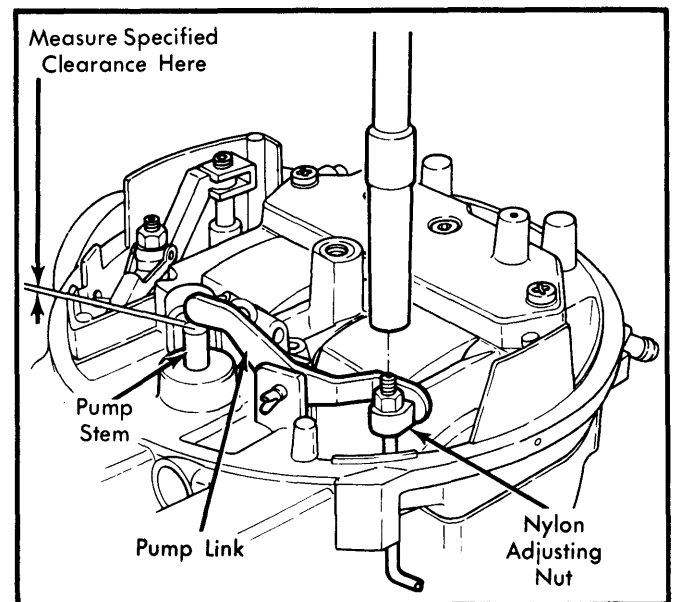


Fig. 1 Adjusting Accelerator Pump Lever Lash

FUEL LEVEL

1) With upper body removed, place a new upper body gasket in position. Turn upper body upside down. See Fig. 2.

2) Construct a gauge (as shown in illustration) to specified fuel level setting. Using gauge, measure distance from cast surface of upper body (not against gasket) to bottom of float.

NOTE — There is a notch cut in gasket to allow for measuring gauge.

3) To adjust, bend adjustment tab on float arm. Make sure float is parallel with new gasket.

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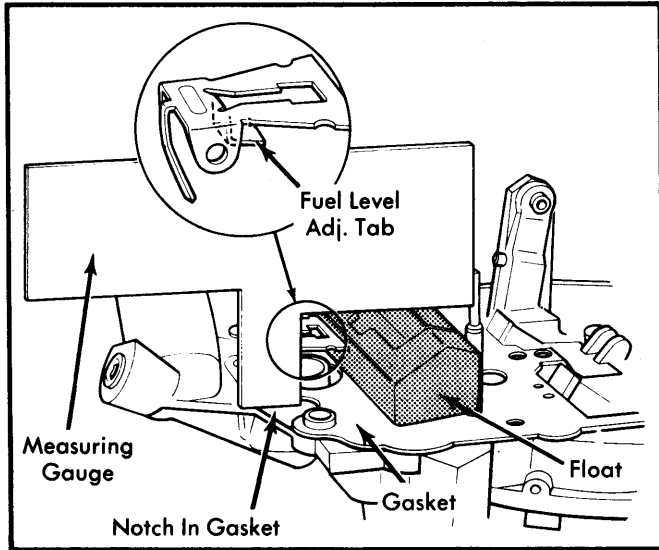


Fig. 2 Adjusting Fuel Level

FLOAT DROP

- 1) With upper body removed, hold in upright position and allow floats to hang by their own weight. See Fig. 3.
- 2) Construct a gauge (as shown in illustration) to specified float drop setting. Using gauge, measure distance from cast surface of upper body to bottom of float.
- 3) To adjust, bend float drop tab on float arm. Make sure float is parallel with new gasket.

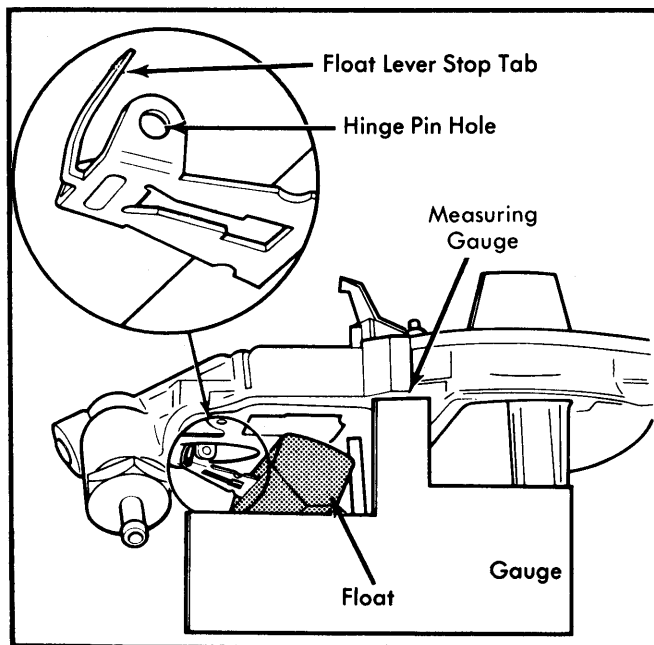


Fig. 3 Adjusting Float Drop

COLD ENRICHMENT METERING ROD

- 1) Remove choke cover. Install stator cap T77L-9848-A7 (or equivalent) as a weight to seat cold enrichment rod. See Fig. 4.

NOTE — Choke coil cover is riveted on California models. Rivets must be drilled out to remove. See appropriate step in Disassembly under Overhaul for removal instructions.

- 2) Connect a dial indicator to carburetor with indicator stem on top surface of enrichment rod. Adjust dial indicator to zero. Raise weight slightly and release to ensure indicator returns to zero.

- 3) Remove stator cap and reinstall at index position. Dial indicator reading should be as specified.

- 4) To adjust, turn adjusting nut clockwise to increase height and counterclockwise to decrease height.

NOTE — If Control Vacuum Regulator is being adjusted, remove stator cap but do not remove dial indicator. Do not reset dial indicator to zero after removing stator cap. Also, if Control Vacuum Regulator, Choke Control Diaphragm or Fast Idle Cam are being adjusted, do not install choke cover.

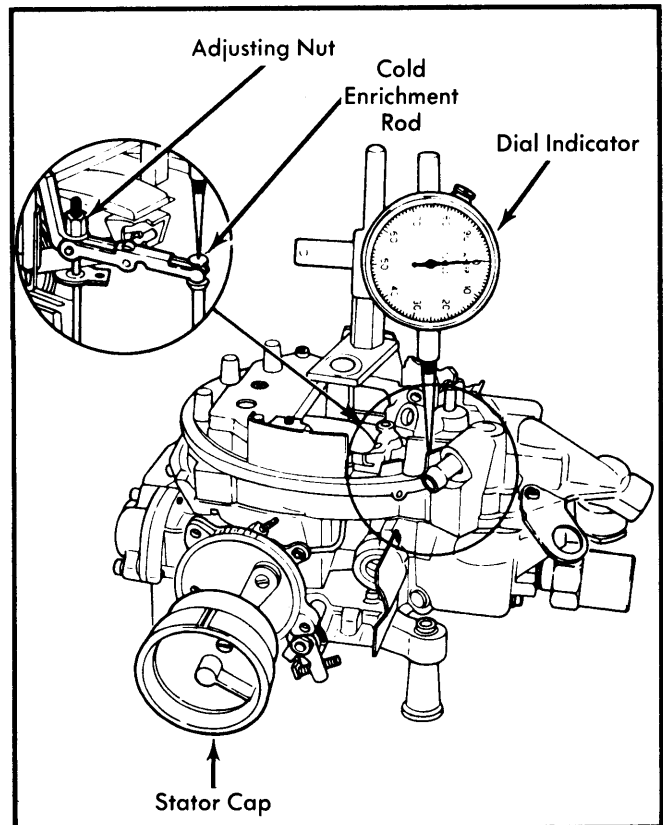


Fig. 4 Adjusting Cold Enrichment Metering Rod

CONTROL VACUUM REGULATOR

NOTE — Cold Enrichment Metering Rod must be adjusted first.

- 1) With dial indicator installed, push down on control vacuum rod until it bottoms against seat. Measure downtravel of rod on dial indicator. See Fig. 5.

- 2) If downtravel is not to specification, position a $\frac{3}{8}$ " wrench over the control vacuum rod adjusting nut to prevent from turning.

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3) Using a $\frac{3}{32}$ " Allen wrench, turn the control vacuum rod counterclockwise to increase travel and clockwise to decrease travel.

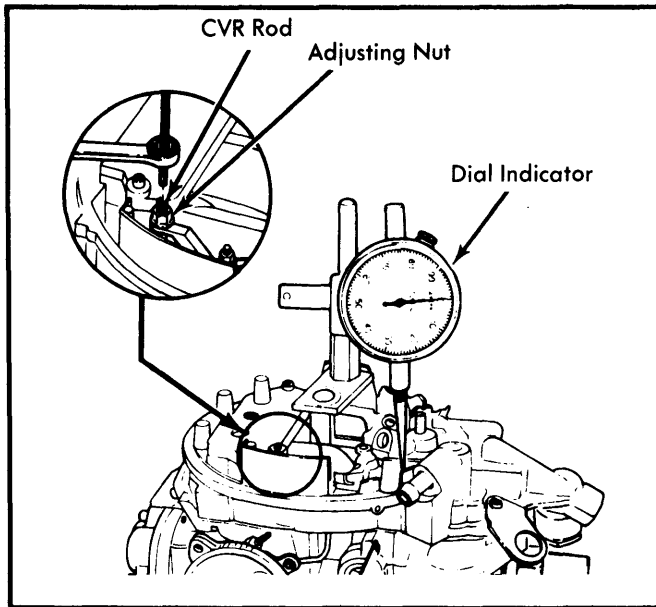


Fig. 5 Adjusting Control Vacuum Regulator

CHOKe CONTROL DIAPHRAGM

At 75°F Position – 1) Remove choke diaphragm cover and spring. Manually seat choke diaphragm assembly in direction of fast idle cam. See Fig. 6.

2) With dial indicator installed, it should read as specified. To adjust, rotate the choke diaphragm assembly clockwise to decrease reading and counterclockwise to increase reading. Install diaphragm cover and spring.

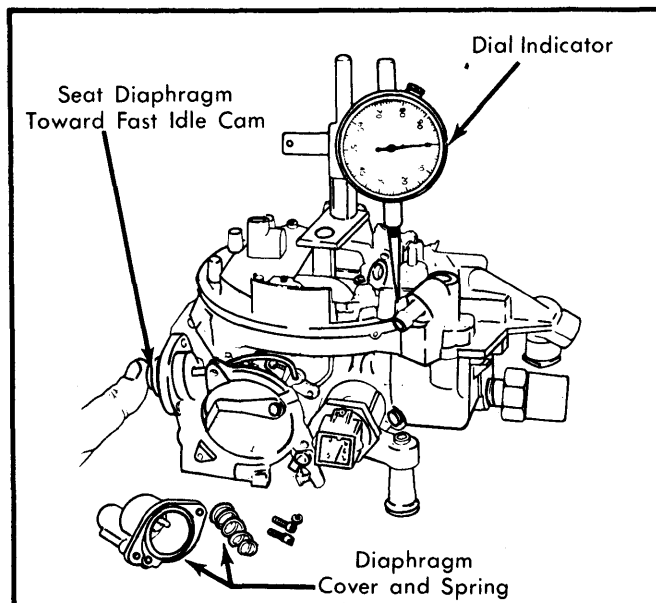


Fig. 6 Adjusting Choke Control Diaphragm (At 75°F Position)

At Zero°F Position – 1) Depress choke diaphragm by pushing on choke diaphragm rod (do not push on fast idle intermediate lever) until it bottoms on choke diaphragm cover adjusting screw. See Fig. 7.

2) Rotate thermostat lever inside choke housing (choke cover removed) clockwise until choke shaft lever pin contacts fast idle intermediate lever. Dial indicator should read as specified.

3) To adjust, remove lead ball covering choke diaphragm cover adjusting screw. Turn adjusting screw clockwise to increase height and counterclockwise to decrease height. Install a new lead ball over adjusting screw.

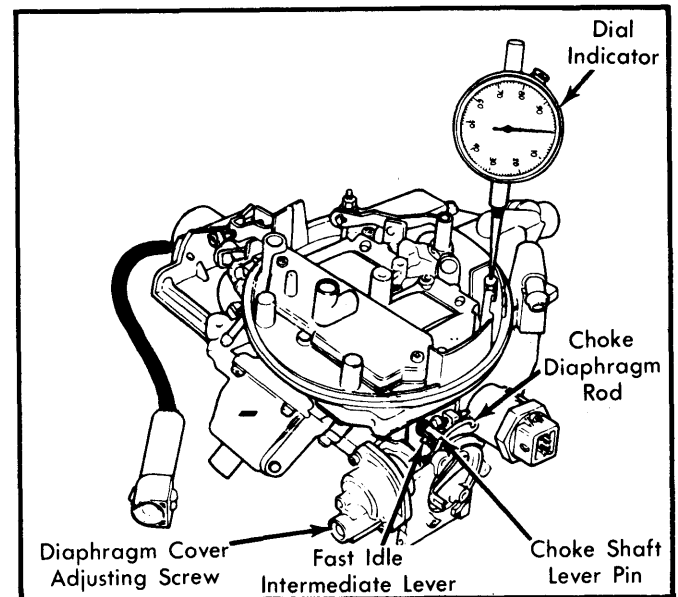


Fig. 7 Adjusting Choke Control Diaphragm (At Zero°F Position)

FAST IDLE CAM

1) Remove choke cover. Position fast idle lever on specified (see Engine Decal) step of fast idle cam. Highest step is con-

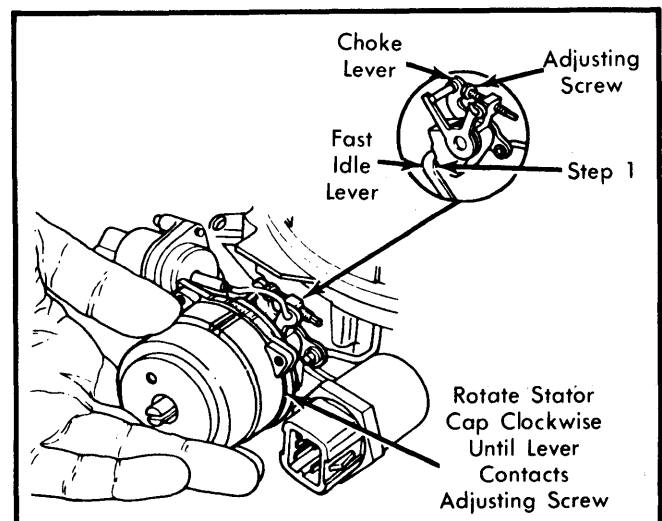


Fig. 8 Adjusting Fast Idle Cam

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sidered first step. If carburetor is removed from vehicle, hold throttle closed with a rubber band to secure fast idle cam in position. See Fig. 8.

2) Install stator cap T77L-9848-A (or equivalent) in place of choke cover. Rotate stator cap clockwise until fast idle speed screw contacts lever.

3) Adjust fast idle cam adjusting screw until index mark on stator cap aligns with specified notch on choke housing. Remove stator cap and install choke cover. Adjust choke cover to specified setting.

NOTE — When installing choke cover retaining ring on California models, use new rivets (Ford part no. 388575). These are $\frac{1}{8}$ " diameter by $\frac{1}{2}$ " long blind rivets.

VENTURI VALVE LIMITER

1) With carburetor removed, remove venturi valve cover, gasket and roller bearings. Remove expansion plug at rear of main body on throttle side of carburetor with a center punch.

2) Remove venturi valve limiter stop screw with a $\frac{5}{32}$ " Allen wrench. Hold throttle valves wide open. Apply light closing pressure on venturi valve.

3) Measure venturi valve limiter specified clearance between venturi valve and air horn wall. To adjust, move venturi valve to wide open position.

4) Insert a $\frac{5}{64}$ " Allen wrench in hole that stop screw was removed from. Turn screw clockwise to increase gap and counterclockwise to decrease gap.

5) Remove Allen wrench. Apply light closing pressure on venturi valve and recheck specified clearance between valve and air horn wall.

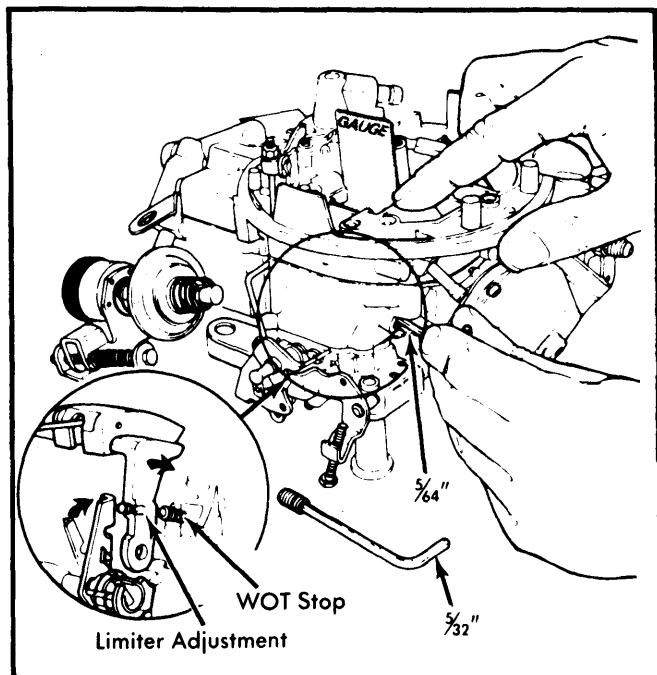


Fig. 9 Adjusting Venturi Valve Limiter

6) Install stop screw and turn in until it contacts venturi valve. Hold venturi valve wide open and measure specified venturi valve limiter stop clearance between venturi valve and air horn wall. To adjust, turn stop screw.

7) Install a new expansion plug in access hole. Install venturi roller bearings, gasket and valve cover. Install carburetor.

CONTROL VACUUM
(2700 MODELS ONLY)

1) Remove carburetor from vehicle. Remove venturi valve diaphragm expansion plug using a center punch.

2) If equipped, remove venturi air bypass plug in venturi valve cover. To remove plug, remove venturi valve cover screws, but hold cover in place. Turn carburetor over holding cover in place. With carburetor upside down, remove cover, gasket and roller bearings. Using a drift punch, remove plug from cover.

3) Install roller bearings, cover gasket and cover. Install carburetor on engine. Attach all electrical and vacuum connections. Turn ignition switch on momentarily to position electric stepper motor.

4) Unplug electrical connection at stepper motor. Start engine and warm to normal operating temperature. Make sure engine is idling at specified RPM.

5) Using a $\frac{5}{32}$ " Allen wrench, turn venturi valve diaphragm adjusting screw clockwise until venturi valve is firmly seated.

NOTE — On some models it may be necessary to remove carburetor again to gain access to this screw.

6) Connect an inches of water vacuum gauge to vacuum cap on venturi valve cover. With engine at curb idle speed, adjust bypass adjusting screw with a $\frac{1}{8}$ " Allen wrench to obtain 7.5 inches of water.

NOTE — It may be necessary to readjust curb idle speed.

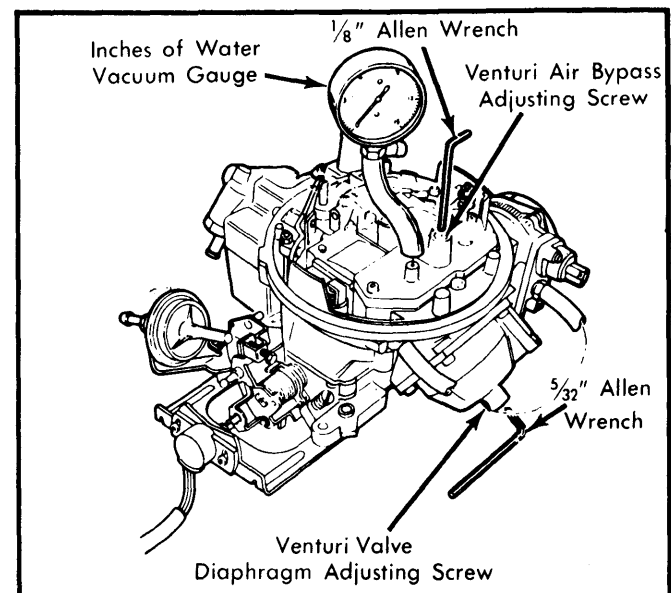


Fig. 10 Adjusting Control Vacuum

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7) Now turn the venturi valve diaphragm adjusting screw until vacuum drops to 5.0 inches of water. It will be necessary to cycle throttle to get the vacuum to drop.

8) Check curb idle speed and adjust to specified RPM if necessary. Install new venturi valve bypass and diaphragm adjustment plugs.

OVERHAUL

DISASSEMBLY

Upper Body – 1) Mount carburetor in a suitable holding fixture. Remove fuel inlet fitting, filter, gasket and spring. Remove clip from accelerator pump and choke control rods. Disconnect rods.

2) Remove air cleaner stud. Remove 7 screws and remove upper body. Note position of 2 long screws. Remove float hinge pin and float assembly. Remove upper body gasket.

3) Remove fuel inlet valve, seat and gasket. Remove accelerator pump rod, dust seal, pump link retaining pin and link. Remove pump swivel and adjusting nut.

4) Disconnect choke rod. Remove retainer and carefully lift out dust seal. Remove choke hinge pin. Remove cold enrichment rod nut, lever, swivel, control vacuum regulator and adjusting nut as an assembly.

NOTE – Disassembly of cold enrichment rod assembly is only required if parts replacement is necessary.

5) Slide cold enrichment rod from casting and seal. Remove venturi valve cover plate and roller bearings. Drive air bypass plug out of venturi valve cover on 7200 models (if equipped). Remove venturi air bypass screw.

6) Using a suitable plug removal tool (T77P-9928A or equivalent), press tapered plugs out of venturi valve pivot pins. Push out pivot pins.

7) Slide venturi valve to rear to remove. Remove pivot pin bushings. Remove metering rod pivot pins (on outer side of venturi valve), metering rods and springs.

NOTE – Mark or identify the rods as to choke or throttle side of carburetor.

8) Using jet plug removal tool (T77L-9533-B or equivalent), remove main jet plugs recessed in upper body casting.

NOTE – The main metering jet setting is important to the overall performance of the carburetor. Use the following step to remove the main metering jets.

9) Using a suitable jet wrench (T77L-9533A or equivalent), turn each metering jet clockwise counting number of turns required to seat them in bottom of casting. Record number of turns to nearest $\frac{1}{4}$ turn. Now turn jet assemblies counter-clockwise to remove. Remove "O" rings. Mark or identify main metering jets as to choke or throttle side.

10) Remove accelerator pump plunger assembly. Remove internal vent valve from plunger stem. Remove accelerator pump cup and spring.

11) Remove venturi valve limiter adjusting screw from throttle side of venturi valve. If necessary for cleaning, remove $\frac{1}{8}$ " pipe plug in fuel inlet casting boss.

Main Body – 1) Remove cranking enrichment solenoid and "O" ring. Remove venturi valve diaphragm cover, spring guide and spring. Carefully loosen diaphragm and slide out of main body. Remove diaphragm adjusting screw by center punching until loose.

2) Remove venturi valve diaphragm adjusting screw. Remove venturi valve limiter stop screw plug by center punching until loose. Remove venturi valve limiter stop screw.

3) On 2700 model carburetors, remove cranking fuel control assembly if necessary. This component should only be removed if there is evidence of physical damage. If control is damaged, bend bi-metal enough to expose discharge port and use jet plug removal tool to remove control assembly.

4) On 7200 model carburetors, remove "Feedback" stepper motor using a $1\frac{3}{8}$ " socket. Remove gasket, valve and spring.

5) Turn main body upside down and catch check ball and weight as they fall out. Remove 5 throttle body screws. Remove throttle body and gasket. On 2700 models, remove choke heat shield.

Throttle Body – 1) Remove any throttle return control device and bracket. Disconnect kickdown spring.

2) On California models, choke cover is secured to housing with rivets. Drill out rivets with an $\frac{1}{8}$ " drill. The bottom rivet is in a blind hole. To remove, tap rear of retaining ring with a punch and hammer. Remove choke cover and gasket.

3) On all remaining models, remove choke housing cover retaining screws. Remove retaining ring, cover and gasket.

4) On all models, remove choke thermostatic lever screw and remove lever. Slide choke shaft and lever assembly out of casting and remove fast idle cam.

5) Remove the high cam speed positioner (2700 models) or the fast idle intermediate lever (7200 models). Remove choke control diaphragm cover screws, cover and spring.

6) Remove choke control diaphragm and rod. Disconnect rod from diaphragm.

7) If necessary to remove choke housing bushing, file off staking from around bushing. Carefully press bushing out while supporting casting.

8) Remove choke heat tube fitting. Remove off idle (TSP) adjusting screw. Remove throttle shaft retaining nut. Remove fast idle adjusting lever, fast idle lever and adjusting screw.

9) If it is necessary to remove throttle valves, scribe alignment mark along shaft and identify the throttle valves as to choke side or throttle side.

10) Throttle valve screws are staked in place. Staking must be removed before removing screws. Remove screws and throttle valves. To remove throttle shaft, it will be necessary to drive limiter lever stop pin down until it is flush with shaft.

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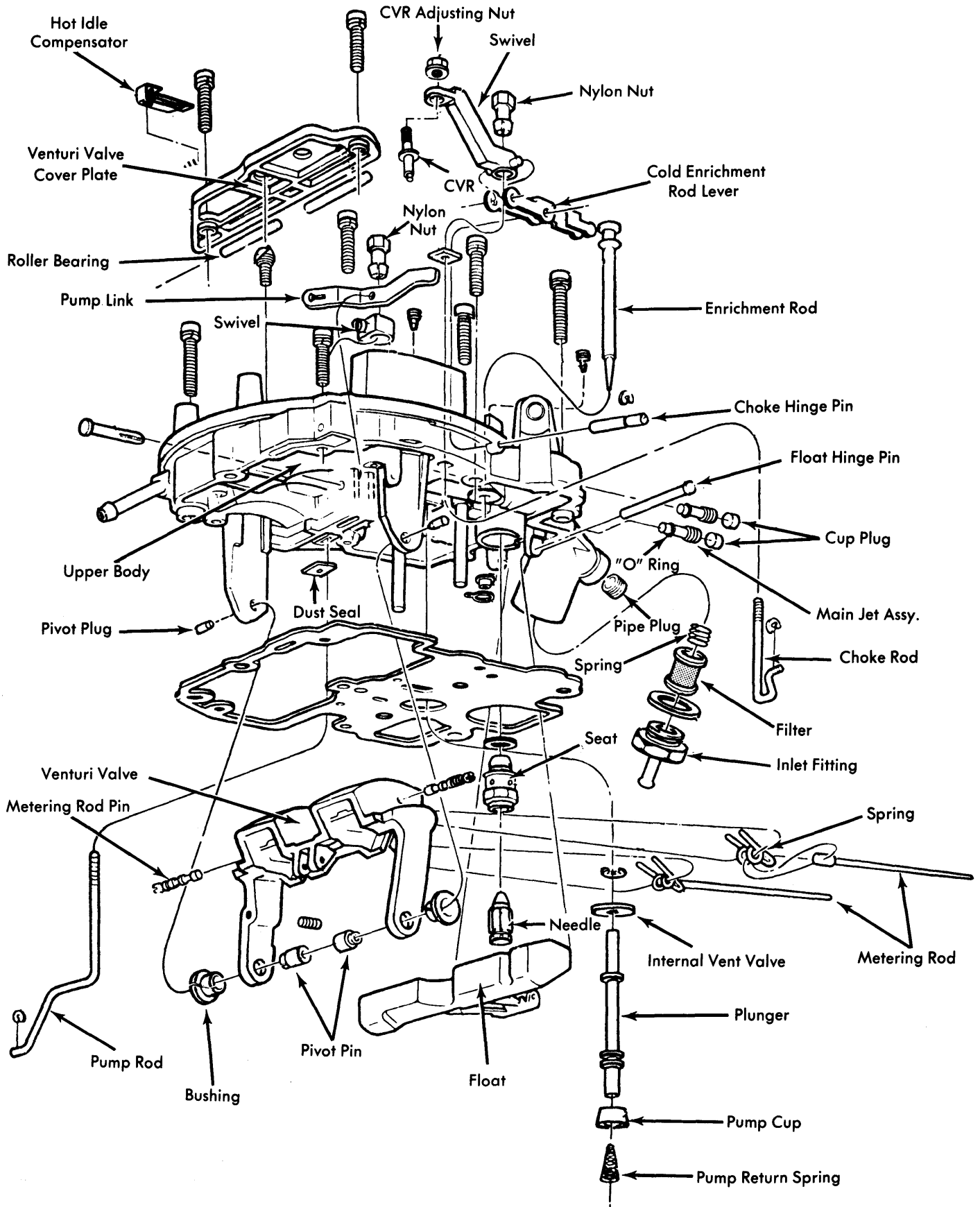


Fig. 11 Exploded View of Model 2700 and 7200 Carburetor Upper Body

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11) Slide throttle shaft out of casting. Remove transmission kickdown adjustment screw. Remove venturi valve limiter lever and bushing.

REASSEMBLY

Throttle Body – 1) Support throttle shaft assembly and drive out venturi valve limiter stop pin. Discard pin. Position venturi valve limiter assembly in throttle body and slide throttle shaft into place.

2) Place throttle valves in correct position (noted during disassembly). Install new screws and tighten until just snug. Close throttle and tap plates to center. Tighten throttle plate screws and stake into position.

3) Drive venturi valve limiter stop pin into shaft. Leave $\frac{1}{8}$ " of pin exposed. Install fast idle lever, adjusting lever and fast idle screw. Install throttle shaft nut and tighten.

4) Install off idle (TSP) adjusting screw. Install choke heat tube fitting. Install choke shaft bushing in housing. Support housing when installing bushing. Stake into position.

5) Install the high cam speed positioner (2700 models) or the fast idle intermediate lever (7200 models). On all models, install fast idle cam. Install choke control diaphragm and rod and connect rod to lever.

6) Install choke shaft and lever assembly. Install choke thermostatic lever in position. Install and tighten lever retaining screws.

NOTE – Perform Choke Control Diaphragm and Fast Idle Cam adjustments at this time.

7) Install choke control diaphragm spring, cover and cover screws. Install choke housing cover gasket and cover. Install retainer and screws.

NOTE – On models that originally had cover riveted into position, screws can be installed to replace rivets, or cover can be riveted on again. Rivets are Ford part no. 388575.

8) Install throttle control device and bracket in position.

Main Body – 1) Position throttle body gasket in position on main body. Assemble main body to throttle body. Install screws and tighten securely. Drop accelerator pump check ball and weight into position in main body.

2) On 2700 models, install cranking fuel control assembly in cavity. Tap lightly into position using a brass drift punch.

NOTE – Do not install venturi valve limiter stop screw and plug at this time. They are installed after carburetor is assembled and venturi valve limiter is adjusted.

3) Slide venturi valve diaphragm into position. Install diaphragm spring, spring guide, cover and cover screws. Install venturi valve diaphragm adjustment screw. Final adjustment is made on vehicle.

4) Install "O" ring on cranking enrichment solenoid. Lubricate "O" ring with a mild soapy solution. Install cranking enrichment solenoid.

5) On 7200 model carburetors, install "Feedback" stepper motor, gasket, valve and spring.

Upper Body – 1) Install $\frac{1}{8}$ " pipe plug in fuel inlet boss. Install the venturi valve limiter screw in venturi valve. Install "O" rings on main metering jets. Lubricate "O" rings with a mild soapy solution.

2) Using jet wrench used during disassembly, install main metering jets in correct holes. Turn jets clockwise until they are lightly seated in casting. Now turn each jet counterclockwise number of turns recorded during disassembly.

3) Drive in jet plugs into recess in casting using a suitable driver (T77L-9533-C). Tap lightly on tool until plugs bottom in casting.

4) Install metering rods and springs in position noted during disassembly on venturi valve. Install metering rod pivot pins. Install venturi valve, carefully guiding metering rods into jets. If springs are correctly installed, metering rods will spring back up when depressed.

5) Install venturi valve bushings and pivot pins. Install tapered plugs in pivot pins using tool used to remove plugs during disassembly.

6) Install venturi air valve bypass screw. Turn clockwise 4 turns to allow clearance for cover plate. Install plug in venturi valve cover plate.

7) Install venturi valve cover plate roller bearings, gasket and cover plate. Install and tighten screws. Install accelerator pump swivel and adjusting nut into pump link.

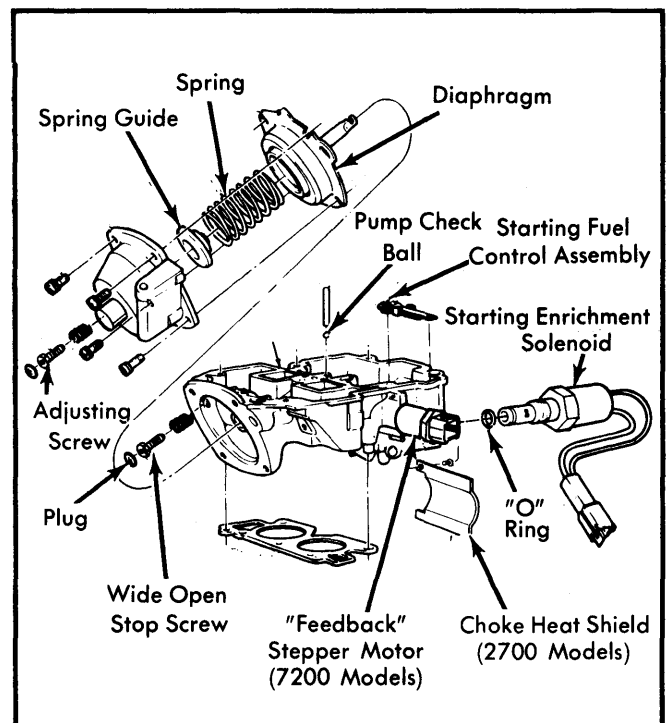


Fig. 12 Exploded View of Model 2700 and 7200 Carburetor Main Body

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8) Install accelerator pump link and retaining pin. Install accelerator pump operating rod and dust seal. Install fuel inlet valve seat gasket, seat and valve.

9) Install upper body gasket. Place float in position and install hinge pin. Install accelerator pump return spring, cup, plunger, internal vent valve and retainer. Place pump piston assembly in position in hole in upper body.

10) Install upper body on main body. Guide accelerator pump piston assembly into cavity in main body. Make sure venturi valve diaphragm stem engages venturi valve.

11) Install fuel filter spring, filter, inlet fitting gasket and inlet fitting. Install air cleaner stud. Install choke control rod dust seal. Tap seal gently to straighten retainer.

12) Slide cold enrichment rod into upper body. Assemble cold enrichment rod adjusting nut, lever, swivel, control vacuum regulator and adjusting nut. Install assembly on carburetor.

13) Install choke hinge pin and retaining clip. Install choke control rod.

NOTE — Perform Cold Enrichment Rod and Control Vacuum Regulator adjustment now.

14) Connect accelerator pump operating rod and choke control rod. Install retaining clips. Install venturi valve limiter stop screw.

NOTE — Perform Venturi Valve Limiter adjustment now.

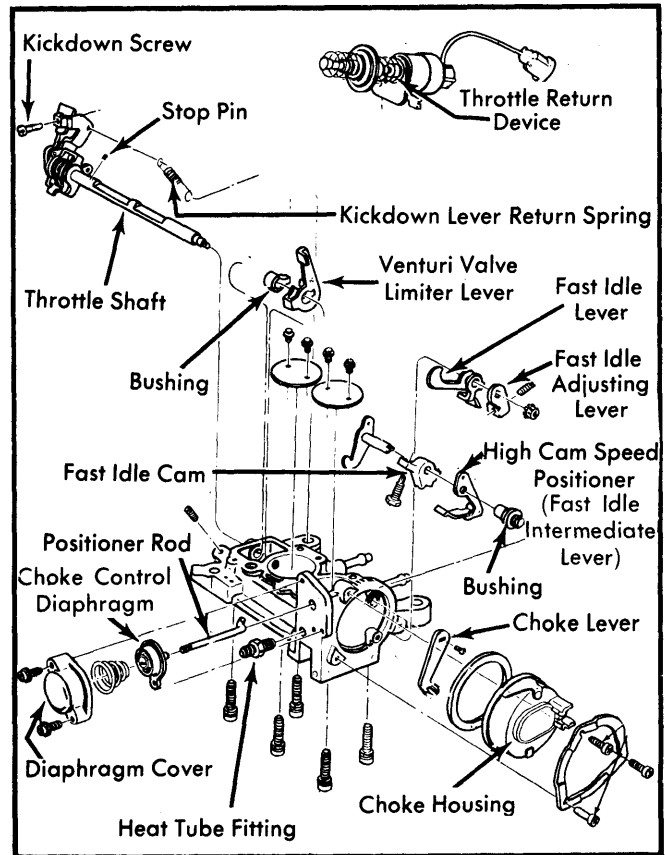


Fig. 13 Exploded View of Model 2700 and 7200 Carburetor Throttle Body

CARBURETOR ADJUSTMENT SPECIFICATIONS

Application	Accel. Pump Setting	Fuel Level Setting	Float Drop Setting	Cold Enrich. Rod Setting	Control Vacuum Regulator Setting	Choke Control Diagram		Fast Idle Cam			Venturi Limiter	
						At 75°F Position	At 0°F Position	Fast Idle Cam Step Setting	Stator Cap Setting	Choke Cover Setting	Limiter Setting	Limiter Stop Setting
2700 Models												
EOAE-AAA	.010"⓪	1-3/64"	1-15/32"	.125"	.090"	.475"	.300"	4	1 Rich	1 Rich	.960"	1.00"
EOAE-ACA⓪	.010"⓪	1-3/64"	1-15/32"	.125"	.090"	.475"	.350"	4	1 Rich	1 Rich	.960"	1.00"
EOAE-ACA⓪	.010"⓪	1-3/64"	1-15/32"	.125"	.090"	.475"	.320"	4	1 Rich	1 Rich	.960"	1.00"
EOAE-APA	.010"⓪	1-3/64"	1-15/32"	.125"	.090"	.475"	.320"	4	1 Rich	1 Rich	.960"	1.00"
EOAE-ZA⓪	.010"⓪	1-3/64"	1-15/32"	.125"	.090"	.475"	.350"	4	1 Rich	1 Rich	.960"	1.00"
EOAE-ZA⓪	.010"⓪	1-3/64"	1-15/32"	.125"	.090"	.475"	.320"	4	1 Rich	1 Rich	.960"	1.00"
7200 Models												
EOAE-ADA	.010"⓪	1-3/64"	1-15/32"	.125"	.275"	.435"	.350"	3	1 Rich	Index	.400"	1.00"
EOAE-AHA	.010"⓪	1-3/64"	1-15/32"	.125"	.250"	.475"	.350"	3	1 Rich	Index	.400"	1.00"
EOAE-BA	.010"⓪	1-3/64"	1-15/32"	.125"	.250"	.475"	.350"	3	1 Rich	Index	.400"	1.00"
EOAE-LA	.010"⓪	1-3/64"	1-15/32"	.125"	.250"	.475"	.350"	3	1 Rich	Index	.400"	1.00"
EOAE-PA	.010"⓪	1-3/64"	1-15/32"	.125"	.250"	.475"	.350"	3	1 Rich	Index	.400"	1.00"

- ⓪ — Plus 1 turn counterclockwise.
- ⓪ — Calibration number 0-13F-R00Z.
- ⓪ — Calibration number 0-33F-R11Z.
- ⓪ — Calibration number 0-13A-R00Z.
- ⓪ — Calibration number 0-13A-R11Z.