MOTORCRAFT MODEL 7200 VV 2-BARREL

CARBURETOR APPLICATION

FORD MOTOR CO.

Application	Ford Motor Co. Part No.①
3.8L (230") V6	
Nationwide	E25E-GA
California	E2AE-LB; E2DE-NA; E25E-FA, GB
4.2L (255") V8	
Nationwide (AOT Trans.)	E1AE-ACA; E2AE-RA
California	E2SE-DA, DB
5.0L (302") V8	
Nationwide	E1AE-SA; E2AE-MA, MB, TA, TB, E25E-AC
5.8L (351") V8	
Nationwide	E1AE-AGA; E2AE-NA

① – Ford basic part number is 9510.

CARBURETOR IDENTIFICATION

Carburetor part number identification is stamped on upper body casting over fuel bowl.

DESCRIPTION

Systems on the Motorcraft model 7200 carburetor include: fuel inlet, main metering, control vacuum, cold enrichment, accelerator pump and choke system. The fuel inlet system has an integral filter at the inlet. Fuel level in fuel bowl is maintained by the float and lever assembly acting on the inlet valve and seat.

The main metering system provides fuel for normal engine operation. Vacuum created by air flowing through the venturi draws fuel from fuel bowl, up main well tubes, through main metering jets and into venturi.

Fuel flow is controlled by tapered metering rods linked to a venturi valve in the main metering jets. Small springs position the metering rods against top of main metering jet orifices for closer fuel flow control. A change in throttle plate position changes the venturi valve position. The venturi valve positions the metering rods to provide the correct fuel flow required by the amount of air flowing through the venturi.

The control vacuum system consists of the venturi valve diaphragm which is connected to the venturi valve. The diaphragm contains a spring to close the venturi valve and control vacuum with a calibrated spring to open the venturi valve. Vacuum source to the diaphragm comes from between the venturi valve and throttle plates.

As the throttle plates open, increased vacuum between the venturi valve and throttle plates causes the diaphragm to open venturi valve. The calibrated spring in the vacuum diaphragm maintains a precise air/fuel ratio for all engine operating conditions, except wide open throttle and choke operation.

During wide open throttle, vacuum is not strong enough to overcome the venturi valve diaphragm spring and open the venturi valve. A venturi valve limiter lever on the throttle shaft manually opens the venturi valve during wide open throttle.

The cold enrichment system provides a rich air/fuel mixture for cold engine operation. The extra fuel flow is metered by a tapered cold enrichment rod (CER) suspended from the upper body through a jet in the bottom of fuel bowl. The enrichment rod height is regulated by the choke bi-metal and choke control diaphragm position.

Enrichment fuel flows through an internal passage to the venturi discharge nozzles. A control vacuum regulator (CVR) restricts control vacuum to the venturi valve diaphragm. The CVR is also regulated by choke bi-metal and choke control diaphragm.

When the bi-metal is wrapped (closed), the CVR is lowered to raise the CER and provide more fuel. As the bi-metal unwraps (opens), the CVR rises to lower the enrichment rod to shut off fuel enrichment. The CER has adjustable cold operation positions.

Accelerator pump system is a positive displacement, pump type which provides additional fuel for sudden acceleration and full load operation. The choke system is a dual stage, electric choke cap and a choke control diaphragm.

The choke cap consists of a 2-stage ceramic heating disc and bi-metal spring. The first stage of the heating disc is always energized when engine is running to open choke plate a calibrated amount. The second stage is energized when engine compartment temperature is 54-75°F (12-24°C). The choke control diaphragm controls the cold enrichment system and fast idle cam.

The control diaphragm has an internal delay mechanism (2-5 seconds) which retracts the choke pulldown rod after engine start-up. The choke pulldown rod allows the fast idle cam to position the fast idle lever on the lower step.

The cold enrichment system is controlled in the following manner: the choke bi-metal positions the CER, CVR and fast idle cam based upon temperature. At 0°F (−18°C), choke control diaphragm overrides bi-metal control operation when manifold vacuum is sensed. As bi-metal temperature increases, the bi-metal gradually takes over control of the system. Above 75°F (24°C), the diaphragm overrides the bi-metal to ensure good warm engine starts. To improve low temperature operation, cool air from the carburetor inlet flows inside the choke cap.

All 7200 model carburetors are equipped with external fuel bowl vent system. A hot idle compensator in the air horn improves hot engine idle quality. Depending on vehicle application, the carburetor may be equipped with an anti-dieseling solenoid, idle speed solenoid (A/C equipped), dashpot, vacuum kicker or any combination of these throttle positioners.

The 7200 carburetor is equipped with a feedback control actuator motor and throttle position sensor. These components are computer-controlled to provide precise metering of the air/fuel ratio, based upon input from various engine sensors.

TESTING

COLD ENRICHMENT SYSTEM

1) Apply parking brake and block drive wheels. Remove air cleaner. Plug vacuum hose(s) to air cleaner. With choke cap cool to touch, turn ignition to "Run" position (without starting engine) for 2 minutes. Choke cap should not become warm.

2) Start engine when cold enrichment rod is up and fast idle cam is freed from fast idle lever. Run engine no longer than 3 minutes. Cold enrichment rod should seat. Turn engine off.

3) Manually set fast idle lever on specified step of cam (refer to Emission Decal in engine compartment), count high step of

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cam as first step. Start engine and warm to normal operating temperature. Open throttle and check that cam falls freely to full off position. If system is operating properly, engine speed should drop a great amount when throttle is released. Turn engine off.

4) Check vacuum hoses, solenoids and electrical wiring for proper connections. Ensure carburetor hold down nuts are tight. Check carburetor linkages for freedom of operation. If binding exists, proceed to step **5)**. If no binding exists, perform Electric Choke test.

5) Check for damaged, missing and/or misaligned parts. Check for dirt, grease or other material on moving parts. Service as required. If linkage is serviced or replaced, check choke adjustments.

6) Remove choke control rod-to-choke shaft lever retaining clip and disengage linkage from lever. Open throttle slightly and check choke shaft lever for freedom of movement. The choke cap and pulldown diaphragm return spring should provide only resistance. Choke shaft lever should spring back to original position. If not, clean or service as required.

7) Manually move choke control rod up and down. Movement should be free. If not, remove CER lever pivot pin retaining clip. Remove pivot pin from lever. Carefully lift lever up and out of upper body as far as linkage will allow. Remove CER and check for dirt, distortion or damage. Clean and service as required.

8) Reinstall parts and ensure free movement. Perform CER adjustment. If cam movement is still not free, overhaul carburetor. If movement is free, reinstall choke control rod to choke shaft lever with retaining clip and reinstall air cleaner.

ELECTRIC CHOKE

NOTE – *Choke cap electrical power is provided either from the battery (choke cap and oil pressure switch connected in series) or alternator (choke cap wire connected to alternator stator terminal connection). Verify power source by tracing electrical connector from choke cap terminal.*

Choke Cap Continuity (Alternator Powered) – 1) Turn ignition off. Disconnect electrical connector from choke cap. Connect a jumper wire between battery positive terminal and choke cap terminal. Connect a test lamp between choke cap ground and negative battery terminal. Test lamp should glow. If not, replace choke cap.

2) Remove jumper wire. Connect test lamp between battery positive terminal and choke cap terminal. Test lamp should glow. If not, locate and repair open circuit. Remove test lamp.

3) Connect electrical connector to choke cap terminal. Connect test lamp between choke cap ground and negative battery terminal. Start engine. Test lamp should glow. If not, locate and service open circuit between choke cap and alternator output and service as required. Stop engine. Remove test equipment.

Choke Cap Continuity (Battery Powered) – 1) Turn ignition off. Disconnect electrical connector at oil pressure switch. Install jumper wire in electrical harness to replace switch. Connect a test lamp between battery negative terminal and choke cap terminal.

2) Turn ignition to "Run" position without starting engine. Test lamp should glow. If not, locate and service open circuit (check fuse, fuse link, connector, etc.). Turn ignition off and disconnect jumper wire. Reconnect electrical connector to oil pressure switch.

3) Turn ignition to "Run" position without starting engine. Test lamp should not glow. If lamp glows, replace oil pressure switch. Start engine. Test lamp should glow. If not, replace oil pressure switch. Stop engine and remove test equipment.

Choke Cap Resistance – 1) Disconnect electrical connector from choke cap terminal. Connect an ohmmeter between choke cap terminal and choke cap ground. (Ensure metal-to-metal contact; not metal oxide-to-metal contact). Ohmmeter reading should read under 30 ohms, but more than 0 ohms. If not to specifications, repeat test. If specifications are not met after second test, replace choke cap.

2) Disconnect ohmmeter and reconnect choke cap terminal connector. Remove air cleaner and plug vacuum hoses. Start engine and run for 3 minutes. If engine was warm prior to start, CER should remain seated. If engine was cold prior to start, CER should slowly lower to seat. Turn engine off. If CER does not operate as described, make a note and continue test. Replace air cleaner and reconnect vacuum lines.

3) Choke cap should be quite warm. Reconnect ohmmeter as described in step **1)**. Using choke tester, cool cap by directing cold air towards oval insulator (not case) around cap terminal. Ohmmeter reading should gradually vary and then register a sudden increase. Stop cooling. The sudden increase should occur within 10 minutes after cooling began (choke tester used at maximum capacity and held close to cap).

4) If sudden increase does not occur within 10 minutes, replace choke cap. If change does occur, warm oval insulator with choke tester. Ohmmeter reading should again vary and then register a sudden decrease. Stop warming. Sudden decrease should occur within 10 minutes after warming began (choke tester used at maximum capacity and held close to cap).

5) If sudden decrease does not occur within 10 minutes, replace choke cap. If change occurs, choke cap is operating properly. If CER did not operate as described in step **2)**, check linkage and correct problem.

CHOKE CONTROL DIAPHRAGM

NOTE – *Three different types of vacuum systems are used to provide vacuum to diaphragm. Internally ported has an internal passage to diaphragm. Externally ported without vacuum trap has vacuum tube direct from manifold vacuum source. Externally ported with vacuum trap has a vacuum trap in the vacuum tube from manifold source. Visually inspect vacuum routing to determine vacuum system used.*

1) Start engine and watch that choke diaphragm rod retracts within 2-5 seconds. To perform this test on externally ported diaphragm with vacuum trap, by-pass vacuum trap. If rod retracts within specified time, diaphragm check is complete. Reconnect vacuum trap (if equipped). If rod does not retract within specified time, proceed to step **2)** for internally ported diaphragms or step **6)** for all others.

2) Remove carburetor. Remove diaphragm and cover as described under OVERHAUL in this article. Using compressed air or vacuum, check and remove any restriction from internal vacuum passage. (Choke air passage connects to diaphragm passage in casting).

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3) Inspect diaphragm for cuts or tears and replace if necessary. Reassemble diaphragm and cover. Tighten to ensure no vacuum leaks are present. Connect vacuum line between casting bottom port and external vacuum source. Seal junction at casting to prevent vacuum leak.

4) Block choke air inlet by capping casting connector tube beneath diaphragm cover. Apply 18 in. Hg vacuum to diaphragm. If diaphragm rod retracts within 2-5 seconds, control diaphragm is operating properly. Remove test equipment and reconnect all vacuum hoses.

5) If the diaphragm holds vacuum but diaphragm rod does not retract, replace cover and repeat test. If diaphragm does not hold vacuum, remove diaphragm cover and block upper diaphragm vacuum port at lower side of diaphgram seating surface. Apply 18 in. Hg vacuum again. If vacuum is held, replace cover and repeat test. If vacuum is not held, locate and service vacuum leak at choke cap gasket, choke shaft bearing or other similar areas. Repeat test.

6) Remove diaphragm and cover as described in OVERHAUL procedures. Inspect diaphragm and replace if cut or torn. Install diaphragm and reassemble diaphragm with original cover. Tighten assembly to ensure no vacuum leaks occur.

7) Connect external vacuum source to connector tube on diaphragm cover. Apply 18 in. Hg vacuum. If choke diaphragm rod retracts within 2-5 seconds, test is complete. If rod does not retract within 2-5 seconds, replace diaphragm cover and repeat test.

CHOKE COOLING AIR CIRCUIT

1) Remove choke cooling air supply line at throttle body. Connect a vacuum gauge to supply line. Start engine and warm to normal operating temperature. With engine at curb idle, observe vacuum reading.

2) If reading is present, stop engine and remove test equipment. Cooling air circuit is operating properly. If no vacuum reading is present, clean, service and/or repair system as required and repeat test.

SOLENOID BOWL VENT VALVE TEST

1) Remove air cleaner, then turn ignition on and off. A "click" should be heard if solenoid is operating properly.

2) If not, disconnect electrical lead, and connect a voltmeter between lead and ground. Turn ignition on and check for battery voltage. If not present, repair wiring as required.

3) If 12 volts are present at lead connector, check valve for binding and/or plugged condition. Repair as required. If valve is not binding and/or plugged, replace solenoid valve assembly. Reinstall air cleaner.

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.

FLOAT LEVEL

Remove upper body and gasket. Turn upper body upside down. Construct a gauge (as shown in *Fig. 1*) to specified float level setting. Measure distance from casting surface of upper body to bottom of float. To decrease setting, bend tab away from inlet needle. To increase setting, bend tab toward inlet needle.

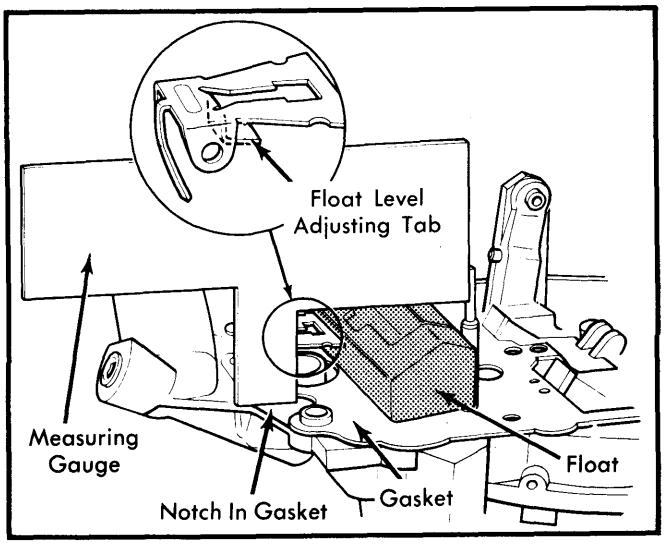

Fig. 1 Float Level Adjustment

FLOAT DROP

1) With upper body and gasket removed, hold upper body upright and allow float to hang down. Construct a gauge (as shown in *Fig. 2*) to specified float drop setting. Measure distance from casting surface of upper body to bottom of float.

2) To adjust, bend float lever stop tab on float arm away from hinge pin to increase setting and toward hinge pin to decrease setting.

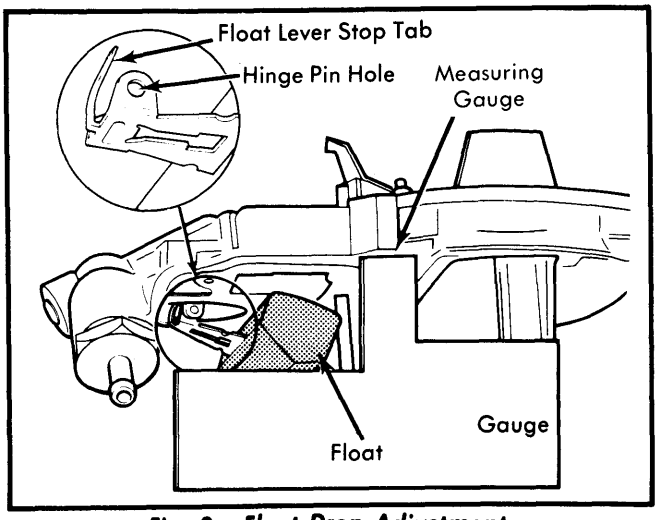

Fig. 2 Float Drop Adjustment

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ACCELERATOR PUMP LEVER LASH

1) Ensure curb idle speed is correctly adjusted. Measure clearance between accelerator pump stem and pump operating link with a feeler gauge. *See Fig. 3.*

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 or carburetor is overhauled.*

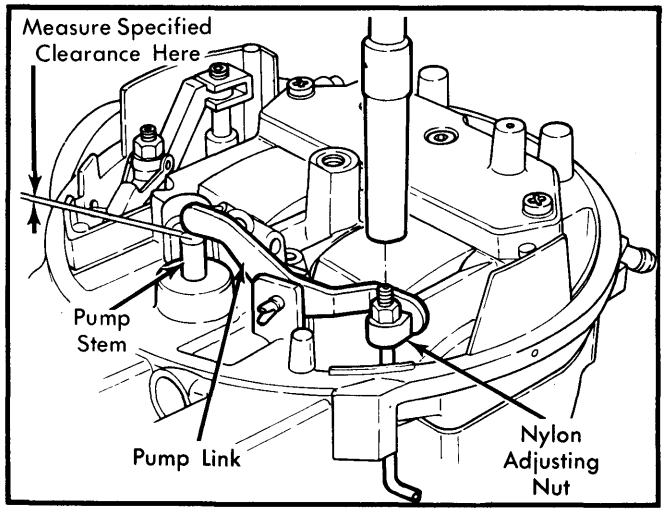

Fig. 3 Accelerator Pump Lever Lash Adjustment

VENTURI VALVE WIDE OPEN THROTTLE OPENING

Checking Procedure – 1) Fabricate a gauge from shim stock .39-.41" (10-10.5 mm) thick. Place transmission in "P" and turn ignition off. Push accelerator pedal to floor and block to simulate wide open throttle. Remove air cleaner. Lightly push venturi valve toward closed position. Measure and record distance between venturi valve and wall of bore.

2) Lightly push venturi valve toward wide open position until it stops. Measure and record distance between venturi valve and wall of bore. If either measurement is not to specification, perform adjustment.

Adjustment Procedure – 1) Remove carburetor. Using a center punch, remove expansion plug covering venturi valve adjustment screw (rear of main body on throttle side of carburetor). Using a 5/32" Allen wrench, remove wide open throttle adjusting screw and spring.

2) Hold throttle plates wide open and lightly push venturi valve toward closed position. Using fabricated gauge, measure distance between venturi valve and wall of bore (closed gap). Adjust (closed gap) to specification by turning adjustment screw on venturi valve arm with a 5/64" Allen wrench. *See Fig. 4.*

3) Using a 5/32" Allen wrench, reinstall wide open throttle adjusting screw and spring. Hold throttle plates wide open and lightly push venturi valve to wide open position until it stops. Measure distance between venturi valve and wall of bore (wide open gap). To adjust, turn wide open throttle adjusting screw with a 5/32" Allen wrench until correct specification is obtained. Install new expansion plug. *See Fig. 4.*

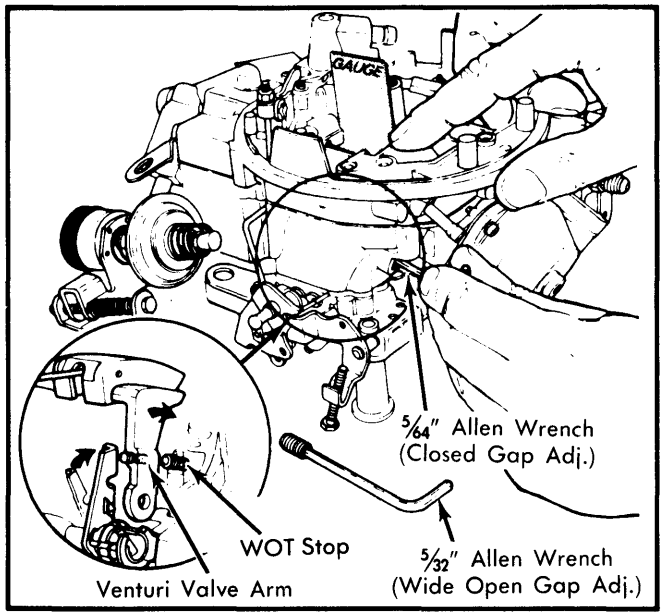

Fig. 4 Venturi Valve Wide Open Throttle Adjustment

COLD ENRICHMENT ROD (CER) & CONTROL VACUUM REGULATOR (CVR)

1) Remove choke cap as described under OVERHAUL procedures in this article. Install choke weight (T77L-9848-A7 or equivalent) on choke bi-metal lever. With CER seated, install a dial indicator on top of CER. Zero dial indicator. Free fast idle cam from fast idle lever. *See Fig. 5.*

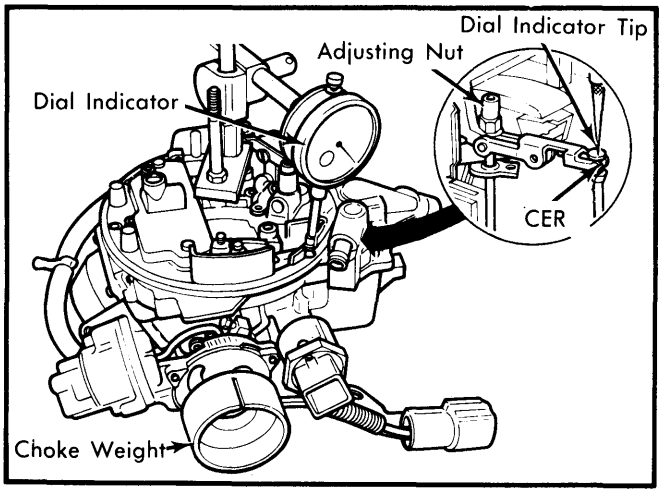

Fig. 5 Cold Enrichment Rod (CER) Adjustment Set-Up Procedure

2) Install stator cap and rotate to index position. Dial indicator should read "CER 75°F (24°C) Run" specification. *See Fig. 6.* Replace choke control rod and CVR swivel assembly as described under OVERHAUL in this article. To adjust, turn CER adjustment screw until dial indicator reading is within specifications.

NOTE – *Adjusting nuts are sealed with epoxy after final adjustment is made by manufacturer. To adjust, new parts must be installed. Also, choke control rod has undercut groove designed to break at 10 INCH lbs. (1 N·m) torque. If rod breaks during adjustment, new rod must be installed.*

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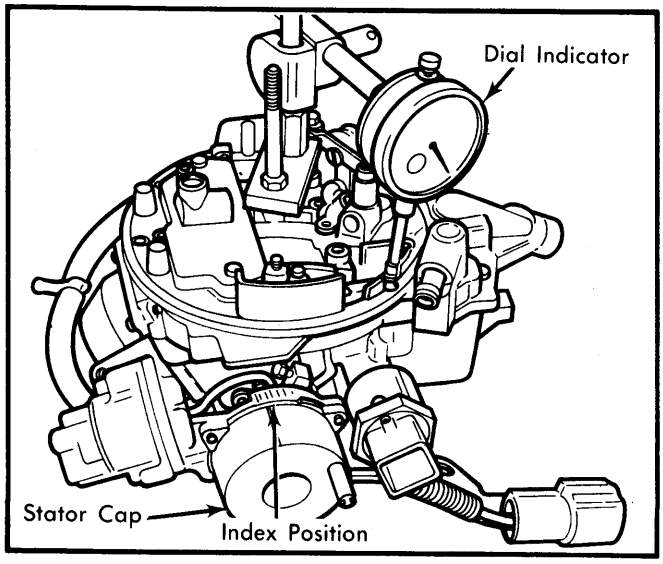

Fig. 6 "CER 75°F (24°C) Run" Adjustment

3) Do not remove dial indicator or reset it to zero. Remove stator cap. Rotate thermostat lever clockwise until CER travel stop screw is bottomed on upper body. Dial indicator should read "CER 0°F (−18°C) Start" specification. *See Fig. 7.* To adjust, turn CER travel stop screw until dial indicator reading is within specifications.

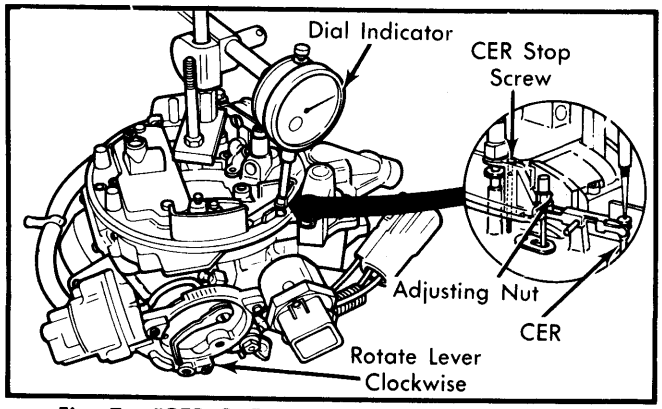

Fig. 7 "CER 0°F (−18°C) Start" Adjustment

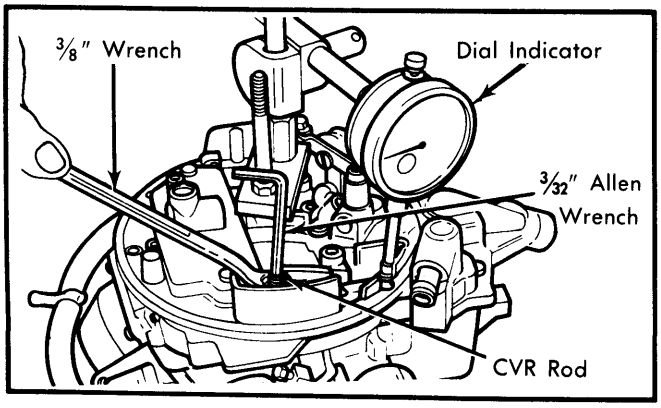

Fig. 8 CVR Adjustment

4) Do not remove dial indicator or reset it to zero. Using stator cap as a weight, push CVR all the way down. Remove stator cap. Dial indicator should read CVR specification. *See Fig. 8.* To adjust, hold CVR nut with a 3/8" wrench. Turn CVR rod with 3/32" Allen wrench clockwise to decrease reading or counterclockwise to increase reading.

5) After all adjustments are complete, remove dial indicator. Apply epoxy to adjusting nuts and stop screw. Replace choke cap.

CHOKE DIAPHRAGM CER

1) Remove choke cap as described under OVERHAUL procedures in this article. Install choke weight (T77L-9484-A7 or equivalent) on choke bi-metal lever. With CER seated, install dial indicator on top of CER. Zero dial indicator. Free fast idle cam from fast idle lever. *See Fig. 5.*

2) Ensure "CER 75°F (24°C) Run" reading is within specifications. Remove choke weight. Remove diaphragm cover. Push in on diaphragm until seated. Dial indicator should read "CER 75°F (24°C) Start" specification. *See Fig. 9.*

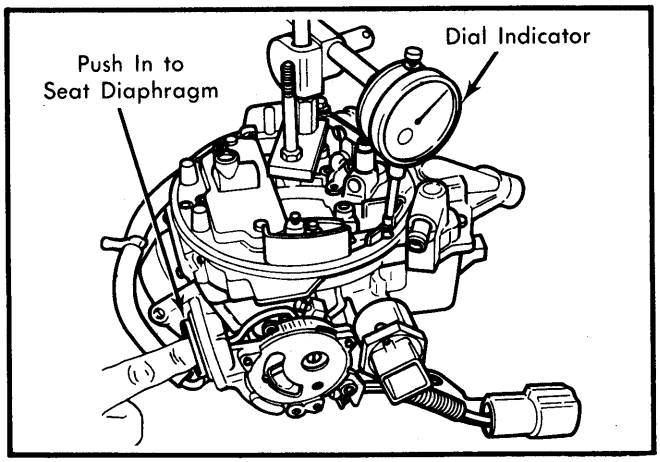

Fig. 9 Choke Diaphragm "CER 75°F (24°C) Start" Adjustment

3) To adjust, rotate diaphragm until dial indicator reading is within specifications. Turn diaphragm to align holes of diaphragm and casting. Install diaphragm cover.

4) Do not remove dial indicator or reset it to zero. Depress choke control diaphragm by pushing in diaphragm rod until diaphragm bottoms out. *See Fig. 10.* Rotate thermostat lever clockwise until choke shaft lever pin touches fast idle intermediate lever. Dial indicator should read "CER 0°F (−18°C) Run" specification.

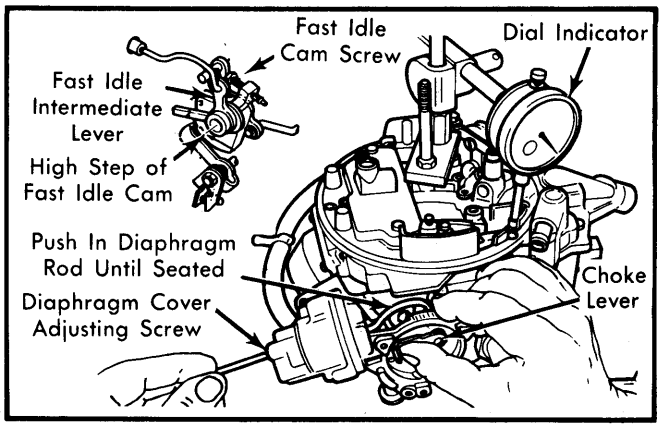

Fig. 10 Choke Diaphragm "CER 0°F (−18°C) Run" Adjustment

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5) To adjust, remove adjusting screw plug. Rotate adjusting screw clockwise to increase reading or counterclockwise to decrease reading. Install adjusting screw plug, diaphragm cover and choke cap. Remove dial indicator.

FAST IDLE CAM

Standard Procedure – 1) Remove choke cap as described under OVERHAUL in this article. Place fast idle lever on specified step of fast idle cam. First step is highest step. Hold throttle closed with rubber band to maintain cam position. See *Fig. 11*.

2) Install stator cap (T77L-9848-A or equivalent). Rotate stator cap clockwise until lever contacts adjusting screw. Choke cap should be on specified notch. To adjust, turn fast idle cam adjusting screw until index mark on stator cap aligns with specified choke casting notch.

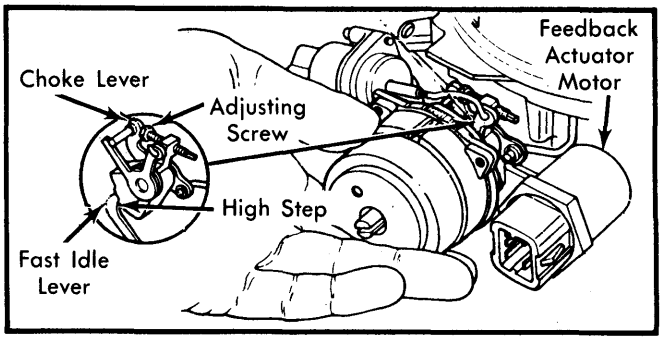

Fig. 11 Fast Idle Cam Adjustment (Standard Procedure)

NOTE – *Fast idle cam adjusting screw is coated with Loctite at factory.*

3) After adjustment, remove stator cap and reinstall choke cap. Seal fast idle cam adjusting screw with Loctite. Remove rubber band.

Alternate Procedure – 1) Using a dial indicator, set the "CER 75°F (24°C) Run" setting to specification. See *Fig. 6*. Do not remove dial indicator or reset it to zero. Hold throttle slightly open to allow free linkage movement.

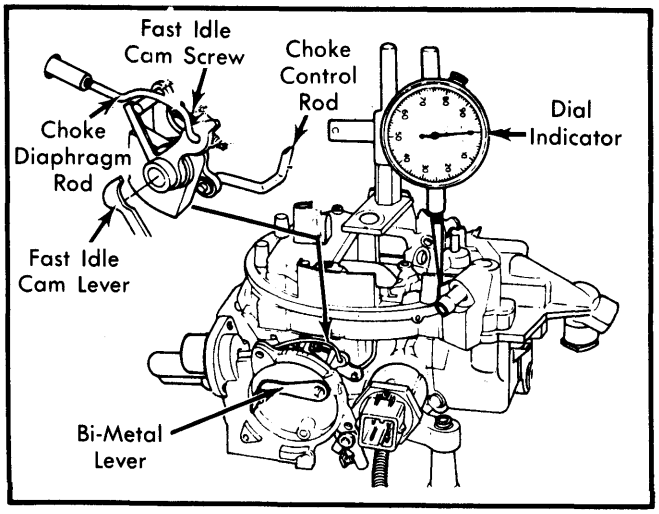

Fig. 12 Fast Idle Cam Adjustment (Alternate Procedure)

2) Place fast idle cam lever on specified step of fast idle cam. Rotate bi-metal lever until choke shaft lever and fast idle cam screw touch. Dial indicator should read specified setting. See *Fig. 12*.

3) To adjust, turn fast idle cam screw. Repeat steps **1)** and **2)**. After adjustment, seal fast idle cam screw with Loctite. Remove dial indicator and replace choke cap.

AUTOMATIC CHOKE

NOTE – *Choke cap is retained with tamper-proof screws. To remove choke cap, see procedure under OVERHAUL in this article.*

1) Apply ½" bead of epoxy sealer to each side of choke cover gasket, next to 3 screw bosses. Install gasket and choke cover with new break-away screws.

2) Rotate cover assembly in "Rich" or "Lean" direction to align notch on choke cover with notch on choke housing. Tighten break-away screws until heads break off.

NOTE – *Ensure that bimetal spring tab is engaged in slotted choke shaft lever.*

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 upper body screws and upper body. Note position of 2 long screws. Remove float hinge pin and float assembly. Remove float bowl gasket. Remove fuel inlet valve, seat and gasket.

3) Remove accelerator pump link retaining screw and nut, pump adjusting nut and accelerator pump link. Remove accelerator pump overtravel spring, circlip and washer. Remove accelerator pump rod and dust seal.

4) Remove CER adjusting nut by turning counterclockwise. Remove choke hinge pin circlip and slide pin out of casting. Remove CER, lever, adjusting swivel CVR and adjusting nut as an assembly. Disassemble CER assembly only if parts require replacement.

NOTE – *CER adjusting nut is coated with epoxy. This may cause breakage of choke control rod. Choke control rod has a circular undercut designed to break at 10 INCH Lbs. (1 N·m). If breakage occurs, new service swivel assembly must be installed.*

5) Slide CER out of upper body casting. Remove 2 venturi valve cover screws. Turn carburetor upside down while holding venturi cover in place. Remove venturi valve cover, gasket and bearings as an assembly.

6) Using pivot pin remover/installer (T77P-9928-A or equivalent), press tapered plugs out of venturi valve pivot pins. Push venturi pivot pins out and slide venturi valve to rear until free of casting.

7) Block venturi valve wide open. Remove metering rod pins (outer side of venturi valve), metering rods and springs.

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

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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 jet wrench (T77L-9533-A or equivalent), turn each metering jet clockwise, counting number of turns to lightly seat each jet. Record number of turns to nearest ¼ turn. Turn jets counterclockwise to remove. Remove "O" rings. Mark or identify each jet as to choke or throttle side.

10) Remove accelerator pump plunger assembly and disassemble as required. Remove venturi valve adjusting screw from throttle side of venturi valve. If necessary for cleaning, remove ⅛" pipe plug from fuel inlet casting boss.

Main Body – 1) Remove venturi valve diaphragm cover screws. Tap cover lightly and remove cover, spring guide and spring. Carefully loosen diaphragm and slide out of main body.

2) Turn carburetor upside down, holding hand under carburetor to catch accelerator pump check ball and weight. Place carburetor on clean surface. Remove 5 throttle body retaining screws and throttle body.

3) Using a 1⅝" socket, remove feedback actuator motor, gasket, pintle valve and pintle spring.

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

NOTE – *Choke cap is held in position with tamper-proof screws. To remove choke cap, center punch each retaining screw head. Using a ¼" drill bit, drill each screw head deep enough to remove choke cap retainer. Remove choke cap by inserting sharp, flat chisel between choke gasket layers (choke cap and gasket are epoxyed in position). Remove choke cap. Using small pliers, remove remaining portion of tamper-proof screws.*

2) Remove choke thermostatic lever screw and lever. Slide choke shaft and lever assembly out of casting. Remove fast idle cam and circlip. Remove fast idle cam adjusting screw. Remove choke diaphragm rod-to-fast idle intermediate lever circlip. Disengage choke unloader (if equipped). Remove fast idle intermediate lever.

NOTE – *Choke control diaphragm cover may be held in position with tamper-proof screws. Use same procedure as choke cap removal. Remove screws, cover and return spring.*

3) Remove choke control diaphragm and rod. Disconnect rod from diaphragm. If necessary to remove choke housing bushing, file off staking from around bushing. Carefully press bushing out while supporting casting.

4) Remove (TSP Off) idle speed adjusting screw. Remove throttle shaft nut (and spring if equipped). Remove fast idle adjusting lever, nylon bushing, fast idle lever and fast idle adjusting screw. Remove choke unloader (if equipped).

5) To remove throttle position sensor, remove large circlip. Scribe a mark across throttle position sensor and throttle body for reassembly reference. Remove sensor retaining screws, sensor and roll pin.

6) If necessary to remove throttle plates, lightly scribe alignment mark along shaft. Identify throttle plate for choke or throttle side. Remove throttle plate screw staking. Remove screws and throttle plates.

7) To remove throtte shaft, drive limiter lever stop pin down until it is flush with shaft. Remove circlip next to venturi valve limiter lever. Slide throttle shaft out of casting.

8) 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. Slide throttle shaft into position. Install circlip.

2) Place throttle plates 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 ⅛" of pin exposed. Install roll pin and slide throttle position sensor over shaft. Engage roll pin with socket on sensor and hold firmly. Rotate sensor clockwise to align marks made during disassembly. Install retaining screws and circlip.

4) Install fast idle lever, nylon bushing, fast idle adjusting lever, throttle shaft retaining nut (and spring if equipped) and fast idle adjusting screw. Install choke unloader, if equipped. Install (TSP Off) idle speed adjusting screw.

5) If choke housing bushing was removed, carefully press bushing into housing. Support housing and stake bushing after pressing. Install fast idle intermediate lever, large circlip, fast idle cam and adjusting screw. Install choke unloader lever (if equipped).

6) Slide choke control diaphragm rod into position. Engage rod and circlip. Slide choke shaft lever and pin assembly into casting. Install choke thermostatic lever and screw. Install choke control diaphragm spring, cover and new break-away screws. Install throttle control device and bracket.

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.

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.*

2) Slide venturi valve diaphragm into position. Install diaphragm spring, spring guide, cover and cover screws. Install venturi valve diaphragm adjustment screw (final adjustment made on vehicle). Install pintle spring, gasket, pintle valve and feedback actuator motor.

Upper Body – 1) Install ⅛" pipe plug in fuel inlet boss. Install venturi valve limiter screw in venturi valve. Lubricate "O" rings with mild soapy solution and install "O" rings on main metering jets.

2) Using jet wrench used during disassembly, install main metering jets in correct holes. Turn jets clockwise until they are

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MOTORCRAFT MODEL 7200 VV 2-BARREL (Cont.)

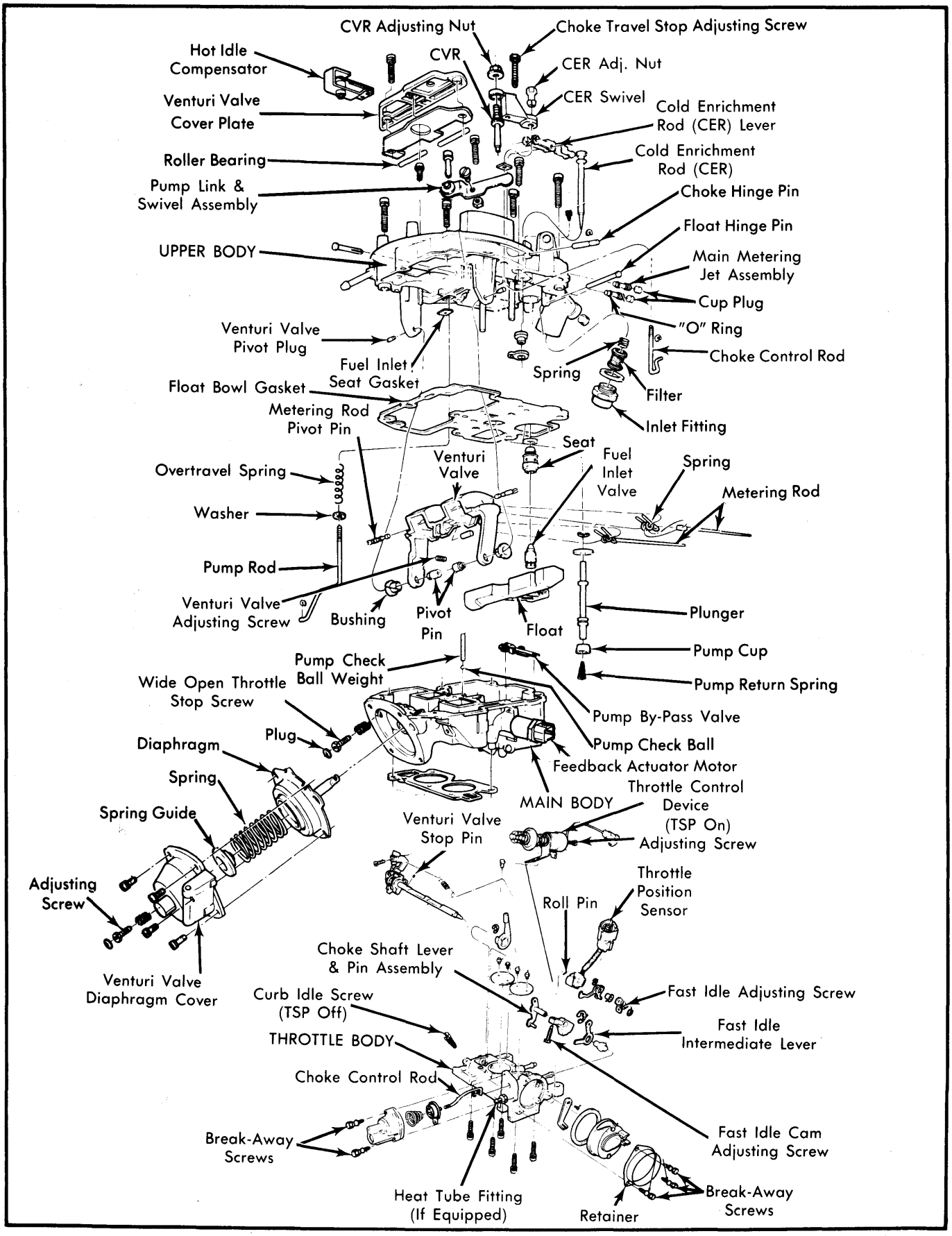

Fig. 13 Exploded View of Motorcraft Model 7200 VV Carburetor

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MOTORCRAFT MODEL 7200 VV 2-BARREL (Cont.)

lightly seated in casting. Now turn each jet counterclockwise number of turns recorded during disassembly.

3) Using plug driver tool (T77L-9533-C), drive main jet plugs into recesses in casting. Tap tool lightly until tool bottoms on face of 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 valve cover plate roller bearings, gasket and attaching screws. Tighten screws. Install accelerator pump operating rod and dust seal. Attach circlip and washer. Slide accelerator pump overtravel spring onto rod.

7) Insert accelerator pump lever and swivel assembly into pump link. Install pump link screw and nut. Install accelerator pump adjusting screw. Install fuel inlet valve seat gasket, seat and valve. Install float bowl gasket.

8) Install float assembly and retain with float hinge pin. Assemble accelerator pump return spring, cup and plunger. Place pump piston assembly in position in upper body hole.

9) Install upper body to main body. Hold pump piston assembly with finger and guide it into pump cavity in main body. If choke control rod broke during disassembly, insert new rod prior to installing upper body.

NOTE – *Venturi valve diaphragm stem must engage venturi valve.*

10) 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.

11) Slide CER into upper body. Assemble CER travel stop screw, lever adjusting swivel, CVR and adjusting nut. Install assembly on carburetor. If original assembly is being installed, assemble CER lever to swivel. Position the assembly and tighten CER nut enough to seat assembly.

12) Install choke hinge pin and circlip. Install choke control rod. Perform CER and CVR adjustments. Check and adjust fast idle cam. Install choke cap gasket and choke cap. Perform choke adjustment.

NOTE – *Ensure bi-metal spring tab is engaged in slotted choke shaft lever.*

13) Engage accelerator pump operating rod and choke control rod. Install circlips. Install venturi valve limiter stop screw and tighten retention spring (omitted when assembling main body). Perform venturi valve wide open throttle adjustment. Install plug after adjustment. Adjust accelerator pump lash.

CARBURETOR ADJUSTMENT SPECIFICATIONS

Application	Accel. Pump Setting	Fuel Level Setting	Float Drop Setting	Cold Enrichment Rod Specifications				Control Vacuum Regulator Setting	Fast Idle Cam Cam			Venturi Limiter	
				0°F Start	0°F Run	75°F Start	75°F Run		Fast Idle Cam Setting		Choke Cover Setting	Maximum Open	Wide Open on Throttle
Ford Motor Co.													
E1AE-SA	.010"①	1-3/64"	1-15/32"	.490"	.350"	.460"	.125"②	.250"	.360"	2	1 Rich	1.00"	.400"
E1AE-ACA	.010"①	1-3/64"	1-15/32"	.490"	.350"	.445"	.125"②	.250"	.360"	2	Index	1.00"	.400"
E1AE-AGA	.010"①	1-3/64"	1-15/32"	.490"	.350"	.460"	.125"②	.250"	.360"	2	Index	1.00"	.400"
E2AE-LB	.010"①	1-3/64"	1-15/32"	.525"	.350"	.445"	.125"②	.300"	.360"	2	Index	1.00"	.400"
E2AE-MA	.010"①	1-3/64"	1-15/32"	.490"	.350"	.460"	.125"②	.250"	.360"	2	1 Rich	1.00"	.400"
E2AE-MB	.010"①	1-3/64"	1-15/32"	.490"	.350"	.460"	.125"②	.250"	.360"	2	1 Rich	1.00"	.400"
E2AE-NA	.010"①	1-3/64"	1-15/32"	.525"	.350"	.445"	.125"②	.300"	.360"	2	Index	1.00"	.400"
E2AE-RA	.010"①	1-3/64"	1-15/32"	.490"	.350"	.445"	.125"②	.300"	.360"	2	Index	1.00"	.400"
E2AE-TA	.010"①	1-3/64"	1-15/32"	.490"	.350"	.445"	.125"②	.250"	.360"	2	Index	1.00"	.400"
E2AE-TB	.010"①	1-3/64"	1-15/32"	.490"	.350"	.445"	.125"②	.250"	.360"	2	Index	1.00"	.400"
E2DE-NA	.010"①	1-3/64"	1-15/32"	.490"	.350"	.460"	.125"②	.250"	.360"	2	Index	1.00"	.400"
E2SE-DA	.010"①	1-3/64"	1-15/32"	.525"	.350"	.475"	.125"②	.075"	.360"	2	Index	1.00"	.400"
E2SE-DB	.010"①	1-3/64"	1-15/32"	.525"	.350"	.475"	.125"②	.075"	.360"	2	Index	1.00"	.400"
E25E-AC	.010"①	1-3/64"	1-15/32"	.525"	.350"	.475"	.125"②	.075"	.360"	2	Index	1.00"	.400"
E25E-FA	.010"①	1-3/64"	1-15/32"	.525"	.350"	.445"	.125"②	.250"	.360"	2	Index	1.00"	.400"
E25E-GA	.010"①	1-3/64"	1-15/32"	.525"	.350"	.445"	.125"②	.250"	.360"	2	Index	1.00"	.400"
E25E-GB	.010"①	1-3/64"	1-15/32"	.525"	.350"	.445"	.125"②	.250"	.360"	2	Index	1.00"	.400"

① – Plus 1 turn counterclockwise.
② – At index postion. See adjustment procedure.

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