HOLLEY MODEL 6500 2-BARREL

CARBURETOR APPLICATION

FORD MOTOR CO.

Application	Ford Motor Co. Part No.①
2.3L (140") 2-Bbl.	
Man. Trans.	
With A/C	E1ZE-RA
Without A/C	E1ZE-SA
Auto. Trans.	
With A/C	E1DE-EA
Without A/C	E1DE-DA

① – Ford basic part number is 9510.

CARBURETOR IDENTIFICATION

Carburetor identification number may be found stamped on side of float bowl or on a metal tag attached to carburetor.

DESCRIPTION

Carburetor is a 2 stage, 2 venturi type with primary venturi smaller in diameter than secondary. Secondary stage is operated by mechanical linkage. Primary stage includes curb idle, accelerator pump, idle transfer, main metering and power enrichment systems. Secondary stage includes secondary idle system, transfer, main metering and power enrichment systems. A single fuel bowl supplies fuel for both stages. All models use an integral-type automatic choke with electric assist heater.

For improved engine starting when engine is warm, all carburetors utilize a vacuum-operated fuel bowl vent valve. This allows fuel vapors to vent into carbon canister when engine is off. With engine running, fuel vapors are vented into air horn of carburetor. All models use integral-type electrically heated choke.

ADJUSTMENT

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

1) With air horn and gasket removed, turn air horn upside down. Allow weight of float to press down against float needle valve. *See Fig. 1.*

2) Measure float level specified clearance between top of float and air horn gasket surface. Clearance can be measured using specified drill or pin gauge.

3) Make sure float tang still rests on float needle when clearance is checked. To adjust, bend tang that contacts float needle.

NOTE – *Do not apply pressure to float needle while checking or changing adjustment.*

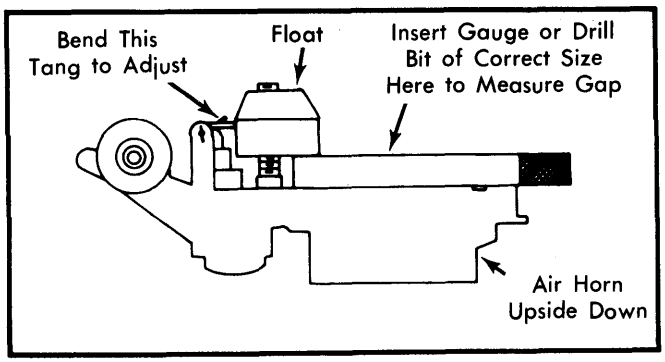

Fig. 1 Adjusting Float Level

FLOAT DROP

1) With air horn and gasket removed, turn air horn right side up. Allow float to hang. Using "T" scale, measure specified float drop from air horn gasket surface to bottom edge of float. *See Fig. 2.*

2) To adjust, bend float tang on float arm that contacts fuel inlet needle seat boss.

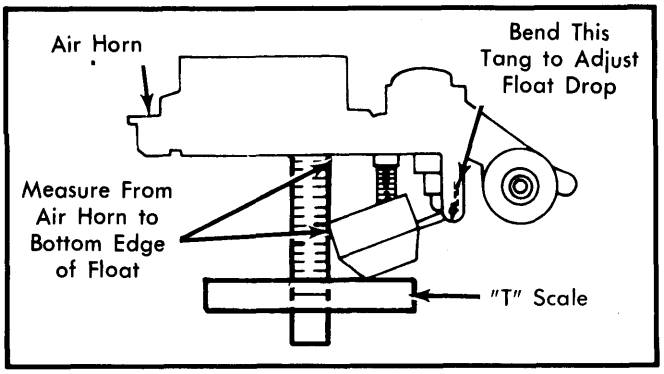

Fig. 2 Adjusting Float Drop

FAST IDLE CAM POSITION

1) Position fast idle speed screw on specified step of fast idle cam against shoulder of next highest step. *See Fig. 3.*

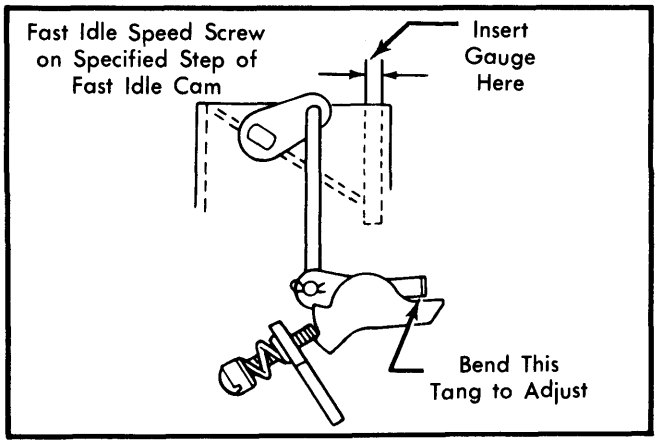

Fig. 3 Adjusting Fast Idle Cam

2) Measure fast idle cam position specified clearance between lower edge of choke valve and air horn wall. Clearance can be measured using a specified drill or pin gauge.

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3) With clearance correct, choke lever tang should just contact lever on fast idle cam. To adjust, bend choke lever tang.

CHOKE VACUUM KICK (INITIAL CHOKE VALVE CLEARANCE)

1) Before making adjustment, perform steps **1)** and **2)** of Automatic Choke adjustment procedures. Then place fast idle speed screw on highest step of fast idle cam. Place rubber band on choke linkage to remove all slack from choke linkage. See *Fig. 4*.

2) Press choke diaphragm stem in toward stop. Measure choke vacuum kick specified clearance between lower edge of choke valve and air horn wall. Clearance can be measured using a specified drill or pin gauge.

3) To adjust, align a 1/8" drill on choke pulldown diaphragm cover rivet head and drill only enough to remove rivet head. Repeat for remaining rivet. Using a 1/8" blunt-tipped punch, drive rivet bodies out of choke pulldown diaphragm housing bores.

4) Remove remaining choke pulldown diaphragm cover retaining screw, cover and return spring. Install return spring and new choke pulldown diaphragm cover with one retaining screw and two 1/8 x 1/2 x 1/4" rivets.

5) Install diaphragm adjusting screw so threads are flush with inside of choke pulldown diaphragm cover. Insert a 5/32" Allen wrench in end of adjusting screw. Turn adjusting screw clockwise to decrease clearance and counterclockwise to increase clearance.

6) When adjustment is complete, install new cup plug in end of choke pulldown diaphragm cover. Remove rubber band and perform steps **3)** and **4)** of Automatic Choke adjustment procedure to complete this adjustment.

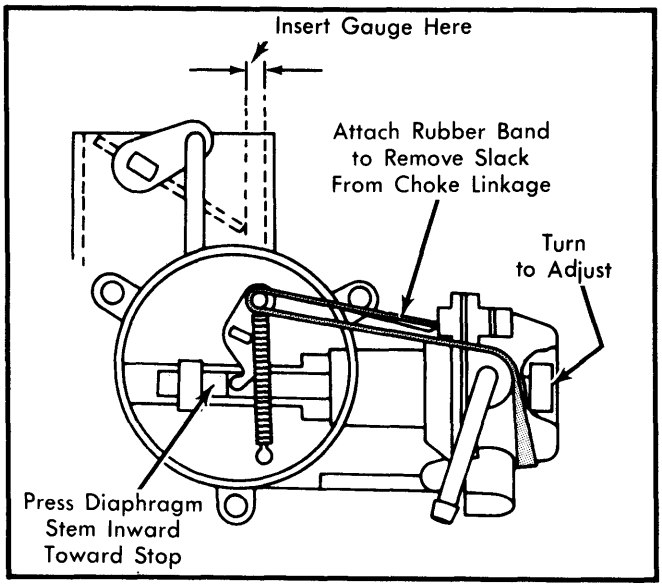

Fig. 4 Adjusting Choke Vacuum Kick

CHOKE UNLOADER

NOTE — *Ford Motor Co. choke unloader clearance cannot be adjusted as it is controlled by the fast idle cam setting.*

SECONDARY THROTTLE STOP SCREW

1) Back off the secondary throttle stop screw until the secondary valve seats in bore. See *Fig. 5*.

2) Turn screw in until it just contacts tab on secondary throttle lever. Now turn screw an additional 1/4 turn.

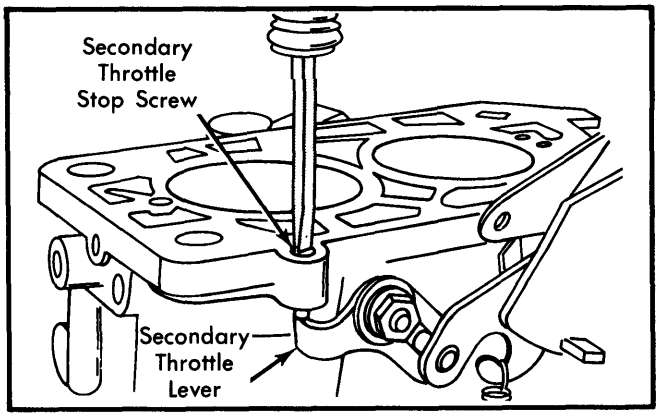

Fig. 5 Adjusting Secondary Throttle Stop Screw

AUTOMATIC CHOKE

1) Align a 1/8" drill on rivet head and drill only enough to remove rivet head. Repeat for remaining rivet. Using a 1/8" blunt-tipped punch, drive rivet bodies out of choke housing bores.

2) Remove remaining choke cover retainer ring screw. Remove retainer ring, choke cover and plastic index plate with locating tab as an assembly.

3) Install plastic index plate with locating tab in slot of choke housing. Install choke cover making sure to engage bimetal loop on choke shaft lever. Install choke cover retainer ring with 1 retaining screw.

4) Rotate choke cover to engage slot with locating tab on plastic index plate. Install two 1/8 x 1/2 x 1/4" rivets and tighten choke cover retaining screw.

OVERHAUL

DISASSEMBLY

Air Horn — 1) Pry choke rod loose from choke housing lever. Remove air horn screws and lock washers. Separate air horn from main body.

2) Disconnect choke rod from choke lever. Remove choke rod and dust seal. Remove float hinge pin. Remove float and fuel inlet needle. Remove fuel inlet needle seat and gasket.

3) Remove 3 bowl vent valve cover screws and remove cover. Remove clip from bowl vent valve diaphragm stem. Remove retainer, spring (if equipped) and diaphragm.

4) Pry float bowl vent lever pivot toward fuel inlet seat. Remove pivot pin and vent lever.

5) On all models remove power enrichment valve screws and remove power enrichment diaphragm. Remove idle speed solenoid (if equipped). Remove fuel inlet fitting, gasket and filter (if equipped).

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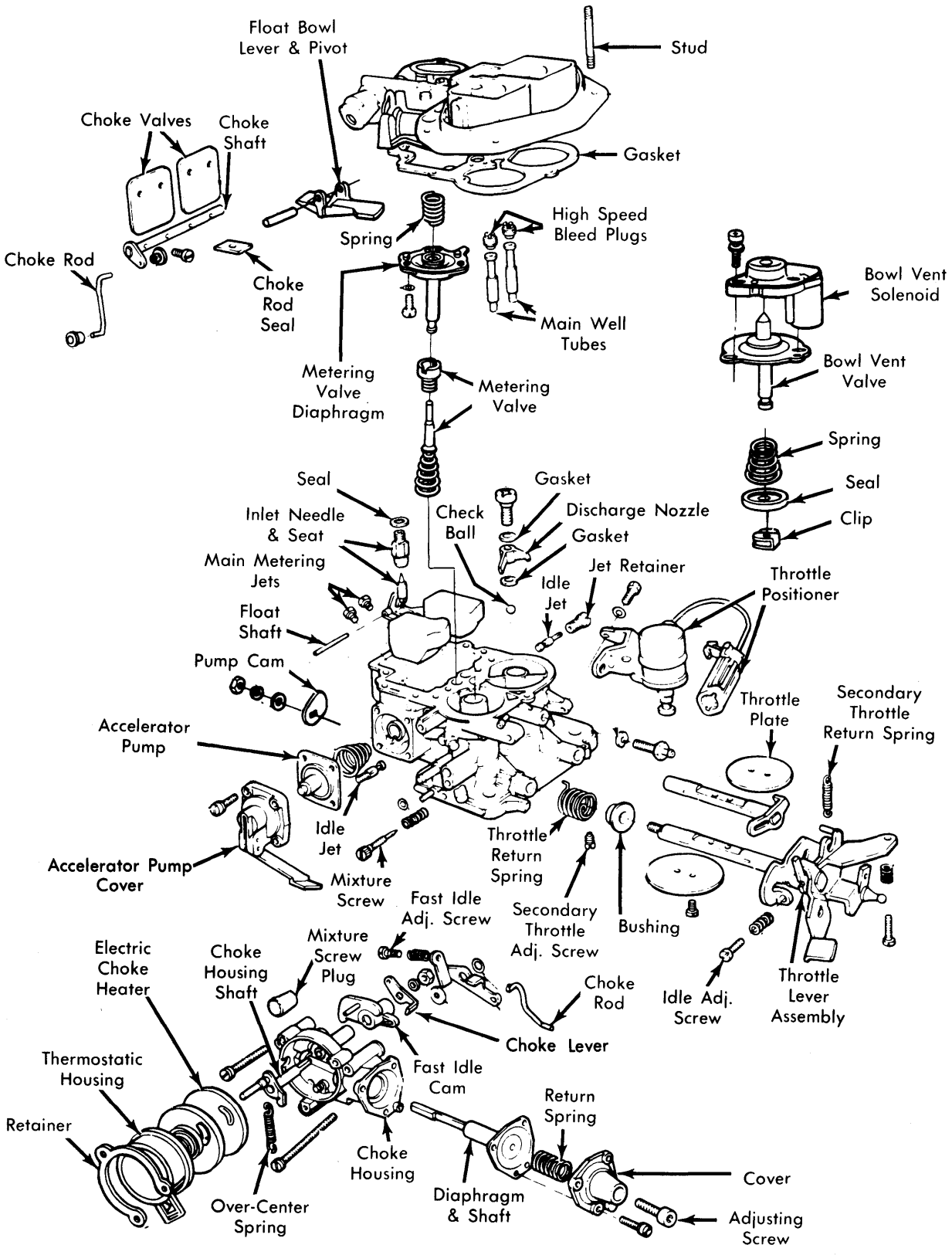

Fig. 6 Exploded View of Holley 6500 2-Barrel Carburetor

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Main Body – 1) Remove choke cover rivets and retaining screw. Remove retainer ring and choke cover with coil. Remove choke pulldown diaphragm cover rivets and retaining screw. Remove cover and return spring.

2) Rotate cam on choke shaft to allow diaphragm shaft to be removed. Remove choke housing screws, pull housing away, and disconnect fast idle rod. Remove housing.

3) Remove "O" ring from vacuum passage in choke housing. Remove choke housing shaft nut, lock washer, lever, spring retainer, and fast idle cam from shaft. Remove screw and lock washer from fast idle lever. Remove bushing and washer, then remove fast idle lever and washer from housing.

4) Remove 4 accelerator pump housing screws. Remove accelerator pump diaphragm and spring. Remove accelerator pump discharge nozzle, then turn main body over and catch check ball.

5) Remove primary and secondary high speed bleed plugs. Note size and position for reassembly. Turn main body upside down and catch primary and secondary main well tubes. Note size and position for reassembly.

6) Remove primary and secondary main jets. Note size and position for reassembly. Remove power valve and gasket.

7) Remove secondary idle jet retainer from side of carburetor. Pull secondary idle jet out.

8) Invert throttle body, and position on holding fixture with manifold side up. Using center punch and small hammer, center punch a mark between 1/4" and 9/32" in from edge of throttle body housing. Align a 3/16" drill on center punch mark and drill hole through casting into space between idle mixture needle and hardened steel plug.

9) Insert a 3/32" diameter pin punch against steel plug and gently tap steel plug out of throttle body housing. Count exact number of turns required to gently seat mixture screw (for reassembly reference). Remove idle mixture screw and spring.

10) Remove secondary operating lever and return spring. Remove nut and lock washer from end of primary throttle shaft. Remove accelerator pump cam. Remove idle speed screw and spring from throttle lever.

11) On models equipped with hot idle compensator, remove 2 screws from hot idle compensator cover and remove with gasket.

CLEANING & INSPECTION

- Do not immerse plastic or rubber parts in solvent. Do not immerse diaphragm assemblies, dashpot or solenoid in solvent.
- Blow out all passages with compressed air. Do not use wire or drill bit to clean carburetor orifices.
- Inspect all parts for wear, cracks, nicks or burrs, and damage. Replace parts as necessary.
- After cleaning with solvent, wash all parts in hot water and blow dry with compressed air.

REASSEMBLY

Reassemble carburetor in reverse order of disassembly, noting the following:

1) Use new gaskets and seals. Make sure that new gaskets fit correctly and that all holes and slots are punched through and correctly located.

2) Reinstall main jets, bleed jets, main well emulsion tubes and idle jets in proper locations. Install power valve diaphragm, aligning 3 screw holes in diaphragm, body and cover. Hold stem and spring compressed against fuel bowl cover while installing and tightening screws.

CARBURETOR ADJUSTMENT SPECIFICATIONS

Application	Float Level Setting	Float Drop Setting	Fast Idle Cam Setting	Choke Vacuum Kick Setting	Choke Unloader Setting	Auto. Choke Setting
Ford Motor Co.						
E1DE-DA	.41-.51"	1.00"	.098-.138"	.217-.256"	.394"	.....
E1DE-EA	.41-.51"	1.00"	.098-.138"	.217-.256"	.394"	.....
E1ZE-RA	.41-.51"	1.00"	.098-.138"	.217-.256"	.394"	.....
E1ZE-SA	.41-.51"	1.00"	.098-.138"	.217-.256"	.394"	.....