1982 Motorcraft Carburetors

MOTORCRAFT MODEL 2150 2-BARREL

CARBURETOR APPLICATION

FORD CARBURETOR NO.

Application	Man. Trans.	Auto. Trans.
3.8L V6		
Nationwide		
Without A/C	E2TE-CGA	E2TE-CFA, E2TE-CYA
With A/C	E2TE-BNA	E2TE-BMA, E2TE-DAA
4.2L 6-Cyl.		
Nationwide	E2TE-BEA	E2TE-BLA
5.0L V8		
Nationwide	E2TE-AYA, E2TE-BEA	E2TE-BBA
Federal		E2TE-BAA, E2TE-BFA, E2TE-DRA, E2UE-JA, E2UE-AHA
High Alt.	E2TE-CJA	E2TE-CKA
5.8L (W) V8		
Nationwide	E2UE-AAA, E2UE-ANA	E2UE-ABA, E2UE-AKA
Federal	E2UE-FA	E2UE-FA
High Alt.	E2UE-HA	E2UE-HA
6.6L V8		
Federal	E2TE-BHA, E2TE-DCA	E2TE-BKA, E2TE-DDA
Calif.	E2TE-BGA, E2TE-DBA	E2TE-BJA, E2TE-DEA

JEEP CARBURETOR NO.

Application	Man. Trans.	Auto. Trans.
6.0L V8		
Federal	2RHM2	2RHA2

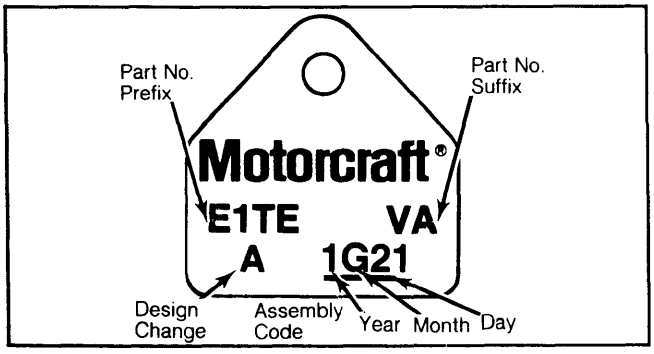
CARBURETOR IDENTIFICATION

Ford

A carburetor identification tag is attached to carburetor. The tag contains part number prefix and suffix. Basic part number for all carburetors is 9510.

A design change code (if any) is also stamped on the tag. An assembly date code (year, month and day) is also stamped on the tag. *See Fig. 1.*

Fig. 1: Ford Carburetor Identification Tag

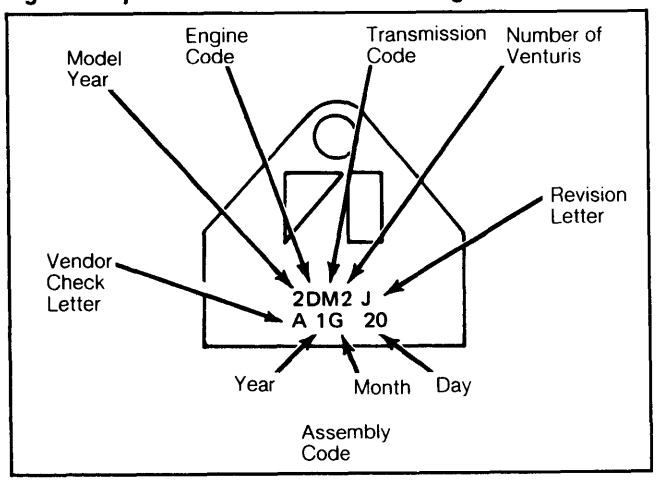


This identification tag is attached to Ford carburetors.

Jeep

A carburetor identification tag is attached to carburetor. The tag contains the Jeep carburetor list number. An assembly date code (year, month and day) is also stamped on the tag. *See Fig. 2.*

Fig. 2: Jeep Carburetor Identification Tag



This identification tag is attached to Jeep carburetors.

DESCRIPTION

The Motorcraft 2150 carburetor has 2 main assemblies: the air horn and main body.

The air horn contains choke plate, fuel bowl vent, and hot idle compensator. The main body houses throttle plate, accelerator pump assembly, float assembly, power valve and fuel bowl.

Each bore contains main and boost venturis, main fuel discharge, accelerator pump discharge, idle fuel discharge and throttle plate.

On some applications, booster venturis contain variable high speed bleed control system. This system allows control of air/fuel mixture for improved high speed operation and low speed responses.

Vehicles sold for high altitude use (above 4000 ft. or 1219 m) contain an altitude compensator. This circuit compensates for thinner air by metering an additional amount of air into the air/fuel mixture, preventing an over-rich situation. An aneroid (automatic device) reacts to atmospheric pressure and overrides the compensation feature at lower altitudes.

ADJUSTMENT

NOTE: For all on-vehicle adjustments, see TUNE-UP SERVICE PROCEDURES.

FLOAT LEVEL (DRY SETTING)

NOTE: Dry float setting is a preliminary adjustment only. Final adjustment (wet setting) must be made after carburetor is installed on vehicle.

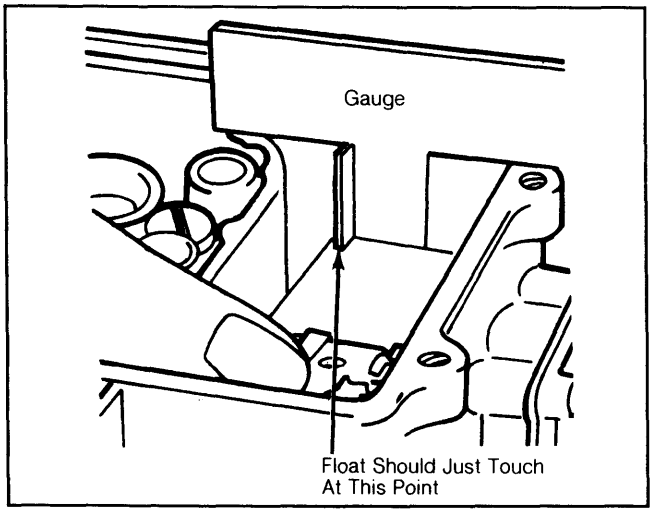
1) Remove float bowl. Hold upside-down. Float is adjusted correctly if top of float is parallel with float bowl. *See Fig. 3.*

Copyright (c) 2001 Mitchell Repair Information Company

1982 Motorcraft Carburetors

MOTORCRAFT MODEL 2150 2-BARREL (Cont.)

Fig. 3: Float Level Adjustment (Dry Setting)



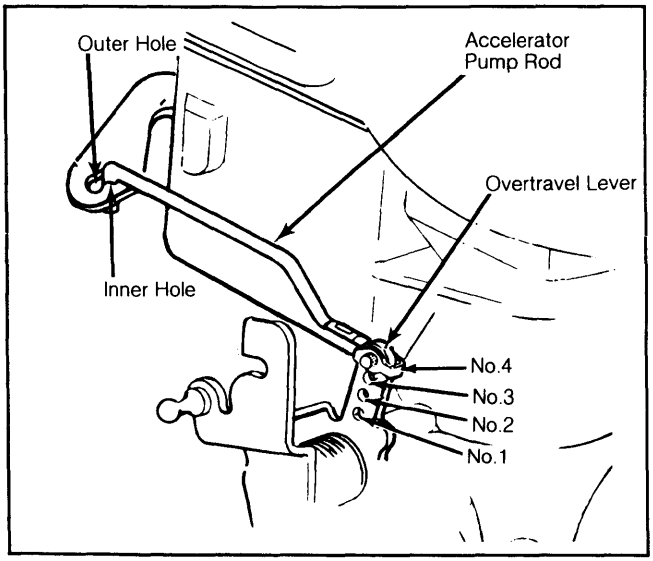
This is a preliminary setting; final adjustment must be made with carburetor installed on engine.

ACCELERATOR PUMP STROKE

NOTE: Accelerator pump stroke has been preset at factory. Setting should not be changed. If original setting has been changed, adjust as follows.

Additional holes are provided for different engine applications. For normal operations, accelerator pump rod should be in the inner hole of pump lever. To adjust, remove connecting rod retaining clip. Install connecting rod into specified hole of overtravel lever. *See Fig. 4.*

Fig. 4: Accelerator Pump Stroke



Ensure connecting rod is installed in correct hole of overtravel lever and pump lever.

CHOKE PULL-DOWN

NOTE: Most applications have a tamper-proof choke, incorporating a sealed pull-down motor and break-away choke cap screws. Adjustments given are used when a major overhaul is performed or if components are damaged.

1) Loosen choke cover retainers. Open throttle and rotate choke cover until choke valve is held closed. Tighten choke cover.

2) Using an external vacuum source, apply vacuum to hold choke diaphragm against set screw. Do not apply pressure to linkage.

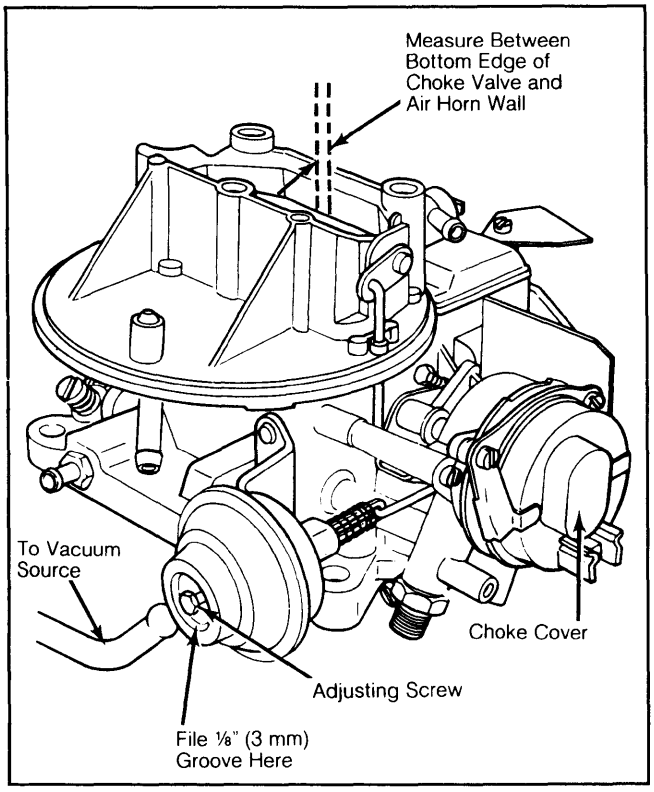
NOTE: If vacuum is applied to choke diaphragm with a hand vacuum pump, an air leak may be detected. This is normal.

3) Using a specified drill or pin gauge, measure clearance between lower edge of choke valve and air horn.

4) If adjustment is required, file a ⅛" (3 mm) deep recessed groove ¼" (6 mm) behind edge of adjusting screw end of diaphragm.

5) Using an awl angled toward plug, drive plug out. Turn adjusting screw until specified clearance is obtained. *See Fig. 5.*

Fig. 5: Adjusting Choke Pull-Down Clearance



If adjustment is changed, fast idle cam position must be checked.

6) After adjustment, reinstall plug and seal with epoxy. If adjustment was changed, check fast idle cam position.

FAST IDLE CAM POSITION

NOTE: Check choke vacuum pull-down adjustment before adjusting fast idle cam position.

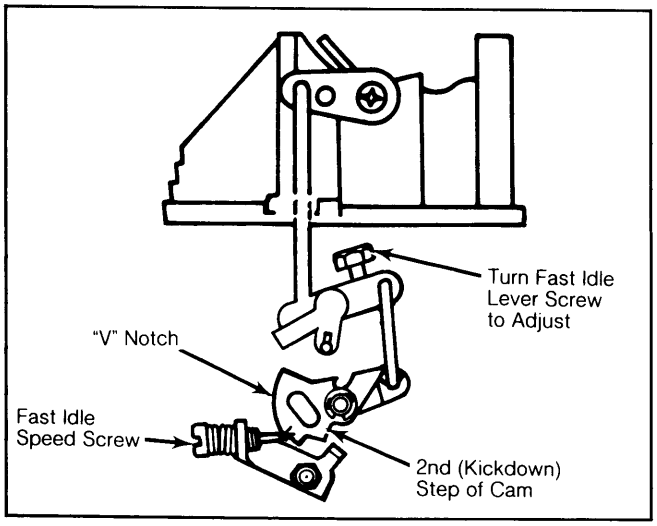
Copyright (c) 2001 Mitchell Repair Information Company

MOTORCRAFT MODEL 2150 2-BARREL (Cont.)

1) Perform steps **1)** and **2)** of Choke Pull-Down adjustment.

2) On Ford models, open and close throttle. Fast idle cam should drop to 2nd (kickdown) step. Fast idle screw should be opposite "V" notch on cam. *See Fig. 6.*

Fig. 6: Ford Fast Idle Cam Position Adjustment

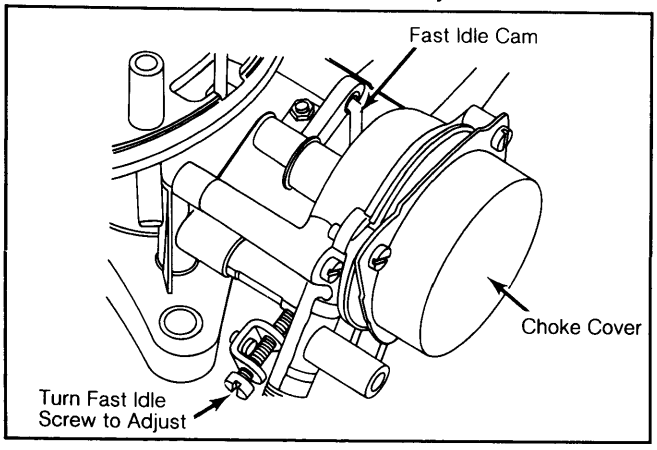


Perform vacuum pull-down adjustment before adjusting fast idle cam position.

3) To adjust, turn fast idle lever screw to align fast idle speed screw with "V" notch. Screw is located in plastic fast idle cam lever. Reset choke.

4) On Jeep models, push down on fast idle cam lever until fast idle speed screw is in contact with 2nd step and against shoulder of high step. *See Fig. 7.*

Fig. 7: Jeep Fast Idle Cam Position Adjustment



Perform vacuum pull-down adjustment before adjusting fast idle cam position.

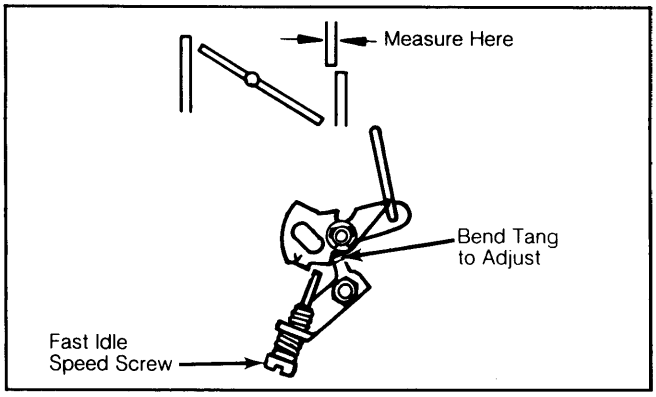
5) To adjust, turn fast idle lever screw. Reset choke to proper adjustment notch.

CHOKE UNLOADER

1) Hold throttle fully open, and lightly press choke valve toward closed position. Using a specified drill or pin gauge, measure specified choke unloader clearance between lower edge of choke valve and air horn wall.

2) To adjust, bend choke unloader tang that contacts fast idle cam. Bend tang toward cam to increase clearance and away from cam to decrease clearance. Do not bend unloader tang downward from a horizontal plane. *See Fig. 8.*

Fig. 8: Choke Unloader Adjustment



Do not bend unloader tang downward from a horizontal plane.

3) After correct adjustment is obtained on Jeep models, open throttle until unloader tang is directly under fast idle cam pivot. Make sure there is .070" clearance, between unloader tang and fast idle cam.

4) On all models, operate throttle after adjustment. Make sure that tang does not stick or bind against any portion of the linkage or carburetor casting.

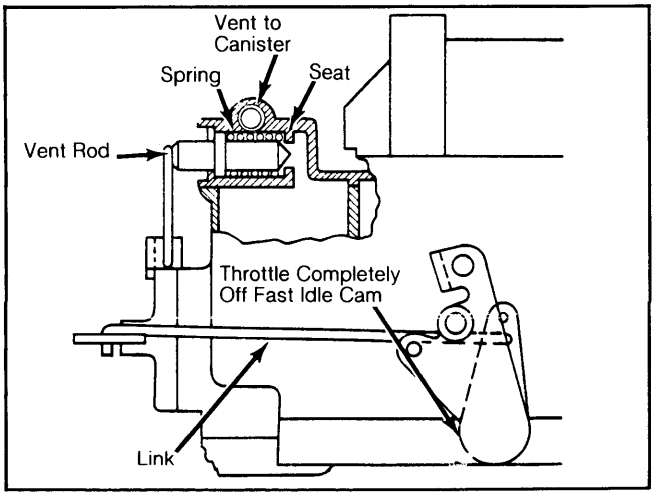
AUTOMATIC CHOKE

Loosen choke thermostat cover retaining screws. Rotate cover assembly in "Rich" or "Lean" direction to align reference marks. Tighten cover screws.

FUEL BOWL VENT

NOTE: This is not a precise adjustment. It is made only to ensure that vent is open at idle and that it closes as throttle opens. Adjustment can be made with carburetor on or off vehicle.

Fig. 9: Fuel Bowl Vent Adjustment



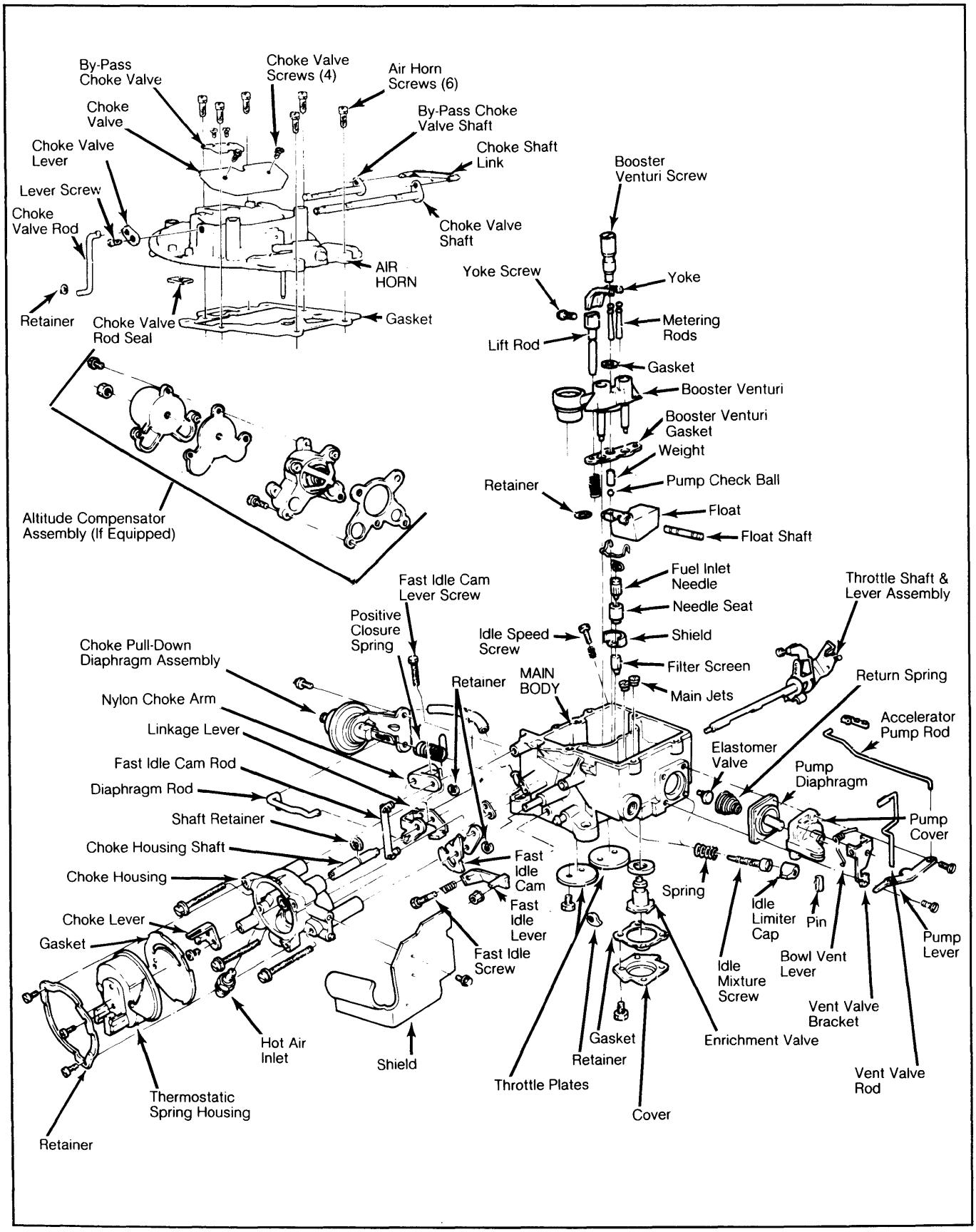
Throttle must be completely off fast idle cam.

Copyright (c) 2001 Mitchell Repair Information Company

1982 Motorcraft Carburetors

MOTORCRAFT MODEL 2150 2-BARREL (Cont.)

Fig. 10: Exploded View of Motorcraft Model 2150 2-Barrel Carburetor



Copyright (c) 2001 Mitchell Repair Information Company

MOTORCRAFT MODEL 2150 2-BARREL (Cont.)

1) If carburetor is installed on vehicle, ensure ignition is off. Throttle must be off fast idle cam.

2) Manually depress stem of bowl vent valve. Measure clearance between end of stem and flat on vent rod. *See Fig. 9.*

3) If clearance is not to specification, bend vent rod at point where it contacts accelerator pump lever. Do not bend accelerator pump lever.

OVERHAUL

DISASSEMBLY

Air Horn

1) Remove air cleaner anchor screw and automatic choke control rod retainer. Remove air horn attaching screws, lock washers, carburetor identification tag and air horn. Remove screw securing choke lever to choke shaft. Remove choke rod and seal from air horn.

2) Remove choke diaphragm assembly. If necessary to remove choke valve, file staking from retaining screws. Remove screws. Slide choke valve out from top of air horn. Remove choke shaft.

3) On models equipped with altitude compensator, remove by-pass choke plate in same way as main choke plate. To remove shaft, remove link retainer and slide shaft out of air horn.

Automatic Choke

1) Remove fast idle cam retainer and thermostatic choke coil housing screws. Remove clamp and gasket.

NOTE: Some models are equipped with break-away screws retaining coil cover to prevent tampering with factory adjustment. To remove break-away screws, align a ¼" (6 mm) drill on head, and drill only enough to remove head. Using an ⅛" (3 mm) punch, drive remaining portion of screw from housing. Repeat for remaining break-away screws.

2) Remove choke housing screws, choke housing, gasket and fast idle cam rod from cam lever. Remove choke lever retaining screw and washer. Remove choke lever and fast idle cam lever.

Main Body

1) Using a screwdriver, pry float shaft retainer from fuel inlet seat. Remove float, float shaft retainer and fuel inlet needle assembly. Remove retainer, float shaft and float damper spring (if equipped) from float lever.

2) Remove fuel inlet needle, seat and filter screen. Using a jet wrench, remove main jets. Remove booster venturi screw, booster venturi, metering rod assembly and gasket. Remove filter screen from booster venturi screw.

3) Invert main body and catch accelerator pump discharge weight and check ball. To disassemble lift rod from booster, remove lift spring retaining clip and spring. Separate lift rod assembly from booster. Do not disassemble metering rod hanger from lift rod.

4) Remove accelerator pump operating rod from overtravel lever and retainer, by pressing ends of retainer together. At the same time, press rod away from retainer until it is free.

5) Remove accelerator pump cover screws. Remove bowl vent rod and bracket, accelerator pump cover diaphragm, and spring. If necessary to remove Elastomer valve, grasp firmly from outside main body and pull out.

NOTE: If tip of Elastomer valve breaks off during removal, make sure it is removed from fuel bowl. Elastomer valve must be replaced, whenever it is removed.

6) Invert main body and remove enrichment valve cover and gasket. Using a box wrench, remove enrichment valve. Remove and discard enrichment valve gasket.

7) Remove mixture needle limiter caps, mixture needles and springs. If necessary, remove nut and washer securing fast idle adjusting lever, and remove lever. Remove throttle positioner solenoid (if equipped).

NOTE: To remove tamper-resistant mixture needle limiter caps, support area under limiter plug and tap cap forward.

8) If necessary to remove throttle plates, mark each plate for reassembly reference. Slide throttle shaft from main body. Mechanical high speed bleed actuator (located between throttle plates in main body) will drop out.

9) On models equipped with altitude compensator, remove 4 attaching screws. Remove aneroid and valve assembly.

CLEANING & INSPECTION

- Use a regular carburetor cleaning solution. Soak components long enough to thoroughly clean all surfaces and passages of foreign matter.
- Do not soak any components containing rubber, leather or plastic.
- Remove any residue after cleaning by rinsing components in a suitable solvent.
- Blow out all passages with dry compressed air.

REASSEMBLY

Use new gaskets and seals. Make sure that new gaskets fit correctly and that all holes and slots are punched through and are correctly located. Replace Elastomer valve if removed from main body. To reassemble carburetor, reverse disassembly procedure and note the following:

1) When installing Elastomer valve (if it was removed), lubricate tip of new valve, and insert tip into center hole of accelerator pump cavity. Insert needle nose pliers in fuel bowl, and pull valve in, until it is fully seated. Cut off excess valve tip at retaining shoulder, and remove tip from fuel bowl.

2) When installing idle mixture needles and springs, turn screws in with fingers until lightly seated. Back screws off seated position 1½ turns for an initial adjustment. Do not install idle screw limiter caps, until final adjustments have been made.

3) If choke coil cover was removed, reinstall using 3 break-away screws. Position gasket, choke cap and retainer. Mount with break-away screws.

Copyright (c) 2001 Mitchell Repair Information Company

1982 Motorcraft Carburetors

MOTORCRAFT MODEL 2150 2-BARREL (Cont.)

CARBURETOR ADJUSTMENT SPECIFICATIONS

Application	Float Level (Dry Setting)	Accel. Pump	Choke Pull-Down	Fast Idle Cam	Choke Unloader	Auto. Choke	Bowl Vent Valve [1]
Ford							
E2TE-AYA	7/16"	#2	.130"	V-Notch	.200"	V-Notch	3/8"
E2TE-BAA	7/16"	#2	.125"	V-Notch	.200"	V-Notch	3/8"
E2TE-BBA	7/16"	#2	.125"	V-Notch	.200"	V-Notch	3/8"
E2TE-BEA	7/16"	#2	.130"	V-Notch	.200"	V-Notch	3/8"
E2TE-BFA	7/16"	#2	.125"	V-Notch	.200"	V-Notch	3/8"
E2TE-BGA	31/64"	#4	.180"	V-Notch	.250"	V-Notch	3/8"
E2TE-BHA	31/64"	#4	.180"	V-Notch	.250"	V-Notch	.....
E2TE-BJA	31/64"	#4	.175"	V-Notch	.250"	V-Notch	3/8"
E2TE-BKA	31/64"	#4	.175"	V-Notch	.250"	V-Notch	.....
E2TE-BLA	7/16"	#2	.125"	V-Notch	.200"	V-Notch	3/8"
E2TE-BMA	7/16"	#2	.125"	V-Notch	.250"	V-Notch	3/8"
E2TE-BNA	7/16"	#2	.125"	V-Notch	.200"	V-Notch	3/8"
E2TE-CFA	7/16"	#2	.125"	V-Notch	.250"	V-Notch	3/8"
E2TE-CGA	7/16"	#2	.125"	V-Notch	.200"	V-Notch	3/8"
E2TE-CJA	7/16"	#2	.130"	V-Notch	.200"	V-Notch	3/8"
E2TE-CKA	7/16"	#2	.120"	V-Notch	.200"	V-Notch	3/8"
E2TE-CYA	7/16"	#2	.125"	V-Notch	.250"	V-Notch	3/8"
E2TE-DAA	7/16"	#2	.125"	V-Notch	.250"	V-Notch	3/8"
E2TE-DBA	31/64"	#3	.180"	V-Notch	.250"	V-Notch	3/8"
E2TE-DCA	31/64"	#3	.180"	V-Notch	.250"	V-Notch	.....
E2TE-DDA	31/64"	#3	.175"	V-Notch	.250"	V-Notch	.....
E2TE-DEA	31/64"	#3	.175"	V-Notch	.250"	V-Notch	.....
E2TE-DRA	7/16"	#2	.125"	V-Notch	.200"	V-Notch	3/8"
E2UE-FA	31/64"	#3	.120"	V-Notch	.200"	V-Notch	3/8"
E2UE-HA	31/64"	#3	.180"	V-Notch	.250"	V-Notch	.050"
E2UE-JA	31/64"	#2	.130"	V-Notch	.200"	V-Notch	3/8"
E2UE-AAA	31/64"	#3	.180"	V-Notch	.250"	V-Notch	.050"
E2UE-ABA	31/64"	#3	.180"	V-Notch	.250"	V-Notch	.050"
E2UE-AHA	31/64"	#2	.130"	V-Notch	.200"	V-Notch	3/8"
E2UE-AKA	31/64"	#3	.180"	V-Notch	.250"	V-Notch	.....
E2UE-ANA	31/64"	#3	.180"	V-Notch	.250"	V-Notch	.....
Jeep							
2RHA2	21/64"	#3	.116"	.076"	.350"	1 Rich	.120"
2RMA2	21/64"	#3	.116"	.076"	.350"	1 Rich	.120"

[1] — Size of fuel bowl vent tube, except E2UE-HA, AAA, ABA, 2RHA2 and 2RMA2; which are bowl vent valve settings.

Copyright (c) 2001 Mitchell Repair Information Company