MOTORCRAFT MODELS 2100 & 2150 2-BARREL

CARBURETOR APPLICATION

FORD (MODEL 2150)

Application	Ford Part No. Man. Trans.	Auto. Trans.
302" V8		
Federal	E0TE-BRA E0TE-DDA	E0TE-BGA, BHA E0TE-CYA, CZA E0UE-ABA
California	E0TE-CFA E0TE-EAA	E0TE-BEA, CVA E0UE-NA
351"M V8		
Federal	E0TE-BSA, CLA	E0TE-BLA, BZA E0TE-CBA
California	E0TE-BYA	E0TE-CCA
351"W V8		
Federal		E0UE-AAA, PA E0UE-SA, TA, VA
California		E0UE-RA, SA, TA
400" V8		
Federal		E0TE-CBA
California	E0TE-EBA	E0TE-CCA

JEEP (MODEL 2100)

Application	Jeep Code No. Man. Trans.	Auto. Trans.
304" V8		
Federal	0DM2J, 0DM2A①	0DA2J
California	0DM2JC	0DA2J2

① — 0DM2A is used on vehicles operated on hilly terrain.

JEEP (MODEL 2150)

Application	Jeep Code No. Man. Trans.	Auto. Trans.
360" V8		
Federal	0RHM2	0RHA2
California		0RHA2

CARBURETOR IDENTIFICATION

Ford Motor Co. — 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.

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

DESCRIPTION

Motorcraft 2100 and 2150 carburetors have 2 main assemblies: air horn and main body. Air horn serves as main body cover and contains choke diaphragm assembly and choke plate. Main body components include: throttle plate, accelerator pump, power valve and fuel bowl. Each bore contains main and boost venturis, main fuel discharge and accelerator pump discharge. On 2150 models, booster venturis contain high speed bleed orifices along with mechanical high speed bleed control system. This control system consists of mechanical lift rods that actuate tapered metering rods in high speed jets.

Some 2150 carburetors used on Ford models and all 2150 carburetors used on Jeep models are equipped with an Altitude Compensator. This unit allows for increased air intake when vehicle is operated in high altitudes. This helps maintain the correct air/fuel mixture. All Ford models are also equipped with an electric assist choke.

ADJUSTMENT

HOT (SLOW) IDLE RPM

See appropriate article in TUNE-UP SERVICE PROCEDURES.

VACUUM THROTTLE KICKER (DECEL THROTTLE MODULATOR)

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 STROKE

Accelerator pump stroke has been preset at the factory. Additional holes are provided for different engine applications. Be sure pump connecting rod is in inner hole of pump actuating lever. Install connecting rod to specified hole of overtravel lever. *See Fig. 1.*

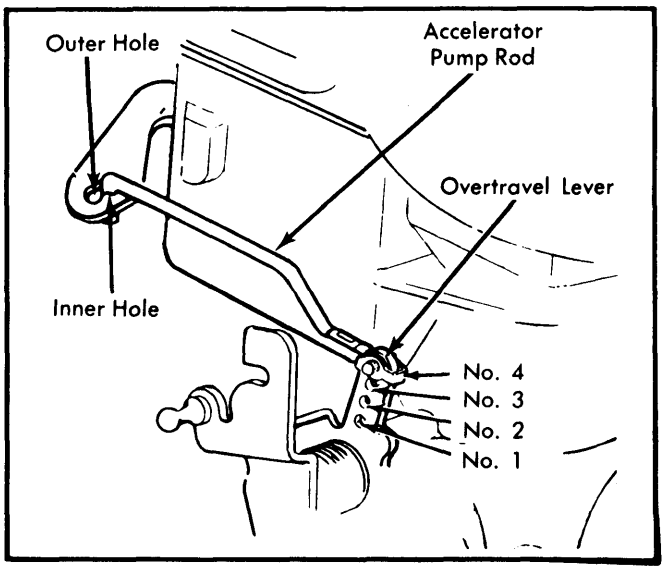

Fig. 1 Accelerator Pump Stroke

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FLOAT LEVEL (DRY SETTING)

NOTE – *Dry float setting is preliminary adjustment only. Final adjustment must be made after carburetor is installed on vehicle.*

With air horn removed, depress float tab to seat fuel inlet needle. Measure distance from top of main body (gasket removed) to float, at a point 1/8" from free end of toe. If adjustment is necessary, bend float tab. See *Fig. 2*.

NOTE – *Do not allow float tab to contact needle while making adjustment as Viton needle tip may be damaged.*

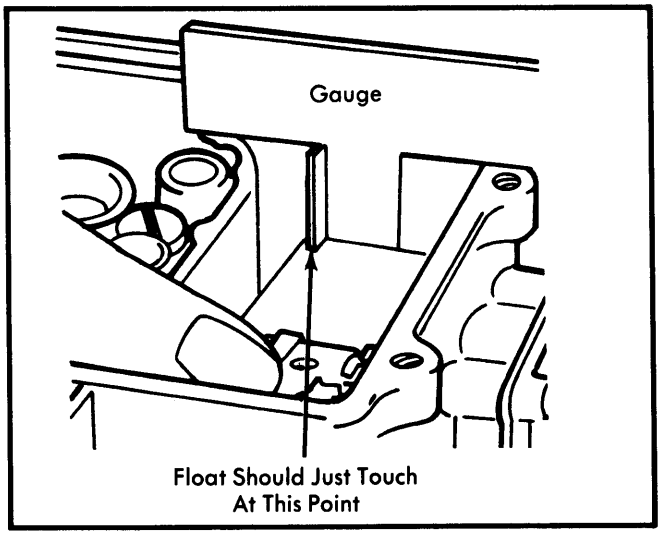

Fig. 2 Adjusting Float Level (Dry Setting)

FLOAT LEVEL (WET SETTING)

1) Warm up engine to operating temperature. Ensure vehicle is on flat, level surface. Stop engine and remove air cleaner and air horn attaching screws. Leave air horn in position on carburetor. Start engine. See *Fig. 3*.

2) Allow engine to idle for a few minutes to stabilize fuel level. With engine idling, remove air horn and gasket.

3) Measure distance, with suitable "T" scale, from machined surface of main body to level of fuel in fuel bowl. Make measurement at least 1/4" away from sides of bowl to be sure of accurate reading.

4) If level is not within specifications, adjustment is needed. Stop engine before adjusting to avoid fire danger from fuel spray. Bend float tab (contacting inlet valve) up to raise fuel level and down to lower level.

5) After each adjustment, install air horn with 2 screws. Start engine and idle long enough for fuel level to stabilize to new setting. Stop engine and recheck fuel level.

6) When correct level is obtained, install new air horn gasket; replace air horn (install I.D. tag). Be sure plastic dust seal on choke rod is positioned properly and does not bind rod.

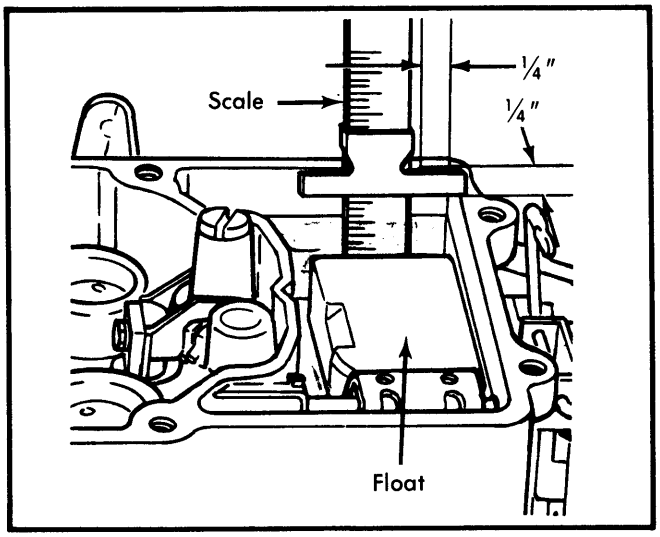

Fig. 3 Adjusting Float Level (Wet Setting)

CHOKE VALVE PULL-DOWN (INITIAL CHOKE VALVE CLEARANCE)

Jeep (2100 Model Carb.) – 1) Loosen choke cover retaining screws. Turn cover 1/4 turn counterclockwise (rich) to close choke valve. Tighten retaining screws. See *Fig. 4*.

2) Disconnect choke heat inlet tube. Position fast idle speed screw on second step of fast idle cam. Start engine without moving accelerator.

3) Turn fast idle cam lever adjusting screw out (counterclockwise) 3 full turns. Measure choke pull-down specified clearance between lower edge of choke valve and air horn wall.

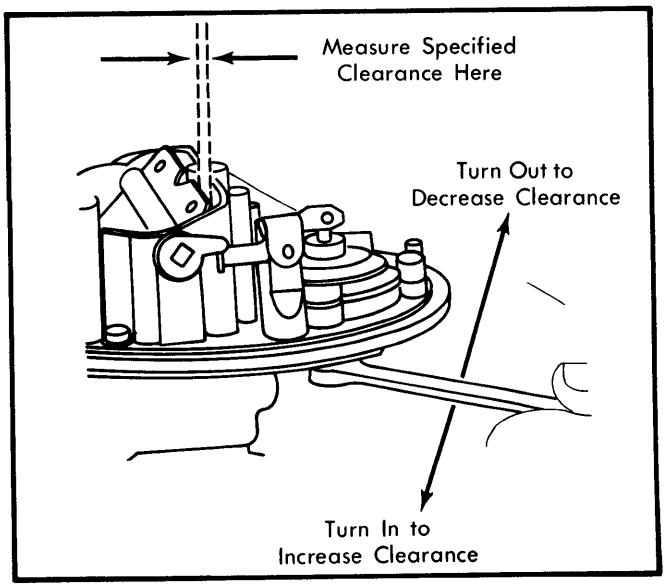

Fig. 4 Adjusting Choke Valve Pull-Down Clearance (Model 2100 Carburetor Only)

4) To adjust clearance, turn diaphragm screw in to increase clearance and out to decrease clearance. Turn engine off and reconnect choke heat tube.

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NOTE – *Fast idle cam linkage must be checked and adjusted after choke valve pull-down adjustment. Do not adjust automatic choke until after fast idle cam is adjusted.*

Ford Motor Co. & Jeep (2150 Model Carb.) – 1) Position fast idle speed screw on high step of fast idle cam. Loosen choke cover retaining screws. Turn cover ¾ turn counterclockwise (rich) to close choke valve. Tighten retaining screws. *See Fig. 5.*

2) Apply an outside vacuum source to choke vacuum diaphragm or manually force diaphragm to the retracted position. Measure choke pull-down specified clearance between lower edge of choke valve and air horn wall.

3) If clearance is not to specification, adjust by turning screw in end of choke vacuum diaphragm. Turn adjusting screw clockwise to decrease clearance and counterclockwise to increase clearance.

NOTE – *Fast idle cam linkage must be checked and adjusted after choke valve pull-down adjustment. Do not adjust automatic choke until after fast idle cam is adjusted.*

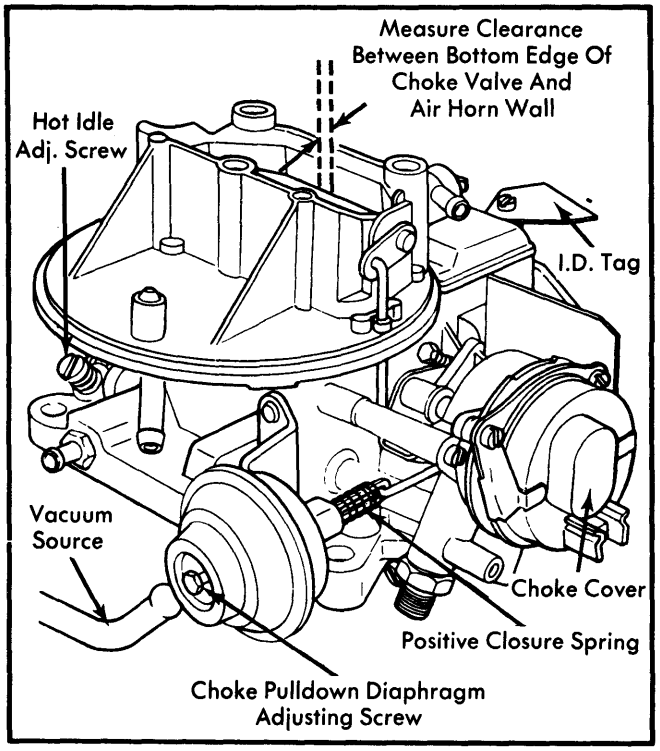

Fig. 5 Adjusting Choke Pull-Down Clearance (Model 2150 Carburetor Only)

FAST IDLE CAM LINKAGE

Ford – 1) Loosen choke cover retaining screws. Turn cover ¼ turn counterclockwise (rich) to close choke valve. Tighten retaining screws. *See Fig. 6.*

2) Open throttle and position fast idle speed screw on high step of fast idle cam. Apply an outside vacuum source to choke vacuum diaphragm or manually force diaphragm to the retracted position.

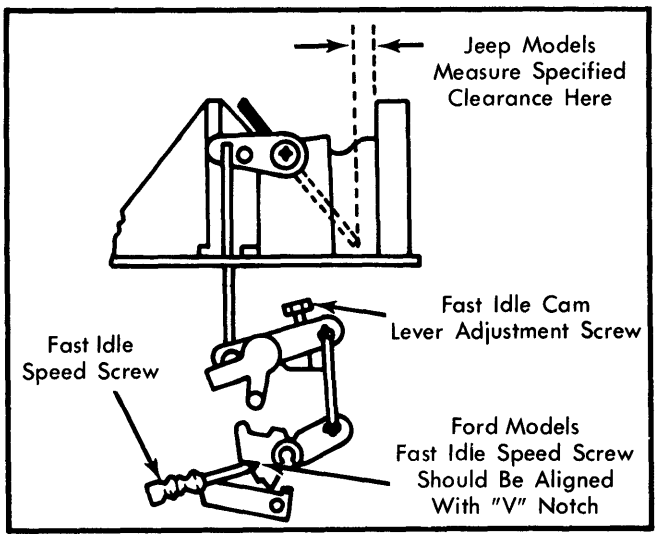

Fig. 6 Adjusting Fast Idle Cam Linkage

3) Open throttle and check movement of fast idle cam. Fast idle speed screw should drop down to the kickdown step of cam and align with "V" notch on cam.

4) To adjust, turn fast idle cam lever adjustment screw. Reconnect vacuum hose to vacuum diaphragm if disconnected. Adjust automatic choke.

Jeep – 1) Push down on fast idle cam lever until fast idle speed screw is against shoulder of high cam step. Measure fast idle cam specified clearance between lower edge of choke valve and air horn wall. *See Fig. 6.*

2) To adjust, turn fast idle cam lever adjustment screw. Adjust automatic choke.

CHOKE UNLOADER

1) Open throttle wide open. Measure specified choke unloader clearance between lower edge of choke valve and air horn wall. *See Fig. 7.*

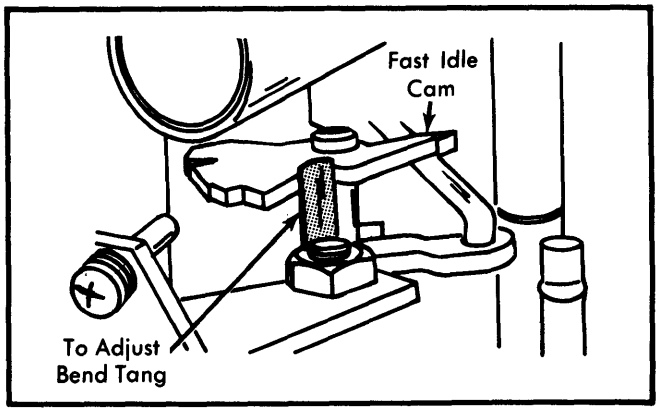

Fig. 7 Adjusting Choke Unloader

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.

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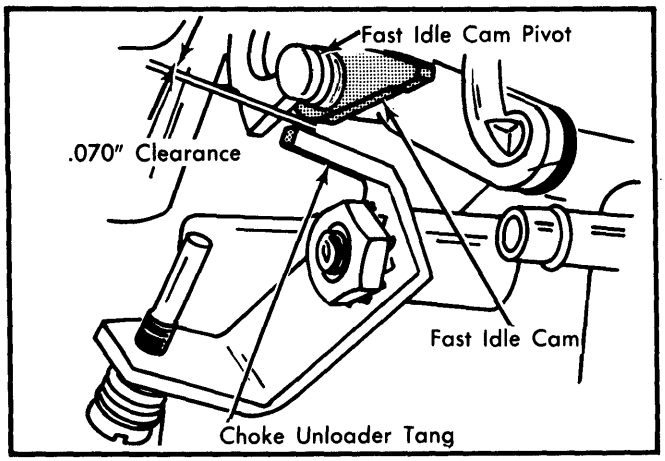

Fig. 8 Unloader Tang-to-Fast Idle Cam Clearance

3) After adjustment is correct, 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. See *Fig. 8*.

4) Operate throttle and make sure that tang does not stick or bind against any portion of the linkage or carburetor casting.

AUTOMATIC CHOKE

1) Loosen choke thermostat cover retaining screws.

2) Rotate cover assembly in "Rich" or "Lean" direction to align reference mark on cover with specified scale graduation on housing. 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.*

1) If carburetor is installed on vehicle, make sure ignition is off. Make sure throttle is completely off fast idle cam.

2) Manually depress stem of bowl vent valve. Measure clearance between end of stem and flat on end of bell crank.

3) If clearance is not to specification, bend bell crank. Do not bend lever on accelerator pump.

OVERHAUL

DISASSEMBLY

Air Horn – 1) Remove air cleaner anchor screw and automatic choke control rod retainer. Remove air horn attaching screws, lockwashers, carburetor I.D. tag and air horn. Remove screw securing choke lever to choke shaft and remove choke rod and seal from air horn.

2) Remove choke diaphragm assembly, then if necessary to remove choke valve, file staking from retaining screws and remove screws. Remove choke valve by sliding it out from the top of the air horn. Remove choke shaft from air horn.

3) On models equipped with altitude compensator, the bypass choke plate is removed 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, thermostatic choke coil housing screws and then remove clamp and gasket.

NOTE – *Some models are equipped with rivets retaining choke coil cover to prevent tampering with factory adjustment. To remove rivets, align a .128" (No. 30) drill on rivet head and drill only enough to remove rivet head. Using an ⅛" punch, drive remaining portion of rivet from housing. Repeat for remaining rivets.*

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

Main Body – 1) Pry float shaft retainer from fuel inlet seat with a screwdriver, then remove float, float shaft retainer and fuel inlet needle assembly. Remove retainer and float shaft from float lever.

2) Remove fuel inlet needle seat, filter screen and main jets. Remove booster venturi screw, air distribution plate (2100 models), booster venturi, metering rod assembly (2150 models) and gasket.

3) Invert main body and catch accelerator pump discharge weight and check ball. Remove accelerator pump operating rod from overtravel lever and retainer by pressing ends of retainer together, while at the same time, pressing rod away from retainer until it is free.

NOTE – *To disassemble metering rod assembly on 2150 models, remove lift spring retaining clip and spring. Do not remove metering rod hanger from lift rod.*

4) Remove accelerator pump cover screws. Remove bowl vent bell crank 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 broke off, make sure it is removed from fuel bowl. Elastomer valve must be replaced whenever it is removed.*

5) Remove enrichment valve cover and gasket, then remove enrichment valve using a box wrench. 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 – *Some models are equipped with tamper resistant idle mixture screw caps. To remove caps, pry in slots on outside body of cap to loosen inner cap. Pull inner cap straight out.*

6) If necessary to remove throttle plates, mark each throttle plate with its corresponding bore for reassembly. Slide throttle shaft from main body. Mechanical high speed bleed actuator will drop out. It is located between throttle plates in main body. On altitude compensated carburetors, remove 4 attaching screws and remove aneroid and valve assembly.

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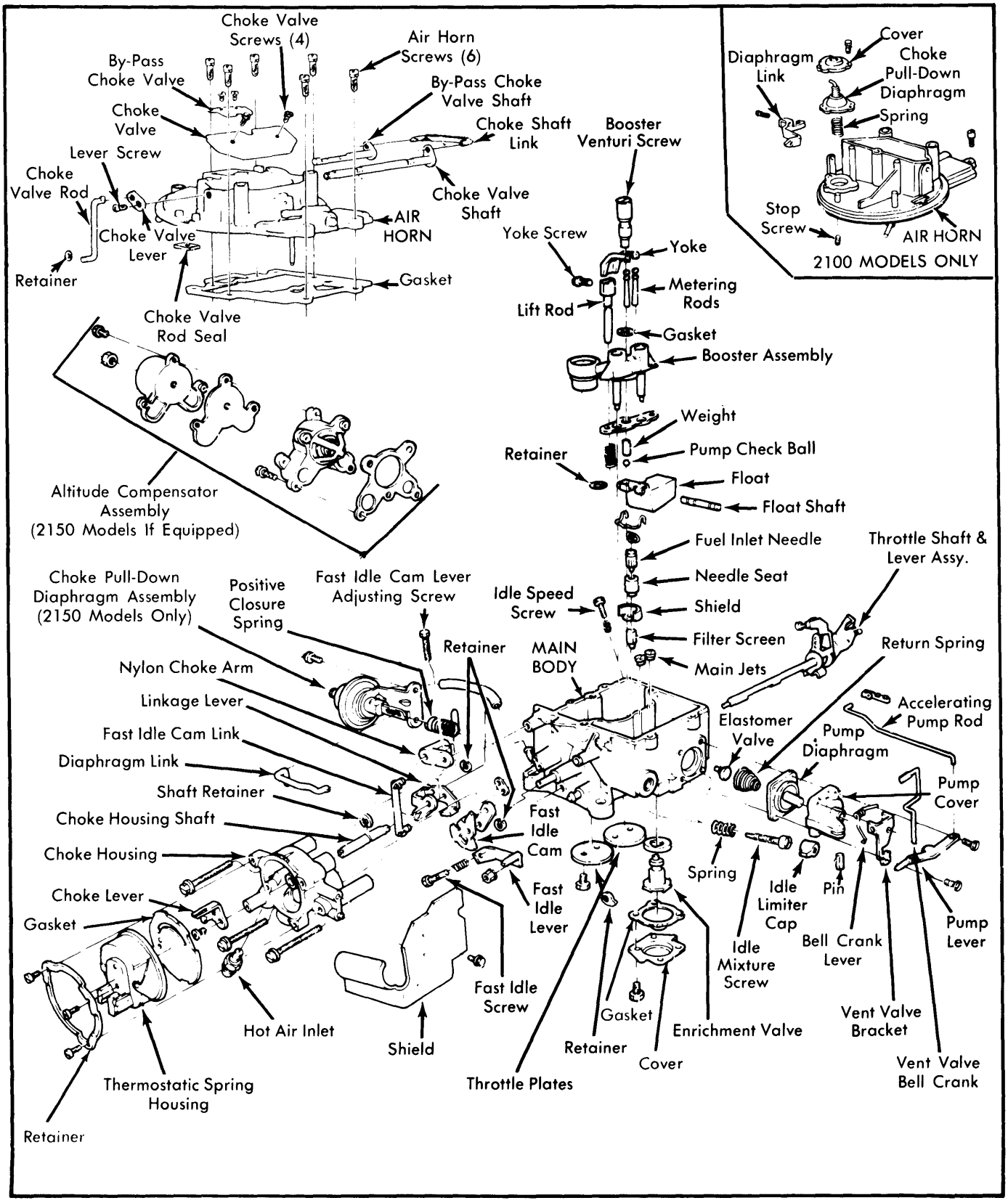

Fig. 9 Exploded View of Motorcraft Model 2100 & 2150 Carburetor Assembly

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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

NOTE – *Use new gaskets and seals. Make sure that new gaskets fit correctly and that all holes and slots are punched through and correctly located. Replace Elastomer valve if removed from main body.*

To reassemble carburetor, reverse disassembly procedure and note the following:

1) When installing Elastomer check valve (if removed), lubricate tip of new valve and insert tip into center hole of accelerator pump cavity. Use needle nose pliers inserted 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. Then back screws off seated position 1½ turns for an initial adjustment. Do not install idle screw limiter caps until final adjustments have made.

3) If choke coil cover was removed, reinstall using ⅛" diameter by ½" long by ¼" head rivets in retainer holes. Set choke coil cover to proper position, then press rivet fully into place and install. Repeat for remaining rivets.

CARBURETOR ADJUSTMENT SPECIFICATIONS

Application	Float Level		Accel. Pump Setting	Choke Pull-Down Setting	Fast Idle Cam Setting	Choke Unloader Setting	Auto. Choke Setting	Bowl Vent Valve Setting
	Dry Setting	Wet Setting						
Ford (Model 2150)								
E0TE-BEA	①	13/16"	No. 2	.140"	②	.200"	3 Rich	①
E0TE-BFA	①	7/8"	No. 3	.148"	②	.250"	3 Rich	.050"
E0TE-BGA	①	13/16"	No. 2	.140"	②	.200"	3 Rich	.080"
E0TE-BHA	①	13/16"	No. 2	.135"	②	.200"	Index	.050"
E0TE-BLA	①	7/8"	No. 3	.148"	②	.250"	3 Rich	.050"
E0TE-BRA	①	7/8"	No. 3	.128"	②	.200"	3 Rich	.050"
E0TE-BSA	①	7/8"	No. 2	.140"	②	.115"	3 Rich	.050"
E0TE-BYA	①	7/8"	No. 2	①	②	.115"	Index	①
E0TE-BZA	①	7/8"	No. 3	.148"	②	.250"	3 Rich	.050"
E0TE-CBA	①	7/8"	No. 3	.159"	②	.250"	Index	.050"
E0TE-CCA	①	7/8"	No. 3	.159"	②	.250"	Index	.050"
E0TE-CFA	①	13/16"	No. 2	.128"	②	.250"	3 Rich	①
E0TE-CLA	①	7/8"	No. 2	.140"	②	.200"	3 Rich	.050"
E0TE-CVA	①	7/8"	No. 2	.105"	②	.200"	1 Rich	①
E0TE-CTA	①	13/16"	No. 2	.140"	②	.250"	3 Rich	.050"
E0TE-CYA	①	13/16"	No. 2	.140"	②	.250"	3 Rich	.050"
E0TE-CZA	①	13/16"	No. 2	.140"	②	.200"	3 Rich	.080"
E0TE-DDA	①	7/8"	No. 3	.128"	②	.200"	2 Rich	.050"
E0TE-EAA	③	13/16"	No. 2	.128"	②	.250"	3 Rich	①
E0TE-EBA	①	7/8"	No. 4	.170"	②	.250"	2 Rich	①
E0UE-AAA	①	13/16"	No. 2	.185"	②	.250"	Index	.050"
E0UE-ABA	①	13/16"	No. 2	.140"	②	.200"	3 Rich	.080"
E0UE-NA	①	13/16"	No. 3	.105"	②	.200"	3 Rich	①
E0UE-PA	①	13/16"	No. 4	.185"	②	.250"	Index	.050"
E0UE-RA	①	13/16"	No. 4	.185"	②	.250"	Index	①
E0UE-SA	①	13/16"	No. 2	.185"	②	.250"	Index	.050"
E0UE-TA	①	13/16"	No. 2	.185"	②	.250"	Index	.050"
E0UE-VA	①	13/16"	No. 4	.185"	②	.250"	Index	.050"
Jeep (Model 2100)								
0DA2J	3/8"	15/16"	No. 3	.128"	.113"	.300"	1 Rich	.120"
0DA2J2	3/8"	15/16"	No. 3	.120"	.106"	.300"	2 Rich	.120"
0DM2A	3/8"	15/16"	No. 3	.128"	.113"	.300"	1 Rich	.120"
0DM2J	3/8"	15/16"	No. 3	.128"	.113"	.300"	2 Rich	.120"
0DM2JC	3/8"	15/16"	No. 3	.120"	.106"	.300"	2 Rich	.120"
Jeep (Model 2150)								
0RHA2	3/8"	15/16"	No. 3	.113"	.086"	.350"	2 Rich	.120"
0RHM2	3/8"	15/16"	No. 3	.104"	.081"	.348"	2 Rich	.120"

① – No adjustment is required.
② – Refer to adjustment procedure.
③ – Using gauge No. DET-18, refer to adjustment procedure.