1975-79 FUEL SYSTEMS
Motorcraft 4350 4-Barrel Carburetor

1975-78 Ford Motor Co.
1975-78 Jeep Corp.

CARBURETOR APPLICATION

FORD MOTOR CO.

Application	Ford Carb. No. Man. Trans.	Ford Carb. No. Auto. Trans.
1975		
460"		
Federal		D5TE-ARC, ARD
		D5UE-NA, NB, NC
California		D5TE-BBA, BBB
		D5TE-BBC
		D5UE-SA, SB
1976		
460"		
F-150-350		
Federal		D5TE-ARC, ARD
		D6TE-NA
California		D5TE-BBA, BBC
E-250 & 350		
Federal		D5UE-NA, NC
		D6UE-KA
California		D5UE-SA, SB
		D6UE-LA
M450 & 500		D6TE-UA
1977		
460"		
Federal		D7UE-AGA, AGB
		D7TE-BLA, BLB
California		D7UE-AFA, AFC
		D7TE-BGA, BGC
1978		
460"		
Federal		D7UE-ASA
California		D8TE-AKA, AMA
		D8UE-AA, CA
		DTUE-ASA

JEEP CORP.

Application	Jeep Carb. No. Man. Trans.	Jeep Carb. No. Auto. Trans.
1975		
360" & 401"	5THM4	5THA4
1976		
360" & 401"		
Federal	6THM4	6THA4
California		6THA4C
1977		
360"		
Federal	6THM4	6THA4
California	6THM4	6THA4C
401"		
Federal		6THA4
California		6THA4C
1978		
360"		
Federal	6THM4	6THA4
401"		
Federal		6THA4

CARBURETOR IDENTIFICATION

Carburetor model designation and suffix stamped on tag attached to carburetor by one air horn screw. First letter on second line of tag indicates design changes which may affect parts replacement. Ford carburetors may have Ford or Motorcraft stamped on identification tag.

DESCRIPTION

The 4350 4-barrel carburetor consists of three main assemblies; air horn, main body and throttle body. Carburetor includes five basic fuel metering systems. These systems are idle circuit, primary metering circuit, secondary metering circuit, accelerating system and power enrichment system. Other systems include a fuel inlet and choke circuits.

ADJUSTMENTS

HOT (SLOW) IDLE RPM

See appropriate article in TUNE-UP PROCEDURES section.

IDLE MIXTURE

See appropriate article in TUNE-UP PROCEDURES section.

COLD (FAST) IDLE RPM

See appropriate article in TUNE-UP PROCEDURES section.

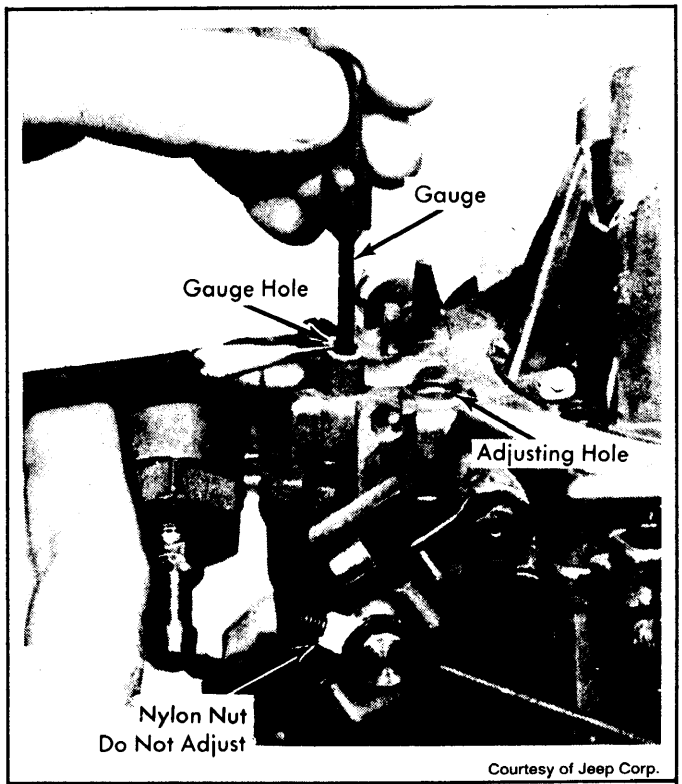
ACCELERATOR PUMP

1) The accelerator pump has 2 adjustments, piston-to-shaft pin position and accelerator pump capacity. The piston-to-shaft adjustment is preset at factory to deliver proper amount of fuel for that engine application. DO NOT change this adjustment.

NOTE: The control rod that operates accelerator pump, also operates the limiter that controls height of main metering rod piston. Do not turn vacuum limiter lever adjusting nut in order to adjust stroke of accelerator pump. This adjustment has been preset at factory and changing it could effect driveability.

2) To check for correct accelerator pump capacity adjustment, remove air cleaner. Ensure curb idle speed is correct. Stop engine. Remove accelerator pump gauge hole plug. *See Fig. 1.*

3) Insert a round rod (for measuring) into hole. Scribe a mark on rod even with carburetor casting. Move throttle to wide open position.



Courtesy of Jeep Corp.

Fig. 1: Accelerator Pump Capacity Adjustment

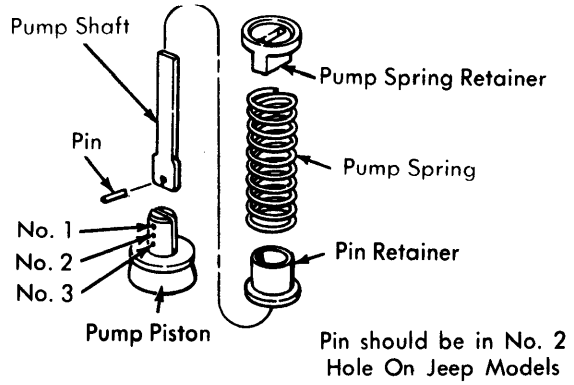
1975-79 FUEL SYSTEMS
Motorcraft 4350 4-Barrel Carburetor (Cont.)

Scribe a second mark on rod. Return throttle to idle position and remove rod.

4) Measure distance between scribe marks. Correct distance for Ford Motor Co. is .315" (Jeep Corp. is .310"). If adjustment is needed, remove plug from adjustment hole in top of carburetor.

5) Using a 5/64" Allen wrench, turn screw clockwise to increase distance. Turn screw counterclockwise to decrease distance. DO NOT turn adjusting screw more than one turn in either direction. Repeat step **3)** to ensure correct adjustment. Install replacement plugs in adjusting and gauge holes.

6) Accelerator pump also has adjustment holes at pump piston for stroke adjustment. To check for proper assembly, remove and invert air horn. Disconnect accelerator pump operating arm by holding down on spring and sliding arm out of shaft slot. Disassemble spring and nylon keeper that retains adjustment pin. If pin is not in specified hole, correct pin position and reverse disassembly procedure. *See Fig. 2.*

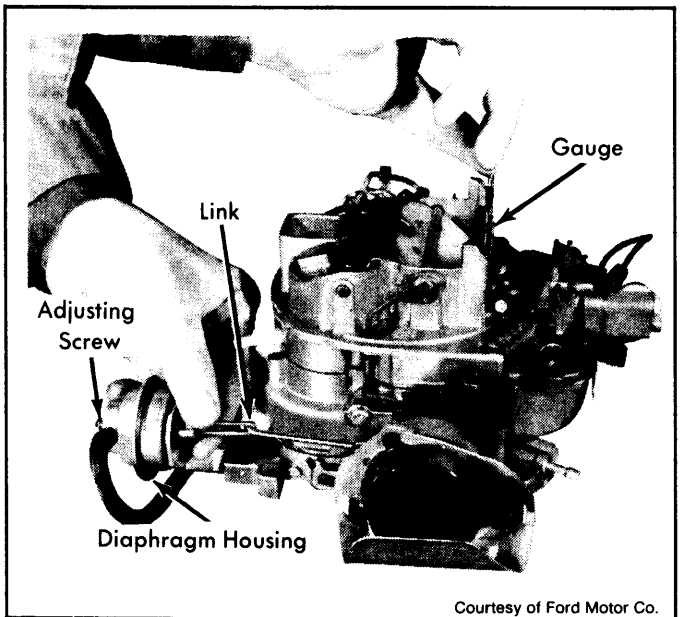


Courtesy of Ford Motor Co.

Fig. 2: Checking Accelerator Pump Stroke Adjustment

CHOKE PULL-DOWN CLEARANCE

Ford Motor Co. - 1) Remove choke thermostatic cover, and spring. Bend .036" wire gauge at 90 degree angle, approximately 1/8" from end. Block throttle half way open to allow fast idle screw to contact high step of fast idle cam. Insert bent end of wire gauge between choke piston slot and the upper edge of right-hand slot in the choke housing. *See Fig. 3.*



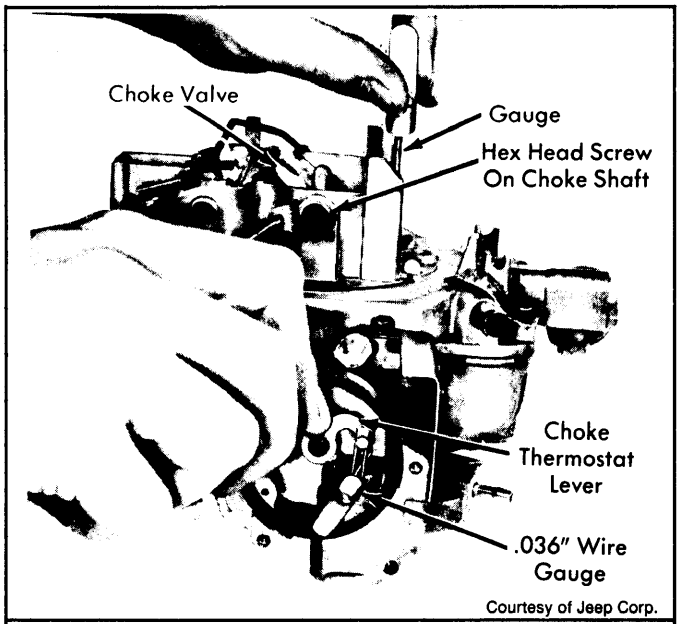
Courtesy of Ford Motor Co.

Fig. 3: Adjusting Ford Choke Pull-Down Clearance

2) Rotate choke lever counterclockwise until wire gauge is held snugly in place. While holding choke piston in this position, measure clearance between lower edge of choke valve and air horn wall. If necessary to adjust, loosen choke lever retaining screw (left-hand thread) and pry outward on lever (tapered shaft) until lever is free to move. With wire gauge inserted between lower edge of choke and air horn wall and with choke held firmly against measuring tool, tighten choke lever retaining screw. With adjustment complete, replace choke cover and thermostatic spring.

Jeep Corp. - 1) Loosen choke cover screws. Rotate choke cover until choke is held in closed position. Tighten one cover screw to hold choke in this position. Close throttle. *See Fig. 4.* Fast idle speed screw should be on high step of fast idle cam.

2) Depress choke diaphragm against set screw. Measure clearance between lower edge of choke valve and air horn wall. Adjust clearance by turning screw on end of diaphragm. Loosen choke cover screw and rotate cover back to original position.



Courtesy of Jeep Corp.

Fig. 4: Checking Jeep Choke Pull-Down Clearance

CHOKE UNLOADER

Ford Motor Co. - 1) Hold throttle in wide open position. Rotate choke toward closed position untill pawl of fast idle lever contacts fast idle cam.

2) Measure clearance between lower edge of choke plate and air horn wall. If adjustment is needed, bend pawl on fast idle lever forward to increase or backward to decrease clearance.

Jeep Corp. - 1) Hold throttle wide open and apply pressure to choke valve, toward closed position. Measure clearance between lower edge of choke valve and air horn wall. If adjustment is necessary, bend unloader tang which contacts fast idle cam.

NOTE: Do not bend unloader tang downward from horizontal plane. Bend unloader tang toward cam to increase clearance and away from cam to decrease clearance.

2) Operate throttle and check that unloader tang does not bind, contact or stick on any part of carburetor casting or linkage. After carburetor installation (if removed), check for full throttle operation. Check that unloader tang has sufficient clearance between tang and choke housing. Clearance here should be at least .070".

DELAYED CHOKE PULL-DOWN

Ford Motor Co. - 1) All models are equipped with a vacuum-diaphragm delayed choke pull-down. This system opens choke to a wider setting approximately 6 to 18 seconds after engine is started.

1975-79 FUEL SYSTEMS
Motorcraft 4350 4-Barrel Carburetor (Cont.)

2) To adjust, set throttle on fast idle cam, note position of index marks on choke housing. Loosen screws and rotate cap 90 degrees in rich direction. Disconnect vacuum hose at delay vacuum-diaphragm.
3) Remove filter cap and place a piece of tape over purge hole. Connect an auxiliary vacuum source to diaphragm and apply 14-18 in. Hg of vacuum. Measure clearance between lower edge of choke valve and air horn wall with a specified gauge. Adjust to correct clearance by turning stop screw on diaphragm. Install vacuum hose and reposition choke cover.

FAST IDLE CAM CLEARANCE

Install choke cover and thermostatic coil loosely (make certain coil end engages choke lever slot). Rotate cover to 90 degrees rich position. Place fast idle speed screw on kickdown (center) step of the fast idle cam, against shoulder of the high step of cam. Hold fast idle speed screw in this position. Using a drill or gauge of specified size, check clearance between lower edge of choke valve and air horn wall. If fast idle cam clearance is not correct, adjust by turning fast idle cam adjusting screw in or out as necessary.

NOTE: This is not the fast idle speed adjusting screw, but the cam adjusting screw.

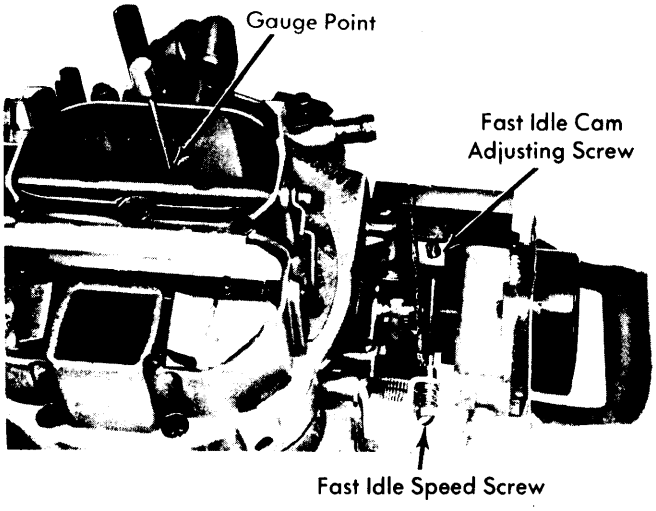


Fig. 5: Fast Idle Cam Linkage Adjustment

FUEL BOWL VENT VALVE

Ford Motor Co. - Start and idle engine. Ensure engine curb idle is correct. Disconnect throttle positioner solenoid. Adjust bowl vent valve so adjustment screw just contacts tab on accelerator pump lever. Turn screw one additional turn clockwise. Open throttle to ensure fast idle cam is released. Check that bowl vent valve operating linkage pushes down on vent valve stem. *See Fig. 6.*

VACUUM THROTTLE MODULATOR

Jeep Corp. - **1)** Ensure fast idle cam linkage adjustment is correct. Push down on fast idle cam counterweight until screw contacts second step of fast idle cam (against shoulder of high step).
2) Apply an external vacuum source of 15 in. Hg minimum to vacuum diaphragm. Turn adjusting screw on end of diaphragm housing until fast idle cam just falls free of cam screw.

FLOAT LEVEL

Remove and invert air horn. Allow weight of floats to rest on inlet needle. Using a "T" scale, measure distance from air horn machined surface and bottom edge of floats. *See Fig. 7.* If setting is not correct, bend float tab.

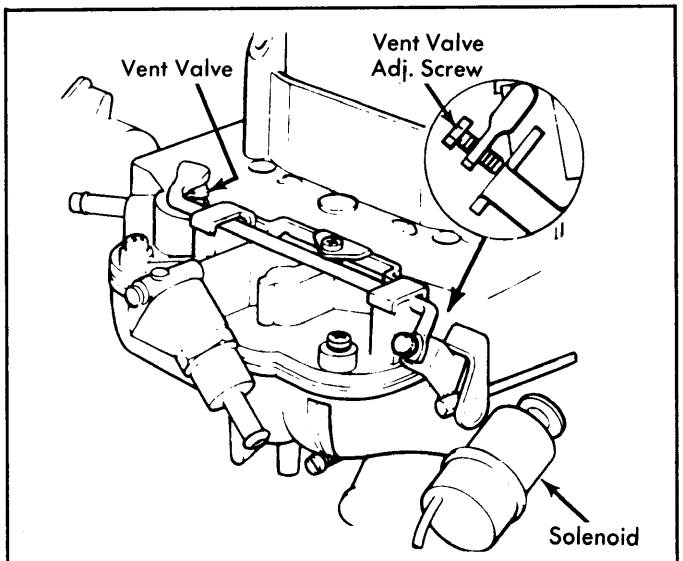


Fig. 6: Adjusting Fuel Bowl Vent Valve

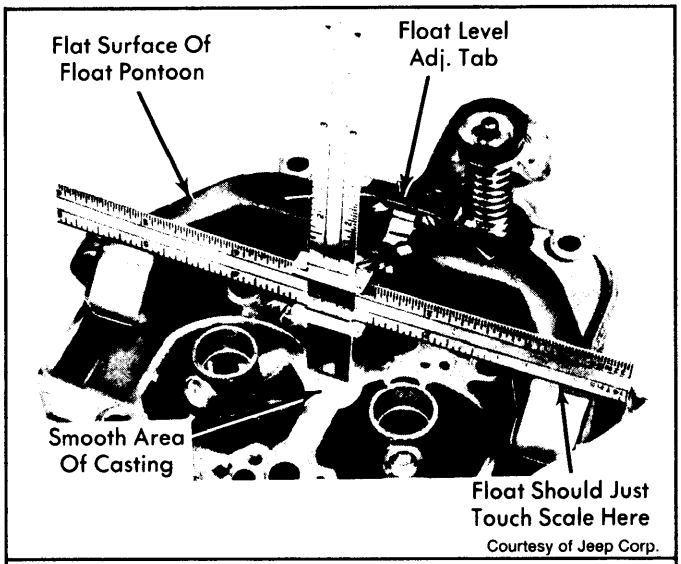


Fig. 7: Float Level Adjustment

AUXILIARY FUEL VALVE

With float level adjusted, check clearance between auxiliary fuel inlet valve and tab on rear of float arm. If clearance is not correct, adjust by bending float tab up or down to correct clearance.

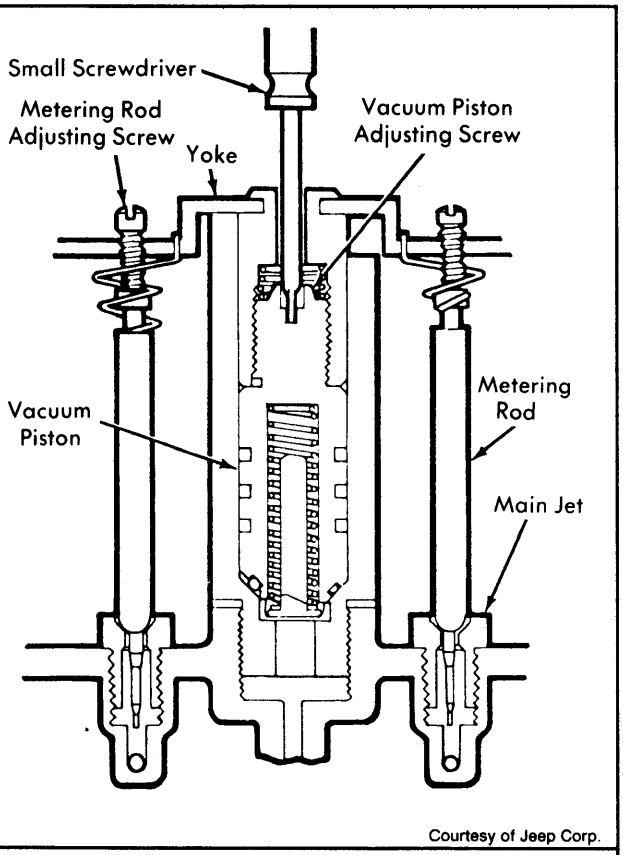
METERING ROD ADJUSTMENT

NOTE: There are no driveability changes which can be made to metering rods or main fuel metering system. However, if metering rods are damaged or need to be changed, the following procedures is applicable:

Ford Motor Co. - **1)** Manually depress metering rod hanger. Using small screwdriver, carefully turn vacuum piston adjusting screw and metering rod adjusting screws counterclockwise until metering rod hanger is fully seated against the vacuum top face.
2) Holding metering rod hanger in full downward position, turn each metering rod adjusting screw clockwise until metering rod hanger just begins to rise. The metering rods are now in proper relationship with the vacuum piston. Turn vacuum piston adjusting screw clockwise until specified clearance is obtained between rod hanger and top edge of vacuum piston cylinder.

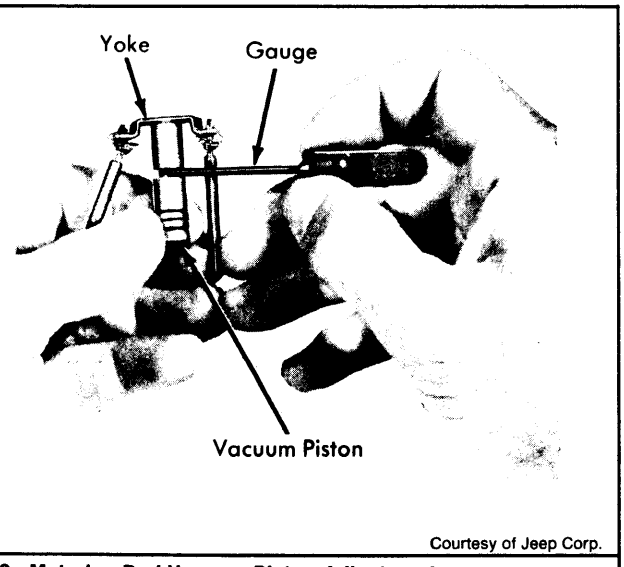
1975-79 FUEL SYSTEMS
Motorcraft 4350 4-Barrel Carburetor (Cont.)

Jeep Corp. - 1) With air horn removed, depress metering rod yoke. Using small screwdriver, turn vacuum piston adjusting screw counterclockwise until yoke is seated against the vacuum piston cylinder. Turn metering rod adjusting screws until large diameter of metering rods contact and seat in main jets. *See Fig. 8.*
2) Remove plastic yoke retainer, metering rod and yoke assembly. Turn vacuum piston adjusting screw clockwise to move vacuum piston away from yoke until .120" clearance is obtained *See Fig. 9.* With adjustment complete, replace metering rod, yoke assembly and plastic yoke retainer.



Courtesy of Jeep Corp.

Fig. 8: Metering Rod Adjustment



Courtesy of Jeep Corp.

Fig. 9: Metering Rod Vacuum Piston Adjustment

OVERHAUL

CARBURETOR

Disassembly (Air Horn) - 1) Disconnect choke control rod from automatic choke lever and accelerating pump rod from throttle lever. Remove all air horn-to-main body retaining screws and carefully lift air horn off main body.
2) Remove float pivot pin and lift out float assembly, use correct size screwdriver to remove main and auxiliary fuel inlet seat assemblies and gaskets. *See Fig. 10.*
3) Disconnect secondary air valve lever rods from dampener piston assembly and air valve, remove dampener piston assembly and air valve.
4) If necessary to remove secondary air valves or shaft, scribe index mark on air valve housing and body casting, remove valve retaining screws and valves, then slide shaft out of air horn.
5) If necessary to remove choke valve or shaft, remove staking marks on choke valve retaining screws or file off flared portion of screws, remove retaining screws and valve, then slide shaft out of air horn.
6) Take out attaching screws and remove hot idle compensator valve assembly. Do not remove power valve vacuum valve assembly unless it is to be replaced. Remove staked areas and remove valve assembly carefully to avoid damage to air horn casting.
Disassembly (Main Body) - 1) Invert main body assembly and catch accelerating pump discharge needle which will fall out. Use 3/8" deep socket to remove power valve and screwdriver to remove main metering jet from within fuel bowl.
2) Remove check ball retainer from bottom of accelerating pump cylinder with long nosed pliers, then invert main body and catch pump inlet ball check which will drop out.
3) Remove throttle body-to-main retaining screws from bottom of throttle body and separate the two castings.

NOTE: Do not remove idle mixture limiter caps, screws, and springs.

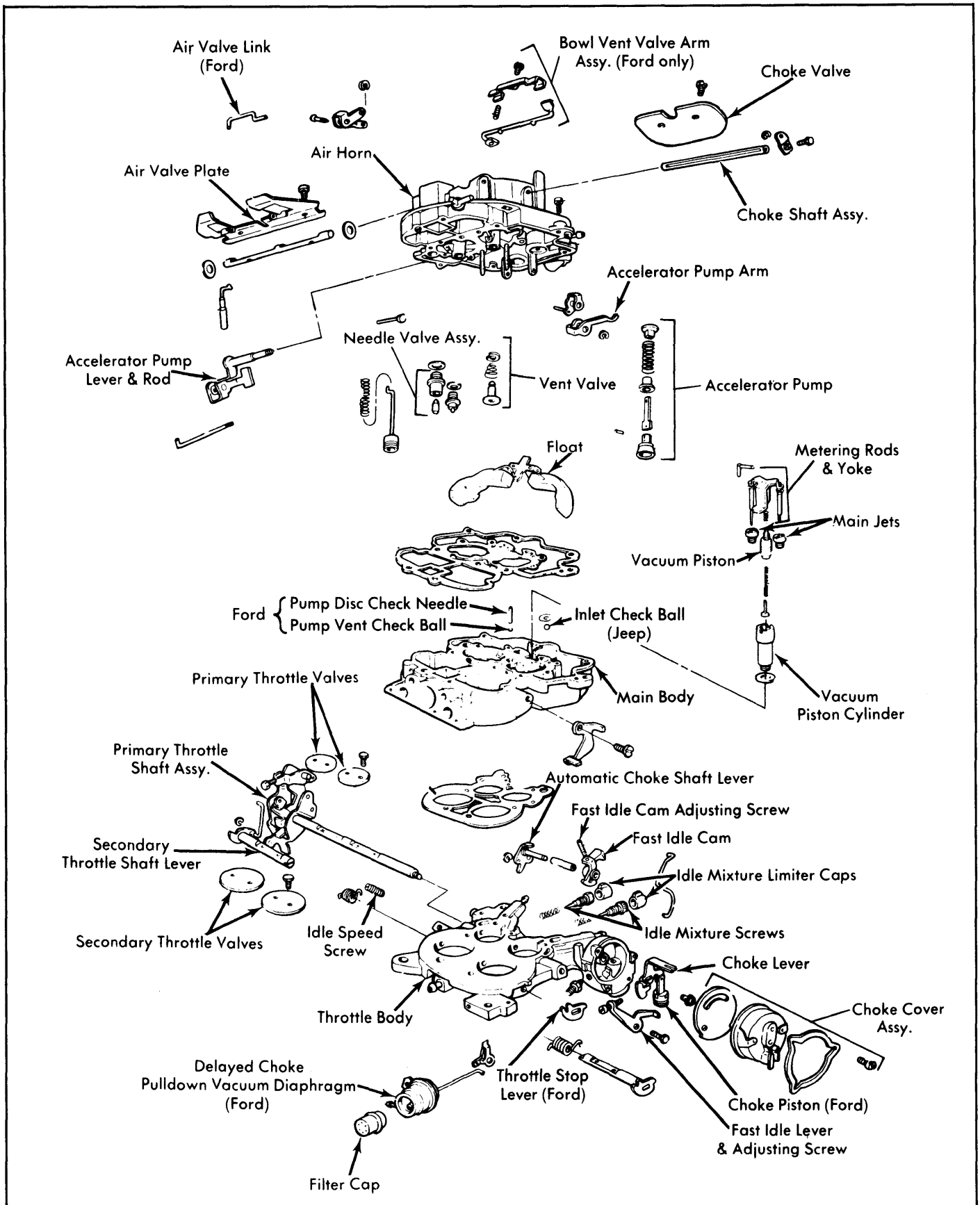
Disassembly (Throttle Body) - 1) Remove automatic choke housing cover screws, remove retainer, cover, gasket, and thermostatic spring assembly. Remove choke piston lever retaining screw, then remove piston assembly.
2) Remove secondary throttle-to-primary throttle lever connecting link. If necessary to remove primary or secondary throttle valves or shafts, remove staking marks on throttle valve attaching screws. Remove screws and valves. With valves removed, remove nut from secondary throttle shaft, slide shaft and return spring out of throttle body.
3) With valves removed, remove nut from primary throttle shaft and remove fast idle lever and adjusting screw, then slide primary throttle shaft and lever assembly out of throttle body. Remove throttle lever assembly retainer, slide lever and springs off shaft.
4) If necessary to remove fast idle cam or bushings, press bushing out of choke housing and bushing column.

NOTE: Housing and column must be properly supported during bushing removal and installation to prevent bending or breaking of the column.

Cleaning & Inspection - Clean all castings and metal parts in cleaning solution (plastic fast idle cam and air valve spring cover can be cleaned in the solution but floats and gaskets should not be immersed in the solution). Rinse parts in hot water and dry with air. Blow out all passages, jets, and tubes with air. Inspect all parts for wear, distortion or damage. Make certain power valve piston and rod move freely.

CAUTION: Do not remove calibrating shims from power valve piston rod for cleaning and use care not to distort rod.

1975-79 FUEL SYSTEMS
Motorcraft 4350 4-Barrel Carburetor (Cont.)



Courtesy of Ford Motor Co.

Fig. 10: Exploded View of Motorcraft 4350 4-Barrel Carburetor

1975-79 FUEL SYSTEMS
Motorcraft 4350 4-Barrel Carburetor (Cont.)

Reassembly (Primary Throttle Valve) - Use all new gaskets. Reassemble carburetor by reversing disassembly procedure. Install return spring (coiled clockwise) on primary throttle shaft and insert shaft in throttle body. Position throttle valves on shaft with ground flat edge of valves facing upward and toward idle mixture needles, install valve screws just snug. Rotate shaft to closed position, tap valves lightly to properly seat them in throttle bore. When viewed against a light, little or no light should be visible around valves. Tighten valve screws securely.

Reassembly (Fast Idle Cam & Bushing) - Start bushing through choke housing. Position fast idle cam between housing and bushing column and slide bushing through fast idle cam, then support bushing column and press bushing into position in column. Clean bushing with ¼" reamer before installing choke shaft and lever.

Reassembly (Choke Valve) - Insert choke shaft in air horn with lever end on automatic choke side. Install choke valve and tighten attaching screws just snug. Close valve and tap lightly to position it in air horn. Tighten attaching screws and stake screws to prevent loosening. Install a new seal on choke control rod. Press seal into air horn and attach control rod to choke shaft lever.

CAUTION: Seal must grip ledge in air horn at all four points to prevent unfiltered air entering carburetor.

Reassembly (Air Valve) - Slide air valve shaft in air horn with slotted end of shaft in air valve spring chamber. Position plain air valve in air horn opening adjacent to spring chamber and tighten attaching screws just snug. Install air valve in other air horn opening with control rod eye facing upward. Install attaching screws just snug. Close air valves and tap valves lightly to position them in air horn. Tighten attaching screws and stake the screws to prevent loosening.

1975 CARBURETOR ADJUSTMENT SPECIFICATIONS

Carb. No.	Idle Speed (Engine RPM)		Float Level		Choke Valve Pull-Down	Fast Idle Cam Clearance	Accel. Pump Setting	Unloader Setting	Auto. Choke Setting
	Hot	Fast	Primary Valve	Auxiliary Valve					
Ford Mtr. Co.									
D5TE-ARC	①	①	.938″	.06″	.160″	.170″	2 Inner	.30″	Index
D5TE-ARD	①	①	1.0″	.03″	.160″	.170″	2 Inner	.30″	Index
D5TE-BBA	①	①	.938″	.06″	.160″	.170″	2 Inner	.30″	Index
D5TE-BBB	①	①	.92″	.06″	.160″	.170″	2 Inner	.30″	Index
D5TE-BBC	①	①	1.0″	.03″	.160″	.170″	2 Inner	.30″	Index
D5UE-SA	①	①	.938″	.06″	.160″	.170″	2 Inner	.30″	Index
D5UE-SB	①	①	1.0″	.03″	.160″	.170″	2 Inner	.30″	Index
D5UE-NA	①	①	.938″	.06″	.160″	.170″	2 Inner	.30″	Index
D5UE-NB	①	①	.92″	.06″	.160″	.170″	2 Inner	.30″	Index
D5UE-NC	①	①	1.0″	.03″	.160″	.170″	2 Inner	.30″	Index
Jeep									
All Models	①	1600	.90″	.050″	.140″	.135″	.....	.325″	2NR

① - See Engine Emission Control Tune-Up Decal.

1976 CARBURETOR ADJUSTMENT SPECIFICATIONS

Carb. No.	Idle Speed (Engine RPM)		Float Level		Choke Valve Pull-Down	Fast Idle Cam Clearance	Accel. Pump Setting	Unloader Setting	Auto. Choke Setting
	Hot	Fast	Primary Valve	Auxiliary Valve					
Ford Motor Co.									
D5TE-ARC	①	①	.938″	.06″	.160″	.170″	2 Inner	.30″	Index
D5TE-ARD	①	①	1.0″	.03″	.160″	.170″	2 Inner	.30″	Index
D5TE-BBA	①	①	.938″	.06″	.160″	.170″	2 Inner	.30″	Index
D5TE-BBC	①	①	1.0″	.03″	.160″	.170″	2 Inner	.30″	Index
D5UE-NA	①	①	.938″	.06″	.160″	.170″	2 Inner	.30″	Index
D5UE-NC	①	①	1.0″	.03″	.160″	.170″	2 Inner	.30″	Index
D5UE-SA	①	①	.938″	.06″	.160″	.170″	2 Inner	.30″	Index
D5UE-SB	①	①	1.0″	.03″	.160″	.170″	2 Inner	.30″	Index
D6TE-NA	①	①	1.0″	.03″	.160″	.170″	2 Inner	.30″	Index
D6TE-UA	①	①	1.0″	.03″	.160″	.170″	2 Inner	.30″	Index
D6UE-KA	①	①	1.0″	.03″	.160″	.170″	2 Inner	.30″	Index
D6UE-LA	①	①	1.0″	.03″	.160″	.170″	2 Inner	.30″	Index
Jeep									
6THA4	①	1600	.900″	.050″	.135″	.135″	.....	.325″	2NR
6THA4C	①	1600	.900″	.050″	.135″	.135″	.....	.325″	2NR
6THM4	①	1600	.900″	.050″	.135″	.135″	.....	.325″	2NR

① - See Engine Emission Control Tune-Up Decal.

1975-79 FUEL SYSTEMS
Motorcraft 4350 4-Barrel Carburetor (Cont.)

1977 CARBURETOR ADJUSTMENT SPECIFICATIONS

Carb. No.	Idle Speed (Engine RPM)		Float Level		Choke Valve Pull-Down	Fast Idle Cam Clearance	Accel. Pump Setting	Unloader Setting	Auto. Choke Setting
	Hot	Fast	Primary Valve	Auxiliary Valve					
Jeep									
6THA4	①	1550-1650	.900″	.050″	.135″	.135″	③	.325″	2 NR②
6THA4C	①	1550-1650	.900″	.050″	.135″	.135″	③	.325″	2 NR②
6THM4	①	1550-1650	.900″	.050″	.135″	.135″	③	.325″	2 NR②
Ford									
D7TE-BGA	①	①	.....	.....	.....	.....	.....	.....	.....
D7TE-BGC	①	①	.....	.....	.....	.....	.....	.....	.....
D7TE-BJA	①	①	1.0″④	.030″⑤	.160″⑦⑧	.170″	2/3⑥	.300″	Index
D7TE-BLA	①	①	1.0″④	.030″⑤	.160″⑦⑧	.170″	2/3⑥	.300″	Index
D7TE-BLB	①	①	.....	.....	.....	.....	.....	.....	.....
D7UE-AFA	①	①	1.0″④	.030″⑤	.160″⑦	.170″	2/3⑥	.300″	Index
D7UE-AFC	①	①	.....	.....	.....	.....	.....	.....	.....
D7UE-AGA	①	①	1.0″④	.030″⑤	.160″⑦	.170″	2/3⑥	.300″	Index
D7UE-AGB	①	①	.....	.....	.....	.....	.....	.....	.....

① — See Emission Control Tune-Up Decal.
② — ±½ Notch
③ — Pump Stroke is .310″.
④ — ±1/32″
⑤ — ±1/64″
⑥ — Plunger Hole/Pump Rod Position .312″
⑦ — ±.020″
⑧ — Delayed Choke — .210″ ± .020″

1978 CARBURETOR ADJUSTMENT SPECIFICATIONS

Carb. No.	Idle Speed (Engine RPM)		Float Level		Choke Valve Pull-Down	Fast Idle Cam Clearance	Accel. Pump Setting	Unloader Setting	Auto. Choke Setting
	Hot	Fast	Primary Valve	Auxiliary Valve					
Jeep									
6THA4	①	1600	.900″	.050″	.135″	.135″	No.2④	.325″	2NR
6THM4	①	1600	.900″	.050″	.135″	.135″	No.2④	.325″	2NR
Ford									
D8TE-AKA	①	①	1.00″	.030″	.....	.160″	No.3②	③	Index
D8UE-AA	①	①	1.00″	.030″	.....	.160″	No.3②	③	Index
D7UE-ASA	①	①	1.00″	.030″	.....	.160″	No.2④	③	Index
DTUE-ASA	①	①	1.00″	.030″	.....	.160″	No.2④	③	Index
D8TE-AMA	①	①	1.00″	.030″	.....	.160″	No.2④	③	Index
D8UE-CA	①	①	1.00″	.030″	.....	.160″	No.2④	③	Index

① — See Emission Control Decal.
② — Bottom hole of pump piston.
③ — Information not available at time of publication.
④ — Middle hole of pump piston. Pump rod position is No. 3.