1970-72 CARTER YF 1-BARREL

FORD MOTOR CO.

Ford Carburetor No.

1970

MAVERICK	Man. Trans.	Auto. Trans.
170" 6 Cyl.	DODF-R	DODF-N
With A/C	DODF-U	DODF-S

MAVERICK, MUSTANG & FALCON

200" 6 Cyl.	DODF-M	DODF-L
With A/C	DODF-T	DODF-V

FORD, METEOR (POLICE & TAXI)

240" 6 Cyl.	DOAF-A	DOAF-B

1971

MAVERICK & COMET

170" 6 Cyl.	D1DF-EA	
200" 6 Cyl.	D1DF-GA	D1DF-JA
With A/C	D1DF-HA	D1DF-KA
200" Calif. Cars W/O A/C		D1DF-LA
200" Calif. Cars W/ A/C		D1DF-RA

FORD (POLICE & TAXI)

240" 6 Cyl.	D1AF-PA	D1AF-RA

1972

MAVERICK & COMET

170" 6 Cyl.	A2DF-AA	
W/O A/C	①D2PF-EA	
200" 6 Cyl. W/O A/C	D2PF-EA	D2PF-EA
	D2DF-BA	D2DF-DA
		①D2DF-EA
200" 6 Cyl. W/ A/C	D2PF-FA	D2PF-FA
	D2DF-CA	D2DF-EA

FORD (POLICE & TAXI)

240" 6 Cyl.		D2AF-JA

ALL MODELS

250" 6 Cyl.	D2PF-BA	D2PF-BA

① Maverick Only.

AMERICAN MOTORS

Carter Carburetor No.

1970

GREMLIN & HORNET	Man. Trans.	Auto. Trans.
199" & 232" 6 Cyl.	4768S	4767S, 4978S

REBEL & JAVELIN

232" 6 Cyl.	4770S	4767S, 4769S

1971

GREMLIN & HORNET

232" 6 Cyl.	6093S, SA	6094S, SA
258" 6 Cyl.	6095S, SA	6096S, 6038S

1971 (Cont.)

JAVELIN, MATADOR & AMBASSADOR

232" 6 Cyl.	6095S, SA	6096S
258" 6 Cyl.		6096S, 6038S

1972

ALL MODELS

232" & 258" 6 Cyl.	6199S	6200S

JEEP

Carter Carburetor No.

1970

F4-134	Man. Trans.	Auto. Trans.
4 Cyl.	4941S	4941S

1971

JEEPSTER

F4-134" 4 Cyl.	6115S	

1972

WAGONEER & TRUCK

232" & 258" 6 Cyl.	6287S	6288S

CJ-5/CJ-6 & COMMANDO

258" 6 Cyl.	6288S	6288S

▶ CHANGES, CAUTIONS, CORRECTIONS

▶ *1970 EMISSION CONTROL NOTE* — Ford Motor Co. engines listed employ IMCO exhaust emission control system. On vehicles first sold in California, an Evaporation Control System (ECS) is incorporated. American Motors engines listed are equipped with the "Engine-Mod" system coupled with "Closed Positive Crankcase Ventilation". Vehicles first sold in California are further equipped with an Evaporation Control System. Jeep engines are equipped with an Air Injection System for exhaust emission control.

▶ *1971 FORD MOTOR CO. 200" ENGINE WITH AUTO. TRANS. STUMBLE OR STALL WITH COLD ENGINE* — Check for choke linkage binding or vacuum leaks. Check Fast Idle RPM and Choke Pulldown Setting. If condition not corrected by these procedures, richen choke setting by one notch.

▶ *1971 FORD MOTOR CO. 200" ENGINE WITH AUTO. TRANS. STALL OR STUMBLE ON ACCELERATION* — Possibly due to inadequate accelerator pump shot during acceleration with Carburetor Nos. D1DF-JA or KA. Some carburetors with these numbers have been reworked in production and will have a daub of yellow paint on front of fuel bowl and will not require rework. A carburetor production change was made in late September and the modified carburetors are numbered D1DF-JB and KB. Before reworking early production carburetors, check vacuum lines and connections for leaks, and check ignition timing. Check accelerator pump jet for blockage or fuel leakage at gasket surface. If condition not corrected by these procedures, remove carburetor from engine and remove air horn. Turn main body casting upside down, catch pump needle. Loosen throttle shaft arm screw and remove arm and pump connector link. Remove accelerator pump diaphragm housing screws and lift assembly out as a unit. Replace pump cover assembly with Part No. D1DZ-9528-A and reassemble carburetor.

1970-72 CARTER YF 1-BARREL (Cont.)

► *1971 AMERICAN MOTORS 232" & 258" ENGINE CARBURETOR NOTE* – To correct stumble or stall on these engines install Carburetion Modification Kit No. 8120453 (for carbs. No. 6093S, 94S, 95S and 96S). Install Kit No. 8120452 (for carb. 6038S) and Kit No. 8120454 (for carb. 6094SA). Installation procedure is included in kit. The modification has been installed during production on later production carburetors. These carburetors may be identified by the suffix "A". Example: 6093SA, 6095SA.

► *1972 AMERICAN MOTORS 232" & 258" ENGINE CARBURETOR NOTE* – If engine stalls on left turn or after hot restart during high temperature, the condition is caused by vapor pressure in the fuel line between fuel pump and carburetor. Correct this condition by installing Vapor Relief Kit (Part No. 8121748), following instructions furnished in kit.

► *1972 JEEP 232" & 258" ENGINE CARBURETOR NOTE* – With choke closed, fast idle screw must align with index mark on fast idle cam. Adjust by bending choke rod at upper angle.

CARBURETOR IDENTIFICATION

Carter carburetor number or Ford part number stamped on tag attached to carburetor body by one screw. Ford number may be stamped Ford, Autolite or Motorcraft.

DESCRIPTION

Single barrel downdraft type with diaphragm type accelerating pump and integral automatic choke. Carburetors are similar to previous models with idle limiter caps used on idle mixture screw. Slight differences and changes are as follows:

All Models – Fuel bowl vent valves have been eliminated to comply with evaporation control standards.

Ford Motor Co. – Carburetors have new domed fuel bowl and adjustable metering rod (see Adjustments). A solenoid throttle positioner is used in some applications instead of a dashpot.

American Motors – Adjustable dashpots used on synchromesh carburetors (idle stop solenoids not used). Metering rod adjustment requires special procedure (see Adjustments).

Jeep Models – This carburetor has a manual choke control and fast idle adjustment is different.

ADJUSTMENT

Idle Speed & Mixture

Ford Motor Co. – Stabilize engine and underhood temperature by running engine for a minimum of 20 minutes at 1500 RPM, with limiter cap counterclockwise against stop. Adjust with engine at normal operating temperature (choke valve wide open and fast idle inoperative), place automatic transmission selector lever in Drive, turn on headlights (to place alternator under load), turn air conditioner OFF, and make certain air cleaner is installed (if necessary to remove air cleaner for adjustment, final idle setting and fuel mixture setting must be checked after air cleaner reinstalled). Adjust carburetors as follows:

Ford Motor Co. Carburetors Without Solenoid Throttle Modulator – Adjust throttle stopscrew for correct hot engine idle speed (see Specifications), turn idle mixture screw in (clockwise) for smoothest possible idle within range of adjusting screw limiter. Recheck idle speed and repeat idle mixture adjustment if necessary.

Ford Motor Co. Carburetors With Solenoid Throttle Modulator – Turn **solenoid plunger screw** in or out to obtain specified curb idle speed (Higher speed as listed in Specifications). *NOTE – Solenoid must be energized (lead connected and ignition ON).* Turn idle mixture screw in (clockwise) for smoothest possible idle within range of adjusting screw limiter. Recheck idle speed and repeat idle mixture adjustment if necessary. Then disconnect solenoid lead (throttle valve will close further) and adjust **throttle stopscrew** for correct idle speed (Lower speed as listed in Specifications). Reconnect solenoid lead, open throttle valve slightly by hand. Solenoid plunger should follow throttle lever and increase idle speed to "solenoid energized" specification.

American Motors – *NOTE – To compensate for fuel and temperature variations while performing idle mixture adjustment observe the following:*

1) After running engine to obtain normal operating temperature and with air cleaner in place do not idle engine over 3 minutes at a time.

2) If idle mixture adjustment not completed within 3 minutes run engine at 2000 RPM for 1 minute. Then recheck idle mixture.

Idle Speed – Using throttle idle speed adjusting screw, adjust idle speed to specified RPM (see Specifications).

Idle Mixture – Observing the *NOTE* above, perform adjustment as follows:

1) Starting from full counterclockwise position turn mixture clockwise (leaner) until loss of engine RPM is noted.

2) Turn mixture screw counterclockwise until highest RPM reading is obtained at "lean best idle" setting.

3) If idle speed changed more than 30 RPM during the mixture adjustment, reset to specified RPM and repeat adjustment. Adjust final curb idle speed.

►*UNSATISFACTORY IDLE PERFORMANCE CORRECTION: If unable to obtain satisfactory idle quality after adjusting to above procedure, idle limiter cap may be removed and idle speed and mixture adjusted.*

Jeep Models – Connect tachometer or vacuum gauge to engine, warm up engine until temperatures are stabilized. Adjust idle speed to specified RPM (see Specifications) by turning throttle stopscrew in or out as required. Starting from rich stop position of idle mixture adjusting screw (screw turned counterclockwise so that limiter cap is against stop), turn mixture screw in or clockwise for "best lean idle" setting (approximately ¾ turn). Recheck idle speed.

1970-72 CARTER YF 1-BARREL (Cont.)

CARBURETOR ADJUSTMENT SPECIFICATIONS

Carb. No.	Idle Speed (Engine RPM)		Float Level Setting	Float Drop	Fast Idle Throttle Clearance	Unloader Setting	Dashpot Clearance	Choke Pulldown	Auto. Choke Setting
	Hot①②	Fast							
D0AF-A	800/500	③	3/8"	.....	.029"	.250"	.....	.225"	Index
D0AF-B	500	③	3/8"	.....	.035"	.250"	7/64"	.225"	1-Lean
D0DF-L	550	③	3/8"	.....	.036"	.250"	7/64"	.265"	Index
D0DF-M	750	③	3/8"	.....	.031"	.250"	7/64"	.265"	Index
D0DF-N	550	③	7/32"	.....	.035"	.280"	7/64"	.225"	Index
D0DF-R	750	③	7/32"	.....	.036"	.280"	7/64"	.225"	1-Rich
D0DF-S	600/500	③	7/32"	.....	.035"	.280"	.....	.225"	Index
D0DF-T	800/500	③	3/8"	.....	.031"	.250"	.....	.265"	Index
D0DF-U	800/500	③	7/32"	.....	.036"	.280"	.....	.225"	1-Rich
D0DF-V	600/500	③	3/8"	.....	.036"	.250"	.....	.265"	Index
D1AF-PA	800/500	1250	3/8"	1 1/4"	.190"	.250"	.....	.200"	Index
D1AF-RA	500	1650	3/8"	1 1/4"	.220"	.250"	7/64"	.230"	1-Lean
D1DF-EA	750	1450	3/8"	1 1/4"	.105"	.280"	7/64"	.200"	Index
D1DF-GA	750	1750	3/8"	1 1/4"	.170"	.250"	7/64"	.230"	Index
D1DF-HA	800/500	1750	3/8"	1 1/4"	.170"	.250"	.....	.230"	Index
D1DF-JA	550	2000	3/8"	1 1/4"	.140"	.250"	7/64"	.200"	Index
D1DF-KA	600/500	2000	3/8"	1 1/4"	.140"	.250"	.....	.200"	Index
D1DF-LA	550	2000	3/8"	1 1/4"	.140"	.250"	7/64"	.200"	Index
D1DF-MA	600/500	2000	3/8"	1 1/4"	.140"	.250"	.....	.200"	Index
D2AF-JA	500	1650	3/8"	.....	.....	.250"	7/64"	.230"	1-Lean
D2DF-AA	750	1500	3/8"	.....	.....	.250"	7/64"	.170"	Index
D2DF-BA	750	1750	3/8"	.....	.....	.250"	7/64"	.230"	Index
D2DF-CA	800/500	1750	3/8"	.....	.....	.250"	.....	.230"	Index
D2DF-DA	750	2000	3/8"	.....	.....	.250"	7/64"	.200"	1-Rich
D2DF-EA	600/500	2000	3/8"	.....	.....	.250"	.....	.200"	1-Rich
D2PF-BA	.....	.....	3/8"	.....	.....	.250"	7/64"	.....	.....
D2PF-EA	.....	.....	3/8"	.....	.....	.250"	7/64"	.....	.....
D2PF-FA	.....	.....	3/8"	.....	.....	.250"	7/64"	.....	.....
4767S	550	2300	7/16"	1 1/4"	.....	9/32"	.....	.....	Index
4768S	600	2300	7/16"	1 1/4"	.....	19/64"	1/8"	.....	Index
4769S	550	2300	7/16"	1 1/4"	.....	9/32"	.....	.....	Index
4770S	600	2300	7/16"	1 1/4"	.....	19/64"	3/32"	.....	Index
4941S	700-750	.....	1/4"	1 1/4"	.....	.....	9/64"	.....	.....
4978S	600	.....	15/32"	1 1/4"	.028"	9/32"	.....	.....	1-Rich
6038S	600	2300	29/64"	1 1/4"	.....	19/64"	.....	.....	Index
6093S,SA	700	2300	29/64"	1 1/4"	.....	19/64"	7/64"	.....	Index
6094S,SA	600	2300	29/64"	1 1/4"	.....	19/64"	.....	.....	1-Rich
6095S,SA	700	2300	29/64"	1 1/4"	.....	19/64"	7/64"	.....	1-Rich
6096S	600	2300	29/64"	1 1/4"	.....	19/64"	.....	.....	Index
6115S	700-750	.....	1/4"	1 1/4"	.....	.....	9/64"	.....	.....
6199S	600④	1600	29/64"	1 1/4"	.....	19/64"	3/32"	.230"	Index
6200S	550⑤	1600	29/64"	1 1/4"	.....	19/64"	3/32"	.230"	Index
6287S	650-700	2200	29/64"	1 1/4"	.....	19/64"	3/32"	.230"	Index
6288S	650-700	2200	29/64"	1 1/4"	.....	19/64"	3/32"	.230"	Index

① – Auto. Trans. in "D", Headlights ON, A/C OFF.
② – Higher speed, solenoid energized. Lower speed, solenoid de-energized.
③ – Controlled by fast idle throttle clearance. *See Adjustments.*
④ – California Vehicles 700 RPM.
⑤ – California Vehicles 600 RPM.

1970-72 CARTER YF 1-BARREL (Cont.)

FAST IDLE SPEED

1970 Ford Motor Co. — *NOTE — Carburetor must be removed from engine to gauge throttle valve opening when making this adjustment.* Open throttle valve and fully close choke valve to allow fast idle cam to assume maximum fast idle position, then close throttle valve as far as possible. Use drill gauge (see Specifications) to check clearance between lower edge of throttle valve and carburetor bore. Adjust by bending choke connector rod at lower angle near throttle lever.

1970 American Motors — With engine at normal operating temperature but not running, fully close choke with throttle open. Hold choke closed and release throttle. Start engine, check fast idle RPM (see Specifications). Adjust by bending choke connector rod at lower angle. *NOTE* — With carburetor off engine, fast idle throttle valve position can be checked in same manner as for Ford carburetors (see above).

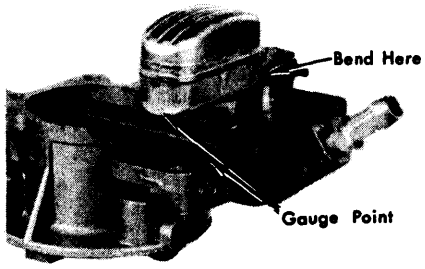
1970-71 Jeep — With engine not running, hold choke valve in wide open position. Lip on fast idle arm should contact boss on body casting. Adjust by bending offset portion of choke connector rod.

1971-72 Ford & American Motors — *NOTE — Curb idle speed and mixture must be adjusted to specifications before adjusting fast idle speed.* With engine at normal operating temperature and air cleaner removed, rotate fast idle cam until fast idle adjusting screw rests on high step of cam (Ford Motor Co.) (1971 American Motors) or second step of cam (1972 American Motors & Jeep). Use fast idle adjusting screw to obtain specified fast idle RPM.

► *JEEP FAST IDLE LINKAGE NOTE* — With choke closed, fast idle screw must align with index mark of fast idle cam. Adjust by bending choke rod at upper angle.

Float Level

Remove air horn and float assembly from carburetor, remove air horn gasket and invert assembly so that weight of float is on seated intake needle. Use gauge of correct size (see Specifications) to measure distance from gasket seat on air horn to top of float at free end (see illustration). *CAUTION - Weight of float only should be on intake needle (excessive pressure will compress spring-loaded needle and cause false setting).* If distance not correct, adjust by bending float arm. *NOTE* - Do not bend tab at end of float arm. This dry float setting is only float adjustment required.



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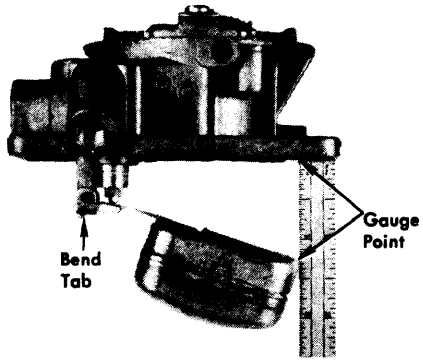
FLOAT LEVEL ADJUSTMENT

Float Drop

All Models — With air horn assembly in upright position and float hanging freely, distance from top of float at outer toe end to air horn casting should be 1¼". Adjust by bending tab at rear of float lever.



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MEASURING FLOAT DROP

Accelerating Pump

No adjustment required.

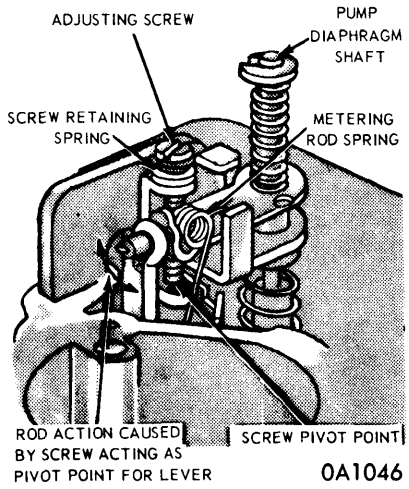
Metering Rod

Ford Motor Co. – After removing air horn and gasket, proceed as follows:

1) Back out idle speed adjusting screw until throttle valve is seated in throttle bore. Press down on diaphragm shaft until metering rod arm contacts lifter link at diaphragm stem.

2) Hold diaphragm assembly down and turn metering rod adjustment screw until metering rod just bottoms in body casting.

3) Turn metering rod adjustment screw in one additional turn.



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METERING ROD ADJUSTMENT (FORD MOTOR CO.)

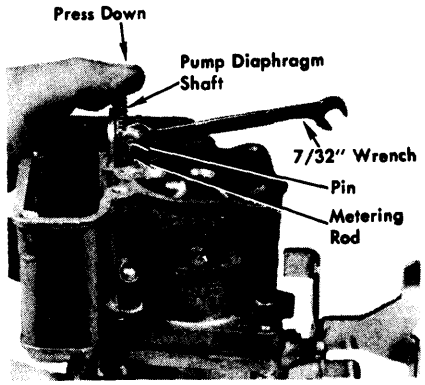
American Motors & Jeep Models – Remove air horn assembly, then proceed as follows:

1) Back out curb idle adjusting screw and dashpot (if so equipped) until throttle valve completely closed. Press down on pump diaphragm shaft until it bottoms.

2) With diaphragm bottomed in vacuum chamber, metering rod should contact bottom of metering rod well and metering rod eyelet should slide freely on metering rod arm pin.

1970-72 CARTER YF 1-BARREL (Cont.)

3) If adjustment required, bend metering rod pin tab as required using an open end wrench as shown.



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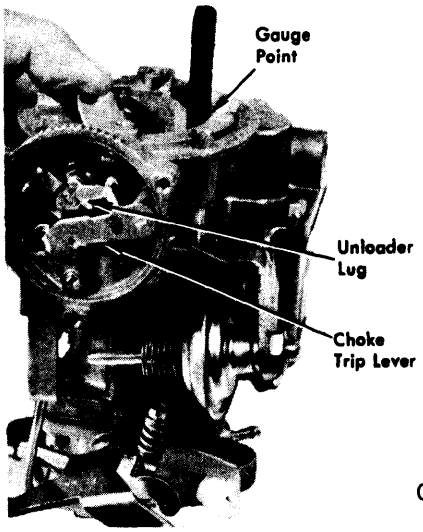
METERING ROD ADJUSTMENT (EXCEPT FORD MOTOR CO.)

UNLOADER (DECHOKE)

Ford Motor Co. – Remove choke thermostatic spring cover and baffle plate (1970 models only). Hold throttle plate fully open and close choke plate as far as possible. Use a drill gauge to measure clearance between choke plate and air horn (see Specifications). Adjust clearance by bending the arm on the choke trip lever (located inside the choke thermostatic spring housing on 1970 models) (located on the throttle lever on 1971-72 models) to obtain correct clearance.

American Motors & Jeep – Remove thermostatic spring cover and baffle plate (1970-71 only). Hold throttle fully open and apply pressure on the choke plate toward the closed position. Measure the clearance between the choke plate and air horn wall (see Specifications). Adjust by bending the arm on the choke trip lever (located inside choke thermostatic spring housing on 1970-71 models) (located on the throttle lever on 1972 models) to obtain specified clearance.



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UNLOADER ADJUSTMENT (EXCEPT FORD MOTOR CO.)

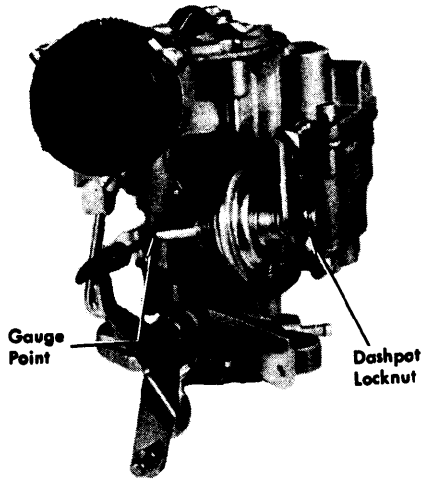
Automatic Choke

Loosen attaching screws and rotate choke cover to align index mark on cover with correct graduation of scale on housing (see Specifications).

Dashpot

NOTE – Dashpot not used on all models.

With choke valve wide open and throttle valve closed in curb idle position, hold dashpot plunger fully depressed and measure clearance between end of dashpot plunger stem and throttle lever. If clearance not correct (see Specifications), adjust by turning dashpot in or out of mounting bracket. Tighten locknut after completing adjustment.



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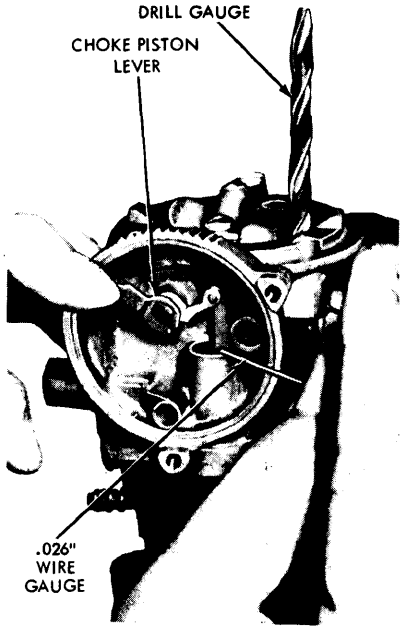
DASHPOT ADJUSTMENT

Choke Valve Clearance Pulldown

Remove air cleaner and choke thermostatic spring housing from carburetor. Bend a .026" diameter wire gauge at a 90° angle approximately 1/8" from one end. Insert bent end of gauge between choke piston slot and right hand slot in



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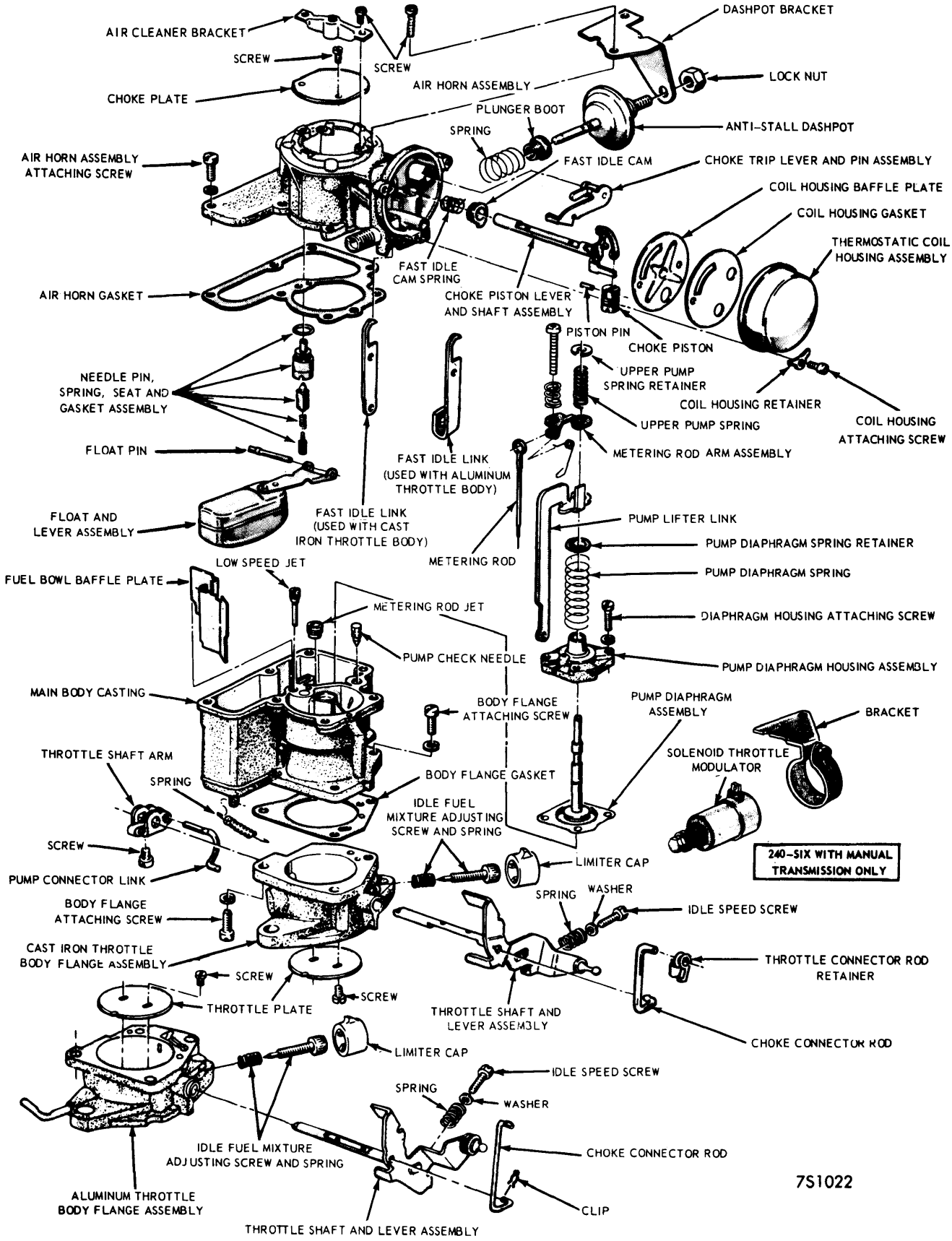
CHOKE VALVE PULLDOWN CLEARANCE

1970-72 CARTER YF 1-BARREL (Cont.)



CARTER YF SINGLE BARREL CARBURETOR ASSEMBLY (WITH INTEGRAL AUTOMATIC CHOKE)

1970-72 CARTER YF 1-BARREL (Cont.)

choke housing. Rotate choke piston lever counterclockwise until gauge is snug in piston slot. Exert light pressure on choke piston lever to hold gauge in place, then using a drill with a diameter equal to specified clearance (see Specifications) check clearance between lower edge of choke plate and carburetor bore. To adjust, bend choke piston lever as required. *CAUTION – Remove choke piston lever for bending, to prevent distorting piston link.*

OVERHAUL

Disassembly

1) Remove attaching screws and retainers, thermostatic spring housing assembly, spring housing gasket, spring housing baffle plate and fast idle link. Remove air horn assembly attaching screws, dashpot or solenoid bracket assembly, air horn assembly, and air horn gasket.

2) Turn air horn assembly upside down and remove float pin and float and lever assembly. Turn air horn right side up and catch needle pin, spring and needle. Remove needle seat and gasket.

3) Remove air cleaner bracket, then remove choke plate attaching screws. File staked ends, if necessary, and use new screws at reassembly. Remove choke plate from air horn, remove choke link lever and attaching screw. Rotate choke shaft and piston assembly counterclockwise until choke piston is out of choke piston cylinder, remove assembly from air horn. Remove piston pin and piston from choke piston lever and shaft assembly.

4) Turn main body upside down and catch accelerating pump check needle. Loosen throttle shaft arm screw and remove arm and pump connector link. Remove fast idle cam and shoulder screw. Remove accelerating pump diaphragm housing screws, lift out pump diaphragm assembly, pump lifter link, metering rod and fuel bowl baffle plate as a unit.

5) Disengage metering rod arm spring from metering rod, remove metering rod from rod arm assembly. Note the location of any washers that were used for shimming either spring. Compress upper pump spring and remove spring retainer, remove upper spring, metering rod arm assembly, and the pump lifter link from the pump diaphragm shaft. Compress pump diaphragm spring, remove pump diaphragm spring retainer, spring, and pump diaphragm assembly from pump diaphragm housing assembly.

6) Using the proper size jet tool or screwdriver, remove metering rod jet and low speed jet. Remove retaining screws and separate throttle body flange assembly from the main body casting. Remove body flange gasket. Remove throttle plate retaining screws. File staked ends, if necessary, and use new screws at reassembly. Slide throttle shaft and lever assembly out of throttle body flange assembly. Note location of the ends of torsion spring on throttle shaft for proper reassembly. When removing idle mixture limiter cap, be sure to note the position of the tab. After removing the limiter cap, count the number of turns to lightly seat the needle, this information is necessary to correctly position needle at reassembly.

Cleaning & Inspection

Wash all parts in carburetor cleaning solution. *CAUTION – Do not immerse accelerating pump diaphragm, power valve, secondary operating diaphragm, and dashpot assembly in solution.* Inspect all parts for wear or damage and replace if necessary. Blow out all passages with air.

Reassembly

To reassemble, reverse disassembly procedure while noting the following:

1) Position throttle plate on the throttle shaft with the notch in the plate aligned with the slotted idle port in the throttle body flange. Install throttle plate attaching screws snug, but not tight, move shaft back and forth and rotate it to be sure the throttle plate does not bind in flange bore. It is necessary that the throttle plate should close tight in the bore, therefore, the idle speed screw should be backed out sufficiently to insure it does not contact the throttle stop. Reposition the throttle plate if necessary, and tighten screws and stake (or peen) the screws in place.

2) Be sure vacuum passage in the diaphragm housing is aligned with the vacuum passage in the main body.