CARBURETOR SERVICE PROCEDURE
CARTER 1-BARREL MODEL YF & YFA

FORM NO. 16C-13-861

NOTE: *Some models of the Carter YF and YFA carburetors may vary in general design and appearance, but basic cleaning and adjustment procedures will remain the same.*

NOTE: *For 1981 and later models, there are two 1-barrel carburetors, the YFA, and the YFA Feedback. Both models are similar in design, the difference being the addition of a feedback solenoid to the YFA Feedback carburetor. This solenoid meters air into both the idle and main circuits for improved engine performance.*

1. DISASSEMBLY

Using the exploded view as a guide, disassemble carburetor only far enough to permit a thorough cleaning. Pay particular attention to the following:

- When disassembling metering rod arm spring from metering rod, note location of any washers shimming spring.
- Removal of choke or throttle valve is not necessary unless part is bent, seized or damaged, requiring repair or replacement. If removal is necessary, file staked (peened) ends of valve retaining screws prior to removal.

NOTE: *On 1981 and later models, choke coil cover is retained with 1 screw and 2 tamper-proof rivets. To remove, proceed as follows:*

- Check choke coil cover retaining rivet for location of mandrel. If flush with head of rivet, drive in or out with a 1/16" diameter punch.
- Align a 1/8" (No. 32) drill on rivet head and drill until rivet head comes loose from body. Do not use excessive pressure, or rivet may spin in hole. Drive the remaining portion of rivet out of hole with a 1/8" diameter punch.

NOTE: *Do not remove idle mixture screw limiter cap unless recalibration is determined necessary after reassembly. If limiter cap is removed, the carburetor must be recalibrated with required equipment to meet state and federal exhaust emission regulations. When limiter cap is removed, count number of turns required to seat idle mixture screw. This will serve as a starting point during reassembly. To remove limiter caps, carefully saw a slot lengthwise through idle mixture cup. Insert a screwdriver in slot just cut and carefully turn to spread outer edge of cup to remove cap. Use extreme care to avoid damaging adjusting needle and carburetor base.*

NOTE: *On 1983 and later Ford models, use side cutters to remove tamper-proof cup covering the closed plate adjusting screw. Back screw out until clear of casting so that metering rod can be adjusted. After adjustment, readjust screw and replace cover.*

NOTE: *To remove tamper-proof rivets from choke pull off seal, drill rivet head just enough to loosen head from body. Using a small punch, drive out remaining pieces of rivet.*

2. CLEANING

- Using a regular carburetor cleaning solution, soak parts long enough to thoroughly clean all surfaces and passages of foreign matter.
- Do not soak any parts containing rubber, leather or plastic, other than limiter caps.
- To remove any residue after use of cleaner, rinse parts in a suitable solvent.
- Blow out all passages with dry compressed air.

NOTE: *Do not immerse air horn in any cleaner or solvent. Vent shaft seal may be damaged.*

3. REASSEMBLY

Reassemble carburetor in reverse order of disassembly, paying particular attention to the following:

- After metering rod installation, make sure metering rod is adjusted.
- Make sure float pin is installed with stop shoulder toward outside of carburetor.
- Some models may use a gasket on accelerator pump housing screws.
- Make sure spring is correctly installed on bowl vent rod shaft (late type if equipped). Also make sure that bowl vent arm engages forked actuating lever.

NOTE: *Install idle limiter cup and perform mixture adjustment, if required. Install new idle limiter cap.*

NOTE: *Install tamper-proof rivets on choke cover and choke pull off seal using a rivet gun and rivets provided in service kit.*

4. ADJUSTMENTS

NOTE: *Depending on application, one of four float designs is used with this carburetor. Specifications and point of measurment for float level and drop will differ with on float design. See figures 1 and 2.*

A. Float Level

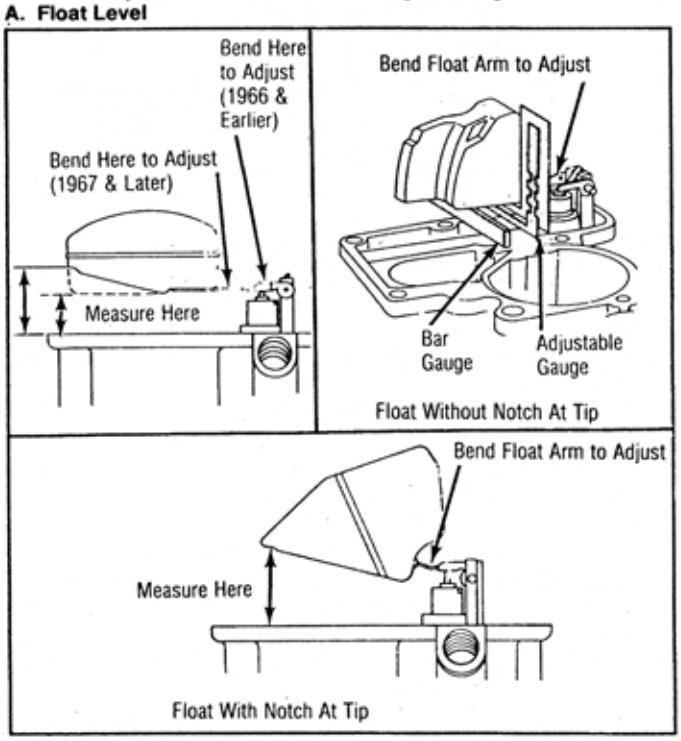

Fig. 1 Float Level Adjustment

1. Invert air horn and allow weight of float to rest on closed needle valve. Adjustment is checked using either the specified bar gauge or adjustable gauge included in kit. *See Fig. 1.*
2. If adjustable gauge is used, assemble gauge and calibrate to "A" scale. If bar gauge in kit is used, it may be identified by a letter (L = 7/32"). *See column "A" in specification table.* With gasket removed, measure float level specified distance between air horn surface and top of float.
3. To adjust 1966 and earlier models, bend lip of float arm that contacts needle valve. To adjust 1967 and later models, bend float arm.

B. Float Drop

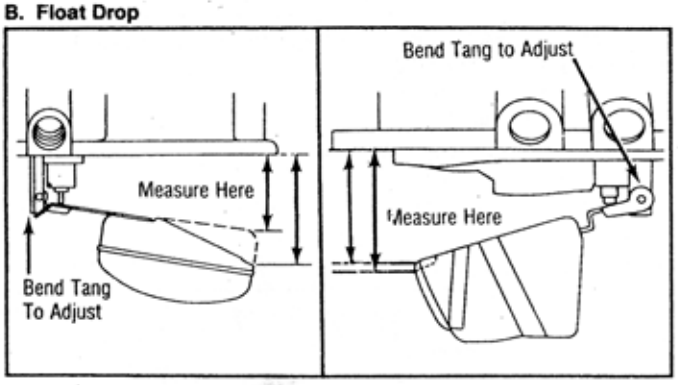

Fig. 2 Float Drop Adjustment

1. Hold air horn upright. Allow weight of float to hang freely. *See Fig. 2.*
2. With gasket removed, measure specified float drop distance between air horn surface and end of float. To adjust, bend stop tang on float arm.

C. Accelerator Pump (All GM & Checker Models)

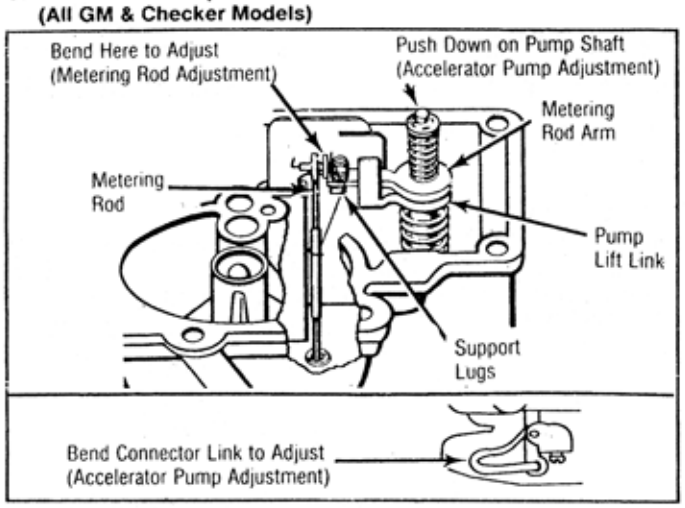

Fig. 3 Accelerator Pump Adjustment (GM and Checker Only) and Metering Rod Adjustment (AMC/Jeep up to 1972; All Others up to 1969)

1. Hold throttle valve closed. Press down on top of accelerator pump shaft until it bottoms. *See Fig. 3.*
2. Metering rod arm should now contact pump lift link at outer end near spring.
3. To adjust, bend accelerator pump connector link at lowest angle.

D. Metering Rod

AMC/JEEP UP TO 1972
ALL OTHERS UP TO 1969

1. Hold throttle valve closed. Press down on top of accelerator pump shaft until it bottoms. *See Fig. 3.*
2. Metering rod should seat at same time metering rod arm contacts pump lift link between springs and at support lug.

***NOTE:** On early models that do not have a support lug on lift link, metering rod arm should contact and be parallel with pump lift link when metering rod is seated.*

3. If metering rod is not seated or seats before arm contacts lift link, adjust by bending arm up or down.

***NOTE:** Starting on 1970 AMC and Jeep models, adjustment is made by bending metering rod pin tab with a 7/32" wrench.*

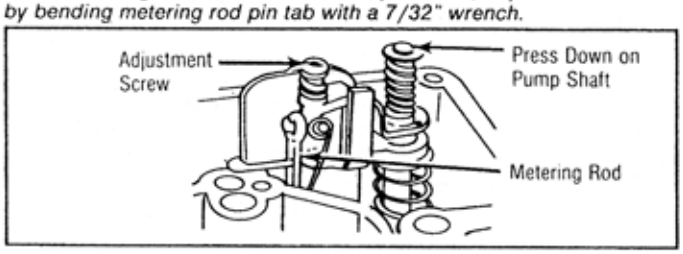

Fig. 4 Metering Rod Adjustment (AMC/Jeep 1973 and Later) (All Others 1970 and Later)

AMC/JEEP 1973 AND LATER
ALL OTHERS 1970 AND LATER

1. Hold throttle valve closed. Press down on top of accelerator pump shaft until it bottoms. *See Fig. 4.*
2. Turn adjusting screw counterclockwise until metering rod bottoms in seat.
3. Now turn metering rod screw 1 turn clockwise.

E. Bowl Vent (If Equipped)

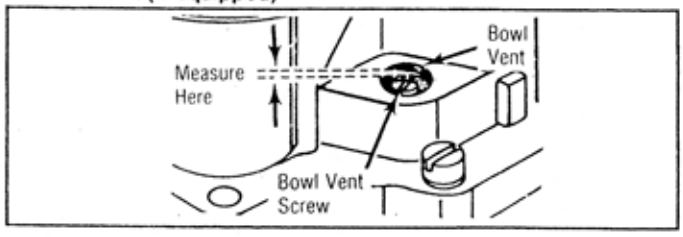

Fig. 5 Bowl Vent Adjustment (Early Type – If Equipped)

EARLY TYPE

1. Adjustment is made after adjusting accelerator pump and metering rod.
2. Hold throttle valves closed. Measure bowl vent specified clearance between bowl vent valve and inside of air horn. *See Fig. 5.*
3. Specified clearance is 1/16". To adjust, turn bowl vent adjusting screw.

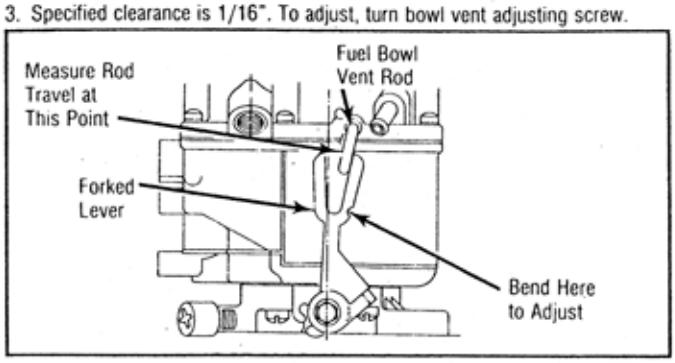

Fig. 6 Bowl Vent Adjustment (Late Forked Lever Type)

LATE (FORKED LEVER) TYPE
AMC/JEEP

***NOTE:** This is not a precise measurement. It ensures that bowl vent is open at idle and closes as throttle opens.*

1. Disconnect canister hose at carburetor. Connect a length of hose to fitting. Position fast idle screw on high cam step. *See Fig. 6.*
2. Apply pressure to hose with mouth. Resistance should be felt. If no resistance is felt, vent is open. Bend arm on forked lever until vent closes.
3. Move fast idle cam until screw drops to third step. Bowl vent should be open and no resistance felt. If resistance is felt, bend arm on forked lever until vent closes.

LATE (FORKED LEVER) TYPE
FORD MOTOR CO.

1. Open throttle until forked lever is not touching bowl vent rod. Close throttle lever to idle position. Measure travel of bowl vent rod at point shown. *See Fig. 6.*
2. The measured distance is the travel of the vent rod from point of no contact with forked lever to point that forked lever moves vent rod to idle position.
3. Specified travel is .020-.040" on all models up to 1980 and .100-.150" on 1981 and later models. To adjust, bend arm of forked lever.

F. Fast Idle Linkage

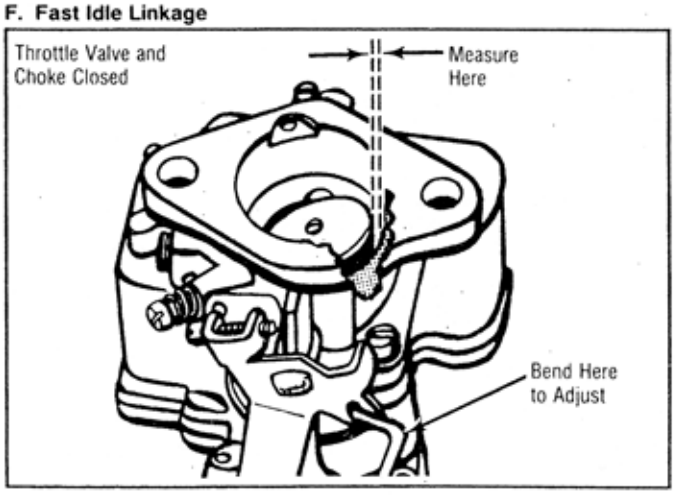

Fig. 7 Fast Idle Linkage Adjustment (Type A – If Equipped)

TYPE A

1. Remove choke housing and baffle plate. Open throttle, close choke, and then close throttle completely.
2. Measure fast idle linkage specified clearance between throttle valve and throttle bore on side opposite idle adjusting screw. *See Fig. 7.*
3. To adjust, bend choke connector rod at lower angle.

TYPE B

1. Hold choke valve wide open. Lip on fast idle arm should contact stop on body casting. *See Fig. 8.*
2. To adjust, bend choke connector rod.

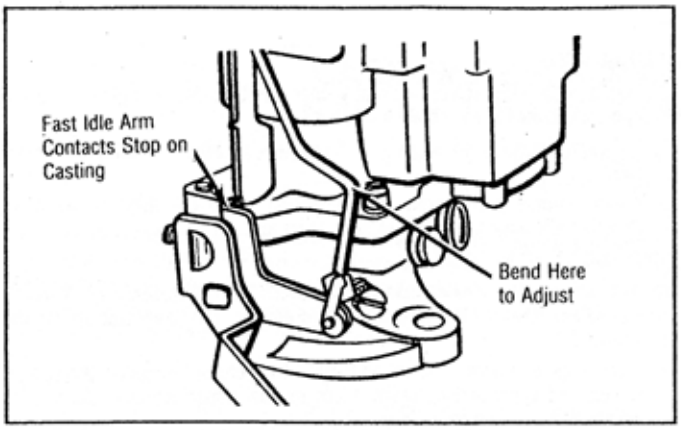

Fig. 8 Fast Idle Linkage Adjustment (Type B - If Equipped)

TYPE C

1. Close choke valve completely. Position connector rod in upper end of slot in fast idle cam. *See Fig. 9.*
2. Top edge of fast idle tang should align with index mark on fast idle cam.
3. To adjust, bend choke connector rod.

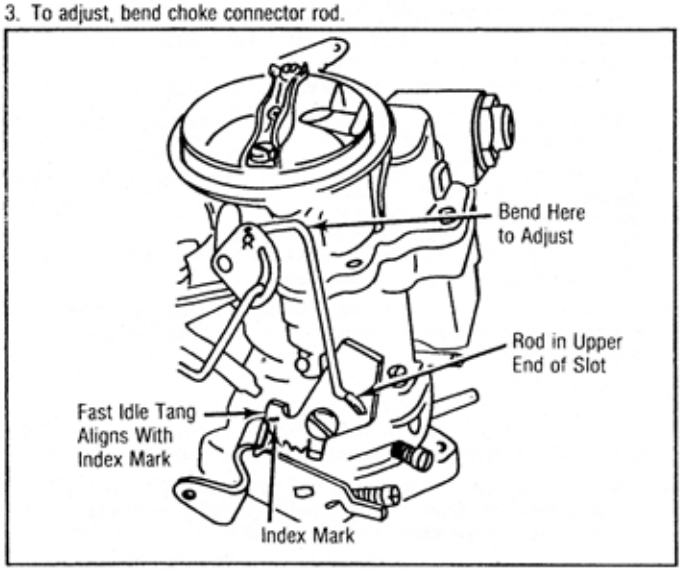

Fig. 9 Fast Idle Linkage Adjustment (Type C - If Equipped)

AMC/JEEP 1970-71

NOTE: *This adjustment is made with carburetor installed on engine and with engine at normal operating temperature.*

1. With engine not running, close choke fully with throttle open.
2. Release throttle. Start engine and adjust engine speed to 2300 RPM by bending choke connector rod.

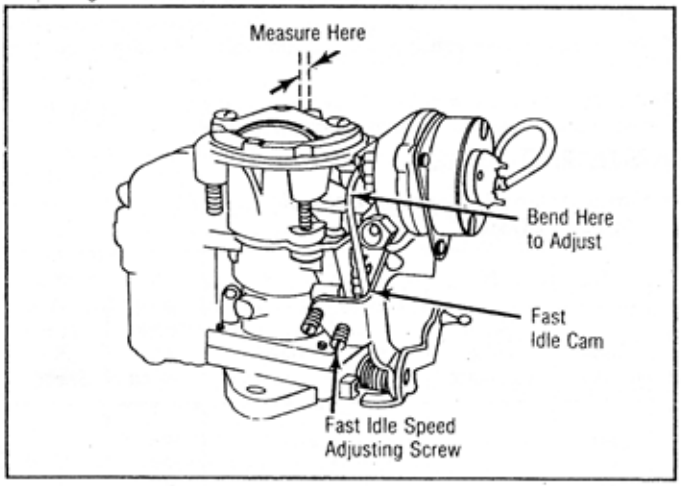

Fig. 10 Fast Idle Linkage Adjustment (AMC/Jeep 1972 and Later; All Others 1971 and Later)

AMC/JEEP 1972 AND LATER
ALL OTHERS 1971 AND LATER

1. Place fast idle speed screw on second step of fast idle cam. *See Fig. 10.*
2. Measure fast idle linkage specified clearance between lower edge of choke valve and air horn wall.
3. To adjust, bend choke connector rod.

G. Choke Unloader

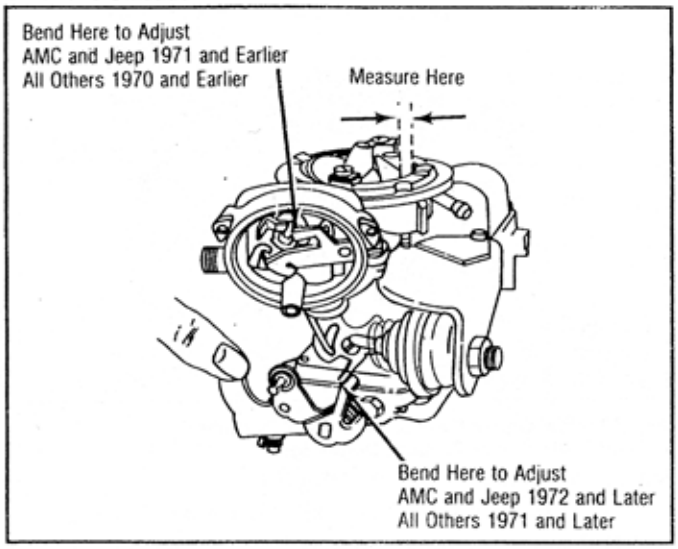

Fig. 11 Choke Unloader Adjustment

1. Hold throttle valve wide open. Close choke valve completely. *See Fig. 11.*
2. Measure choke unloader specified clearance between lower edge of choke valve and air horn wall.
3. To adjust on early type, bend arm on trip lever in choke housing.
4. To adjust on later models, bend unloader tang on throttle lever that contacts fast idle cam.

NOTE: *After making adjustment in step 4, make sure there is approximately .070" clearance between unloader tang and main body when throttle is wide open.*

H. Initial Choke Valve Clearance

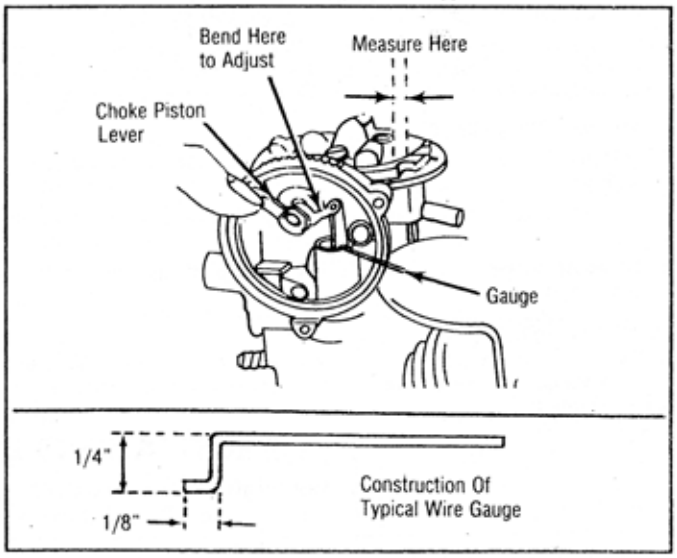

Fig. 12 Initial Choke Valve Clearance Adjustment (Models Without Choke Vacuum Diaphragm)

MODELS WITHOUT
CHOKE VACUUM DIAPHRAGM

1. Remove choke housing and baffle plate.
2. Insert a .025" gauge (AMC and Jeep) or a .026" gauge (Ford Motor Co.) between the choke piston slot and the right hand slot in choke housing. *See Fig. 12.*

NOTE: *A gauge can be made from a paper clip if necessary. Construct the gauge to measurements shown in Fig. 12.*

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3. Rotate choke piston lever counterclockwise until gauge is snug in piston slot.
4. Measure initial choke valve specified clearance between lower edge of choke valve and air horn wall.
5. To adjust, bend choke piston lever.

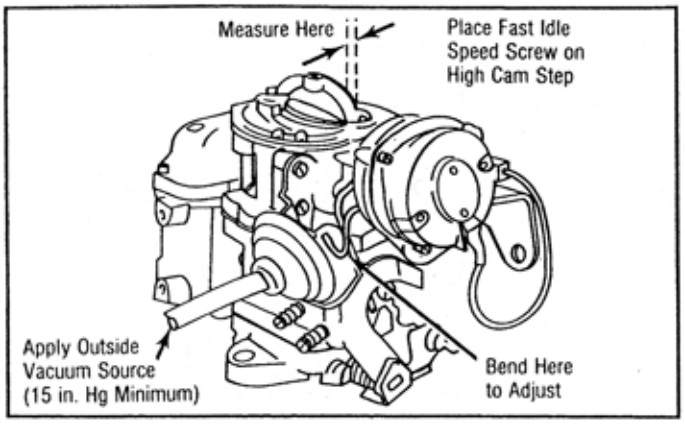

Fig. 13 Initial Choke Valve Clearance Adjustment (Models With Choke Vacuum Diaphragm)

MODELS WITH CHOKE VACUUM DIAPHRAGM

1. Place fast idle speed screw on high step of fast idle cam. *See Fig. 13.*
2. With choke cool, rotate choke coil cover 90° in closing (rich) direction. On models with tamper-proof housing, apply light closing pressure on choke valve.
3. Apply an outside vacuum source of at least 15 in. Hg to choke vacuum diaphragm. Make sure diaphragm stem is fully retracted.
4. Measure initial choke valve specified clearance between lower edge of choke valve and air horn wall.
5. To adjust, bend choke vacuum diaphragm connector rod.

I. Automatic Choke

1. On carburetors without tamper-proof choke coil, loosen choke cover screw. On models with tamper-proof choke coil, remove rivets and screw.
2. On all models, rotate cover against tension until mark on cover is aligned with specified mark on choke housing. Tighten cover screws.

***NOTE:** When installing cover on 1981 and later models, use replacement rivets supplied in service kit. Ensure cap is installed correctly and aligned with proper notch before retaining with rivets.*

J. Dashpot (If Equipped)

1. Hold throttle valve in closed position. Hold dashpot stem in bottomed position.
2. Measure dashpot specified clearance between dashpot stem and throttle lever.
3. To adjust, loosen dashpot lock nut and rotate dashpot until specified clearance is obtained.

K. Curb Idle Speed

***NOTE:** If idle limiter cap has been removed, refer to manufacturer's service manual for correct idle mixture procedure and specifications (air/fuel ratio).*

1937-68 MODELS

1. Turn throttle stop screw to slightly open throttle. Warm engine to normal operating temperature, choke fully open.
2. Turn idle adjusting screw in or out until engine idles smoothly at highest RPM.
3. Rotate throttle stop screw until specified curb idle RPM is obtained. Readjust idle adjusting screw to smoothest idle.

1969 AND LATER MODELS

***NOTE:** The term "idle speed solenoid" encompasses; Throttle Solenoid Positioner (TSP), A/C throttle kicker, TSP-dashpot and front-mounted TSP.*

1. Warm engine to normal operating temperature, choke fully open. Block drive wheels and apply parking brake. Place manual transmission in Neutral and automatic transmission in Drive.
2. Depending upon year and model, perform the following adjustment preparations:
   - 1969-72 Ford headlights on (1970-72 hi-beam on).
   - Remove air cleaner and plug vacuum lines on 1974-75 Ford models. On all other models, air cleaner should be installed during adjustment.
   - Turn A/C on for 1969 models.
   - Close hot idle compensator valve if equipped.
   - 1969-71 models with A.I.R., disconnect and plug vacuum line to thermal sensing valve.
   - 1984 AMC & Jeep, disconnect Sol-Vac vacuum hose.
3. If equipped with idle speed solenoid, turn solenoid adjusting screw to obtain solenoid energized RPM.
4. If not equipped with idle speed solenoid, turn idle speed screw to obtain specified curb idle RPM. On feedback models, 10-30 RPM variation is normal during closed loop operation.
5. Adjust idle mixture screw, within range of limiter cap, to obtain smoothest idle. Readjust curb idle speed as necessary.
6. If equipped with idle speed solenoid, disconnect electrical connection of solenoid. Adjust solenoid de-energized RPM by turning curb idle speed adjusting screw.

L. Fast Idle Speed

***NOTE:** Refer to engine compartment decal for correct procedure and specifications. If no decal is present, proceed as follows:*

1. Disconnect and plug vacuum hose at EGR valve, purge valve and cold start vacuum switch (if equipped). Using rubber tubing, connect manifold vacuum source to cold start vacuum switch (if equipped).
2. Place fast idle speed screw on second step of fast idle cam. Adjust fast idle speed screw to obtain specified fast idle RPM.

M. Altitude Compensator

***NOTE:** See Exploded View and Ref. No. 21.*

1. Adjustable altitude compensator plug has 2 positions, inner seated position and outer seated position. Non-adjustable altitude compensator must be replaced if inoperable.
2. Adjust to outer seated position (counterclockwise) for operation above 4000 feet.
3. Adjust plug to inner seated position (clockwise) for operation below 4000 feet.

***NOTE:** Plug must be in either of the full seated positions. Total travel between both positions is approximately 2 1/2 turns.*

SPECIFICATIONS & ADJUSTMENT TABLE

NOTE: See Engine Compartment Decal or Manufacturer's Service Manual for Idle Mixture and Speed Specifications

Adjustment Reference Letter			A		B	F		G	H	I	J	K	L
Application			Float Level		Float Drop	Fast Idle Linkage		Choke Unloader	Choke Valve Clearance	Auto. Choke	Dashpot Clearance	Curb Idle Speed	Fast Idle Speed
			Gauge	Setting		Type	Setting						
AMC-RAMBLER-NASH													
1951-53	Statesman	All	B	1/2"	1-1/4"	A	.054"	.281"	.....	1 Lean	.....	500 [2]	[3]
1954-55	Statesman	All	F	5/16"	1-1/4"	A	.024"	.437"	.....	2 Lean	.....	500 [2]	[3]
1951-62	Rambler	All	B	1/2"	1-1/4"	A	.054"	.281"	.....	1 Lean	.....	500 [2]	[3]
1970	AMC	All	.....	9/64"	1-1/4"	.....	[3]	.300" [4]	.....	Index [5]	.095" [6]	550 [7]	2300
1971	AMC	All	.....	29/64"	1-1/4"	.....	[3]	.300"	.....	Index [8]	.110"	600 [9]	2300

ABBREVIATIONS: A/T = Automatic Transmission; M/T = Manual Transmission; Alt. = Altitude Compensator; Cal. = California; Fed. = Federal; Can. = Canada, A.I.R. = Air Injection Reactor; W/ = With; W/O = Without; A/C = Air Conditioning; EGR = Exhaust Gas Recirculation; L/D = Light Duty (Under 8500 Lbs. GVW); H/D = Heavy Duty (Over 8500 Lbs. GVW)