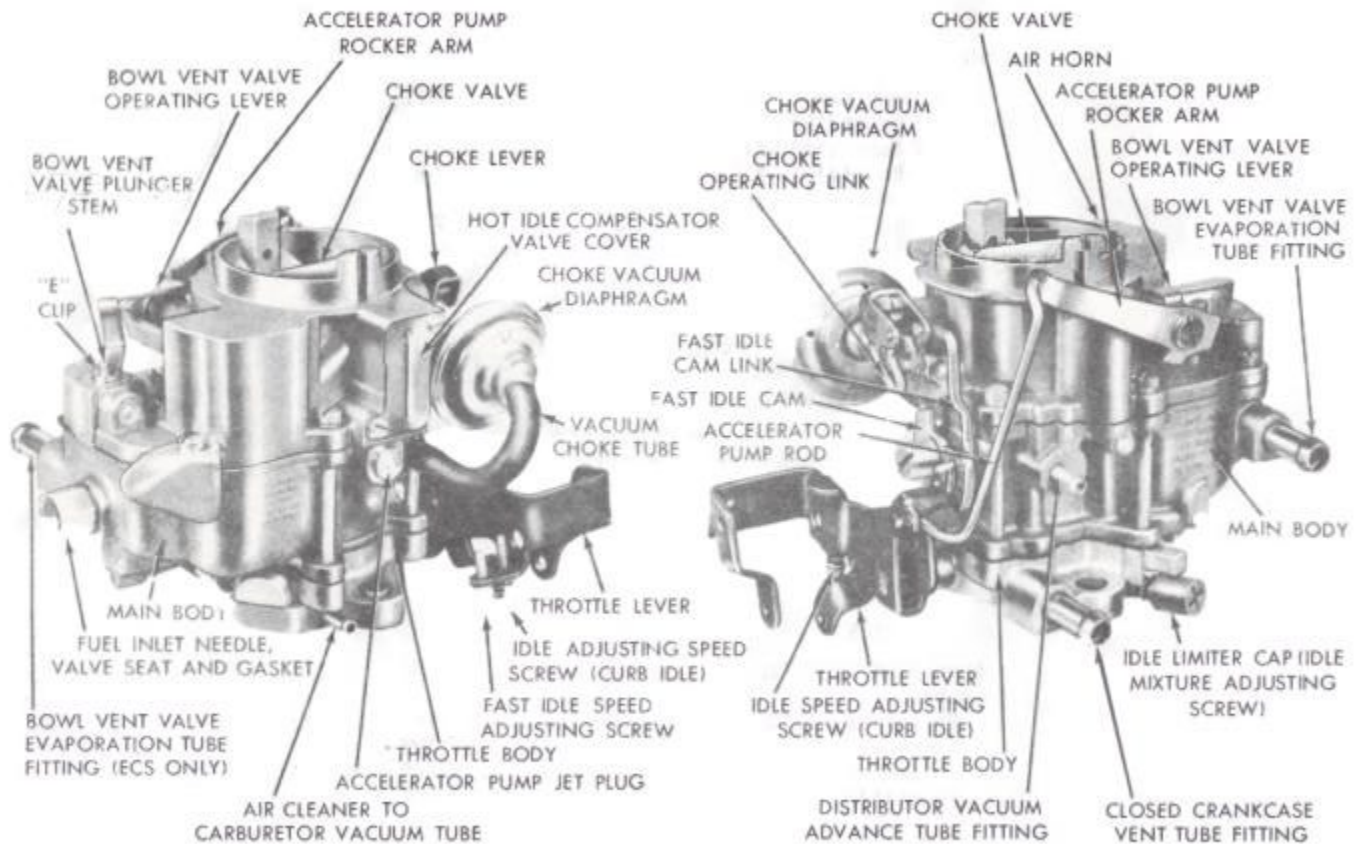


Carter BBS Rebuild & Adjustments



Rebuild Steps

- 1) Remove hairpin clip and disengage accelerator pump operating rod, then remove vacuum hose between carburetor body and vacuum diaphragm. Remove clip from choke operating link and disengage and remove link from diaphragm plunger (stem) and choke lever.
- 2) Remove vacuum diaphragm and bracket assembly and place to one side for cleaning. Remove air horn retaining screws and tilt air horn toward throttle lever enough to disengage fast idle cam link from cam, then lift air horn up and away from main body.
- 3) Remove "E" clip from bowl vent valve plunger to operating lever. Remove accelerator pump rocker arm pivot screw, push up on bottom of plunger and disengage from rocker arm. Remove rocker arm and bowl vent valve lever, slide plunger, spring and seat out of air horn. If plunger can be used again, place in clean gasoline to prohibit leather from drying out.
- 4) Remove screws attaching hot idle compensator valve cover to air horn, lift off cover and remove valve and gasket (if so equipped). Remove fuel inlet needle valve, seat and gasket from main body, lift out float fulcrum pin retainer, then lift out floats and fulcrum pin.

- 5) Remove step-up piston retaining screw, slide step-up piston and rod out of well, now lift out the step-up piston spring and remove step-up piston gasket from bottom of well. Remove main metering jet, unscrew and remove idle orifice tube.
- 6) Invert carburetor and drop out accelerator pump check balls from their seats. Remove accelerator pump jet plug, then using suitable tool, remove accelerator pump jet. Remove plastic limiter cap from idle air mixture screw (being sure to count the number of turns to seat screw, as the same number of turns must be maintained at reassembly). Remove screw and spring from throttle body.

Cleaning & Inspection

Clean all parts, except those made of plastic and choke diaphragm, in a suitable solvent (such as Berrymans) and blow dry with air. Blow out all passages with air. Spray carb cleaner through each passage so you can make sure none are plugged. Do not use wire or drills to clean or gauge jets or passages. Do not immerse vacuum kick diaphragm in any liquid, clean external surfaces with clean cloth or soft wire brush and shake dirt from stem side of diaphragm with diaphragm de-pressed; do not direct air stream into vacuum diaphragm fitting. Inspect all parts for wear or damage. Check throttle shaft for excessive wear or damage, if wear is extreme, replace entire throttle body assembly rather than installing a new shaft in the old body.

Reassembly

Reverse disassembly procedure and note the following:

Idle Mixture Screw & Limiter Cap - Install idle mixture screw and spring in body, tapered portion must be straight and smooth, if tapered portion is grooved or ridged, a new idle mixture screw should be installed. Turn screw lightly against its seat (DO NOT USE SCREWDRIVER), back off the same number of turns counted at disassembly, then install new (blue) plastic cap with tab against stop.

Step-Up Piston & Rod Assembly - Before installing step-up piston, be certain step-up rod is able to move freely each side of vertical position, also be sure step-up rod is straight and smooth. Be sure step-up piston slides freely in its cylinder.

Vacuum Kick Diaphragm - Before installing, check for internal leakage by depressing diaphragm stem and placing finger over vacuum fitting to seal passage, then release stem. If stem moves more than 1/16" in 10 seconds, leakage is excessive and unit should be replaced.

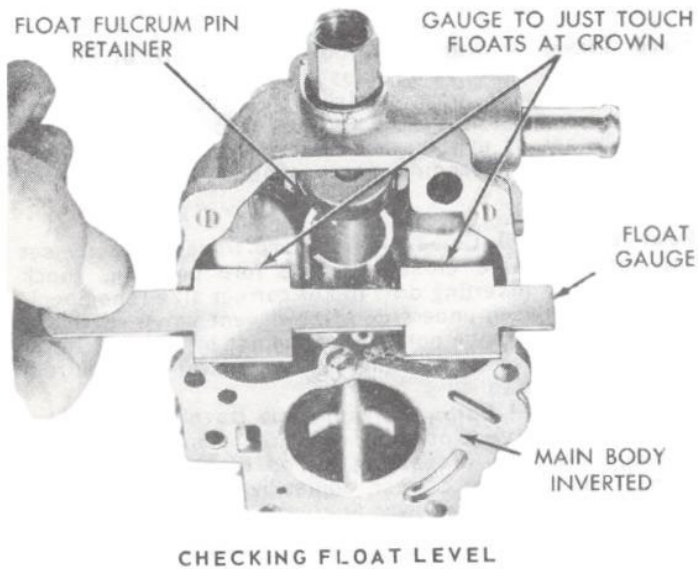
Adjustments

Float Level

On Engine Check - Disconnect accelerating pump operating rod, remove two long air horn screws and two short screws, insert short screws in place of long screws and tighten securely to retain main body on throttle body. Remove remaining air horn screws, tilt air horn to allow fast idle cam link to be disengaged from fast idle cam, remove air horn and gasket. Make certain bowl filled with fuel so that float lever lip bears firmly against needle. Seat fulcrum pin by pressing on fulcrum pin retainer, use suitable gauge (Carter T-109-239) or "T" scale to measure distance from top surface of bowl to crowned top of each float at center (see Specifications). Adjust as directed in "On Bench" check below.

On Bench - With air horn and gasket off, invert carburetor with weight of floats only holding inlet needle against seat (hold finger on retainer to fully seat float fulcrum pin). Use gauge or "T" scale to measure from top edge of fuel bowl to crown of each float at center. If float setting not correct (see Specifications) remove

float and bend float lever lip as required. CAUTION - Do not attempt to adjust float without removing it from carburetor (inlet needle has synthetic rubber tip which may be compressed sufficiently to cause a false setting and can cause flooding).

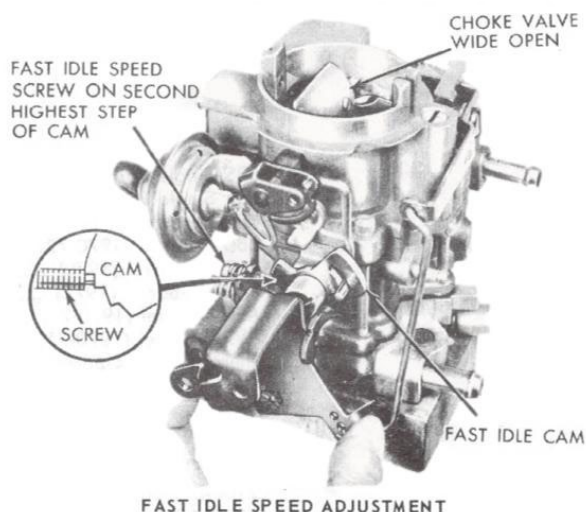


Idle Speed & Mixture

NOTE -Idle adjustments must be made with engine at normal/ operating temperature, automatic transmission in Neutral(not Park), A/C OFF, timing checked to specifications.

Idle Speed -Obtain specified idle RPM by adjusting carburetor throttle speed screw (see Specifications).

Idle Mixture -Exhaust Analyser must be used to ensure correct air-fuel ratio.

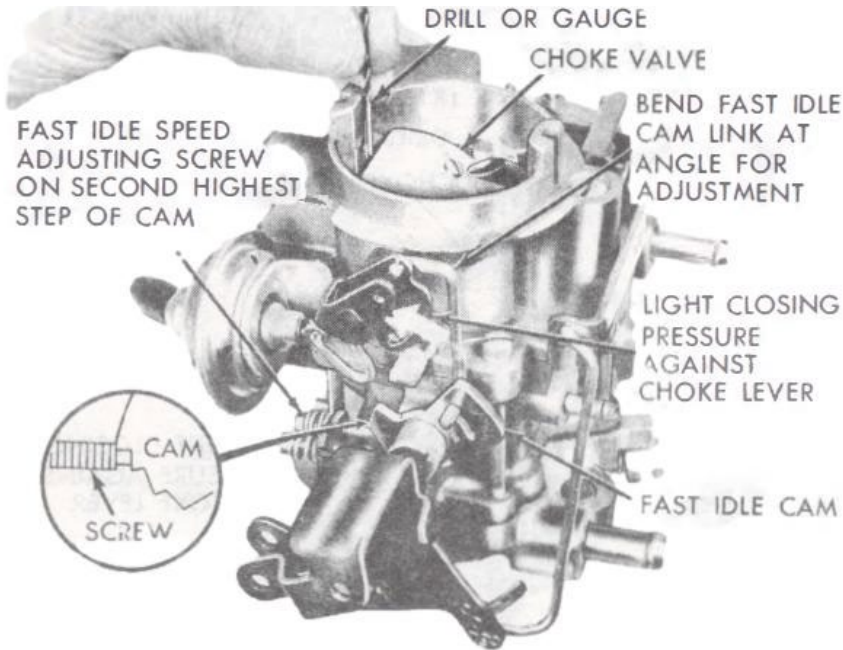


Fast Idle Speed (On Engine)

With curb idle speed correctly adjusted and engine at normal operating temperature with transmission in Neutral or Park, position fast idle screw on second highest step of fast idle cam. Turn screw in or out to obtain correct RPM (see Specifications).

Fast Idle Cam Position

Position fast idle screw on second step of fast idle cam. Check choke valve opening by inserting gauge or drill (see Specifications) between edge of choke valve and air horn wall. If slight drag not noted as gauge is withdrawn, adjust by bending fast idle connector rod at upper angle. With choke valve fully closed there should be a slight clearance between tang on choke lever and stop on air horn.



ACCELERATING PUMP & BOWL VENT

("C.A.S." CARBURETORS)

NOTE - Throttle lever has three holes for pump connector

rod engagement to allow seasonal pump setting adjustment. Normal pump setting is obtained with connector rod in OUTER HOLE (long stroke).

Bowl Vent Adjustment

With throttle stop screw backed off and throttle valve fully closed, make certain that bowl vent clip is installed in correct notch (see Pump Seasonal Setting). Check clearance between vent valve and seat on bowl cover using gauge or drill rod of correct size (see Specifications). Adjustment may be made by bending connector rod at lower angle. NOTE - Pump travel will be correct when bowl vent is properly adjusted.

Pump Seasonal Setting

Outer hole provides maximum pump discharge, inner hole minimum pump discharge. NOTE - Whenever pump rod moved from one hole to another, corresponding change must be made in vent valve clip on pump stem as follows: Center hole (center groove), inner hole (upper groove), outer hole (lower groove). Re-check bowl vent clearance.

ACCELERATING PUMP & BOWL VENT

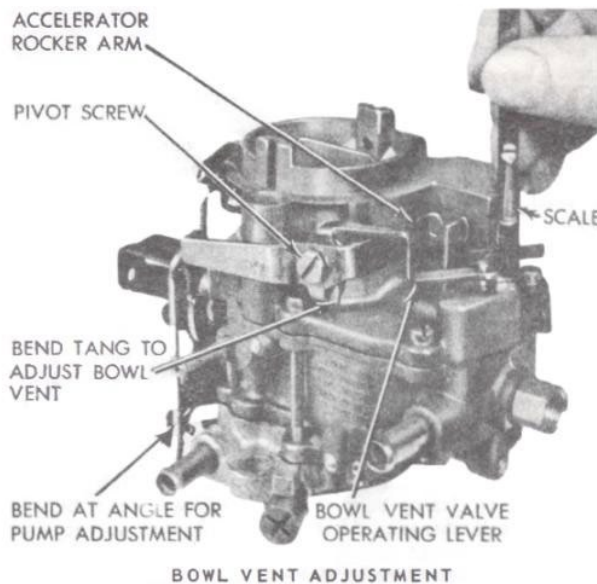
("E.C.S." & 1971 CARBURETORS)

NOTE - Pump travel must be checked and adjusted before adjusting bowl vent.

Pump Travel - With pump rod in outer hole of throttle

lever and throttle valve closed to curb idle position, measure . distance from straightedge placed on flat air cleaner mounting surface of air horn to top of accelerating pump plunger. If this distance is not correct, adjust by bending pump connector rod at existing angle.

Bowl Vent (1970 Carbs.) - With pump travel correctly set and throttle valve closed to curb idle position, check adjustment by inserting drill rod of correct size (see Specifications) between underside of bowl vent valve lever and air horn. If clearance is not correct, adjust by bending lower tang on bowl vent operating lever at pivot as required.



Bowl Vent (1971 Carbs.) - With pump travel correctly set and throttle valve closed to curb idle position, measure distance from top of casting to top of bowl vent valve stem. If distance is not correct, adjust by bending lower tang on bowl vent operating lever at pivot.

Vacuum Break or Pull-Off

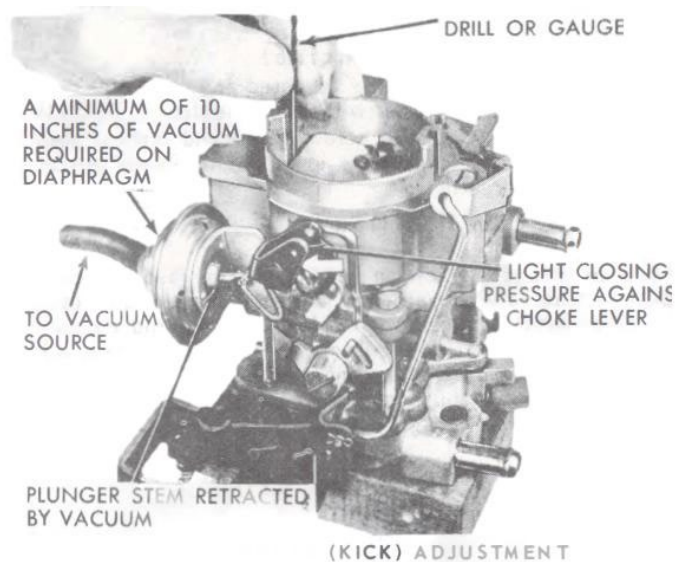
NOTE -Adjustment can be made with carburetor on engine and engine running to supply vacuum as follows:

- 1) Back off fast idle speed screw so choke can be closed to kick position with carburetor throttle at curb idle. Apply sufficient closing force on choke rod lever to provide minimum choke valve opening without distorting diaphragm link.

NOTE -Diaphragm internal spring must be fully compressed which will be noted by extension of diaphragm stem.

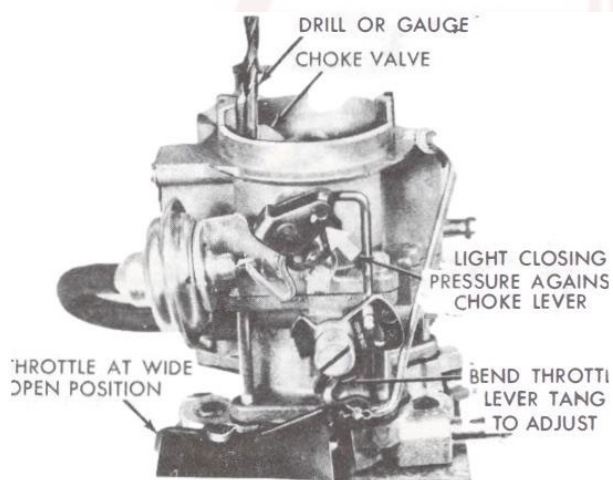
2) At this point, insert drill or gauge between choke valve and air horn wall (see Specifications). If slight drag not noted as drill withdrawn, adjust diaphragm link length as required. Reset fast idle speed screw.

3) Adjustment precautions: When adjusting link length by opening or closing bend, do not apply twisting or bending force to diaphragm. After adjustment, with no vacuum applied to diaphragm, check to see that choke valve moves freely from open to closed position.



Unloader

Hold throttle valve in wide open position. With correct drill or gauge (see Specifications) measure clearance between choke valve and air horn wall. If slight drag not noted as gauge withdrawn, bend unloader tang on throttle lever as required.



Automatic Choke

Carburetors have conventional choke valve in air horn actuated and controlled by remote thermostatic coil in well in manifold. Unit is serviced as an assembly and should not be adjusted. If unit has been tampered with, adjustment may be reset as follows:

- 1) With choke coil unit removed from well, loosen locknut and turn shaft so that index mark on disc is in alignment with correct mark (see Specifications) on frame. Retain this position while tightening locknut.

CARBURETOR ADJUSTMENT SPECIFICATIONS									
Carter Carb. No.	Idle Speed (Engine RPM)		Fast Idle Cam Position	Float Level Setting	Pump Travel Setting	Bowl Vent Setting	Unloader Setting	Vacuum Break Setting	Auto Choke Setting
	Hot	Fast							
4715S	750	1800	#48	1/4"		1/32"	3/16"	#35	2-Rich
4716S	750	1800	#48	1/4"		1/32"	3/16"	#48	2-Rich
4717S	750	1800	#48	1/4"	5/16"	9/32"	3/16"	#35	2-Rich
4718S	750	1800	#48	1/4"	5/16"	9/32"	3/16"	#48	2-Rich
4955S	800	1900	#48	1/4"	5/16"	17/64"	3/16"	#35	2-Rich
4956S	800	1800	#48	1/4"	5/16"	17/64"	3/16"	#35	2-Rich

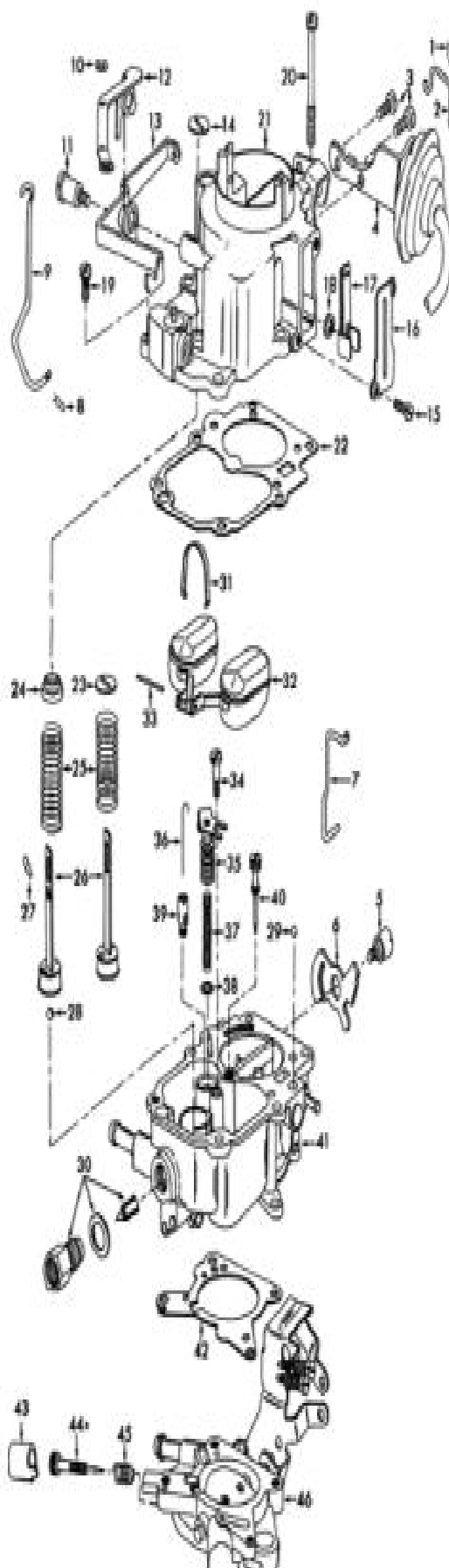
NOMENCLATURE

REF. NO.	REF. NO.
1. RETAINER - CHOKE PULL-OFF LINK	23. WASHER - PUMP SPRING GUIDE S/M
2. LINK - CHOKE PULL-OFF	24. BUSHING - PUMP SPRING S/M
3. SCREW (2) - CHOKE PULL-OFF	25. SPRING - PUMP PLUNGER
4. CHOKE PULL-OFF & HOSE ASSY.	26. PUMP PLUNGER ASSY.
5. SCREW - FAST IDLE CAM	27. PIN SPRING - PUMP PLUNGER S/M
6. CAM - FAST IDLE	28. BALL - PUMP INTAKE CHECK
7. LINK - FAST IDLE	29. BALL - PUMP DISC. CHECK
8. RETAINER - PUMP ROD	30. NEEDLE & SEAT ASSY.
9. ROD - PUMP	31. RETAINER - FLOAT PIN
10. RETAINER - VENT VALVE LEVER (SOME MODELS)	32. FLOAT ASSY.
11. SCREW - PUMP & VENT VALVE LEVERS	33. PIN - FLOAT
12. LEVER - VENT VALVE	34. SCREW - STEP-UP PISTON PLATE
13. LEVER - PUMP PLUNGER	35. STEP-UP PISTON ASSY.
14. VALVE - VENT S/M	36. ROD - STEP-UP
15. SCREW (2) - COMPENSATOR VALVE COVER S/M	37. SPRING - STEP-UP PISTON
16. COVER - COMPENSATOR VALVE S/M	38. GASKET - STEP-UP PISTON
17. VALVE - COMPENSATOR S/M	39. JET - MAIN METERING
18. GASKET - COMPENSATOR VALVE S/M	40. JET - IDLE
19. SCREW & LOCKWASHER (2) - BOWL COVER	41. BOWL ASSY.
20. SCREW & LOCKWASHER (4) - BOWL COVER	42. GASKET - THROTTLE BODY
21. BOWL COVER ASSY.	43. CAP - IDLE LIMITER S/M
22. GASKET - BOWL COVER	44. NEEDLE - IDLE ADJUSTING*
	45. SPRING - IDLE ADJ. NEEDLE
	46. THROTTLE BODY ASSY.

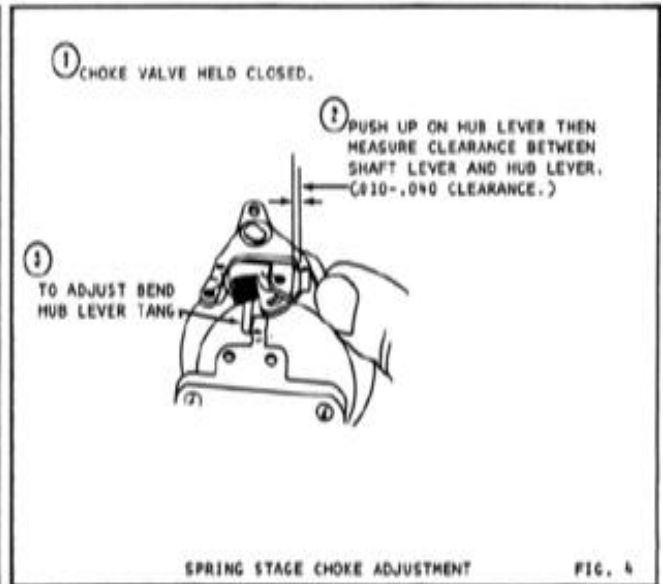
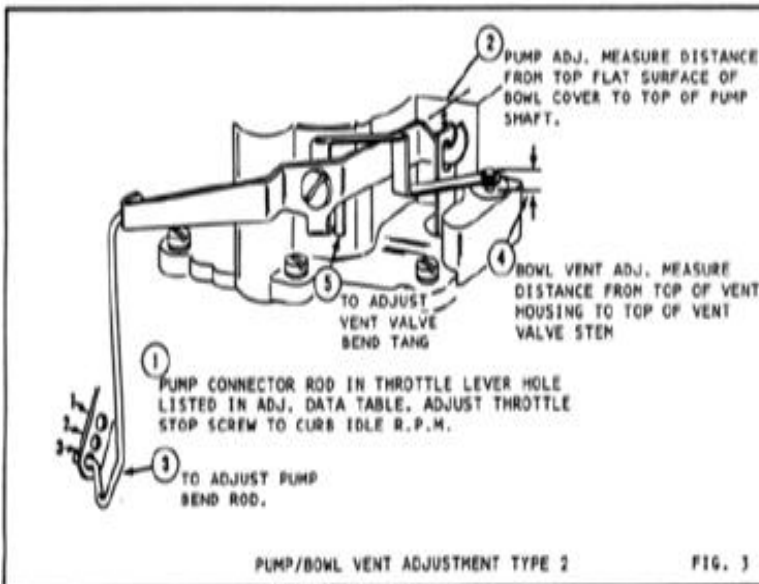
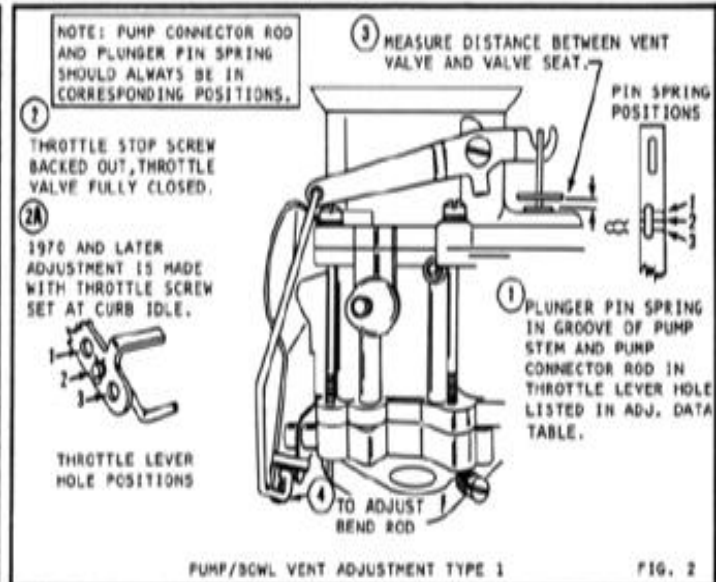
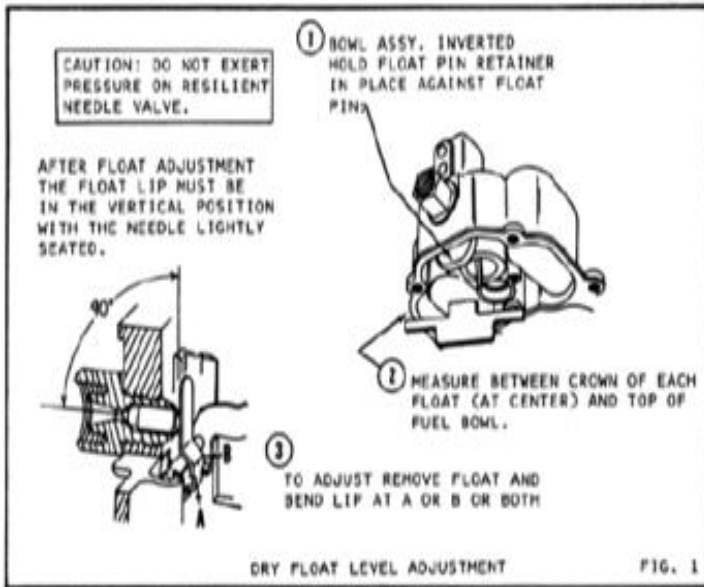
S/M = SOME MODELS

* NOT REMOVABLE ON EARLY C.A.P. MODELS

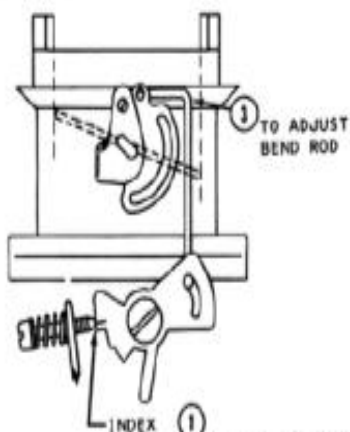
Exploded View



More Adjustment Examples

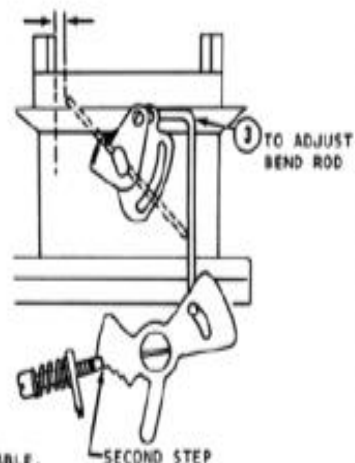
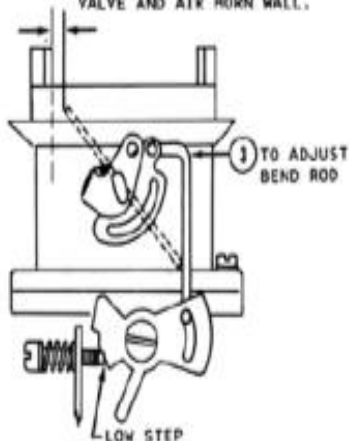


- ② INDEX SETTING. CHOKE VALVE SHOULD BE COMPLETELY CLOSED WITH ROD IN END OF SLOT IN CAM.



① PLACE FAST IDLE SCREW ON STEP OF FAST IDLE CAM LISTED IN ADJ. DATA TABLE.

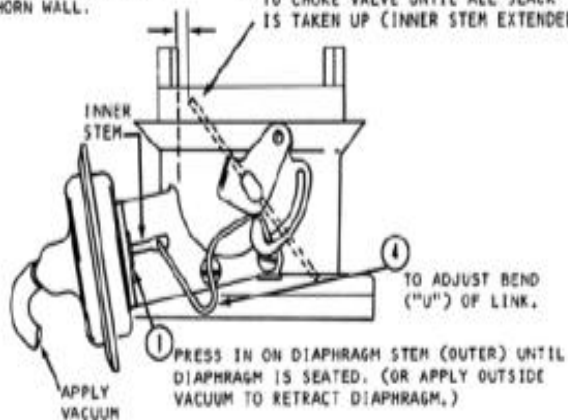
- ②A LOW STEP & SECOND STEP. HOLD CHOKE VALVE TOWARDS CLOSED POSITION THEN MEASURE DISTANCE BETWEEN UPPER EDGE OF CHOKE VALVE AND AIR HORN WALL.



FAST IDLE LINK/CAM ADJUSTMENT

FIG. 5

- ① MEASURE DISTANCE BETWEEN UPPER EDGE OF CHOKE VALVE AND AIR HORN WALL.
- ② APPLY LIGHT CLOSING PRESSURE TO CHOKE VALVE UNTIL ALL SLACK IS TAKEN UP (INNER STEM EXTENDED)



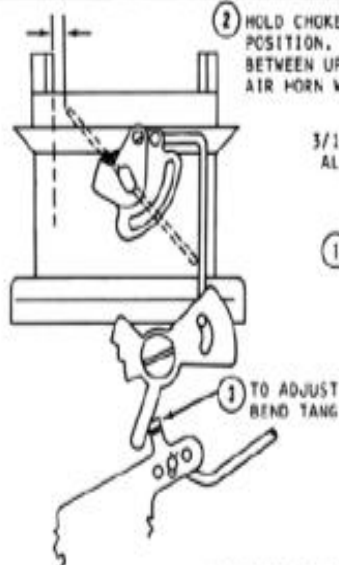
CHOKE VACUUM PULL-OFF ADJUSTMENT
(VACUUM KICK)

FIG. 6

- ② HOLD CHOKE VALVE TOWARDS CLOSED POSITION. THEN MEASURE DISTANCE BETWEEN UPPER EDGE OF VALVE AND AIR HORN WALL.

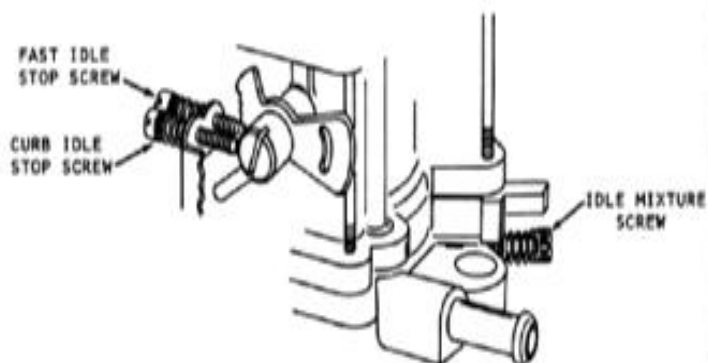
3/16" CLEARANCE
ALL MODELS

- ① THROTTLE VALVE HELD IN WIDE OPEN POSITION.



UNLOADER ADJUSTMENT

FIG. 7



USE FACTORY CAR MANUAL PROCEDURE FOR SETTING SLOW IDLE IF AVAILABLE AND SPECIFICATIONS LISTED ON ENGINE COMPARTMENT DECAL.

SUPPLEMENT PROCEDURE

1. SET IGNITION TIMING PER CAR FACTORY SPECIFICATIONS
2. ENGINE AT OPERATING TEMPERATURE, CHOKE FULLY OPEN.
TRANSMISSION IN NEUTRAL (NOT PARK)
AIR CLEANER INSTALLED
A/C OFF
HEADLIGHTS ON HIGH BEAM
3. SET THROTTLE CURB IDLE SPEED AS LISTED ON ENGINE COMPARTMENT DECAL.
4. ADJUST IDLE MIXTURE NEEDLE TO OBTAIN THE HIGHEST R.P.M. AT THE LEANEST BEST IDLE SETTING.
5. READJUST IDLE SPEED IF NECESSARY.

SLOW IDLE ADJUSTMENT

FIG. 8

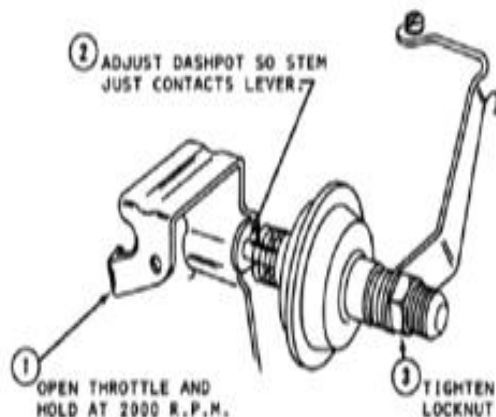
- ① PLACE FAST IDLE SCREW ON PROPER STEP OF FAST IDLE CAM. (SEE DATA TABLE) CAM LOCATION POINT, FIG. 5



- ② ADJUST FAST IDLE SCREW TO PROPER R.P.M.

FAST IDLE ADJUSTMENT

FIG. 9



DASHPOT ADJUSTMENT S/T

FIG. 10

Year	Application	Float Level	Pump/Bowl Vent Adj.				Late Bowl Vent	Fast Idle Link Adj.		Choke Pull-Off Dimen.	Curb. Idle R.P.M.	Fast Idle R.P.M.	Auto Choke Setting
			Type	Lever Hole	Pin Spring Position	Pump/Bowl Vent		Cam Step	Dimen				
6 CYL. CHRYSLER CORP. PASS. CARS													
1960-63	170", 225"	7/32"	1	2	2	1/16"	---	INDEX	---	---	550	1800 2/5	Note 1
1960-63	170", 225" Taxi	9/32"	1	1	1	1/16"	---	INDEX	---	---	550	1800 2/5	Note 1
	Carb. No. 3590	7/32"	1	2	2	1/16"	---	INDEX	---	---	550	1500 2/5	4 Rich
1960-65	Repl. Carbs. 4196, 4197, 4198	1/4"	1	2	2	1/16"	---	2/5	5/64"	9/64"	550	700 L/5	2 Rich
1964	170", 225"	1/4"	1	2	2	1/16"	---	L/5	13/64"	5/32"	550	700 L/5	2 Rich
	Carb. No. 3678, 3680	1/4"	1	2	2	1/16"	---	2/5	3/16"	1/8"	550	700 L/5	2 Rich
1964	170", 225" Taxi	5/16"	1	1	1	1/16"	---	L/5	13/64"	5/32"	550	700 L/5	2 Rich
1965	170", 225" S/T	1/4"	1	2	2	1/16"	---	2/5	5/64"	5/32"	550	700 L/5	2 Rich
	A/T	1/4"	1	2	2	1/16"	---	2/5	5/64"	3/32"	550	700 L/5	2 Rich
1965-67	225" Taxi	5/16"	1	1	1	1/16"	---	2/5	5/64"	9/64"	550	700 L/5	2 Rich
1966-67	170", 225" S/T	1/4"	1	3	3	1/16"	---	2/5	5/64"	5/32"	550	700 L/5	2 Rich
	wo/C.A.P. A/T	1/4"	1	2	2	1/16"	---	2/5	5/64"	7/64"	550	700 L/5	2 Rich
1966-67	170" W/C.A.P.	1/4"	1	3	3	1/16"	---	2/5	5/64"	5/32"	700	1500 2/5	2 Rich
1967-69	225"	1/4"	1	3	3	1/16"	---	2/5	5/64"	9/64"	E/D	1800 2/5	2 Rich
1968-69	170"	1/4"	1	3	3	1/16"	---	2/5	5/64"	7/64"	E/D	1800 2/5	2 Rich
1970-71	198" wo/E.C.S. S/T	1/4"	1	3	3	1/32"	---	2/5	5/64"	7/64"	E/D	1800 2/5	2 Rich
	A/T	1/4"	1	3	3	1/32"	---	2/5	5/64"	5/64"	E/D	1800 2/5	2 Rich
1970-71	198" w/E. C. S. S/T	1/4"	2	3	---	5/16"	17/64"	2/5	5/64"	7/64"	E/D	1800 2/5	2 Rich
	A/T	1/4"	2	3	---	5/16"	17/64"	2/5	5/64"	5/64"	E/D	1800 2/5	2 Rich
6 CYL. DODGE TRUCK													
1961-63	170", 225"	7/32"	1	2	2	1/16"	---	Index	---	---	500	1400 2/5	Index
1961-72	251" M/C	7/32"	1	2	2	1/16"	---	---	---	---	500	---	---
1961-65	225" Carb. no. 4199	1/4"	1	2	2	1/16"	---	2/5	5/64"	7/64"	500	700 L/5	2 Rich
1964-65	170", 225"	1/4"	1	2	2	1/16"	---	L/5	7/32"	5/32"	500	700 L/5	2 Rich
1966-68	225" wo/C.A.P. S/T	1/4"	1	2	2	1/16"	---	Index	5/32"	---	500	700 L/5	---
	A/T	1/4"	1	3	3	1/16"	---	2/5	5/64"	7/64"	500	700 L/5	2 Rich
1966-68	225" w/C.A.P. S/T	7/32"	1	3	3	1/16"	---	Index	5/32"	---	550	700 L/5	---
	A/T	1/4"	1	3	3	1/16"	---	2/5	5/64"	7/64"	550	1550 2/5	2 Rich
1969	225" All S/T	1/4"	1	3	3	1/16"	---	Index	5/32"	---	E/D	1550 2/5	---
	A/T	1/4"	1	3	3	1/16"	---	2/5	5/64"	7/64"	E/D	700 2/5	2 Rich
1970-71	225" wo/E.C.S. S/T	1/4"	1	3	3	1/32"	---	Index	5/32"	---	E/D	---	---
	A/T	1/4"	1	3	3	1/32"	---	2/5	5/64"	7/64"	E/D	1800 2/5	2 Rich
1970-71	225" w/E.C.S. S/T	1/4"	2	3	---	5/16"	17/64"	2/5	5/32"	---	E/D	---	---
	A/T	1/4"	2	3	---	5/16"	17/64"	2/5	5/64"	5/64"	E/D	1800 2/5	2 Rich
1972-73	225"	1/4"	1	3	3	1/32"	---	2/5	5/64"	7/64"	E/D	1900 2/5	---
1973	225" w/E.C.S.	1/4"	2	3	---	5/16"	17/64"	2/5	5/64"	7/64"	E/D	1900 2/5	---
1974	225"	1/4"	2	3	---	5/16"	---	2/5	5/64"	7/64"	E/D	1900 2/5	---

S/T = Standard Transmission
 A/T = Automatic Transmission
 M/C = Manual Choke
 wo/C.A.P. = Without Cleaner Air Package
 w/C.A.P. = With Cleaner Air Package
 wo/E.C.S. = Without Evaporation Control System

w/E.C.S. = With Evaporation Control System
 2/5 = Second Step
 L/5 = Low Step
 E/D = Engine Decal
 *Make adjustment after curb idle has been set.

Note 1, 60-61 Index
 62-63 2 Rich