

## CARTER BBD 2-BARREL

CHRYSLER CORP.

Carter Carburetor No.

Application	Man. Trans.	Auto. Trans.
318" (Federal) .....	BBD-6464S .....	BBD-6465S .....
(Calif.) .....	BBD-6466S .....	BBD-6467S .....

### CARBURETOR IDENTIFICATION

Carter carburetor number is stamped on tag attached to carburetor by one air horn screw.

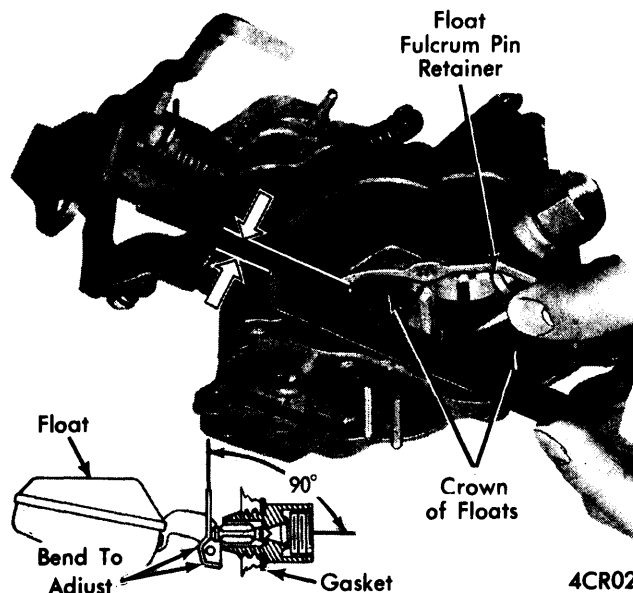
### DESCRIPTION

Two barrel downdraft type, which incorporates three basic fuel metering systems. Idle system provides mixture for idle and low speed operation. Accelerator pump system provides additional fuel for acceleration. Main metering system provides an economical mixture for normal cruising.

In addition to these fuel systems, the carburetor uses an automatic choke and choke diaphragm. Automatic choke is assisted by an electric heating element, to provide for shorter choke duration during warm weather. Choke diaphragm prevents overchoking by opening choke valve when engine is being cranked.

### ADJUSTMENTS

It is very important that the following adjustments be made on every reconditioned carburetor and in sequence listed.

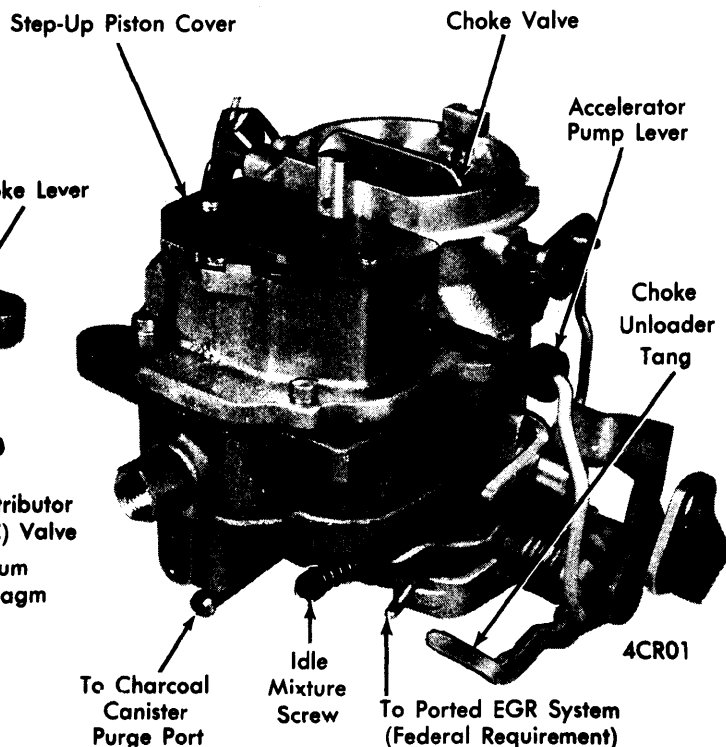
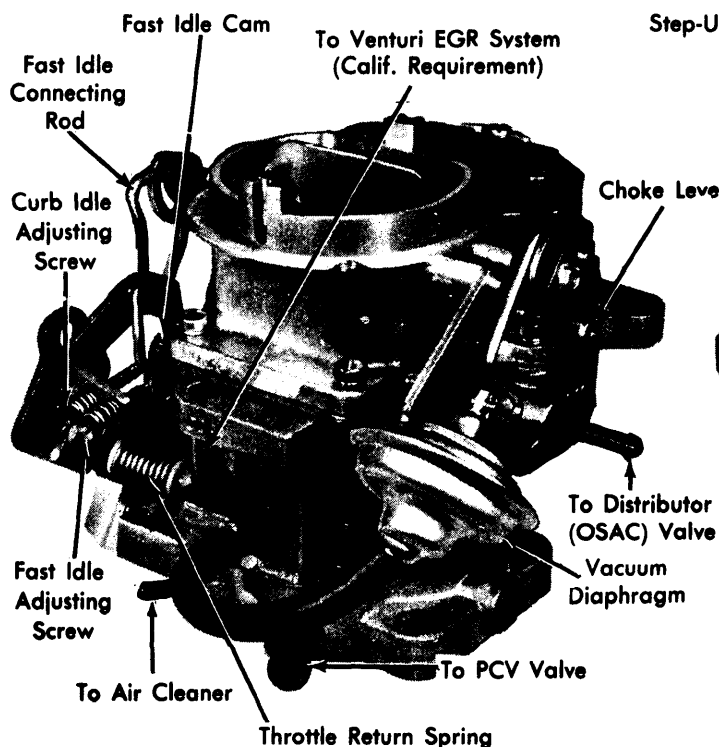


### CHECKING FLOAT SETTING

#### FLOAT LEVEL

**CAUTION** - When making adjustment, do not allow lip to press against intake needle which has synthetic rubber tip. Float must be perpendicular to intake needle or slanted not more than ten degrees away from needle when float is set correctly.

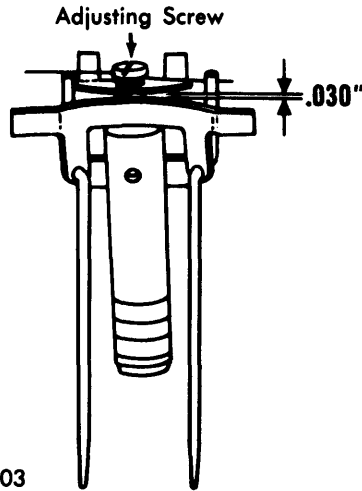
With air horn removed, invert main body (catch pump intake check ball) so that weight of float is forcing needle against seat. **NOTE** - Do not allow float lip to press against intake



### CARBURETOR ASSEMBLY MODEL BBD

## CARTER BBD 2-BARREL (Cont.)

needle, which has synthetic rubber tip. Hold finger against retainer to fully seat fulcrum pin. Using straight edge scale, check float setting. Measure from surface of fuel bowl to crown of each float. If adjustment is necessary, hold floats on bottom of bowl and bend float lip toward or away from needle. Recheck setting and repeat lip bending operation if necessary.

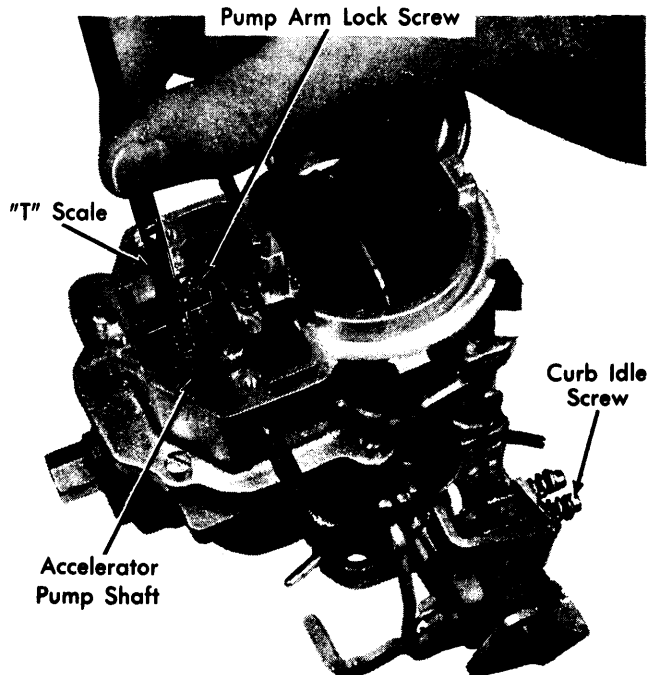


4CR03

## STEP-UP PISTON ADJUSTMENT

## VACUUM STEP-UP PISTON

Adjust gap in step-up piston (see illustration) by turning Allen head screw on top of piston. Install step-up piston assembly in bore of air horn, making sure metering rods are positioned in metering jets. Back off curb idle screw until throttle valves are completely closed. Fully depress step-up piston while holding moderate pressure on rod lifter tab. While holding in this position, tighten rod lifter lock screw. Release piston and rod lifter, then return curb idle to its original position.



4CR04

## MEASURING ACCELERATOR PUMP STROKE

## ACCELERATOR PUMP STROKE

Open choke valve and back off curb idle speed screw so that throttle valves are completely closed. Be sure that pump "S" link is in outer hole of pump arm. Turn curb idle adjusting screw until it just contacts stop, then turn it two more turns. Measure distance between surface of air horn and top of accelerator pump shaft, this measurement should be to specifications. To adjust, loosen pump arm adjusting screw and rotate sleeve until proper distance is obtained.

## FAST IDLE CAM POSITION

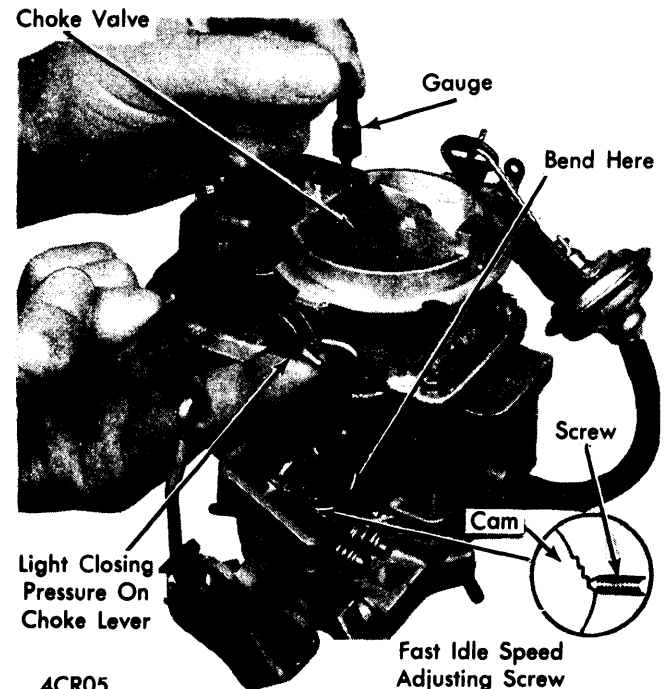
Fast idle cam position can be adjusted on or off car. This adjustment is necessary to assure that speed of each cam step occurs at proper time.

With fast idle speed adjusting screw on second highest step of fast idle cam, move choke toward closed position with light pressure on choke shaft lever. Insert specified gauge between air horn wall and choke valve. Adjustment is necessary, if slight drag is not felt as gauge is withdrawn. To adjust, bend fast idle connector rod.

## CHOKE DIAPHRAGM (VACUUM KICK)

This adjustment can be made on or off car. If it is made off car, an external vacuum source of at least 15 in. Hg must be used. If made on car, disconnected fast idle linkage to allow choke to close to kick position, (with engine at curb idle).

1) Insert specified gauge between choke valve and wall of air horn. Apply sufficient closing pressure on lever to which choke attaches, to provide minimum choke valve opening. **NOTE** — Cylindrical stem of diaphragm will extend as internal spring is compressed. This spring must be fully compressed for proper measurement of vacuum kick. Adjustment is necessary if slight drag is not felt as gauge is withdrawn. Adjustment should be made by opening or closing "U" bend of link.

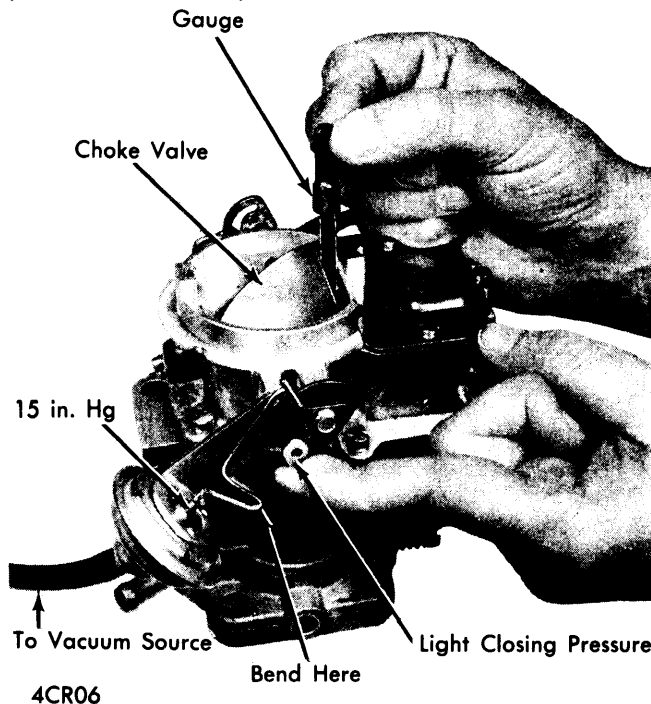


4CR05

## FAST IDLE CAM POSITION ADJUSTMENT

## CARTER BBD 2-BARREL (Cont.)

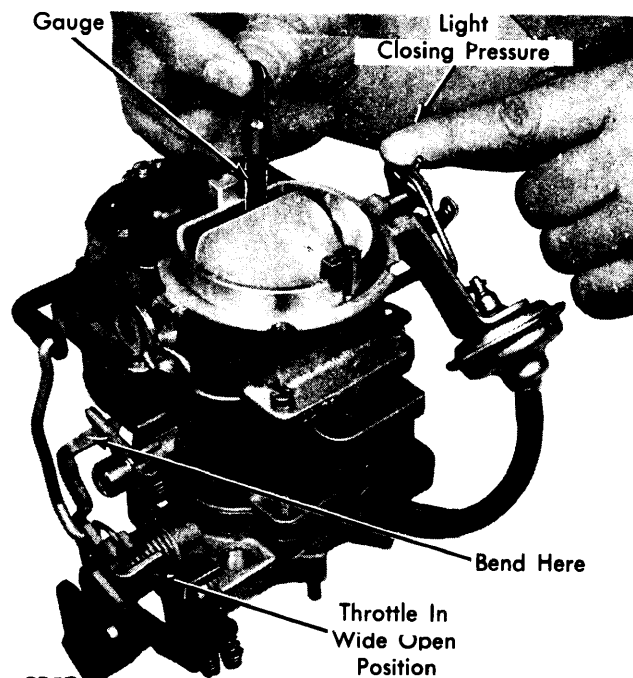
2) With no vacuum applied, check that choke valves move freely. If movement is not free, check for linkage misalignment caused by bending operation. Then repeat adjustment procedure if necessary.



4CR06  
ADJUSTING CHOKE DIAPHRAGM (VACUUM KICK)

### CHOKE UNLOADER (WIDE OPEN KICK)

Hold throttle in wide open position and insert specified gauge with light finger pressure against choke lever, slight drag should be felt as gauge is withdrawn. If adjustment is necessary, bend unloader tang of throttle lever.

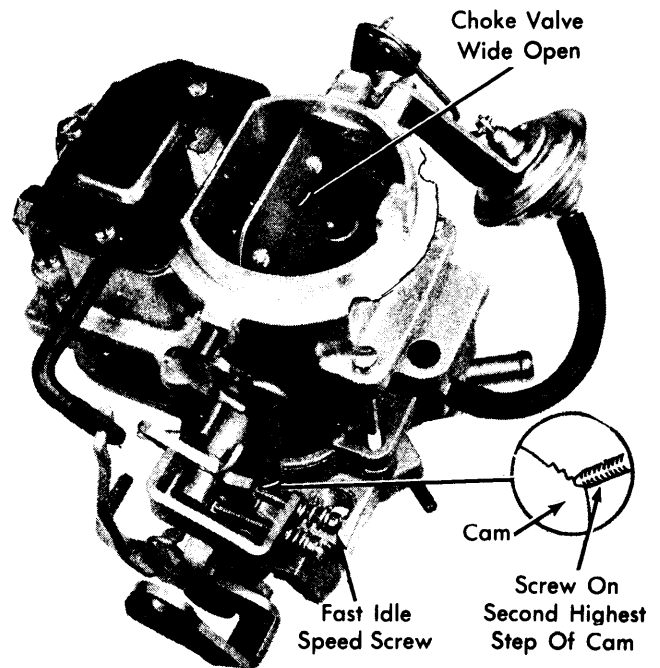


4CR07  
CHOKE UNLOADER ADJUSTMENT

### FAST IDLE SPEED

Prepare engine by driving at least five miles. Connect tachometer, set curb idle speed and mixture, and proceed as follows:

1) With engine off and transmission in neutral, open throttle and close choke. Close throttle plates to set fast idle speed screw on highest step of fast idle cam. Move fast idle cam until screw drops onto second highest step of fast idle cam.



4CR08  
FAST IDLE SPEED ADJUSTMENT

2) Start engine and determine stabilized speed. Turn fast idle adjustment screw, to obtain specified RPM. As each turn is made on screw, check to see that its position on cam has remained same.

### IDLE SPEED ADJUSTMENT

*NOTE* — In order to comply with emission standards, specifications shown on engine compartment emission control tune-up decal must be used in all instances. Decal information should be considered the most valid information available. If performing adjustment procedure only, do not remove idle mixture limiter caps.

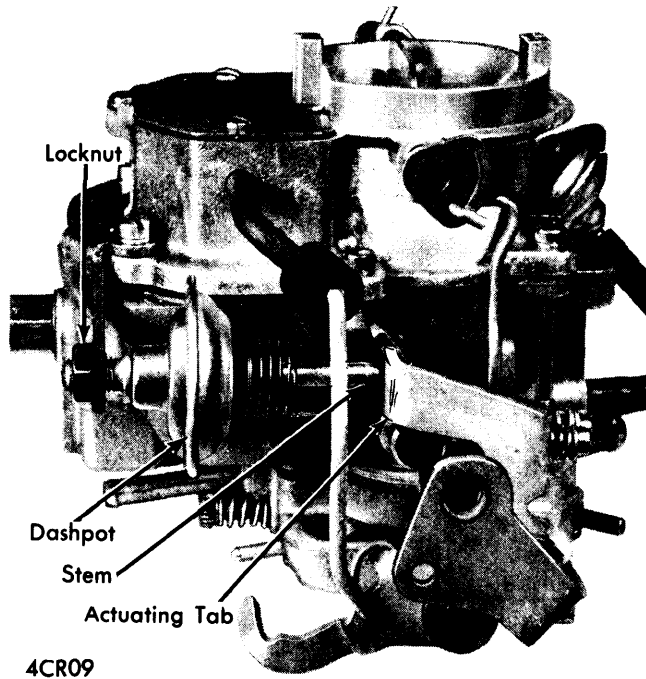
**Preparations For Adjustment** — Block wheels and apply parking brake. With air conditioner off, place transmission in Neutral. If equipped with air pump, disconnect air outlet hose and plug hose to exhaust manifold.

**Exhaust Gas Analyzer Procedure** — With timing set, insert analyzer probe into tailpipe and calibrate meter. Do not remove idle mixture limiter caps. Adjust mixture screws  $\frac{1}{16}$  turn out (richer) and wait 30 seconds before reading meter. If necessary, repeat until meter indicates a definite increase in richness. Adjust mixture screws leaner or richer, as required, to give correct CO level (air/fuel ratio) shown on decal. If idle speed changes as mixture screws are turned, adjust RPM to specifications and readjust mixture screws as required to give correct CO level (air/fuel ratio) at specified RPM.

## CARTER BBD 2-BARREL (Cont.)

## IDLE MIXTURE ADJUSTMENT

Idle mixture will be correct when idle speed has been properly adjusted.



**DASHPOT ADJUSTMENT  
(MANUAL TRANSMISSION ONLY)**

## AUTOMATIC CHOKE

Choke unit contains electric assist heating element controlled by thermostatic switch. Both choke and control switch are serviced as an assembly only. No adjustment is necessary or can be made. **NOTE** — For testing procedures, see Mitchell Manuals' Emission Control Manual.

## DASH POT

After idle speed and mixture adjusted, run engine with tachometer attached. Open throttle until actuating tab on throttle lever just barely contacts dashpot stem (stem must not be compressed). At this point, engine RPM should be 2500. Adjust by turning dash pot in mounting bracket.

## OVERHAUL

## DISASSEMBLY

1) Place carburetor on repair stand to prevent damage to throttle valves and provide a suitable base for working. Remove clip from accelerator pump arm link. Remove step-up piston cover plate from top of air horn. After cover has been removed, screws and locks on accelerator pump arm and step-up piston can be removed.

2) Remove vacuum hose from carburetor main body and choke diaphragm; then remove diaphragm. Remove fast idle cam and linkage. After removing air horn retaining screws lift

air horn straight up (to avoid damage to parts) and away from main body. Invert air horn, compress accelerator pump drive spring and remove "S" link from pump shaft. Remove fuel inlet needle and seat, float pin and float, and main metering jets.

3) In main body, remove venturis, but do not remove idle orifice tubes or main vent tubes from venturi cluster. Venturi cluster can be cleaned in solvent and blown dry with compressed air. Invert main body and drop out accelerator pump discharge and intake check balls. Turn idle limiter caps to stop and carefully remove plastic caps. Count number of turns to seat screws, then remove. Separate main body from throttle body by removing attaching screws.

## CLEANING &amp; INSPECTION

**NOTE** — Do not apply compressed air to diaphragm. Do not use wire or drill to clean jets or passageways.

1) Inspect all moving parts for wear or damage and replace if necessary. It is generally not recommended by manufacturer to replace throttle shafts that show signs of wear, since wear on throttle shafts indicate serious wear of throttle body. Manufacturer suggests replacement of carburetor assembly.

2) Clean all parts in denatured alcohol or suitable commercial carburetor cleaner. Avoid placing any plastic parts in liquid cleaner. These parts should be cleaned with a cloth or soft brush.

## REASSEMBLY

Use all new gaskets and reverse disassembly procedures while noting the following.

**Idle Mixture Screw & Limiter Cap Installation** — Install idle mixture screws and springs in body, tapered portion must be straight and smooth; if tapered portion is grooved or ridged, a new screw should be used. **Do Not use a screwdriver for installation**, turn screws lightly against their seats with fingers, back off the number of turns counted at disassembly and install new plastic limiter caps with tab against stop.

**Accelerator Pump Assembly** — Check operation as follows: Pour clean gasoline into carburetor bowl (½" deep), operate plunger several times to fill cylinder and expel all air. Use a small brass rod and hold discharge check ball down on its seat. Raise plunger and press downward, no fuel should be emitted from either intake or discharge passage. Fuel emitted from either passage indicates either the presence of dirt or a damaged check ball seat.

**Step-Up Piston & Rod Assembly** — Be sure step-up rods move freely, each side of vertical position. Carefully guide step-up rods into main metering jets.

**Vacuum Kick Diaphragm** — Check for internal leakage by depressing diaphragm stem, then placing finger over fitting to seal opening. Release stem, if stem moves more than 1/16" in ten seconds, leakage is excessive and assembly must be replaced.

## CARTER BBD 2-BARREL (Cont.)

CARBURETOR ADJUSTMENT SPECIFICATIONS							
Carter Carb. No.	Idle Speed (Engine RPM)		Fast Idle Cam Position	Float Level Setting ①	Acc. ② Pump Travel	Unloader Setting	Vacuum Break Setting
	Hot	Fast					
BBD-6464S	750	1700	.095"	¼ "	½ "	.325"	.150"
BBD-6465S	750	1500	.095"	¼ "	½ "	.325"	.110"
BBD-6466S	750	1700	.095"	¼ "	½ "	.325"	.150"
BBD-6467S	750	1500	.095"	¼ "	½ "	.325"	.110"

- ① At center of floats.  
 ② Throttle closed tightly.