CARTER BBD 2-BARREL

CHRYSLER CORP.

① Carter Carburetor No.

Application	Man. Trans.	Auto. Trans.
318" V8 (Exc. Calif.)	6316SA	6317SA
(Calif.)	6343SA	6344SA

① — BBD 1 1/4" Carburetor.

CARBURETOR IDENTIFICATION

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

DESCRIPTION

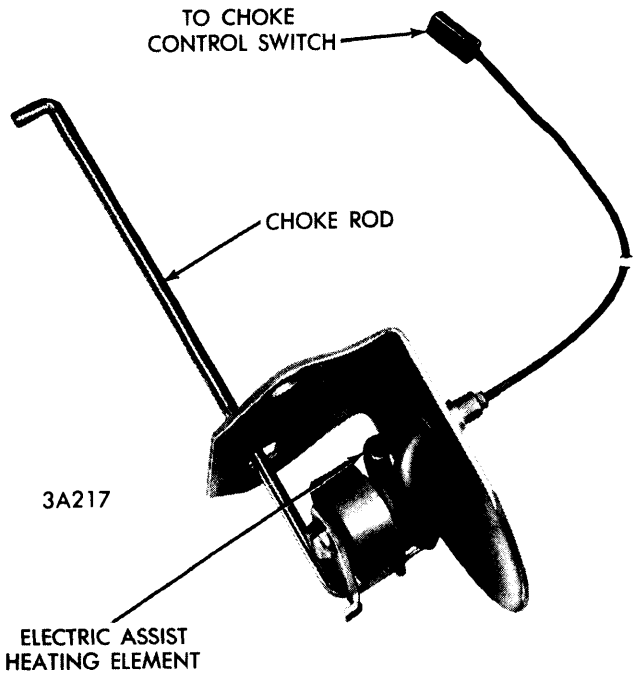
Two barrel downdraft type with remote automatic choke coil mounted on and in manifold. Idle mixture screws have idle limiter caps installed. Other features are as follows:

Bowl Vent Valve — Valve is enclosed and fuel bowl vapors are vented through valve to a hose connected to crankcase air cleaner. No separate adjustment of this valve is required. Adjustment is correct when accelerator pump is correctly adjusted.

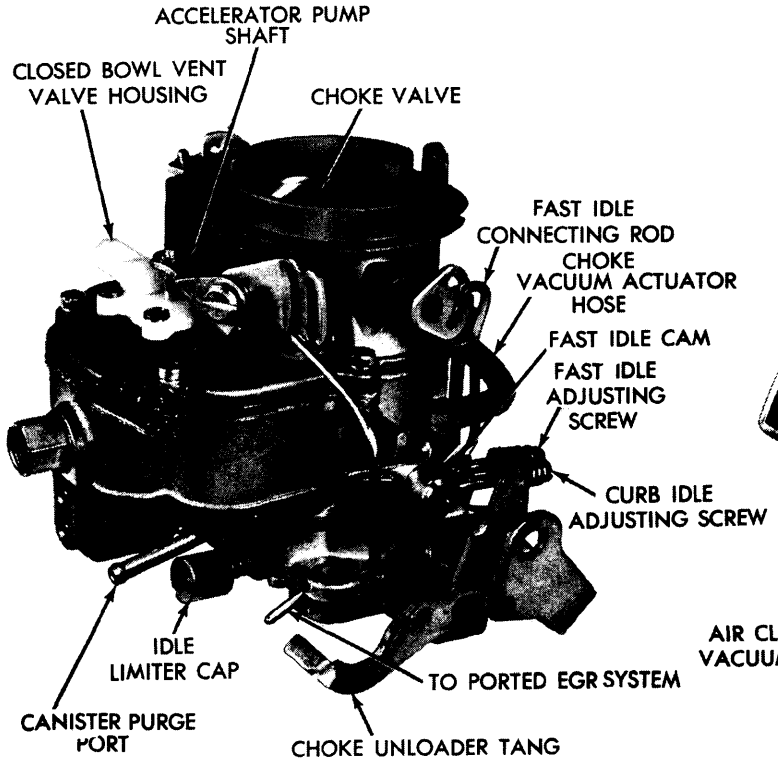
Idle Retard Dash Pot — Carburetors used on vehicles equipped with Man. Trans. employ a dash pot to retard throttle closing. *NOTE — It is important that the dash pot be correctly adjusted (see Adjustments).*

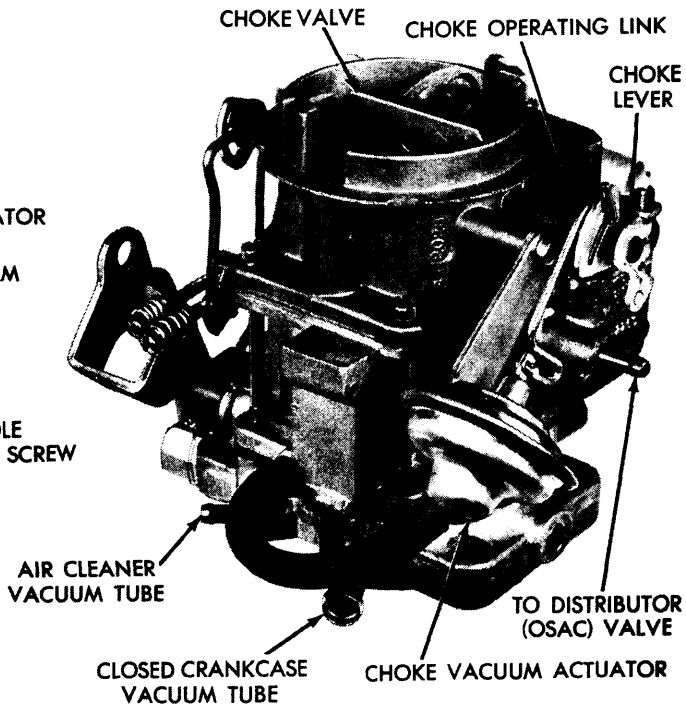
New Electric Assist Choke System — System is composed of an electric heating element mounted adjacent to the conventional thermostatic choke coil (see illustration), and a thermostatic choke control switch. The system is designed to afford a more rapid choke opening at temperatures above 63°F and slower opening at lower temperatures.

NOTE — Since the choke heating element receives its electrical input from the ignition circuit (through the control switch), a short in the wiring or within the heater itself will also result in a short in the ignition circuit. Adjustment is not possible on the choke heater unit.



CHOKE HEATING ELEMENT





CARTER BBD 1 1/4" CARBURETOR

CARTER BBD 2-BARREL (Cont.)

Electric Choke Assist Control Switch – Connect in series between ignition circuit and choke heater, switch will energize choke heater when underhood temperature is above 63°F. When control switch is warmed up to approximately 110°F by engine heat and a small electrical heating element within the switch, switch will de-energize choke heater. Adjustment of control switch is not possible. For testing procedure, see appropriate article in Exhaust Emission Manual.

Ported Vacuum Nipple – An additional vacuum nipple has been installed in the base of the carburetor for the purpose of supplying vacuum to the EGR (Exhaust Gas Recirculation) control valve. Vacuum is obtained from a slot type port in the carburetor throttle body which is exposed to an increasing percentage of manifold vacuum as the throttle blade opens.

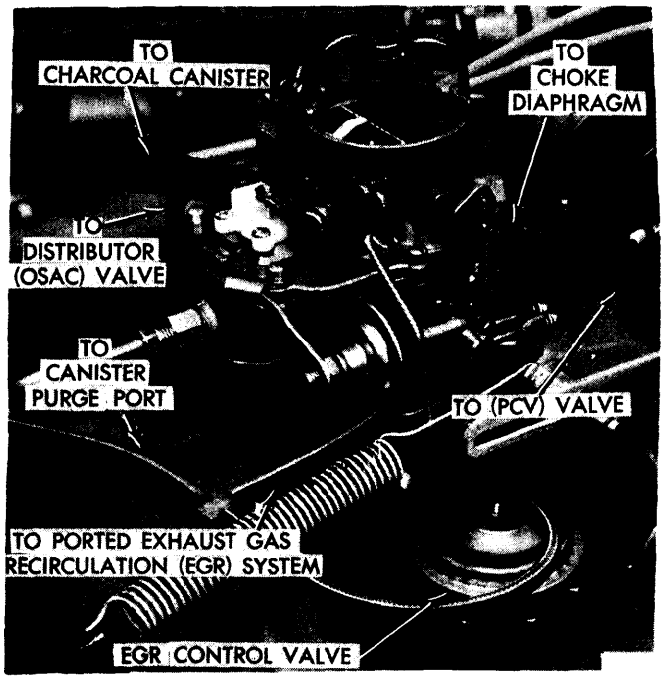
The external nipple from the slot type port is connected directly to the EGR control valve. Vacuum flow rate is determined by manifold vacuum, throttle position, and exhaust gas back presssure.

ADJUSTMENT

► *NOTE – Do not attempt to adjust or tamper with idle mixture screws locked in position with plastic limiter caps. If limiter caps and idle mixture screws are removed for carburetor overhaul, fuel bowl or throttle body replacement, special procedure is required to correctly readjust idle mixture screws. See appropriate article in Tune-Up section of Exhaust Emission Manual.*

IDLE SPEED & MIXTURE

Idle Speed – Obtain the following conditions: engine at normal operating temperature, timing checked, air cleaner installed, A/C OFF, Auto. Trans. in "N" (not "P"). Adjust idle speed screw to obtain specified RPM (see Specifications).



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BBD VACUUM HOSE IDENTIFICATION

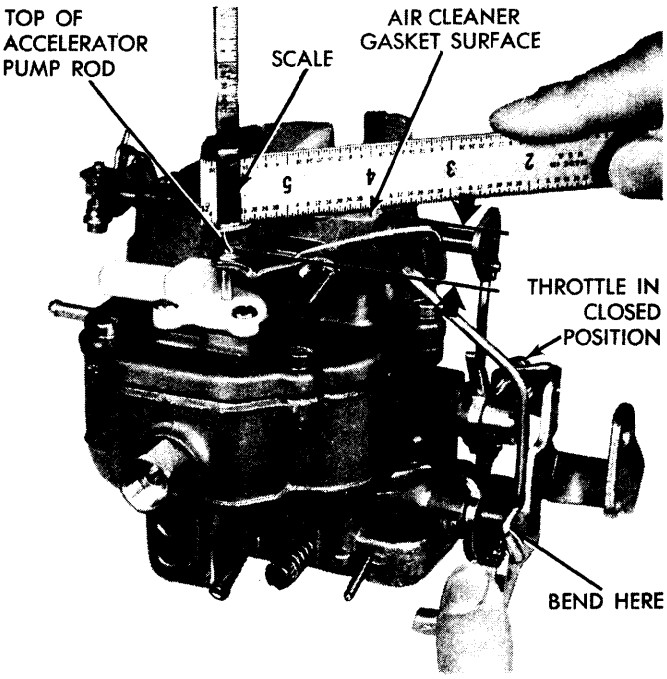
Idle Mixture – Requires special procedure. See appropriate article in Tune-Up section of Exhaust Emission Manual. *NOTE – If idle speed changes as idle mixture is adjusted, readjust to specification.*

Fast Idle Speed

After correctly adjusting curb idle speed and with transmission in Neutral or Park, position fast idle screw on second step of fast idle cam. Turn fast idle speed screw in or out to obtain specified speed (see Specifications).

Accelerator Pump & Bowl Vent

With accelerator pump operating rod in medium stroke hole in throttle lever, open choke valve so that fast idle cam allows throttle valves to seat in bore. With throttle valves tightly closed, measure distance from air cleaner gasket surface of air horn to top of accelerator pump rod. If measurement not as specified (see Specifications), bend accelerator pump operating rod at lower angle, until correct pump travel has been obtained.



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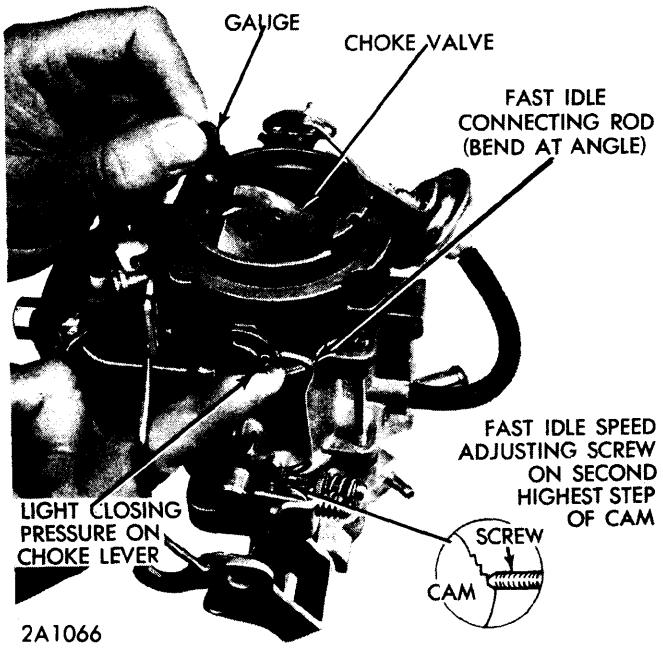
ADJUSTING ACCELERATOR PUMP STROKE

Fast Idle Cam Position

With fast idle speed adjusting screw on second highest step of fast idle cam, move choke valve toward closed position with light pressure on choke shaft lever. With specified drill (see Specifications) inserted between choke valve and air horn wall, a slight drag should be felt as drill is withdrawn. Bend fast idle connector rod at lower angle if adjustment required.

CARTER BBD 2-BARREL (Cont.)

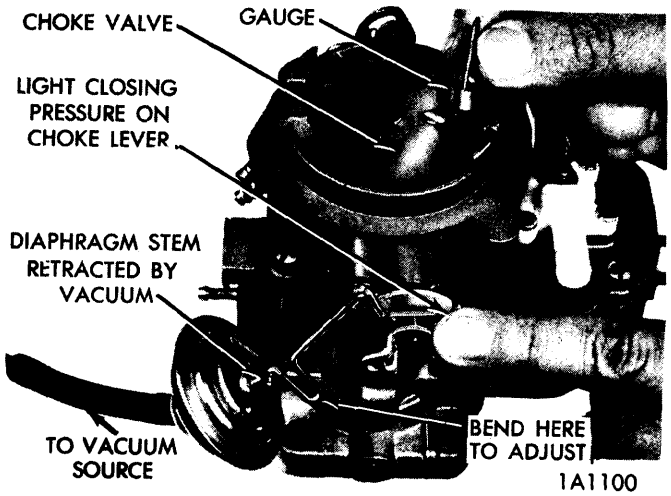


ADJUSTING FAST IDLE CAM POSITION

Vacuum Break (Kick)

NOTE – Adjustment can be made on or off car, using an auxiliary vacuum source (minimum of 10" or more of mercury), or on the car with engine running. When using auxiliary vacuum source, remove vacuum break hose from carburetor, NOT from vacuum break diaphragm.

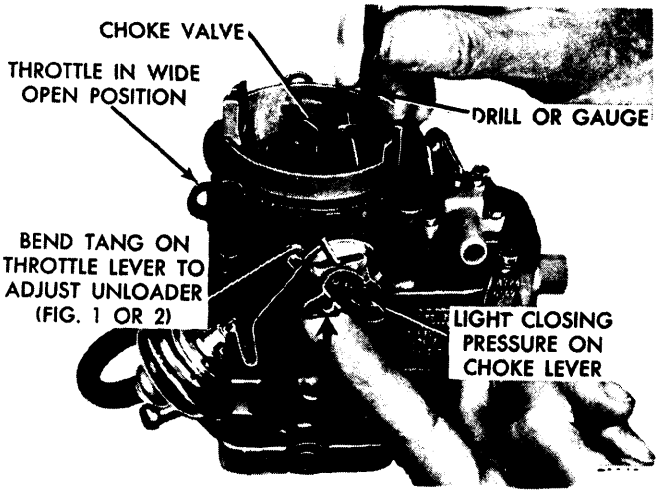
Disconnect fast idle linkage so choke can be closed to break (kick) position with carburetor throttle at curb idle. Insert specified drill (see Specifications) between choke valve and air horn wall and apply sufficient closing pressure on choke rod lever to provide minimum choke valve opening without distorting diaphragm link. *NOTE – Diaphragm internal spring must be fully compressed which will be noted by extension of diaphragm stem.* If slight drag not felt as drill is withdrawn adjust by opening or closing "U" bend of diaphragm link. *CAUTION – Do not apply twisting or bending force to diaphragm. With no vacuum applied, choke valve must move freely between open and closed positions.*



ADJUSTING CHOKE VACUUM KICK

Unloader

Hold throttle valves in wide open position, insert specified drill or gauge (see Specifications) between upper edge of choke valve and air horn wall. Move choke valve toward closed position with light pressure on choke shaft lever. If slight drag is **not** felt as drill is withdrawn, adjust by bending unloader tang on throttle lever.



ADJUSTING CHOKE UNLOADER

Float Level

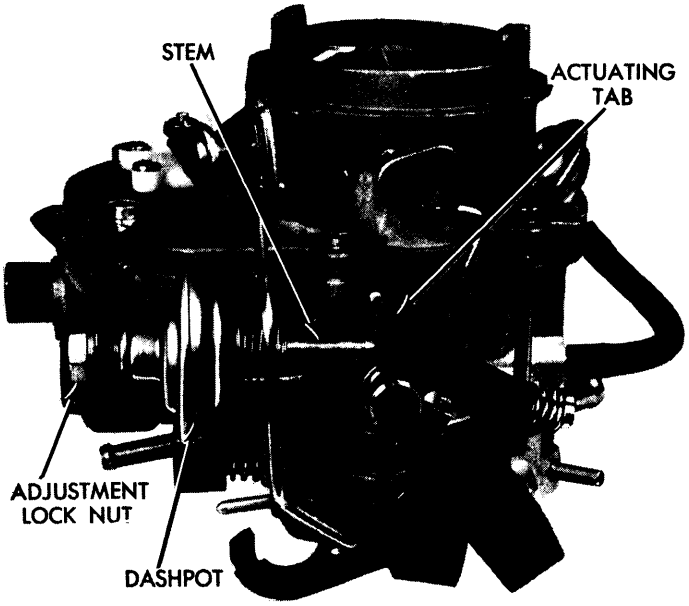
NOTE – Float level can be checked with carburetor on engine or bench as follows:

On Engine – Disconnect and remove accelerating pump rod, disconnect choke rod at choke lever, remove air horn attaching screws and lift air horn straight up and off main body, remove air horn gasket. Make certain bowl filled with fuel so that float lever lip presses firmly against needle, seat fulcrum pin by pressing on fulcrum pin retainer. Use suitable "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" procedure below.

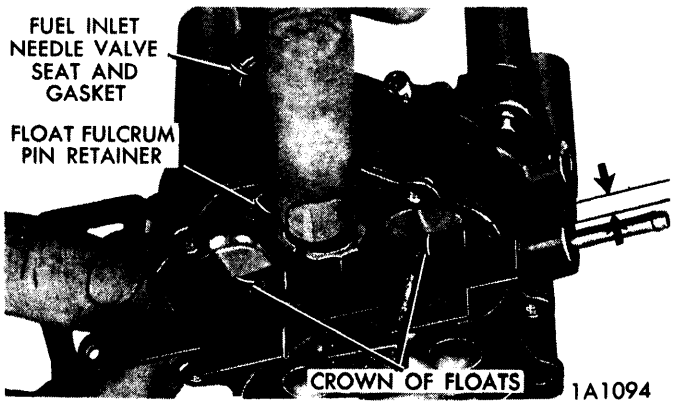
On Bench – With bowl cover and gasket removed, invert carburetor so that weight of float only is holding needle valve against seat. Seat fulcrum pin by pressing on fulcrum pin retainer. Use suitable "T" scale to measure distance from top surface of bowl to crowned top of each float at center. If measurement not as specified (see Specifications), hold floats down in bottom of bowl so they do not contact intake needle, and bend float lever lip as required.

CARTER BBD 2-BARREL (Cont.)

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.



DASH POT ADJUSTMENT (MAN. TRANS. ONLY)



CHECKING FLOAT SETTING

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 appropriate article in Exhaust Emission Manual.*

DASH POT

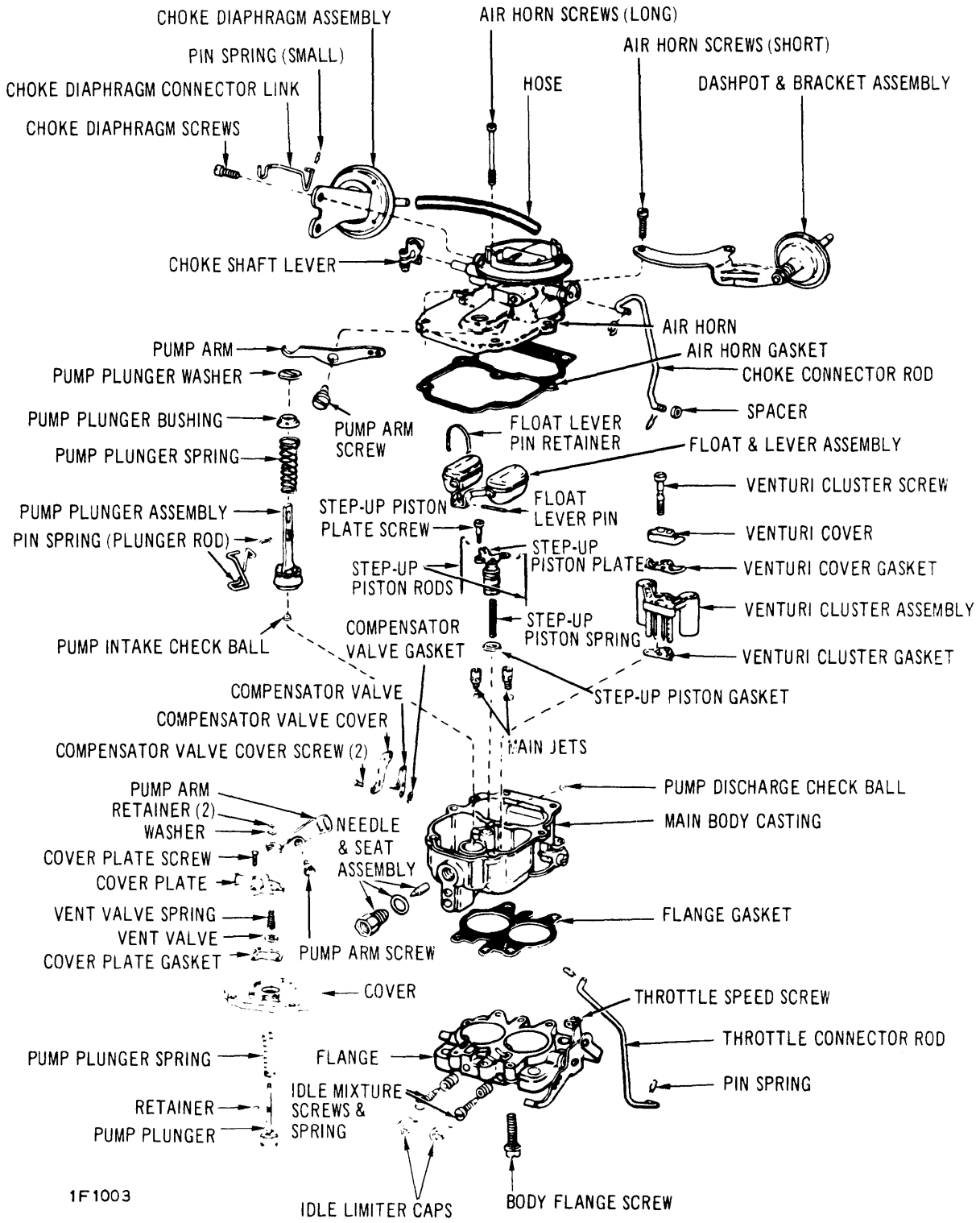
After idle speed and mixture adjusted, run engine with tachometer attached. Open throttle until actuating tab on throttle lever just barely contacts dashpot stem (stem must not be compressed). At this point, engine RPM should be 2500. Adjust by turning dash pot in mounting bracket.

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					
6316SA	700	1700	.095"	1/4"	.242"	1/4"	.150"
6317SA	750	1700	.095"	1/4"	.242"	1/4"	.130"
6343SA	750	1700	.095"	1/4"	.242"	1/4"	.130"
6344SA	700	1700	.095"	1/4"	.242"	1/4"	.150"

① At center of floats.
② Throttle closed tightly.

CARTER BBD 2-BARREL (Cont.)



TYPICAL 2-BARREL BBD CARBURETOR

CARTER BBD 2-BARREL (Cont.)

OVERHAUL

Disassembly

1) Remove hairpin clips and disengage fast idle connector rod from cam and choke lever. Remove hairpin clips and disengage accelerator rod from throttle lever and pump rocker arm. Remove vacuum hose between carburetor throttle body fitting and vacuum diaphragm.

2) Remove clip from choke operating link and disengage link from diaphragm plunger and choke lever. Remove vacuum diaphragm and bracket assembly and place aside for special cleaning. Remove screws attaching hot idle compensator valve cover to main body, remove cover and lift compensator valve and gasket out.

3) Remove air horn attaching screws, lift air horn straight up and away from main body, discard gasket. On 1½ carburetors, disengage accelerator pump plunger from pump arm by pushing up on bottom of plunger and sliding plunger shaft off hook, slide plunger from air horn and remove compression spring and seat, then remove bowl vent valve cover. On 1¼" carburetors, remove "E" clip and washer from plunger stem and slide accelerator pump plunger out of air horn, remove screws attaching bowl vent housing to air horn, and remove housing, vent valve spring and valve. If old plunger can be used again, or if new one to be installed, place plunger in a jar of clean gasoline or kerosene (to prevent drying out).

4) Remove fuel inlet needle valve, seat, and gasket from main body, lift out float pin retainer, floats and fulcrum pin. Remove step-up piston and retaining screw, slide piston and rods from well. Lift out step-up piston spring and remove step-up piston from bottom of well.

5) Remove main metering jets, then remove venturi cluster screws, lift venturi cluster and jackets up and away from main body and discard gaskets. *NOTE – Do not remove idle orifice tubes or main vent tubes from cluster, they can be cleaned in a suitable solvent and dried with compressed air.*

6) Invert carburetor and drop out accelerator pump discharge check ball and intake check ball (intake check ball is the larger); separate bodies and discard gasket. Remove plastic limiter caps from idle air mixture screws, being certain to count number of turns to seat screws, as the same number of turns (from the seat), must be maintained at reassembly. Remove screws and springs from throttle body.

Cleaning & Inspection

Inspect all parts for excessive wear, replace as necessary. Wash all metal parts in a suitable solvent or cleaner, but do not place diaphragm assembly in any liquid.

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.