ALIGNMENT GAUGE ADAPTOR CHART

MODEL	Wheelbase	Front Gauge	Center Gauge	Rear Gauge
RC-1, RC-2	122	B	A	D
RC-3	126	C	C	D
RY-1	129	C	C	C
Town and Country:				
Newport (RC-1)	122	B	A	C
New Yorker (RC-3)	126	C	C	C

GROUP 14
FUEL SYSTEM (PUMP, CARBURETOR, TANK)
WWC3 SERIES STROMBERG CARBURETOR
DATA AND SPECIFICATIONS

CARBURETOR

Type	Dual Throat Downdraft
Model	WWC3-188
Bore	1 9/16"
Venturi	1 5/16"
Main Metering Jet (Standard)	.068"
(One Step Lean)	.066"
(Two Steps Lean)	.064"
Power Jet	.040" to .063"

ADJUSTMENTS

Idle Mixture (Both Screws)	½ to ⅝ Turn Open
Idle Speed (rpm)	500
(With Car Cooling) (rpm)	550
Fast Idle Speed (rpm)	1375 to 1425
Fast Idle Speed Cam Index (Choke Blade Opening)	¼" Drill – 3½ Turns
Accelerator Pump Travel (Blades Fully Closed)	9/16"
Bowl Vent Valve (Blades Fully Closed)	5/64"
Vacuum Kick (Drill Size)	No. 14 and No. 59
Float Setting	⅛"
Unloader Adjustment (Wide Open Kick)	¼"

WWC3 CARBURETOR SPECIFICATIONS — Continued

CHOKE

Type	Well Type
Control	Thermostatic Coil Spring
Setting	1 Notch Rich

BBD CARBURETOR SPECIFICATIONS

CARBURETOR

Type	Ball and Ball	Dual Throat
Model	BBD-2923SA	*BBD-3132S
Bore	1 9/16"	1 9/16"
Venturi	1 5/16"	1 5/16"
Main Metering Jet		
Standard	No. 120-249S	No. 120-249S
One Step Lean		
Two Steps Lean		
Step-Up Wire (Standard)	75-1526	75-1525
Diameter (2 Stage)	.026" x .032"	.026" x .031"

ADJUSTMENTS

Accelerator Pump Travel	1" ±1/64"	1" ±1/64"
Float Setting (at Center of Floats)	9/32"	9/32"
Bowl Vent Valve (Throttle Closed)	.060"	.060"
Choke Unloader	1/4"	1/4"
Idle Mixture Screws (Turns Open)	1	1
Idle Speed RPM (Curb Idle)	500	500
(Air Conditioned Cars)	575	575
Fast Idle Speed RPM	1375 to 1425	1375 to 1425

CHOKE

Control	Thermostatic	Coil Spring
Type	Well	Well
Setting	On Index	On Index

*For use with closed crankcase vent system – mandatory for California cars.

SPECIAL TOOLS

T109-287S	Elevating Legs (Set of 5)
73598	Jet Remover
T109-173	Jet Remover
73725	Float Gauge (1/8")
T109-213	Bending Tool
T109-214	Bending Tool
73605	Bending Tool #59 Drill Vacuum Kick #14 Drill 1/4 Inch Drill – Unloader and Fast Idle Speed

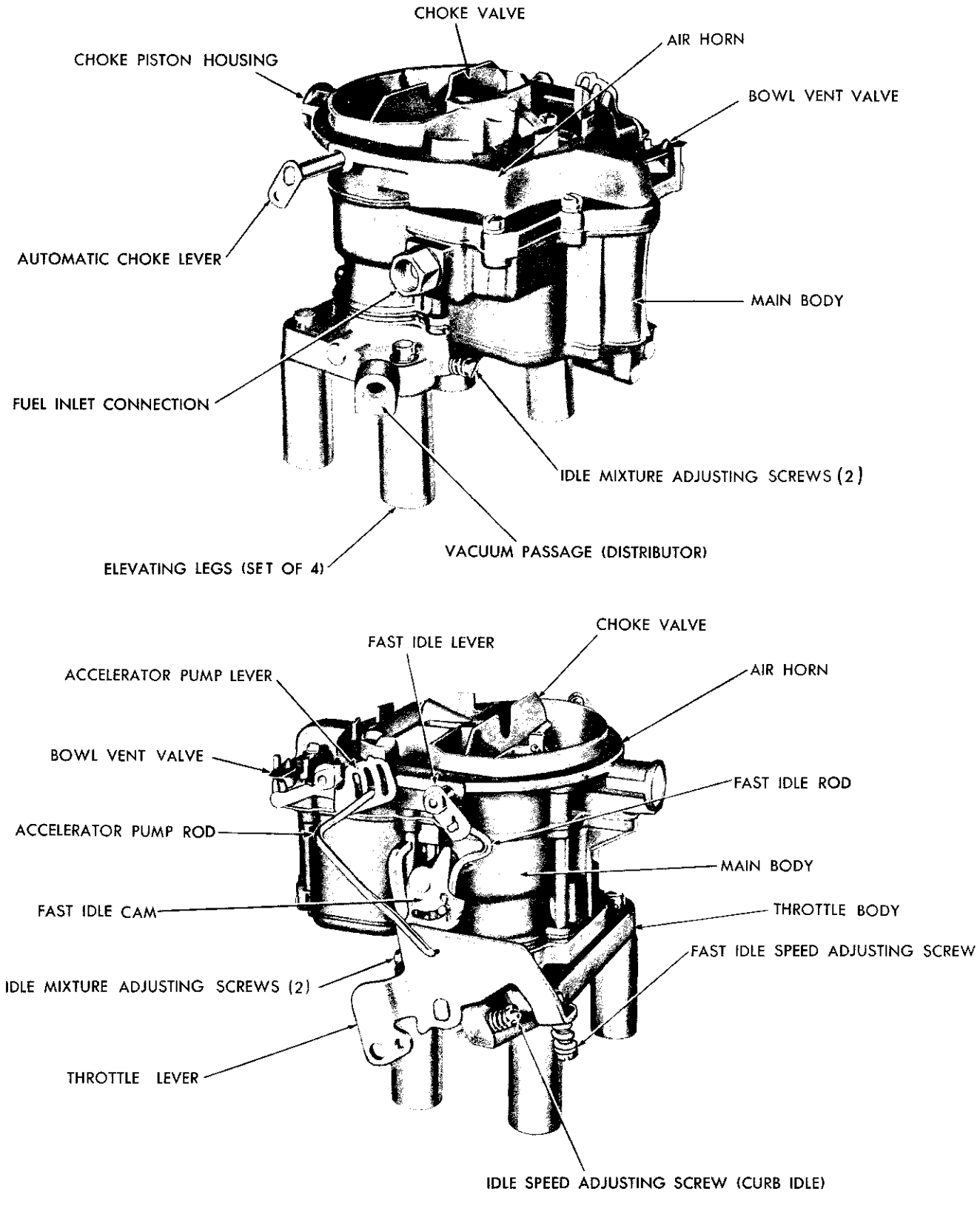


Fig. 1—Carburetor Assembly (WWC3 Series)

GROUP 14
FUEL SYSTEM (PUMP, CARBURETOR, TANK)
WWC3 SERIES STROMBERG CARBURETOR

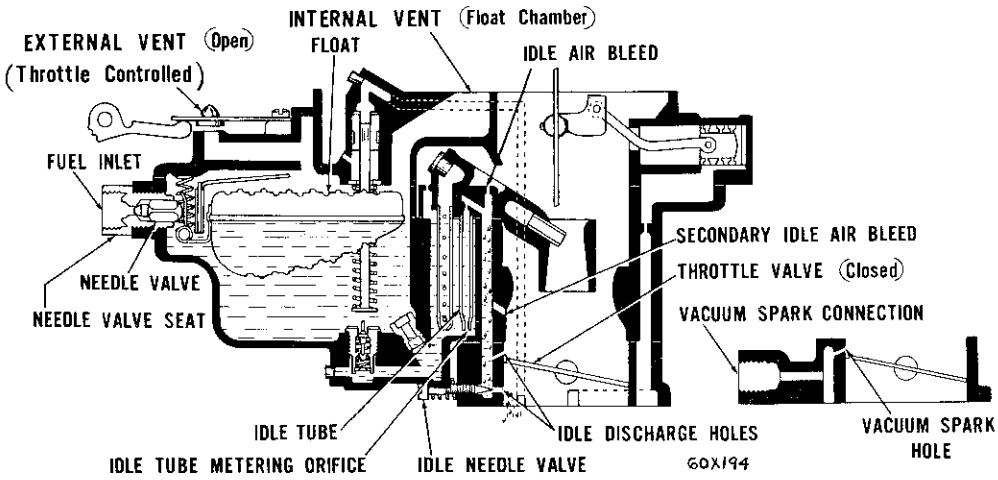


Fig. 2—Float System and First Stage of Idle

The WWC3 Series Stromberg carburetor is a dual throat downdraft type, with each throat having its own idle system, main metering system and throttle valve. The idle and main metering system are supplemented by the float system, the accelerating system and the power system.

The carburetor incorporates an idle system vent, operated from the throttle linkage, a double venturi cluster which in addition to the small venturi, also includes the discharge nozzles, the main discharge tubes and the idle tubes in a single assembly.

THE FLOAT SYSTEM

The function of the float system is to maintain a constant level of fuel in the float chamber at all times and under all conditions of operation. Fuel enters the carburetor at the fuel inlet, flowing through the float chamber, as shown in Figures 2 and 3. When the fuel reaches a given level, the float shuts off the supply of fuel at the needle valve.

The float chamber is vented internally by a vent passage which connects the float chamber with the air horn and by an external idle vent in the top of the air horn, which opens when the throttle is returned to the idle position.

The external vent supplements the internal vent at a time when the gaseous vapors which accumulate due to high temperatures are at their maximum.

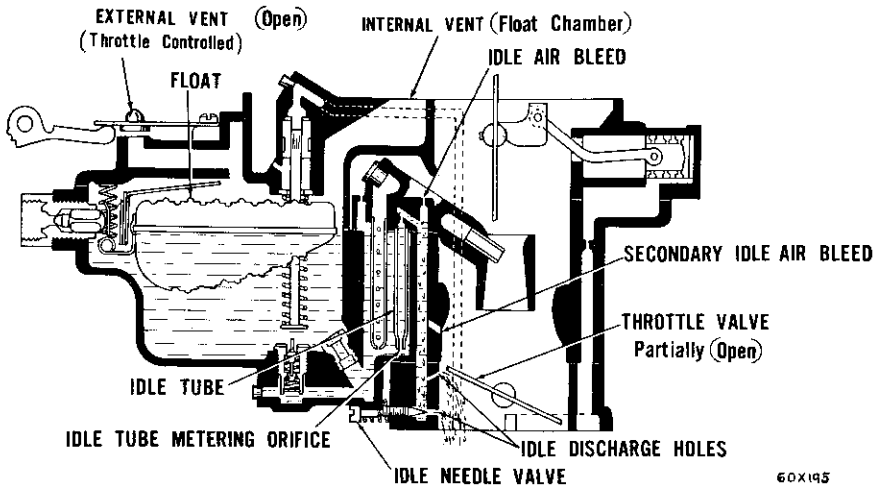


Fig. 3—Idle System (2nd Stage of Idle)

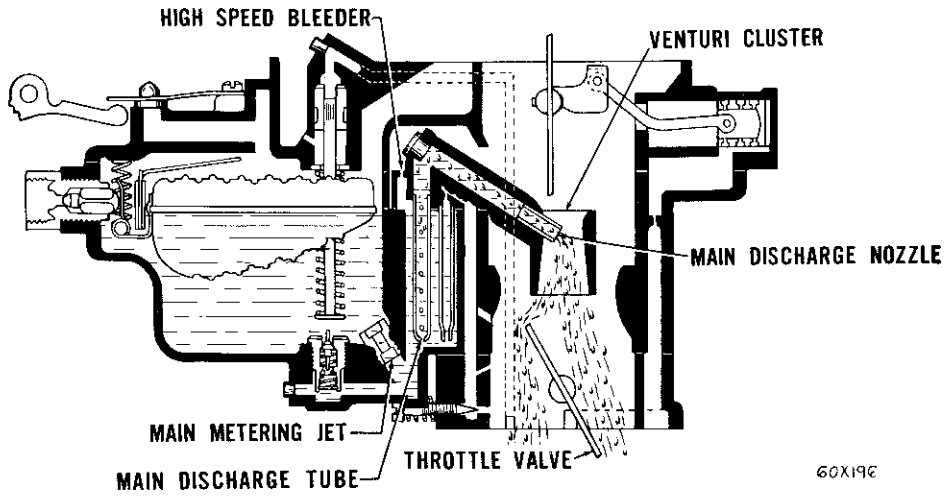


Fig. 4—Main Metering System

THE IDLE SYSTEM

With the throttle valves closed and the engine running at slow idle speed, fuel from the float chamber is metered into the idle tubes by an orifice at the base of each idle tube, as shown in Figures 3 and 4. The air taken in through the idle air bleeds mixes with the fuel at the top of the idle tubes. This mixture of air and fuel then flows down the channels where it is mixed with additional air entering through the secondary idle air bleeds. This mixture is then discharged at the lower idle discharge holes.

The quantity of fuel discharged is controlled by adjustable needle valves. As the throttle valves are opened slightly, the air-fuel mixture is also discharged from the upper idle discharge holes, to supply the additional fuel reguired for increased engine speed, as shown in Figure 3.

THE MAIN METERING SYSTEM

The main metering system controls the flow of fuel during the intermediate or part throttle range of operation.

With the throttle valves in a partially open position, fuel flows from the float chamber through the main metering jets and into the main discharge tubes where it is mixed with air taken in through the high speed air bleeders, as shown in Figure 4.

This mixture of air and fuel is then discharged from the tips of the main discharge nozzles into the air stream through the auxiliary venturi.

The main body and main discharge tubes are so designed that should vapor bubbles form in the fuel in the main discharge system, due to high temperatures while the vehicle is standing, the vapor bubbles

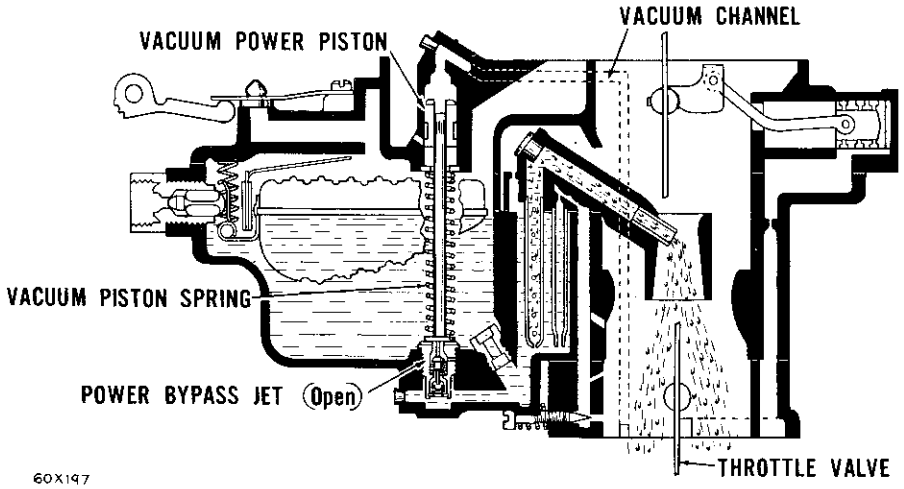


Fig. 5—Power System

will collect in the channel surrounding the main discharge tubes from where they will rise into the cavity above the fuel level. In this location the vapor bubbles are free to break and dissipate without causing any difficulty.

THE POWER SYSTEM

The power system is incorporated into the carburetor to provide a richer mixture for maximum power and high speed operation. The extra fuel for power is supplied by a vacuum-controlled power piston which automatically operates a two-stage power by-pass jet in accordance with the throttle opening.

Intake manifold vacuum is maintained above the vacuum power piston through a vacuum channel which leads to the mounting flange of the carburetor, as shown in Figure 5.

During initial or part throttle opening, the vacuum above the vacuum piston is sufficient to overrule the compression spring and hold the piston in the "UP" position. When the throttle valves are opened to the point where the manifold vacuum drops to approximately 10″ to 12″ Hg., the piston compression spring then moves the piston "DOWN" to open the upper (first) stage of the power by-pass jet and meters additional fuel through the upper hole into the main metering system.

With increased demand for power and consequent further drop in manifold vacuum approximately 3″ to 7″ Hg., the piston moves "DOWN" an additional amount to open the lower (second) stage valve and meters an additional amount of fuel into the main metering system through the hole at the bottom of the power by-pass jet.

When the demand for power is satisfied and the throttle opening is decreased, the manifold vacuum

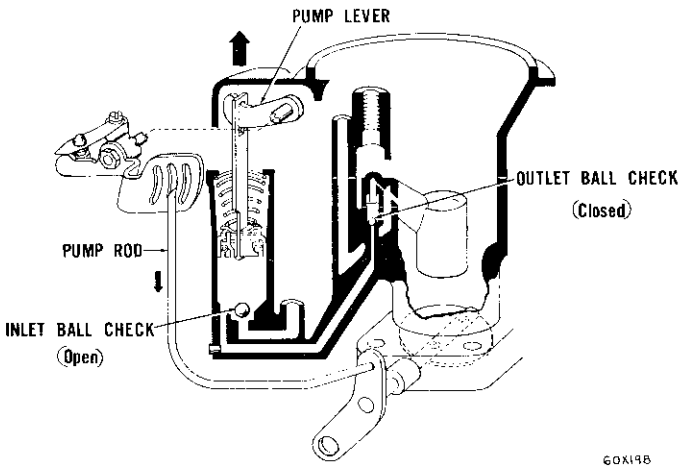


Fig. 6—Accelerating System (Discharge Stroke)

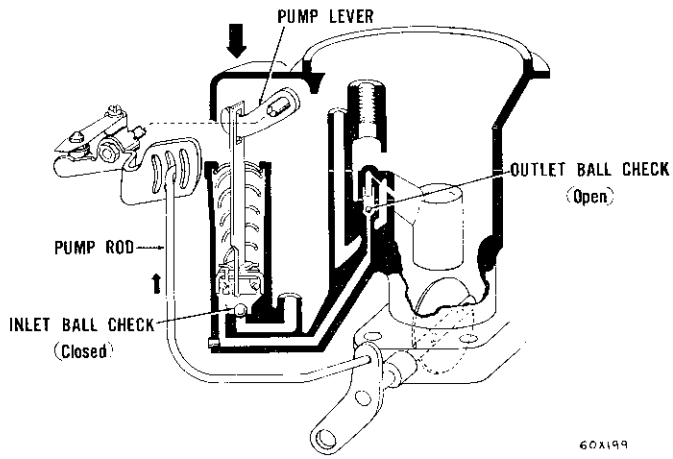


Fig. 7—Accelerating System (Return Stroke)

again builds up to raise the power piston. As soon as the manifold vacuum exceeds 7″ Hg., the lower (second) stage valve closes, cutting off the supply of fuel through the bottom hole.

When the manifold vacuum exceeds 12″ Hg., the upper (first) stage valve closes, cutting off the supply of fuel through the upper hole.

THE ACCELERATING SYSTEM

To insure a smooth, uninterrupted flow of power for acceleration, additional fuel must be metered into the engine. This is accomplished through the use of a spring-loaded accelerator pump, and is operated by the throttle linkage.

As the throttle valves are opened, the accelerator pump piston moves "DOWN" to close the inlet ball check valve and force a metered quantity of fuel through the outlet ball check valve and pump discharge nozzle into the air stream, as shown in Figures 6 and 7.

A slotted type of pump lever is used, as shown in Figure 7. When the throttle is closed, the piston is raised against the compression of the duration spring.

When the throttle is opened the pump lever moves down and permits the compression spring above the piston to move the piston down. The calibrated spring then delivers a given quantity of fuel over a metered period of time.

With the release of the accelerator pedal and the return of the accelerator pump to the released position, the outlet check ball "CLOSES" while the inlet check ball "REOPENS" thus permitting fuel from the float chamber to enter and refill the accelerator pump cylinder, as shown in Figures 6 and 7.

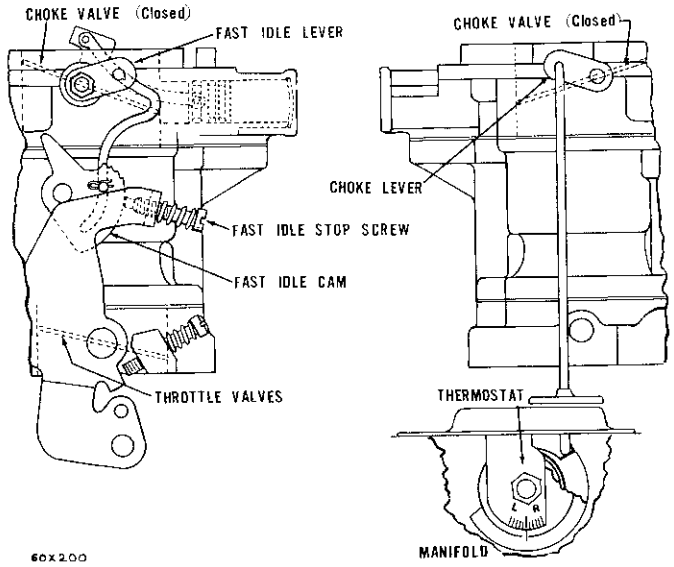


Fig. 8—Choke Closed—Cold Engine—Fast Idle

THE AUTOMATIC WELL TYPE CHOKE

The operation of the automatic choke control is based upon the combination of the intake manifold vacuum, a vacuum-operated piston, and offset choke valve and a thermostatic coil spring, located within the manifold and connected to the choke lever by a rod.

Heat from the manifold governs the tension of the thermostatic coil spring. The fast idle cam operates in conjunction with the automatic choke mechanism, to provide the correct throttle opening to prevent the engine from stalling during the warm-up period.

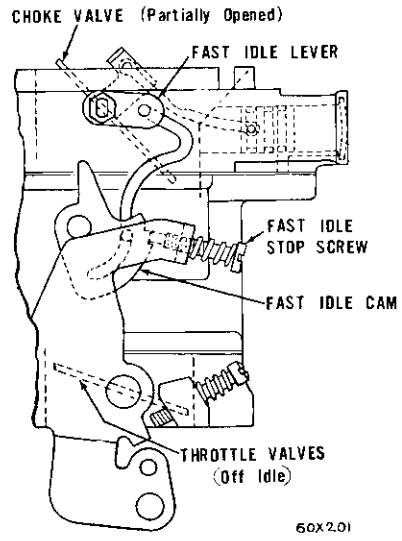


Fig. 9—Choke Partially Open—Engine Warming Up

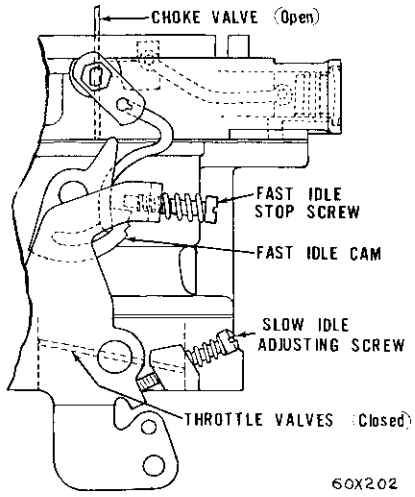


Fig. 10—Choke Open—Engine Warm—Slow Idle

CHOKE CLOSED — FAST IDLE — COLD ENGINE

As the engine cools, the thermostatic coil spring also cools and gradually gains tension, as shown in Figure 8. The thermostatic coil spring, however, is unable to close the choke valve until the throttle valves are opened sufficiently to move the fast idle stop screw away from the fast idle cam.

The tension on the thermostatic spring will then close the choke valve according to the prevailing temperature. As the engine begins to operate, manifold vacuum exerts a pull on the vacuum piston to open the choke valve just enough to supply the necessary air for a running mixture.

CHOKE PARTIALLY OPEN — ENGINE WARMING UP

As the engine warms, the amount the choke valve opens is governed by the pressure of air against the offset choke valve, as shown in Figure 9.

The heat from the manifold gradually decreases the tension of the thermostatic coil spring, until the spring offers no further resistance to the opening of the choke valve.

With the engine partially warm, the fast idle stop screw will rest on a lower step of the fast idle cam when the accelerator is released to allow the engine to idle at a lower idle speed.

ENGINE WARM — CHOKE OPEN — SLOW IDLE

When the engine reaches its normal operating temperature and the accelerator is released, as shown in Figure 10, the fast idle cam rotates to its fully released position with space between the fast idle cam and the end of the fast idle stop screw. In this position the throttle opening is controlled entirely by the slow idle adjustment screw.

SERVICE PROCEDURES

Dirt, dust, water and gummy deposits are some of the main causes for improper carburetor operation. Proper cleaning, however, and the installation of new parts, where required, will return the carburetor to its originally designed performance.

When overhauling the carburetor, several items of importance should be observed to assure a good job.

(1) All parts should be carefully cleaned in a suitable solvent, then inspected for damage or wear.

(2) Use air pressure only, to clear the various orifices and channels.

(3) Replace questionable parts with NEW ones. Always use a complete kit when overhauling the carburetor. Using the code number stamped on the air horn, adjacent to the fuel inlet, refer to the parts catalog and order the correct repair kit for the carburetor being worked on.

DISASSEMBLY OF AIR HORN (Fig. 11)

(1) Install four elevating legs, Tool T109-287S,

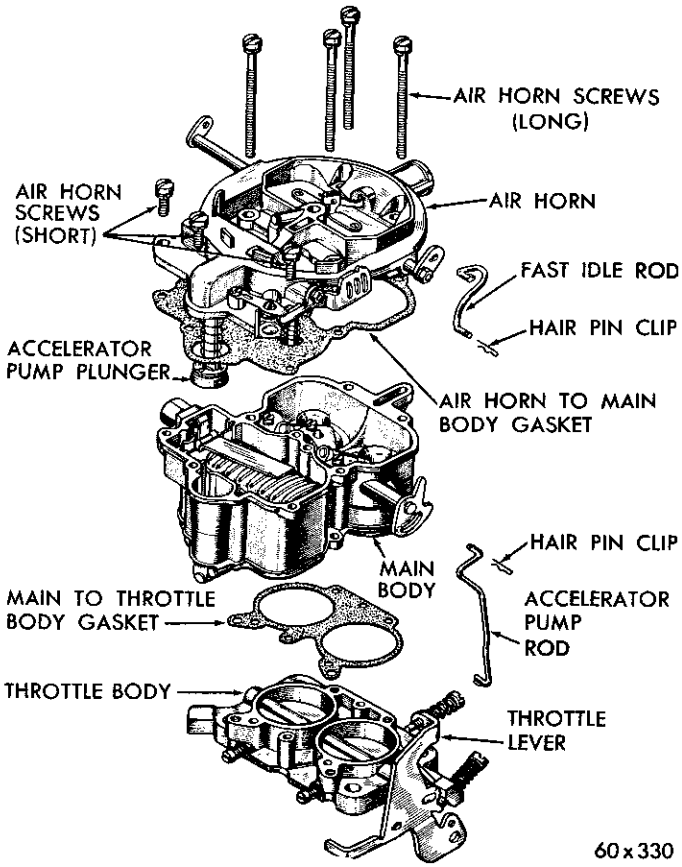


Fig. 11—Carburetor Assembly (Exploded View)

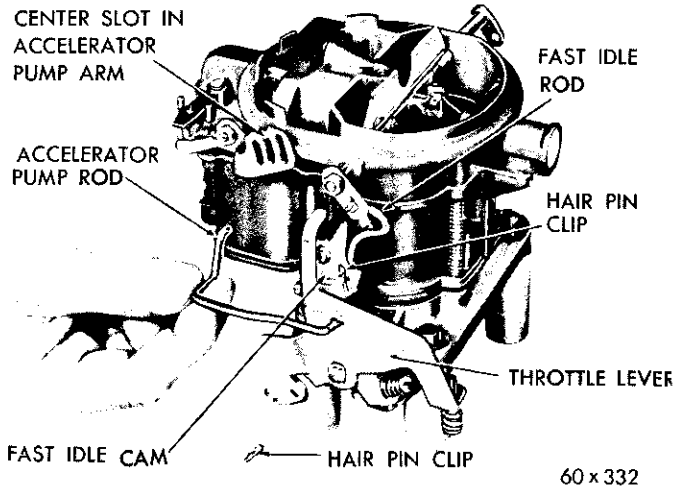


Fig. 12—Removing or Installing Pump Rod

in the mounting flange holes in the throttle body. These legs are used to protect the throttle valves from damage and to provide a suitable base for working.

(2) Remove the hairpin clip that holds the pump rod in the center slot of the pump arm. Remove rod from slot and disengage from the throttle lever, as shown in Figure 12.

(3) Remove the hairpin clip that holds the fast idle rod in the fast idle cam. Disengage rod from cam, then rotate rod to disengage from choke lever, as shown in Figure 13.

(4) Remove the three short air horn attaching screws, then remove the two long air horn attaching screws next to the choke piston. Install two short

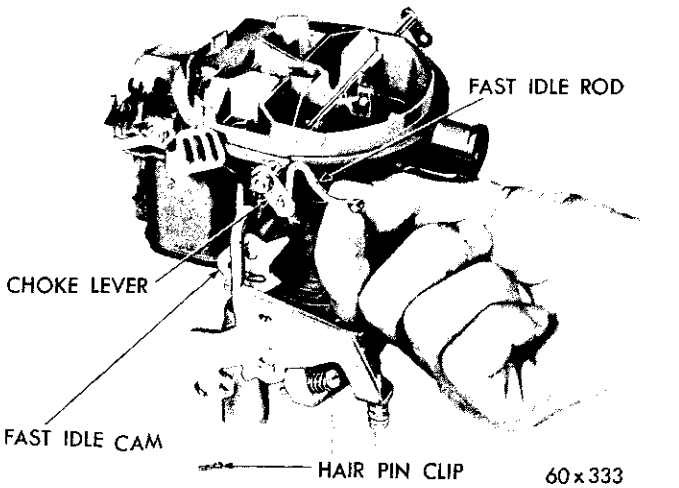


Fig. 13—Removing or Installing Fast Idle Rod

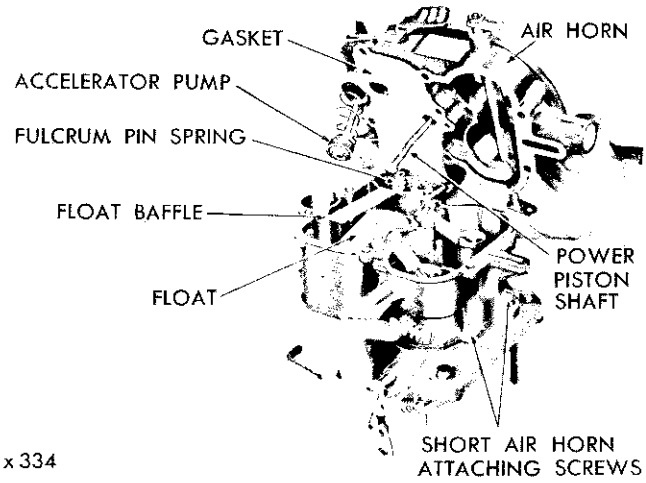


Fig. 14—Removing or Installing Air Horn

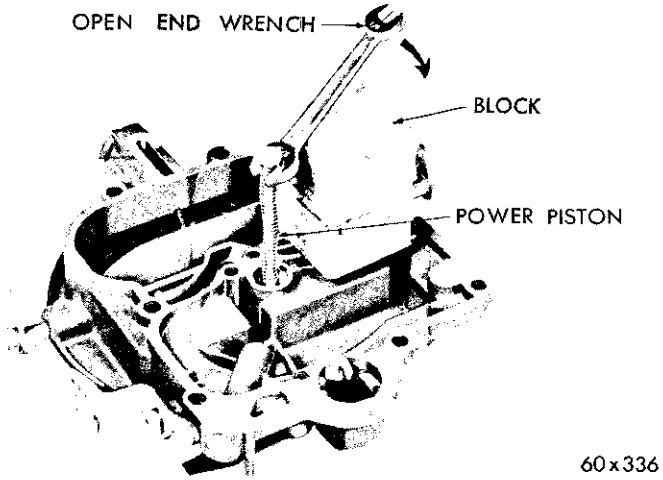


Fig. 16—Removing the Vacuum Power Piston

screws through the main body into the throttle body to hold the bodies together (Fig. 14).

(5) Remove the remaining air horn attaching screws, then lift air horn straight up and away from main body, as shown in Figure 14.

(6) Disengage the accelerator pump-plunger from the pump arm hook by tilting down and out from under hook, as shown in Figure 15. Remove the compression spring.

Place the accelerator pump plunger in a jar of clean gasoline or kerosene to prevent the leather from drying out.

(7) Remove the vacuum power piston from the air horn, using an open end wrench and wood block, as shown in Figure 16. (Exert sufficient pressure on end of wrench to force piston out of its well in air horn. This assembly is staked in the air horn and care should be used at removal.) Discard air horn gasket.

(8) Remove the screws that hold the choke valve and the choke piston link bracket to the choke shaft.

CAUTION

These screws are staked to prevent loosening, and care is necessary to avoid breaking in the shaft.

(9) Remove choke lever nut and slide lever off end of choke shaft.

(10) Lift out the choke valve, allowing the link and bracket to hang, then withdraw choke shaft and lever out of the air horn.

MAIN BODY REMOVAL (Fig. 11)

(1) Remove the venturi cluster attaching screws, the venturi cluster and gasket, as shown in Figure 17.

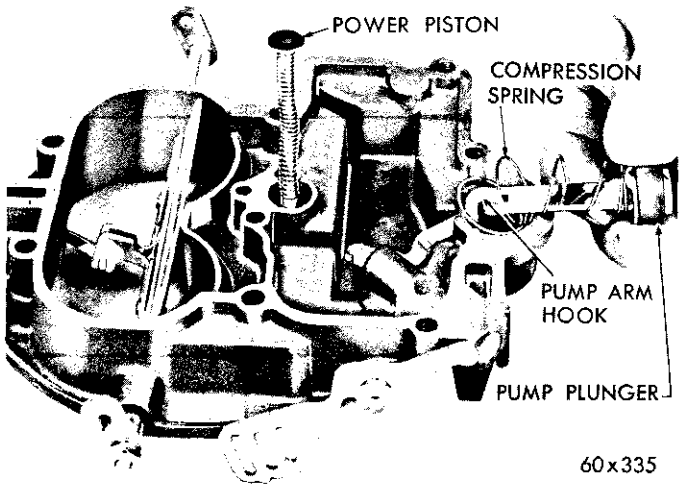


Fig. 15—Removing or Installing Accelerator Pump Plunger

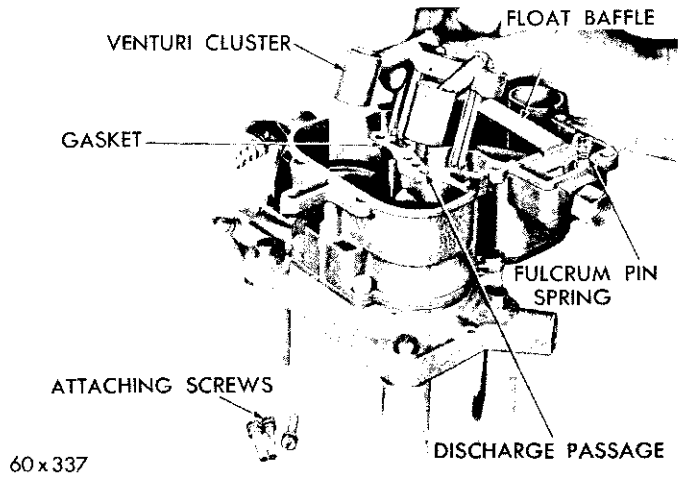


Fig. 17—Removing or Installing Venturi Cluster

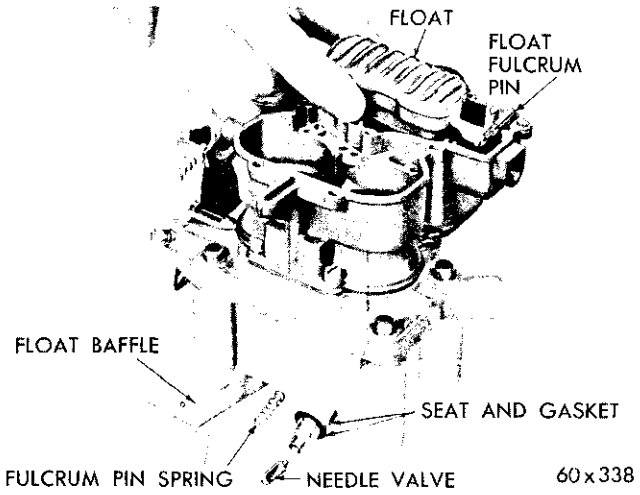


Fig. 18—Removing or Installing Float and Fulcrum Pin

(2) Remove the float fulcrum pin spring, the fuel inlet needle valve, seat and gasket.

(3) Slide the float baffle up and out of its grooves, and remove the float and fulcrum pin, as shown in Figure 18.

(4) Invert the carburetor main body and drop out the discharge check ball from the discharge passage (Fig. 17), and the accelerator pump inlet check ball from the pump well.

(5) Using Tool 73598, remove the power by-pass jet and gaskets, as shown in Figure 19.

(6) Using Tool T109-173, remove the two main metering jets, as shown in Figure 20.

(7) Remove the two air horn screws used to hold the main and throttle bodies together. Separate the throttle and main bodies.

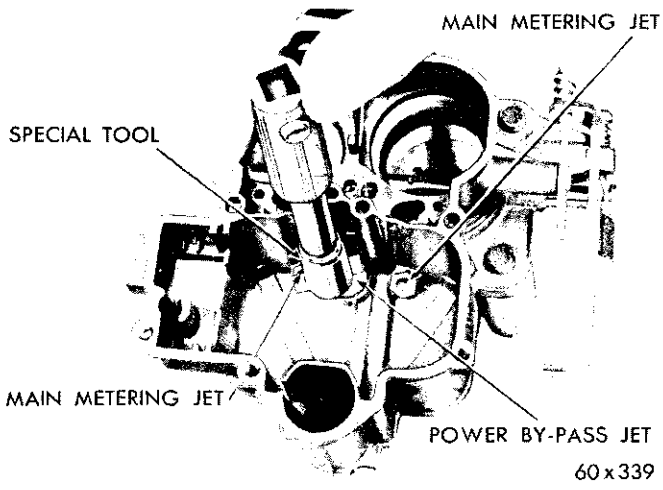


Fig. 19—Removing or Installing Power By-Pass Jet

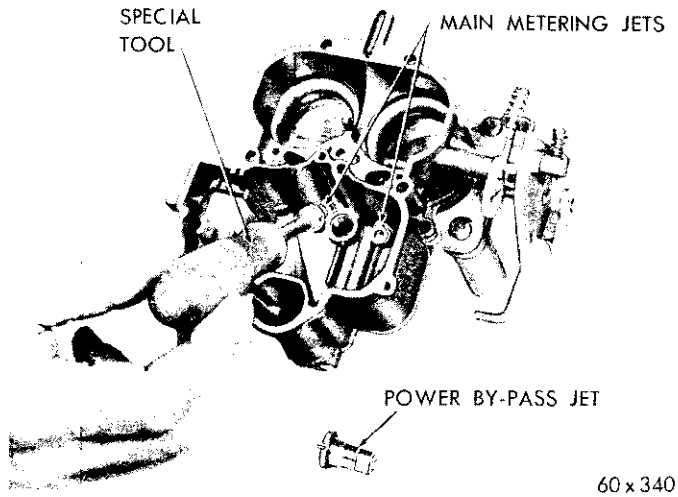


Fig. 20—Removing or Installing the Main Metering Jet

THROTTLE BODY REMOVAL (Fig. 11)

(1) Unscrew and remove the two idle mixture adjusting screws and springs from the throttle body.

(2) The carburetor now has been disassembled into three units; namely, the air horn, main body and throttle body and the component parts of each disassembled as far as necessary for cleaning and inspection.

NOTE: It is usually not advisable to remove the throttle shaft or valves unless wear or damage necessitates installation of new parts.

CLEANING AND INSPECTION

The recommended solvent for gum deposits is denatured alcohol which is easily obtainable. There are other commercial solvents, however, such as Metalclene, which may be used with satisfactory results.

Check the throttle shaft for excessive wear in the throttle body. If wear is extreme, it is recommended that the throttle body be replaced rather than installing a new throttle shaft in the old body.

IMPORTANT

If the commercial solvent or cleaner recommends the use of water as a rinse, it should be "HOT". After rinsing, all trace of water must be blown from the passages with air pressure. It is further advisable to rinse all parts in clean gasoline or kerosene to be certain no trace of moisture remains. Never clean jets with a wire, drill or other mechanical means because the orifices may become enlarged, making the fuel mixture too rich for proper performance.

THROTTLE BODY ASSEMBLY

(1) During manufacture, the location of the idle transfer ports and the spark advance control ports to the valves are carefully established for one particular assembly (Fig. 21).

(2) If a new shaft should be installed in an old worn throttle body, it would be very unlikely that the original relationship of these ports to the valves would be obtained. Changing the port relationship would adversely affect normal car operation between the speeds of 15 and 30 miles per hour. If it has been determined, however, that a new shaft or valves are to be installed, adhere closely to the following instructions:

(3) Mark the valves to be sure each is replaced in the same bore from where removed (if replacing throttle shaft only). (Fig. 22).

(4) Remove the screws that hold the throttle valves to the shaft. Slide the valves out of shaft and bore.

CAUTION

These screws are staked on the opposite side and care should be used at removal so as not to break the screws in the shaft. Remove the staking with a file.

(5) Slide the throttle shaft and lever out of the throttle body.

(6) Install the new throttle shaft and lever in the throttle body. The idle tab on the lever should rest against the stop.

NOTE: The idle speed adjusting screw must be backed off when seating the valves in the following operation.

(7) Slide the valves down into position with the notches in the valves at the ports. Install **new** screws

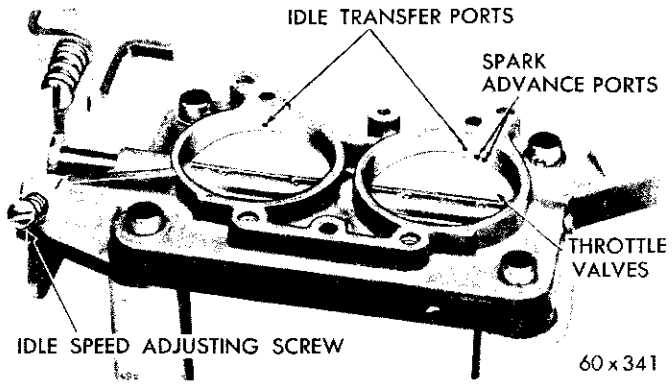


Fig. 21—Ports in Relation to Throttle Valves

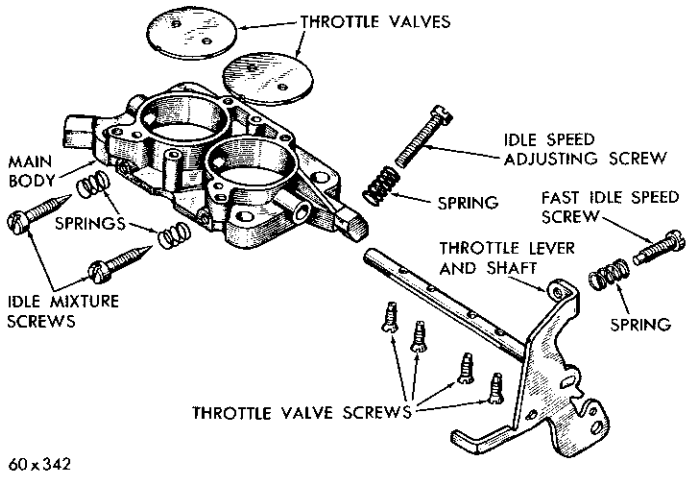


Fig. 22—Throttle Body (Exploded View)

but do not tighten. Hold the valves in place with the fingers pressing on the high side of valves.

(8) Tap the valves lightly with a screwdriver to seat in the throttle bores. Holding the valves in this position, tighten the screws securely and stake by squeezing with pliers.

(9) Install the two idle mixture adjusting screws and springs in the throttle body. (The tapered portion must be straight and smooth.) If the tapered portion is grooved or ridged, a new idle mixture adjusting screw should be installed to insure having correct idle mixture control.

DO NOT USE A SCREWDRIVER. The idle mixture screw adjustment should be made with the fingers. Turn the screws lightly against their seats, then back off one full turn for an approximate setting.

MAIN BODY ASSEMBLY (Fig. 23)

(1) Place a new gasket on the throttle body, then

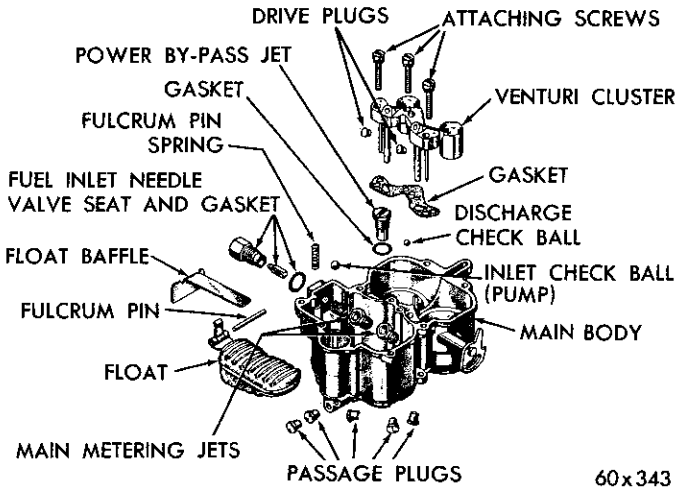


Fig. 23—Main Body (Exploded View)

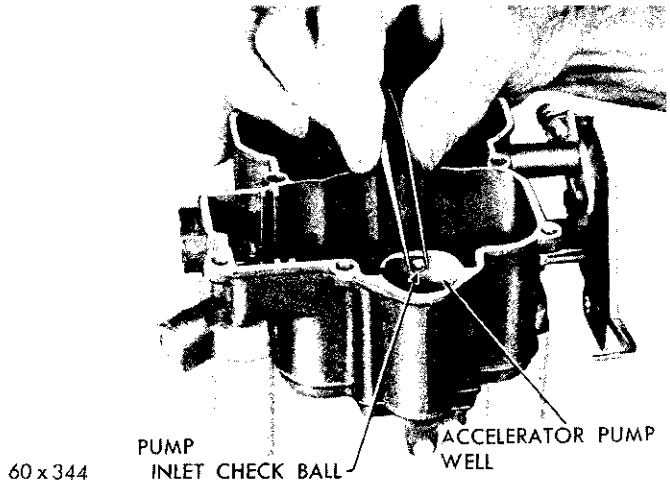


Fig. 24—Installing Accelerator Pump Inlet Check Ball

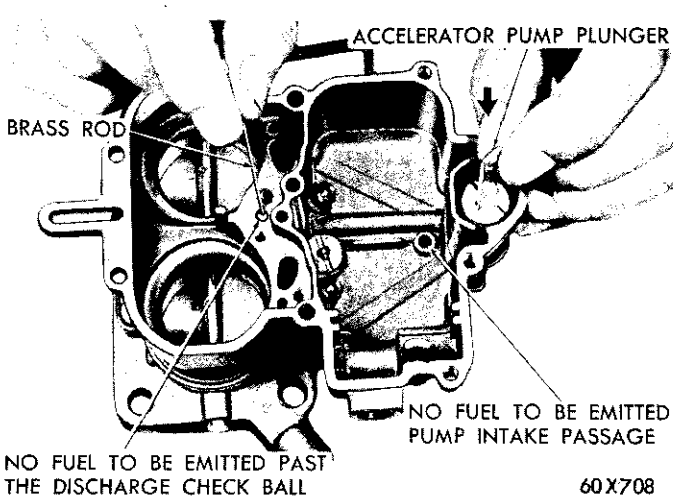


Fig. 26—Testing Accelerator Pump

install main body. Install two short screws to secure.

(2) Install the main metering jets in the main body. Tighten securely, using Tool T109-173 (Fig. 20).

(3) Install the power by-pass jet and new gasket. Tighten securely, using Tool 73598 (Fig. 19).

(4) Install the accelerator pump inlet check ball (1/8 inch) in the pump well, as shown in Figure 24.

(5) Install the accelerator pump discharge check ball (3/16 inch) in the discharge passage, as shown in Figure 25.

ACCELERATOR PUMP TEST

(1) Pour clean gasoline into the carburetor bowl approximately 1/2 inch deep. Remove the accelerator pump plunger from the jar of gasoline and slide down in its well. Raise the plunger and press lightly on the plunger shaft to expel the air from the pump passage.

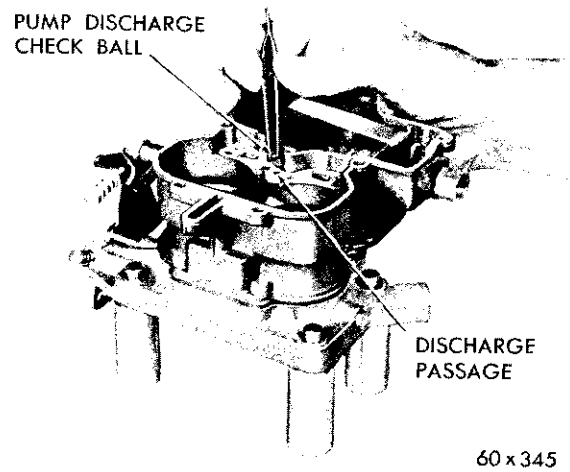


Fig. 25—Installing the Discharge Check Ball

(2) Using a small clean brass rod, hold the discharge check ball firmly down on its seat. Raise the pump plunger and press downward. No fuel should be emitted from either the intake or discharge passage, as shown in Figure 26.

(3) If any fuel does emit from either the intake or discharge passages, it indicates the presence of dirt or a damaged check ball. The passages should be recleaned and then thoroughly blown out with compressed air. Examine the check ball for signs of damage that would not allow the ball to seat properly.

(4) Reinstall the check ball and test again. If still leaking, place a piece of drill rod down on the check ball and rap sharply with a hammer. Remove the old check ball and install a new one. Then retest. (This operation forms a new ball seat in the carburetor casting.)

(5) Install the venturi cluster gasket and slide the venturi cluster down into position (Fig. 17). Install attaching screws and tighten securely.

Again depress the accelerator plunger. A clear straight stream should emit from each jet orifice. If the streams are not identical (if either one is restricted or diverted), remove venturi cluster and reclean.

After test, pour gasoline from the bowl and remove the pump plunger.

(6) Check the float for leaks or damage. If satisfactory for further service, install in position in the bowl (Fig. 18).

(7) Assemble the fuel inlet needle valve, seat and gasket, then insert in the main body. Tighten securely. (If the needle valve is ridged or grooved, or badly worn, a new synthetic rubber-tipped fuel inlet needle valve assembly should be installed.)

TESTING OR SETTING THE FLOAT HEIGHT

The carburetor is equipped with a new synthetic rubber-tipped fuel inlet needle (Fig. 27).

(1) Invert the main body so that the weight of the floats only is forcing the needle against the seat. **Be sure hinge pin does not drop out of the float hinge.**

(2) Using Tool 73725 or a "T" scale, measure the float level, as shown in Figure 28. There should be 1/8 inch from the surface of the fuel bowl to the crown of the float at the center.

If an adjustment is necessary, remove the needle valve and seat, the fulcrum pin retainer spring, the floats and fulcrum pin. Bend the lip of the float lever either in or out until correct setting has been obtained.

CAUTION

Do not attempt to change the setting without removing the float, as the synthetic rubber tip can be compressed sufficiently to cause a false setting, which will affect correct level of fuel in the bowl.

NOTE: It is important that the float lip is perpendicular to the needle or slanted not more than 10 degrees away from the needle when the float is set correctly.

Install float, needle and seat and tighten seat securely. Slide the float baffle down into position and install the fulcrum pin spring (Fig. 14). Remeasure as described in Step 2 above.

AIR HORN ASSEMBLY (Fig. 29)

(1) Slide the choke shaft and lever into the air horn with the choke lever pointing down and away from the air horn. Slide the choke valve down into the slot in the shaft.

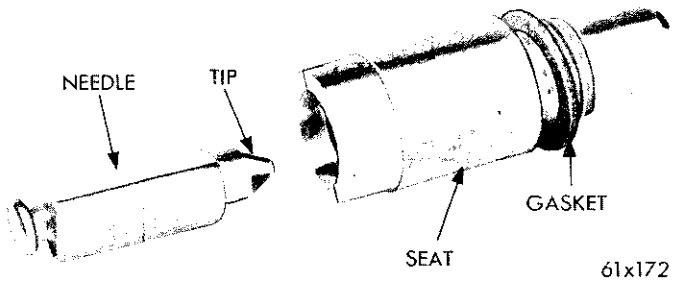


Fig. 27—Rubber Tipped Needle Seat and Gasket

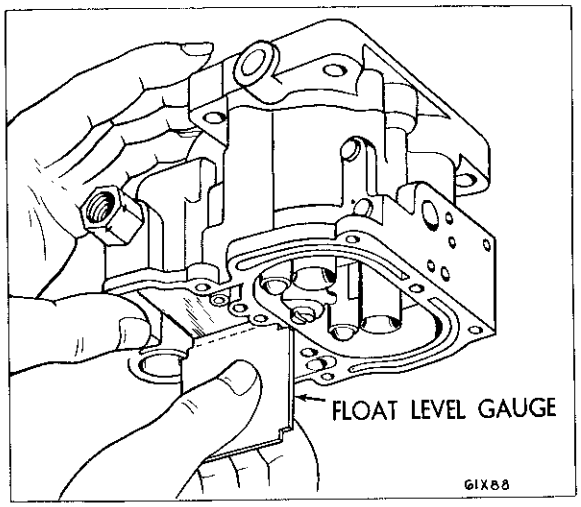


Fig. 28—Testing Float Setting

(2) Hold the choke valve closed, then position the choke piston bracket and install new screws. DO NOT TIGHTEN. While holding the valve in the closed position, tap gently with a screwdriver, to center and locate the valve.

(3) Tighten attaching screws securely, then stake by squeezing with pliers. Reinstall the fast idle lever and secure with lockwasher and nut.

(4) Soak the accelerator pump plunger in a jar of clean gasoline. Test the leather. If the leather is hard, cracked, or worn, install a new pump plunger. (Be sure and flex the leather several times before installing plunger in air horn.)

(5) Slide the compression spring over plunger shaft, then slide plunger over hook and into position (Fig. 15).

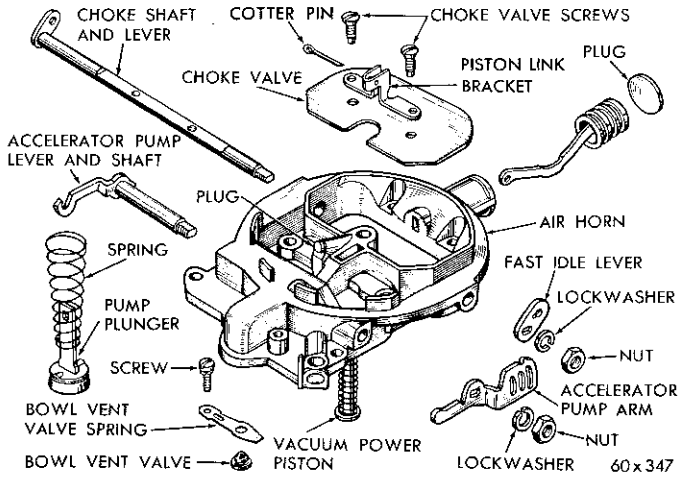


Fig. 29—Air Horn (Exploded View)

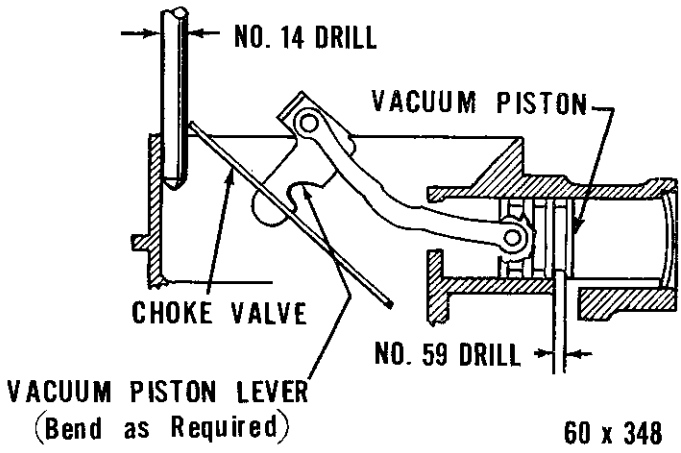


Fig. 30—Vacuum Kick Setting

(6) Install a new air horn gasket, then install the vacuum power piston in air horn. Lock the piston in position by prick punching on the retaining rim. Compress the piston plunger to be sure no binding exists. If the piston sticks or binds enough to hinder smooth operation, install a new piston assembly.

VACUUM KICK ADJUSMENT

(1) Insert a #59 drill in the top of groove of the vacuum piston, as shown in Figure 30. Apply light closing pressure against the choke valve (to take up slack in parts). It should be possible to insert a #14 drill between the air horn and choke valve. If an adjustment is necessary, bend the ear on the bracket as shown, until correct opening has been obtained.

(2) Install the air horn assembly on the main body, guiding the pump plunger into its well (Fig. 14). (Be sure the leather does not curl or fold back.) Install retaining screws and tighten securely.

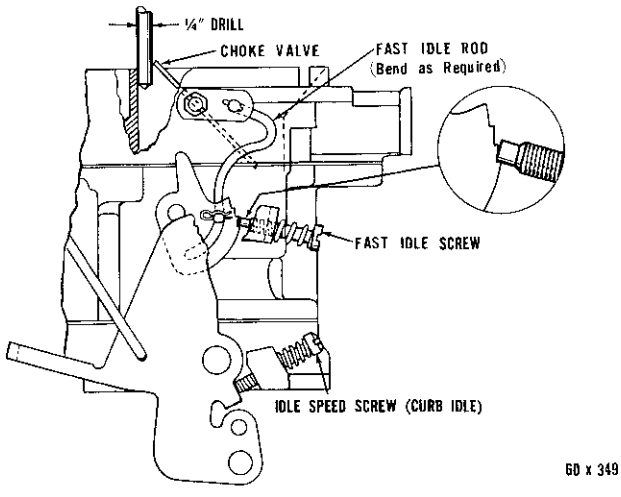


Fig. 31—Fast Idle Speed and Cam Position Setting

NOTE: The choke valve must be held partially closed while installing the air horn.

(3) Remove the two short screws holding the main body and throttle body together (Fig. 14), and install in air horn. Reinstall the two long screws and tighten securely.

(4) Install the fast idle rod and secure with the hairpin clip (Fig. 13).

(5) Install the pump rod and secure with hairpin clip. (Be sure rod is in the center slot of arm.) (Fig. 12.) Work the accelerator pump plunger several times to be sure it operates smoothly.

CARBURETOR ADJUSTMENTS

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

(a) Fast Idle Speed and Cam Position Setting.

(b) Unloader Adjustment (Wide Open Kick).

(c) Accelerator Pump Travel.

(d) Bowl Vent Valve Setting.

(e) Vacuum Kick Adjustment.

FAST IDLE SPEED AND CAM POSITION ADJUSTMENT (Fig. 31)

(1) Turn the idle speed adjusting screw out far enough to clear the throttle lever tang when the throttle valves are closed.

(2) Hold the throttle valves in the closed position, and turn the fast idle adjusting screw out until the fast idle cam can be positioned as shown (Fig. 31).

(3) From the point of initial contact with the step of the cam, as shown, turn the fast idle screw in 3½ turns.

(4) With the fast idle screw held in the position illustrated, move the choke valve (with light pressure) toward the closed position and insert a ¼ inch drill between the choke valve and the wall of the air horn.

(5) If an adjustment is necessary, bend the fast idle rod at the upper bend, using Tool T109-213, until correct opening has been obtained.

UNLOADER ADJUSTMENT (WIDE OPEN KICK) (Fig. 32)

(1) Lightly hold the choke valve closed, then open the throttle valves to the wide open position. The choke valve should open sufficiently to allow a 1/4 inch drill to be inserted between the choke valve and the wall of the air horn as shown.

(2) To adjust, bend the tang on the throttle lever, using Tool T109-214, until correct opening has been obtained.

(3) Hold the choke valve open and then open and close the throttle valves. Failure to obtain full throttle operation indicates improper assembly or wrong adjustment of the choke mechanism.

(4) With the throttle valves held in the open position, open the choke valve slowly to the wide open position. There should be no bind throughout the entire travel of the choke mechanism.

ACCELERATOR PUMP TRAVEL (Fig. 33)

(1) With the throttle valves fully closed, measure the pump travel from the fully closed to the fully open throttle.

(2) This travel should be 7/16 inch as shown.

(3) If an adjustment is necessary, bend the pump rod at the point shown, using Tool T109-213, until correct travel has been obtained.

BOWL VENT VALVE SETTING (Fig. 34)

This setting is made after the pump travel setting.

(1) With the idle speed screw set at closed throttle, hold the throttle in the closed position, and choke valve wide open.

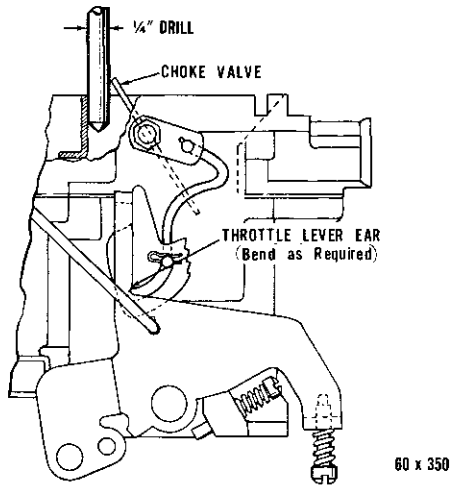


Fig. 32—Unloader Adjustment (Wide Open Kick)

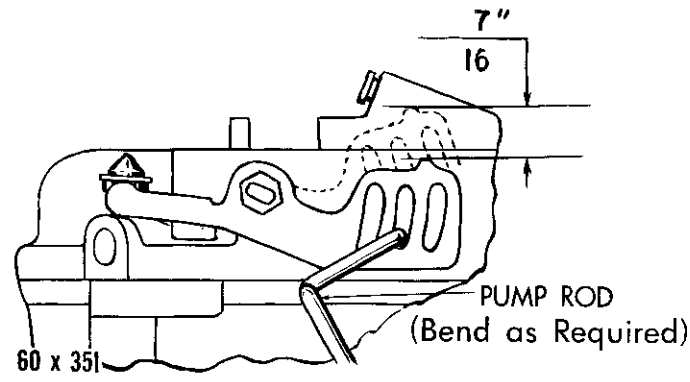


Fig. 33—Accelerator Pump Travel

(2) Test the opening of the bowl vent valve at the center of hole with the rubber valve hanging free.

(3) The opening should be 5/64 inch.

(4) If an adjustment is necessary, bend the bowl vent lever, using Tool T109-214, until correct opening has been obtained.

IDLE SPEED ADJUSTMENT

For the best results, it is recommended that a tachometer be used in this adjustment.

(1) Turn the idle speed screw in or out to obtain 500 rpm. (On cars with air conditioning, set the idle speed at 550 rpm.) Be sure the choke valve is fully

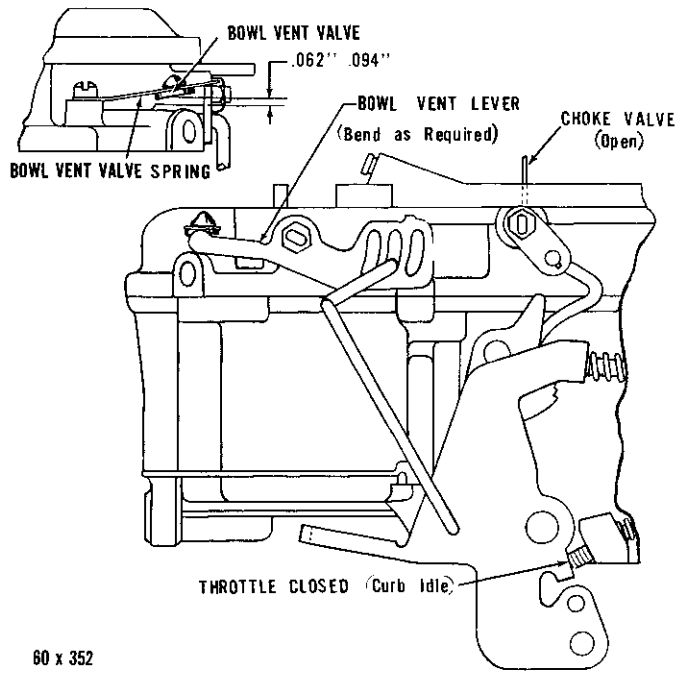


Fig. 34—Bowl Vent Valve Setting

open and that the fast idle adjusting screw is not contacting the fast idle cam (engine off fast idle).

(2) Turn each idle mixture screw to obtain a smooth idle.

(3) Readjust to 500 (or 550) rpm with the idle speed screw.

Fast Idle Speed Adjustment

To set the fast idle speed, connect a tachometer, then proceed as follows:

(1) With the engine not running, open the throttle halfway, close the choke valve, then allow the throttle to close.

The fast idle adjusting screw should be contacting the top step of the fast idle cam. If an adjustment is necessary, bend the fast idle rod at the upper angle in order to secure proper position of the fast idle cam, using Tool T109-213.

(2) With the engine running and warmed up, and with the fast idle adjusting screw contacting the top step of the fast idle cam, turn the fast idle adjusting screw in or out to secure 1400 rpm.

Checking Float Setting or Fuel Level (On the Vehicle)

Remove the three short air horn to main body attaching screws. Then remove one long air horn to throttle body screw next to fuel bowl and assembly short screw through main body flange and thread into the throttle body. Remove long screw from side away from fuel bowl and on opposite side and assemble short screw through main body flange. Securely tighten. Remove the air horn as follows:

(1) Remove the spring clip and disconnect the choke operating rod.

(2) Remove the hairpin clip and disconnect the fast idle rod.

(3) Remove the hairpin clip that holds the pump rod in the center slot of the pump arm. Disconnect the pump rod.

(4) Remove the remaining two long screws and lift off the air horn.

Check the float setting as follows:

(1) Seat the float fulcrum pin by pressing finger against the fulcrum pin spring.

There should be enough fuel in the bowl to raise the float so that the lip bears firmly against the needle. Additional fuel may be admitted by slightly depressing the float. If the fuel pressure in the line is insufficient to force additional fuel into the bowl, add the necessary fuel from a clean container.

CAUTION

Since the manifolds may be hot, it is dangerous to spill fuel onto these surfaces. Therefore, take the necessary precautions to avoid spillage.

(2) With only the pressure from the buoyant float holding the lip against the inlet needle, check the float setting, using Tool 73725 or "T" scale. There should be ⅛ inch from the surface of the bowl (gasket removed) to the top of the float at the center.

If an adjustment is necessary, hold the float on the bottom of the bowl, then bend the float lip toward or away from the needle, using Tool 73605. Recheck the ⅛ inch setting again, then repeat the lip bending operation as required.

CAUTION

When bending the float lip, do not allow the lip to push against the needle as the rubber tip can be compressed sufficiently to cause a false setting which will affect correct level of fuel in the bowl. After being compressed, the rubber tip is very slow to recover its original shape.

It is very important that the float tip be perpendicular to the needle or slanted not more than 10 degrees away from the needle when the float is set correctly.

(3) Reassemble the air horn.

AUTOMATIC CHOKE (Well Type)

(1) To function properly, it is important that all

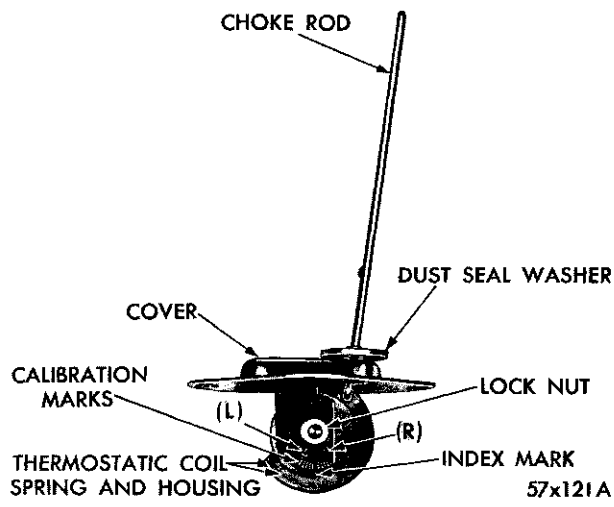


Fig. 35—Automatic Well Type Choke

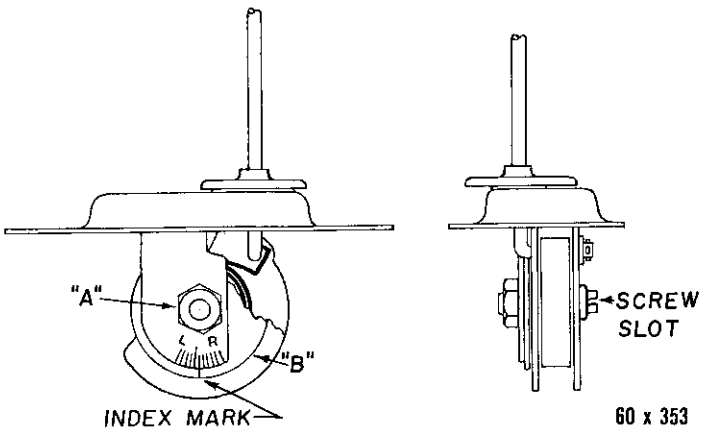


Fig. 36—Adjusting the Well Type Choke

parts be clean and move freely. Other than an occasional cleaning, the automatic choke control requires no servicing. It is very important, however, that the choke control unit works freely at the thermostatic coil spring housing and at the choke shaft.

(2) Move the choke rod up and down to check for free movement of the coil housing on the pivot. If the unit binds, a new unit should be installed.

NOTE: The well type choke unit is serviced only as a complete unit. Do not attempt to repair.

(3) Figure 35 shows the component parts of the control unit along with the number stamped on the crown of the cover.

(4) When installing the well type choke unit, make certain that the coil housing does not contact the sides of the well. Any contact at this point will affect choke operation.

(5) Do not lubricate any of the choke parts or the control unit, since this causes dirt to accumulate, which would result in a binding condition of the choke mechanism.

(6) Do not attempt to change the calibration setting. This is pre-determined and should it be changed, improper choke action would result.

(7) The choke control unit is accurately adjusted when originally assembled. Under normal service operation, it is recommended not to change the setting, or to disassemble the components for servicing. If, however, the setting has been disturbed, refer to Figure 36, then reset as follows:

(8) Loosen locknut "A" and turn part with screwdriver until index mark on disk "B" coincides with the first mark to the right of center mark on the bracket. Hold in this position with screwdriver while tightening nut.

NOTE: After adjustment is made and the choke unit installed on the engine, lift the cover disc and check to see that the rod has clearance when the choke is opened and closed. The rod should have clearance at hole in cover plate.

SERVICE DIAGNOSIS

Condition	Possible Cause	Correction
(1) Poor idling	(a) Idle air bleed carbonized or of incorrect size.	(a) Disassemble carburetor. Then, use compressed air to clear idle bleed after soaking it in a suitable solvent.
	(b) Idle discharged holes plugged or gummed.	(b) Disassemble carburetor. Then, use compressed air to clear idle discharge holes after soaking main and throttle bodies in suitable solvent.
	(c) Throttle body carbonized or worn throttle shaft.	(c) Disassemble carburetor. Check throttle valve shaft for wear. If excessive wear is apparent, replace throttle body assembly.
	(d) Damaged or worn idle mixture needle.	(d) Replace worn or damaged idle needle. Adjust air mixture.
	(e) Low grade fuel or incorrect float level.	(e) Test fuel level in carburetor. Adjust as necessary to obtain correct float level.
	(f) Loose main body to throttle body screws.	(f) Tighten main body to throttle body screws securely to prevent air leaks and cracked housings.

SERVICE DIAGNOSIS — Continued

Condition	Possible Cause	Correction
(2) Poor acceleration	(a) Accelerator pump by-pass seat corroded or bad.	(a) Disassemble carburetor. Clean and inspect accelerator pump by-pass jet. Replace by-pass jet, if it is in questionable condition.
	(b) Accelerator pump piston (or plunger) leather too hard, worn, or loose on stem.	(b) Disassemble carburetor. Replace accelerator pump assembly if leather is hard, cracked or worn. Test follow-up spring for compression.
	(c) Faulty accelerator pump discharge ball.	(c) Disassemble carburetor. Use compressed air to clear the discharge nozzle and channels after soaking main body in a suitable solvent. Test the fuel pump capacity.
	(d) Faulty accelerator pump inlet check ball.	(d) Disassemble carburetor. Check accelerator pump inlet check ball for poor seat or release. If part is faulty, replace.
	(e) Incorrect fuel or float level.	(e) Test fuel or float level in carburetor. Adjust as necessary to obtain correct float level.
	(f) Worn or corroded needle valve and seat.	(f) Clean and inspect needle valve and seat. If found to be in questionable condition, replace assembly. Then, test fuel pump pressure. Refer to Data and Specifications for correct fuel pump pressure.
	(g) Worn accelerator pump and throttle linkage.	(g) Disassemble Carburetor. Replace worn accelerator pump and throttle linkage and check for correct position.
	(h) Automatic choke not operating properly.	(h) Test adjustment and operation of automatic choke. If necessary, replace the choke.
(3) Carburetor floods or leaks	(a) Cracked body.	(a) Disassemble carburetor. Replace cracked body. Make sure main to throttle body screws are tight.
	(b) Defective body gaskets.	(b) Disassemble carburetor. Replace defective gaskets and test for leakage. Be sure screws are tightened securely.
	(c) High float level.	(c) Test fuel level in carburetor. Make necessary adjustment to obtain correct float level.
	(d) Worn needle valve and seat.	(d) Clean and inspect needle valve and seat. If found to be in a questionable condition, replace complete assembly and test fuel pump pressure. Refer to Data and Specifications for correct fuel pump pressure.
	(e) Excessive fuel pump pressure.	(e) Test fuel pump pressure. If pressure is in excess of recommended pressure (refer to Data and Specifications), replace fuel pump.
(4) Poor performance—mixture too rich	(a) Restricted air cleaner.	(a) Remove and clean air cleaner.

SERVICE DIAGNOSIS — Continued

Condition	Possible Cause	Correction
	(b) Leaking float.	(b) Disassemble carburetor. Replace leaking float. Test float level and correct as necessary, to proper level.
	(c) High float level.	(c) Adjust float level as necessary to secure proper level.
	(d) Excessive fuel pump pressure.	(d) Test fuel pump pressure. Refer to Data and Specifications for recommended pressure. If pressure is in excess of recommended pressure, replace fuel pump assembly.
	(e) Worn metering jet.	(e) Disassemble carburetor. Replace worn metering jet, using a new jet of the correct size and type.

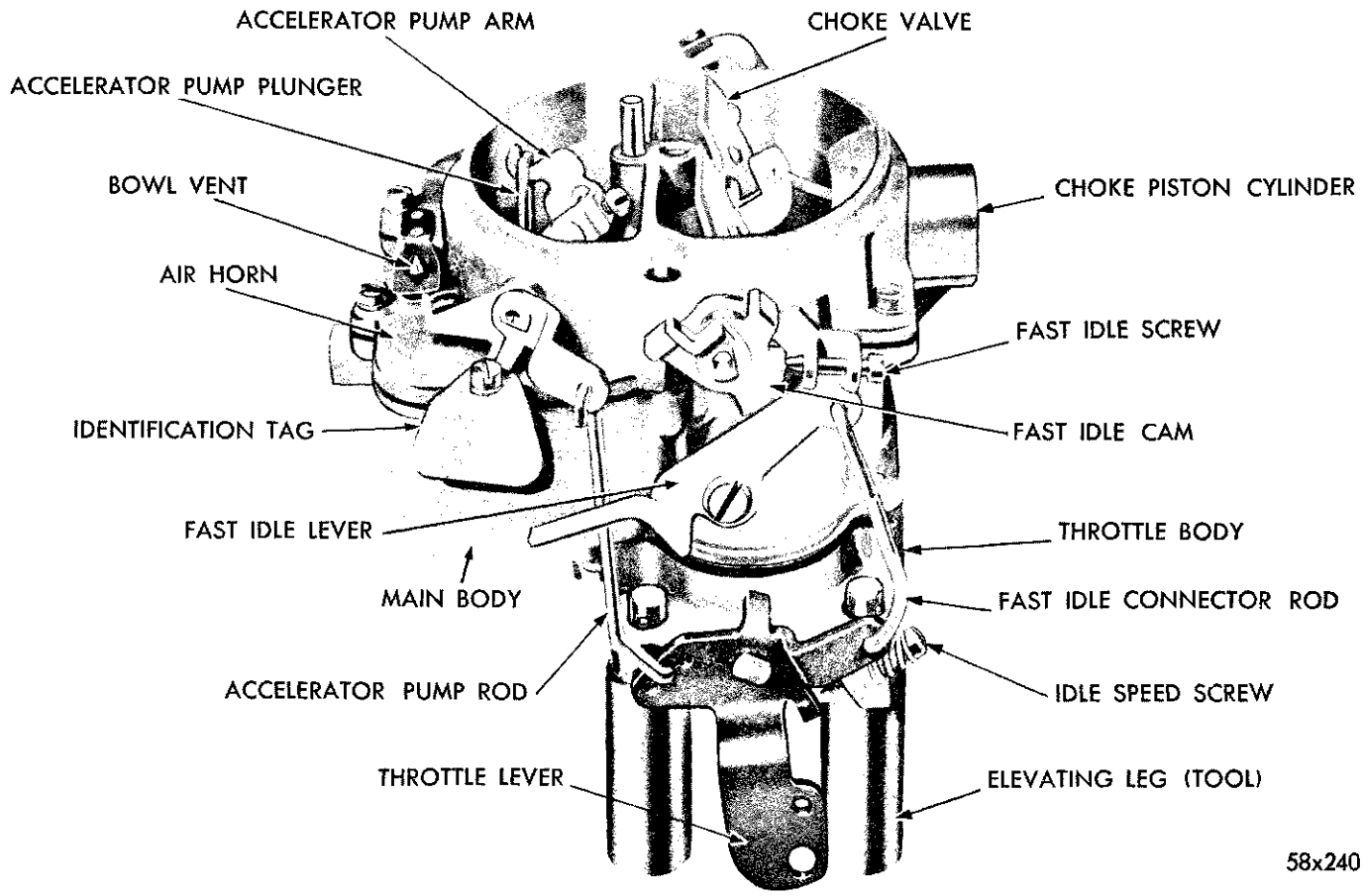


Fig. 37—Carburetor Assembly (BBD-2923SA)

BBD-2923SA AND BBD-3132S CARBURETORS

The service procedures and adjustments covering the new BBD series Carburetors, as shown in Figures 37 and 38, are the same as covered in the 1960 Chrysler and Imperial Service Manual with the following exceptions:

(1) Rubber-tipped fuel inlet needle (requiring a new procedure for setting the floats).

(2) Idle speed, idle mixture and fast idle speed adjustments.

(3) Closed crankcase vent system (mandatory equipment on all cars for the state of California).

RUBBER-TIPPED FUEL INLET NEEDLE (Fig. 39)

The carburetors for the 1961 model cars are equipped with a new rubber-tipped fuel inlet needle. The rubber tip is flexible enough to make a good seal on the needle seat, and to give increased resistance to flooding.

CHECKING OR SETTING THE FLOAT HEIGHT

(Off the Vehicle)

The use of the rubber-tipped needle requires a new procedure in adjusting the float setting. Care should be taken to perform this operation accurately in order to secure the best performance and fuel economy.

(1) To correctly set the float height when the carburetor is being overhauled, install the floats with the fulcrum pin and pin retainer in the main body.

(2) Install the rubber-tipped needle, seat and gasket in the body and tighten securely. (See Figure 39.)

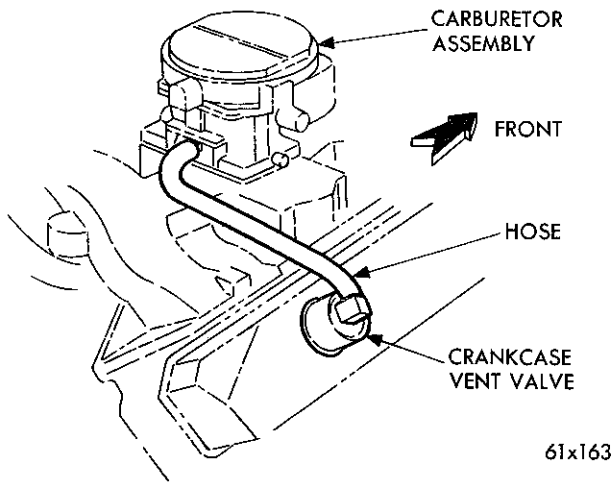


Fig. 38—Carburetor Assembly (BBD-3132S Closed Crankcase Vent System)

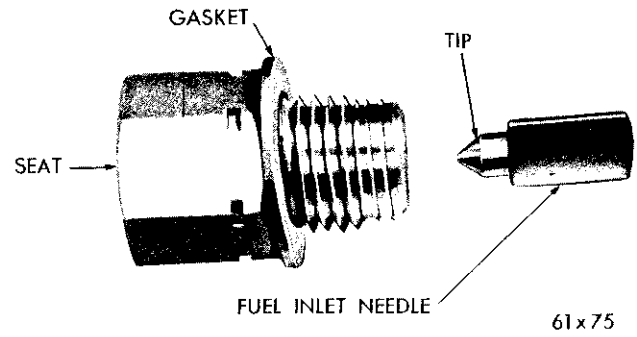


Fig. 39—Rubber Tipped Needle, Seat and Gasket

(3) Invert the main body so that the weight of the float only is forcing the needle against the seat. Hold finger against the retainer to fully seat the fulcrum pin.

(4) Using Tool T109-230, or a "T" scale, test the float, as shown in Figure 40. There should be $\frac{9}{32}$ inch from the surface of the fuel bowl to the crown of each float at the center.

If an adjustment is necessary, hold the floats on the bottom of the bowl and bend the float lip toward or away from the needle. Recheck the $\frac{9}{32}$ inch setting again and repeat the lip bending operation as required.

CAUTION

When bending the float lip, do not allow the lip to push against the needle as the rubber tip can be compressed sufficiently to cause a false setting which will affect correct level of fuel in the bowl.

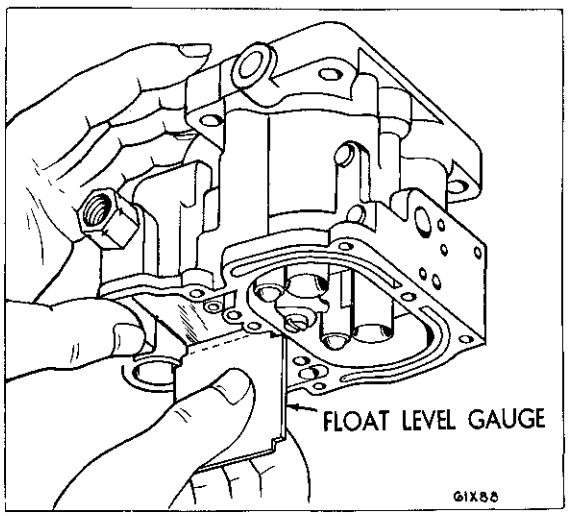


Fig. 40—Testing the Float Setting

NOTE: After being compressed, the rubber tip is very slow to recover its original shape. It is very important that the float lip be perpendicular to the needle or slanted not more than 10 degrees away from the needle when the float is set correctly.

CHECKING FLOAT SETTING OR FUEL LEVEL

(On the Vehicle)

(1) To check the float setting with the carburetor mounted on the engine, remove the hairpin clip and disengage the fast idle connector rod from the throttle and fast idle levers.

(2) Remove the hairpin clip and disengage the accelerator pump rod from the throttle lever and the pump rocker arm. Disconnect the automatic choke rod by unsnapping clip.

(3) Remove the air horn attaching screws and lift the air horn straight up and away from the main body. Remove the gasket.

(4) Set the float fulcrum pin by pressing a finger against the fulcrum pin retainer.

There should be enough fuel in the bowl to raise the floats so that the lip bears firmly against the needle. Additional fuel may be admitted by slightly depressing the float. If the fuel pressure in the line is insufficient to force the additional fuel into the bowl, add the necessary fuel from a clean container.

WARNING

Since the manifolds may be hot, it is dangerous to spill fuel onto these surfaces. Take the necessary precautions to avoid spillage.

(5) With only the pressure from the buoyant float holding the lip against the inlet needle, check the float setting, using Tool T109-230, or a "T" scale. There should be $^{9}/_{32}$ inch from the surface of the bowl (gasket removed) to the crown of the floats at the center.

If an adjustment is necessary, hold the floats on the bottom of the bowl, then bend the float lip toward or away from the needle. Recheck the $^{9}/_{32}$ inch setting again, then repeat the lip bending operation as required.

CAUTION

When bending the float lip, do not allow the lip to push against the needle as the rubber tip can be compressed sufficiently to cause a false setting which will affect correct level of fuel in the bowl.

NOTE: After being compressed, the rubber tip is very slow to recover its original shape. It is very important that the float lip be perpendicular to the needle or slanted not more than 10 degrees away from the needle when the float is set correctly.

(6) After the float has been correctly set, reassemble the air horn.

IDLE SPEED ADJUSTMENT (Curb Idle)

To make the idle speed adjustment, the engine must be thoroughly warmed up. A more reliable idle adjustment can usually be obtained if the car has been driven a minimum of five miles. For best results, it is recommended that a tachometer be used in this adjustment.

The following precautions should be taken before making the idle speed adjustment:

Because the alternator can charge at idle speeds and impose a load on the engine, the headlights should be turned on (high beam). This will assure setting the idle to compensate for the alternator load.

On cars equipped with automatic transmission, loosen the nut in the sliding link of the carburetor to bellcrank rod so that the stop in the transmission will not interfere with the free movement of the carburetor throttle lever.

(1) To make the idle speed adjustment, turn the idle speed screw in or out to obtain 500 rpm. (On cars with air conditioning, set the idle speed at 575 rpm.) Be sure the choke valve is fully open and that the fast idle adjusting screw is not contacting the fast idle cam.

(2) Turn each idle mixture screw to obtain the highest rpm. While making the adjustment, carefully watch the tachometer and notice that the speed can be decreased by turning the screws in either direction from the setting that gave the highest rpm reading.

(3) Readjust to 500 (or 575) rpm with the idle speed screw.

(4) Turn each idle mixture adjusting screw in the clockwise direction (leaner) until there is a slight drop in rpm. Turn each screw out, counterclockwise (richer) just enough to regain the lost rpm.

This procedure will assure that the idle has been set to the leanest mixture possible for smooth idle. **This setting is very important.**

Since the correct speed was originally set, using the speed screw, the speed obtained after finding the leanest smooth idle will probably be too fast.

(5) Readjust the speed screw to obtain correct idle speed. Repeat steps 2 and 4 above if necessary.

After the proper idle speed has been obtained, move the sliding link to the rear against the stop and tighten the nut securely.

FAST IDLE SPEED ADJUSTMENT

(1) With the engine not running, open the throttle halfway; close the choke valve, then allow the throttle to close.

The fast idle adjustment screw should be contacting the **top** step of the fast idle cam at the index mark. If an adjustment is necessary, bend the tang on the choke shaft lever, using Tool T109-22 to secure proper position of the fast idle cam.

(2) With a tachometer connected and with the engine running and warmed up, and with the fast idle adjusting screw contacting the top step of the fast idle cam, turn the fast idle adjusting screw in or out to secure 1375 to 1425 rpm.

CLOSED CRANKCASE VENT SYSTEM

The closed crankcase ventilator valve is located in the crankcase vent tube cap and is connected to the carburetor throttle body with the use of a rubber tube.

The function of the valve is to regulate the flow of unburned hydrocarbons from the crankcase and return them to the intake manifold. From here they enter the combustion chamber and then exit through the exhaust system, as completely burned exhaust products.

For the servicing procedures covering this vent system, refer to the "Engine" Group 9 of this Supplement.

AFB-3108S, AFB-3134S, AND AFB-2903S CARBURETORS

AFB CARBURETOR SPECIFICATIONS

CARBURETOR			
Type	4 Barrel Downdraft		
Model	AFB-3108S	*AFB-3134S	AFB-2903S
Engine Displacement (Cubic Inches)	413	413	413
THROTTLE BORE			
Primary	1 7/16"	1 7/16"	1 7/16"
Secondary	1 9/16"	1 9/16"	1 11/16"
MAIN VENTURI			
Primary	1 3/16"	1 3/16"	1 3/16"
Secondary	1 5/16"	1 5/16"	1 9/16"
MAIN JET			
Primary	.089"	.089"	.089"
Secondary	.065"	.065"	.0595"
STEP-UP ROD (2 STAGES)			
Standard	16 - 160	16 - 160	16 - 119
1 Size Lean	16 - 171	16 - 171	16 - 45
2 Sizes Lean	16 - 175	16 - 175	16 - 35
ADJUSTMENTS			
Accelerator Pump (Top of Plunger to Air Horn)	7/16"	7/16"	1/4"
Choke Unloader	1/4"	1/4"	1/4"
Fast Idle Adjustment	.021"	.021"	.009"
Fast Idle Speed (rpm)	1800	1800	1400
Idle Speed (rpm)	500	500	750
(With Air Conditioning)	550	550	750
Secondary Throttle Lever Adjustment	3/8"	3/8"	3/8"

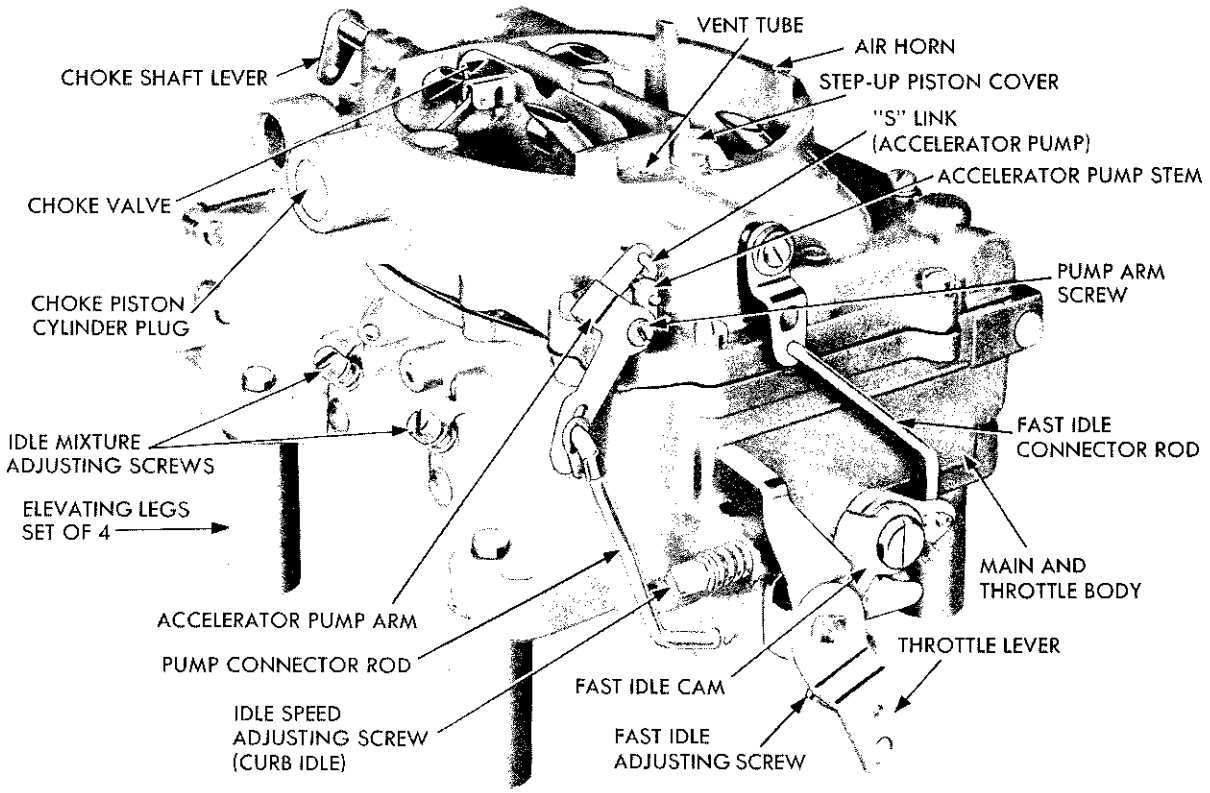


Fig. 41—Carburetor Assembly (AFB Series)

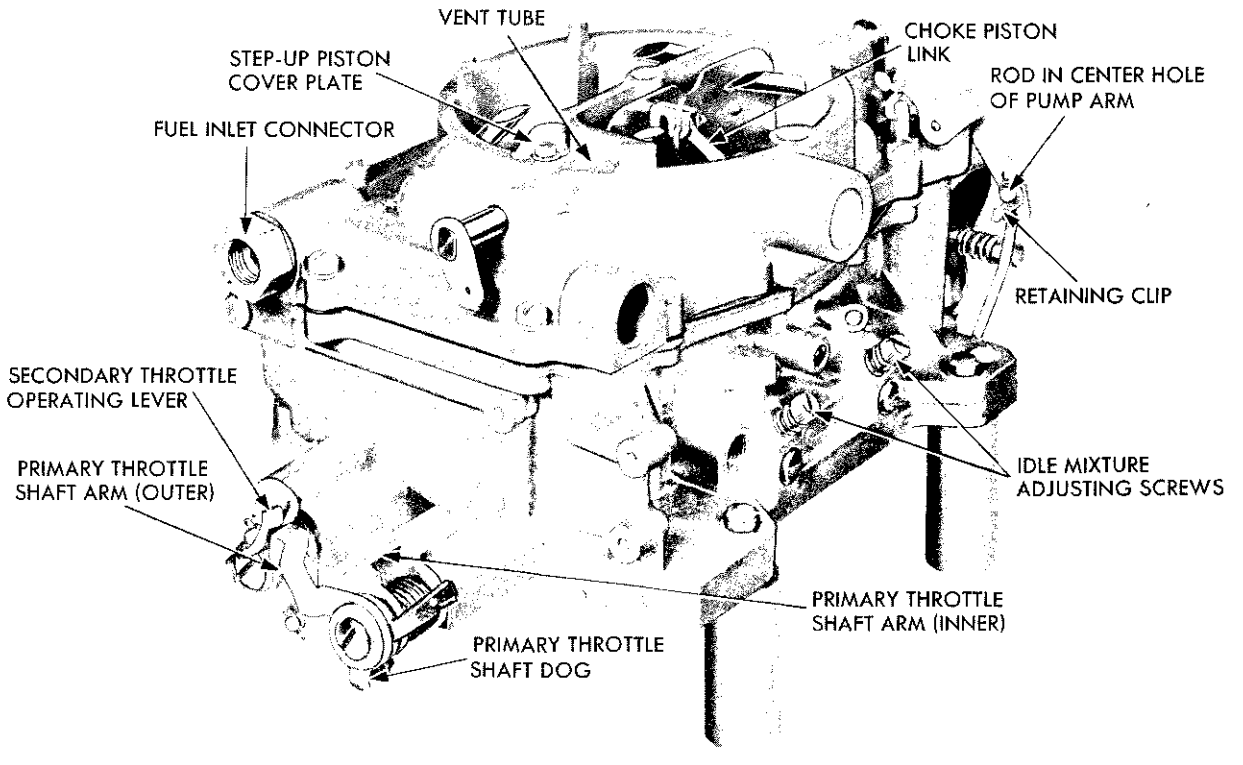


Fig. 42—Carburetor Assembly (AFB Series)

AFB CARBURETOR SPECIFICATIONS — Continued

Secondary Throttle Lockout Adjustment	.020"	.020"	.020"
Float Setting	7/32"	7/32"	9/32"
Float Drop	9/16"	9/16"	3/4"
Idle Mixture (Both Screws Open)	1½ Turns	1½ Turns	1½ Turns
CHOKE			
Control	Thermostatic Coil Spring		
Type	Well	Well	Well
Setting	2 Notches Rich	2 Notches Rich	1 Notch Rich

*For use with closed crankcase vent system – mandatory for California cars.

AFB-3108S, AFB-3134S, AND AFB-2903S CARBURETORS

The service procedures covering the AFB series carburetors, shown in Figures 41 and 42, are the same as covered in the 1960 Chrysler and Imperial Service Manual, with the following exceptions:

(1) Staged step-up rods and new step-up piston.

(2) Synthetic rubber-tipped fuel inlet needles (2).

(3) Accelerator pump intake check valve.

(4) Closed crankcase vent system (mandatory equipment on all cars for the state of California).

STAGED STEP-UP RODS AND NEW STEP-UP PISTON

The change from the low speed, best fuel economy, road load mixtures to the rich wide open throttle full power mixtures is now accomplished in two steps. This has made it possible to secure the best low speed fuel economy without sacrificing performance in the intermediate speed range. To do this, there is a new step-up piston and spring assembly, new metering rods with three diameters, and a new style primary metering jet, as shown in Figure 43.

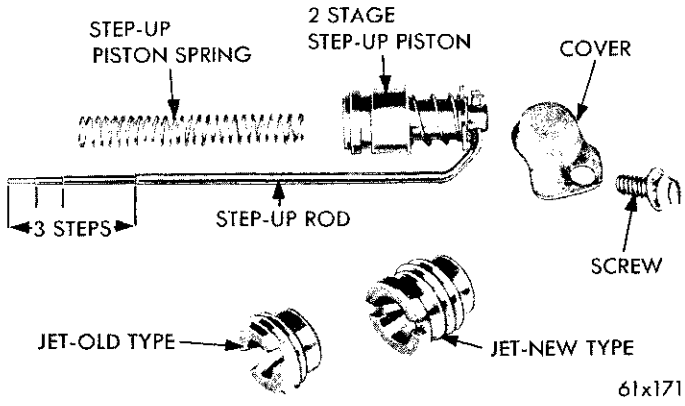


Fig. 43—Step-Up Piston, Rod and Jet

SYNTHETIC RUBBER TIPPED FUEL INLET NEEDLE

The carburetors for the 1961 model cars are equipped with new synthetic rubber-tipped fuel inlet needles, as shown in Figure 44. The rubber tip is flexible enough to make a good seal on the needle seat, and to give increased resistance to flooding.

NOTE: The use of the rubber-tipped needles require that care be used when making float adjustments. Avoid applying any pressure on the floats which might compress the tip of the fuel inlet needles. The rubber tip can be compressed sufficiently to cause a false setting which will affect correct level of fuel in the bowl.

ACCELERATION PUMP INTAKE CHECK BALL

The accelerator pump intake check ball was formerly accessible from the bottom of the throttle body flange on previous AFB carburetors. On the 1961 AFB carburetors, the intake ball check is located

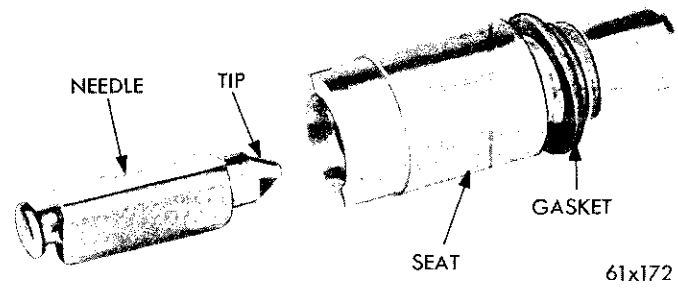


Fig. 44—Rubber Tipped Fuel Inlet Needle, Seat and Gasket

inside the fuel bowl, adjacent to the accelerator pump cylinder. When overhauling the carburetor, remove the intake ball check valve and clean thoroughly. When reassembling the carburetor, this check valve should be installed before the air horn is attached.

CLOSED CRANKCASE VENT SYSTEM

The closed crankcase ventilator valve is located in the crankcase vent tube cap and is connected to the carburetor throttle body with a rubber tube. (See Fig. 45.) With the ram manifolds, the connection is to the balance tube between the right and left manifolds. (See Fig. 46.) The function of the valve is to regulate the flow of unburned hydrocarbons from the crankcase and return them to the intake manifold. From here they enter the combustion chamber and then exit with the exhaust system as completely burned exhaust. For servicing procedures of this system, refer to "Engine," Group 9, of this Supplement.

SERVICE PROCEDURES AFFECTING DISASSEMBLY AND ASSEMBLY OF THE AFB CARBURETOR

There is a new "S" shaped link on the accelerator pump stem. (Refer to Fig. 41.)

(1) To remove the accelerator pump link, remove the spring clip that holds the throttle connector rod in the center hole of the pump arm.

(2) Remove the pump arm pivot screw and lift off the pump arm; at the same time, disengage the link from the arm and pump stem.

(3) When reassembling, make sure the large diameter of the pivot screw enters the hole in the pump arm and that the shoulder on the screw has not pinched the pump arm.

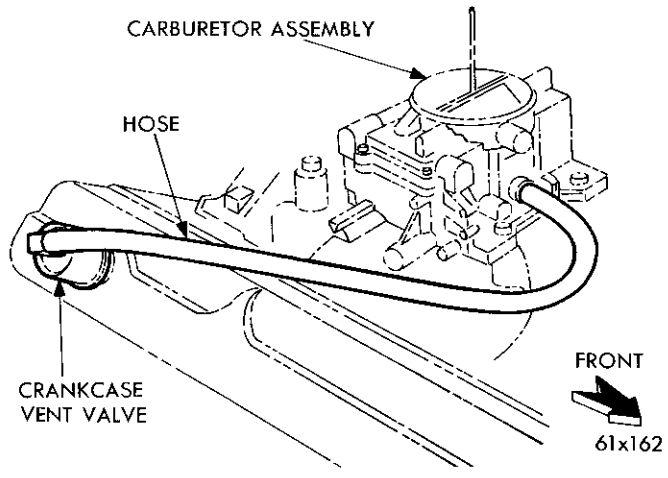


Fig. 45—Closed Crankcase Vent System

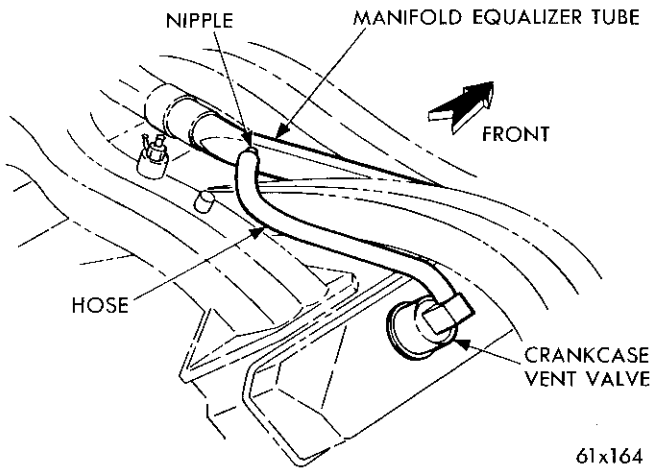


Fig. 46—Closed Crankcase Vent System (Ram Manifold)

INSTALLING THE AIR HORN

(1) Before installing the air horn, slide the accelerator pump plunger spring into the cylinder, then install the pump plunger. **Be sure the leather on the plunger does not curl up.**

(2) Lower the air horn carefully down on the main body. **This operation must be done accurately.**

(3) Be sure the fuel baffles on the air horn slide down in front (bowl side) of the float chamber baffles.

(4) Be sure the accelerator pump shaft is centered to pass through the hole in the air horn.

(5) Care must be taken to center the small brass main bleed tubes (see Fig. 41) so that they will pass through the holes in the air horn without being damaged.

(6) When all parts are aligned correctly, the air horn will drop easily into place.

IDLE SPEED ADJUSTMENT (Curb Idle)

To make the idle speed adjustment, the engine must be thoroughly warmed up. A much more reliable idle adjustment can usually be obtained if the car has been driven a minimum of five miles. For the best results, it is recommended that a tachometer be used in this adjustment. (Before making the idle speed adjustment, observe the following precautions:)

Because the alternator can charge at idle speeds and impose a load on the engine, the headlights

should be turned on (high beam). This will assure setting the idle to compensate for the alternator load.

On cars equipped with the automatic transmission, loosen the nut in the sliding link of the carburetor to bellcrank rod so that the stop in the transmission will not interfere with the free movement of the carburetor throttle lever.

(1) To make the idle speed adjustment, turn the idle speed screw in or out to obtain 500 rpm. (On cars with air conditioning, set the idle speed at 550 rpm.) Be sure the choke valve is fully open and that the fast idle adjusting screw is not contacting the fast idle cam.

(2) Turn each idle mixture screw to obtain the highest rpm. While making the adjustment, carefully watch the tachometer and notice that the speed can be decreased by turning the screws in either direction from the setting that gave the highest rpm reading.

(3) Readjust to 500 (or 550) rpm with the idle speed screw.

(4) Turn each idle mixture adjusting screw in the clockwise direction (leaner) until there is a slight drop in rpm. Turn each screw out, counterclockwise (richer) just enough to regain the lost rpm.

This procedure will assure that the idle has been set to the leanest possible mixture for smooth idle. **This setting is very important.**

NOTE: Since the correct speed was originally set using the speed screw, the speed obtained after finding the leanest smooth idle setting will probably be too fast.

(5) Readjust the speed screw to obtain correct idle speed. Repeat steps 2 and 4 above if necessary.

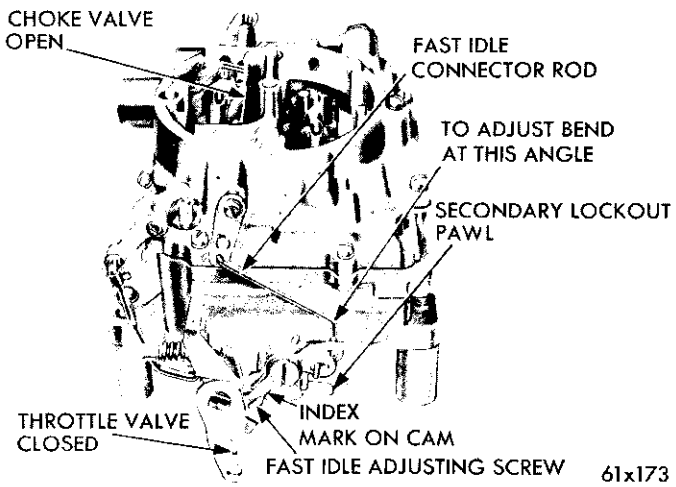


Fig. 47—Fast Idle Cam Indexing

After the proper idle speed has been obtained, move the sliding link to the rear, against the stop, and tighten the nut securely.

FAST IDLE SPEED ADJUSTMENT

(1) With the engine not running, open the throttle halfway, close the choke valve, then allow the throttle to close. Release the choke valve.

The fast idle adjusting screw should be centered over the index mark on the fast idle cam (Fig. 47). If an adjustment is necessary, bend the fast idle rod at the angle, using Tool T109-213, to secure proper position of the fast idle cam.

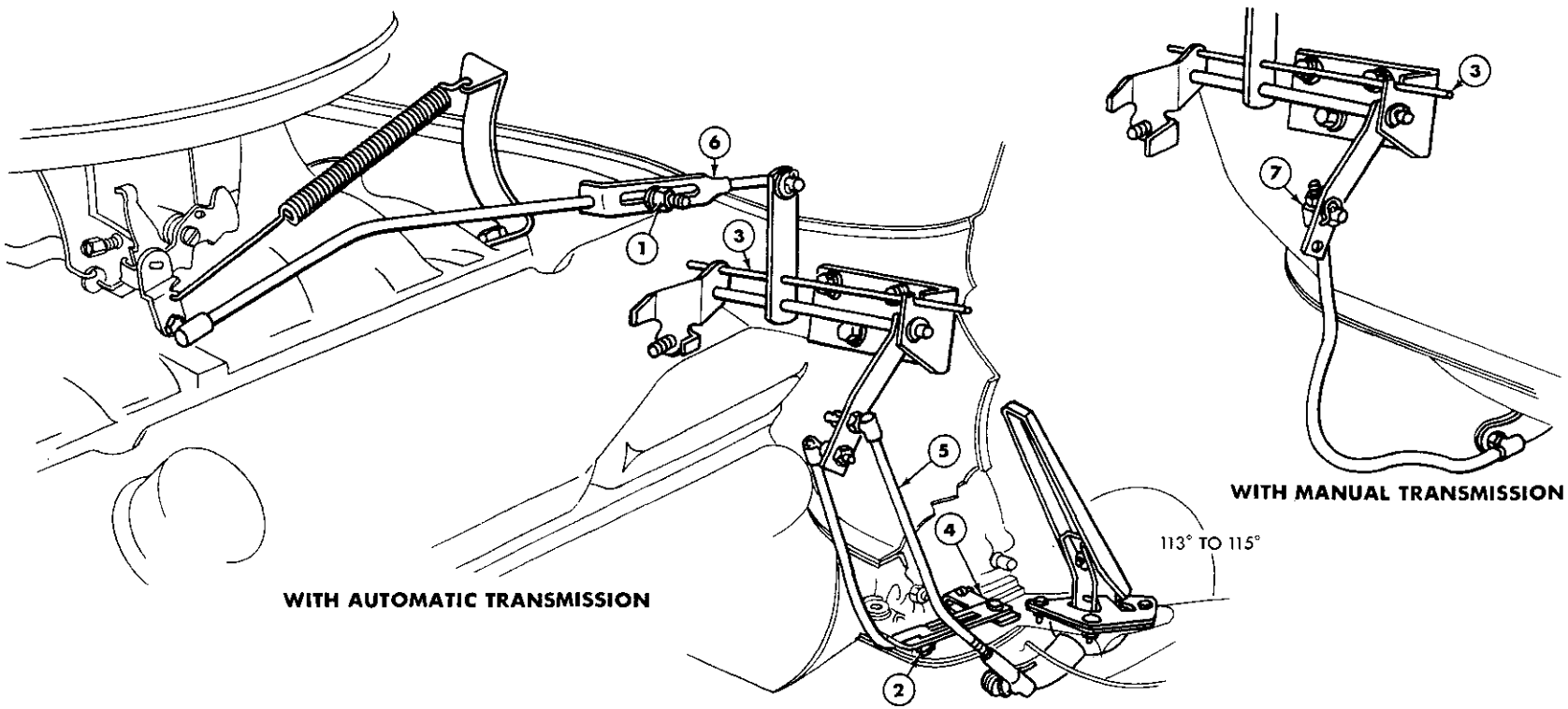
(2) With a tachometer connected and the engine running and warmed up, turn the fast idle adjusting screw in or out to the specified rpm, as shown in the Specifications.

FUEL PUMP

The fuel pumps used on the 1961 Model Passenger Cars are identical to those used on the 1960 Models. Refer to the 1960 Chrysler and Imperial Service Manual for Specifications and Service Procedures.

FUEL TANK

The procedures covering the servicing of the fuel tanks remain the same as described in the 1960 Chrysler and Imperial Service Manual.



WITH AUTOMATIC TRANSMISSION

1. —ASSEMBLE THROTTLE LINKAGE IN PLACE.
2. —WITH LOCK NUTS LOOSE IN CARB. (1) AND TRANS. (2) RODS, INSERT A 3/16" DIAMETER ROD (3) APPROX. 10" LONG INTO PROVIDED HOLES IN ACCELERATOR SHAFT BRKT. AND LEVER.
3. —MOVE TRANS. THROTTLE LEVER (4) FOREWARD AGAINST STOP AND TIGHTEN TRANS. ROD LOCK NUT. (2)
4. —DISCONNECT ONE END OF ACCELERATOR PEDAL ROD. (5) ADJUST ITS LENGTH TO PROVIDE A PEDAL ANGLE OF 113° TO 115°.
5. —REMOVE 3/16" ROD (3) FROM ACCELERATOR SHAFT BRKT. AND LEVER.
6. —OPEN CHOKE VALVE AND OPEN THROTTLE SLIGHTLY TO RELEASE FAST IDLE CAM, THEN RETURN THROTTLE TO CURB IDLE.
7. —MOVE REAR OF CARB. ROD ASS'Y. (6) REARWARD UNTIL THE STOP IS CONTACTED, TIGHTEN CARB. ROD LOCK NUT. (1)

WITH MANUAL TRANSMISSION

1. —ASSEMBLE THROTTLE LINKAGE IN PLACE.
2. —WITH THE LOCK NUT LOOSE IN THE CARB. ROD (1) INSERT A 3/16" DIAMETER ROD (3) APPROX. 10" LONG THRU HOLES PROVIDED IN ACCELERATOR SHAFT BRKT. AND LEVER.
3. —OPEN CHOKE VALVE AND OPEN THROTTLE SLIGHTLY TO RELEASE FAST IDLE CAM, THEN RETURN THROTTLE TO CURB IDLE.
4. —TIGHTEN CARB. ROD LOCK NUT. (1)
5. —DISCONNECT TOP END OF ACCELERATOR PEDAL ROD (7). ADJUST LENGTH OF THIS ROD TO PROVIDE A PEDAL ANGLE OF 113° TO 115°.
6. —REMOVE THE 3/16" ROD (3) FROM ACCELERATOR SHAFT BRACKET AND LEVER.

61X219

Fig. 48—Throttle Linkage Adjustment

THROTTLE LINKAGE

The throttle linkage used on the 1961 models has been changed and a new linkage adjustment incorporated. Should it become necessary to adjust the throttle linkage, refer to Figure 48 for complete instructions.

GROUP 16
PROPELLER SHAFT AND UNIVERSAL JOINTS

DATA AND SPECIFICATIONS

PROPELLER SHAFT (Models RC-1, RC-2, RC-3)	
Length – Ball and Trunnion Joint Pin Centerline to Cross Centerline	59.21″
Diameter (Manual Transmission)	3¼″
Diameter (TorqueFlite Transmission)	2¾″
UNIVERSAL JOINTS (Models RC-1, RC-2, RC-3)	
Front Joint	Ball and Trunnion
Rear Joint	Cross Type
PROPELLER SHAFT (Model RY-1)	
Length – Front Shaft – Cross Centerline to End of Spline	25.82″
Rear Shaft – Cross Centerline to Cross Centerline	33.06″
Diameter (Maximum)	2¾″
UNIVERSAL JOINTS (Model RY-1)	
Front, Center, Rear	Cross Type

TIGHTENING REFERENCE

	Foot-Pounds	Inch-Pounds
Front – Companion Flange Nuts	35	
Rear – Clamp Bolts		170

The servicing procedures for the Propeller Shaft and Universal Joint Group remain the same as outlined in the 1960 Chrysler and Imperial Service Manual. There are changes in the Data and Specifications, Tightening Reference and Service Diagnosis.

SERVICE DIAGNOSIS

Condition	Possible Cause	Correction
PROPELLER SHAFT VIBRATION	a. Excessive grease in the universal joint dust boot (Chrysler).	a. Remove all grease and pack a total 2 ounces of fibrous grease evenly fore and aft of the trunnion pin in both raceways.
	b. Undercoating or other foreign material on shaft.	b. Clean propeller shaft and wash with solvent.
	c. Loose universal joint flange bolts.	c. Tighten the flange bolts.
	d. Loose universal joint flange.	d. Install a new flange if worn and tighten to specifications.