PART 10-6—Autolite Model 4300 4-V Carburetor

1 DESCRIPTION AND OPERATION

DESCRIPTION

The Autolite Model 4300 4-V Carburetor (Figs. 1, 2 and 3) is a three-piece, separately cast design consisting of the air horn, main body and throttle body.

A cast-in center fuel inlet has provision for a supplementary fuel inlet system. The fuel bowl is vented by an internal balance vent, and a mechanical atmospheric vent operates during idle.

An idle air by-pass system is designed to provide a more consistent idle and a hot idle compensator is used to help idle stability.

The main (primary) fuel system has booster-type venturis cast integral with the air horn and the main venturis are cast integral with the main body. The secondary throttle plates are mechanically operated from the primary linkage. Air valve plates are located above the secondary main venturis and an integral hydraulic dashpot dampens sudden movement of the air valve plates to help prevent flutter and erratic engine operation. A single fuel bowl supplies both the primary and secondary fuel systems. Pontoon-type floats are used to help cornering and hill climbing capability. The accelerator pump is of the piston type located in the fuel bowl.

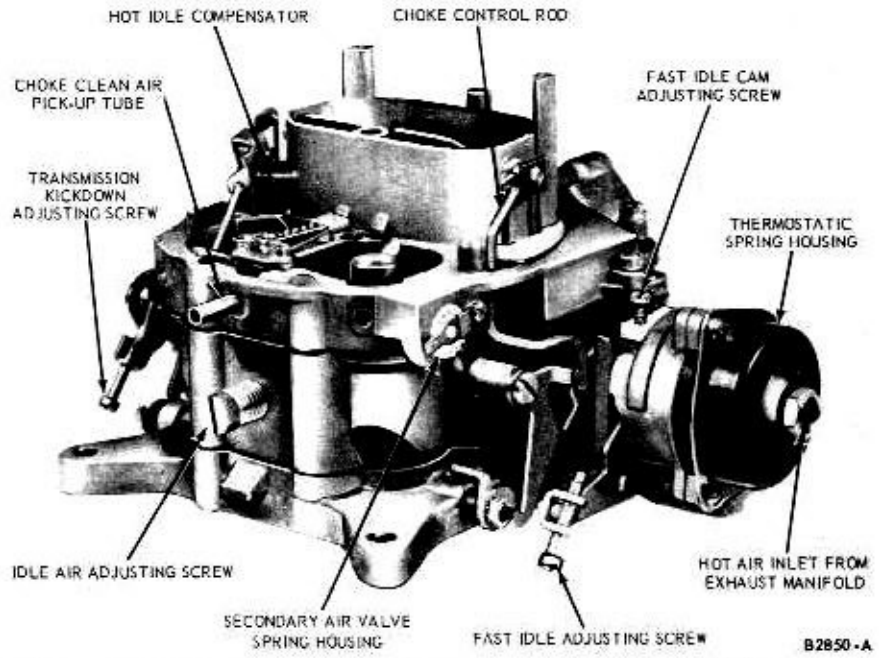

FIG. 1—Autolite Model 4300 4-V Carburetor—Right Rear 3/4 View

OPERATION

FUEL INLET SYSTEM

The fuel inlet system (Fig. 4) maintains a predetermined quantity of fuel (fuel level) within the carburetor. The correct fuel level is important for proper carburetor operation. A fuel level below the specified setting will result in lean fuel-air mixtures, while high fuel levels, produce rich fuel-air mixtures. The calibration of the carburetor is upset if the fuel level is not to specifications.

Fuel enters the carburetor through the fuel inlet channel located in the air horn. A needle valve and seat regulates the quantity of fuel flowing into the fuel bowl located in the main body. The quantity of fuel is regulated by the distance the needle valve is moved off the seat and by fuel pump delivery (volume and pressure). Correct fuel pump delivery is necessary if the specified fuel level within the carburetor is to be maintained.

The fuel level within the carburetor, is maintained at a predetermined level by a dual pontoon float and lever assembly, which controls the movement of the needle valve. The float reacts to any lowering in the fuel level. The needle riding on the float lever, falls away from the seat as the float drops due to a lower fuel level. To prevent fuel starvation during hot fuel vapor handling, an auxiliary fuel inlet valve opens to supplement the main fuel inlet valve. The auxiliary valve opens when the float drops below a predetermined level. The float lever presses against the auxiliary valve plunger, opening the valve for additional fuel to enter the fuel bowl.

The fuel bowl is vented internally by two stand pipes located adjacent to the choke air horn. In addition, a mechanically actuated valve, vents the fuel bowl externally during periods of idle and part throttle operation. The

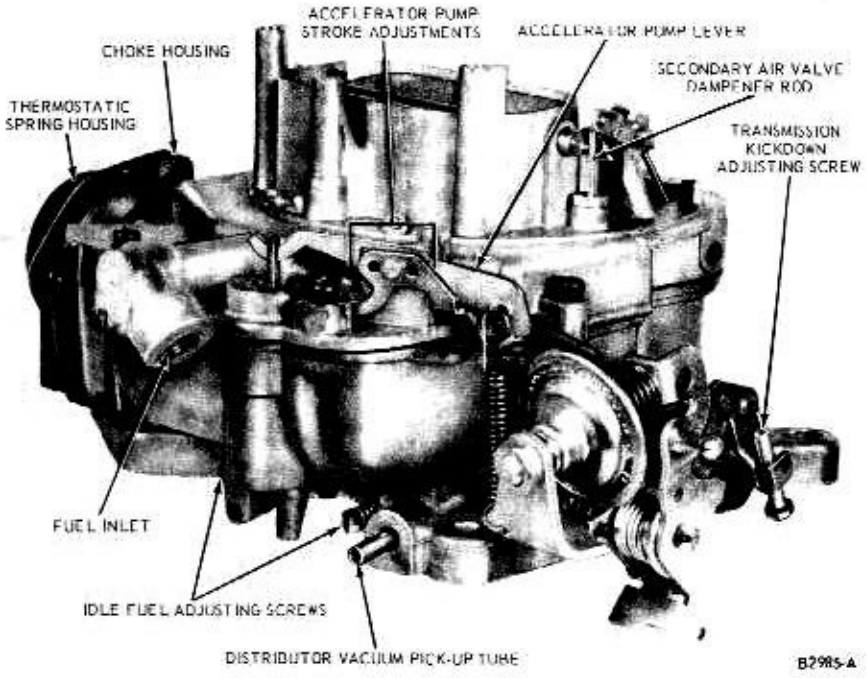

FIG. 2—Autolite Model 4300 4-V Carburetor—Left Front 3/4 View

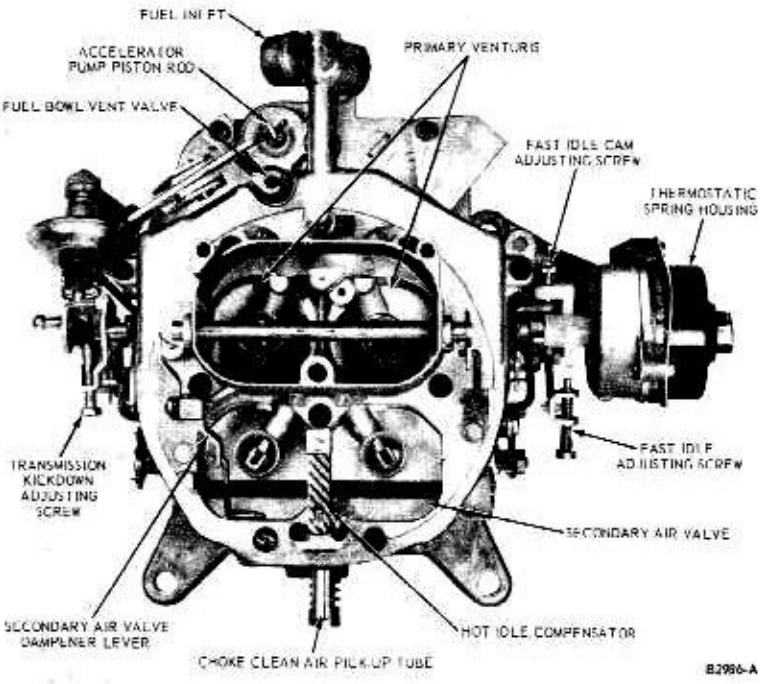

FIG. 3—Autolite Model 4300 4-V Carburetor—Top View

accelerator pump link controls the movement of the external vent valve.

The fuel inlet system has three main calibrating adjustments: float level, auxiliary fuel inlet and the external vent valve. The dual pontoons must be parallel for proper operation.

IDLE FUEL SYSTEM

The primary idle fuel system (Fig. 5) functions when the engine is operating at low engine rpm. It supplies the fuel-air mixture when the air flow past the carburetor venturi is insufficient to operate the main metering system. Air bleeds, restrictors and adjustments are provided to control and meter the idle fuel-air mixture.

At curb idle speeds, the throttle plates are completely closed and with manifold vacuum below the plates, enough difference in pressure is created between the fuel bowl and the idle discharge ports to operate the idle fuel system.

Fuel is forced from the fuel bowl through the main metering jets into the main well. The fuel then flows up through a calibrated restriction in the idle tube. Filtered air enters an idle air bleed restriction and mixes with the fuel flowing up the idle tube. The idle air bleed also serves as an anti-syphoning vent at high engine speeds or when the engine is shut down. The fuel-air mixtures passes down the idle channel into an idle cavity in the throttle body. The idle cavity has an upper and lower discharge port. At curb idle (throttle plate closed), the idle fuel-air mixture flows past an idle fuel adjusting screw and is discharged below the throttle plate from the lower discharge port and from a small portion of the upper discharge port.

The upper discharge port is a vertical slot-type port and extends slightly below the closed throttle plate. When opening the throttle plate, a greater portion of the upper discharge port is exposed to manifold vacuum and a larger amount of idle fuel-air mixture will discharge from the upper port. Further opening of the throttle plate results in a decrease in manifold vacuum and a decrease in the quantity of idle fuel-air mixture that is discharged. As the idle system tapers off, the main fuel metering system begins to discharge fuel.

The idle speed (engine rpm) is adjusted by turning an idle air adjusting screw to admit more or less air, as required, below the throttle plates. This method of air control by-passes the throttle plates. Filtered air enters through a pick-up hole located near the base of the main venturi. The air passes by the idle air adjusting screw and down into the throttle body. The air is then discharged from a port below the throttle plate.

It is particularly important that the idle air and the idle fuel mixture adjustments are performed at the same time. Opening the idle air screw to increase engine rpm leans the fuel-air mixture, consequently, the idle fuel mixture must also be increased to

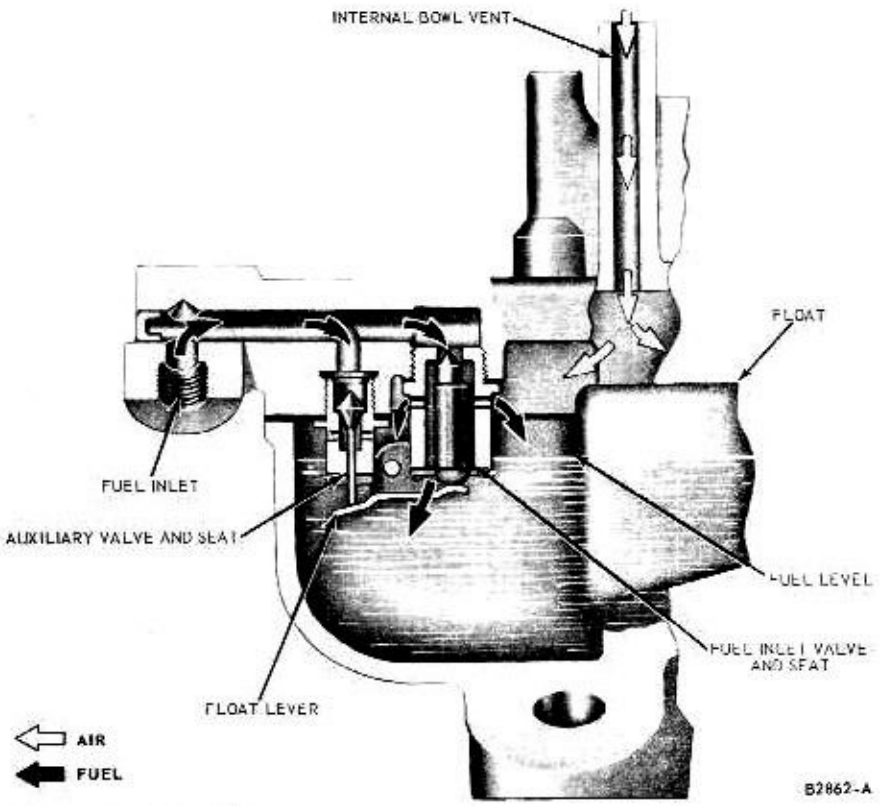

FIG. 4—Fuel Inlet System

provide the proper fuel-air mixture for smooth engine idle.

MAIN METERING SYSTEM

The main fuel metering system (Fig. 6) is calibrated to supply a leaner fuel-air mixture than the other fuel metering systems. This is because the main fuel metering system operates during a cruise or part throttle condition and under low engine power load requirements.

Main system calibration is controlled by calibrated main metering jets, high speed air bleeds and the fuel level in the fuel bowl.

The system begins to function when the air flow through the carburetor venturi creates a sufficient pressure drop (vacuum) to start fuel flow in the main system. The pressure drop at the main discharge nozzle in the booster venturi will increase, as the air flow through the carburetor increases. When engine speeds increase, the fuel flow in the main system will increase.

Fuel flows from the fuel bowl through calibrated main metering jets into a main well. The height of the fuel in the main well is controlled by the fuel level in the fuel bowl. Air is channeled down into the main well from a high speed air bleed, located in the air horn. Fuel is mixed with this air, which enters through holes in the main well tube. The fuel-air mixture flows up the tube and over to the discharge channel and is then discharged into the air stream flowing past the discharge nozzle in the booster venturi.

The high speed air bleed also serves as a vent to prevent syphoning of fuel at low speeds and as an anti-percolation vent during hot engine shut down.

ACCELERATOR PUMP SYSTEM

For smooth acceleration, the accelerator pump system (Fig. 7) injects a metered amount of fuel directly into the air stream flowing through the

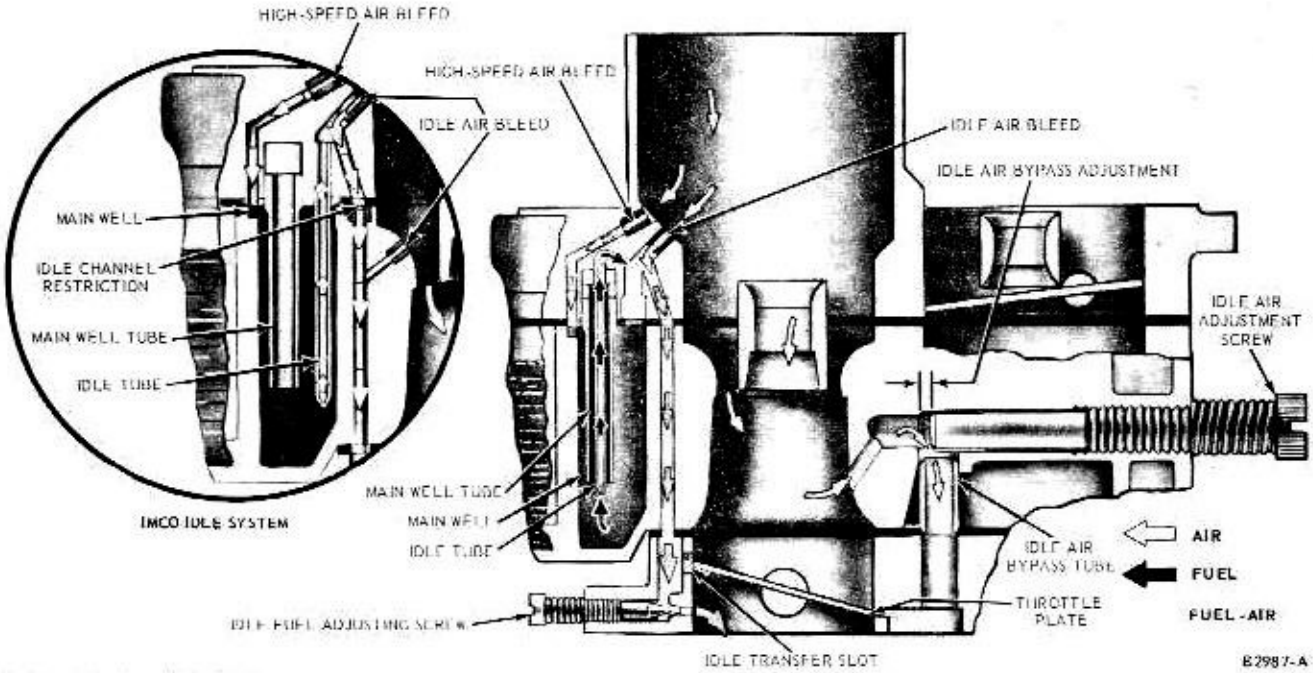

FIG. 5—Idle Fuel System

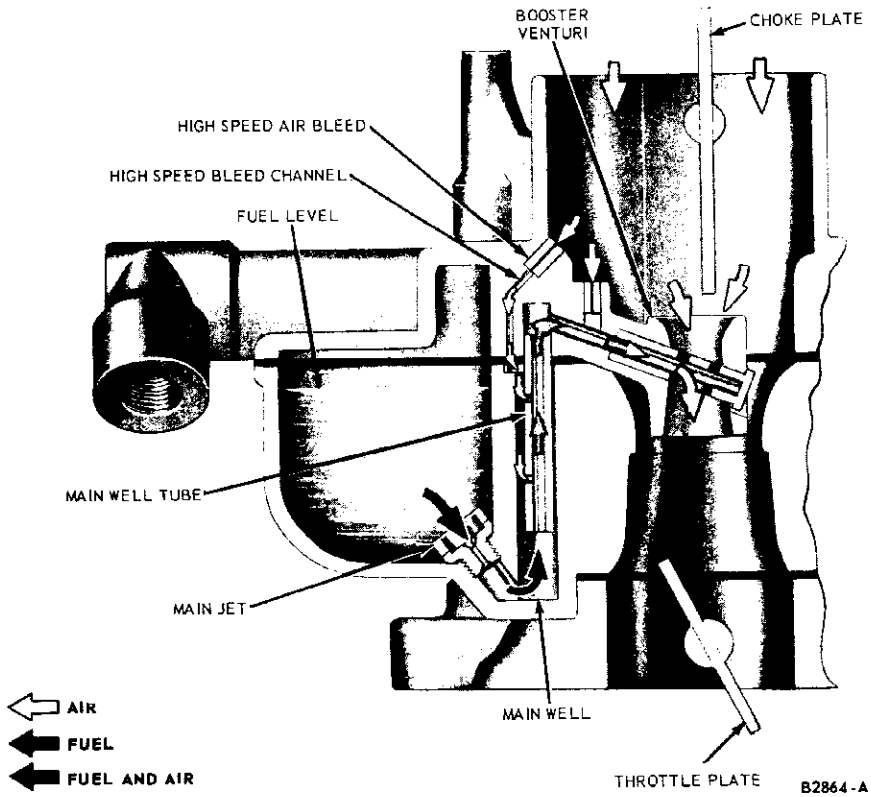

FIG. 6—Main Metering System

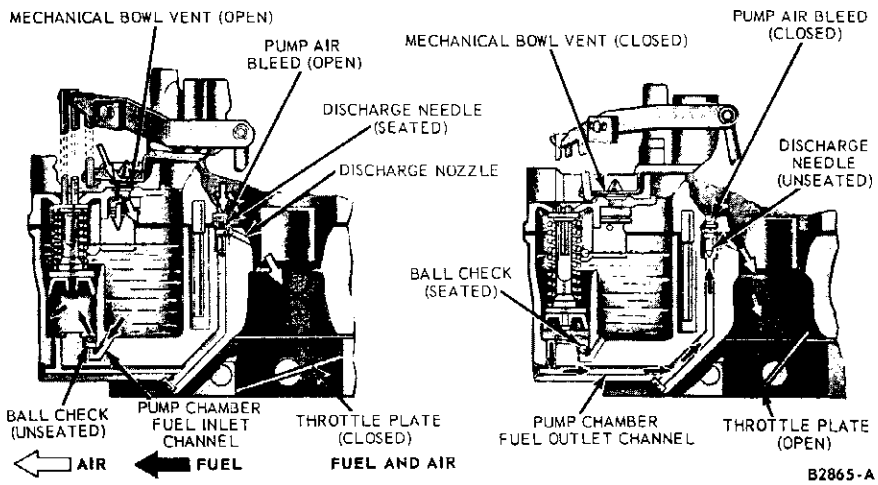

FIG. 7—Accelerator Pump System

carburetor. This fuel supplement is required for a brief period to compensate for a fuel lag that occurs in the idle or main fuel system when the throttle plates are suddenly opened. The air, which is lighter than fuel, responds almost immediately to any opening of the throttle plates.

When the throttle is closed, the accelerator pump plunger is pulled upward, compressing the accelerator pump spring. Fuel flows from the fuel bowl, past the intake ball check valve and into the pump chamber. The pump discharge valve needle is seated at this time to prevent air from being drawn into the pump chamber. When the throttle is opened, the spring loaded pump plunger moves downward, forcing fuel into the discharge channel and simultaneously forcing the inlet ball check to seat, thus preventing fuel from being forced back into the fuel bowl. The pressure of the fuel in the discharge channel unseats the discharge needle and the fuel flows through restrictions at the discharge nozzle outlets.

During high speed operation, a vacuum exists at the discharge nozzles. To prevent fuel from being drawn through the system, the discharge nozzles are vented by a check valve disc located in the cavity between the discharge nozzles and the pump discharge needle. This allows air instead of fuel to be drawn through the discharge nozzles.

POWER FUEL SYSTEM

During periods of increased engine road load operation, the fuel-air ratio must be increased for added power. Additional fuel is supplied during this period by the power fuel system (Fig. 8).

The power fuel system is piston actuated and controlled by manifold vacuum. A stem on the piston contacts the power valve in the lower main body. The piston assembly and the power valve are both spring loaded and oppose each other. However, the spring tension on the piston assembly is greater, therefore, piston position controls the power valve position.

Manifold vacuum, sensed through slots in the base of the throttle body, is transmitted through a passage in the main body to the power valve vacuum chamber, located in the upper body assembly.

At normal engine power demands, the high manifold vacuum draws the piston upward in the power valve vacuum chamber. With the piston in its uppermost position, the piston stem does not contact the power valve stem and the valve is thus normally closed.

During high power demands, a greater load is placed on the engine and manifold vacuum drops. When manifold vacuum drops below a predetermined value, the vacuum in the power valve piston chamber is reduced and the piston moves downward due to force applied by the vacuum piston spring. As the piston moves downward, the stem on the piston contacts the stem on the power valve. Continued downward movement of the piston opens the power valve. When the power valve is opened, fuel flows through the valve and into the connecting main fuel wells to supply the additional fuel required to meet the engine power demands.

When engine demands are reduced, manifold vacuum increases and the higher vacuum in the power valve vacuum chamber pulls the piston upward. As the piston moves upward the force exerted by the spring in the power valve closes the valve, shutting off the additional supply of fuel to the main wells.

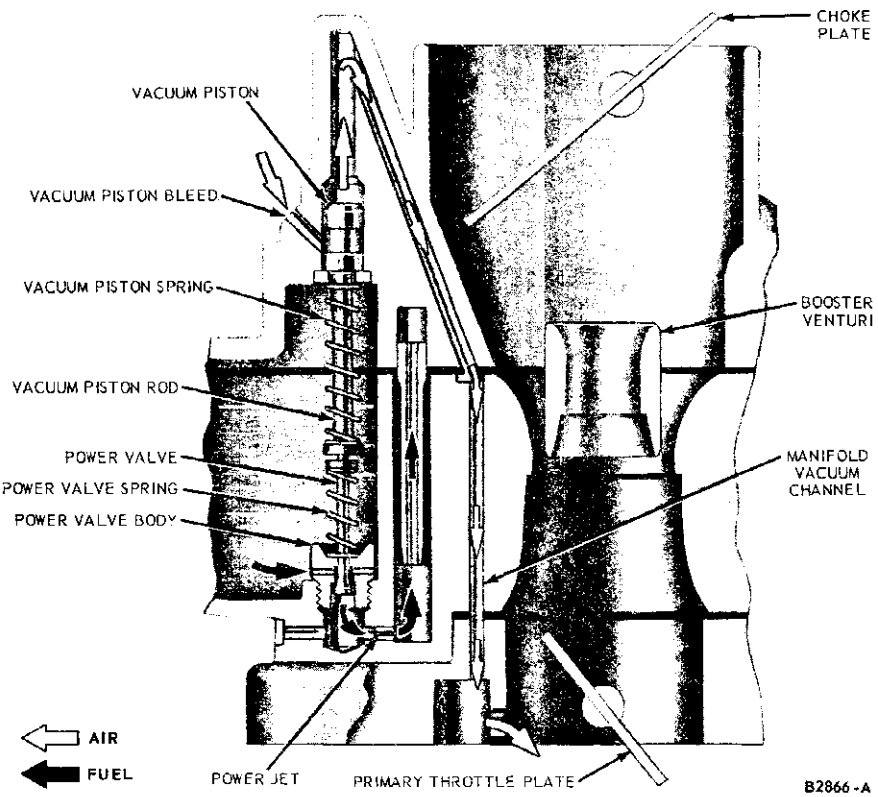

FIG. 8—Power Fuel System

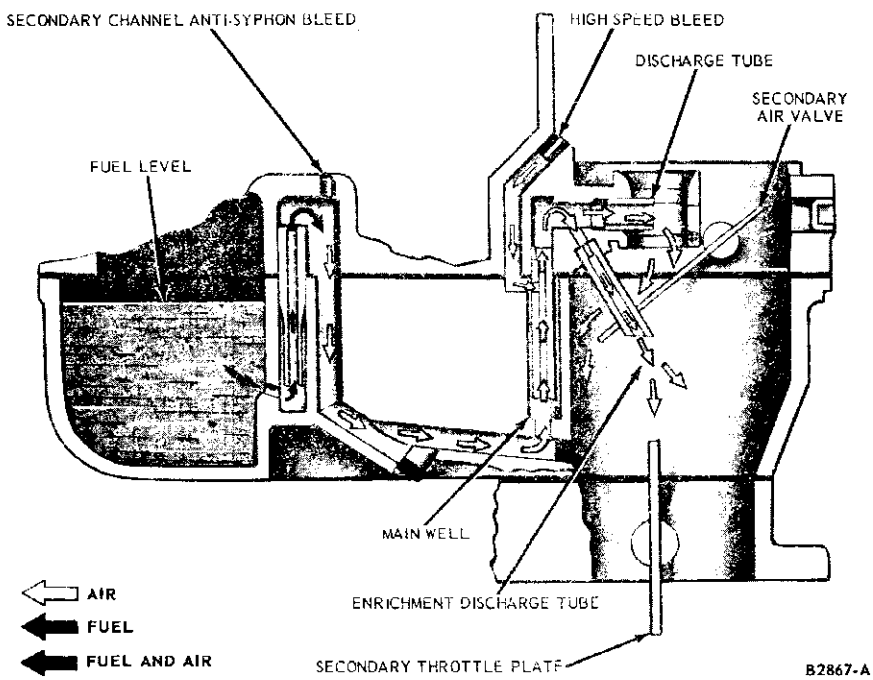

FIG. 9—Secondary Metering System

SECONDARY METERING SYSTEM

To provide a sufficient quantity of the fuel-air mixture to operate the engine at maximum power, the mixture supplied by the main fuel system is supplemented by an additional quantity of fuel-air mixture from the secondary fuel system (Fig. 9).

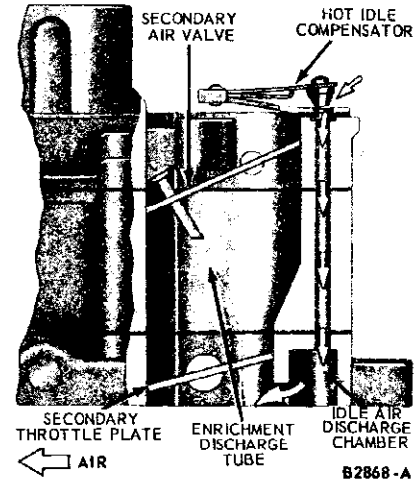

FIG. 10—Hot Idle Compensator

The secondary throttle plates are mechanically connected to the primary throttle lever. The secondary throttle plates begin to open when the primary throttle are 3/4 open and the engine warmed sufficiently to disengage the secondary throttle lock-out lever. The secondary throttle lock-out prevents the secondary throttles from opening during cold engine wide open throttle operation. Off-set air valve plates are located above the secondary main venturis and below the booster venturis. A calibrated coil spring pre-loads the air valve plates to a closed position.

When the secondary throttle plates begin to open, manifold vacuum appears below the air valve plates. Enrichment discharge tubes, located in the secondary main venturis, sense the pressure drop and fuel starts to flow in the secondary fuel system. The air valve plates also react to the pressure drop and start to open. The amount of opening is controlled by the velocity of air acting upon the off-set plates and the opposing torque exerted by a spiral torsion spring. In addition, an integral hydraulic dashpot dampens sudden movements of the air valve plates to help prevent plate flutter and erratic engine operation.

Fuel flows from the fuel bowl up through the secondary main jet tube. The fuel flows past the secondary channel anti-syphon bleed, located in the primary air horn, and down through a passage to the secondary main wells. The fuel flowing up the main well tubes is mixed with air from the high speed air bleeds and the fuel-air mixture is initially discharged from the enrichment discharge tubes. As the air flow through the secondaries increases, a greater pressure drop occurs in the booster

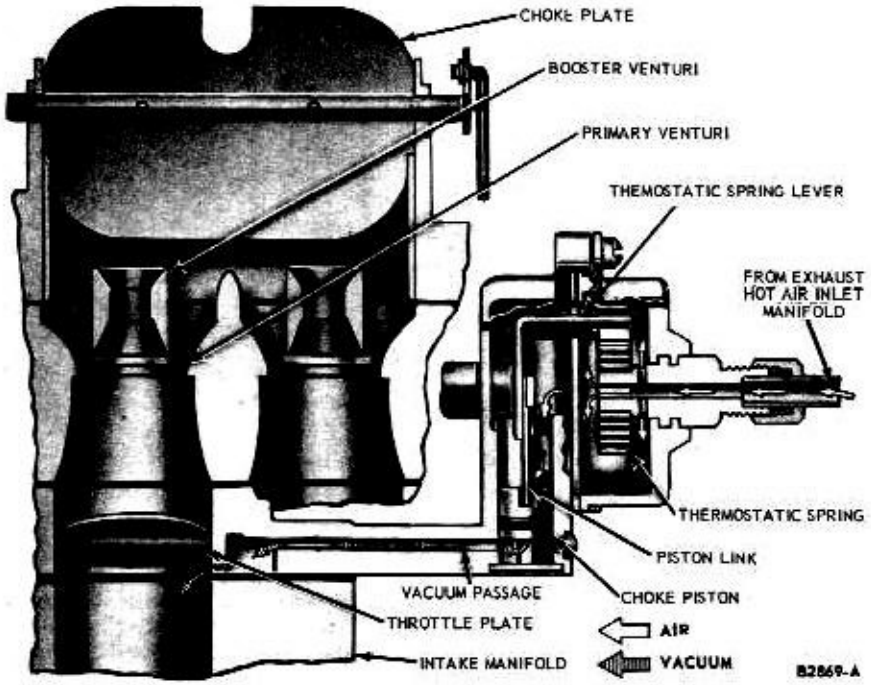

FIG. 11—Automatic Choke System

venturis and the fuel-air mixture is then discharged from the secondary main discharge tubes. The anti-syphon bleed and the high speed air bleeds act as anti-percolator vents during idling periods and when a hot engine is shut down. This helps vent fuel vapor pressure in the main well tubes before fuel is pushed out through the nozzles.

When the primary throttle plates begin to close on deceleration, the secondary throttle plates are closed mechanically. As air flows through the secondaries diminishes, the air valves are closed by force exerted by the air valve spring.

HOT IDLE COMPENSATOR

A thermostatically controlled hot idle compensator (Fig. 10) is located in the upper main body on the secondary side of the carburetor. At carburetor high inlet temperatures, the hot idle compensator will open and additional air is mixed with the idle fuel-air mixture.

The air enters through the compensator valve and moves down the air horn and main body passage into the idle air discharge chamber of the throttle body. The air is discharged below the throttle plates. The additional air improves idle stability and minimizes the excessively rich idle mixture resulting from increased fuel vaporization of a hot engine.

AUTOMATIC CHOKE SYSTEM

In order to start and operate a cold engine, a richer fuel-air mixture must be introduced into the cold intake manifold. The need for a richer fuel-air mixture is due to condensation of the atomized fuel inside the cold manifold. As the engine warms up, the atomized fuel inside the warm manifold can vaporize and a leaner fuel-air mixture is then required. The automatic choke system (Fig. 11) provides the function of regulating the enrichment of the fuel-air mixture during the start and warm-up period of cold engine operation.

Exhaust heated air is used to control automatic choke operation. Air is drawn from the pickup tube, located in the carburetor upper body assembly, and a heater in a chamber on the exhaust manifold. The heated air is then routed into the automatic choke cover and deflected around a bimetallic spiral torsion spring which controls the position of the choke plate relative to engine temperature. The air is exhausted below the throttle plates after passing through restrictions in the vacuum piston chamber. When the engine is cold, the torque exerted by the bimetallic spring forces the choke linkage to close the choke plate.

As the engine starts, air velocity against the offset choke plate causes the choke plate to open slightly. Manifold vacuum, applied to the choke piston, pulls the piston downward and further assists in opening the choke plate. The choke plate opens to a position where the tension from the thermostatic spring is balanced by the air velocity acting on the choke plate and the pull of vacuum on the piston. Enough air is drawn around the choke plate to prevent engine flooding and to enable the engine to operate. The piston initial pull-down travel is limited by vacuum bypass slots in the piston cylinder wall and a slot in the piston. When the slot in the piston is exposed to the slots in the cylinder wall, vacuum travels through the channel and further downward movement of the piston is restricted. The choke plate then, is opened to a definite distance, but no farther.

When engine reaches its normal operating temperature, the bimetallic spring exerts torque to hold the choke plate open.

If the engine is accelerated during the engine warmup period, the drop in manifold vacuum applied to the choke piston allows the thermostatic spring to partially close the choke plate for a brief moment. This action provides a richer fuel-air mixture to prevent engine stumble or stalls.

If the engine should flood (over rich mixture) during the starting period, the choke plate may be opened manually to lean out the excessively rich fuel-air mixture in the intake manifold. This is accomplished by fully depressing the accelerator pedal and engaging the starter. A projection on the throttle lever contacts the unloader face on the fast idle cam and, in turn, partially opens the choke plate.

During the engine warm-up period, it is necessary to provide a faster idle speed to prevent engine stalling. A fast idle cam is rotated into position by the automatic choke lever. A fast idle adjusting screw on the throttle lever contacts the cam face to provide the increased engine speed that is required.

2 REMOVAL AND INSTALLATION

REMOVAL

Flooding, stumble on acceleration, and other performance complaints are, in many instances, caused by the presence of dirt, water, or other foreign matter in the carburetor. To aid in diagnosing the cause of a complaint, the carburetor should be care-

fully removed from the engine without removing the fuel from the bowl. The contents of the bowl may then be examined for contamination as the carburetor is disassembled.

1. Remove the air cleaner. Remove the bracket that secures the heater hose to the automatic choke. Remove the throttle cable from the throttle lever. Disconnect the distributor vacuum line, in-line fuel filter, choke clean air tube and the choke heat tube at the carburetor.

2. Remove the carburetor retaining nuts and lock washers; then remove the carburetor.

Whenever the carburetor is removed from the engine, care must be exercised to prevent damage to the throttle plates. The lower edges of the throttle plates project below the carburetor body whenever they are open.

INSTALLATION

1. Clean the gasket surface of the intake manifold and carburetor. Install a new gasket. Position the carburetor, then install the carburetor retaining nuts. To prevent leakage, distortion or damage to the carburetor body flange, snug the carburetor retaining nuts; then, alternately tighten the nuts in a criss-cross pattern to the specified torque.

2. Connect the choke heat tube, in-line fuel filter, choke clean air tube and the distributor vacuum line. Connect the throttle cable to the throttle lever and adjust the accelerating pump stroke (if necessary); the idle fuel mixture and idle speed, and the anti-stall dashpot (if so equipped). Install the air cleaner.

3 MAJOR REPAIR OPERATIONS

DISASSEMBLY

To facilitate working on the carburetor, and to prevent damage to the throttle plates, install carburetor legs on the base. If legs are unavailable, install four 5/16 x 2 1/2 inch bolts and 8 nuts; install nuts on the bolts, above and below the carburetor base.

Use a separate container for the component parts of the various assemblies, to facilitate cleaning, inspection, and assembly.

The following is a step-by-step sequence of operations for completely overhauling the carburetor. **However, certain components of the carburetor may be serviced without a complete disassembly of the entire unit.** Refer to Fig. 14 for parts identification.

AIR HORN

1. Remove the fuel inlet line from the fuel filter.

2. Remove the choke clean air pickup tube (if so equipped) from the air horn.

3. Remove the choke control rod retainer from the automatic choke lever. Separate the rod from the lever.

4. Remove the accelerator pump rod retainer from the pump rod. Separate the rod from the throttle lever.

5. Remove the air horn to fuel bowl retaining screws (one of the 11 screws also retains the fuel bowl external vent valve).

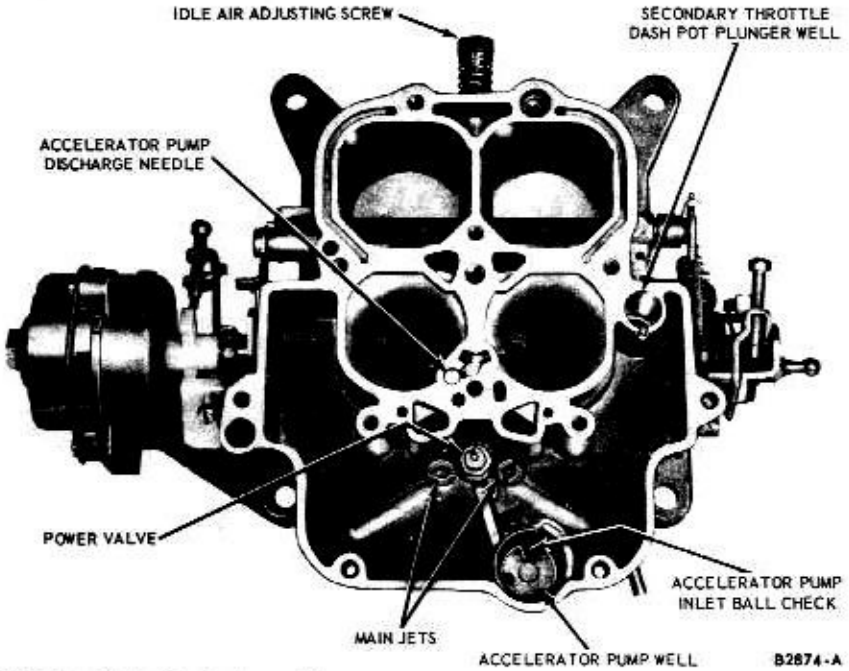

FIG. 12—Main Body Assembly

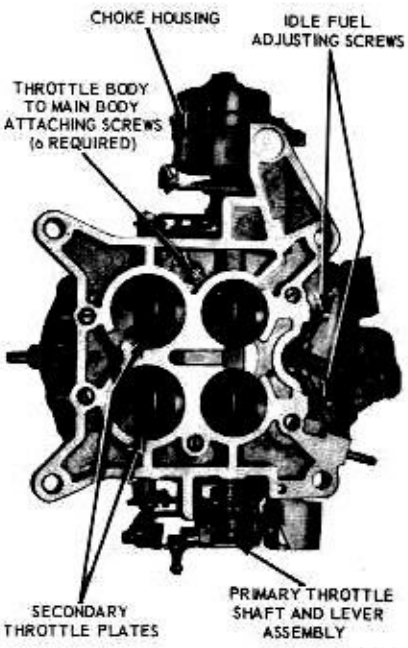

FIG. 13—Throttle Body—Bottom View

6. Lift the air horn off the main body.

7. Pull the float pivot pin and remove the float assembly.

8. Using the proper size screwdriver or jet removal tool, remove the main and auxiliary fuel inlet seats and gaskets.

9. Remove the secondary air valve lever retainer and the rod from the dampener piston assembly and air valve plate, then remove the air valve dampener piston and rod.

10. If it is necessary to remove the secondary air valve plates or shaft, scribe an index mark on the air valve housing and body casting. Re-

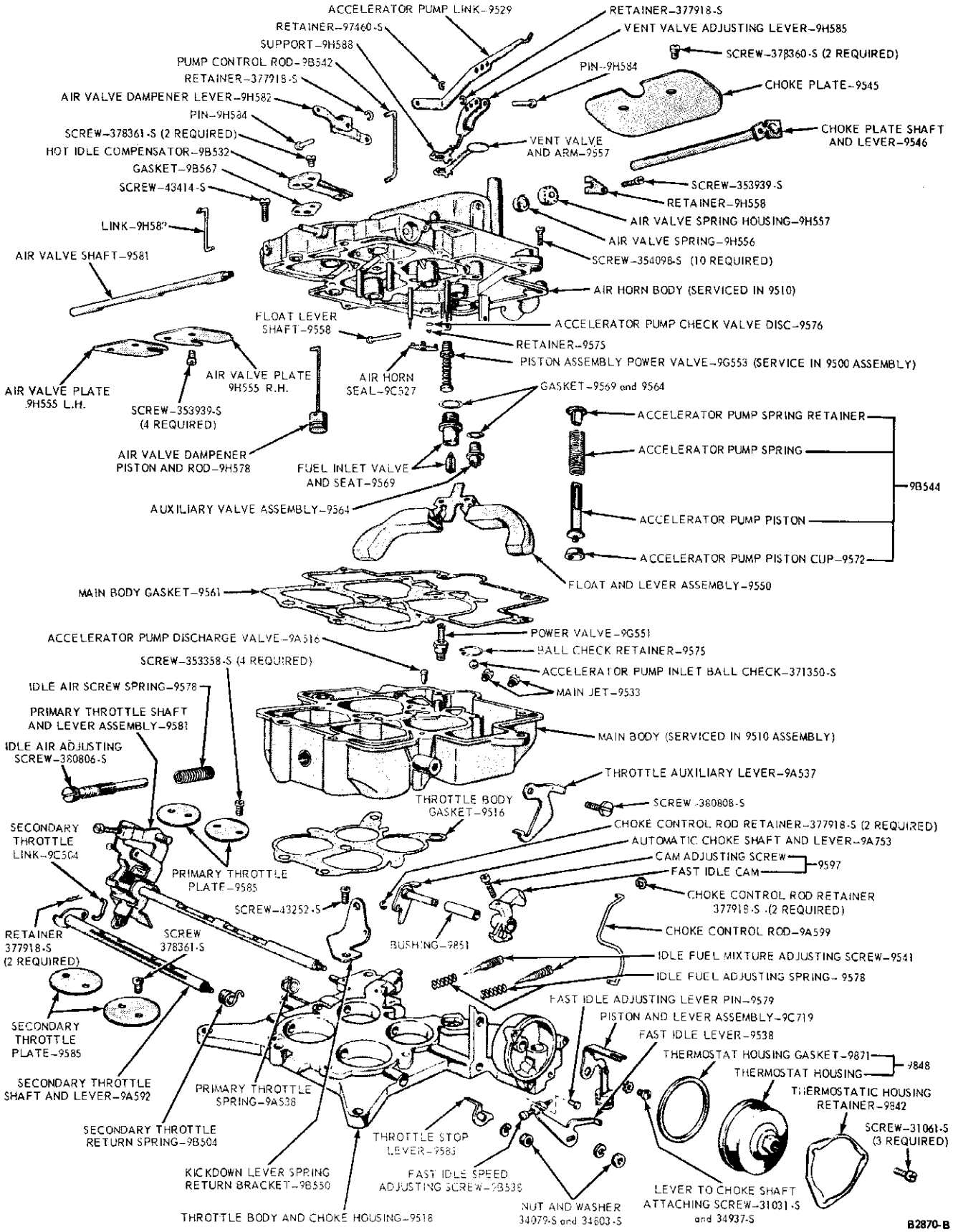

FIG. 14—Carburetor Assembly

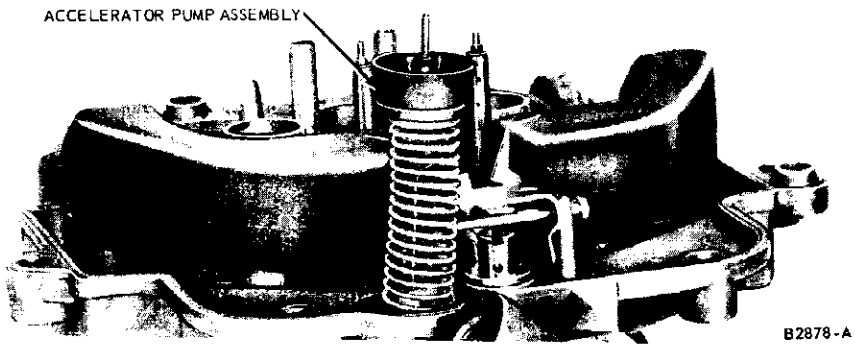

FIG. 15—Accelerator Pump in Position on Air Horn

move the air valve plate retaining screws. Remove the plates, then slide the shaft out of the air horn.

11. If it is necessary to remove the choke plate or choke shaft, remove the staking marks on the choke plate retaining screws and remove the screws. **If the tips of the screws are flared excessively, file the flared portion to prevent damage to the threads in the shaft.** Remove the choke plate, then slide the choke shaft out of the air horn.

12. Remove the hot idle compensator attaching screws, then remove the compensator.

13. Do not remove the power valve vacuum piston assembly unless it is to be replaced. It is staked in place in the air horn, and care must be used to avoid damage to the air horn casting when relieving the staked areas.

MAIN BODY

1. Turn the main body upside down and catch the accelerating pump discharge needle (Fig. 12).

2. Remove the idle air adjusting screw and spring.

3. With a 3/8 deep socket, remove the power valve from the floor of the main body fuel bowl (Fig. 12).

4. Remove the main metering jets (Fig. 12) from the fuel bowl with a jet tool.

5. Using long nose pliers, remove the accelerating pump inlet check ball retainer, then turn the main body over and catch the ball from the pump well.

THROTTLE BODY

1. Remove the throttle body to main body screws from the bottom of the throttle body (Fig. 13) and separate the two castings.

2. Remove the idle mixture screws and springs from the throttle body.

3. Remove the choke housing cover screws, cover, gasket and thermostatic spring.

4. Remove the choke piston lever retaining screw, then remove the piston assembly.

5. Remove the retainers from the secondary throttle lever to primary throttle connecting link, then remove the link.

6. If it is necessary to remove the throttle plates or shafts from the throttle body, remove the staking marks on the throttle plate attaching screws. Remove the screws and remove the plates.

7. Remove the nut from the secondary throttle shaft, then remove the lockout lever and slide the shaft and return spring out of the throttle body.

8. Remove the nut from the primary throttle shaft and remove the fast idle lever and adjusting screw. Slide the throttle shaft and primary throttle shaft and lever assembly out of the throttle plate.

9. Remove the primary throttle lever assembly retainer, then slide the lever and springs off the shaft.

10. If it is necessary to remove the fast idle cam or bushing, carefully press the bushing out of the choke housing and bushing column. **The column may bend out of alignment or break without proper support to the column during bushing removal or installation.**

CLEANING AND INSPECTION

Refer to Part 10-1, Section 3 for the cleaning and inspection procedures.

ASSEMBLY

Make sure all holes in the new gaskets have been properly punched and that no foreign material has adhered to the gaskets. Gasket surfaces must be clean and flat and free of nicks or burrs.

The carburetor assembly is shown in Fig. 14.

THROTTLE BODY

1. If the throttle plates and shafts are removed, slide the primary throttle return spring (coiled clockwise) on the primary throttle shaft (flat milled) and slide the shaft into the primary shaft holes (mixture needle side of body).

2. Position the primary throttle plates (smaller diameter) in the primary bores with the ground flat edge of the plates facing up and towards the idle mixture needles. Install the plate retaining screws snug but not tight.

3. Rotate the throttle shaft to the closed position and tap the plate lightly with the end of a screw driver handle or similar tool, so that the plates are properly and fully seated in the throttle bores (when viewed with a light behind the plates, little or no light should be observed). Tighten the throttle plate screws.

4. Install the secondary throttle lock out lever.

5. Install the fast idle speed lever and adjusting screw.

6. If the fast idle cam and bushing were removed, insert the automatic choke shaft bushing through the choke housing. Position the fast idle cam between the choke housing and bushing column. Slide the bushing through the fast idle cam. Press the bushing in the choke housing and into the column. Clean the bushing with a 1/4-inch reamer.

7. Insert the automatic choke shaft and lever in the bushing.

8. Position the automatic choke piston in the choke cylinder and the lever on the automatic choke shaft. Install the retaining screw.

9. Insert the secondary throttle to primary throttle connecting rod into the throttle levers and install retainers.

MAIN BODY TO THROTTLE BODY

1. Position the main body on a working surface with the fuel bowl down.

2. Position the main body to throttle body gasket on the main body.

3. Position the throttle body on the main body and install the retaining screws.

4. Invert the main body and throttle body so the fuel bowl is upward.

5. Install the power valve and main jets in the main body.

6. Install the choke to throttle lockout lever.

7. Place the accelerator pump ball check in the pump inlet hole of the pump chamber. Install the ball check retaining ring. **The retaining ring must be installed with the tangs over the pump inlet hole as shown in Fig. 47, Part 1, Section 2.**

8. Place the accelerator pump discharge needle into the pump discharge cavity.

9. Install the idle air screw and spring. Turn the screw inward (clockwise) until it lightly seats. Backoff (counterclockwise) three and one-half (3-1/2) turns.

AIR HORN

1. Install the components removed from the air horn in the following order:

a. Power valve and gasket.

b. Main fuel inlet seat and gasket.

c. Auxiliary fuel inlet valve and gasket.

d. Hot idle compensator and gasket.

2. Assemble the accelerator pump plunger (Fig. 15) and insert into air horn.

3. Compress the pump plunger and insert accelerator pump arm into plunger stem.

4. Slide fuel vent valve lever on air horn and under pump lever.

Line up holes in both levers and insert pivot pin through the No. 1 hole in levers and the air horn casting (Fig. 15). Install retainer on pin.

5. If the choke plate and shaft were removed, slide the choke shaft through the holes in the air horn with the lever end of the shaft on the automatic choke side.

Insert the choke plate into the slot in the choke shaft and install the plate retaining screws snug but not tight.

6. Close the choke plate and gently tap the plate with the end of a screw driver or a similar tool to properly position the plate in the air horn.

Tighten and stake the plate retaining screws.

7. Insert a new choke control rod seal on the choke control rod.

Push seal into air horn and attach control rod end to choke shaft lever with retainer. **The seal must grip the ledge in the air horn at all four points to prevent unfiltered air from entering carburetor.**

8. If the air valve plates and shaft were removed, slide the shaft through the holes on the secondary side of the air horn and with the slotted end of the shaft in the air valve spring chamber.

Position the plain air valve plate in the air horn opening on the underside of the air horn and adjacent to the spring chamber.

Install the plate retaining screws snug but not tight.

Position the other air valve plate in the air horn opening with the eye retainer for the air valve control rod facing upward.

Install the plate retaining screws snug but not tight.

9. Close the air valve plates and lightly tap the plates with end of a screwdriver or similar tool to properly position the plates in the air horn.

Tighten and stake the plate retaining screws. Be sure the plates and shaft turn freely after assembly.

10. Insert the air valve spring in the slot at the end of the shaft. Push the spring to the bottom of the slot. **The spring must be installed with the outer hook at the bottom of the spring cavity when the air valve plates are vertical (open). The hook opening must face to the left.**

11. Install the housing retainer but do not tighten the attaching screw.

12. Adjust air valve spring tension as described in Part 1, Section 2.

13. Insert fuel inlet needle into fuel inlet seat.

14. Position float and lever assembly between hinge post and over fuel inlet valves.

Insert float hinge pin through post and float lever.

15. Insert key end of air valve dampener rod into keyed hole in the air valve lever.

Slide other end of rod into eye on the air valve plate.

Position the air valve dampener lever on the air horn and install pivot pin and retainer.

16. Insert the air valve dashpot piston rod through air horn and attach the rod end to the air valve lever.

17. Insert the accelerator pump bleed disc into the pump bleed cavity.

Push disc retainer into cavity.

18. Set float levels (Refer to Common Adjustments and Repairs, Part 1, Section 2).

AIR HORN TO MAIN BODY

1. Position the main body to air horn gasket on the main body.

2. Carefully position the air horn assembly over the main body. Guide the accelerator pump plunger and the secondary throttle dashpot piston into their chambers as the air horn is gently lowered into position.

3. Install the longest of the 11 air horn retaining screws in the left rear hole.

4. Slide the fuel bowl vent valve into position under the accelerator pump lever. Position the vent valve support on the vent valve arm and install the retaining screw.

5. Install the other air horn retaining screws.

6. Insert the key end of accelerator pump control rod into the keyed hole in the primary throttle lever. Insert the other end of the rod into the pump lever and install retainer.

7. Insert the choke control rod end into the automatic choke lever. With long nose pliers, install the retaining clip.

8. Check the choke plate pulldown clearance (Refer to Part 1, Section 2).

9. Install the choke gasket cover and retainer. Set the cover to the ninety (90) degree rich position.

10. Check the fast idle cam clearance (Refer to Part 1, Section 2).

11. Reset the choke cover to specifications.

12. Check the fuel bowl vent valve clearance (Refer to Part 1, Section 2).

13. Remove the carburetor legs or bolts from the throttle body.