

HOLLEY CARBURETOR

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CARBURETOR DESCRIPTION — HOLLEY MODEL 4150

The Holley model 4150 carburetor used on vehicles equipped with the 312 cu. in. engine, is a four-barrel downdraft carburetor which incorporates primary and secondary fuel metering sections. See figure 9D-1.

The primary section consists of a fuel inlet and float system, idle system, main metering system, accelerating pump system, power enrichment system (power valve), and automatic choke.

The secondary section consists of a secondary fuel inlet and float system, a main metering system, transfer (idle) system, and a power enrichment system.

Each throttle bore is vented to air through a small drilled hole in the main body just above the throttle plates. The function of these vents is to allow excessive vapor, which may accumulate in the throttle bores, to escape.

The basic design of the carburetor assembly incorporates the use of separate float bowls and float assemblies respectively for the primary and secondary sections. The major components which make up the carburetor assembly are the primary float bowl, primary metering body, main body, throttle body, secondary metering body, and secondary float bowl.

The primary and secondary metering bodies are located between the primary and secondary float bowls, respectively, and the main body. The metering bodies contain the jets, power valves, idle mixture adjustment screws (primary side only) and passages connecting the float bowls to the main body. The metering bodies, therefore, function in the various carburetor systems, through the metering and delivery of fuel from the float bowls to the throttle bore and venturi discharge ports.

For carburetor identification, the model and part numbers are stamped on the front side of the main

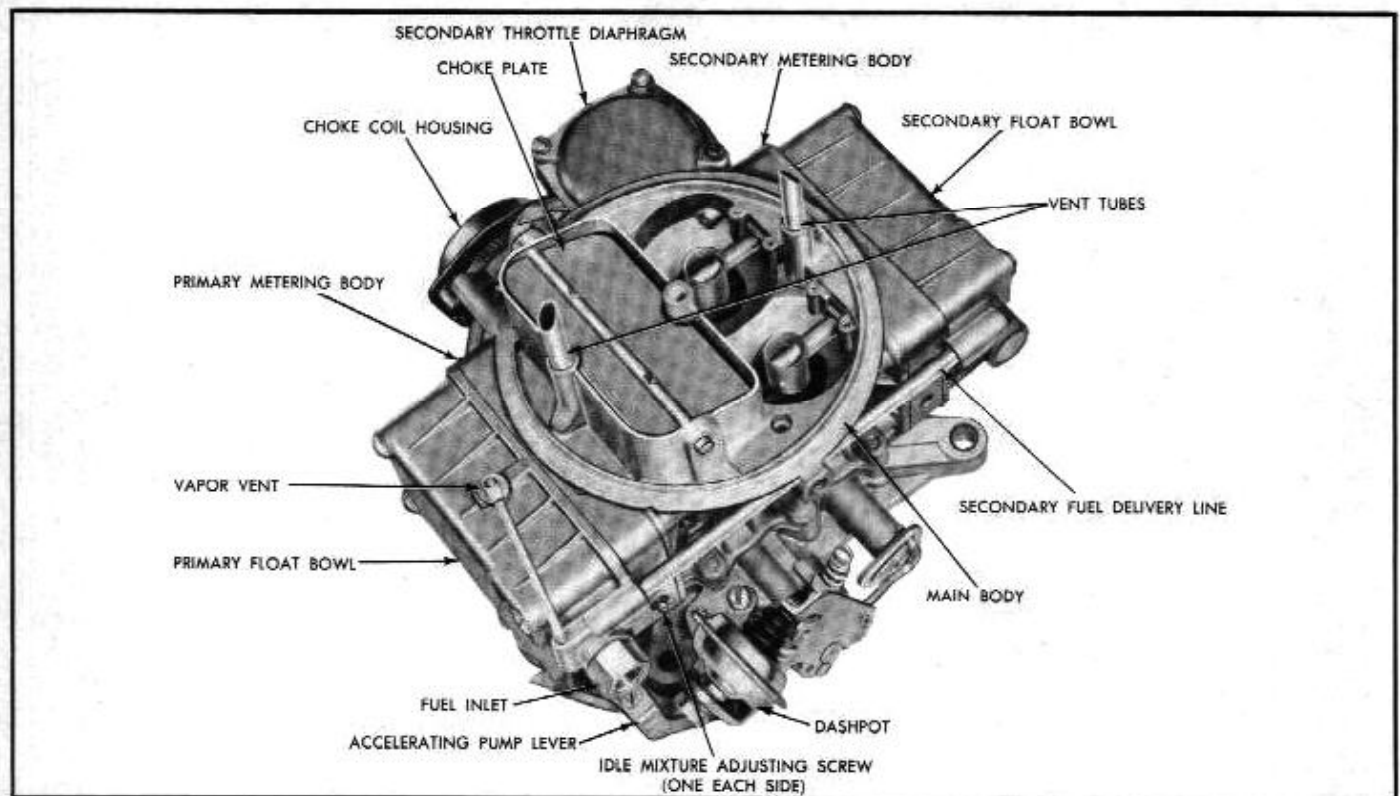


Fig. 9D-1—Holley Model 4150 Carburetor

body air horn, adjacent to the primary float bowl vent tube.

PRINCIPLES OF OPERATION

Fuel Inlet and Float System

As the fuel enters the carburetor under fuel pump pressure through a filter screen, it is directed to the primary fuel inlet valve (needle and seat) and through the secondary fuel line tube to the secondary fuel inlet valve. See figure 9D-2 and 9D-3.

Since the operation of the primary and secondary inlet valves and float assemblies is identical, the description is applicable to both fuel inlet and float system.

As the fuel level drops, the subsequent float drop opens the round cone-tipped needle valve, and the fuel is allowed to enter the bowl through the needle valve seat discharge holes located in the hex area of the valve seat. A mesh-type baffle screen attached to the fuel inlet needle seat functions to minimize gushing action of the fuel as it is pumped into the bowl, thereby maintaining the fuel in the bowl in a constant liquid state, and at a more stable level.

A spring loaded pin, inside the hollow needle valve, cushions the needle valve against road shock and vibration. A conical spring is incorporated under the float to assist in maintaining stable float position and fuel level.

The primary and secondary float bowls are vented to the air cleaner through the two vertical tubes pressed into the top of the main body. The primary float bowl is vented to the atmosphere during slow idle or when the engine is stopped, through the external vent assembly located on top of the primary bowl. The vent assembly is operated by throttle linkage, so that the valve is raised to its open position, when the throttle plates are closed, thereby venting excess vapors from the primary bowl.

The secondary float bowl is vented to the air cleaner during high speed operation, and to the atmosphere during idle or when the engine is not running. A secondary bowl vent button is located on the top of the secondary metering body. When the secondary metering body is assembled to the main body, the vent button is located under an external vent passage in the main body which connects with the pressed-in secondary bowl vent tube.

When the engine is running at slow idle, or turned off, the vent button is seated on the secondary metering body. The secondary bowl vapors pass through the secondary metering block and upward to the secondary vent tube. The vapors are then vented out of the connecting main body external vent passage to the atmosphere.

During high speed operation, the increased flow of

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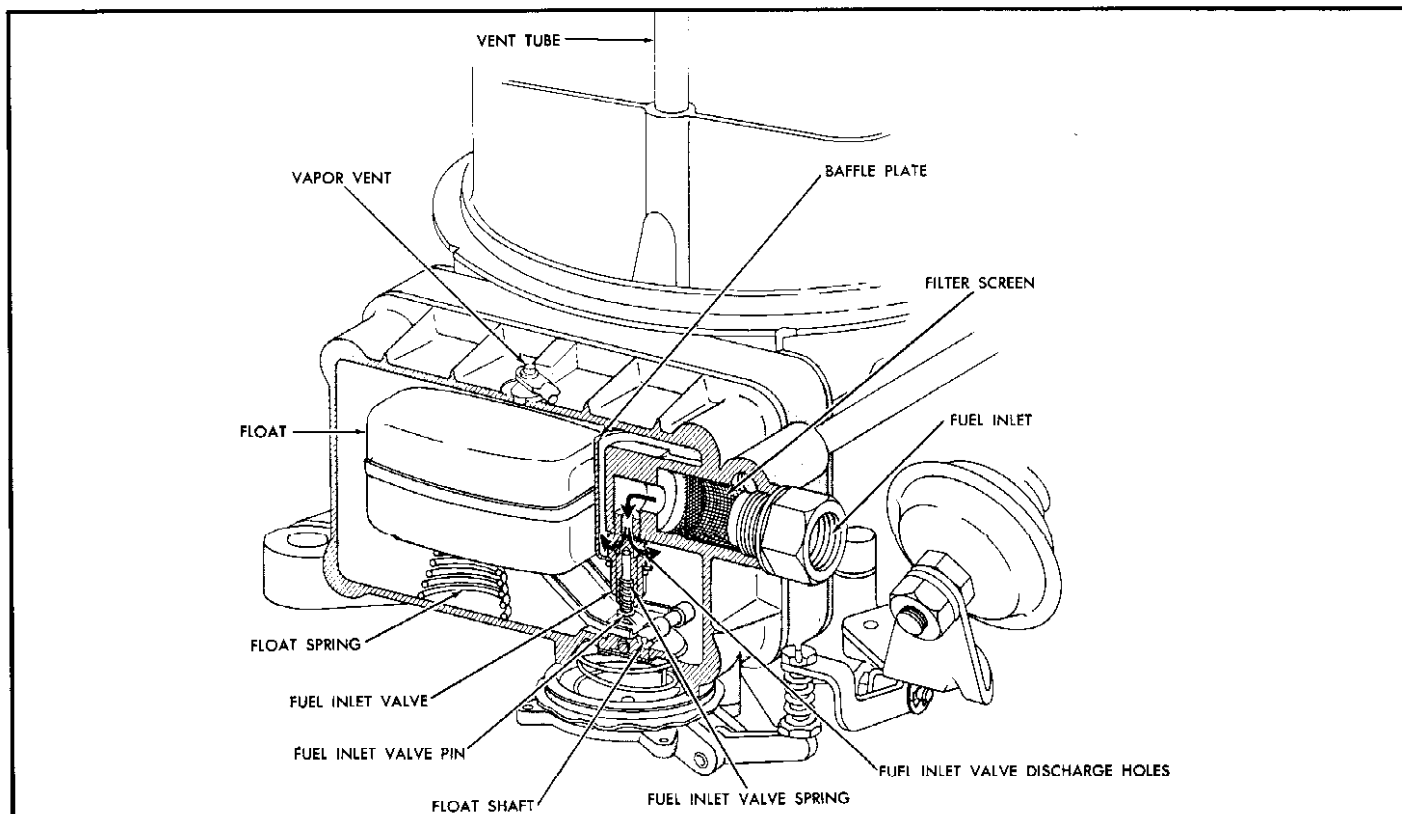


Fig. 9D-2—Primary Fuel Inlet and Float System

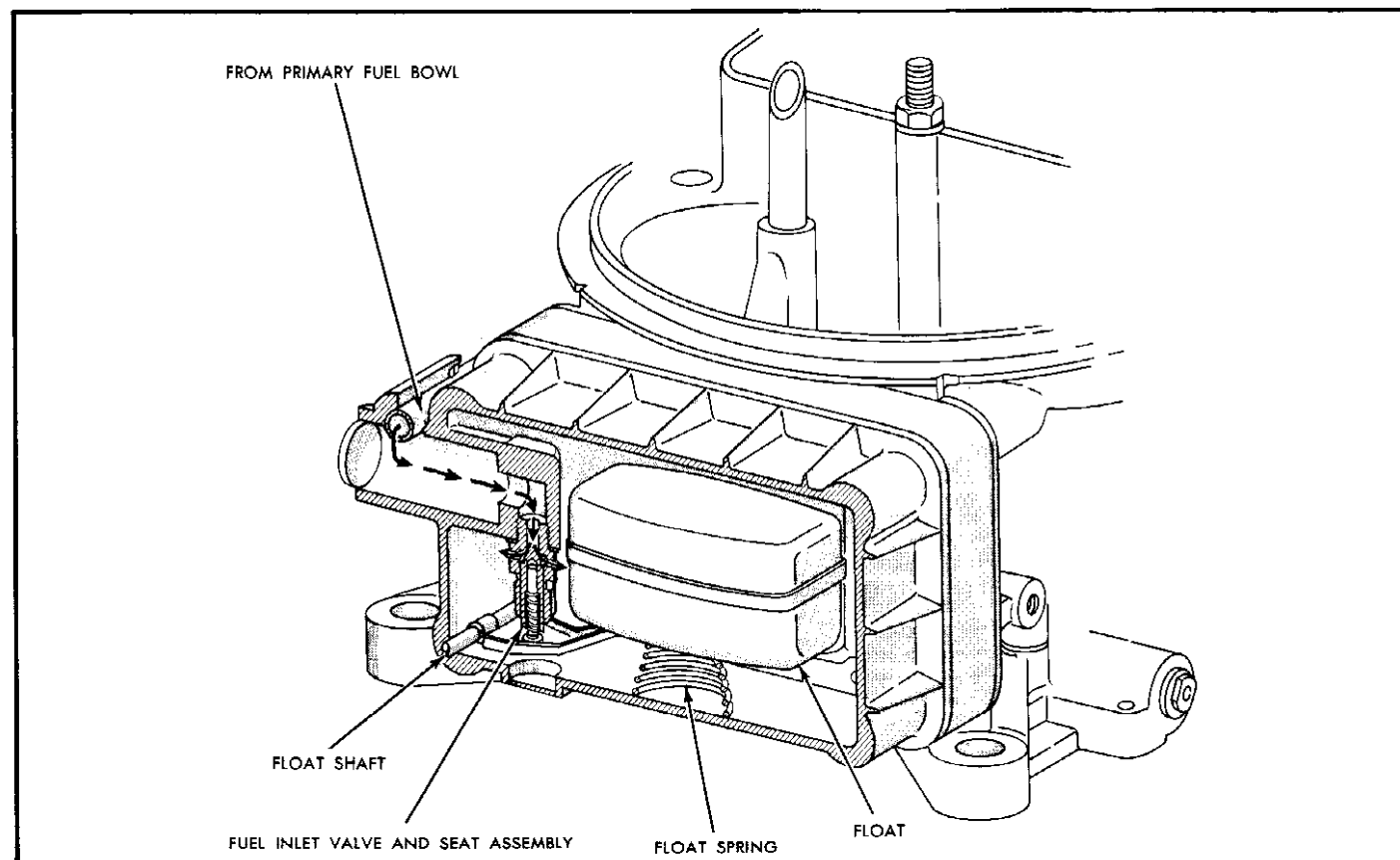


Fig. 9D-3—Secondary Fuel Inlet and Float System

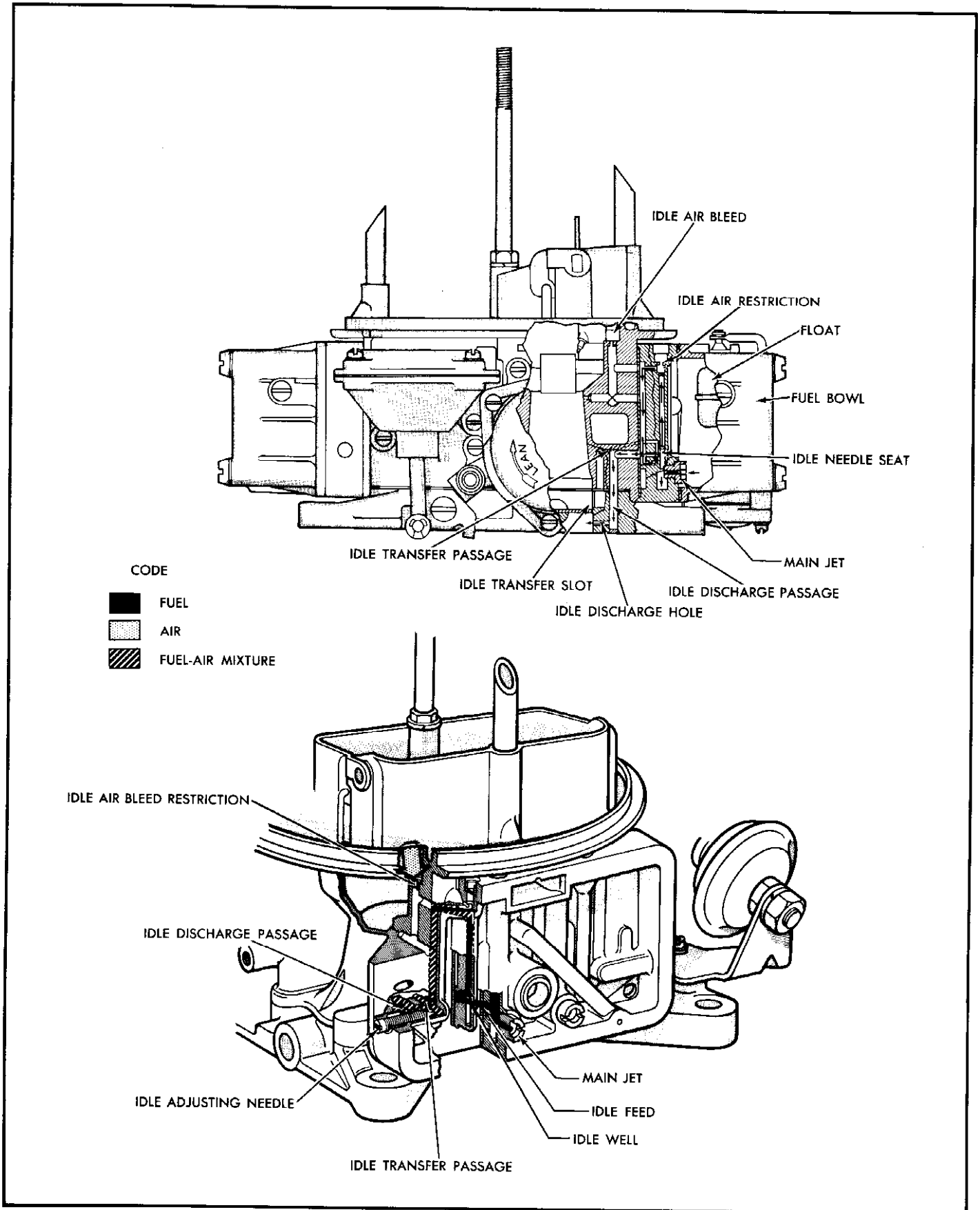


Fig. 9D-4—Idle System

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air through the secondary vent tube induces a vacuum in the main body external vent passage. The vacuum existing in the external vent passage unseats the vent button thereby allowing the secondary bowl vapors to vent to the air.

Idle System

The idle system consists of two circuits which meter the fuel-air mixture to the left and right primary throttle bores. Since both circuits function identically, only one side will be considered in this explanation. See figure 9D-4.

Pressure differential of air below the throttle plates and nearly atmospheric pressure above the fuel causes the fuel to flow through the main jet into the main well of the metering body. The main well is the large vertical passage located directly behind the main jet. The fuel is drawn part-way up the main well, and through an angular horizontal passage (idle feed) connecting the main well and the adjacent vertical passage (idle well). The fuel flows up the idle well, where it is mixed with air coming in from the idle air bleed. The fuel-air mixture then flows across a small horizontal passage and down another vertical passage. At the bottom of this vertical passage the fuel-air mixture branches in two directions, one through the idle discharge passage and the other through the idle transfer passage.

The fuel in the idle discharge passage flows past the pointed tip of the idle adjusting needle which controls the mixture delivered at idle. Turning the needle in toward its seat restricts the flow of fuel, thus providing a leaner idle mixture. Turning the needle out enriches the mixture by allowing a greater flow of fuel.

From the idle adjusting needle chamber in the metering body, the fuel-air mixture flows through a short horizontal passage in the main body. An air bleed at the end of this passage allows additional air to join the mixture at this point. The mixture is then discharged through the idle discharge hole into the throttle bore below the throttle plate.

During off-idle operation when the throttle plate is opened slightly, the fuel flows through the metering body idle transfer passage into the main body passage, through a restriction and then into the throttle body passage. As the idle transfer slot is exposed to manifold vacuum, fuel is discharged into the throttle bore. When the throttle plate is fully closed, during slow idle, the lower portion of the idle transfer slot is below the throttle plate while the upper portion is above the throttle plate. The slot, therefore, serves as an air bleed for the idle system during idle.

Each idle adjusting needle is retained in the primary metering body by means of a cork composition ad-

justing needle seal. The internally threaded seal, inserted in the idle adjusting screw hole in the metering body, provides sufficient tension on the threads of the needle to retain the needle in its adjusted position, thereby eliminating the need for an idle adjusting screw spring.

Main Metering System

The two main metering systems which supply fuel to the left and right primary booster venturis are identical. See figure 9D-5. The following circuit description is pertinent to both circuits.

As the throttle plate is opened enough to induce a low pressure in the booster venturi, the fuel flows through the main jet into the main well. The fuel flows up the main well to the main metering air bleed hole in the side of the well. At this point, the fuel is mixed with air from the main metering system air bleed located in the main body adjacent to the booster venturi; interconnecting main body and metering body passages connect the main metering system air bleed in the main body to the air bleed hole in the side of the main well.

The fuel-air mixture flows to the top of the main well where a restriction permits additional air from the idle system air bleed to join the mixture. The mixture is then discharged out of the booster venturi in the main body.

Power Enrichment System

The power enrichment system consists of a power valve assembly which provides a richer mixture for higher power operation. See figure 9D-6. The power valve assembly, which is located in the primary metering block, consists of a spring loaded valve and diaphragm assembly.

A vacuum passage in the throttle body transmits manifold vacuum to the power valve chamber in the metering body. The manifold vacuum, acting on the power valve diaphragm at idle or normal load conditions, is strong enough to hold the diaphragm closed against spring tension, thereby holding the valve closed. When open throttle operation places a greater load on the engine, and manifold vacuum drops to a predetermined value, the valve spring tension opens the valve; fuel flows from the float chamber, through the opened valve and through passages in the valve assembly and metering block to the main well where it joins the fuel flow in the main metering system, enriching the mixture.

The primary power valve is distinguished from the secondary power valve (secondary fuel enrichment system), by the numeral 85 stamped on one of the four flats on the valve assembly head.

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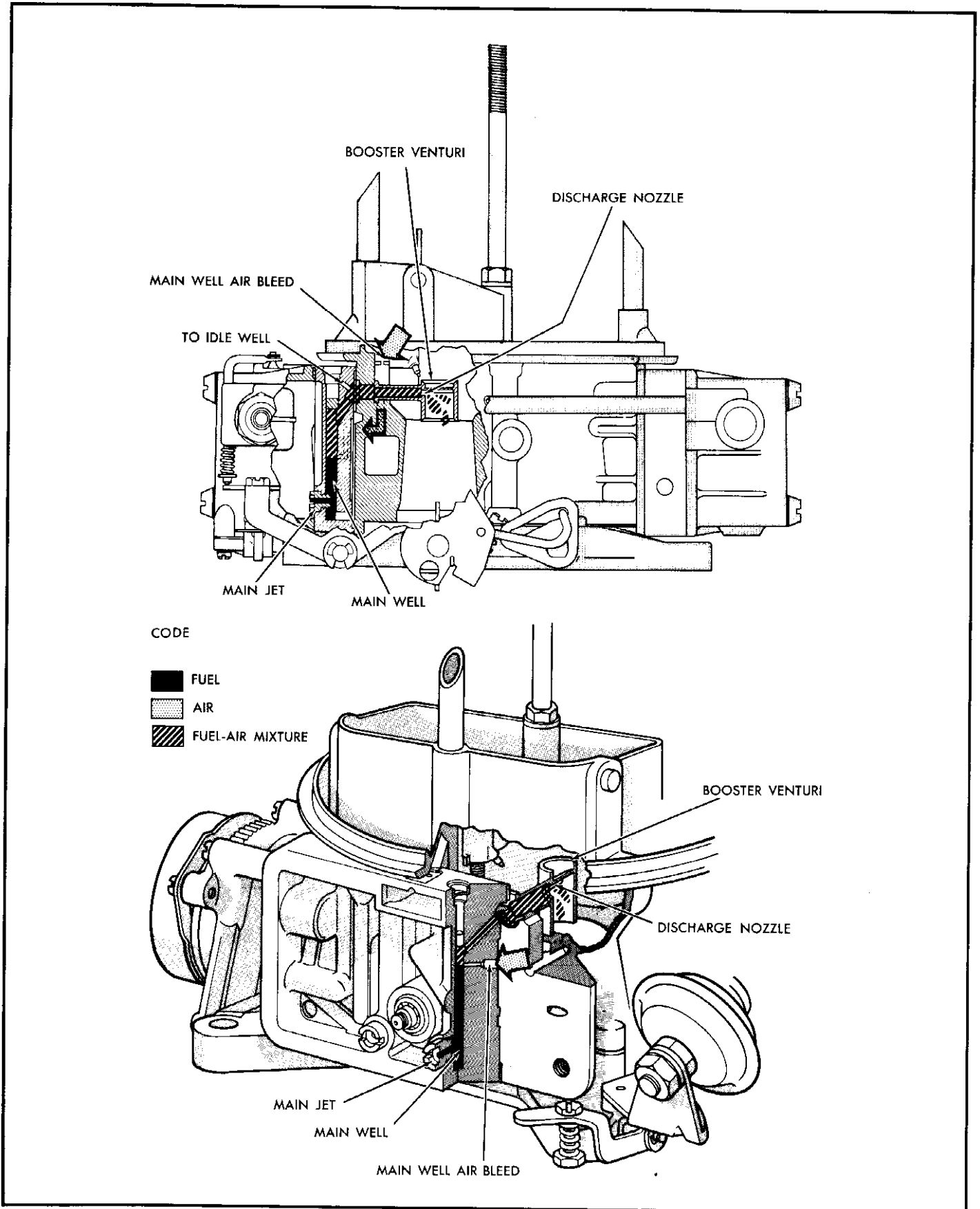


Fig. 9D-5—Main Metering System

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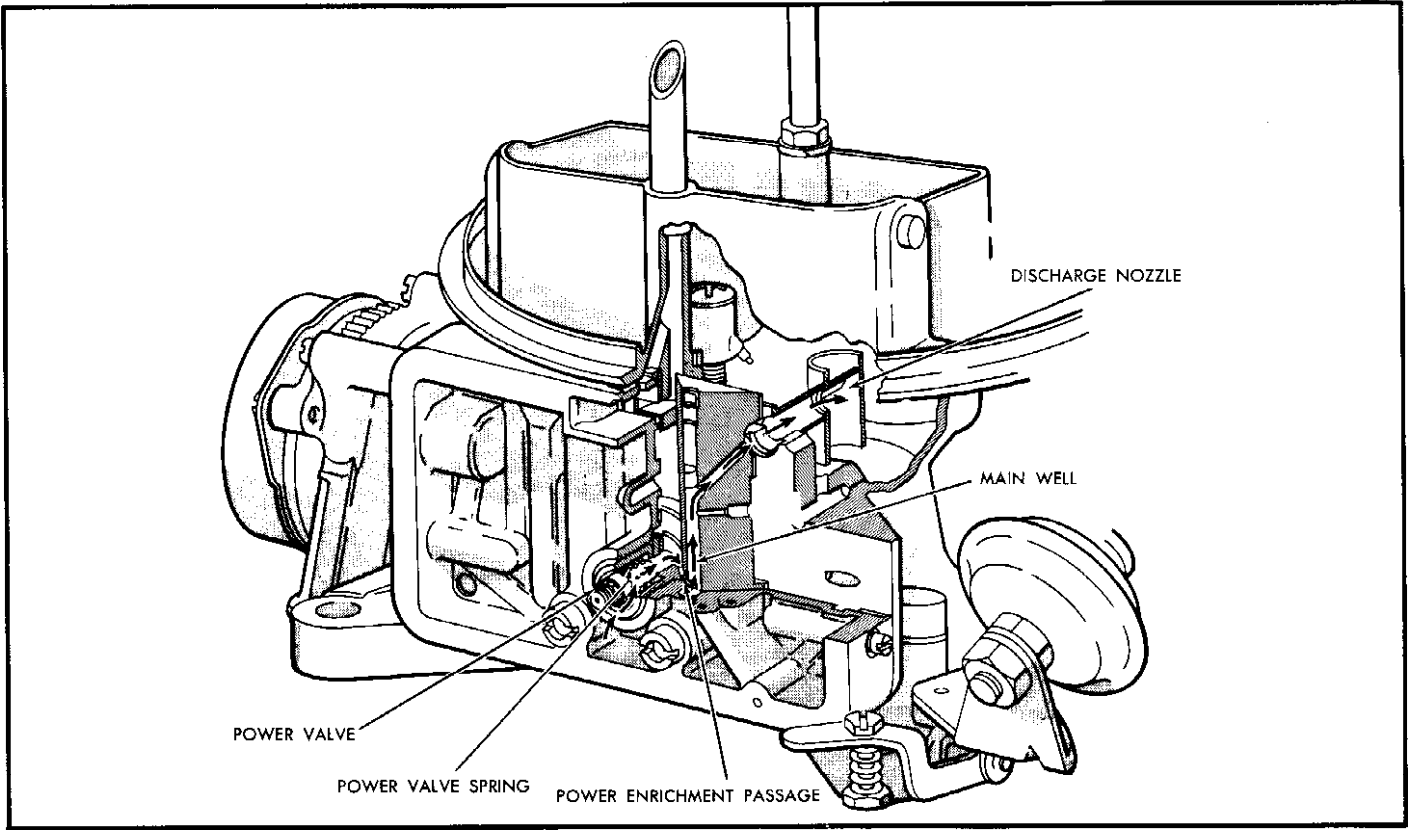


Fig. 9D-6—Power Enrichment System

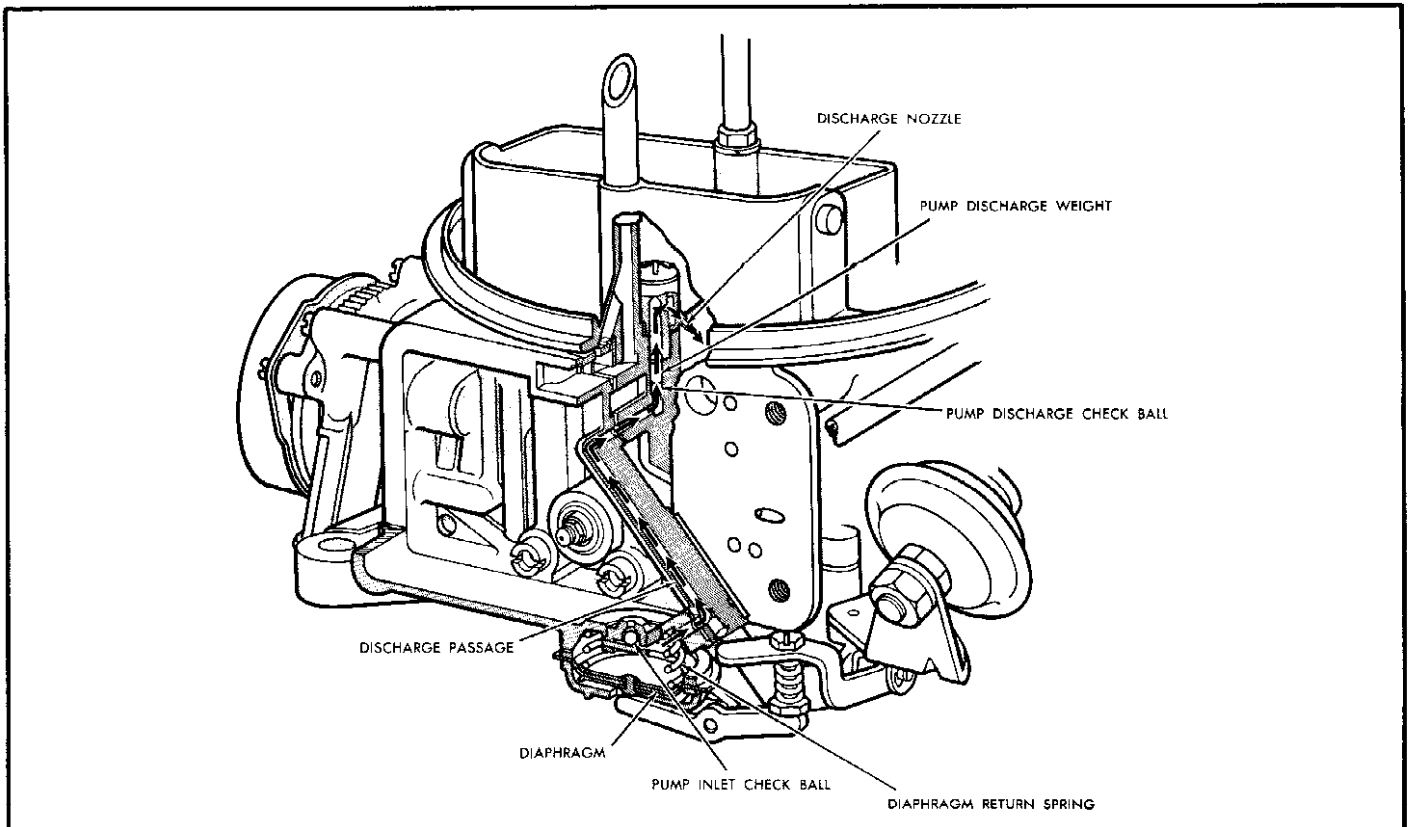


Fig. 9D-7—Accelerating Pump System

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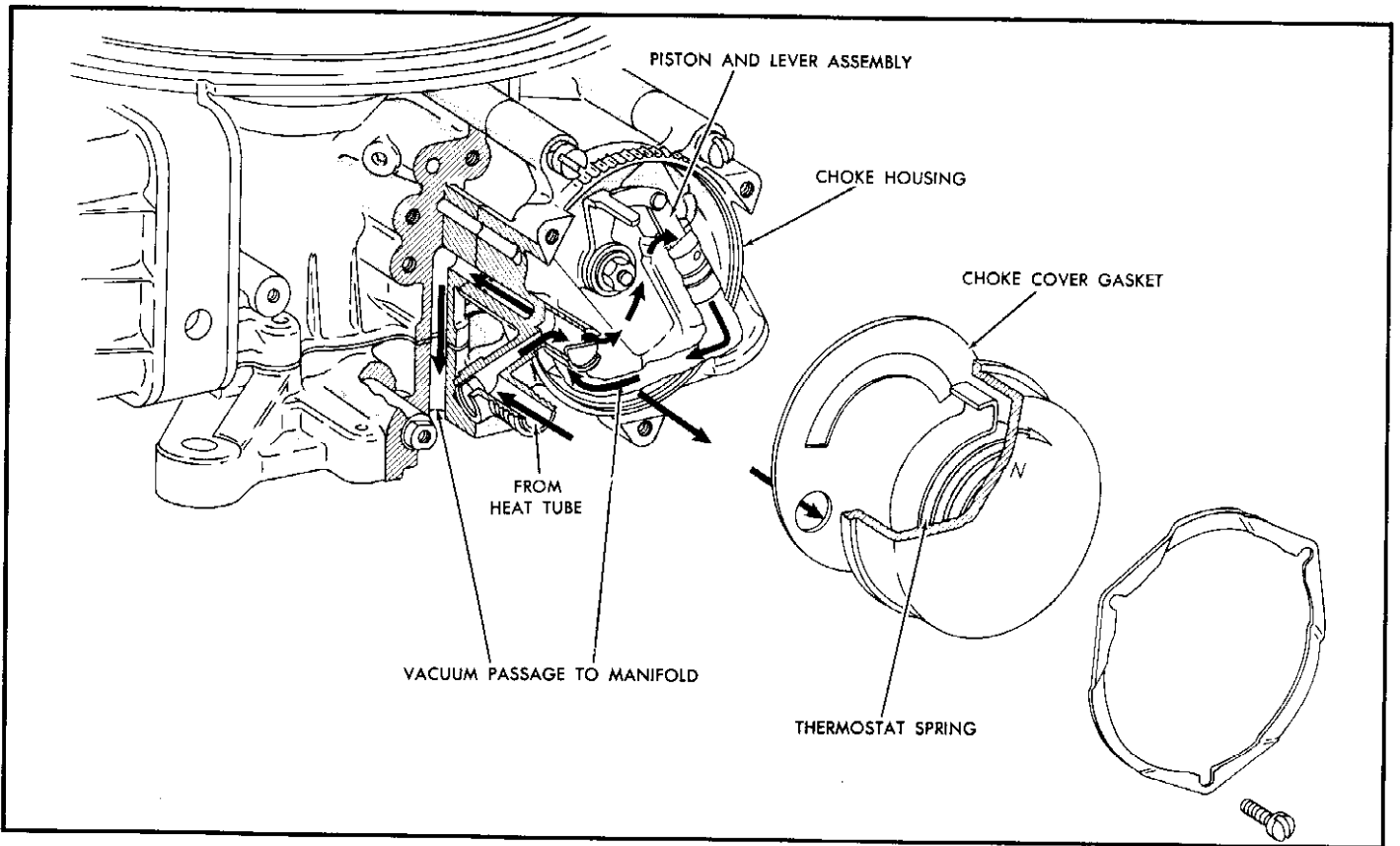


Fig. 9D-8—Automatic Choke System

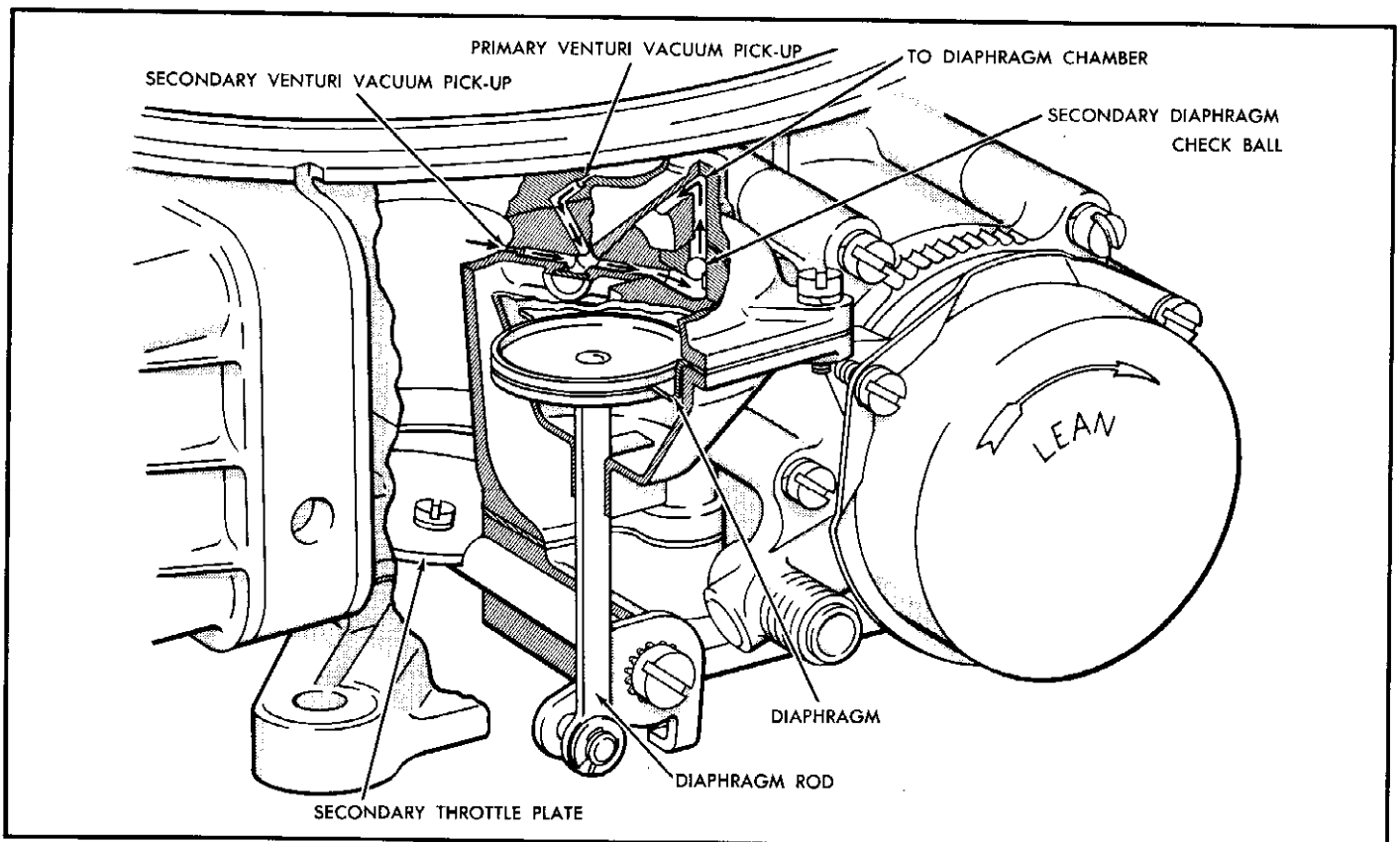


Fig. 9D-9—Secondary Throttle Operating System

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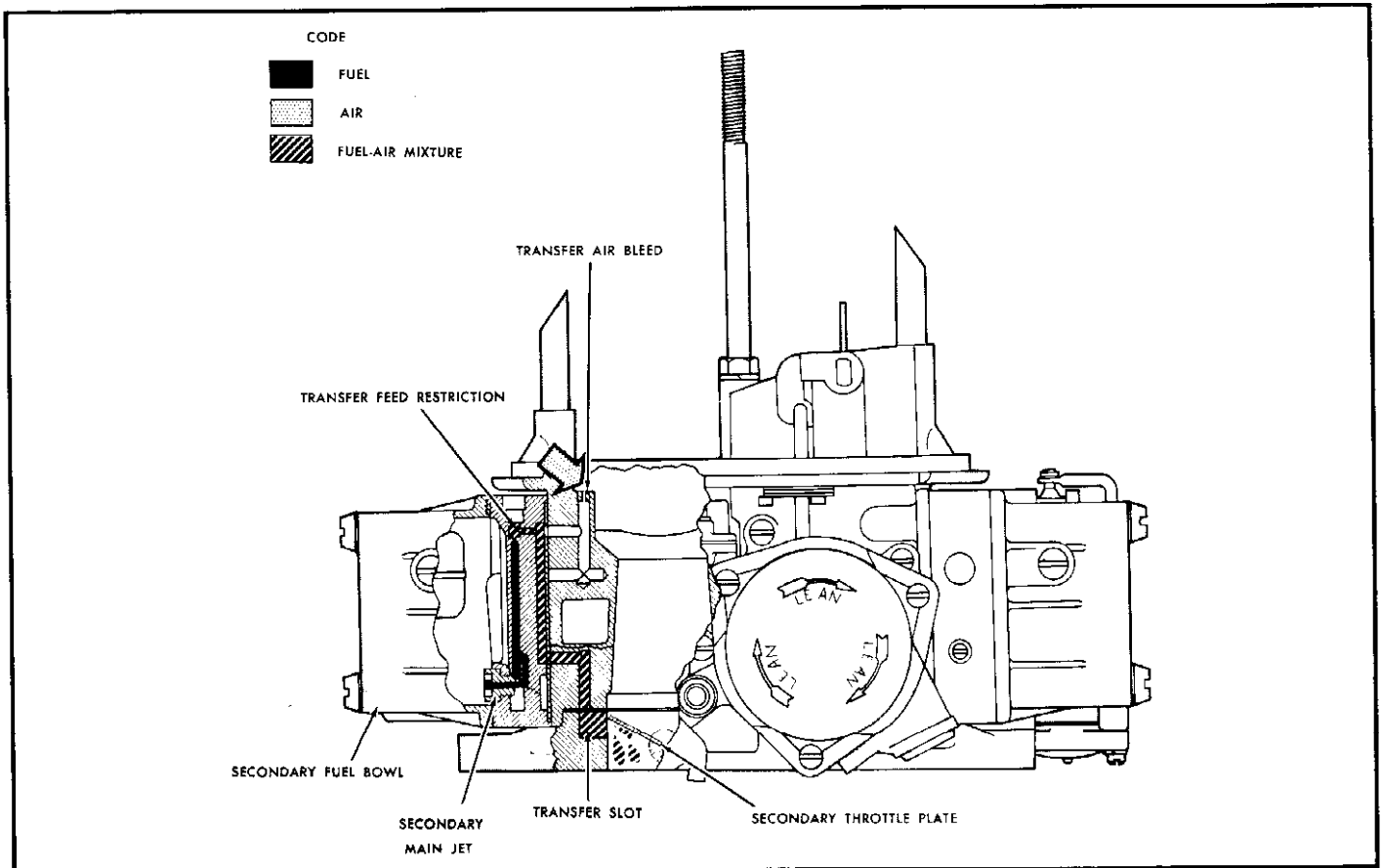


Fig. 9D-10—Secondary Fuel Metering System

Accelerating Pump System

A diaphragm-type accelerating pump is located on the bottom of the primary float bowl. See figure 9D-7. The spring loaded diaphragm is operated by a pump operating lever actuated by a cam attached to the primary throttle shaft lever. As the primary throttle is opened, the cam actuates the pump operating lever; the diaphragm overcomes spring tension to seat the inlet ball check and force fuel out of the pump diaphragm chamber. This fuel is routed through a diagonal passage in the primary metering body and into the main body. The pressure of the fuel causes the discharge ball check and its weight to unseat, and the fuel is discharged out of the pump discharge nozzle.

As the throttle is moved toward the closed position, the diaphragm spring forces the diaphragm down. As the diaphragm returns downward to its original position, the inlet check ball is unseated and the diaphragm chamber is filled with fuel from the float bowl.

“Pump pullover” is eliminated by the discharge check ball weight located above the check ball in the main body discharge passage.

The pump cam adjustment, which positions the pump cam in relation to the primary throttle shaft lever, determines the amount of pump discharge. Refer

to “Carburetor Adjustments” in this section of the manual.

Automatic Choke System

The operating principles of the automatic choke system are identical to the choke systems incorporated on previous models. See figure 9D-8.

A counterweight attached to the fast idle cam assembly assists the cam in returning to its slow idle position when the choke plate is in its open position.

A choke rod felt seal and seal retainers are located on the main body where the connecting rod from the choke housing lever to the choke plate passes through the air cleaner mounting flange. The seal prevents the entry of dust and dirt into the carburetor and engine.

Secondary Throttle Operating System

The positioning of the secondary throttle through primary and secondary venturi vacuum actuating the secondary diaphragm is identical to previous four-barrel carburetors. The venturi vacuum pickup ports are located in the right primary and right secondary throats (venturis) of the carburetor. See figure 9D-9.

Secondary Fuel Metering Systems

TRANSFER SYSTEM

The secondary transfer system operates at idle and fuel from the system increases in volume as the secondary plates begin to open, and fuel from the secondary float bowl is discharged from the transfer slots in the secondary throttle bores. See figure 9D-10.

The transfer system in the secondary metering body is identical to the primary idle system in the primary metering body, with the exception that mixture adjusting needles are not incorporated in the transfer system. The transfer system incorporates air bleed holes in the secondary metering body which, in location, are identical to the primary body idle adjusting needle holes.

SECONDARY MAIN METERING SYSTEM

When the secondary throttle plates are opened beyond the transfer system stage, the low pressure area in the secondary booster venturis causes the secondary main metering system to function. The secondary metering system circuits are identical to those in the primary main metering system.

SECONDARY FUEL ENRICHMENT SYSTEM

The secondary fuel enrichment system is identical to the primary fuel enrichment system. The secondary power valve assembly is distinguished from the primary power valve by the numeral 105 stamped on one of the four flats on the head of the valve assembly.

CARBURETOR ADJUSTMENTS (ON CAR)

The following adjustments can be performed without removal of carburetor. Remove air cleaner and proceed as follows:

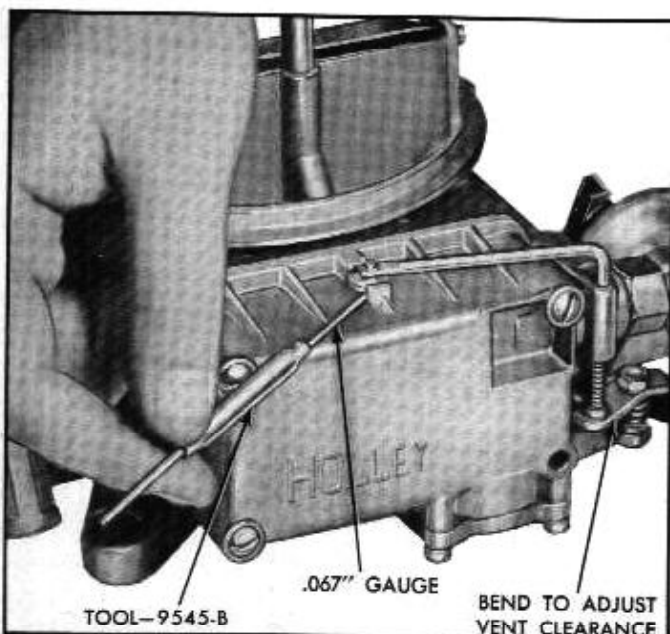


Fig. 9D-11—Primary Float Bowl Vapor Vent Adjustment

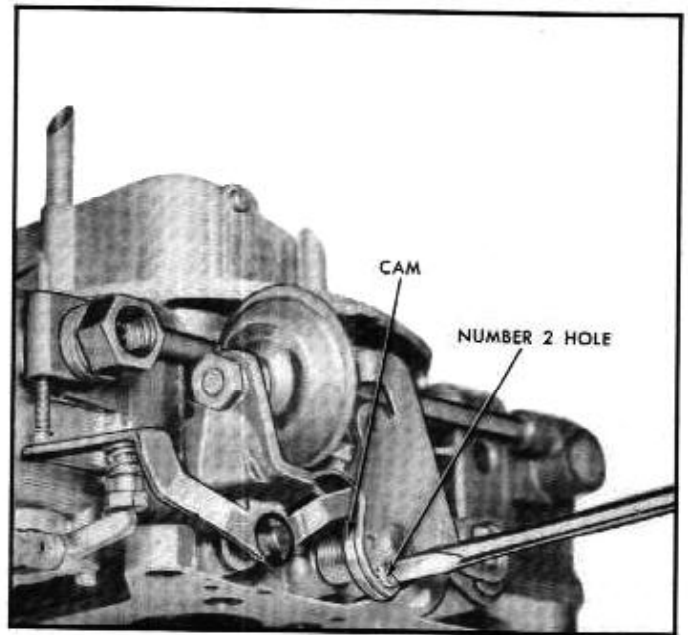


Fig. 9D-12—Accelerating Pump Adjustment

Primary Float Bowl Vapor Vent Adjustment

With the primary throttle plates closed, there should be .067" clearance between the unscated bowl vent valve and the vent valve seat. Check clearance with .067" gauge of Tool 9545-B (T109-234). See figure 9D-11.

When the primary throttle plates open, the valve should be seated on the primary float bowl. To adjust as required, bend the vent arm of the accelerating pump lever.

CAUTION: Do not bend the vent valve rod. Adjust only at the accelerating pump lever.

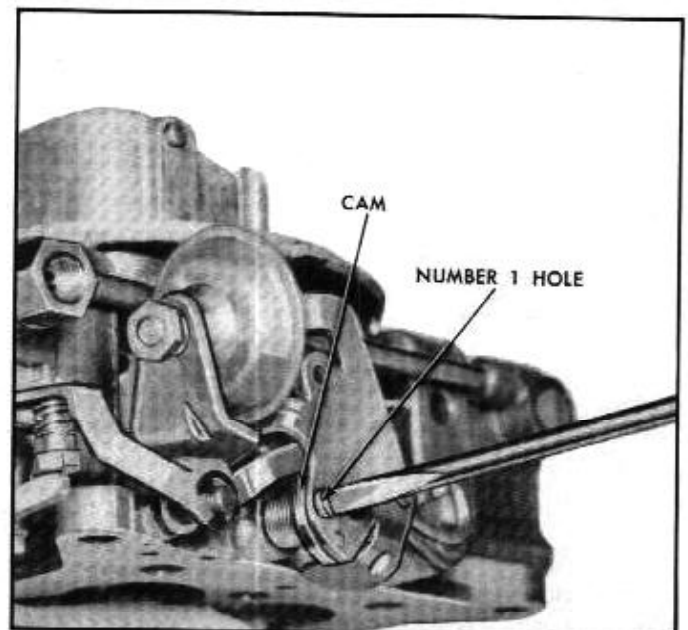


Fig. 9D-13—Accelerating Pump Adjustment

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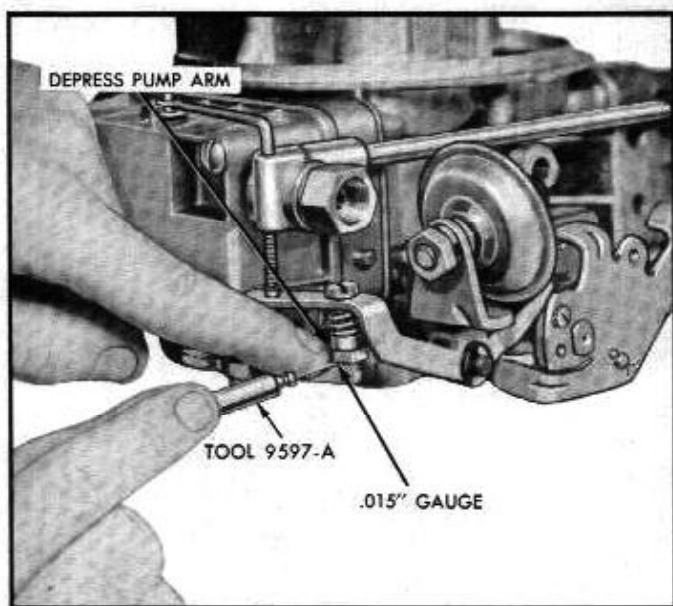


Fig. 9D-14—Accelerating Pump Over-Ride Adjustment

Accelerating Pump Stroke Adjustment

The holes designated 1 and 2 on the primary throttle shaft lever, and the corresponding holes on the pump cam, located behind the lever, permit adjustment of accelerating pump stroke and pump discharge. The number 2 (lower) hole adjustment provides maximum pump discharge for cold weather operation; the number 1 (upper) hole provides minimum pump discharge.

To adjust pump stroke for maximum pump discharge, align the number 2 hole of the throttle shaft lever with the lower hole on the pump cam; install the screw in the number 2 hole. See figure 9D-12.

To adjust pump stroke for minimum pump discharge, align the number 1 hole of the throttle shaft lever with the upper hole on the pump cam; install the screw in the number 1 hole. See figure 9D-13.

Accelerating Pump Over-ride Adjustment

1. With the primary throttle plates held in the wide open position, there should be .015" clearance between the accelerating pump arm and the hex nut on the accelerating lever, with the pump arm held fully depressed. See figure 9D-14. Use .015" gauge of Tool 9597-A (T109-44) to check clearance.
2. TO ADJUST, hold the hex nut stationary and turn the adjusting screw on the pump lever as required to obtain proper clearance.
NOTE: One-half turn of the adjusting screw is equivalent to .015" vertical movement.

Idle Adjustments

If one of the idle adjustments is changed, other

carburetor adjustments may also be affected. It is necessary that the adjustments be made in the following order:

1. Idle mixture adjustment.
2. Hot idle R.P.M. adjustment.
3. Cold idle R.P.M. adjustment.
4. Dashpot adjustment.

IDLE MIXTURE ADJUSTMENT

1. Run engine until it reaches operating temperature.
NOTE: If engine is cold, it must be run approximately one half hour at 1200 R.P.M. to stabilize temperature.
2. Turn cold engine idle adjustment screw out until it no longer touches fast idle cam.
3. Turn each idle mixture adjustment screw in until it just touches its seat, then back each screw out $1\frac{1}{4}$ turns.

CAUTION: Do not force the idle mixture adjustment screws against their seats as the tips will become grooved making it impossible to correctly adjust idle mixture.

4. Turn hot engine idle adjusting screw in or out to obtain 475 to 500 engine R.P.M. with transmission in neutral position.
5. Turn one idle mixture adjusting screw in until engine begins to run rough.
6. Back the same mixture adjustment screw out until the engine begins to "roll" indicating a rich mixture.
7. Turn the same mixture adjustment screw in just enough to provide the smoothest engine idle.
8. Repeat steps 5, 6, and 7 with the other idle mixture adjustment screw.

NOTE: Final adjustment of the idle fuel mixture should favor the "rich" side of the mixture range to insure the smoothest engine idle throughout the extremes of engine operating temperatures.

9. If engine idle R.P.M. has changed, reset to 475 to 500 R.P.M., using hot engine idle screw.
10. Readjust each idle mixture screw $1/8$ of a turn in each direction for smoothest idle.
11. Repeat step 9 if necessary. Perform hot idle R.P.M. adjustment.

HOT IDLE R.P.M. ADJUSTMENT

1. Set parking brake and place transmission key board control in "D" position (automatic transmission).
2. Momentarily open throttle slightly and allow throttle to close. Engine idle should be from 425 to 450 R.P.M. (475 to 500 R.P.M., standard

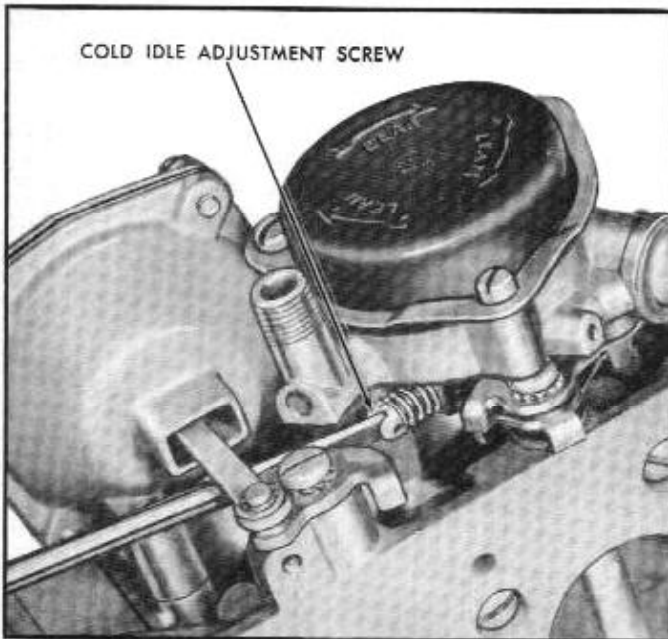


Fig. 9D-15—Cold Idle Adjustment Screw

transmission in neutral). If R.P.M. is not correct adjust with hot engine idle screw.

3. Perform cold idle adjustment.

COLD IDLE ADJUSTMENT

1. Perform the idle mixture and hot idle R.P.M. adjustment as outlined.
2. Make sure that the fast idle cam is in the slow position with the choke plate held wide open and primary throttle plates held in their closed position. Turn the cold engine idle adjustment screw in until it just touches the lowest step of the fast idle cam. Then back off 1/4 turn. See figure 9D-15.

NOTE: The cold engine idle screw may be backed off not more than one full turn in localities where a normal setting of the cold engine speed may seem unnecessarily high.

Dashpot Adjustment

1. Make the idle mixture, hot idle R.P.M. and cold idle R.P.M. adjustments.
2. Hold dashpot plunger in to the limit of its travel.
3. Loosen locknut securing dashpot to dashpot bracket. Insert .067" gauge of Tool 9545-B (T109-234) between dashpot plunger and primary throttle operating lever. Rotate dashpot to obtain proper 1/16" clearance between plunger and lever. NOTE: Be sure throttle is closed so hot idle screw is against the stop.
4. Tighten dashpot locknut and recheck clearance.

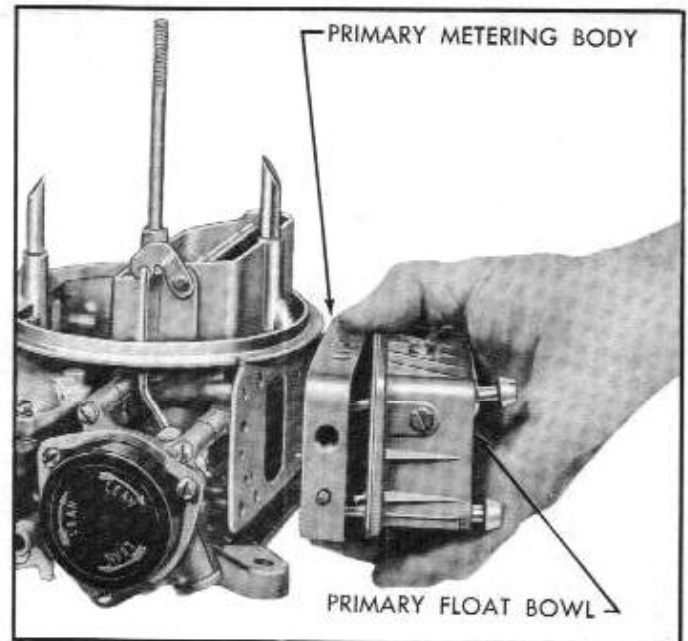


Fig. 9D-16—Removing Primary Float and Metering Body

Float Level Adjustments (Off Car)

PRIMARY FLOAT LEVEL

1. Remove one lower screw and drain fuel from float bowl into suitable container.
2. Remove other three screws securing primary float bowl and primary metering body to carburetor main body; remove float bowl and metering body. See figure 9D-16.
3. Separate metering body and float bowl and remove gaskets. Invert float bowl. Install 13/16" gauge of Tool 9550K-1 in bowl as shown in figure

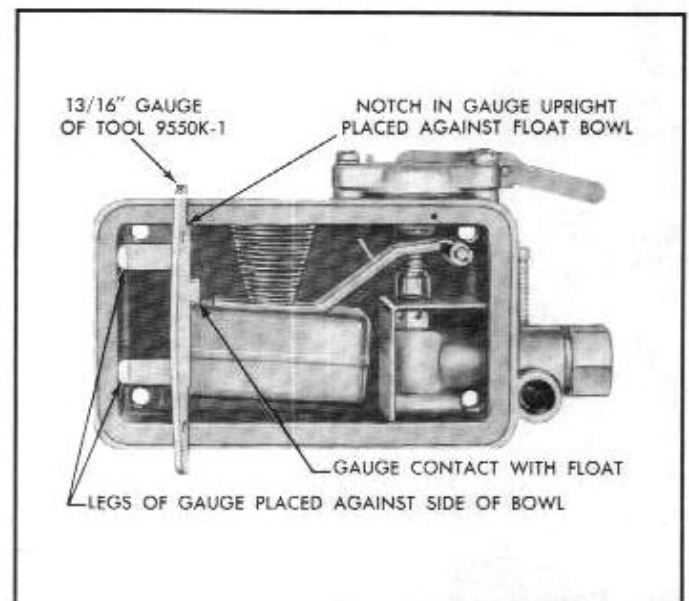


Fig. 9D-17—Gauging Primary Float Level

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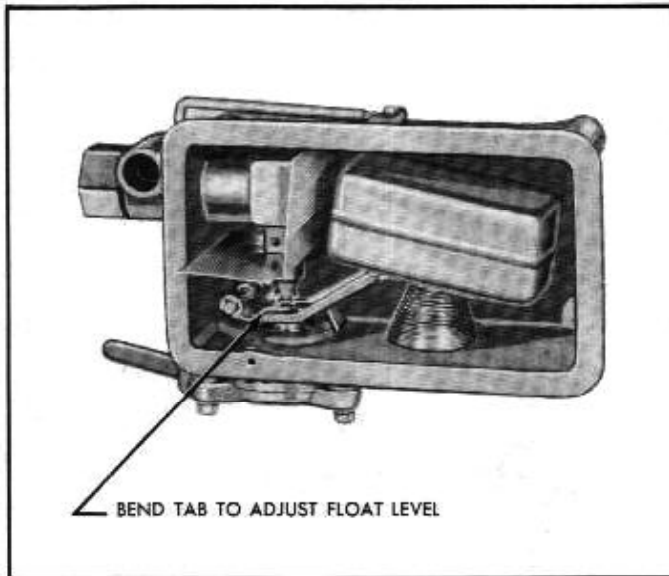


Fig. 9D-18—Adjusting Primary Float Level

9D-17. With notch in gauge upright placed against inverted bottom edge of float bowl, and the two horizontal legs of gauge contacting side of float bowl, gauge should lightly contact inverted lower edge of float.

4. To adjust float level, bend the fuel inlet needle tab on the float lever. See figure 9D-18. To decrease clearance between float and gauge, bend tab towards fuel inlet needle and away from float lever. To increase clearance, bend tab away from fuel inlet needle and toward float lever.

SECONDARY FLOAT LEVEL

1. Remove one lower screw and drain fuel from bowl into suitable container.

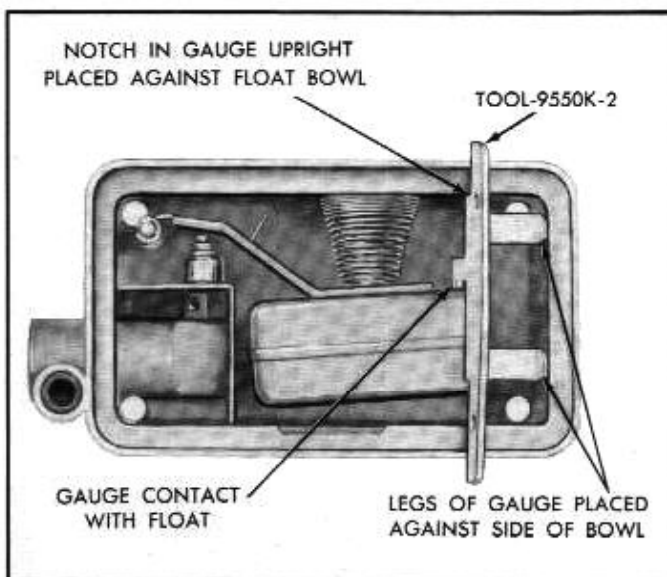


Fig. 9D-19—Gauging Secondary Float Level

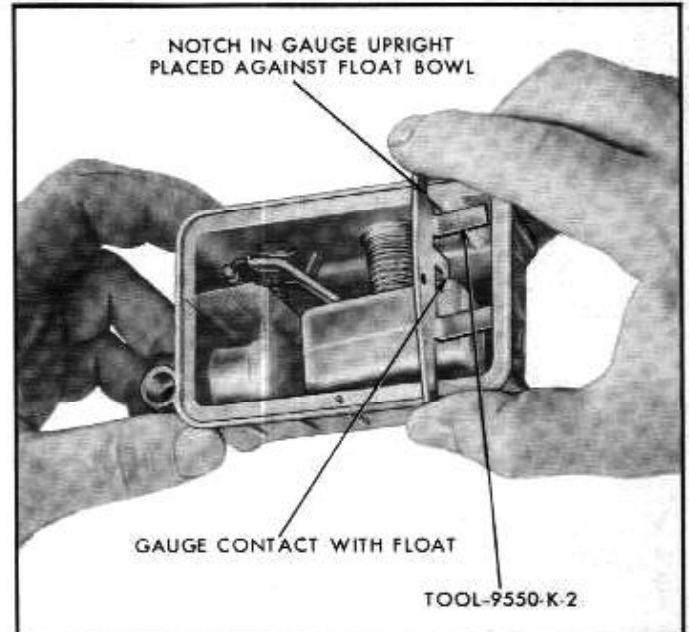


Fig. 9D-20—Gauging Secondary Float Level

2. Remove other three screws securing secondary float bowl and secondary metering body to carburetor body; remove float bowl and metering body.
 3. Separate metering body and float bowl and remove gaskets. Invert float bowl. Install 3/4" gauge of Tool 9550K-2 in bowl as shown in figure 9D-19. With notch in gauge upright placed against inverted bottom edge of float bowl, and the two horizontal legs of gauge contacting side of float bowl, gauge should lightly contact inverted lower edge of float.
- NOTE: For float gauge application on later type secondary float bowl see figure 9D-20.
4. To adjust float level, bend the fuel inlet needle tab on the float lever. To decrease clearance between float and gauge, bend tab towards fuel inlet needle and away from float lever. To increase clearance, bend tab away from fuel inlet needle and toward float lever.

REMOVING CARBURETOR FROM ENGINE

1. Carefully remove air cleaner from the engine.
2. Unhook clip that secures carburetor control shaft rod to throttle lever. Remove rod from hole in throttle lever.
3. Disconnect distributor vacuum advance line connection at the carburetor.
4. Disconnect choke heat tube at choke housing.
5. Disconnect fuel line connection at carburetor.
6. Remove four nuts and lockwashers securing carburetor to intake manifold. Carefully remove carburetor from engine.

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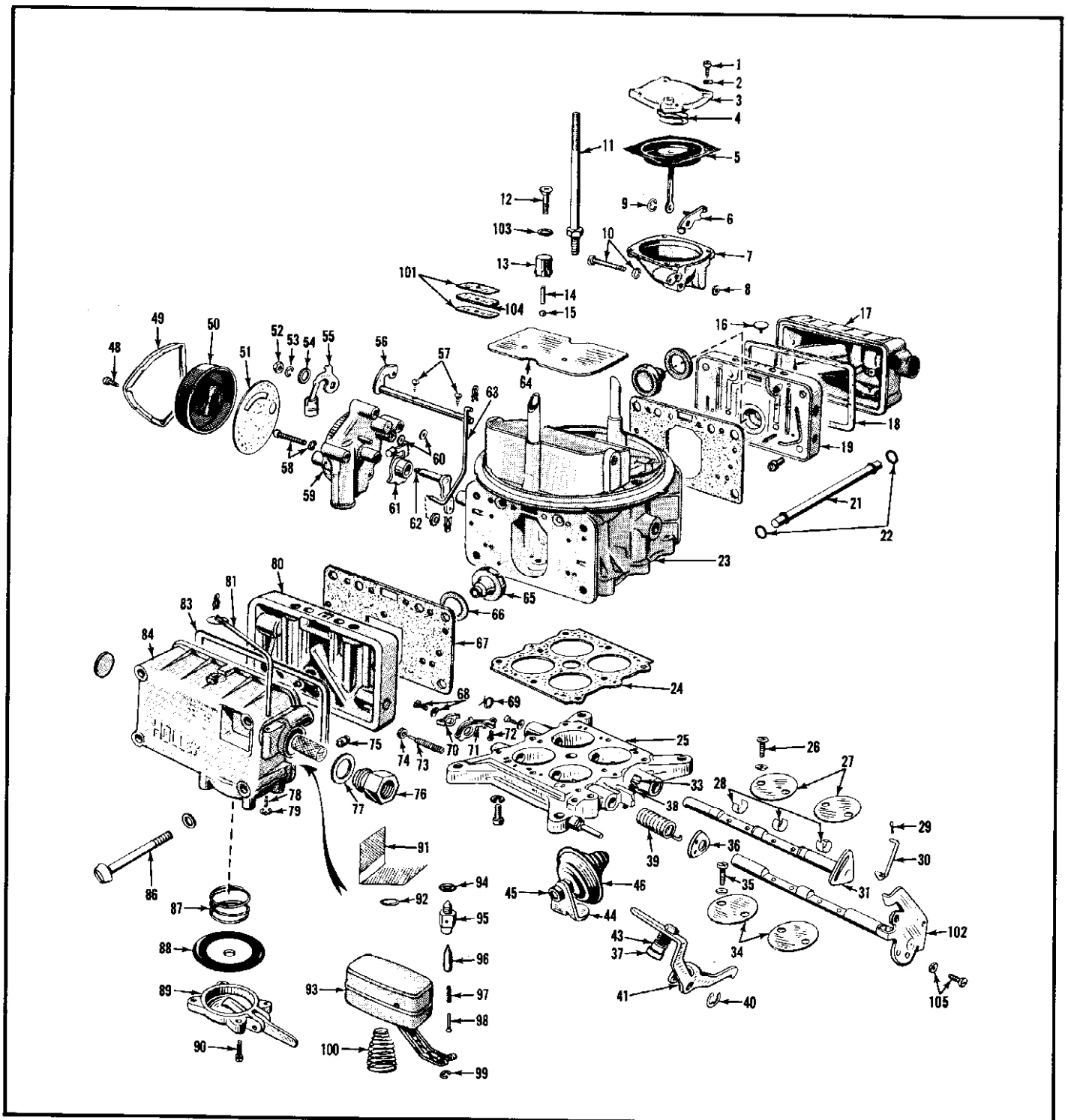


Fig. 9D-21—Holley Model 4150 Carburetor — Disassembled

HOLLEY MODEL 4150 CARBURETOR NOMENCLATURE

(See figure 9D-21.)

- | | |
|---|--|
| 1. Secondary Throttle Diaphragm Cover Screw (4) | 6. Secondary Throttle Diaphragm Lever Assembly |
| 2. Lockwasher (4) | 7. Diaphragm Housing and Plug Assembly |
| 3. Secondary Throttle Diaphragm Cover | 8. Secondary Diaphragm Housing Gasket |
| 4. Secondary Throttle Diaphragm Return Spring | 9. Retainer |
| 5. Secondary Throttle Diaphragm Assembly | 10. Screw and Washer Assembly |

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11. Air Cleaner Anchor Stud
12. Pump Discharge Nozzle Screw
13. Pump Discharge Nozzle
14. Pump Check Ball Weight
15. Pump Check Ball
16. Secondary Float Bowl Vent Valve
17. Secondary Float Bowl and Plugs Assembly
18. Secondary Float Bowl Gasket
19. Secondary Metering Body
20. Secondary Metering Body Gasket
21. Float Bowl Connecting Tube
22. Connecting Tube "O" Ring
23. Main Body
24. Main Body to Throttle Body Gasket
25. Throttle Body
26. Secondary Throttle Plate Screws and Washer (4)
27. Secondary Throttle Plates
28. Secondary Throttle Shaft Bushings
29. Retainer
30. Secondary Throttle Control Rod
31. Secondary Throttle Shaft
32. Retainer
33. Fast Idle Adjusting Screw
34. Primary Throttle Plates
35. Primary Throttle Plate Screws and Washers
36. Pump Diaphragm Operating Cam
37. Nut (Sleeve) 10-32 x 17/64"
38. Idle Adjusting Screw Spring
39. Throttle Lever Return Spring
40. Pump Operating Lever Retainer
41. Pump Piston Operating Lever
42. Pump Lever Adjusting Screw
43. Pump Lever Adjusting Screw Spring
44. Dashpot Mounting Bracket
45. Nut (Hex) 5/16" - 24
46. Dashpot
47. Throttle Body to Main Body Attaching Screw and Lockwasher Assemblies (8)
48. Thermostatic Choke Housing Screw (3)
49. Thermostatic Choke Housing Clamp
50. Thermostatic Choke Housing Cover and Spring
51. Choke Cover Gasket
52. Choke Piston Retaining Nut
53. Washer
54. Choke Shaft Spacer
55. Thermostatic Choke Piston and Link Assembly
56. Choke Piston Lever and Shaft Assembly
57. Choke Plate Screws
58. Screw and Lockwasher Assembly
59. Choke Housing and Plug Assembly
60. Gasket
61. Fast Idle Cam Assembly
62. Choke Shaft and Lever Assembly
63. Choke Control Rod
64. Choke Plate
65. Primary Power Valve Assembly
66. Gasket
67. Secondary Metering Body Gasket
68. Screw and Washer Assembly
69. Fast Idle Cam Spring
70. Choke Shaft Lever
71. Fast Idle Adjusting Lever
72. Fast Idle Adjusting Lever Screw and Spring (Separate Parts)
73. Idle Adjusting Needle
74. Idle Adjusting Needle Seal
75. Primary Main Metering Jet (2)
76. Fuel Inlet Adapter
77. Fuel Inlet Adapter Gasket
78. Primary Float Vent Spring
79. Retainer
80. Primary Metering Body
81. Vent Lever
82. Primary Float Bowl Vent Valve
83. Primary Float Bowl Gasket
84. Primary Float Bowl and Plug Assembly
85. Fuel Inlet Filter Screen
86. Float Bowl and Metering Body Attaching Screws (8)
87. Pump Piston Return Spring
88. Pump Piston Assembly
89. Pump Cover Assembly
90. Screw and Washer Assembly (4)
91. Primary Float Bowl Baffle
92. Float Baffle Plate Retainer
93. Float and Lever Assembly
94. Fuel Inlet Seat Screw Gasket
95. Fuel Inlet Seat
96. Fuel Inlet Needle
97. Fuel Inlet Needle Spring
98. Fuel Inlet Needle Pin
99. Retainer
100. Float Spring (2)
101. Choke Rod Seal Retainers
102. Primary Throttle Shaft and Lever Assembly
103. Pump Discharge Nozzle Gasket
104. Choke Rod Seal
105. Pump Operating Cam Adjusting Screw and Lockwasher
106. Float Bowl Screw Gasket (8)
107. Secondary Float and Lever Assembly
108. Secondary Main Metering Jets (2)
109. Power Valve
110. Power Valve Gasket
111. Retainer
112. Washer
113. Retainer
114. Washer

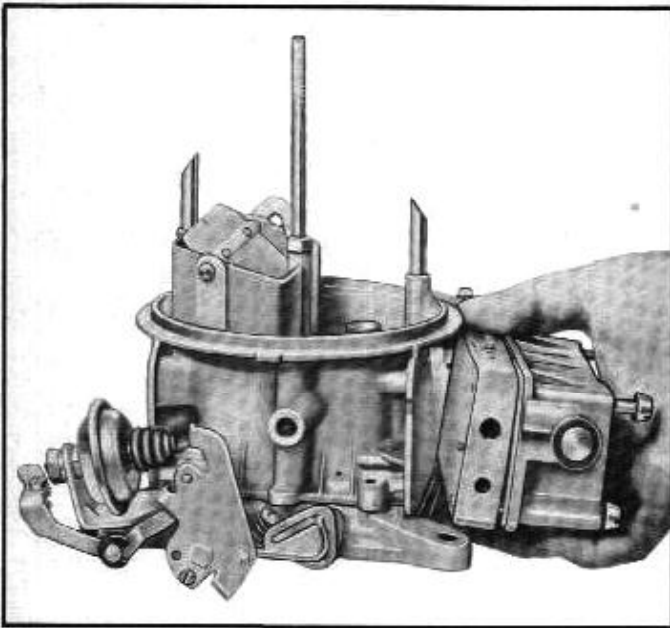


Fig. 9D-22—Removing Secondary Fuel Bowl

DISASSEMBLY OF HOLLEY MODEL 4150 CARBURETOR

Disassembly of Primary and Secondary Fuel Bowls and Metering Bodies

1. Remove the four primary fuel bowl screws and gaskets. Discard the gaskets. See figure 9D-16.
2. Separate the primary fuel bowl, fuel bowl gasket, metering body and metering body gasket. Discard the gaskets.
3. Remove float bowl connecting tube and discard the two "O" rings.

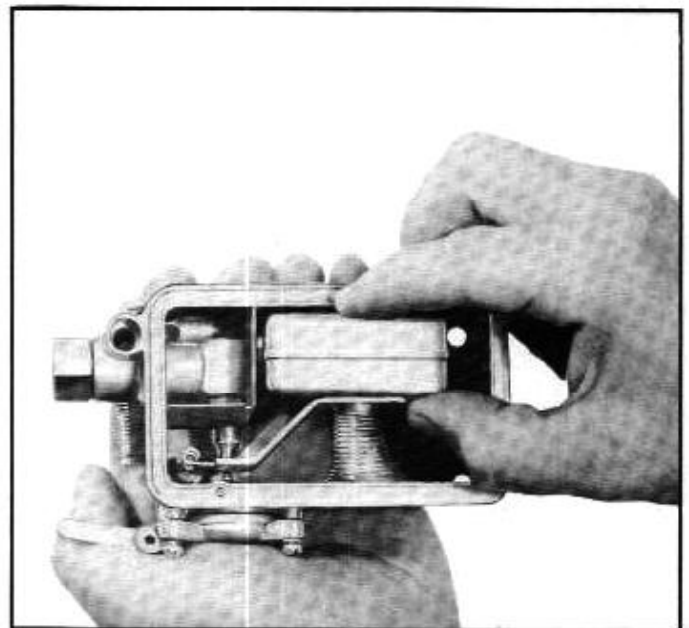


Fig. 9D-24—Removing Primary Float and Hinge Retainer

4. Remove four secondary fuel bowl screws and washers. Discard the washers. See figure 9D-22.
5. Separate the fuel bowl, fuel bowl gasket, metering body and metering body gasket. Discard the gaskets.
6. Remove the secondary diaphragm rod retainer. See figure 9D-23.
7. Remove the primary float and hinge retainer and slide the float and hinge assembly off its stud. The float spring will come off its boss at the same time. See figure 9D-24.
8. Remove and discard the baffle plate retainer "O" ring.

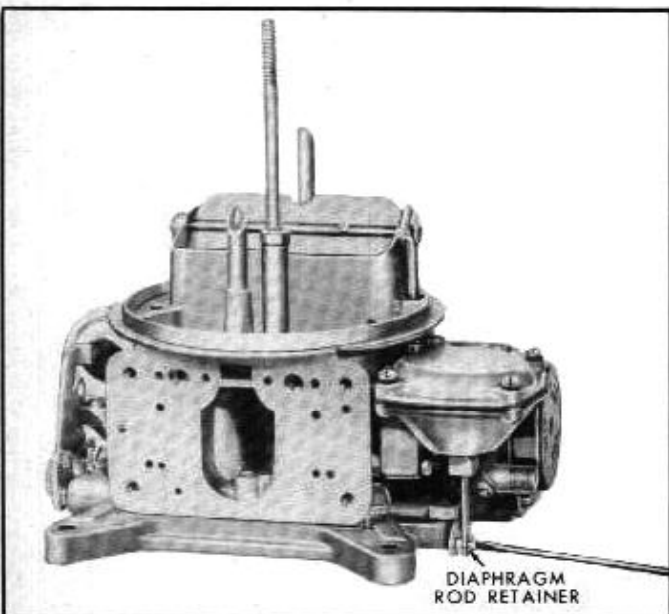


Fig. 9D-23—Removing Diaphragm Rod Retainer

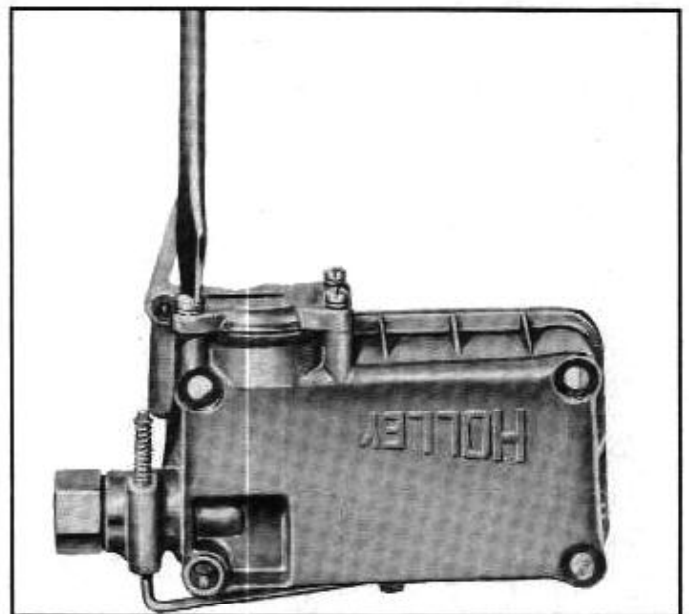


Fig. 9D-25—Removing Diaphragm Cover Screws

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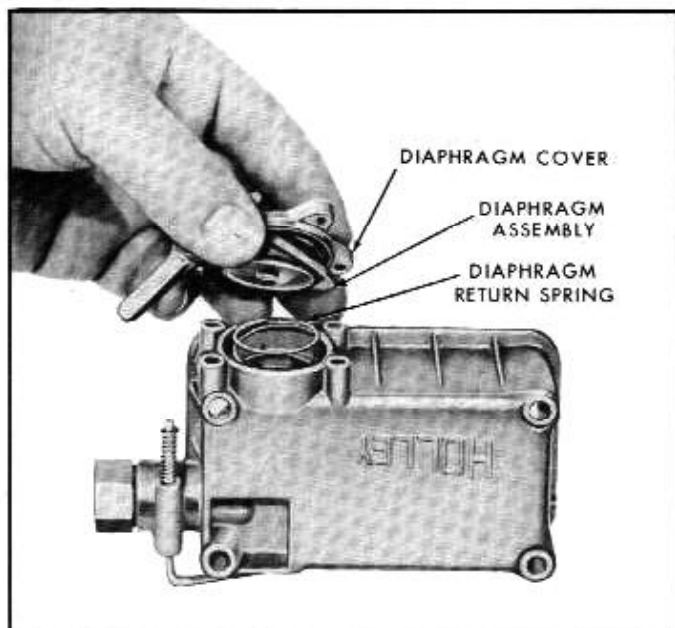


Fig. 9D-26—Removing Diaphragm Assembly

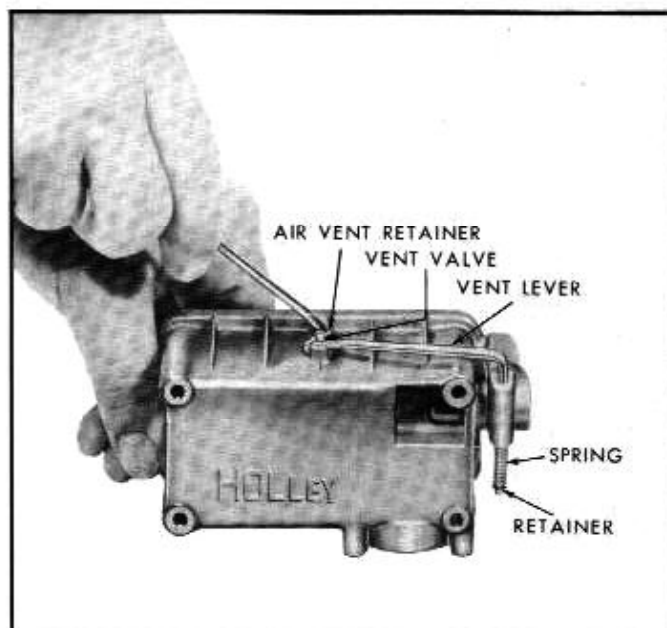


Fig. 9D-28—Removing Air Vent Retainer

9. Remove the baffle plate.
10. Remove the fuel valve and seat assembly. Remove and discard gasket.
11. Remove the four pump diaphragm cover screws and lockwashers. See figure 9D-25.
12. Remove pump diaphragm cover, diaphragm assembly and diaphragm return spring. See figure 9D-26.
13. Remove fuel inlet fitting and discard the gasket. Remove filter screen assembly. See figure 9D-27.
14. Remove air vent retainer and air vent rod spring retainer. See figure 9D-28.

15. Slide the spring off the air vent push rod and remove the air vent push rod from the fuel bowl. Lift off the air vent valve.
16. Remove the two main jets from primary metering body. See figure 9D-29.
17. Using a 1" box end wrench, remove the power valve assembly and gasket. Discard the gasket.
18. Remove the two idle adjusting needles and their seals. Discard the seals. See figure 9D-30.
19. Remove the secondary float and hinge retainer from the secondary fuel bowl.
20. Slide the float and hinge assembly off its stud.

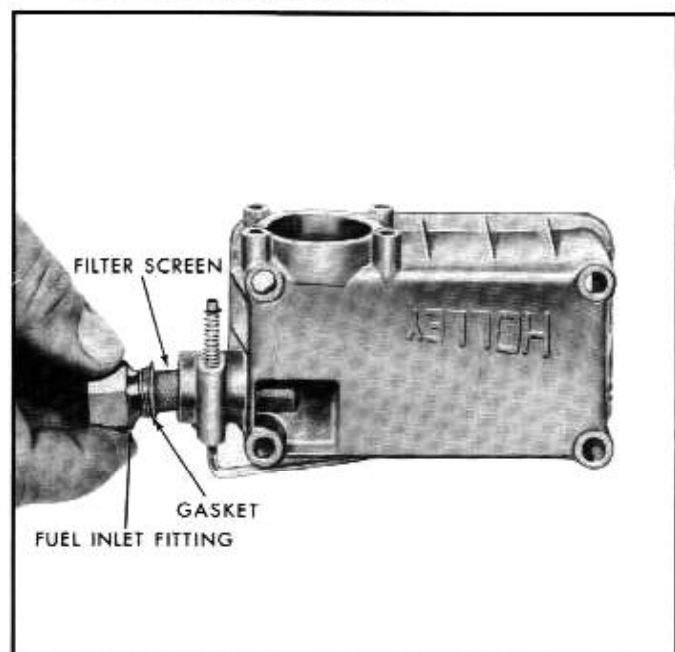


Fig. 9D-27—Removing Fuel Inlet Fittings

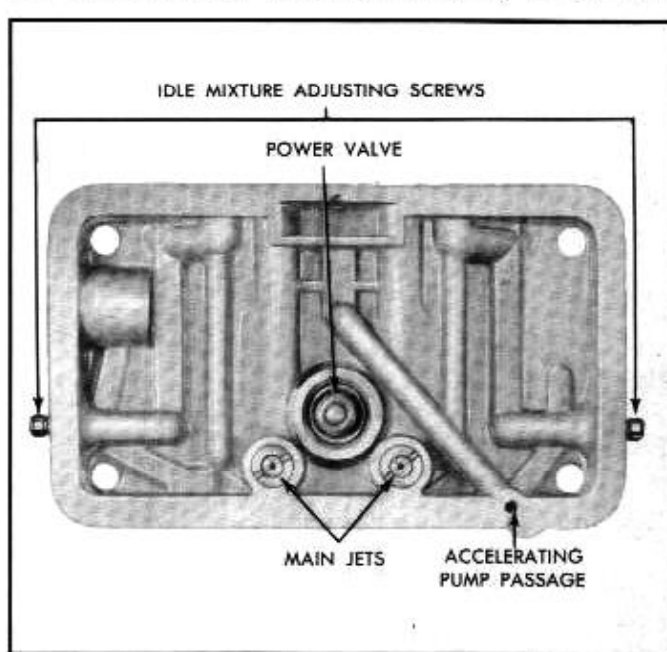


Fig. 9D-29—Primary Metering Body

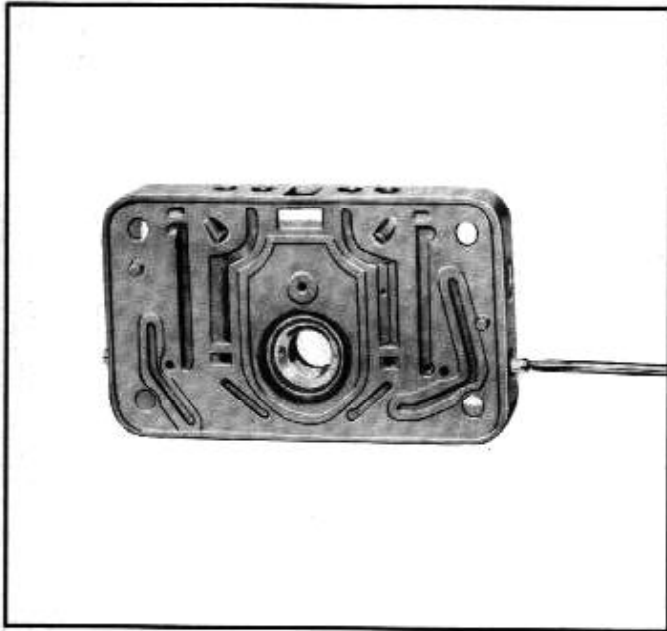


Fig. 9D-30—Removing Idle Adjusting Needles

The float spring will come off its boss at the same time.

21. Remove and discard the baffle plate retainer "O" ring, slide the baffle plate out of its position.
22. Remove the fuel valve and seat assembly, discard the gasket.
23. Using 1" box end wrench, remove the power valve assembly, discard the gasket.
24. From the secondary metering body, remove the two main jets.

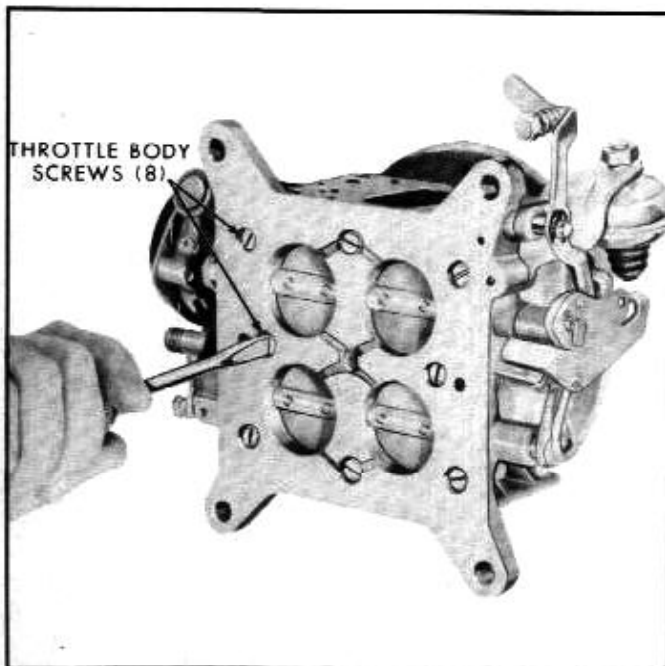


Fig. 9D-31—Removing Throttle Body Screws

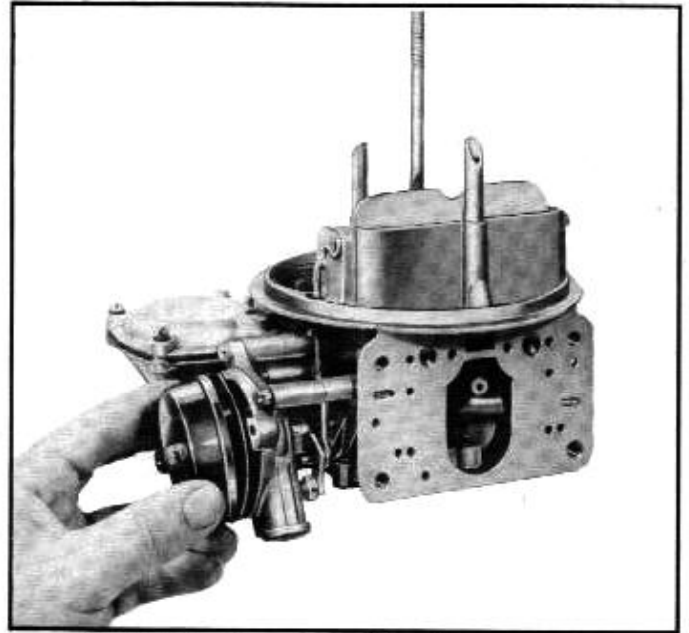


Fig. 9D-32—Removing Choke Housing Cover

Disassembly of Main Body Assembly

1. Remove the eight throttle body to main body screws and lockwashers. See figure 9D-31.
2. Lift the throttle body off the main body. Remove and discard the gasket.
3. Remove the three thermostat housing screws and clamp. See figure 9D-32.
4. Remove the thermostat housing cover and gasket. Discard gasket.
5. Remove the lower choke rod retainer and flat washer.

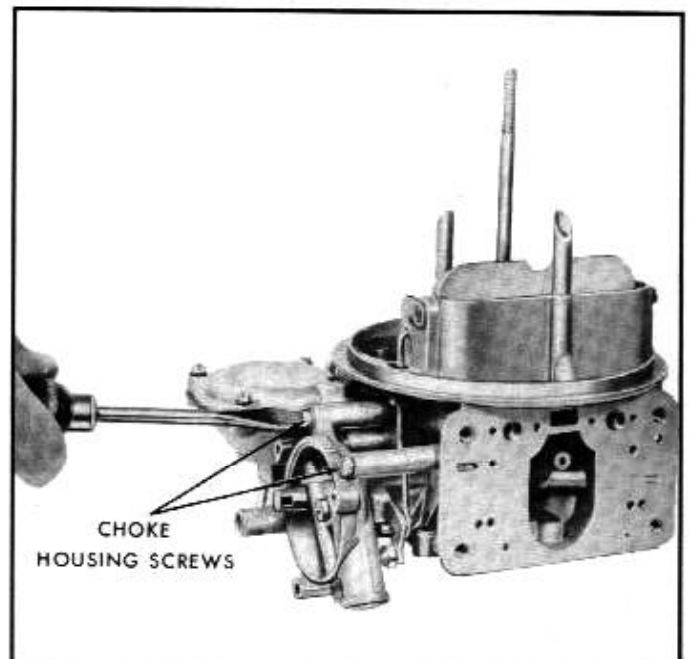


Fig. 9D-33—Removing Choke Housing Screws

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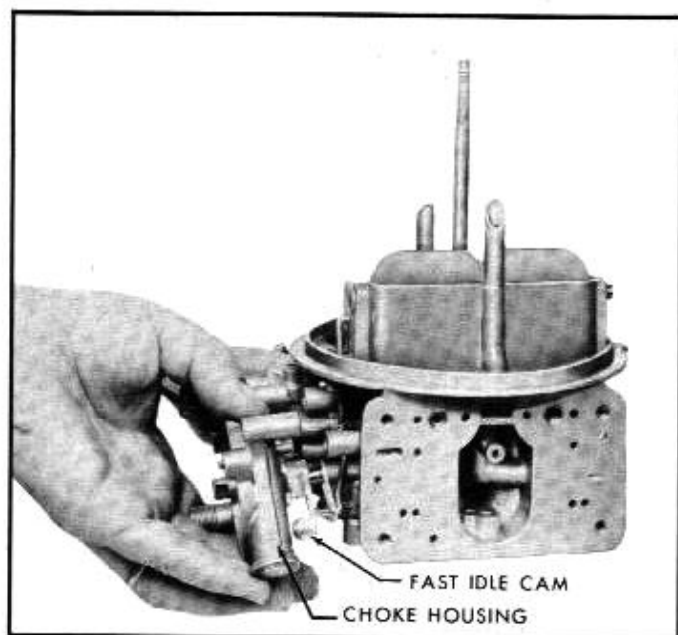


Fig. 9D-34—Removing Choke Housing

6. Remove the three choke housing screws and lockwashers and lift housing, fast idle cam and choke housing shaft off the main body. Discard the two choke housing gaskets. See figure 9D-33.
7. Remove the choke shaft nut, lockwasher and spacer.
8. Remove the choke housing shaft and fast idle cam. See figure 9D-34.
9. Slide the thermostat lever, link and piston assembly out of its chamber.
10. Remove the three secondary diaphragm screws and lockwashers. See figure 9D-35.

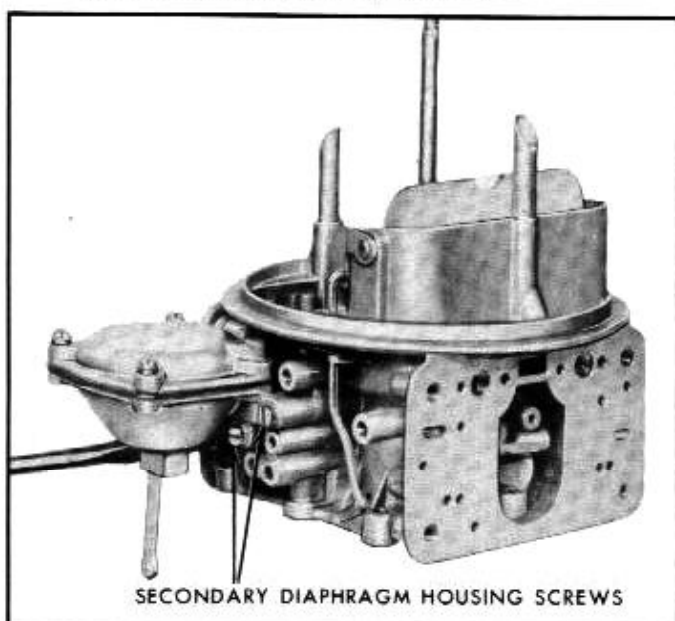


Fig. 9D-35—Removing Secondary Diaphragm Housing Screws

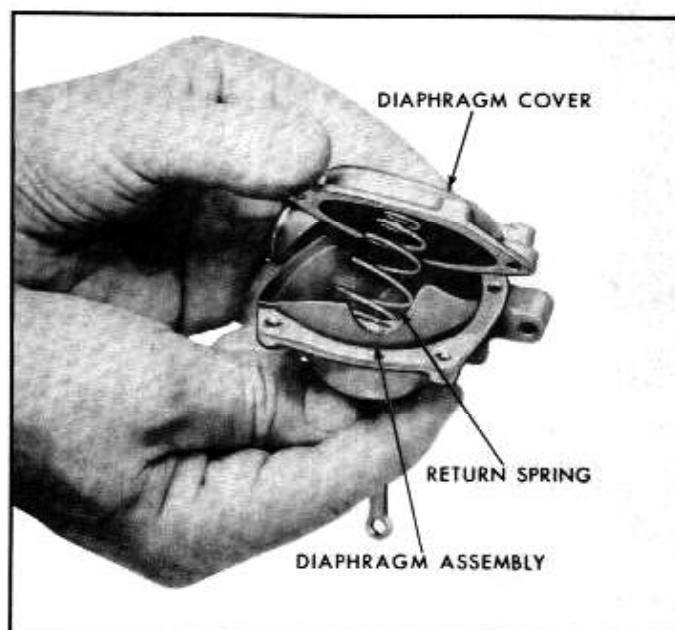


Fig. 9D-36—Removing Secondary Diaphragm Cover

11. Lift the secondary diaphragm housing off the main body. Discard the housing gasket.
12. Remove the four diaphragm cover screws and lockwashers.
13. Lift the cover off the housing and remove the diaphragm spring, diaphragm assembly and the diaphragm check ball. Discard diaphragm assembly. See figure 9D-36.
14. Remove the upper choke rod retainer.
15. Slide the choke rod out of its position, and remove the two choke rod retainers and seal. Discard the seal.

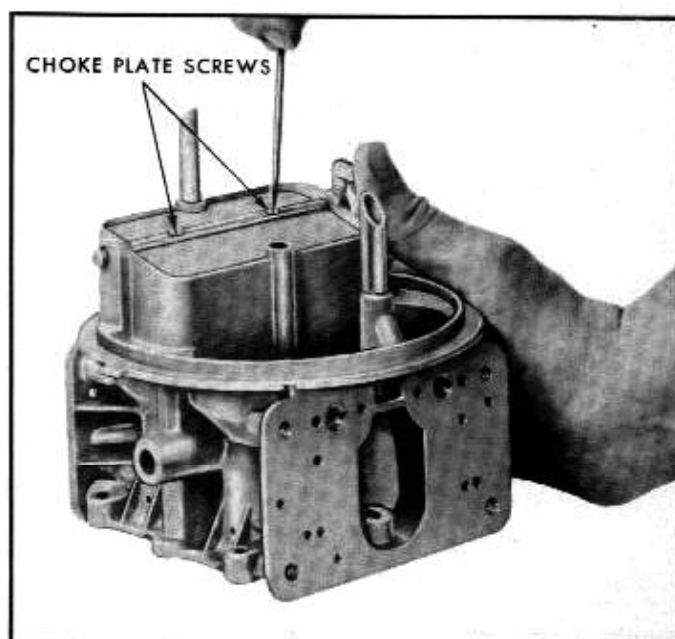


Fig. 9D-37—Removing Choke Plate Screws

1957 MERCURY MAINTENANCE MANUAL

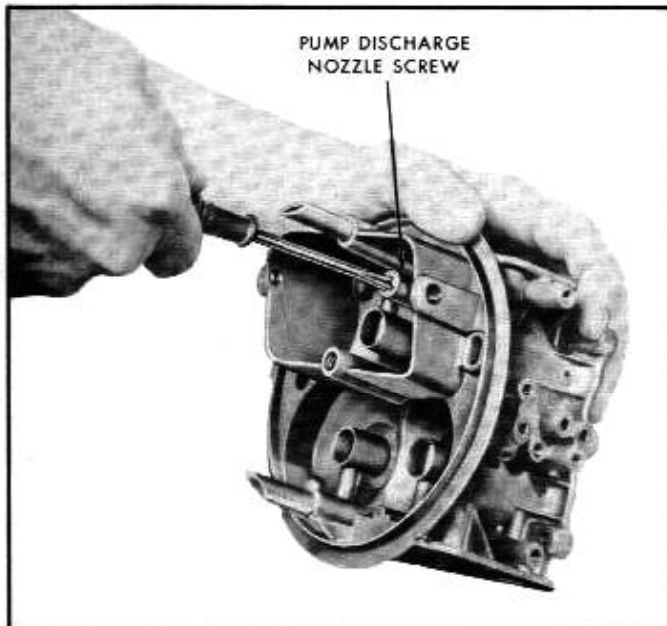


Fig. 9D-38—Removing Pump Discharge Nozzle Screw

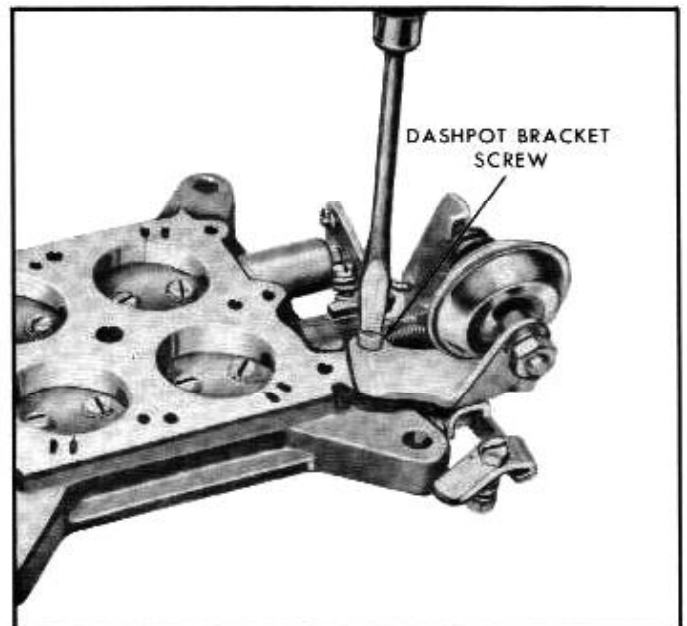


Fig. 9D-40—Removing Dashpot Bracket Screw

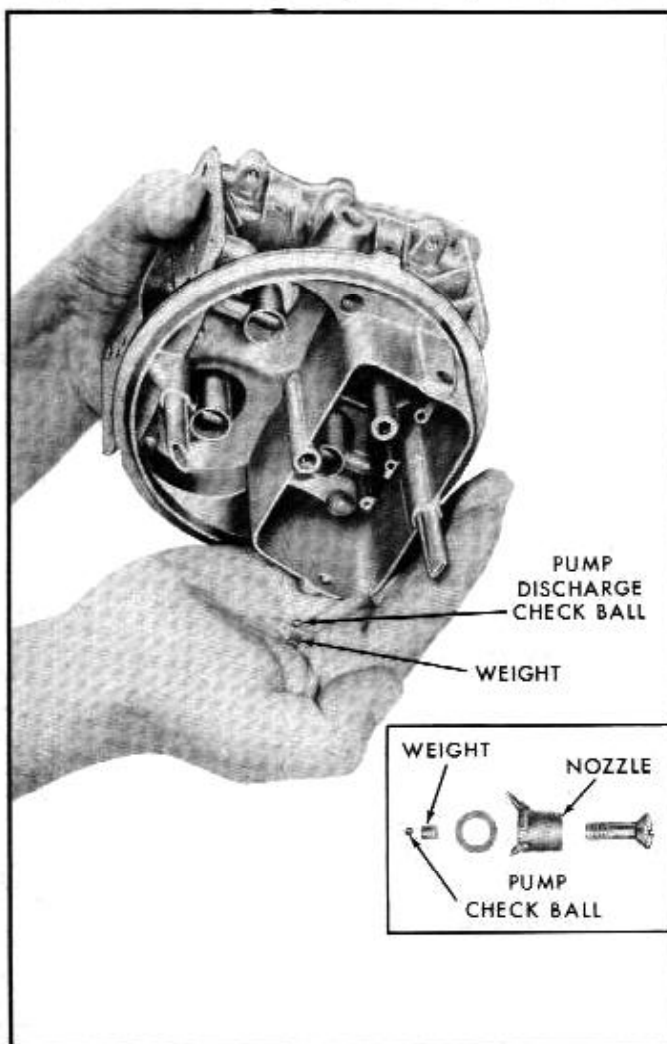


Fig. 9D-39—Removing Pump Nozzle, Weight and Check Ball

16. Lightly scribe a mark along the choke shaft to insure proper positioning of the choke plate for reassembly.
17. Remove the two choke plate screws and remove the choke plate. See figure 9D-37.
18. Remove the choke shaft.
19. Using a Phillips head screwdriver, remove the pump discharge nozzle screw. See figure 9D-38.
20. Remove the pump discharge nozzle and gasket. Discard the gasket.
21. Invert the main body and shake out the pump check ball and weight. See figure 9D-39.

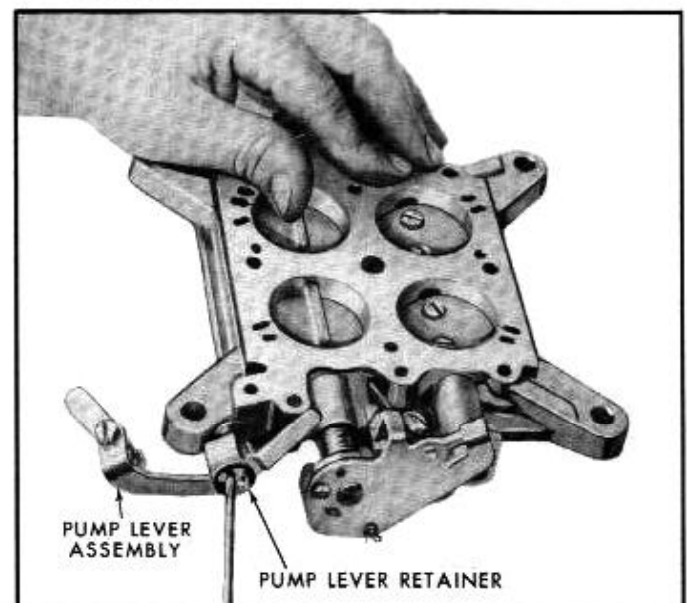


Fig. 9D-41—Removing Fuel Pump Lever Retainer

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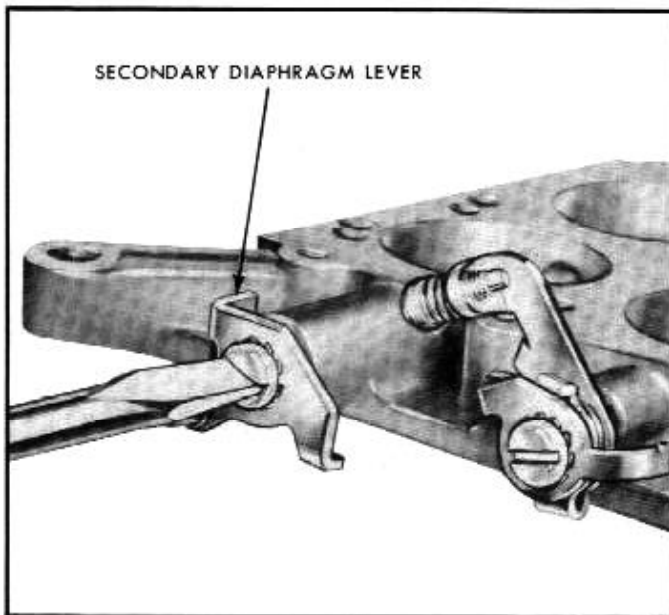


Fig. 9D-42—Removing Secondary Diaphragm Lever

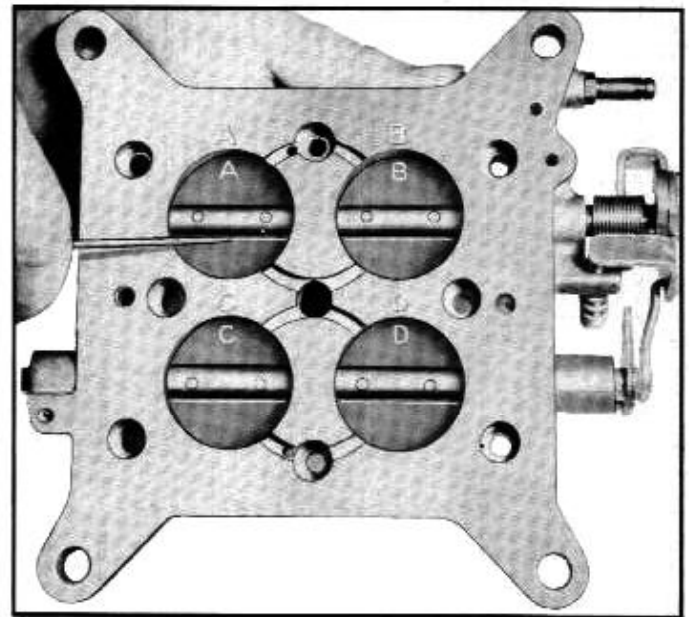


Fig. 9D-44—Scribing Throttle Plates

Disassembly of Throttle Body Assembly

1. Remove the dashpot bracket screw and lockwasher. See figure 9D-40.
2. Remove the fuel pump lever retainer and slide lever off its stud. See figure 9D-41.
3. Remove the throttle stop screw and spring.
4. Remove the secondary diaphragm lever screw and lockwasher. The lever will fall off. See figure 9D-42.
5. Remove the fast idle cam lever screw and lockwasher. See figure 9D-43.
6. Remove the fast idle pick-up lever, fast idle cam lever, and spring.

NOTE: Observe position of fast idle cam lever spring for correct position for easier assembly. Under normal service the throttle body assembly may be cleaned without further disassembly. If complete disassembly is necessary, perform the remaining operations.

7. Lightly scribe all four throttle plates along the throttle shaft and mark each throttle plate and its corresponding bore with a number or letter to insure proper replacement. See figure 9D-44.
8. Remove the four primary throttle plate screws. See figure 9D-45.
9. Remove the primary throttle plates.

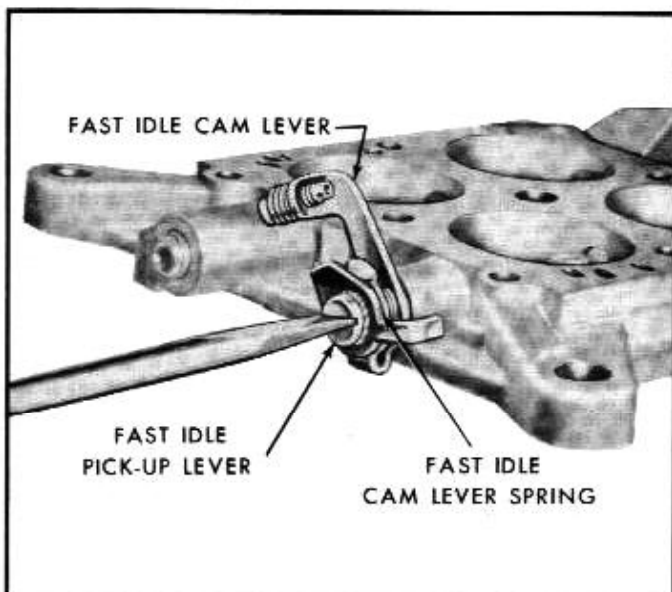


Fig. 9D-43—Removing Fast Idle Cam Lever Screw

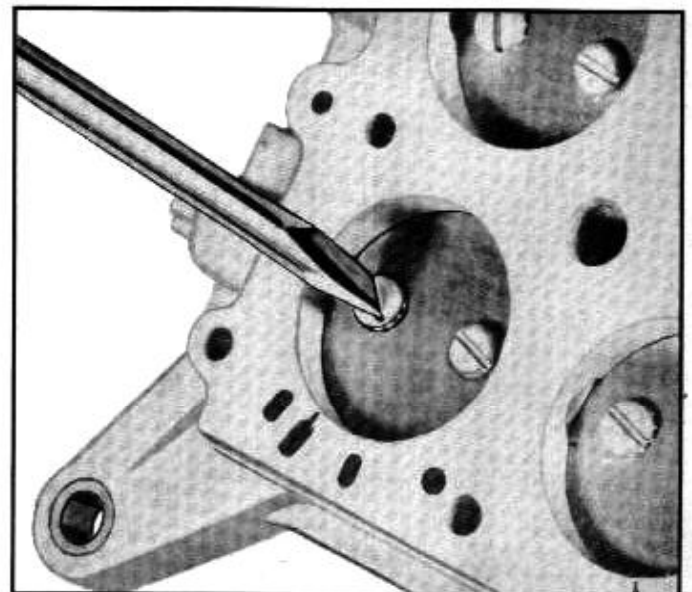


Fig. 9D-45—Removing Throttle Plate Screws

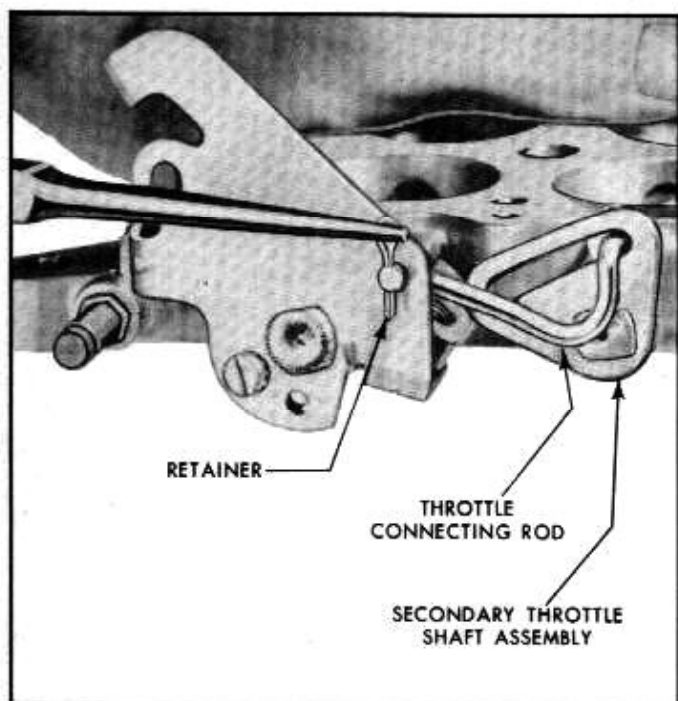


Fig. 9D-46—Removing Throttle Connecting Rod Retainer

10. Remove the two throttle connecting rod retainers and the washer. See figure 9D-46.
11. Slide the primary throttle shaft out the throttle body and remove the throttle connecting rod and throttle return spring. See figure 9D-47.
12. Remove the four secondary throttle plate screws.
13. Remove secondary throttle plates.
14. Slide the secondary throttle shaft out of the throttle body.
15. Remove the three teflon sleeves from secondary throttle shaft.

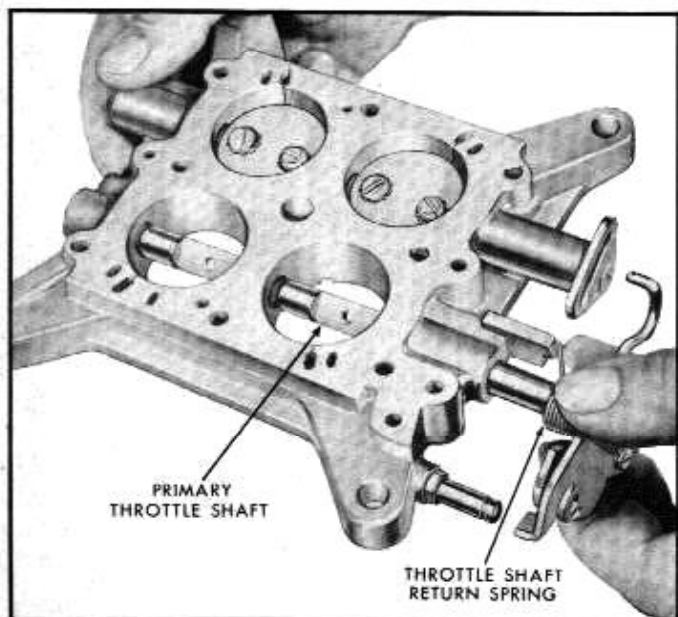


Fig. 9D-47—Removing Primary Throttle Shaft

CLEANING AND INSPECTION OF PARTS

Dirt, gum, water or carbon contamination in the carburetor or on the exterior moving parts of a carburetor are often responsible for unsatisfactory performance. For this reason, efficient carburetion depends upon careful cleaning and inspection while servicing.

Cleaning

1. Thoroughly clean carburetor castings and all metal parts in clean carburetor cleaning solution.
NOTE: Always use a reputable commercial carburetor cleaning solution, following the cleaning instructions.
CAUTION: *Composition and plastic parts such as thermostatic coil housing, pump and dashpot plungers, gaskets, etc., should not be immersed in cleaner.*
2. Scrub all major castings with a stiff bristle brush.
3. Blow out all passages with compressed air.
CAUTION: *Do not use drills or wire to clean out jets, air bleeds or ports as this may enlarge the openings and affect carburetor operation.*
4. Wipe secondary throttle operating diaphragm housing assembly and choke thermostat housing with a kerosene soaked cloth.
CAUTION: *Do not use air blast to dry these parts.*

Inspection of Parts

Carefully inspect parts for wear and replace those which are worn. Refer to Chassis Parts Catalog for correct part usage. Check the following specific points:

1. Remove carbon from throttle bores with a bristle brush.
2. Inspect main body and choke plate for cracks; damaged gasket mating surfaces; worn choke shaft and shaft holes; nicked, bent or binding choke plate; stripped threads.
3. Inspect body casting for cracks; damaged gasket mating surface; obstructed passages; worn throttle shafts and shaft holes; nicked, bent or binding throttle plates; loose passage plugs; stripped threads.
4. Inspect secondary diaphragm housing and cap for damaged gasket mating surfaces; cracks; obstructed passages; stripped threads. **DO NOT REUSE OLD DIAPHRAGM.**
5. Inspect choke piston housing for excessive gum or carbon deposits; damaged gasket mating surfaces; worn, scored or nicked piston bore; loose expansion plug; stripped threads.
6. Inspect choke coil housing for cracks and distortion.

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7. Inspect needle valves and seats for worn, nicked or scored condition; damaged screw driver slots; stripped threads.
8. Inspect floats for leaks; signs of wear on both sides of pontoons; collapsed conditions; worn float tab. Smooth tab with fine sandpaper if necessary.
9. Inspect metering jets for proper size; stripped threads; damaged screw driver slots.
10. Inspect fast idle cam for distortion; worn steps.
11. Inspect idle mixture screws for damaged or worn threads; grooved or nicked faces; distortion.
12. Inspect all springs for distortion, rust, corrosion or wear.
13. Inspect all retainers for distortion, rust or corrosion.
14. Inspect all linkage for wear (eggshaped holes) or distortion.
15. Inspect all ball and needle checks and seats for worn, nicked or scored condition; stripped threads; damaged screw driver slots.

ASSEMBLY OF CARBURETOR

Assembly of Throttle Body

If the throttle body was completely disassembled, proceed with steps 1 through 13.

1. Slide the secondary throttle shaft assembly into the throttle body with three teflon sleeves in position on the shaft.
2. Referring to the letters or figures scribed on the throttle plates, install the secondary throttle plates.
3. Install the four secondary throttle plate screws and run them down until snug but not tight.
4. Close the throttle plates and hold the throttle body up to light. Little or no light should show between the throttle plates and the walls of throttle bores.
5. If there is no binding when throttle shaft is rotated, tighten the throttle plate screws.
6. Place the primary throttle return spring on the throttle shaft, also place the smallest bend of the throttle connecting rod in position on the throttle lever.
7. Slide the primary throttle shaft in position into the throttle body, guiding the connecting rod so that the largest bend will be in place in the secondary throttle shaft lever.

NOTE: The correct position of the return spring is with the small hook fitting into the slot alongside the throttle adjusting lever adjusting screw, while the other end rests against the boss which houses the throttle stop screw.

8. Referring to the letters or figures scribed on the

primary throttle plates, install the primary throttle plates.

9. Install the four throttle plate screws and run them down until snug but not tight.
10. Close the primary throttle plates and hold the throttle body up to light. Little or no light should show between the throttle plates and walls of the throttle body.
11. If there is no binding when the throttle shaft is rotated, tighten the primary throttle plate screws.
12. Install the throttle connecting rod, two throttle connecting rod retainers and the washer. The washer should be located on the secondary throttle shaft lever.
13. Place the fast idle cam lever spring inside the fast idle cam lever and position the lever on its stud.
14. Place the fast idle pick-up lever on the stud. The longest end of the spring should be resting on the longest arm of the pick-up lever.
15. Install the screw and lockwasher.
16. Position the secondary diaphragm lever on the secondary throttle shaft.

NOTE: The round stud should be on the bottom and pointing away from the throttle body.

17. Install the secondary lever screw and lockwasher.
18. Install the throttle stop screw and spring, turning the screw in until light spring tension is obtained.
19. Slide the fuel pump lever assembly on its stud and install the lever retainer.
20. Place the dashpot bracket and dashpot assembly in position on the throttle body.
21. Install dashpot bracket screw and lockwasher.

NOTE: Two holes in the throttle lever permit adjustment of the accelerating pump discharge. The lower hole provides a maximum pump discharge for extreme cold weather operation and the upper hole provides minimum pump discharge for hot weather. For most driving conditions the upper hole should be used.

Assembly of Main Body

1. Check seat of pump discharge ball. If the seat is rough, using the old discharge ball, place a small brass rod on the ball and tap lightly with a fiber mallet to insure proper seating of the ball. Inspect to see that the seat has not been damaged during this operation.
2. Install pump discharge check ball and check ball weight.
3. Install pump discharge gasket and nozzle.
4. Install pump discharge nozzle screw.
5. Slide the choke shaft into position.

6. Referring to marks scribed during disassembly, install the choke plate.
7. Install the two choke plate screws and stake the screws.
8. Check choke plate for freedom of movement.
9. Insert a new felt seal between the two choke rod seal retainers and slide them in position on the main body.
10. Slide the choke rod through the hole in the main body and insert the upper end of the rod into the choke shaft lever.
11. Install choke rod upper retainer, and check the choke plate for freedom of movement.
12. Install the secondary diaphragm check ball in position.
13. Assemble the secondary diaphragm and insert in the diaphragm housing. Place the small end of the diaphragm return spring on the boss of the cover.
14. Insert the four diaphragm cover screws and lockwashers in the diaphragm cover.
15. Align the screws with the holes in the diaphragm and housing, lower the cover and spring in position and tighten the screws.
CAUTION: Relieve spring tension from diaphragm before installing cover. If pressure is not relieved, diaphragm will become wrinkled and leak.
16. Install the secondary vacuum diaphragm housing assembly, using a new gasket, with the three screws and lockwashers on the main body.
17. Place the fast idle cam on the choke housing and insert the choke housing shaft. Install choke shaft spacer, lockwasher and nut.
NOTE: The fast idle cam weight should be pointed away from the secondary diaphragm housing.
18. Place the choke housing on the main body, using new gaskets. Engage the choke rod into the choke housing shaft lever.
19. Install the three choke housing to main body screws.
20. Place the thermostat housing cover gasket in place and install cover. Position the cover clamp with the ears of the clamp away from the cover and install the three screws.
NOTE: Align the indicator mark in the rim of the thermostat housing cover with the center mark on the choke housing.
21. Place the throttle body to main body gasket on the main body.
NOTE: Check that all passages are aligned with gasket openings.
22. Lower the throttle body in position and install the eight screws and lockwashers.

23. Install secondary diaphragm rod and retainer.

Assembly of Fuel Bowls and Metering Bodies

1. Install power valve assembly and new gasket on secondary metering body.
2. Install the two main jets.
3. Install the fuel inlet valve and seat assembly in the secondary bowl, using a new gasket.
4. Slide the baffle plate over the fuel inlet valve and seat assembly and install the "O" ring retainer.
5. Place the float spring in position on the locator on the float. Slide the float and hinge assembly and spring into the bowl and install retainer.
6. The float level may be adjusted by bending the small tab in the float lever which contacts the head of the fuel inlet needle pin. For float gauge applications see figures 9D-19 and 9D-20 (CARBURETOR ADJUSTMENTS).
7. Insert the four secondary fuel bowl screws with new gaskets into the fuel bowl and place a new fuel bowl gasket in the recess. Slide the secondary metering body on the screws.
8. Insert the bowl vent valve.
9. Using a new metering body to main body gasket, position the fuel bowl and metering body assemblies on the main body and tighten the screws.
10. Install the power valve assembly, with a new gasket, on the primary fuel bowl.
11. Install the two main jets.
12. Install the two idle adjusting needles with new seals in primary metering body. Turn the needles in until they seat, then back off one turn.
NOTE: Do not force the idle adjusting needles against their seat. The tips will become grooved making it impossible to correctly adjust the idle mixture.
13. Install the air vent valve and retainer on the air vent rod.
14. Insert the air vent rod into position on the primary fuel bowl.
15. Place the air vent rod spring and retainer on the lower end of the rod.
16. Install the fuel filter screen assembly, new inlet fitting gasket and the fuel inlet fitting on the primary fuel bowl assembly.
17. Position the accelerator pump diaphragm return spring in the recess of the primary fuel bowl and install the diaphragm assembly with head of rivet facing lever.
18. Place the accelerator pump diaphragm cover in position, making sure the holes are aligned. Insert the four pump diaphragm screws and hold

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the lever against the pump diaphragm while tightening the screws to prevent the diaphragm from wrinkling.

NOTE: To insure that the accelerator pump diaphragm screws are evenly tightened, tighten the screws alternately and torque 5-6 lbs. in.

19. Install the fuel inlet valve and seat assembly, using a new seal.
20. Slide the baffle plate over the fuel valve and seat assembly, and install a new baffle plate retainer "O" ring.
21. Place the float spring in position on the locator on float. Slide the float and hinge assembly and spring into the bowl and install retainer.
22. The level of the float may be adjusted by bending the small tab in the float lever which contacts the head of the fuel inlet needle pin. See "FLOAT LEVEL ADJUSTMENT".
23. Install two new "O" rings on the float bowl connecting tube and insert one end of the tubing in position on the secondary fuel bowl.
NOTE: Use Lubriplate, or similar lubricant, on "O" rings to prevent damage to seals.
24. Insert the four primary fuel bowl screws with new gaskets into the fuel bowl and place a new fuel bowl gasket in the recess.
25. Slide the primary metering body on the screws.
CAUTION: *Make certain the accelerating pump hole in the gasket is in the correct position.*
26. Using a new metering body to main body gasket, position the fuel bowl and metering body assemblies on the main body and tighten the screws.
NOTE: When positioning the fuel bowl, the

accelerator pump lever must be depressed in order to clear the fuel pump lever assembly.

INSTALLATION OF CARBURETOR

1. Clean manifold spacer, manifold flange and carburetor of any old gasket material. Check manifold and spacer for any damage or nicks.
2. Install spacer and two gaskets (one gasket on each side of spacer) on intake manifold.
NOTE: Do not use a gasket sealer or any form of sealing compound on these gaskets.
3. Position carburetor on manifold. Start fuel line, distributor vacuum advance line and choke heat tube connections.
4. Secure carburetor to manifold with four nuts and lockwashers, observing the following procedure to prevent distortion and possible damage to the carburetor body flange: Snug down and then alternately tighten each mounting nut in a criss-cross pattern. Torque each nut 12-15 lbs. ft.
5. Tighten fuel line, distributor vacuum advance line and choke heat tube connections on carburetor.
6. Attach carburetor control shaft rod to throttle lever and secure with clip.
7. Start engine. Run engine sufficiently to fill fuel bowls in carburetor. Check carburetor and fittings for leaks.
8. Refer to carburetor adjustments in this section of the manual and make choke thermostat, idle mixture, hot idle R.P.M., fast idle R.P.M. and dashpot adjustments.
9. Install air cleaner.

TROUBLE SHOOTING CHART

TROUBLE	CAUSE	REMEDY
(1) Hard starting.	(a) Incorrect choke thermostat adjustment.	(a) Adjust choke thermostat.
	(b) Incorrect idle adjustments.	(b) Perform all idle adjustments.
	(c) Binding linkage, choke plate, or choke piston.	(c) Repair or replace defective parts.
	(d) Restricted choke vacuum and hot air passages.	(d) Clean carburetor with solvent and blow out passages with compressed air.
	(e) Air leaks into vacuum and hot air passages.	(e) Replace defective gaskets.
	(f) Improper fuel level.	(f) Adjust fuel level.
(2) Stalling when accelerator is released suddenly.	(a) Improperly adjusted dashpot.	(a) Adjust dashpot.
	(b) Defective dashpot.	(b) Replace dashpot.
	(c) Incorrect idle adjustment.	(c) Perform all idle adjustments.
	(d) Incorrect choke setting.	(d) Adjust choke thermostat.

TROUBLE SHOOTING CHART

TROUBLE	CAUSE	REMEDY
(3) Rough idle and stalling.	(a) Improper idle adjustments.	(a) Perform all idle adjustments.
	(b) Damaged tip on idle mixture screws.	(b) Replace screws.
	(c) Clogged air bleeds or idle passages.	(c) Clean with solvent and compressed air.
	(d) Leaking intake manifold and carburetor gaskets.	(d) Replace leaking gaskets.
	(e) Throttle plates not closing.	(e) Position throttle plates correctly. Remove carbon in throttle bore.
	(f) Improper throttle stop adjustment.	(f) Adjust throttle stop screw.
	(g) Improper fuel level.	(g) Adjust fuel level.
	(h) Improper fast idle cam adjustment.	(h) Perform all idle adjustments.
	(i) Loose power valve.	(i) Tighten power valve.
(4) Poor low-speed operation.	(a) Idle adjusting screws unequally adjusted.	(a) Perform all idle adjustments.
	(b) Clogged idle transfer holes.	(b) Remove and clean carburetor with solvent and blow out holes with compressed air.
	(c) Restricted idle air bleeds and passages.	(c) Remove and clean carburetor with solvent. Blow out passages with compressed air.
(5) Faulty acceleration.	(a) Improper pump stroke.	(a) Adjust pump stroke.
	(b) Inoperative pump discharge check ball.	(b) Clean or replace.
	(c) Worn or damaged pump diaphragm.	(c) Replace pump diaphragm.
	(d) Leaking main body cover gasket.	(d) Replace gasket.
	(e) Exhaust thermostat valve stuck in heat "off" position.	(e) Repair or replace.
(6) Surging (cruising speeds to stop speeds).	(a) Clogged main jets.	(a) Clean main jets with solvent and blow out jets with compressed air.
	(b) Undersize main jets.	(b) Replace main jets.
	(c) Low fuel level.	(c) Adjust fuel level.
	(d) Low fuel pump pressure or volume.	(d) Test fuel pump.
	(e) Blocked air bleeds.	(e) Clean with solvent and blow out bleeds with compressed air.
	(f) Clogged filter screen.	(f) Clean with solvent and compressed air.

Section 9D—FUEL SYSTEM

TROUBLE SHOOTING CHART

TROUBLE	CAUSE	REMEDY
(7) Reduced top speed.	(a) Clogged secondary metering passages.	(a) Clean with solvent and blow out with compressed air.
	(b) Leaking secondary throttle operating diaphragm or housing gasket.	(b) Replace diaphragm or gasket.
	(c) Low fuel pump volume.	(c) Test fuel pump.
	(d) Secondary linkage, throttle plates or shaft binding.	(d) Free up linkage and position throttle plates.
	(e) Clogged vacuum passage to venturi.	(e) Clean with solvent and blow out passage with compressed air.
	(f) Air leak at secondary metering body gasket.	(f) Replace gasket.
	(g) Power valve stuck.	(g) Clean or replace.
	(h) Improper size, or obstructed main jets.	(h) Clean or replace.
	(i) Faulty choke operation.	(i) Check choke operation.

**HOLLEY MODEL 4150 CARBURETOR SPECIFICATIONS
(312 Cu. In. Engine)**

Type	Quadruple Down Draft
Venturi Size:	
Primary	1-1/16"
Secondary	1-1/16"
Float Setting – Dry:	
Primary	13/16" between floor of float bowl and bottom of float – bowl inverted.
Secondary	3/4" between floor of float and bottom of float – bowl inverted.
Fuel Level Setting:	
Allowable Tolerance	± 1/32"
Primary	1/2" below center of main discharge nozzle.
Secondary	5/8" below center of main discharge nozzle.
Bowl Vapor Vent Adjustment	1/16" between bowl vent valve and top surface of vent seat throttle in closed position.
Dashpot Adjustment045"-.064"
Initial Idle Setting	1½ turns open.
Fast Idle Setting	2250 R.P.M. with fast idle screw on high step of fast idle cam.

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HOLLEY MODEL 4150 CARBURETOR SPECIFICATIONS (312 Cu. In. Engine)

Engine Idle R.P.M.	
Std. and O/Drive Transmission475-500
Auto. Transmission (Neutral)475-500
Auto. Transmission (Drive Range)425-450
Engine Idle Manifold Vacuum (Hg. inches) at	
Auto. Transmission (Drive Range)	19-20
Main Metering Jet Identification:	
Feet Altitude	
0-5,000	55
5,000-10,000	53
10,000-15,000	52
Secondary Metering Jet Identification:	
All Altitudes	48
Power Jet Assembly — Identification Number:	
Primary	85
Secondary	105
Power Valve Operating Vacuum Limits:	
Primary	8-9 (Hg."")
Secondary	10-11 (Hg."")
Torque Specifications — Holley Carburetor:	
Choke Valve Attaching Screws	7-10 Lbs. In.
Choke Housing Cover Attaching Screws	10-15 Lbs. In.
Diaphragm Housing Attaching Screws	15-20 Lbs. In.
Choke Housing Attaching Screws	10-15 Lbs. In.
Pump Jet Housing Attaching Screws	20-25 Lbs. In.
Fast Idle Cam Attaching Screw	20-25 Lbs. In.
Secondary Throttle Diaphragm Housing Cover Attaching Screws	15-20 Lbs. In.
Dashpot Attaching Screw and Washer Assembly	20-25 Lbs. In.
Primary Metering Rod Jet	25-30 Lbs. In.
Secondary Metering Jet	25-30 Lbs. In.
Secondary Throttle Valve Attaching Screw	15-20 Lbs. In.
Primary Throttle Valve Attaching Screw	15-20 Lbs. In.
Fuel Level Check Plug	10-15 Lbs. In.
Power Valve Assembly (Primary)	7½-8 Lbs. Ft.
Power Valve Assembly (Secondary)	7½-8 Lbs. Ft.
Choke Thermostat Shaft Nut	15-20 Lbs. In.
Pump Cam Lockscrew	7-10 Lbs. In.
Throttle Body Screws	35-45 Lbs. In.
Fast Idle Cam Lever Screw	20-25 Lbs. In.
Fuel Inlet Fitting	15-17 Lbs. Ft.
Fuel Bowl to Main Body Screws	20-25 Lbs. In.
Accelerator Pump Diaphragm Cover Screws	5-6 Lbs. In.
Fuel Inlet Needle and Seat Assembly	4-5 Lbs. Ft.
Flange Nuts	12-15 Lbs. Ft.

HOLLEY CARBURETOR SPECIAL TOOLS

9545-A	Wire Gauge — .010" Dia.
9550-K-1	Primary Float Level Gauge
9550-K-2	Secondary Float Level Gauge
9597-A	Wire Gauge — .015" Dia.