CARTER WCFB CARBURETOR

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CARTER WCFB CARBURETOR DESCRIPTION

The Carter WCFB-2404-SA carburetor is a four barrel downdraft type which is divided into two sections. The primary section contains its own vent, fuel inlet, low speed (idle), high speed (main metering), power, acceleration, and choke systems.

The secondary section contains its own vent, fuel inlet, and high speed systems. The secondary section may be thought of as a supplementary two-throat carburetor that makes possible increased engine breathing capacity at high speeds.

The primary throttle plates are controlled by the accelerator pedal and linkage. The secondary throttle plates are actuated by a diaphragm assembly which is positioned by primary and secondary throat venturi vacuum.

PRINCIPLES OF OPERATION

The carburetor contains eight basic systems. These are listed and explained in the following text:

Vent System
Fuel Inlet System
Low Speed (Idle) System
High Speed (Main Metering) System
Power System
Secondary System
Accelerator Pump System
Automatic Choke System

Vent System

The primary float chamber is vented to the air cleaner by two vent tubes and to the atmosphere by a vapor vent valve. See figure 9F-1. The vapor

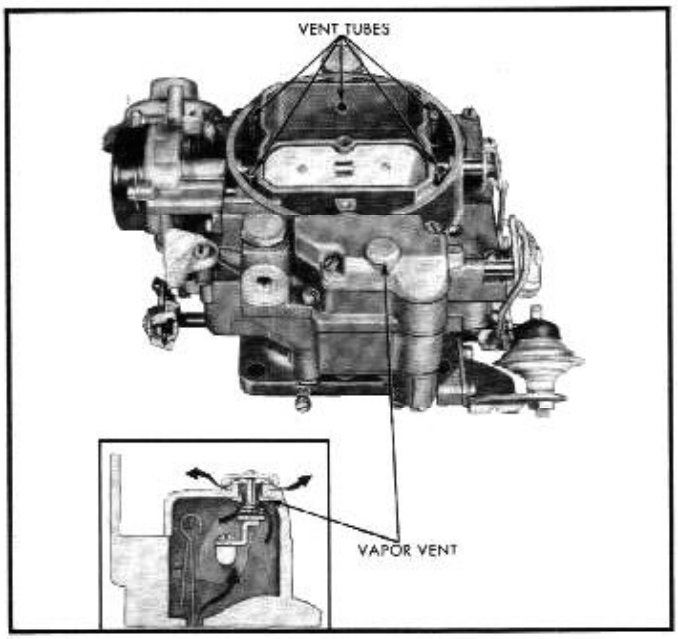

Fig. 9F-1—Vent System

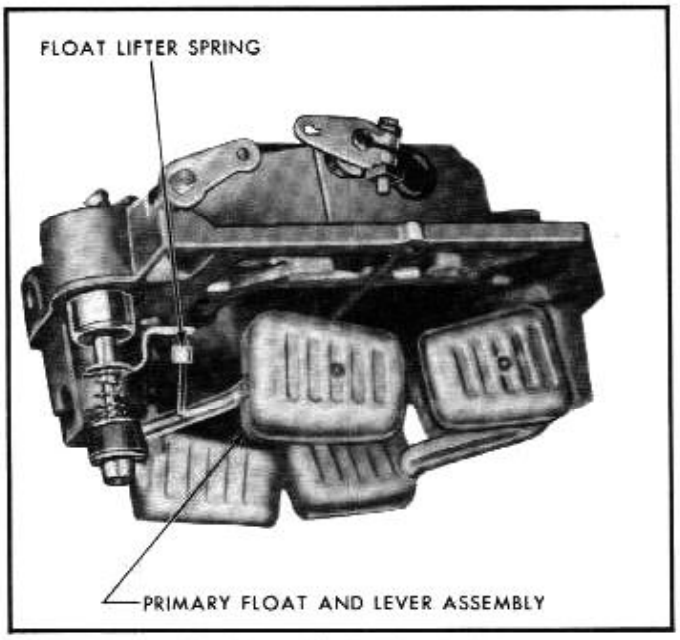

Fig. 9F-3—Float Lifter Spring

vent valve is located in the dust cover and is operated by linkage. The vapor vent is open at idle and closed at speeds above idle. The vapor vent allows fuel vapors and the resultant vapor pressure to escape the float chamber. This prevents the fuel from being forced from the main nozzle at idle and during a hot engine shut-down period. The secondary float chamber is vented to the air cleaner by three vent tubes.

Fuel Inlet System

The main body is partitioned into two compart-

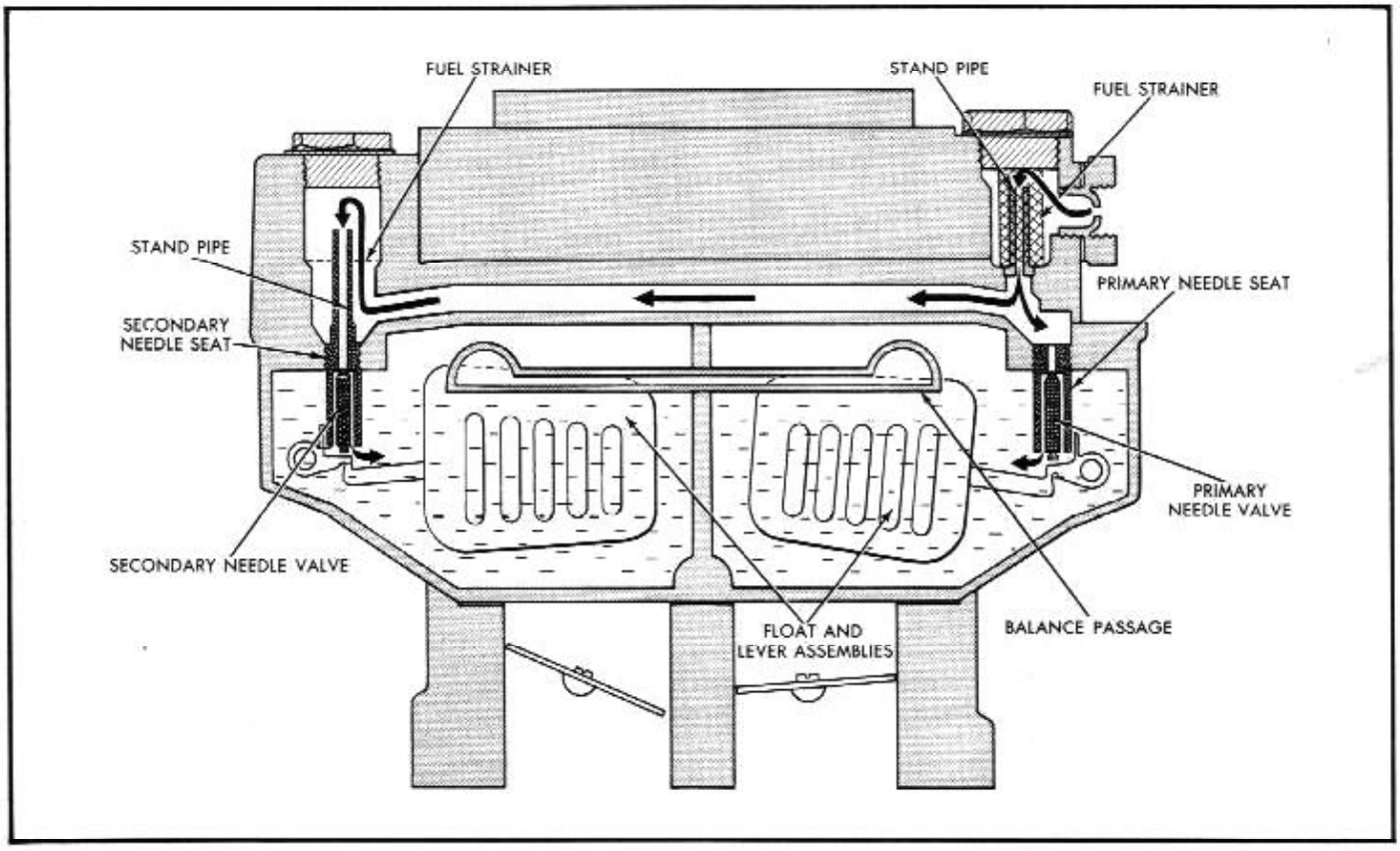

Fig. 9F-2—Fuel Inlet System

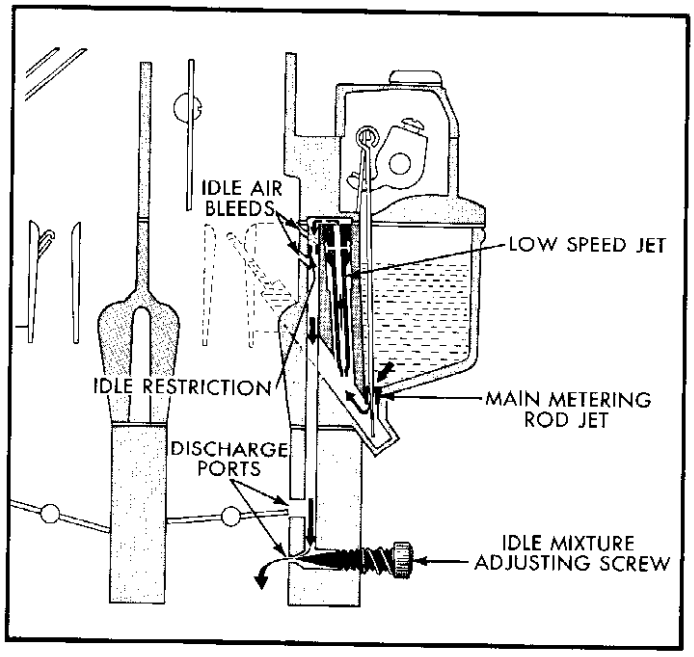

Fig. 9F-4—Low Speed (Idle) System

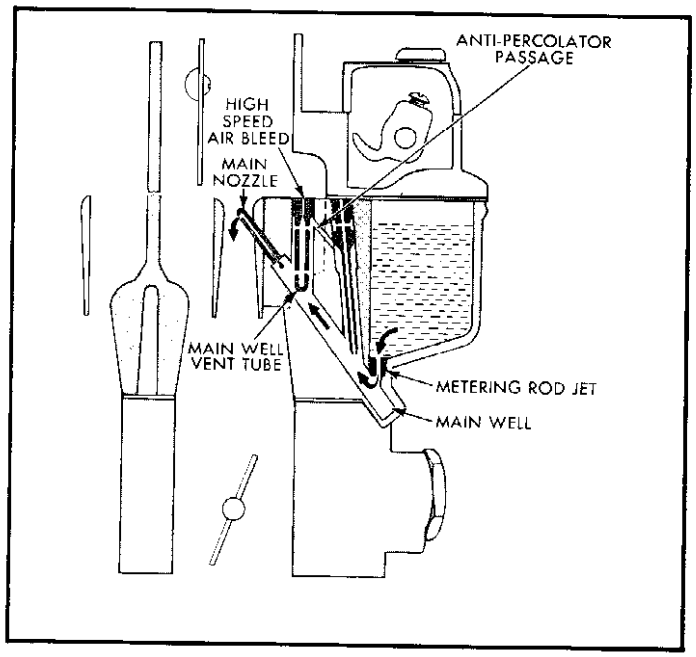

Fig. 9F-5—High Speed System

ments (primary and secondary), each containing a double pontoon float and lever assembly and a needle valve and seat. Fuel enters the primary side of the carburetor through a strainer screen at the fuel inlet and is directed to the primary needle valve and seat. The fuel is also conducted through a passage in the air horn to the secondary needle seat. A stand pipe is provided at both needle seats as an additional trap for foreign material that might prevent the needle valves from seating properly. See figure 9F-2.

A float lifter spring, which is connected to the lever arm of the primary float and to a bracket on the accelerator pump plunger, is incorporated to stabilize primary bowl fuel level and prevent float bounce upon sudden stops, or on rough roads. See figure 9F-3. As the accelerator is released and the primary throttle plates are closed to the idle position, the upward movement of the pump plunger and attached spring bracket exerts tension on the spring and tends to stabilize the float in a level position. Because the float is maintained in a level position, needle valve bounce is minimized and excess fuel entry into the bowl is prevented. The float lifter spring also provides better float and fuel level stability when operating on rough, washboard type roads.

A balance passage connects the primary and secondary float chambers to provide fuel level control when the vehicle is accelerating, stopping, or rounding curves. The balance passage also tends to prevent flooding in the event one of the needles should temporarily become stuck open by maintaining equal fuel level between the two float chambers.

Low Speed (Idle) System

At idle and early part throttle operation, the primary throttle plates are almost closed and a strong vacuum (low pressure area) is produced below the throttle plates. Fuel under air cleaner pressure is forced from the float chamber to the low pressure area at the idle ports below the throttle plates. See figure 9F-4.

The fuel is forced through the metering rod jet to the main well. The fuel is metered by the restriction in the lower end and then flows up the low speed jet assembly. Bleed holes are drilled in the upper end of the low speed jet assembly and are connected by a drilled passage to the carburetor throat. Air from this passage joins the fuel at this point. The air and fuel then pass through a restriction, where they are mixed and partially vaporized. After leaving the restriction, the air-fuel mixture is joined by additional air from a second air bleed. This mixture passes through a drilled passage to the upper and lower discharge ports and is discharged into the air stream. The lower discharge port is below the throttle plate. The upper discharge port is a vertical slot type and is located so the upper portion of the slot is above the throttle plate at idle. As the throttle is opened further, a larger portion of the slot is exposed to the low pressure area (vacuum) and an increased quantity of fuel is discharged into the air stream. Further opening of the throttle results in a decrease in the vacuum and the amount of the fuel coming from the idle ports decreases. As the fuel coming from the idle ports diminishes, the high speed system starts supplying the fuel the engine requires.

The transition from the low speed system to the high speed system must be smooth and gradual.

High Speed System

As the throttle plates are opened, manifold vacuum at the idle ports drops, diminishing the fuel-air flow through the idle system. However, air flow through the venturi has increased to a point where venturi vacuum causes the fuel from the float chamber which is under air pressure to be forced to the low pressure area at the end of the main nozzle. See figure 9F-5.

The fuel flows from the float chamber through the metering rod jet to the main well. As the fuel moves up the main well, it is joined by air entering from the main well vent tube. The air and fuel mixture continues up the main well to the main nozzle where it is injected into the air rushing through the venturi.

An anti-percolator passage connects the low speed well with the vent tube passage. Any vapor bubbles that may form in the main well, when the high speed system is not in operation, are shunted up the low speed well. The vapor pressure from these bubbles is allowed to escape through the high speed air bleed. This prevents the vapor bubbles from forcing droplets of fuel out of the main nozzle and causing an erratic idle and difficult hot starting.

All fuel is metered through the metering rod jets.

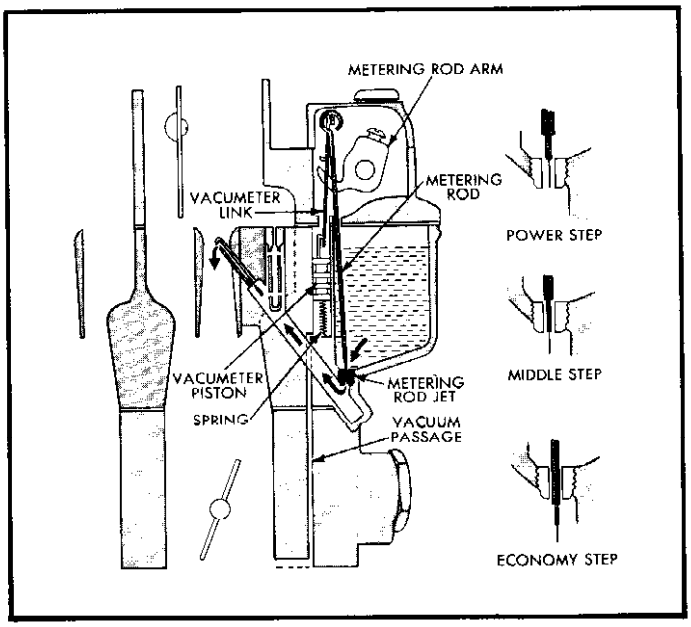

Fig. 9F-6—Vacumeter (Power) System

The metering rod jet is restricted by a metering rod. The position of the metering rod is controlled by the primary throttle and linkage. The lower end of the metering rod has steps of three different diameters. The smallest diameter step is at the bottom of the rod. At idle, the larger diameter (top) of the rod is in

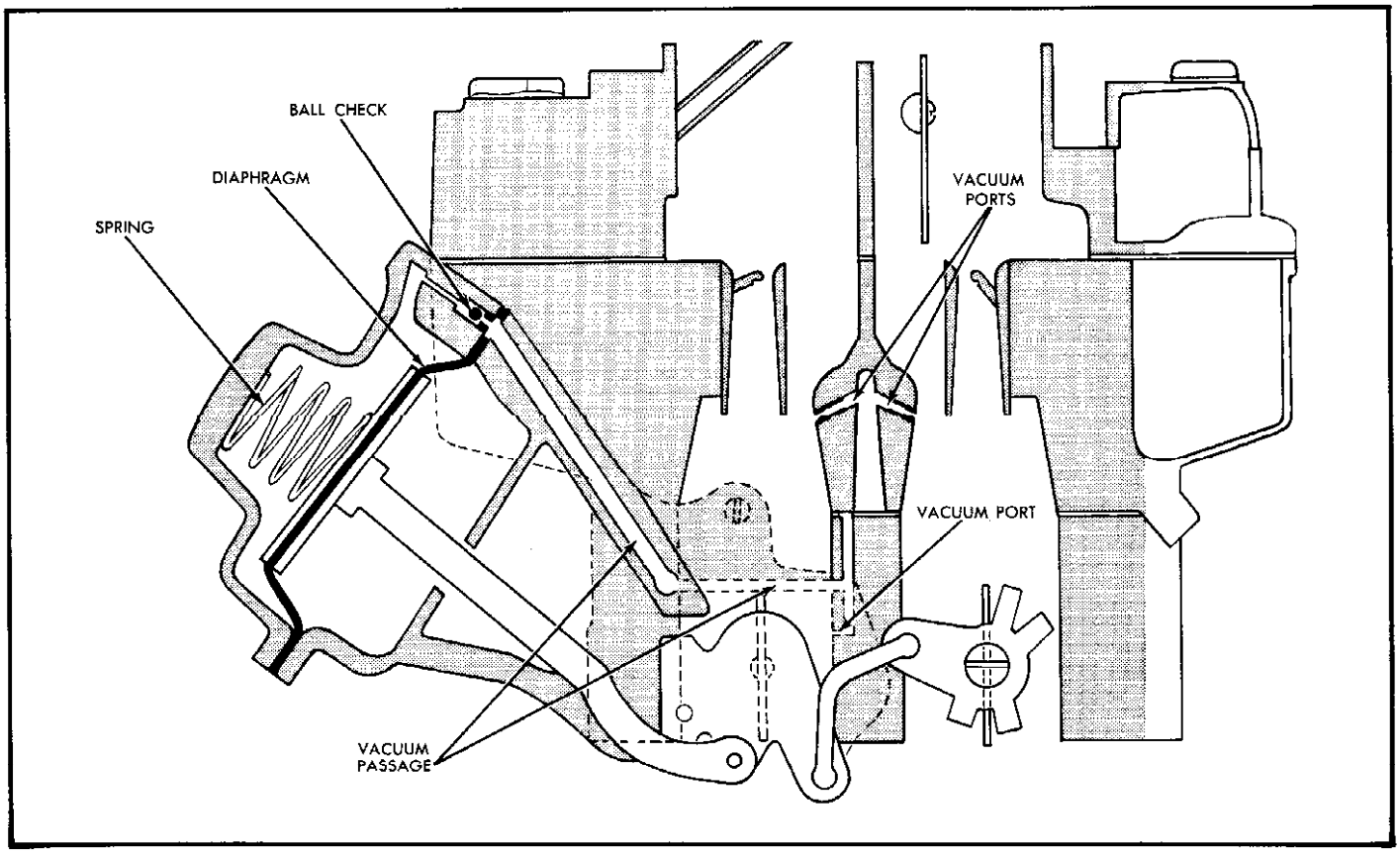

Fig. 9F-7—Secondary Throttle Control

the jet. As the throttle is opened, the metering rod is lifted up in the jet and offers less restriction to the fuel flow. At wide open throttle, the metering rod is pulled up so the last (smallest diameter) step is in the jet.

Vacumeter (Power) System

The metering rods are suspended from the vacumeter link. The vacumeter link is connected to the vacumeter piston. See figure 9F-6. Under normal engine load conditions, manifold vacuum is sufficient to hold the vacumeter piston and link down until the link contacts the metering rod arm. Thus the metering rods are positioned by the throttle under normal engine load conditions. When the engine is under heavy load, manifold vacuum drops and the spring lifts the vacumeter piston, link, and metering rods up. The metering rods are then in a position that provides a rich power mixture.

Secondary System

The opening and closing of the secondary throttle plates is controlled by a vacuum operated diaphragm and diaphragm spring. The throttle plates are opened by primary venturi vacuum and closed by the diaphragm spring. See figure 9F-7.

When the air volume through the primary venturi is sufficient to require the additional capacity of the secondary section, the vacuum at the port in the primary venturi will be strong enough to open the secondary throttle plates.

Two ports are located in one bore of the secondary section. One port is located at the secondary venturi and the other in the same throat above the throttle plate. Previous to the opening of the secondary throttle plates, these ports act as calibrated air bleeds to provide a controlled opening. When the secondary throttle plates are open, these ports are exposed to a partial vacuum and they then assist in holding the secondary plates open. The lower port also allows any fuel that may accumulate in the passages to drain out when the primary venturi drops (pressure increases). With the venturi vacuum removed, the vacuum in the diaphragm chamber is thus reduced and the spring rapidly closes the secondary throttles.

In the event the secondary throttle plates should become stuck (fully open or fully closed) the secondary throttle shaft can be nudged by a primary throttle shaft dog and spring. These parts also provide a consistent closing of the secondary throttle plates by placing the secondary shaft under a supplementary spring pressure. This results in stable idle operation after the secondary system has been used. See figure 9F-8.

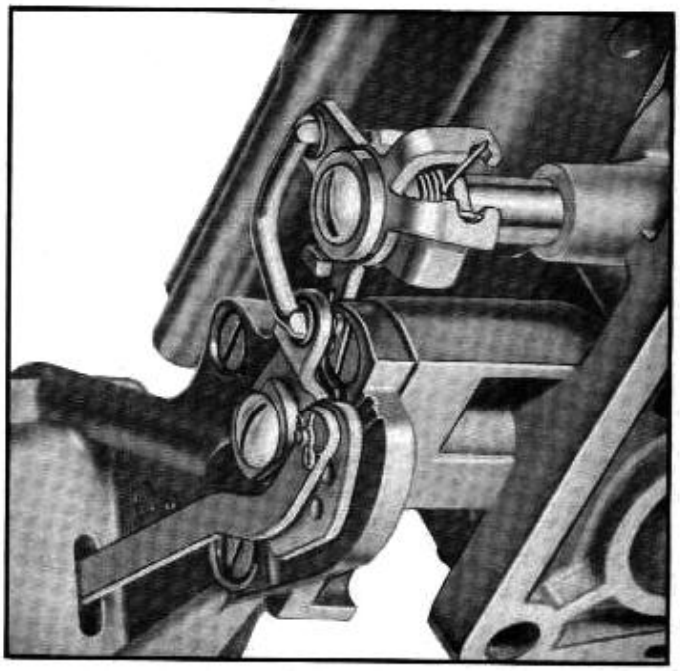

Fig. 9F-8—Throttle Shaft Dog and Spring

As the secondary throttle plates are opened, a vacuum is created in the secondary venturi. Fuel in the secondary float chamber is forced through the main metering jet to the main well. The fuel is joined by air from the high speed air bleed and secondary bleed tube. See figure 9F-9. The fuel and air mixture then continues up the main well to the nozzle where it is discharged into the air rushing through the secondary venturi. There are no metering rods in the secondary system. The fuel flow is controlled by the main metering jets only. The main metering jets are calibrated to provide a power mixture as the secondary

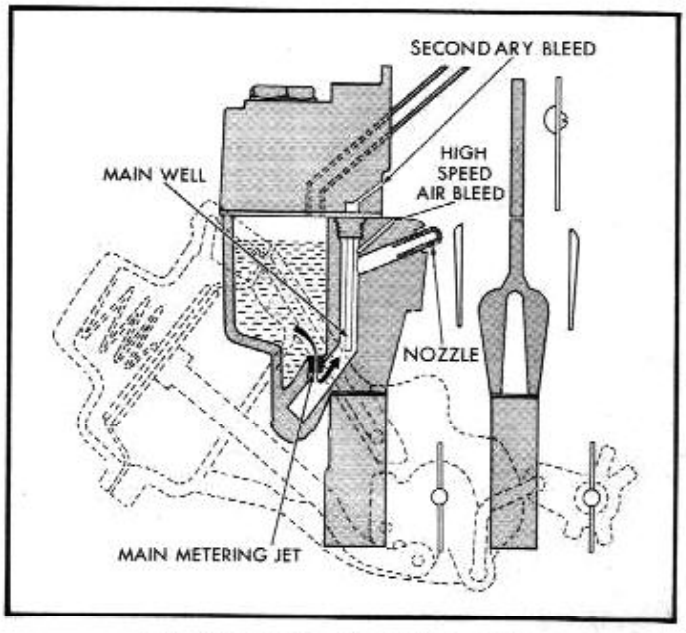

Fig. 9F-9—Secondary Fuel System

system is only used for full power operation.

The high speed air bleed and secondary bleed tube also act as anti-percolator passages for the secondary system.

Accelerator Pump System

A pump plunger, see figure 9F-10, which is mechanically actuated by throttle linkage, is forced downward by a spring whenever the throttle is opened. The downward movement of the pump plunger places the fuel in the pump cylinder under spring pressure and seats the inlet check ball. The fuel is forced through a passage past the discharge check needle to the pump jet and housing assembly. The pump jet directs the fuel toward the sides of both primary venturi. As the throttle is closed, the pump plunger moves up and fuel in the float chamber lifts the inlet check ball off its seat to fill the cylinder. The discharge check needle is held on the seat by its own weight to prevent air from entering the pump cylinder when the plunger moves upward.

At high speeds the pump discharge is not required for smooth acceleration. When the primary throttle plates are approximately one-third open, the plunger bottoms in the pump cylinder and the system is thus inoperative.

A vapor vent assembly is located in the horizontal portion of the pump discharge passage adjacent to the pump plunger cylinder. During a hot engine shutdown period, the vent prevents vapor bubbles from forcing fuel past the discharge check needle and out the pump jet by allowing the vapor bubbles to vent through the fuel in the primary bowl to the surface of

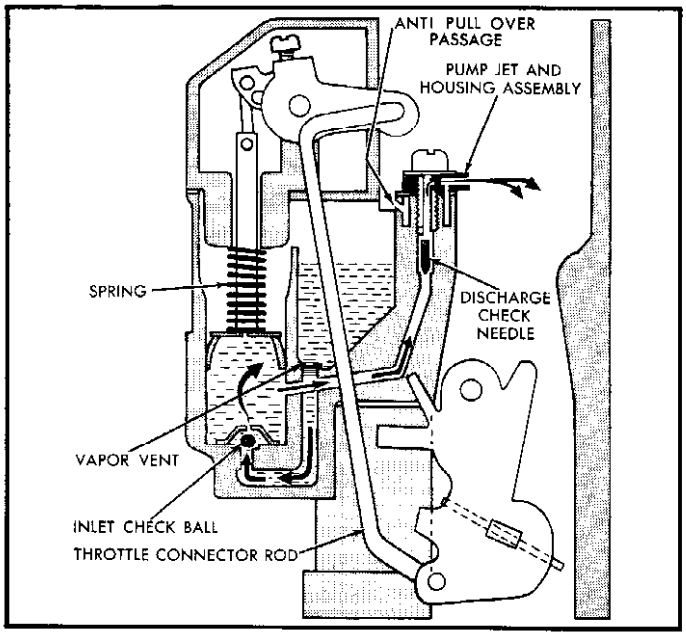

Fig. 9F-10—Accelerator Pump System

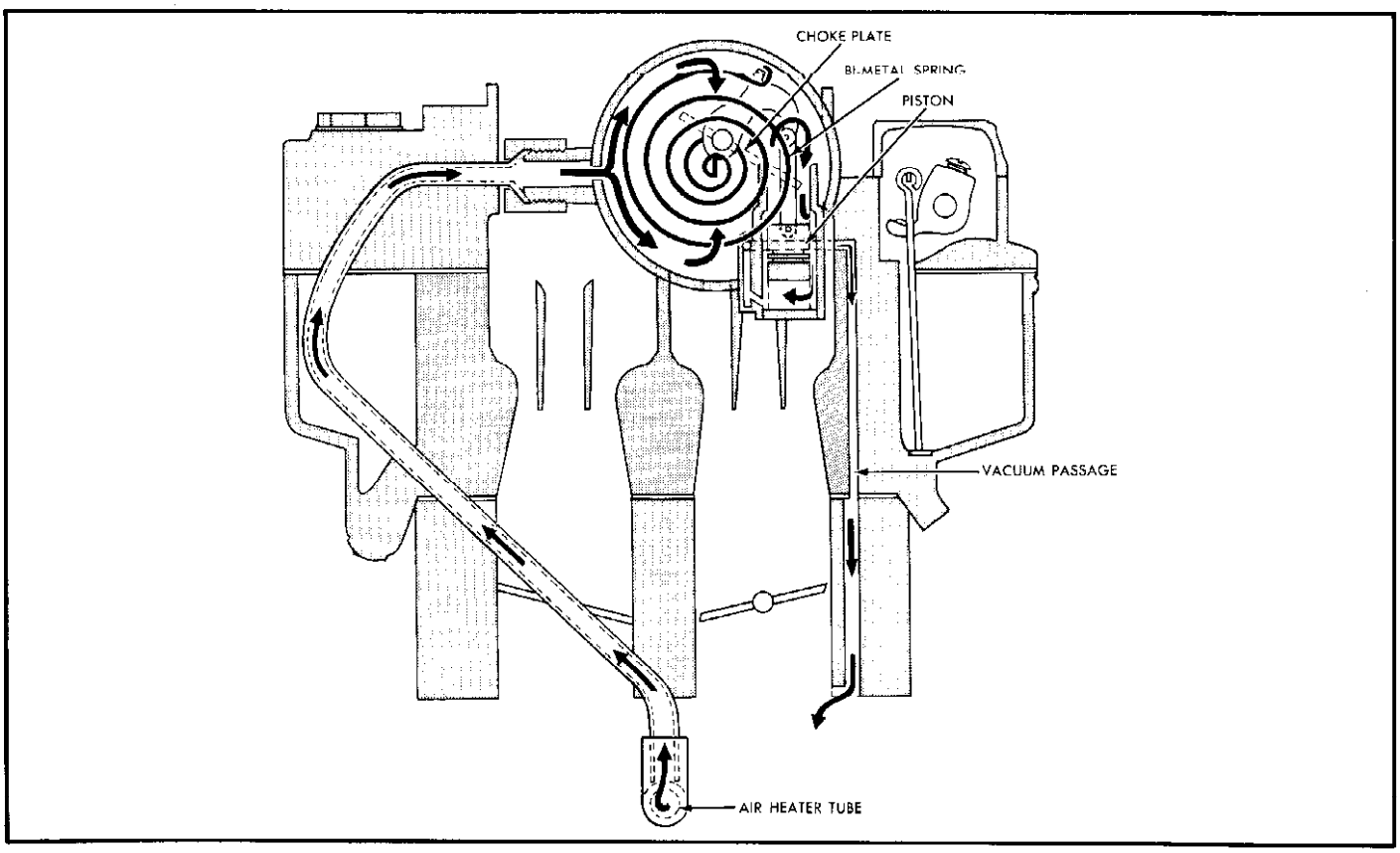

Fig. 9F-11—Automatic Choke System

the fuel, from which they are discharged through the vapor vent valve.

At high speeds, a vacuum exists at the pump jets. To prevent fuel from being forced through the pump system under this condition, the pump jet nozzles are vented to the float chamber by a groove cast in the nozzle assembly and a connecting passage drilled in the main body to the float chamber.

Choke System

The choke system located in the primary side provides the correct mixture necessary for quick cold engine starting and warm-up.

When the engine is cold, tension of the thermostatic coil spring holds the choke plate closed. When the engine is started, air velocity against the offset choke plate causes the plate to open slightly against thermostatic coil spring tension. Intake manifold vacuum applied to the choke piston also tends to pull the choke plate open. The choke plate assumes a position where tension of the thermostatic coil spring is balanced by the pull of vacuum on the choke piston and the force of air on the offset choke plate.

When the engine starts, slots located in the sides of the choke piston cylinder are uncovered allowing manifold vacuum to draw warm air into the choke mechanism for warm up of the thermostatic coil. The air is heated in a tube running through the exhaust cross-over of the intake manifold. As the warm air is circulated around the coil, the tension of the coil is relieved, and the combined efforts of the choke piston and air flow on the offset choke plate hold the choke plate in its open position.

The choke mechanism features a rotating type baffle assembly which prevents premature opening of the choke plate by regulating the delivery of warm air to the thermostatic coil. See figure 9F-11. The baffle assembly consists of a movable baffle plate which is riveted to the center of a stationary baffle plate in the choke piston housing. When the choke plate is in the closed position (thermostatic coil in cold position), the movable baffle partially restricts warm air delivery to the thermostatic coil. As the choke piston pulls the choke lever to open the choke plate against the tension of the cold thermostatic coil, the movable baffle is rotated by the choke lever to uncover the warm air delivery passage, and the warm air circulates directly around and through the coil. If manifold vacuum is decreased due to sudden acceleration during the warm-up period, the thermostatic coil momentarily closes the choke and the tension of the coil acting on the choke lever rotates the movable baffle back to its restrictive position. When the engine reaches its normal operating temperature and the choke plate is fully open, the coil no longer exerts tension against the choke lever and the movable baffle is positioned to allow unrestricted flow of warm air to the coil. After circulating about the coil, the warm air is drawn past the piston into the intake manifold of the engine.

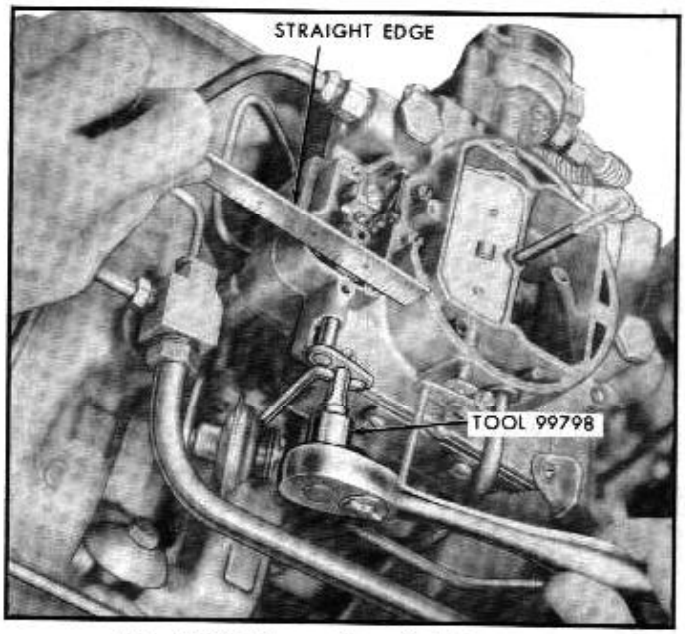

Fig. 9F-12—Pump Travel Adjustment

CARBURETOR ADJUSTMENTS (ON CAR)

Refer to "Assembly of Air Horn" for float adjustments. All other adjustments except Bench Fast Idle Adjustments may be made with carburetor installed on the car.

Pump Travel Adjustment

1. Remove dust cover and install pump arm connector link in lower hole of pump arm.
2. Back out throttle lever stop screw until primary throttle plates seat in bores of carburetor.
3. Hold straight edge tool across, and parallel to top of dust cover boss on top of pump arm. See figure 9F-12.
4. Using Tool 99798 (T109-213), bend upper horizontal leg of carburetor pump operating rod until flat on pump arm is parallel to dust cover boss.
5. Install pump arm connector link in hole of pump arm that corresponds with operating conditions encountered. The upper hole will provide the greatest pump discharge.

Metering Rod Adjustment

1. Make pump travel adjustment.
2. Be sure throttle lever set screw is backed out so throttle plates are closed tight.
3. Loosen metering rod arm clamp screw and push vacumeter link down until metering rods bottom.

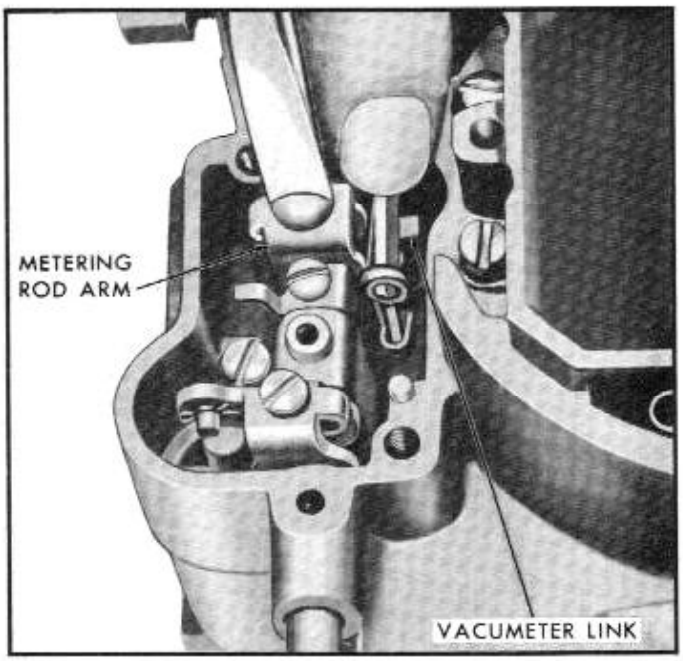

Fig. 9F-13—Metering Rod Adjustment

4. While holding throttle plates closed and vacumeter link down, rotate metering rod arm until finger just contacts lip on link. See figure 9F-13. Carefully tighten metering rod arm clamp screw.

Vapor Vent Adjustment

1. Make pump travel and metering rod adjustments.
2. Install dust cover and gasket.
3. Close primary throttles and measure clearance between bottom edge of vapor vent cap and top of dust cover with .067" gauge of Tool 9545-B (T109-234). See figure 9F-14.

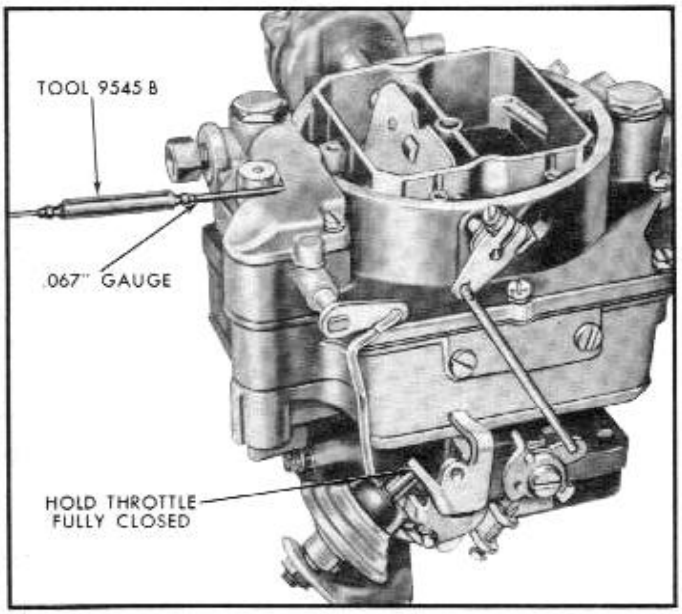

Fig. 9F-14—Vapor Vent Adjustment

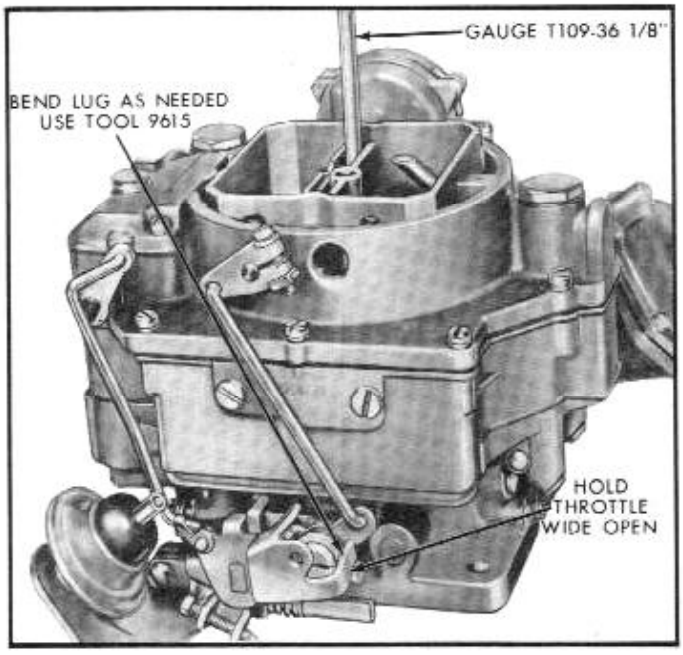

Fig. 9F-15—Unloader Adjustment

4. Remove dust cover and bend vent arm up or down as indicated by previous measurement.
5. Install dust cover and gasket and secure to air horn with two screws and lockwashers. Recheck vapor vent clearance.

Unloader Adjustment

1. Force throttle wide open and measure clearance between upper edge of choke plate and inner wall of air horn. See figure 9F-15.
2. Bend unloader lip on throttle shaft lever with Tool 9615 (T109-41) until 1/8" clearance is obtained.

Primary Throttle Shaft Dog Adjustment

1. Place .086" gauge of Tool 9581-A (T109-215) against primary throttle lever stop boss on body flange. Open primary throttle until stop tang on throttle lever contacts gauge. See figure 9F-16.
2. While holding throttle in this position, with secondary throttles held closed, upper arm of throttle flex spring should lightly contact tang of throttle operating lever. See figure 9F-17.
3. Bend upper lug of throttle shaft dog with Tool 9581 (T109-214) until correct spring contact is obtained.
4. Hold both primary and secondary throttles wide open. The lower arm of throttle flex spring should lightly contact center web of throttle operating lever. See figure 9F-18.
5. Bend lower lug of throttle shaft dog with Tool 9581 (T109-214), until correct spring contact is obtained.

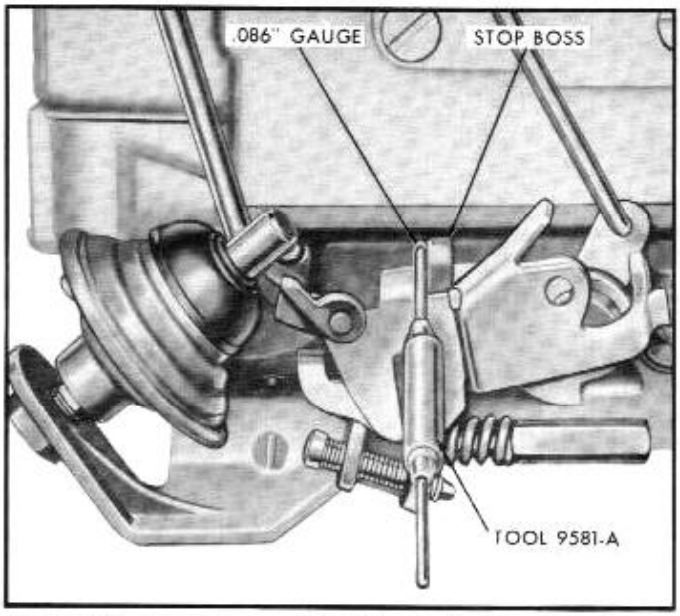

Fig. 9F-16—Preliminary Throttle Shaft Dog Adjustment

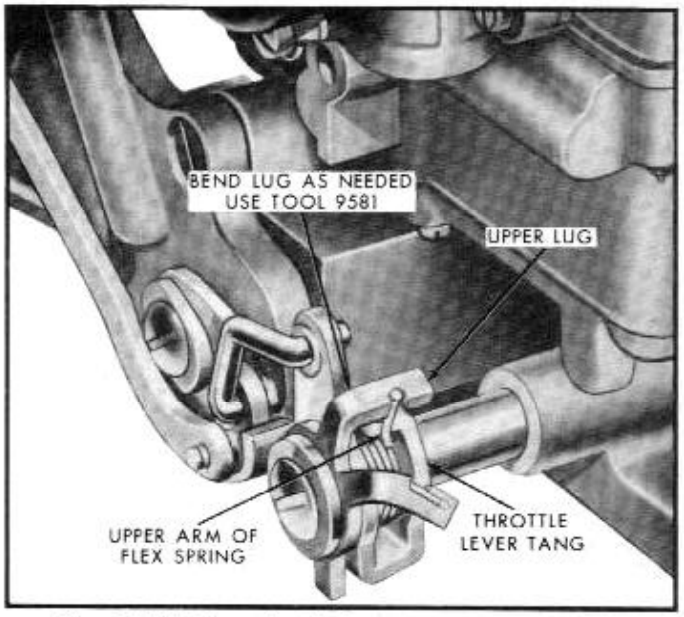

Fig. 9F-17—Throttle Shaft Spring Contact With Throttle Lever Tang

Secondary Throttle Lever Adjustment

1. Hold choke valve in wide open position and back off throttle lever adjusting screw to allow primary throttle valves to seat in carburetor bores.
2. Hold primary and secondary throttle plates in fully closed position. Using .010" wire gauge of Tool 9545-A (T109-200) check clearance between lug on secondary operating lever and stop on primary throttle shaft dog. See figure 9F-19. To adjust, bend lug on secondary operating lever with Tool 9581 (T109-214) to obtain minimum of .010" clearance.
   NOTE: Secondary throttle valves seat at top edge only.

Choke Thermostat Adjustments

1. Remove air cleaner.
2. Loosen choke coil housing retainer screws.
3. Rotate choke coil housing until scribe mark on coil housing lines up with the second digit from center mark (rich side) on choke piston housing.
   NOTE: The final adjustments may vary from the index to compensate for different climatic conditions. The final setting should not be more than two digits, left or right, from the normal setting of the choke piston housing.
4. Tighten three choke coil housing retainer screws.
5. Install air cleaner.

Idle Adjustments

If one of the idle adjustments is changed, the other idle adjustments may also be affected. It is therefore necessary that the adjustments be made in the exact order listed below and that all of the idle adjustments following the one being made are checked:

1. IDLE MIXTURE ADJUSTMENT.
2. HOT IDLE R.P.M. ADJUSTMENT.
3. FAST 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 for ap-

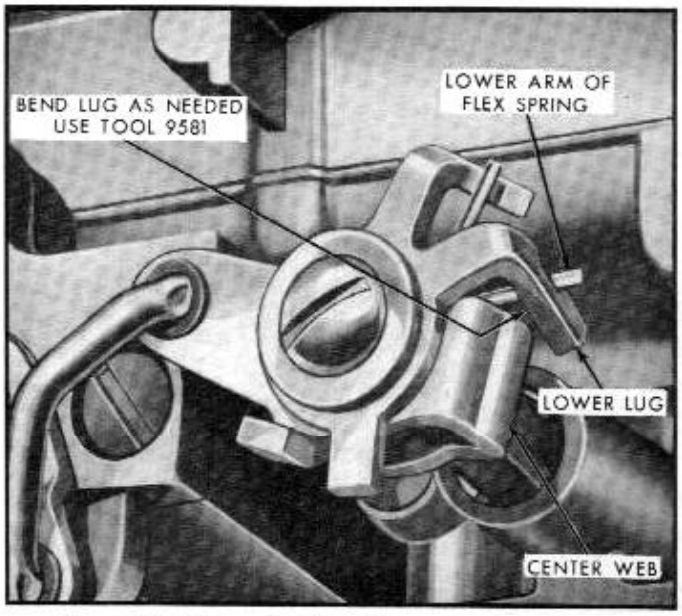

Fig. 9F-18—Throttle Shaft Spring Contact With Throttle Lever Web

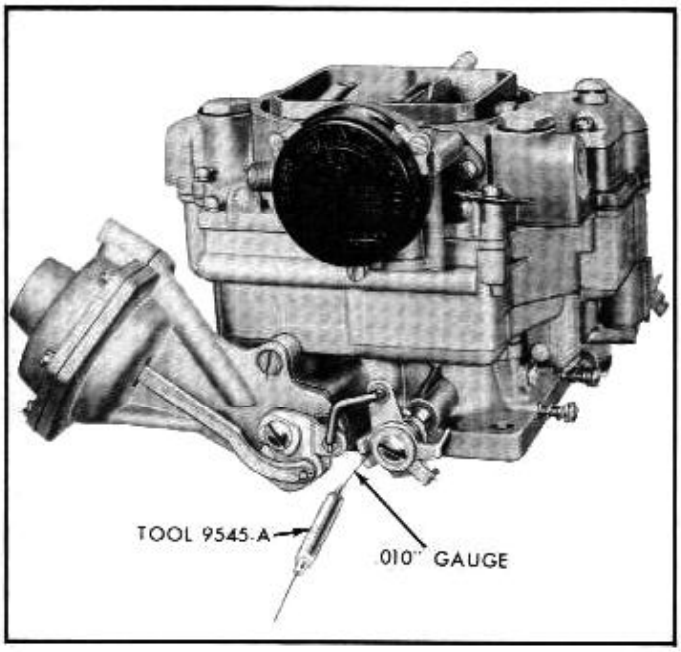

Fig. 9F-19—Secondary Throttle Lever Adjustment

proximately one-half hour at 1200 R.P.M. to stabilize temperature.

2. Turn each idle mixture adjustment screw in until it touches its seat, then back out each screw 1¼ turns.
3. Turn hot engine idle adjustment screw in or out to obtain 475 to 500 engine R.P.M. with transmission selector in NEUTRAL position.
4. Turn one idle mixture adjustment screw in until engine begins to run rough.
5. Back the mixture screw out until the engine begins to "roll" indicating a rich mixture.
6. Turn the mixture screw in just enough to provide the smoothest engine idle.
   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.
7. Repeat this procedure with the other mixture screw.
8. If engine idle R.P.M. has changed, reset to 475 to 500 R.P.M. using hot engine idle screw.
9. Re-adjust idle screw 1/8 of a turn in each direction for smoothest idle.
10. Repeat step 8 if necessary. Perform hot idle R.P.M. adjustment.

Hot Idle R.P.M. Adjustment

1. Adjust idle mixture as described.
2. Set parking brake and place transmission selector in DRIVE position.
3. Momentarily open throttle slightly, and allow throttle to close. Engine idle should be from 425 to 450 R.P.M. If R.P.M. is not correct, adjust with hot engine idle screw. Perform fast idle adjustment.

Fast Idle Adjustment

This final adjustment is made after the carburetor has been installed on the engine and the engine has been run approximately 30 minutes at 1200 R.P.M.

1. Loosen choke lever clamp screw. While holding choke tightly closed, pull choke lever up until lip of fast idle cam lightly contacts boss on flange body.
2. Position fast idle cam so fast idle adjustment screw is against the lowest step.
3. Start engine and adjust fast idle adjusting screw until 800 R.P.M. is obtained.

Dashpot Adjustment

1. Make the idle mixture, hot idle R.P.M. and fast 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 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.

REMOVING CARBURETOR FROM ENGINE

1. Carefully remove air cleaner from the engine.
2. Unhook clip that secures carburetor to control shaft rod to throttle lever. Remove rod from hole in throttle lever.
3. Pull choke fresh air tube from rubber grommet in carburetor air horn and rotate tube to allow removal of carburetor.
4. Disconnect distributor vacuum advance line connection at the carburetor.
5. Disconnect choke heat tube at choke housing.
6. Disconnect fuel line connection at carburetor.
7. Remove four nuts and lockwashers securing carburetor to manifold. Carefully remove carburetor from engine.
   NOTE: Do not invert carburetor upon removal. To provide a more accurate inspection of fuel condition, or inspection for dirt in the carburetor, keep fuel in carburetor at its normal level until air horn is removed.

DISASSEMBLY OF CARBURETOR

1. Using Tool 9550-AAA (T109-56) remove spring retainer (hair pin retainer) at lower end of choke connector rod and remove rod. Loosen clamp screw and remove choke shaft lever.
2. Remove spring retainer and rod end clip from carburetor pump operating rod. Remove rod.
3. Remove two screws and lockwashers securing dust cover to air horn.
4. Compress bowl vent spring and remove spring retainer. Remove spring, pin and valve cap assembly from dust cover.
5. Remove sixteen screws and lockwashers securing air horn to main body. See figure 9F-21. To remove air horn with all parts attached, carefully lift air horn assembly straight up from main body.
6. Place air horn assembly in inverted position and remove primary float hinge pin, and primary float and lever assembly. Disconnect float lifter spring from primary float by pulling up pump plunger to eliminate spring tension. Invert the primary float to allow disengagement of the float lever from the spring.
7. Remove secondary float hinge pin and secondary float and lever assembly.
8. Remove primary needle valve, then remove needle seat and gasket.
   NOTE: If needle and seat assemblies are to be re-used, keep these parts together as they are matched sets.
9. Remove secondary needle valve, then remove needle seat and gasket.
10. Remove metering rods from vacumeter link. Remove vacumeter piston from link by rotating piston 1/4 turn from normal position. See figure 9F-22.
11. Remove spring retainer from accelerator pump link and disconnect link from pump plunger and accelerator pump arm. Remove pump plunger assembly from air horn.
12. Remove air horn gasket.
13. Remove attaching screw and bowl vent arm from countershaft.
14. Loosen accelerator pump arm and metering rod arm clamp screws. Slide pump operating lever and countershaft assembly from air horn. Remove accelerator pump arm, metering rod arm, and vacumeter link. See figure 9F-23.
15. Remove three screws and retainers securing choke coil housing to choke piston housing. Remove choke coil housing, gasket, and choke baffle plate assembly. See figure 9F-24.
16. Carefully file stake marks from bottom of choke plate attaching screws. Remove the two screws and choke plate.
17. Rotate choke shaft counterclockwise until choke piston is clear of cylinder. Slide choke piston lever, link and shaft assembly from air horn.
18. Remove three screws securing choke piston housing to air horn. Remove piston housing and gasket.
19. Remove fuel inlet fitting. Remove strainer nut, gasket, and bowl strainer screen from primary side of air horn.
20. Remove strainer nut and gasket from secondary side of air horn.
21. Remove choke tube grommet from air horn.
22. Remove vacumeter piston spring and pump plunger return spring from main body. See figure 9F-25.
23. Remove special screw, pump jet and housing assembly, and gasket from main body. See figure 9F-26. Remove pump discharge check valve by inverting carburetor body.
24. Remove low speed jets from primary side of carburetor.
25. Remove metering rod and main metering (secondary) jets.
26. Remove accelerator pump relief valve assembly from pump discharge passage adjacent to pump plunger cylinder.
27. Remove pump inlet check ball retainer with Tool 9575-B. See figure 9F-27. While pushing tool down over retainer, slowly rotate tool clockwise until tool has a firm grip on retainer. Pull retainer from pump plunger cylinder. Remove inlet check ball.
28. Insert the four longest air horn to main body attaching screws into the screw holes in the corners of the main body. Invert carburetor and remove four body flange attaching screws and lockwashers. Separate body flange and main body. Remove gasket.
    NOTE: To prevent damage or distortion of brass standpipe in main body choke vacuum passage, do not invert carburetor on bench without a suitable support to provide clearance for standpipe. Leave screws installed in main body during cleaning and assembly until main body is assembled to body flange.
29. Remove idle mixture adjusting screws and springs from body flange.
30. Remove dashpot assembly from dashpot bracket.
31. Remove fast idle cam attaching screw, fast idle cam and spring assembly, cam trip lever, and cam washer.
32. Remove throttle lever adjusting screw and spring.
33. Remove a spring retainer and flat washer from each end of secondary throttle control rod. Remove control rod and two flat washers.

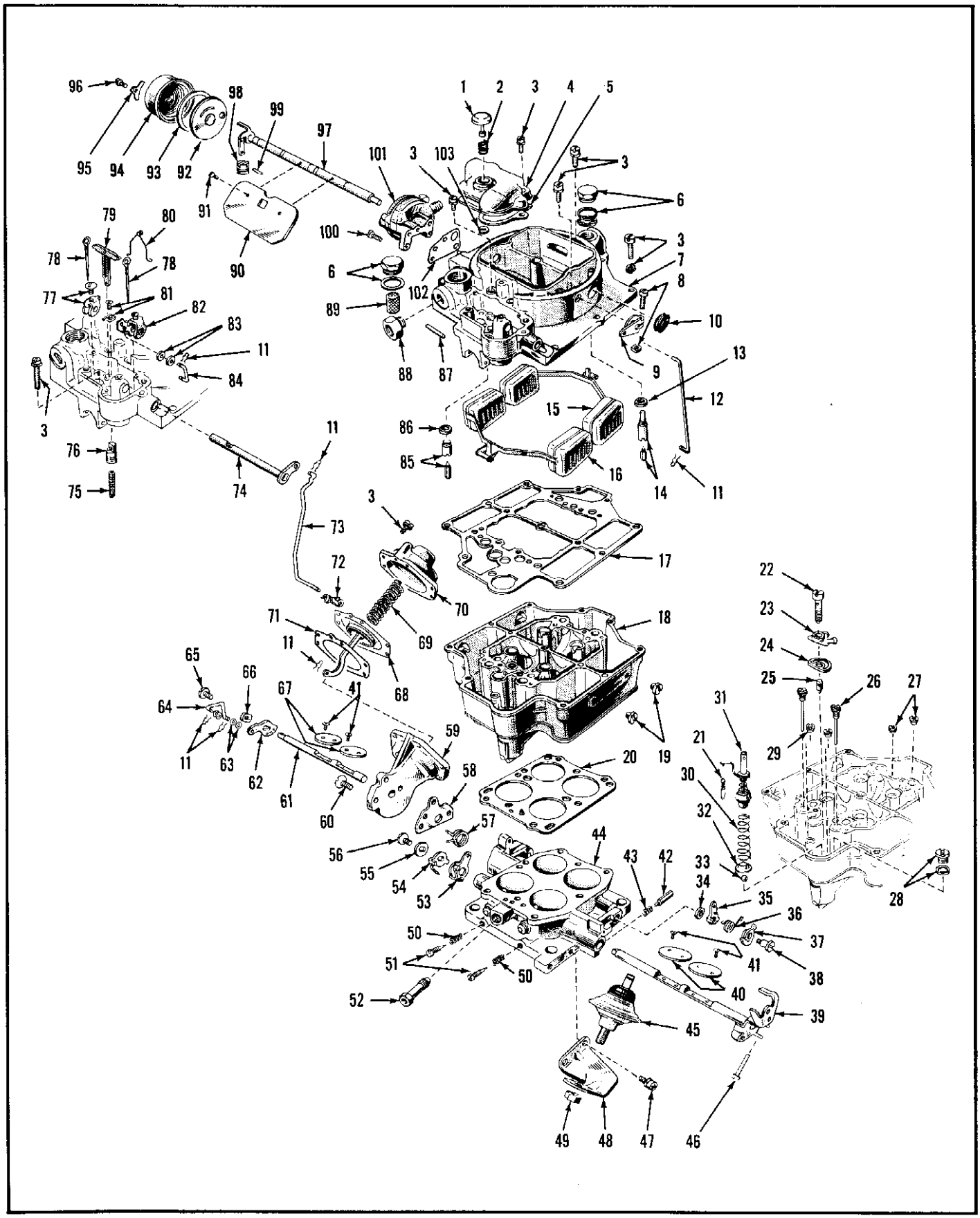

Fig. 9F-20—WCFB 2404 SA Carburetor—Disassembled

CARTER WCFB 2404-SA CARBURETOR NOMENCLATURE

(See figure 9F-20.)

1. Pin and Valve Cap Assembly
2. Bowl Vent Spring
3. Screw and Lockwasher Assembly
4. Dust Cover
5. Dust Cover Gasket
6. Strainer Nut and Gasket
7. Air Horn
8. Choke Lever Screw and Nut
9. Choke Shaft Lever
10. Choke Air Tube Seal
11. Spring Retainer
12. Choke Connector Rod
13. Secondary Fuel Inlet Seat Gasket
14. Secondary Needle and Seat
15. Secondary Float and Lever Assembly
16. Primary Float and Lever Assembly
17. Air Horn to Main Body Gasket
18. Main Body
19. Sight Plugs
20. Main Body to Body Flange Gasket
21. Float Lifter Spring
22. Pump Jet and Housing Attaching Screw (Special)
23. Pump Jet and Housing
24. Pump Jet and Housing Gasket
25. Pump Discharge Needle
26. Low Speed Jet Assembly
27. Main Metering (Secondary) Jets
28. Pump Relief Valve
29. Metering Rod (Primary) Jets
30. Accelerator Pump Spring
31. Pump Plunger Assembly
32. Pump Inlet Check Ball Retainer
33. Pump Inlet Check Ball
34. Fast Idle Cam Washer
35. Fast Idle Cam Trip Lever
36. Fast Idle Cam Spring
37. Fast Idle Cam
38. Fast Idle Cam Attaching Screw
39. Primary Throttle Shaft and Lever Assembly
40. Primary Throttle Plates
41. Throttle Plate Attaching Screws
42. Throttle Lever (Idle R.P.M.) Adjusting Screw
43. Throttle Lever Adjusting Screw Spring
44. Body Flange
45. Dashpot Assembly
46. Fast Idle Adjustment Screw
47. Dashpot Mounting Bracket Attaching Screws (Cross Head) and Lockwashers
48. Dashpot Bracket
49. Dashpot Adjustment Locknut
50. Idle Adjusting Screw Springs
51. Idle Mixture Adjusting Screws
52. Distributor Vacuum Line Fitting
53. Throttle Operating Lever (Primary)
54. Throttle Shaft Dog
55. Throttle Shaft Washer (Primary)
56. Throttle Shaft Arm Attaching Screw
57. Throttle Flex Spring
58. Diaphragm Housing Gasket
59. Secondary Diaphragm Housing
60. Diaphragm Housing Attaching Screws
61. Secondary Throttle Shaft
62. Secondary Throttle Lever
63. Throttle Control Rod Washers (Four)
64. Secondary Throttle Control Rod
65. Secondary Throttle Lever Attaching Screw
66. Throttle Shaft Washer (Secondary)
67. Secondary Throttle Plates
68. Diaphragm Assembly
69. Diaphragm Return Spring
70. Diaphragm Housing Cap
71. Diaphragm Housing Cap Gasket
72. Clip (Pump Operating Rod to Throttle Shaft)
73. Throttle Connector Rod
74. Pump Operating Lever and Countershaft Assembly
75. Vacuum Piston Spring
76. Vacuum Piston
77. Metering Rod Arm and Screw
78. Metering Rods
79. Vacumeter Piston Link
80. Metering Rod Spring
81. Vent Arm and Screw
82. Accelerator Pump Arm and Screw
83. Pump Link Washers (Two)
84. Accelerator Pump Link
85. Primary Needle and Seat
86. Primary Fuel Inlet Seat Gasket
87. Float Hinge Pin
88. Fuel Inlet Fitting
89. Bowl Strainer
90. Choke Plate
91. Choke Plate Attaching Screw
92. Choke Baffle Assembly
93. Choke Coil Housing Gasket
94. Choke Coil Housing
95. Choke Coil Housing Retainer
96. Choke Coil Retaining Screw
97. Choke Shaft, Link, and Lever Assembly
98. Choke Piston
99. Choke Piston Pin
100. Choke Piston Housing Attaching Screw
101. Choke Piston Housing
102. Choke Piston Housing Gasket
103. Bowl Vent Spring Retainer

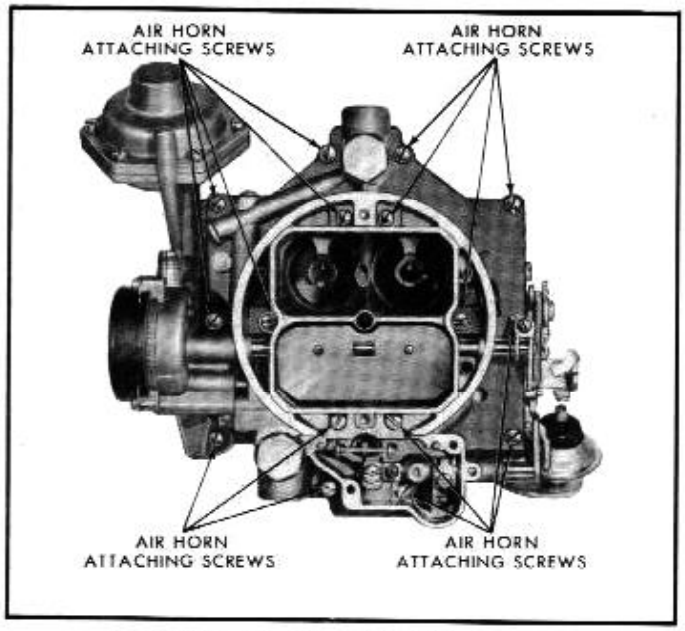

Fig. 9F-21—Air Horn Attaching Screws

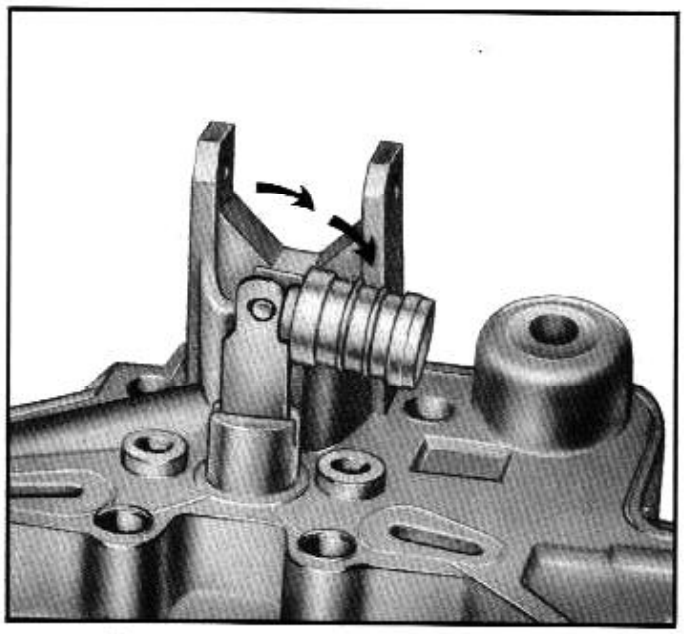

Fig. 9F-22—Remove Vacumeter Piston

34. Remove primary throttle shaft lever attaching screw and washer. Remove throttle shaft dog, throttle flex spring, and operating lever.
35. Remove spring retainer from pin on secondary throttle lever and disconnect secondary diaphragm rod from secondary throttle lever. Remove secondary throttle lever attaching screw, washer, and secondary throttle lever assembly from throttle shaft.
36. Remove six screws and lockwashers securing diaphragm housing cap to diaphragm housing. Remove cap, diaphragm spring, diaphragm assembly

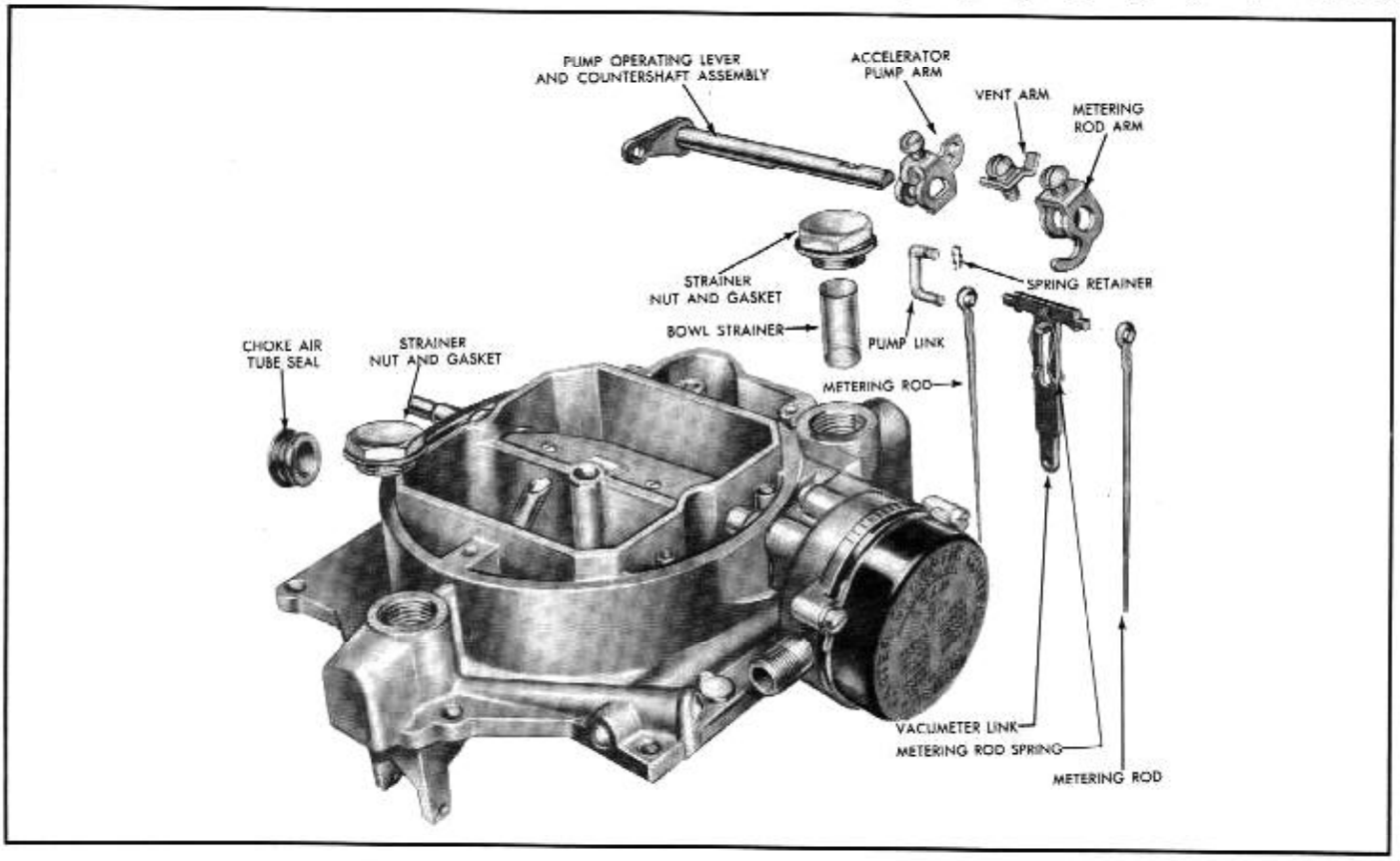

Fig. 9F-23—Parts to be Removed From Top of Air Horn

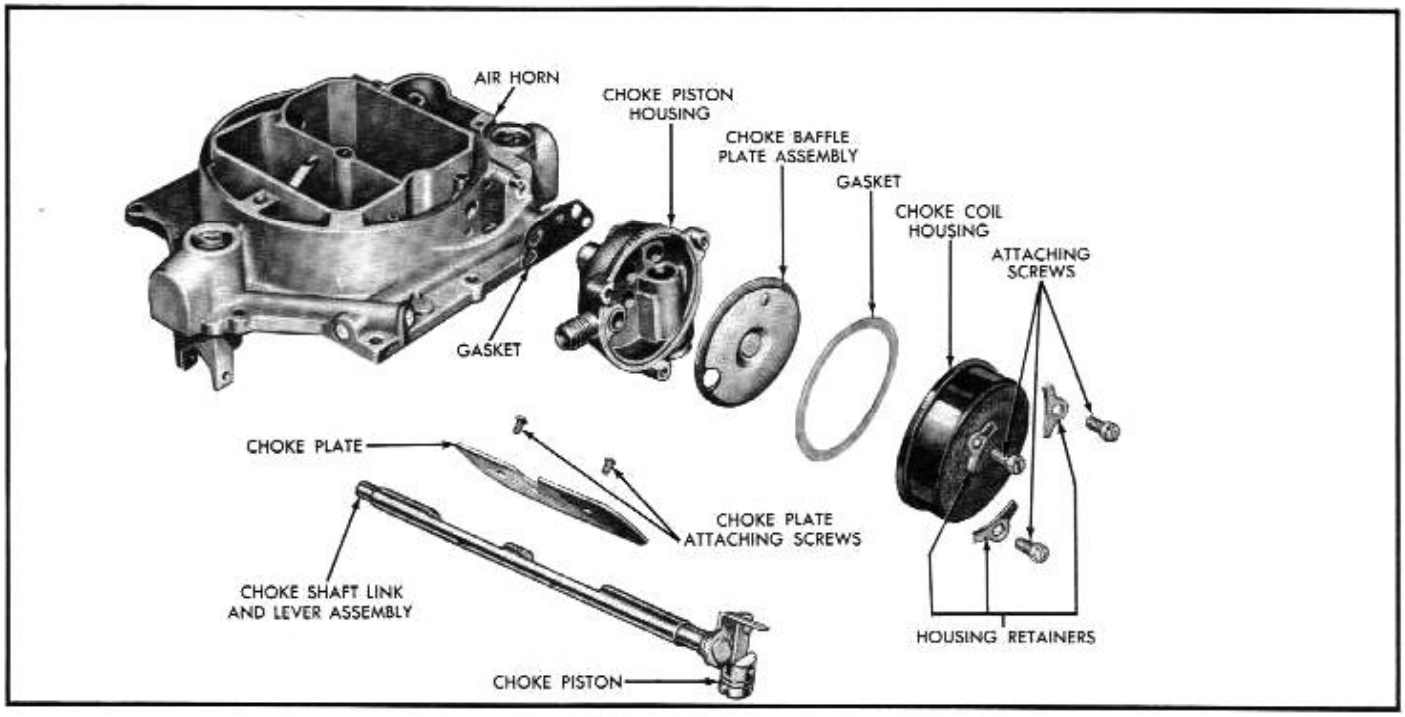

Fig. 9F-24—Choke and Choke Plate Disassembly

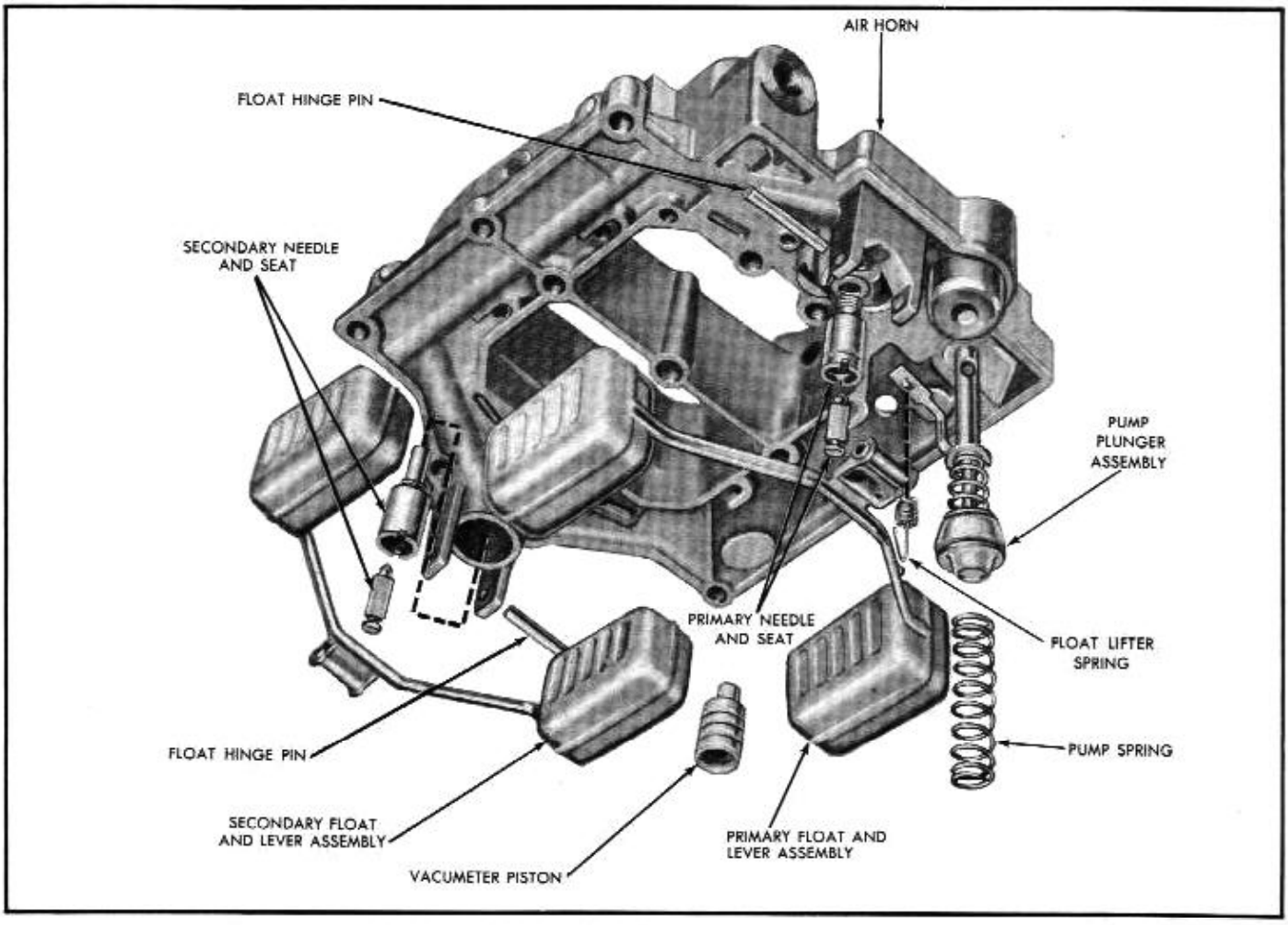

Fig. 9F-25—Parts to be Removed From Bottom of Air Horn

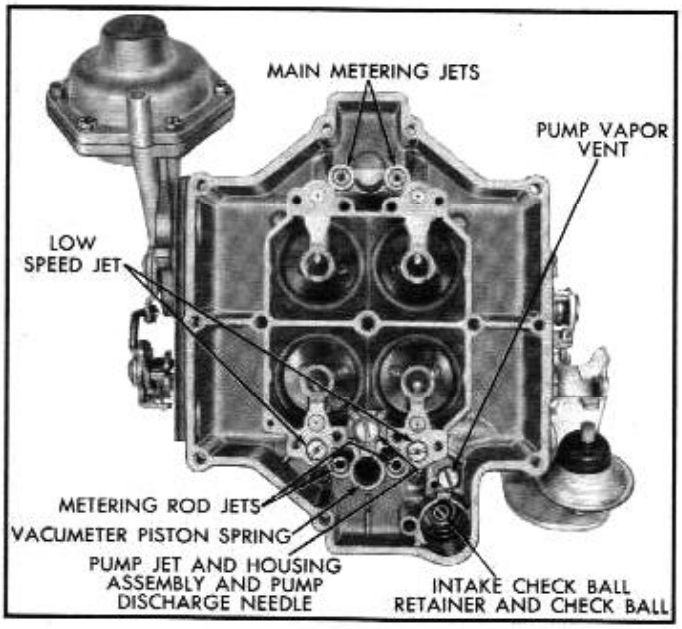

Fig. 9F-26—Parts to be Removed From Main Body

and gasket from diaphragm housing.

37. Remove three diaphragm housing attaching screws. Remove diaphragm housing and gasket from body flange.
    NOTE: The throttle plates and shaft should not be removed unless absolutely necessary for cleaning or replacement of damaged parts. If the throttle plates are to be removed, the staked ends of the attaching screws must be filed to remove burrs before loosening the screws.
38. Remove gaskets from all fittings, valves, and plugs if these parts are to be used in reassembly.
39. Clean all parts as outlined under "Cleaning".

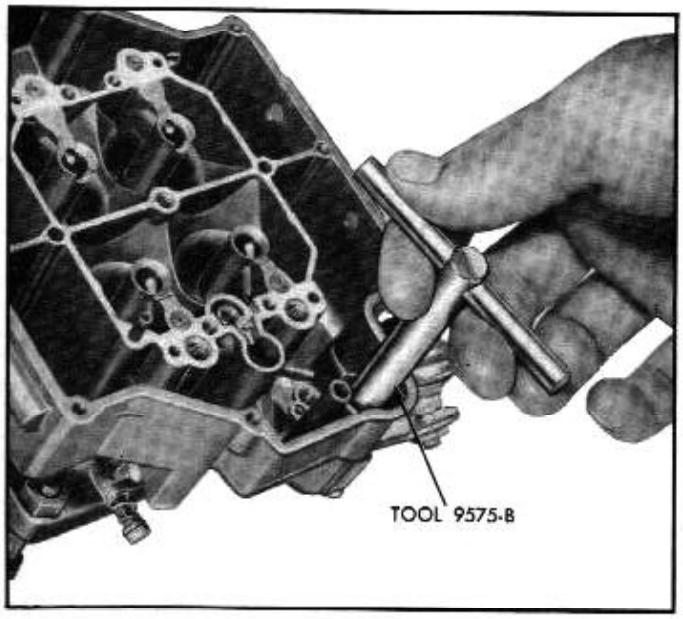

Fig. 9F-27—Removing Pump Check Ball Retainer

CLEANING AND INSPECTION

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 on 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 manufacturers cleaning instructions.
   CAUTION: *Composition and plastic parts such as choke coil housing, pump plunger, dashpot, secondary throttle operating diaphragm assembly, 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 pump plunger, dashpot, secondary throttle operating diaphragm assembly and choke coil housing with a kerosene soaked cloth.
   CAUTION: *Do not air blast to dry these parts.*

Inspection

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

1. Body flange for: cracks; damaged gasket surfaces; obstructed passages; worn throttle shafts and shaft holes; nicked, bent or binding throttle plates; loose passage plugs; stripped threads.
2. Main body for: cracks; damaged gasket mating surfaces; damaged or loose choke vacuum passage standpipe; loose passage plugs; obstructed passages; stripped threads.
3. Air horn and choke plate for: cracks; damaged mating surfaces; worn choke shaft and shaft holes; nicked, bent or binding choke plate; stripped threads.
4. Secondary diaphragm housing and cap for: damaged gasket mating surface; cracks; obstructed passages; stripped threads.
5. Choke piston housing for: gum and carbon deposits; damaged mating surfaces; obstructed passages; worn, scored or nicked piston bore; loose welsh plug; stripped threads.
6. Choke coil housing for: cracks and distortion.
7. Needle valves and seats for: worn, nicked or

scored condition; damaged or burred screwdriver slots; stripped threads.

8. Primary and secondary float and lever assemblies for: leaks; signs of wear on sides of pontoons; collapsed condition; float tab worn by needle impression. Smooth tab with fine sandpaper if necessary.
9. Metering rod and main metering jets for: proper size; stripped threads; damaged or burred screwdriver slots.
10. Metering rods for: distortion; wear; proper size.
11. Vacumeter link and piston for: signs of binding in air horn or vacumeter piston cylinder.
12. Pump plunger for: binding or distortion; grooved or worn plunger leather.
13. Fast idle cam for: distortion; worn steps; damaged spring.
14. Idle mixture screws for: damaged or worn threads; grooved or nicked faces.
15. All springs for: distortion; rust; corrosion; wear.
16. All retainers for: distortion; rust; corrosion.
17. All linkage for: wear (eggshaped holes); distortion.
18. All ball and needle checks for: worn, nicked or scored condition.

ASSEMBLY OF CARBURETOR

1. If the throttle plates have been removed, the following installation procedures should be observed:
   (a) Install both the primary and secondary throttle shafts.
   (b) Install both primary and secondary throttle plates with trade mark "C" toward bottom of carburetor (toward intake manifold), and away from center of carburetor when viewed from the manifold side, using new throttle plate attaching screws.
   (c) Hold primary throttle plates tightly closed. Loosen throttle plate attaching screws slightly and tap both plates with screwdriver. When plates are correctly seated, tighten both screws, and stake with side cutting pliers.
2. Place gasket and secondary diaphragm housing in position on body flange. Secure in place with three flat head screws. Stake screws at notches provided in countersunk screw holes.
3. Place secondary throttle lever and washer on secondary throttle shaft. Secure in place with round head attaching screw.
4. Position secondary diaphragm gasket on secondary diaphragm housing.
   NOTE: Be sure vacuum passage hole in gasket is lined up with vacuum passage in housing.

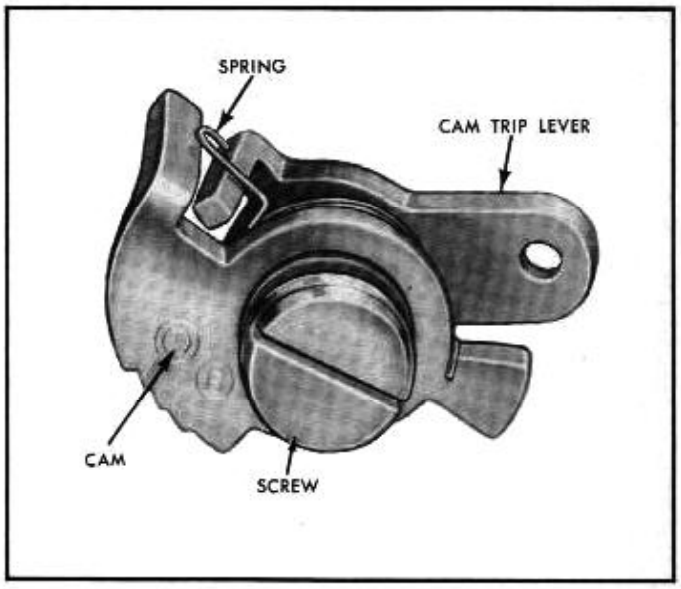

Fig. 9F-28—Throttle Shaft Dog Assembly

5. Place secondary diaphragm assembly in diaphragm housing. Temporarily hook end of diaphragm rod over pin on secondary throttle lever.
6. Place diaphragm return spring and cap in position and install six screws and lockwashers. Be sure diaphragm cap is positioned so vacuum passage in cap is lined up with vacuum passage in housing, diaphragm and gasket.
7. Install primary throttle shaft lever and flex spring. While compressing ends of flex spring, install throttle shaft dog with lugs toward body flange. Release flex spring so ends of spring fit in notches in throttle shaft dog lugs. See figure 9F-28.
8. Install primary throttle shaft washer with lettering facing outward. Secure in place with round head attaching screw.
9. Install flat washer on each end of throttle control rod. Connect throttle control rod to secondary throttle lever and primary throttle operating lever and secure with two flat washers and two spring retainers.
10. Install throttle lever adjusting screw and spring. NOTE: Do not turn adjusting screw in far enough to open throttle plates at this time.
11. Install fast idle cam and spring assembly, cam trip lever, and cam washer on fast idle cam attaching screw.
    NOTE: Longest lug on cam trip lever should point toward cam and spring assembly. This lug should also be held against the flat on fast idle cam by the cam spring. See figure 9F-29.
12. Install fast idle cam, trip lever, washer, and screw as an assembly on body flange boss. See figure 9F-29.

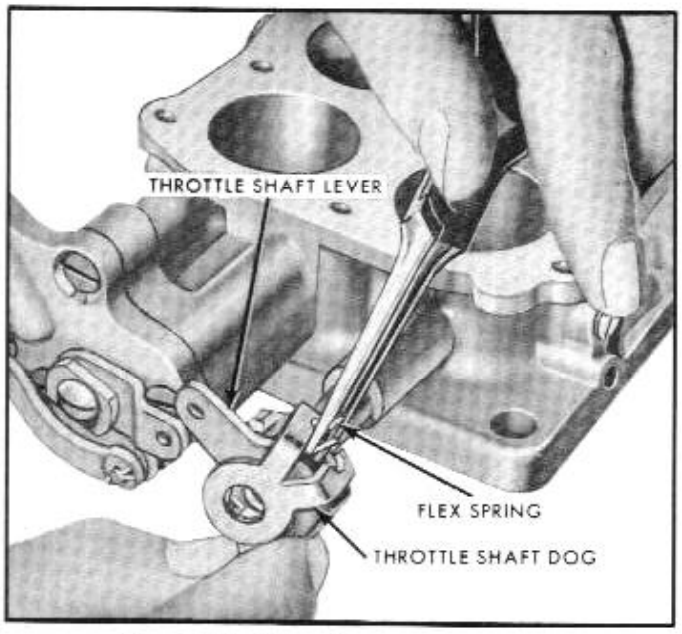

Fig. 9F-29—Fast Idle Cam Assembly

13. Install dashpot assembly on dashpot bracket.
14. Install distributor vacuum advance fitting on body flange.
15. Install idle mixture screws and springs. Turn screws in BY HAND until they just contact seats. Back screws out 1½ turns from seated position for a preliminary adjustment.
16. Place new body flange gasket on inverted main body.
    NOTE: Do not invert main body without providing suitable support to prevent damage to main body choke vacuum passage brass insert.
17. Install body flange and secure to main body with four screws and lockwashers. Tighten securely.
18. Place pump inlet check ball in pump cylinder. Install inlet check ball retainer using Tool 9575-A. Position retainer in counterbore at bottom of cylinder with sleeve portion of tool. The sleeve may be tapped lightly to be sure retainer bottoms in counterbore. Install rod portion of tool and tap lightly to expand retainer to a snug fit in counterbore. See figure 9F-30.
19. Install pump relief valve assembly in pump discharge passage.
20. Install metering rod jets in primary float bowl. The metering rod jets are those with the larger holes.
21. Install secondary main metering jets (small holes) in secondary float bowl.
22. Install low speed jets on primary side of carburetor.
23. Install pump discharge needle (point downward) in pump jet discharge passage. Install pump jet and housing assembly, and gasket. Secure in place with special drilled screw.
24. Place vacumeter piston spring in main body vacumeter piston cylinder.
25. Place pump plunger return spring in pump plunger cylinder.
26. Install choke air tube grommet in air horn.
27. Install strainer nut and gasket on secondary side of air horn.
28. Place bowl strainer screen in strainer nut and install screen, nut and gasket in primary side of air horn as an assembly.
29. Install choke piston housing and gasket on air

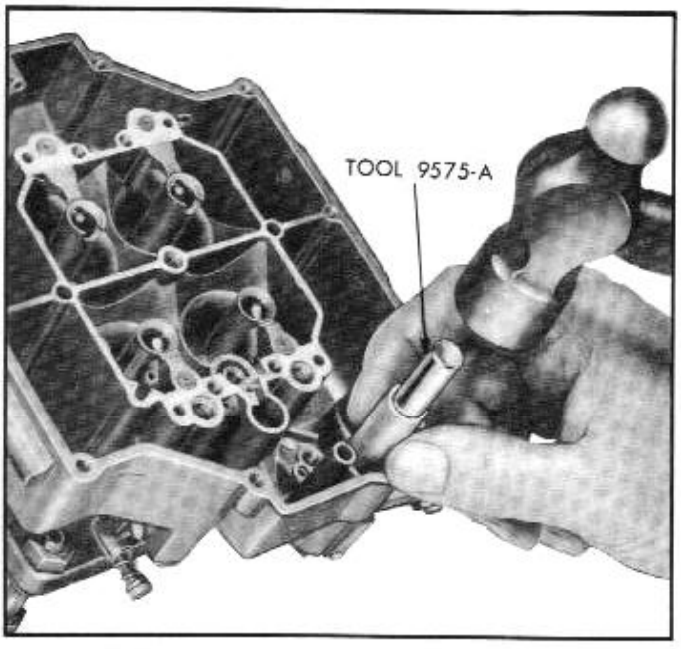

Fig. 9F-30—Installing Pump Check Ball Retainer

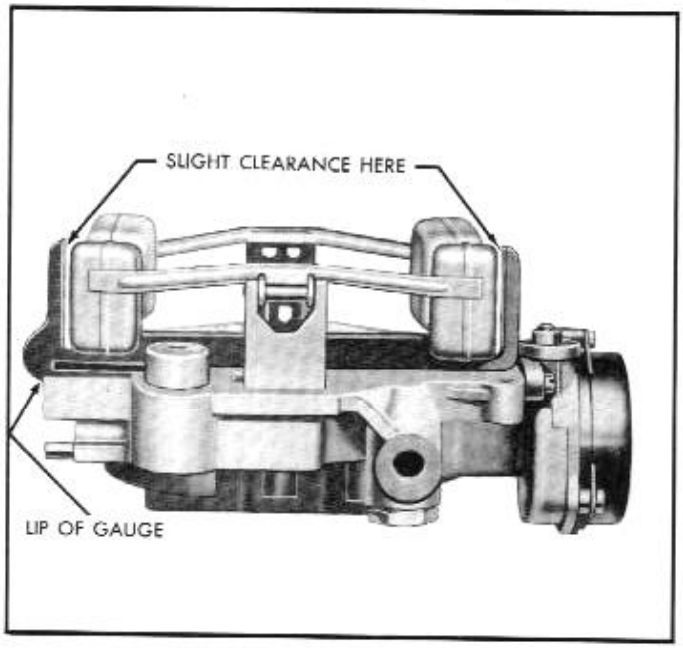

Fig. 9F-31—Lateral Float Adjustment

horn. Secure in place with three screws.

30. Fasten choke piston to choke shaft link with pin.
31. Slide choke piston lever, link and shaft assembly into choke piston housing and air horn. Start choke piston in cylinder bore. Check to be sure assembly operates freely without binding.
32. Place choke plate on choke shaft with trade mark up. Secure in place with new attaching screws while holding choke plate closed. If choke plate binds, loosen screws slightly. Hold choke plate closed and tap lightly with screwdriver to properly seat. Retighten attaching screws and stake with side cutting pliers.
33. Install choke baffle plate, gasket and coil housing. Install three coil housing retaining screws and retainers and align index mark on choke coil housing with second digit from center mark (rich side) on choke piston housing. Alternately tighten the three retaining screws.
34. Install secondary needle seat and gasket.
    NOTE: Secondary needle seat has long standpipe on upper end.
35. Install primary needle seat and gasket.
36. Install primary and secondary needle valves in their respective seats.
37. Install the primary and secondary float and lever assemblies on the air horn. The primary float is identified by the float lifter spring link stamped on the primary float lever.
    NOTE: Do not install air horn gasket at this time. The float assemblies are temporarily installed without installation of air horn gasket for accurate check of float lateral, vertical and drop adjustments prior to assembly of the air horn and its components.
38. FLOAT ADJUSTMENT: Make lateral, vertical and drop adjustments on both floats as follows:
    1. LATERAL
    (a) Be sure the primary float, identified by the float lifter spring link stamped on the lever, is reinstalled on the primary side of the carburetor.
    (b) With air horn inverted and floats resting on needle valves, place Float Gauge 9550H (T109-293) for primary and 99693 (T109-222) for secondary under the center of each float (solder dot) with lip of gauge against air horn, choke lever side. See figure 9F-31.
    (c) Using Tool 9564-A (T109-22), bend float arms so floats just clear vertical upright of float gauge.
    2. VERTICAL (FLOAT LEVEL ADJUSTMENT)
    The float level for both floats is determined by the clearance between the top of each float and the gasket surface of the air horn with air horn in inverted position. The primary float level is specified at 1/16" clearance between these points and the secondary at 3/16". Set vertical float adjustment as follows:
    (a) Make lateral float adjustment.
    (b) With gauges 9550H (T109-293) (primary) and 99693 (T109-222) (secondary) in same position, bend float arms so both floats just clear horizontal portion of gauge. See figure 9F-32.

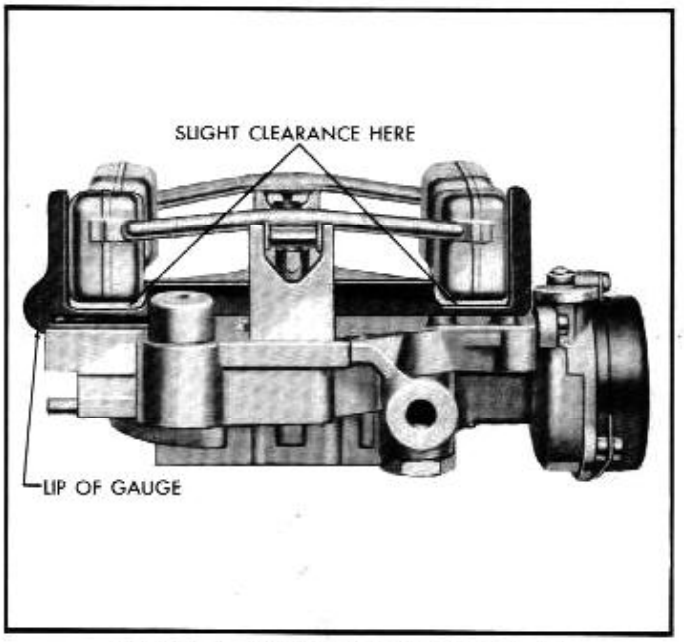

Fig. 9F-32—Vertical Float Adjustment

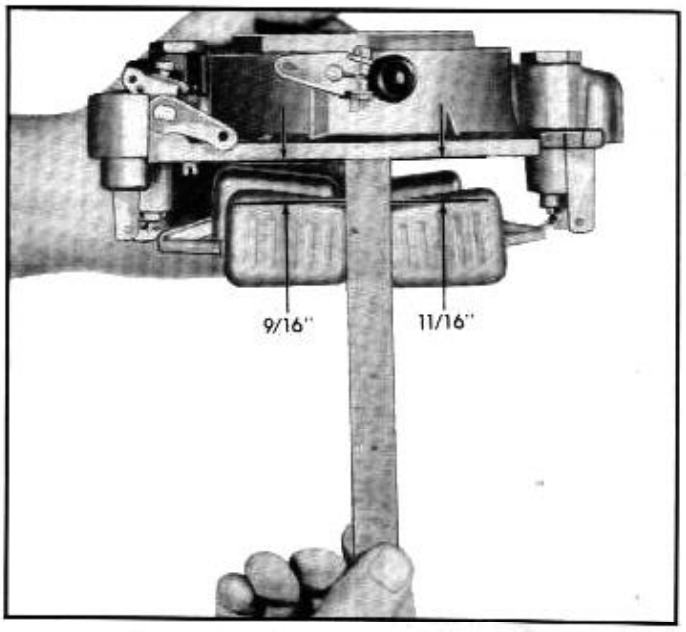

Fig. 9F-33—Float Drop Adjustment

3. FLOAT DROP
   (a) Make lateral and vertical adjustment.
   (b) Turn air horn to an upright position so floats fall to limit of travel.
   (c) With pump plunger and float lifter spring bracket in down position or float lifter spring disconnected, measure distance between bottom of air horn and top of float at free end of float. See figure 9F-33.
   (d) Bend stop tabs to obtain 9/16" drop on secondary float, 11/16" drop on primary float.
39. Install metering rod spring on vacumeter link. Install vacumeter link in air horn with lip toward choke plate.
40. Position accelerator pump arm and screw assembly in the air horn with pump link holes located over pump plunger hole. Slide the pump operating lever and countershaft assembly into the air horn and through the pump arm. Position metering rod arm to engage lip on vacumeter link and slide countershaft into metering rod arm. See figure 9F-34. Tighten pump arm clamp screw.
41. Install air horn to main body gasket on air horn.
42. Install pump plunger and float lifter spring in air horn as an assembly.
43. Install pump connector link on pump plunger and through the top hole of the pump arm. Secure link to pump arm with spring retainer.
44. Install vacumeter piston on vacumeter link by engaging pin on piston with hole in link when piston is 1/4 turn from normal position.

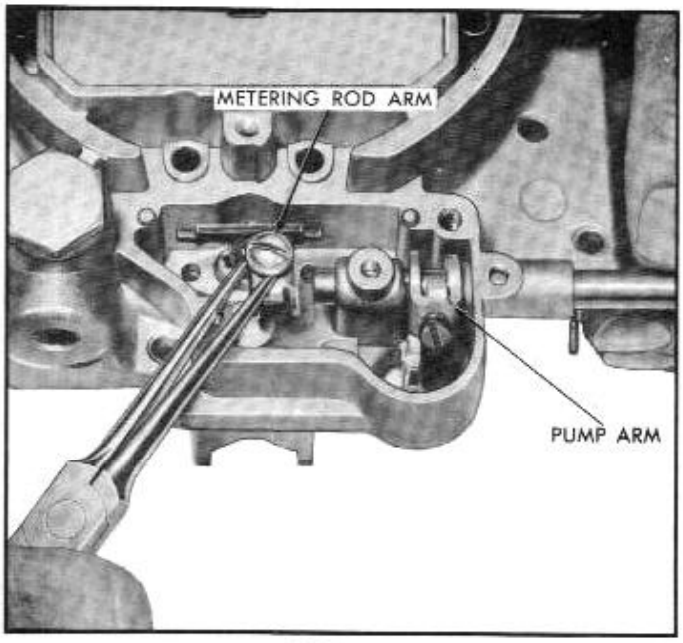

Fig. 9F-34—Install Pump Operating Lever and Countershaft Assembly

45. Install primary and secondary needle valves in their respective seats.
46. Install secondary float and lever assembly. Connect float lifter spring to primary float lever and install primary float and lever assembly.
47. Carefully fit air horn in place on main body. Be sure pump plunger and vacumeter piston are properly started in their cylinders.
48. Secure air horn to main body with sixteen attaching screws. Install longest screws inside the air cleaner mounting circle and in the dust cover portion of the air horn adjacent to the pump plunger. Install the shortest length screws in the outer attaching screw holes. Install the one attaching screw of intermediate length in the corner hole between the choke piston housing and fuel inlet fitting. See figure 9F-21.
49. Install fuel inlet fitting.
50. Install carburetor pump operating rod. Secure at lower end with rod end clip and at upper end with spring retainer.
51. Install metering rods on vacumeter link. Hook ends of metering rod spring around metering rods. Be sure vacumeter link does not bind in air horn.
52. Install bowl vent arm on countershaft. Place vapor vent pin and valve cap assembly in dust cover. Install pin spring and retainer. Do not secure dust cover to air horn at this time.
53. Refer to "Carburetor Adjustments" in this section of manual and make pump travel, metering rod, and vapor vent adjustments at this time.
54. Place a few drops of light engine oil on countershaft at holes in air horn.
55. Install dust cover and gasket and secure to air horn with two screws and lockwashers.
56. Install choke lever on choke shaft so lever points toward countershaft. Tighten clamp screw. Install choke connector rod on choke lever and secure to fast idle cam trip lever with spring retainer.

Bench Fast Idle Adjustment

These adjustments are intended as preliminary bench adjustments. The final fast idle speed adjustment should be made after the carburetor has been installed on the engine.

1. CAM ADJUSTMENT
   (a) Loosen choke lever clamp screw.
   (b) While holding choke tightly closed, pull choke lever up until lip of fast idle cam lightly contacts boss on flange body. Tighten choke lever clamp screw. See figure 9F-35.
   (c) While holding choke plate closed, turn fast

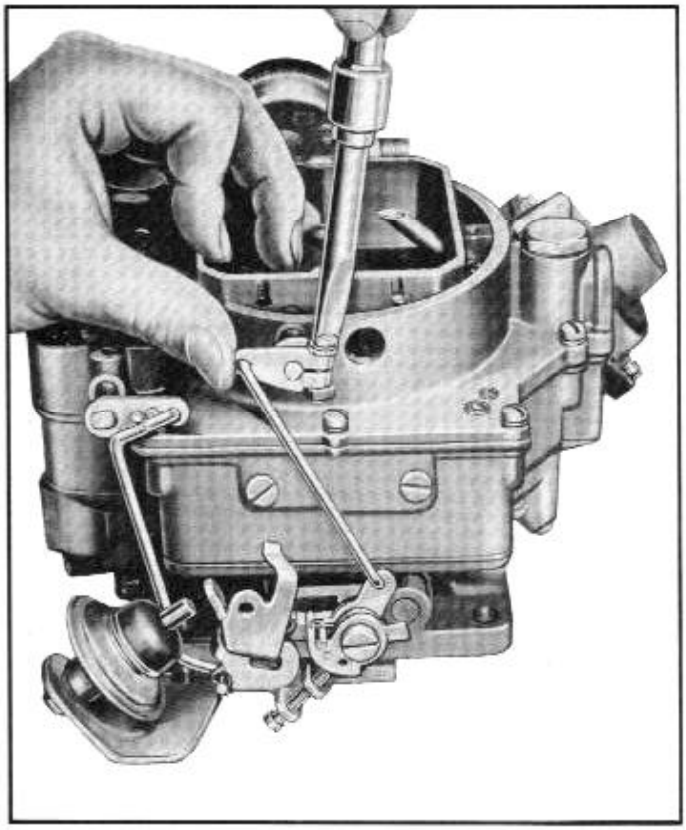

Fig. 9F-35—Preliminary Fast Idle Cam Adjustment

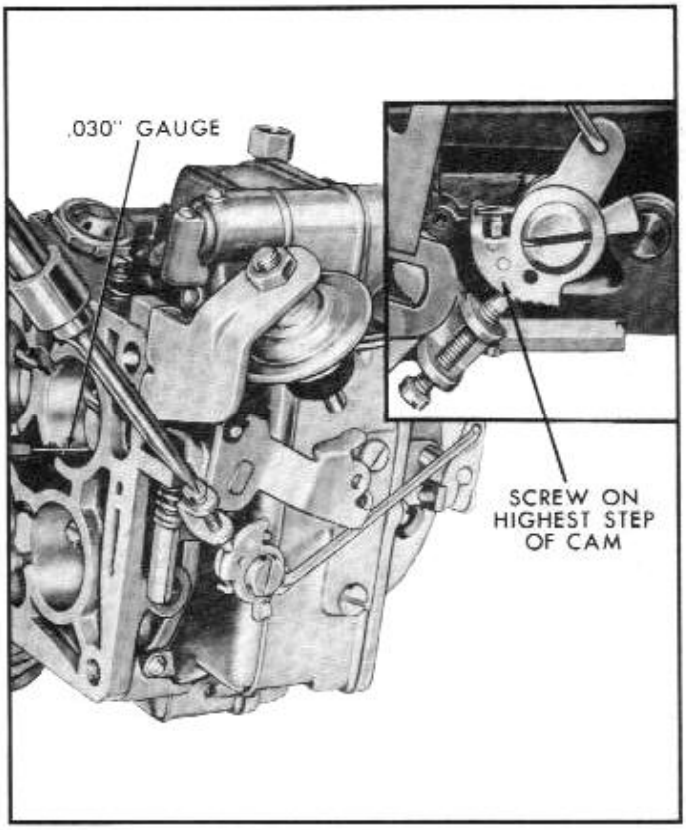

Fig. 9F-36—Preliminary Fast Idle Throttle Adjustment

idle adjusting screw in until it contacts high step of fast idle cam.

2. FAST IDLE THROTTLE ADJUSTMENT
   (a) Place a No. 69 drill or 1/32" drill between the edge of primary throttle plate and bore of carburetor, side opposite idle port. Hold throttle plates closed against gauge. Slowly tighten fast idle adjusting screw until drill falls free, indicating .030" clearance. See figure 9F-36.

INSTALLATION OF CARBURETOR

1. Clean manifold spacer, manifold flange and carburetor of any old gasket material. Check carburetor manifold and spacer for any damage or nicks.
2. Install spacer and two gaskets (one on each side of spacer) to intake manifold.
   CAUTION: *Do not use a gasket sealer or any form of sealing compound on these gaskets.*
3. Position carburetor over studs on manifold. Start fuel line, distributor vacuum advance line, and choke heat tube connections.
4. Secure carburetor to manifold with four nuts and lockwashers.
   IMPORTANT: To prevent distortion and possible damage to the carburetor body flange, it is important to snug down and then alternately tighten each pair of carburetor mounting nuts in a crisscross pattern to an equivalent torque of 12 to 15 lbs. ft. It is necessary that a good seal be maintained between carburetor base and spacer, and between spacer and manifold, to prevent loss of fuel which flows through the grooved passages in the base of the carburetor during engine idle speed operation. The seal must also be adequate to prevent loss of manifold vacuum.
5. Tighten fuel line, distributor vacuum advance line, and choke heat tube connections on carburetor.
6. Attach carburetor to control shaft rod to throttle lever and secure with clip.
7. Install choke fresh air tube in rubber grommet in carburetor air horn.
8. Start engine. Run engine sufficiently to fill fuel bowl in carburetor.
9. 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.
10. 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 plates or choke piston.	(c) Repair or replace parts if necessary.
	(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 gaskets.
	(f) Improper fuel level.	(f) Adjust fuel level.
(2) Stalling when accelerator is released suddenly.	(a) Improperly adjusted dashpot.	(a) Adjust dashpot.
	(b) Inoperative dashpot.	(b) Replace dashpot.
	(c) Incorrect idle adjustment.	(c) Perform all idle adjustments.
(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) Secondary throttle plates not closing.	(e) Position throttle plates correctly. Remove carbon in throttle bore.
	(f) Wrong idle mixture screws.	(f) Install correct screws.
	(g) Improper fuel level.	(g) Adjust float level.
	(h) Improper fast idle adjustment.	(h) Perform all idle adjustments.
	(i) Exhaust thermostat valve not operating correctly.	(i) Repair or replace.
	(j) Loose body to flange attaching screws.	(j) Tighten screws.
(4) Poor low-speed operation.	(a) Idle mixture 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 and blow out passages with compressed air.
(5) Faulty acceleration.	(a) Improper pump stroke.	(a) Adjust pump link.
	(b) Leaking pump inlet check ball.	(b) Clean or replace.
	(c) Inoperative pump discharge needle.	(c) Clean or replace.
	(d) Worn or damaged pump piston.	(d) Replace pump piston.
	(e) Blocked or bent discharge nozzle.	(e) Clean, straighten or replace.
	(f) Leaking main body cover gasket.	(f) Replace gasket.
	(g) Exhaust thermostat valve stuck in heat "off" position.	(g) Repair or replace.

TROUBLE SHOOTING CHART

TROUBLE	CAUSE	REMEDY
(6) Surging (cruising speeds to top speed).	(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 float 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.
(7) Low top speed.	(a) Clogged secondary jets.	(a) Clean with solvent and blow out jets with compressed air.
	(b) Undersize secondary jets	(b) Replace with correct size jets.
	(c) Leaking secondary throttle operating diaphragm or housing gasket.	(c) Replace diaphragm or gasket.
	(d) Low fuel pump volume.	(d) Test fuel pump.
	(e) Secondary linkage, throttle plates or shaft binding.	(e) Free up linkage and position throttle plates.
	(f) Clogged vacuum passage to venturi.	(f) Clean with solvent and blow out passage with compressed air.
	(g) Improper size, worn or obstructed main jets.	(g) Clean or replace.
	(h) Leaking accelerator pump discharge needle.	(h) Clean or replace.
	(i) Faulty choke operation.	(i) Check choke operation.
	(j) Dislocated float spring.	(j) Install spring correctly.

WCFB CARBURETOR SPECIFICATIONS

Type	Quadruple Down Draft
Venturi Size:	
Primary	1-3/16″
Secondary	1-3/16″
Float Setting – Dry:	
Primary	1/16″ between top of float and machined surface of bowl cover inverted.
Secondary	3/16″ between top of float and machined surface of bowl cover casting – cover inverted.
Bowl Vapor Vent Adjustment	1/16″ between lower edge of bowl vapor vent valve and dust cover – throttle in closed position.
Dashpot Adjustment	.067″
Pump Adjustment	Top surface of pump arm must be parallel to dust cover boss.
Initial Setting Idle Mixture Screws	1½ turns open.
Fast Idle Adjustment:	
Bench Adjustment	With fast idle screw on high step of fast idle cam, adjust screws to obtain .030″ clearance between primary throttle plate and bore on side opposite idle passage.
On The Vehicle	800 R.P.M. idle adjustment screw on first (lowest) step of fast idle cam.

WCFB CARBURETOR SPECIFICATIONS

Main Metering Jet Identification:
At Number Ft. Alt.
0-15,000 162
Secondary Metering Jet Identification:
At Number Ft. Alt.
0-5,000 175
5,000-10,000 175
10,000-15,000 186

Engine Idle R.P.M.:
Auto. Transmission (Neutral) 475-500
Auto. Transmission (Drive Range) 425-450
Engine Idle Manifold Vacuum (Hg.")
specified Idle R.P.M. (Sea Level) 18-19
Metering Rods Identification:
At Number Ft. Alt.
0-5,000 75-1333
5,000-10,000 75-1354
10,000-15,000 75-1355

TORQUE SPECIFICATIONS – CARTER WCFB CARBURETOR

Strainer Nut Assembly	15-18 Lbs. Ft.
Secondary Needle and Seat Assembly	4-5 Lbs. Ft.
Primary Needle and Seat Assembly	4-5 Lbs. Ft.
Choke Valve Attaching Screw	3-6 Lbs. In.
Metering Rod Arm Clamp Screw	15-20 Lbs. In.
Throttle Shaft Arm Attaching Screw	20-25 Lbs. In.
Choke Housing Cover Attaching Screw	15-20 Lbs. In.
Body Flange Attaching Screw and Washer Assembly	35-45 Lbs. In.
Dust Cover Attaching Screw and Washer Assembly	15-20 Lbs. In.
Diaphragm Housing Attaching Screw	25-35 Lbs. In.
Choke Housing Attaching Screw	4-5 Lbs. Ft.
Pump Jet Housing Attaching Screw	30-40 Lbs. In.
Air Horn Attaching Screw and Washer Assembly	20-25 Lbs. In.
Fast Idle Cam Attaching Screw	4-5 Lbs. Ft.
Throttle Valve Attaching Screw	4-7 Lbs. In.
Diaphragm Housing Cover Attaching Screw and Washer Assembly	10-15 Lbs. In.
Dashpot Screw and Washer Assembly	30-40 Lbs. In.
Dashpot Lock Nut	35-45 Lbs. In.
Primary Metering Rod Jet	30-40 Lbs. In.
Secondary Metering Jet	30-40 Lbs. In.
Flange Nuts	12-15 Lbs. Ft.

CARTER CARBURETOR SPECIAL TOOLS

9549-A	Wire Gauge, .010" Dia.
9545-B	Wire Gauge, .067" Dia.
9550-AAA	Retaining Ring Remover
9550-H	Primary Float Gauge (1/16")
9564-A	Float Bending Tool
9575-B	Pump Checking Ball Removing Tool
9581	Primary Throttle Shaft Bending Tool
9581-A	Wire Gauge, .076"-.086"
9615	Fast Idle and Unloader Bending Tool
99693	Secondary Float Gauge (3/16")
99798	Throttle Connecting Link Bending Tool