

then install throttle valve screws. Before tightening screws, align throttle valves so that they seal tightly in throttle bores. Push secondary shaft inward until it is seated against bearing on throttle lever side. Tighten throttle valve screws and stake securely.

4. Install new $\frac{3}{4}$ " Welch plug in hole over secondary throttle shaft bearing. (Throttle lever side). Press tightly in place.
5. Install primary throttle shaft bearing seal in rear of governor housing. (Chamfer on seal faces shaft bearing.) Stake seal in place.

Completion of 4G Governor Assembly

1. Install new gasket on governor housing, then install governor housing on throttle body using (4) attaching screws and lockwashers. Tighten securely.
2. Install governor lever, link and secondary valve actuating lever as shown (Fig. 20). Make sure "D" hole in primary lever is seated on flat of primary throttle shaft.
3. Install secondary throttle closing spring and secondary throttle lever on throttle shaft. Make sure flats on lever are seated on shaft. Install (2) lockwashers and $1\frac{1}{32}$ " nuts on ends of throttle shafts to retain levers. Tighten securely.
4. Install ends of governor spring over stationary pin and pin on governor lever. Make sure spring is seated in grooves on pins and ends of spring loops point downward. Use a light grease on spring pins to prevent friction and breakage.
5. Install governor diaphragm rod into governor housing and then end of rod into governor lever. End of plunger rod should face outward. Install rod retaining clip and pinch ends together.
6. Line up holes in governor diaphragm with holes in governor diaphragm housing. Install diaphragm cover and ten retaining screws and lockwashers. Leave screws loose so that diaphragm can move freely between cover and housing.
7. To obtain the proper convolute in the governor diaphragm open the primary throttle valves wide open. Then tighten governor diaphragm cover screws securely. If the diaphragm is not installed as described, it may be too taut and will prevent full throttle opening.
8. Install governor housing side plate using (4) attaching screws and lockwashers. Tighten screws securely.
9. Install throttle lever and bearing assembly using new gasket. Install (4) attaching screws and lockwashers. Tighten securely.

Assembly of the Throttle Body — All Models

As mentioned during the disassembly of the carburetor, there is a very close tolerance fit of the throttle valves in the throttle body. Also the idle discharge orifices are drilled in relation to a properly fitting valve. Therefore, if the throttle valves, levers or shafts are worn excessively or damaged, a complete throttle body assembly is required.

1. Install the idle mixture needles and springs

finger tight. Back out the needles $1\frac{1}{2}$ turns as a preliminary idle adjustment.

2. If removed, install the slow and fast idle screws in the throttle levers.

NOTE: If choke coil and housing are mounted on the throttle body, the installation is covered under final carburetor assembly.

Assembly of the Carburetor Float Bowl (Fig. 21)

1. With the float bowl inverted, install the auxiliary throttle valve assembly (if used).
2. Position the throttle body gasket on the float bowl so that all holes are properly aligned.
3. Place the throttle body on the float bowl and install the four attaching screws. Tighten the $\frac{3}{8}$ " — 24 center screw 9 to 10 ft. lbs. and the 12-28 outer screws 3 to 4 ft. lbs.
4. Place the throttle body and bowl upright on the carburetor stand.

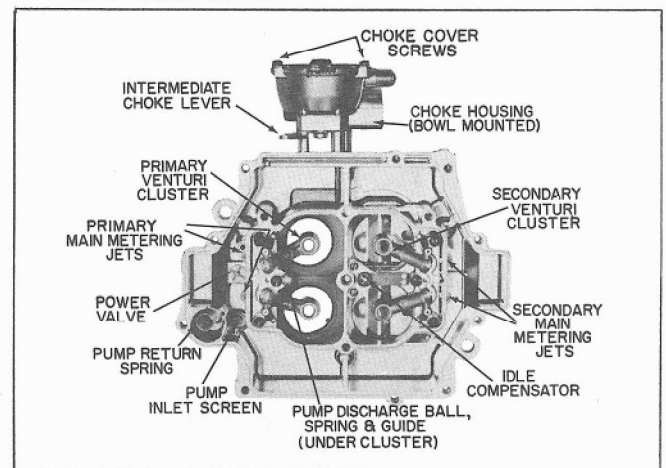


FIGURE 21

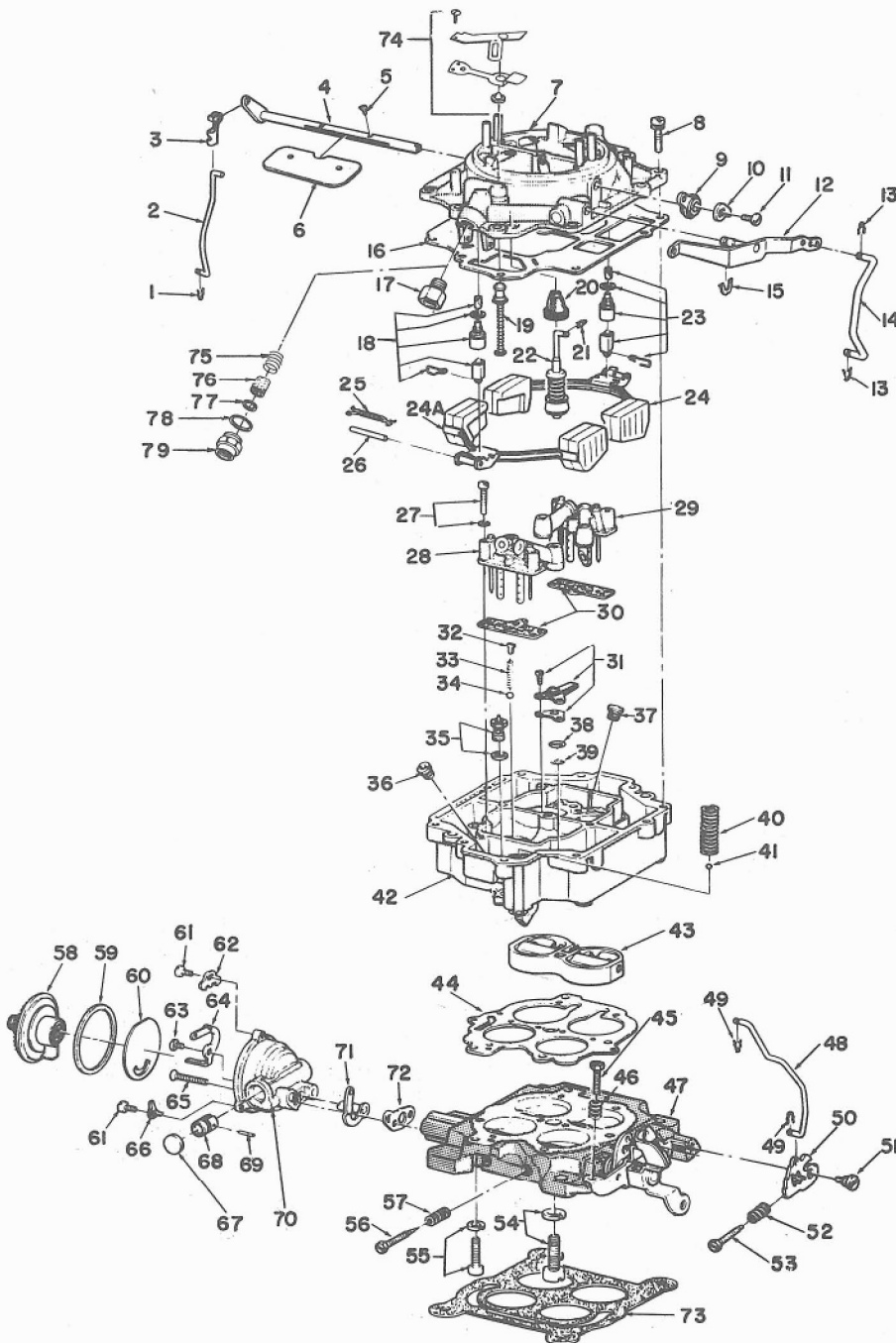
5. Install the power valve and gasket, and the two primary main metering jets into float bowl.
6. Install the two secondary main metering jets.
7. Install the secondary venturi cluster and gasket and retain with three attaching screws and washers. Tighten securely.

NOTE: The secondary cluster does not have pump discharge nozzles.

8. Install the pump outlet steel ball, spring, and "T" shaped retainer in the center hole of primary venturi cluster mounting surface in carburetor body. "T" retainer must be flush with casting.
9. Install primary venturi cluster and gasket and retain with three attaching screws and lock washers. Tighten securely.

NOTE: Primary main well insert tubes or baffles are used in the main wells on some models. Make sure insert tubes are installed in recess provided, with flats on lip of tubes lined up with flats in casting recess. If baffles are used, they should face towards carburetor bores when cluster is installed.

TYPICAL EXPLODED VIEW — MODELS 4G, 4GC



1. Clip—Intermediate Choke Rod (lower)
2. Intermediate Choke Rod
3. Clip—Intermediate Choke Rod (upper)
4. Choke Shaft and Lever Assembly
5. Screw—Choke Valve
6. Choke Valve
7. Air Horn Assembly
8. Screw—Air Horn
9. Choke Lever and Collar Assembly
10. Choke Trip Lever
11. Screw—Choke Trip Lever
12. Pump Shaft and Lever Assembly
13. Clip—Pump Rod
14. Pump Rod
15. Clip—Pump Shaft and Lever
16. Gasket—Air Horn
17. Fuel Inlet Fitting
18. Needle and Seat Assembly (primary)
19. Power Piston Assembly
20. Boot—Pump Plunger
21. Clip—Pump Plunger
22. Pump Plunger Assembly
23. Needle and Seat Assembly (secondary)
24. & 24A. Float Assembly
25. Float Balance Spring and Clip Assy.
26. Float Hinge Pin
27. Venturi Cluster Screw and Lockwasher
28. Venturi Cluster (primary)
29. Venturi Cluster (secondary)
30. Gaskets—Venturi Cluster
31. Idle Compensator Assembly
32. Guide—Pump Discharge
33. Spring—Pump Discharge
34. Check Ball—Pump Discharge
35. Power Valve Assembly
36. Main Metering Jet (primary)
37. Main Metering Jet (secondary)
38. Pump Inlet Screen Retainer
39. Pump Inlet Screen
40. Spring—Pump Return
41. Check Ball—Pump Inlet
42. Float Bowl Assembly
43. Auxiliary Throttle Valve Assembly
44. Gasket—Throttle Body to Bowl
45. Screw—Idle Speed
46. Spring—Idle Speed Screw
47. Throttle Body Assembly
48. Choke Rod
49. Clips—Choke Rod Attaching
50. Fast Idle Cam
51. Screw—Fast Idle Cam
52. Spring—Fast Idle Screw
53. Fast Idle Screw
54. Screw—Throttle Body to Bowl (large)
55. Screw—Throttle Body to Bowl (small)
56. Idle Mixture Screw
57. Spring—Idle Mixture Screw
58. Choke Cover and Coil Assembly
59. Gasket—Choke Cover and Coil
60. Choke Baffle Plate
61. Screws—Choke Cover Attaching
62. Retainers—Choke Cover (toothed)
63. Screw—Choke Piston Lever
64. Choke Piston Lever and Link Assembly
65. Screw—Choke Housing Attaching
66. Retainer—Choke Cover
67. Plug—Choke Housing
68. Choke Piston
69. Pin—Choke Piston
70. Choke Housing Assembly
71. Intermediate Choke Shaft and Lever
72. Gasket—Choke Housing
73. Gasket—Carburetor to Manifold
74. Idle Vent Valve Assembly
75. Spring—Filter Element Relief
76. Filter Element
77. Gasket—Filter Element
78. Gasket—Fuel Inlet Fitting
79. Fuel Inlet Fitting