FUEL SYSTEM
SERVICE INSTRUCTION WORKSHEET

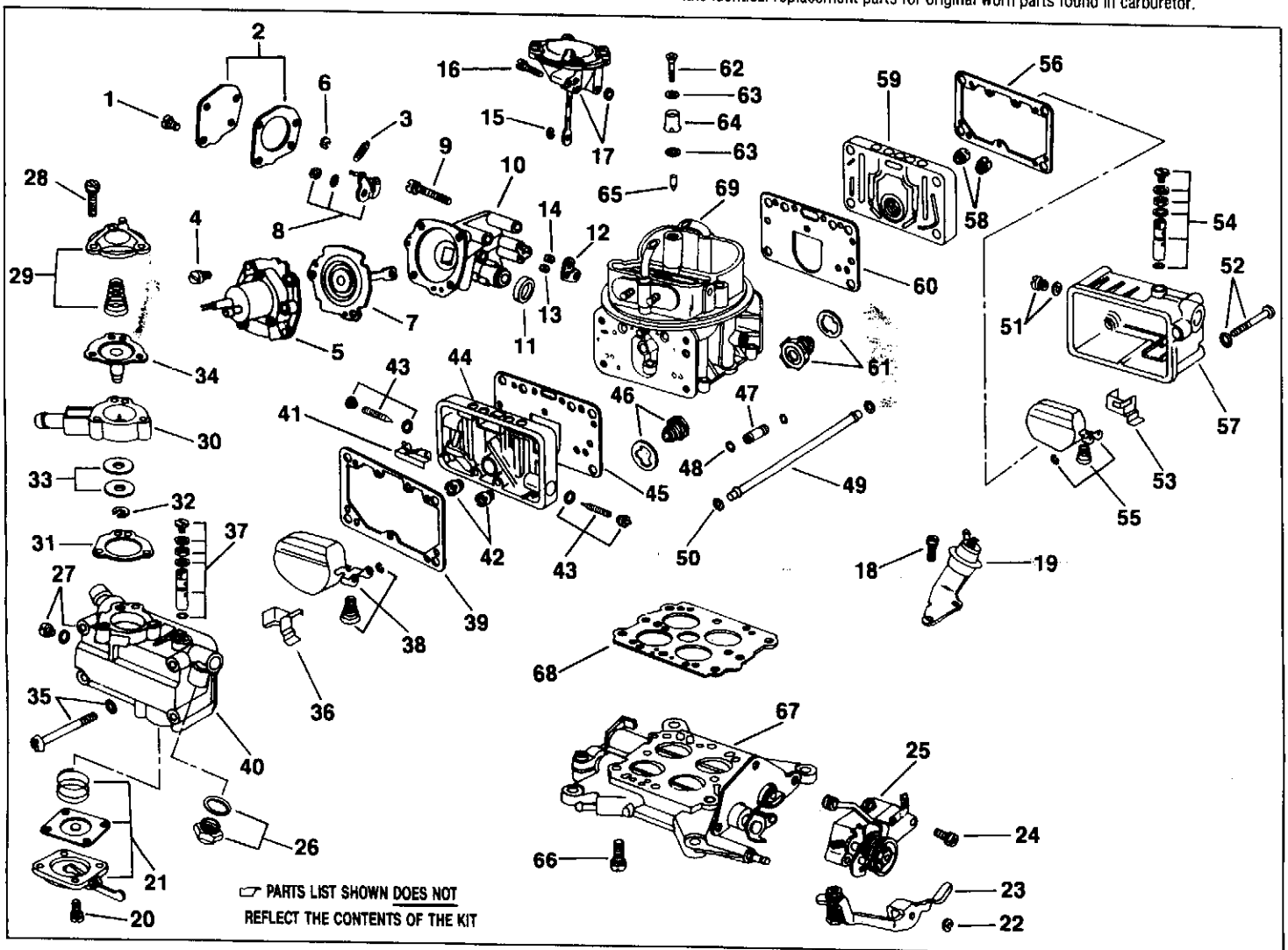
TO REPAIR

GF3697-11

HOLLEY CARBURETOR

4 Barrel • Models 4150, 4150EG, 4152EG

1. **Carefully read the text in the following pages to become familiar with the contents of this worksheet before performing carburetor overhaul.**
2. The exploded view is typical of the model carburetor this kit will service. The view may differ slightly from the actual carburetor being overhauled.
3. Use the exploded view as a guide. The numerical sequence of the parts list may generally be followed to disassemble the carburetor far enough to permit cleaning and inspection.
4. Parts list shown DOES NOT reflect the contents of the kit.
5. Kit may contain extra parts intended for other carburetors within this group. Substitute identical replacement parts for original worn parts found in carburetor.



PARTS LIST

1. Screw, cover (4)
2. Cover and gasket, governor
3. Spring, governor
4. Screw, solenoid (4)
5. Solenoid assembly
6. Retainer, diaphragm stem
7. Diaphragm assembly
8. Governor lever assembly
9. Screw, governor housing (3)
10. Governor housing assembly
11. Seal, governor housing
12. Gasket, governor housing
13. Jet "A", housing
14. Jet "B", housing
15. Retainer, secondary diaphragm stem
16. Screw, diaphragm housing (3)
17. Secondary diaphragm assembly
18. Screw, throttle positioner (2)
19. Throttle positioner assembly
20. Screw, pump cover (4)
21. Pump diaphragm and cover assembly
22. Retainer, pump lever
23. Pump lever assembly
24. Screw, throttle operating housing (3)
25. Throttle operating housing assembly
26. Fitting & washer, fuel inlet
27. Plug and washer, fuel inlet
28. Screw, bowl vent assembly (3)
29. Cover and spring, diaphragm
30. Bowl vent housing assembly
31. Gasket, housing
32. Retainer, diaphragm stem
33. Vent valve and washer
34. Diaphragm, vent valve
35. Screw, primary fuel bowl (4)
36. Baffle plate
37. Adjustable needle and seat assembly, primary
38. Float and spring assembly
39. Gasket, primary fuel bowl
40. Primary fuel bowl assembly
41. Vent baffle, metering body
42. Main jets, primary
43. Idle mixture needle, cap and washer
44. Metering body, primary
45. Gasket, primary metering body
46. Economizer assembly, primary
47. Connector, pump channel
48. O-ring, connector (2)
49. Tube, fuel line
50. O-ring, tube (2)
51. Plug and washer, fuel level sight
52. Screw, secondary fuel bowl (4)
53. Baffle plate
54. Adjustable needle and seat assembly, secondary
55. Float and spring assembly
56. Gasket, secondary fuel bowl
57. Secondary fuel bowl assembly
58. Main jets, secondary
59. Metering body, secondary
60. Gasket, secondary metering body
61. Economizer assembly, secondary
62. Screw, pump discharge nozzle
63. Washer, nozzle (2)
64. Nozzle, pump discharge
65. Needle valve, pump discharge
66. Screw, throttle body (8)
67. Throttle body assembly
68. Gasket, throttle body
69. Main body assembly

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REMOVAL & INSTALLATION NOTES

1. Cover opening on intake manifold after carburetor is removed.
2. Do not mix parts and components from primary and secondary sides. They are not always interchangeable. Be sure to mark the parts and their location when similarity exists.
3. Exercise care when disassembling and assembling secondary throttle diaphragm assembly (17). Do not damage diaphragm with cover screws.
4. Before removing idle mixture needle (43), turn in until lightly seated, counting number of turns. Record for proper installation.
5. On some models unhook heavy safety spring on throttle lever assembly for easier access to screws (24).
6. Install parts and components in reverse order of removal.
7. When installing fuel line tube (49), place the o-rings at the very ends. The o-rings will roll on the tube to position.
8. When installing idle mixture needle (43), turn in until lightly seated, then back out number of turns recorded earlier.
9. Refer to Fig. 7 for installation of governor diaphragm.
   Refer to Fig. 8 for installation of pump nozzle.
   Refer to Fig. 9 for installation of primary fuel bowl gasket.
10. Tighten screws evenly to arrive to the correct torque. See table.

TORQUE TABLE

Economizer assembly (46, 60) — 100 in.-lbs.
Throttle body screws (65) — 50 in.-lbs.
Fuel bowl screws (35, 52) — 40 in.-lbs.

CLEANING

Cleaning must be done with carburetor disassembled. Use spray cleaner and a stiff bristle brush to remove dirt and carbon deposits. Do not use abrasives and wires to clean parts and passageways. Wash off in suitable solvent, and clear all passageways with compressed air.
Caution: When cleaning with solvent do not soak or spray parts containing rubber, leather, plastic and electrical components.

ADJUSTMENT DATA

FIG. 1
FLOAT LEVEL
ADJUSTMENT (DRY)
PRIMARY & SECONDARY

1 INVERT FUEL BOWL.
2 FLOAT SURFACE MUST BE PARALLEL WITH SURFACE DIRECTLY BELOW FLOAT AS SHOWN.
3 IF ADJUSTMENT IS REQUIRED, LOOSEN LOCK SCREW & TURN ADJUSTING NUT UNTIL FLOAT SURFACE IS PARALLEL WITH SURFACE BELOW FLOAT. RE-TIGHTEN LOCK SCREW. NOTE: DO NOT COMPRESS NEEDLE TIP AS A FALSE READING MAY RESULT.

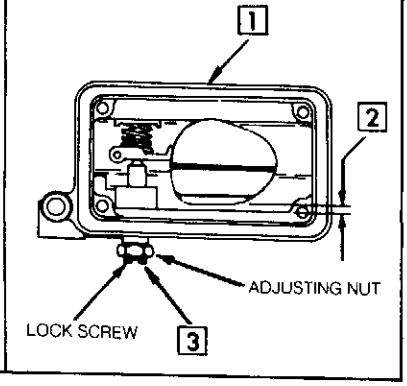
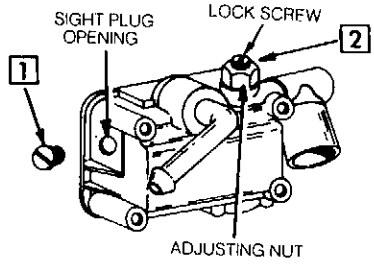


FIG. 2
FLOAT LEVEL
ADJUSTMENT (WET)
PRIMARY & SECONDARY

NOTE: WITH VEHICLE ON A LEVEL SURFACE & ENGINE RUNNING AT OPERATING TEMPERATURE, PLACE AN EMPTY CONTAINER BELOW SIGHT PLUG TO DRAIN OFF ANY SPILLOVER OF FUEL. WARNING: EXERCISE CARE DUE TO FIRE HAZARD.

1 REMOVE SIGHT PLUG FROM FUEL BOWL. FUEL LEVEL MUST BE AT BOTTOM EDGE OF SIGHT PLUG OPENING ± 1/32" TOLERANCE.



2. IF ADJUSTMENT IS REQUIRED, LOOSEN LOCK SCREW & TURN ADJUSTING NUT CLOCKWISE OR COUNTER CLOCKWISE TO LOWER OR RAISE FUEL LEVEL RESPECTIVELY. ALWAYS MAKE THE FINAL ADJUSTMENT IN THE "RAISE FUEL LEVEL" MODE.

FIG. 3
FAST IDLE CAM
ADJUSTMENT

1. PULL CHOKE CONTROL TO FULLY CLOSE CHOKE VALVE.
2. INSERT .375" (3/8) GAUGE OR DRILL BIT BETWEEN LOWER EDGE OF CHOKE VALVE AND AIR HORN WALL.
3. WITH GAUGE IN PLACE, CHECK FAST IDLE SPEED (REFER TO SERVICE MANUAL). IF ADJUSTMENT IS NECESSARY, TURN FAST IDLE SCREW.

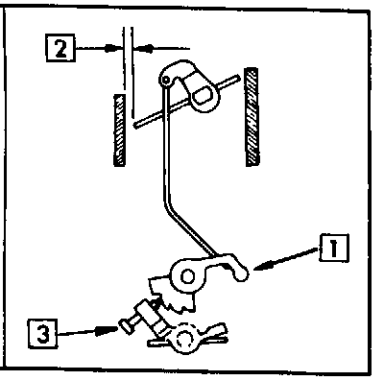


FIG. 4
PUMP LEVER
ADJUSTMENT

1. MAINTAIN THROTTLE IN WIDE OPEN POSITION.
2. DEPRESS PUMP OPERATING LEVER IN A DOWNWARD POSITION TO FULLY COMPRESS DIAPHRAGM.
3. MEASURE CLEARANCE .015" BETWEEN PUMP LEVER & BOLT HEAD AS SHOWN.
4. IF ADJUSTMENT IS REQUIRED, HOLD BOLT HEAD FAST & TURN SELF-LOCKING NUT UP OR DOWN AS REQUIRED.

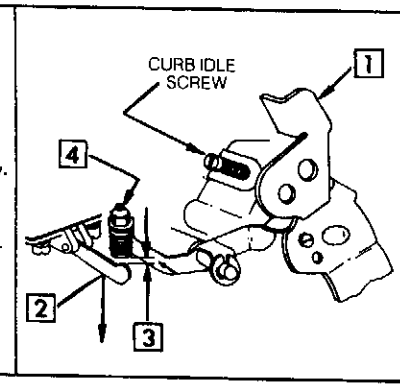
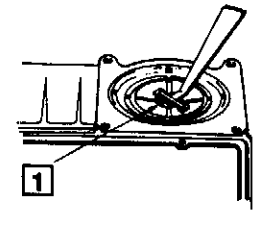


FIG. 5
PUMP INTAKE CHECK BALL
ADJUSTMENT

1. WITH FUEL BOWL INVERTED, MEASURE CLEARANCE .011-.015 INCH BETWEEN RETAINER BAR AND CHECK BALL, USING A FEELER GAUGE.



ADJUSTMENT DATA (CONT'D)

FIG. 6
SEC. THROTTLE STOP ADJUSTMENT

1. CLOSE SECONDARY THROTTLE PLATES BY BACKING OUT SECONDARY THROTTLE STOP SCREW.
2. NEXT, TURN SCREW IN UNTIL IT JUST TOUCHES STOP. THEN TURN SCREW IN 1/4 TURN MORE.

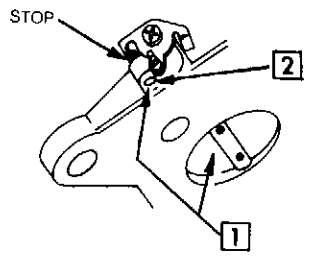


FIG. 7
GOVERNOR DIAPHRAGM INSTALLATION & ADJ.

1. CAREFULLY ALIGN GOVERNOR HOUSING SCREW HOLES WITH DIAPHRAGM ASSY. & COVER. INSTALL SCREWS FINGER TIGHT. NOTE: SCREWS MUST BE PROPERLY ALIGNED TO AVOID DAMAGE TO DIAPHRAGM.
2. PULL DIAPHRAGM PLUNGER ROD OUT (TOWARD LEFT) TO THE END OF ITS TRAVEL.
3. WHILE DIAPHRAGM IS STRETCHED IN THIS POSITION, TIGHTEN DOWN SCREWS EVENLY.

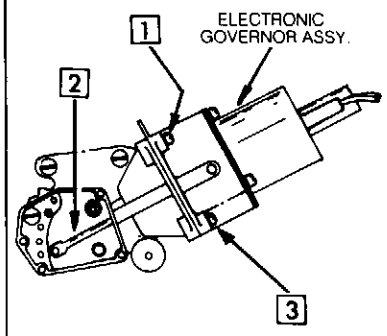


FIG. 8
PUMP NOZZLE INSTALLATION

1. TIGHTEN SCREW SECURELY OVER NOZZLE.
2. USING A FLAT PUNCH AND HAMMER, RESTAKE NOZZLE SCREW IN TWO PLACES.

NOTE: EXERCISE CARE WHEN STAKING. DO NOT USE EXCESSIVE FORCE.

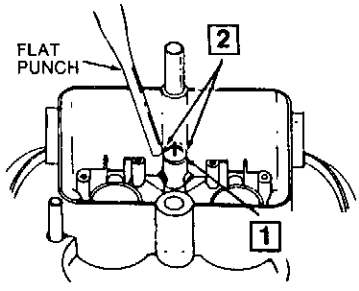


FIG. 9
FUEL BOWL GASKET INSTALLATION

1. THE PRIMARY FUEL BOWL GASKET MUST BE INSTALLED WITH THE ACCELERATOR PUMP PASSAGE ON THE RIGHT SIDE OF THE MAIN JETS. TORQUE SCREWS AS SPECIFIED IN TABLE.