

FUEL SYSTEM

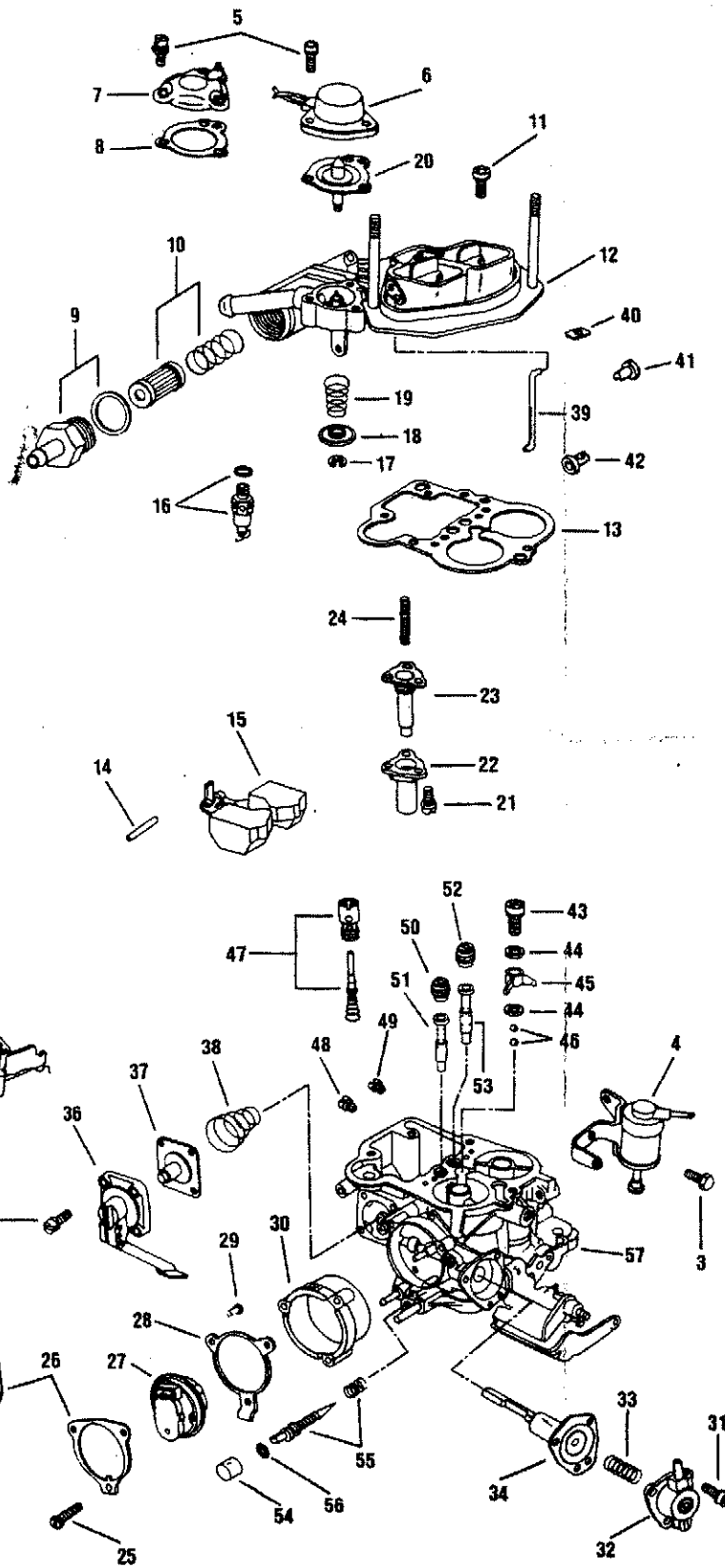
SERVICE INSTRUCTION WORKSHEET

TO REPAIR

GF3820-5

HOLLEY CARBURETOR

2 BARREL---Model 5220



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.

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.

PARTS LIST

1. Screw, transducer assembly (2)
2. Transducer assembly
3. Screw, throttle solenoid (2)
4. Throttle solenoid assembly
5. Screw, cover (3)
6. Electric cover, bowl vent
7. Cover, bowl vent *
8. Gasket, cover *
9. Fitting & washer, fuel inlet
10. Filter & spring, fuel inlet *
11. Screw, air horn (5)
12. Air horn assembly
13. Gasket, air horn
14. Pin, float hinge
15. Float assembly
16. Needle & seat assembly
17. Retainer, vent valve *
18. Valve, bowl vent *
19. Spring, valve *
20. Diaphragm assy., vent valve *
21. Screw, cover (3)
22. Cover, diaphragm assembly
23. Diaphragm assembly, enrichment
24. Spring, power valve
25. Screw, choke retainer (3)
- 25A. Breakaway screw, choke retainer *
- 25B. Pop rivet, choke retainer (2) *
26. Retainer, choke cover
27. Thermostatic coil & cover assy.
28. Ring, choke ground
29. Bushing, choke coil
30. Housing, choke coil
31. Screw, cover (3)
32. Cover assembly
33. Spring, diaphragm return
34. Diaphragm assembly, choke pull-down
35. Screw pump cover (4)
36. Pump cover assembly
37. Pump diaphragm assembly
38. Spring, diaphragm return
39. Rod, choke operating
40. Seal, choke rod
41. Retainer, choke rod (upper)
42. Retainer, choke rod (lower)
43. Screw, pump discharge nozzle
44. Washer, pump nozzle
45. Nozzle, pump discharge
46. Ball, pump discharge (2)
47. Power valve assembly
48. Jet, primary main
49. Jet, secondary main
50. Jet, primary high speed bleed
51. Tube, primary main well
52. Jet, secondary high speed bleed
53. Tube, secondary main well
54. Plug, idle adjust. needle *
55. Idle adjust. needle & spring
56. O-ring, idle adjust. needle *
57. Main body assembly

REMOVAL & INSTALLATION NOTES:

1. Cover opening on intake manifold after carburetor is removed.
2. Note similar components such as springs, jets, tubes. Mark their locations for proper installation. Note shape of needle of power valve assembly (47).
3. When pop rivets are used to retain choke components, drill rivet head then use a small punch to drive remainder of rivet out. When break-away screws (25A) are used, use a file or a small grinder to remove screw heads. Remove choke components, then use pliers to back out remainder of screws.
4. To remove idle mixture needle plug (54), refer to Fig. 1.
5. Before removing idle mixture needle (55), turn in until lightly seated counting number of turns. Record for installation.

6. Install parts and components in reverse order of removal.
7. Install O-rings (56) on needle, then turn in until lightly seated. Back out number recorded earlier. (Install plug or limiter cap after final adjustment).
8. Install pump return spring (38) with large diameter against diaphragm assembly.
9. If two check balls (46) are available, one is used as a weight.
10. When installing choke cover & coil assembly (27), make sure bushing and spring loop are on pin of lever. No gasket should be used with electric choke. Install pop rivets or break-away screws as required.
11. Make sure to install the correct needle with power valve assembly (47) as two different needles may be found in kit.

FIG. 1
IDLE MIXTURE NEEDLE PLUG REMOVAL

1. CENTER PUNCH A MARK ON BOTTOM SURFACE OF CARBURETOR FUEL EXTENSION HOUSING 1/4" - 9/32" FROM THE EDGE.
2. DRILL A 3/16" HOLE THROUGH THE CASTING INTO THE SPACE BETWEEN IDLE MIXTURE NEEDLE AND PLUG.
3. USE A 3/32" DIAMETER PUNCH AND TAP PLUG OUT OF HOUSING.

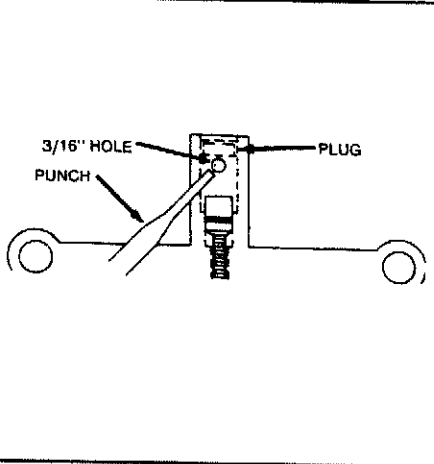
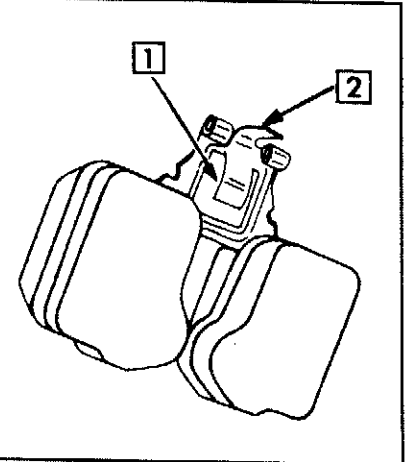


FIG. 2
FLOAT ASSEMBLY DETAIL VIEW

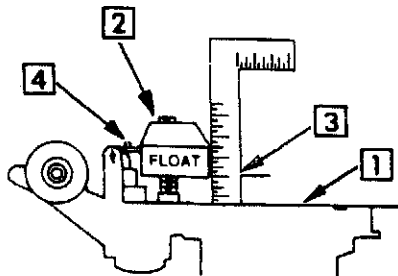
1. BEND THIS TANG TO ADJUST FLOAT LEVEL.
2. BEND THIS TANG TO ADJUST FLOAT DROP.



ADJUSTMENT DATA

FIG. 3
FLOAT LEVEL ADJUSTMENT

1. INVERT AIR HORN WITHOUT GASKET.
2. ALLOW WEIGHT OF FLOAT TO PRESS DOWN AGAINST FLOAT NEEDLE.
3. MEASURE CLEARANCE AS SPECIFIED BETWEEN TOP OF FLOAT AND AIR HORN CASTING SURFACE.
4. TO ADJUST, BEND FLOAT ARM TANG THAT TOUCHES FLOAT NEEDLE (See Fig. C).



NOTE: TO AVOID DAMAGING FLOAT NEEDLE, DO NOT PRESS INTO SEAT.

FIG. 4
FLOAT DROP ADJUSTMENT

1. POSITION AIR HORN ASSEMBLY RIGHT SIDE UP WITHOUT GASKET.
2. WITH FLOAT HANGING, MEASURE SPECIFIED DISTANCE FROM AIR HORN CASTING SURFACE TO BOTTOM OF FLOAT.
3. IF ADJUSTMENT IS REQUIRED, BEND FLOAT DROP TANG (See Fig. 2) THAT CONTACTS INLET NEEDLE SEAT BOSS.

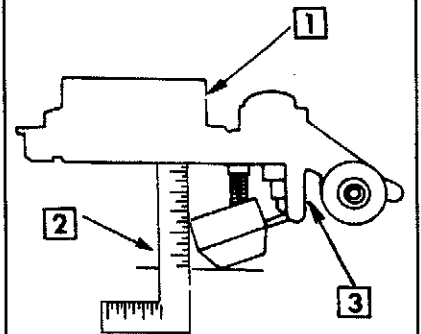


FIG. 5
PUMP HOLE LOCATION

NOTE: THIS ADJUSTMENT HAS 3 HOLE LOCATIONS TO CONTROL LENGTH OF PUMP STROKE.

1. PLACE PIN IN CORRECT HOLE AS SPECIFIED:
1—SHORT STROKE,
2—MEDIUM,
3—LONG.

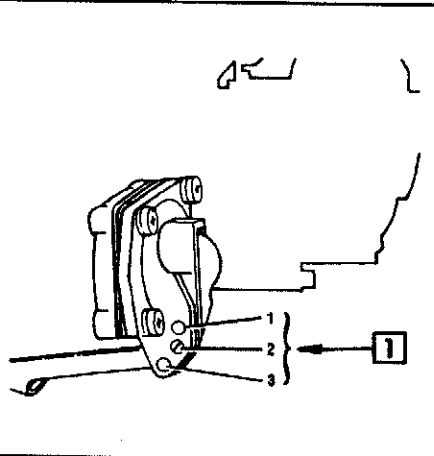
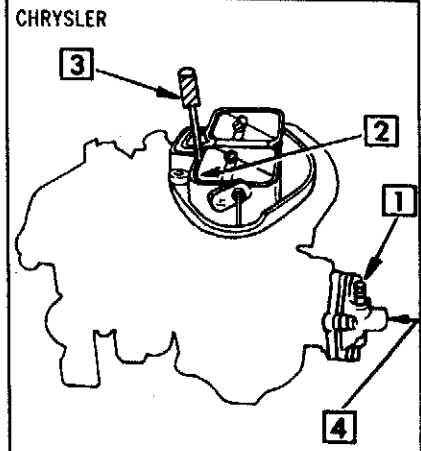


FIG. 6
VACUUM BREAK ADJUSTMENT

NOTE: OPEN THROTTLE, CLOSE CHOKE, ALLOW THROTTLE TO CLOSE TO LOCATE CAM AT CLOSED CHOKE POSITION.

1. APPLY AN OUTSIDE VACUUM SOURCE (15 in. Hg. Min.) TO CHOKE DIAPHRAGM.
2. APPLY LIGHT CLOSING PRESSURE TO CHOKE VALVE.
3. MEASURE AS SPECIFIED USING GAUGE OR DRILL BETWEEN WALL OF AIR HORN & UPPER EDGE OF CHOKE VALVE.
4. IF ADJUSTMENT IS REQUIRED, TURN SCREW AT END OF VACUUM DIAPHRAGM COVER TO OBTAIN NECESSARY CLEARANCE.



ADJUSTMENT DATA (Cont'd)

FIG. 7

AUTO. CHOKE ADJUSTMENT

1. LOOSEN THREE CHOKE COVER SCREWS.
2. ROTATE & ALIGN INDEX MARK ON CHOKE COVER WITH SPECIFIED LINE GRADUATION ON CHOKE HOUSING. RETIGHTEN SCREWS AFTER SETTING IS MADE.

NOTE 1 — WHEN INSTALLING CHOKE COVER, BE SURE TO ENGAGE CHOKE COIL LOOP WITH CHOKE LEVER TANG IN HOUSING.

NOTE 2 — SOME MODELS USE TAMPER-PROOF SCREWS. FILE SCREW HEADS UNTIL COVER RETAINING RING CAN BE REMOVED.

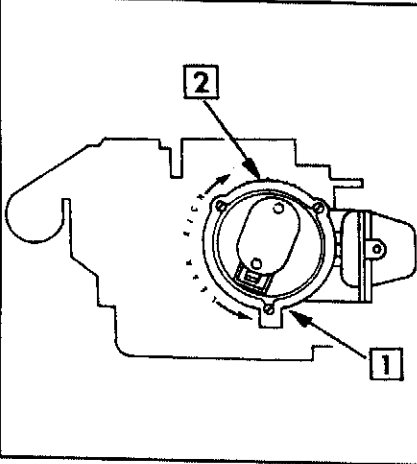


FIG. 8

THROTTLE TRANSDUCER ADJUSTMENT

1. IF ADJUSTMENT IS REQUIRED, LOOSEN LOCKNUT.
2. ROTATE TRANSDUCER IN OR OUT UNTIL A CLEARANCE OF 35/64" IS OBTAINED. RE-TIGHTEN LOCKNUT.

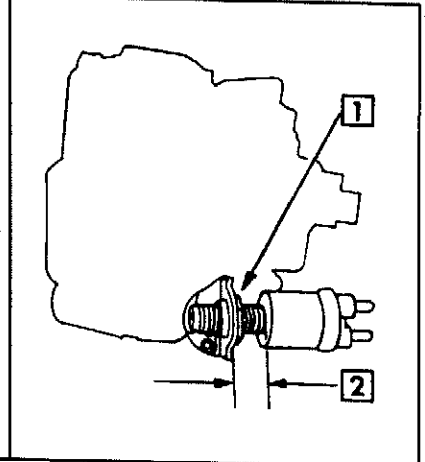
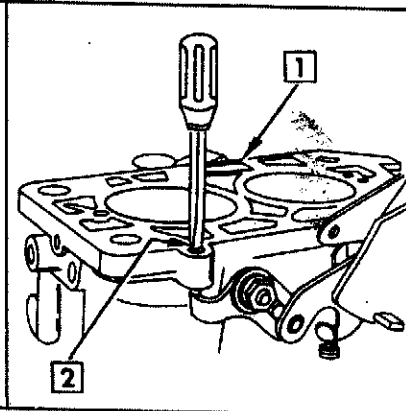


FIG. 9

SECONDARY THROTTLE STOP SCREW ADJUSTMENT

1. WITH CARBURETOR INVERTED, TURN OUT SECONDARY THROTTLE STOP SCREW UNTIL SECONDARY VALVE SEATS IN BORE.
2. ADJUST BY TURNING SCREW IN UNTIL IT TOUCHES TAB ON SECONDARY THROTTLE LEVER. THEN TURN SCREW AN ADDITIONAL 1/4 TURN CLOCKWISE.



SPECIFICATION CHART

| Year | Application | Float Level | Float Drop | Pump Hole Location | Vacuum Break | Auto. Choke |
|--|--------------------------|-------------|------------|--------------------|-------------------|-------------|
| DODGE, PLYMOUTH —SPECIFICATION I.D.-A | | | | | | |
| 1980-79 | 1.7L Eng.—A/T | 31/64 | 1-7/8 | # 2 | .040 | 2NR |
| | —M/T | 31/64 | 1-7/8 | # 2 | .070 ¹ | 2NR |
| 1978 | 1.7L Eng.—All | 31/64 | 1-7/8 | # 2 | .070 | 2NR |
| CHRYSLER MOTORS —SPECIFICATION I.D.-B | | | | | | |
| 1982 | 1.7L Eng.—M/T—Can. | 31/64 | 1-7/8 | # 2 | .076 | N/A |
| | —A/T—Can. | 31/64 | 1-7/8 | # 2 | .040 | N/A |
| | 2.2L Eng.—M/T—Can. | 31/64 | 1-7/8 | # 3 | .076 | N/A |
| | —A/T—Can. | 31/64 | 1-7/8 | # 2 | .070 | N/A |
| 1981 | 2.2L Eng.—Fed. | 31/64 | 1-7/8 | # 3 | .052 | N/A |
| | 1.7L, 2.2L Eng.—M/T—Can. | 31/64 | 1-7/8 | # 2 | .070 | N/A |
| | 1.7L Eng.—A/T—Can. | 31/64 | 1-7/8 | # 2 | .040 | N/A |
| | 2.2L Eng.—A/T—Can. | 31/64 | 1-7/8 | # 2 | .060 | N/A |
| CHRYSLER MOTORS —SPECIFICATION I.D.-C | | | | | | |
| 1987 | 2.2L Eng.—Fed. & Can. | 31/64 | 1-7/8 | 2 | .075 | N/A |
| 1986-85 | 1.6L Eng. | 31/64 | 1-7/8 | 2 | — | N/A |
| | 2.2L Eng. | 31/64 | 1-7/8 | 2 | .097 | N/A |
| 1984 | 2.2L Eng.—Can. | 31/64 | 1-7/8 | # 3 | .060 | N/A |
| | —Fed. | 31/64 | 1-7/8 | # 3 | .070 | N/A |
| 1983 | 1.6L Eng.—Can. | 31/64 | 1-7/8 | # 2 | .040 | N/A |
| | 2.2L Eng.—Can. | 31/64 | 1-7/8 | # 2 | .070 | N/A |
| | —Fed. | 31/64 | 1-7/8 | # 3 | .055 | N/A |

SPECIFICATION CHART

| Year | Application | Float Level | Float Drop | Pump Hole Location | Vacuum Break | Auto. Choke |
|------|-------------|-------------|------------|--------------------|--------------|-------------|
|------|-------------|-------------|------------|--------------------|--------------|-------------|

CHRYSLER MOTORS — SPECIFICATION I.D. — D

| | | | | | | |
|------|--|-------|---|---|-------|---|
| 1988 | Truck 2.2L Eng. Carb. #R40334A, 40335A | 1/2 | — | 3 | 9/64 | — |
| 1987 | Exc. Truck 2.2L Eng. Carb. #R40234, 40240 | 31/64 | — | 3 | — | — |
| | Exc. Truck 2.2L Eng. Carb. #40303 | 31/64 | — | 3 | 11/64 | — |
| 1986 | Truck 2.2L Eng. Carb. #R40308, 40308-1 | 31/64 | — | 3 | 9/64 | — |
| | Exc. Truck 2.2L Eng. Carb. #R40116-40117-2 | 31/64 | — | 3 | 11/64 | — |
| | Carb. #R40134-2, 40135-2, 40138-2, 40139-2, 40229, 30, 31, 32, 40273 | 31/64 | — | 3 | 9/64 | — |
| | Carb. #R40233, 234, 240 | 31/64 | — | 3 | — | — |
| | Truck 2.2L Eng. Carb. #40308, 40308-1, 40309, 40309-1 | 31/64 | — | 3 | 9/64 | — |

ABBREVIATIONS:

A/T —Automatic Transmission
 Can. —Canada
 Fed. —Federal (49 States)
 M/T —Manual Transmission

FOOTNOTES:

¹ Carb. No. R9109, set .100".
² Install pin in original location.