

# INSTRUCTION SHEET

## HOLLEY CARBURETOR—MODEL 1946

50-546-3

THE GENERAL DESIGN AND PARTS SHOWN WILL VARY TO  
INDIVIDUAL UNITS COVERED ON THIS INSTRUCTION SHEET.

### DISASSEMBLY

USE EXPLODED VIEW AS A GUIDE. THE NUMERICAL SEQUENCE MAY  
GENERALLY BE FOLLOWED TO DISASSEMBLE UNIT FAR ENOUGH TO PERMIT  
CLEANING AND INSPECTION. CAUTION: BEFORE REMOVING IDLE  
LIMITER CAP, TURN CAP TO THE LEANEST POSITION, REMOVE CAP  
FROM THIS POSITION, THEN TURN IDLE ADJUSTING NEEDLE (18) IN,  
COUNTING THE NUMBER OF TURNS IT TAKES TO BE LIGHTLY SEATED.  
THEN REMOVE NEEDLE AND SPRING. MAIN WELL TUBE IS NOT  
REMOVABLE. TAKE EXTREME CARE SO AS NOT TO BEND OR DAMAGE  
TUBE. REMOVE STAKING FROM BOWL COVER FOR EASY REMOVAL OF  
POWER PISTON RETAINING WASHER (38).

### NOMENCLATURE

| REF.<br>NO.                                  | REF.<br>NO.                                      |
|----------------------------------------------|--------------------------------------------------|
| 1. SCREW & LOCKWASHER (2)-<br>SOLENOID       | 28. GASKET-BOWL COVER                            |
| 2. SOLENOID ASSY.-ANTI-DIESEL                | 29. SCREW-PUMP ROD CLAMP                         |
| 3. SCREW (2)-CHOKE PULLDOWN<br>ASSY.         | 30. CLAMP-PUMP ROD                               |
| 4. CHOKE PULLDOWN & LINK ASSY.               | 31. SCREW & LOCKWASHER-SPRING<br>RETAINING PLATE |
| 5. SCREW (3)-CHOKE RETAINER                  | 32. CUP-PUMP                                     |
| 6. RETAINER-CHOKE COIL HOUSING               | 33. STEM-PUMP                                    |
| 7. ELECTRIC CHOKE COIL ASSY.                 | 34. SPRING-PUMP                                  |
| 8. GASKET-CHOKE COIL ASSY.                   | 35. PLATE-PUMP SPRING RETAINING                  |
| 9. SCREW (3)-VENT VALVE COVER                | 36. ROO-PUMP OPERATING                           |
| 10. COVER-VENT VALVE                         | 37. GROMMET-PUMP ROD                             |
| 11. GASKET-VENT VALVE COVER                  | 38. RETAINER-VACUUM PISTON                       |
| 12. SPRING-VENT VALVE                        | 39. PISTON-POWER                                 |
| 13. SCREW-LEVER PIN                          | 40. SPRING-POWER PISTON                          |
| 14. LEVER-VENT VALVE                         | 41. WEIGHT-PUMP DISC. BALL                       |
| 15. PIN-LEVER                                | 42. BALL-PUMP DISC.                              |
| 16. VALVE-VENT                               | 43. NEEDLE, SEAT & GASKET ASSY.                  |
| 17. CAP-IDLE LIMITER                         | 44. RETAINER-FLOAT PIN                           |
| 18. NEEDLE-IDLE ADJUSTING                    | 45. FLOAT ASSY.                                  |
| 19. SPRING-IDLE ADJ. NEEDLE                  | 46. PIN-FLOAT HINGE                              |
| 20. SCREW & LOCKWASHER (3)-<br>THROTTLE BODY | 47. JET-POWER VALVE                              |
| 21. THROTTLE BODY ASSY.                      | 48. STEM-POWER VALVE                             |
| 22. LINK-PUMP OPERATING                      | 49. SPRING-POWER VALVE                           |
| 23. GASKET-THROTTLE BODY                     | 50. JET-MAIN                                     |
| 24. RETAINER-FAST IDLE CAM                   | 51. SCREW & LOCKWASHER (2)-<br>COVER             |
| 25. CAM-FAST IDLE                            | 52. COVER-HOT IDLE COMPENSATOR                   |
| 26. SCREW & LOCKWASHER (7)-<br>BOWL COVER    | 53. GASKET-COVER                                 |
| 27. BOWL COVER ASSY.                         | 54. COMPENSATOR-HOT IDLE                         |
|                                              | 55. GASKET-COMPENSATOR                           |
|                                              | 56. BOWL ASSY.                                   |

### CLEANING

CLEANING MUST BE DONE WITH CARBURETOR DISASSEMBLED. SOAK PARTS  
LONG ENOUGH TO SOFTEN AND REMOVE ALL FOREIGN MATERIAL. USE A  
CARBURETOR CLEANING SOLVENT. MAKE CERTAIN THE THROTTLE BORES  
ARE FREE OF ALL CARBON AND VARNISH DEPOSITS. RINSE OFF IN  
SUITABLE SOLVENT. BLOW OUT ALL PASSAGES IN CASTINGS WITH COM-  
PRESSED AIR AND CHECK CAREFULLY TO INSURE THOROUGH CLEANING OF  
OBSCURE AREAS. CAUTION: DO NOT SOAK PLASTIC FLOAT, SOLENOID,  
DIAPHRAGM ASSY., OR RUBBER PARTS IN CLEANING SOLVENT.

### REASSEMBLY

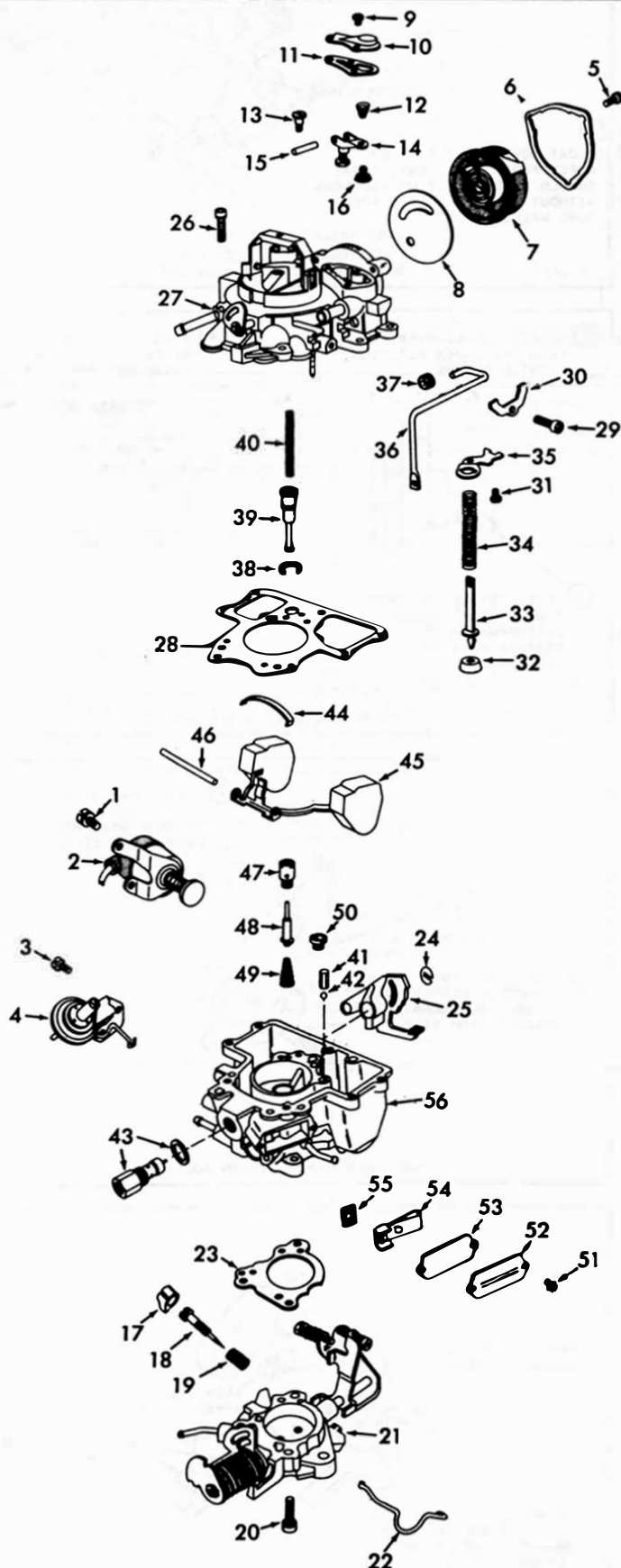
REASSEMBLE IN REVERSE ORDER OF DISASSEMBLY. NOTE SPECIAL  
INSTRUCTIONS AND FOLLOW NUMERICAL OUTLINE IN MAKING ADJUST-  
MENTS NECESSARY FOR CARBURETOR BEING SERVICED.

### SPECIAL INSTRUCTIONS

VACUUM PISTON RETAINER (38) - LIGHTLY STAKE CASTING AROUND  
WASHER.

PUMP SPRING (34) - INSTALL WITH SMALL END TOWARDS PUMP CUP.

IDLE ADJ. NEEDLE (18) - TURN IN UNTIL LIGHTLY SEATED, THEN  
BACK OUT NUMBER OF TURNS RECORDED ON DISASSEMBLY.



# ADJUSTMENTS

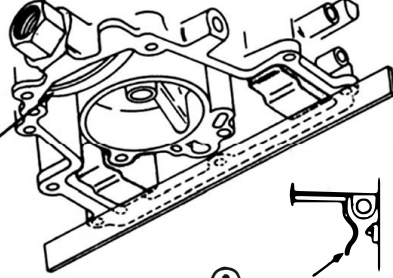
- 1 FLOAT BOWL INVERTED AND FLOAT PIN HELD IN PLACE FIRMLY BY PRESSING ON FLOAT PIN RETAINER. A STRAIGHT EDGE HELD ACROSS SURFACE OF FLOAT BOWL AT TOE END OF FLOATS. LOWEST POINT ON THE FLOAT SHOULD JUST TOUCH STRAIGHT EDGE.

FLOAT PIN RETAINER

- 3 FLOAT BOWL RIGHT SIDE UP. FLOAT SHOULD MOVE FREELY UP AND DOWN WITHOUT CONTACTING THE FUEL BOWL WALLS.

49 STATE VEHICLES ONLY  
DRY FLOAT LEVEL ADJUSTMENT

- 4 STRAIGHTEN BY BENDING THE FLOAT ARMS, IF NECESSARY. (RECHECK THE FLOAT LEVEL ADJUSTMENT.)



- 2 TO ADJUST BEND FLOAT TANG.

FIG. 1

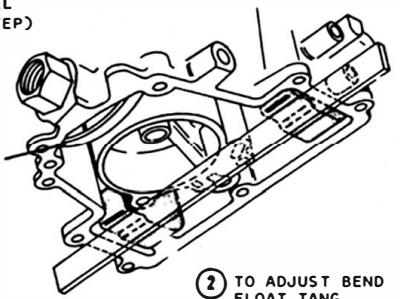
- 1 FLOAT BOWL INVERTED AND FLOAT PIN HELD FIRMLY IN PLACE BY PRESSING ON FLOAT PIN RETAINER. A STRAIGHT EDGE HELD ACROSS SURFACE OF FLOAT BOWL AT HEEL END OF FLOATS. "HEEL" (OR STEP) OF FLOAT SHOULD JUST TOUCH STRAIGHT EDGE.

FLDAT PIN RETAINER

- 3 FLOAT BOWL RIGHT SIDE UP. CHECK FLOAT ALIGNMENT. FLOAT SHOULD MOVE FREELY UP AND DOWN WITHOUT CONTACTING THE FUEL BOWL WALLS.

CALIFORNIA VEHICLES ONLY  
DRY FLOAT LEVEL ADJUSTMENT

- 4 STRAIGHTEN BY BENDING THE FLOAT ARMS IF NECESSARY. (RECHECK THE FLDAT LEVEL ADJUSTMENT.)

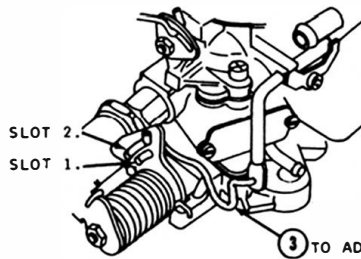


- 2 TO ADJUST BEND FLOAT TANG.

FIG. 2

- 1 PLACE LINK IN PROPER SLOT OF THROTTLE RETURN SPRING ARM.

SLOT 2.  
SLOT 1.



- 2 MEASURE LENGTH OF PUMP LINK AS SHOWN.

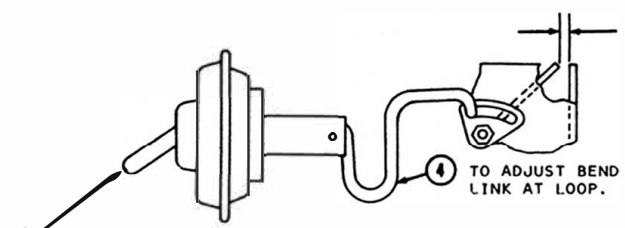
- 3 TO ADJUST BEND LOOP OF PUMP LINK.

PUMP STROKE ADJUSTMENT

FIG. 3

- 1 ROTATE CHOKE COVER 90° RICH FROM THE INDEX POSITION, TIGHTEN SCREWS

- 3 MEASURE DISTANCE BETWEEN UPPER EDGE OF CHOKE VALVE AND AIR HORN WALL.

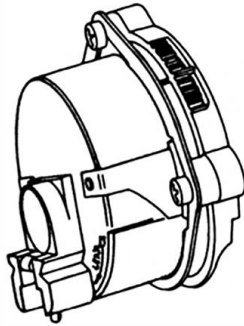


- 2 APPLY OUTSIDE VACUUM SOURCE TO PULLDOWN DIAPHRAGM UNTIL DIAPHRAGM IS FULLY SEATED.

(MODULATOR SPRING COMPRESSED)

CHOKE PULLDOWN ADJUSTMENT

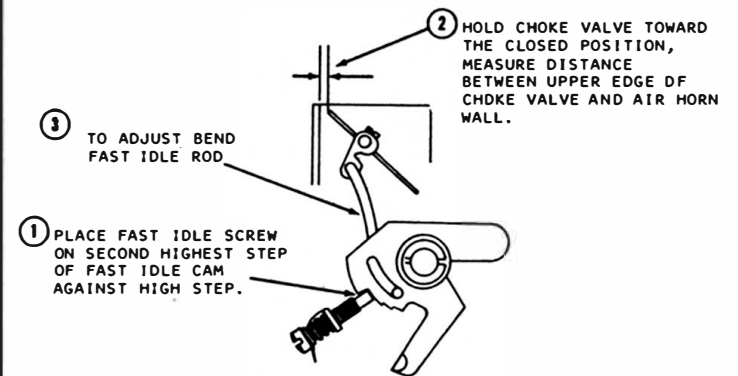
FIG. 4



ROTATE CHOKE COVER AGAINST SPRING TENSION. SET GROOVE IN THE EDGE OF CAP TO LINE UP WITH SPECIFIED NOTCH ON CHOKE HOUSING. (CHECK ENGINE EMISSION DECAL).

AUTOMATIC CHOKE COIL ADJUSTMENT

FIG. 5



- 1 PLACE FAST IDLE SCREW ON SECOND HIGHEST STEP OF FAST IDLE CAM AGAINST HIGH STEP.

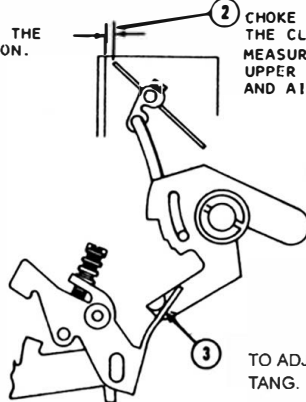
- 3 TO ADJUST BEND FAST IDLE ROD

- 2 HOLD CHOKE VALVE TOWARD THE CLOSED POSITION, MEASURE DISTANCE BETWEEN UPPER EDGE OF CHOKE VALVE AND AIR HORN WALL.

FAST IDLE CAM POSITION ADJUSTMENT

FIG. 6

- 1 THROTTLE HELD IN THE WIDE OPEN POSITION.



- 2 CHOKE VALVE HELD TOWARDS THE CLOSE POSITION. MEASURE DISTANCE BETWEEN UPPER EDGE OF CHOKE VALVE AND AIR HORN WALL.

- 3 TO ADJUST BEND UNLOADER TANG.

CHOKE UNLOADER ADJUSTMENT

FIG. 7

CURB IDLE SCREW (CONTACTS SOLENOID)

SLOW IDLE SPEED SCREW.

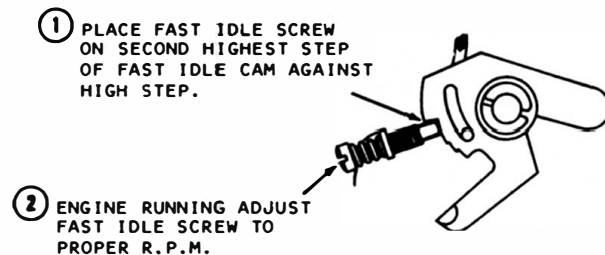
IDLE MIXTURE SCREW AND LIMITER CAP.

TO ADJUST SLOW & CURB IDLE FOLLOW CAR SHOP MANUAL & ENGINE DECAL INFORMATION & SPECIFICATIONS.

CURB AND SLOW IDLE SPEED ADJUSTMENT

FIG. 8

# ADJUSTMENTS

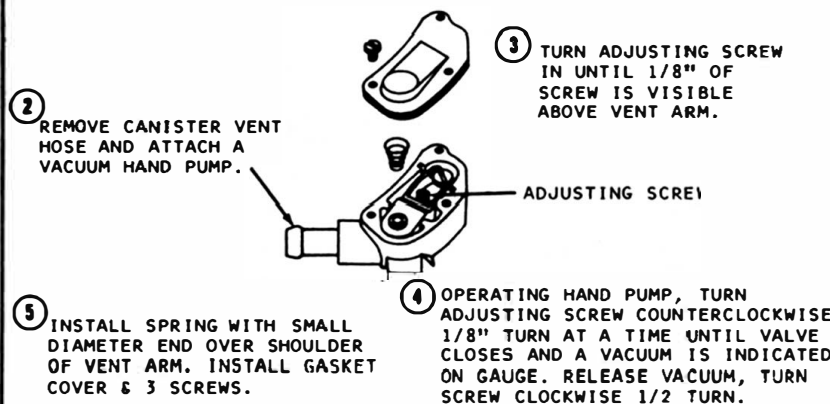


(CHECK INFORMATION ON ENGINE DECAL).

FAST IDLE ADJUSTMENT

FIG. 9

- ① CURB & SLOW IDLE ADJUSTED. (THROTTLE IN SLOW IDLE POSITION) ENGINE OFF.



ON CAR  
EXTERNAL BOWL VENT ADJUSTMENT

FIG. 10

## ADJUSTMENT DATA TABLE

| Year | Application                                   | Dry Float Level  | Pump Adj. |                    | Choke Pulldown Setting | *Auto Choke Setting | Fast Idle Cam Setting | Choke Unloader Setting |
|------|-----------------------------------------------|------------------|-----------|--------------------|------------------------|---------------------|-----------------------|------------------------|
|      |                                               |                  | Slot      | Rod Length         |                        |                     |                       |                        |
| 1978 | Fairmont/Zephyr 200" Eng.                     |                  |           |                    |                        |                     |                       |                        |
|      | Federal Calif.                                | Fig. 1<br>Fig. 2 | 2<br>2    | 2 5/32"<br>2 5/32" | .110<br>.150           | INDEX<br>INDEX      | .090<br>.130          | .150<br>.150           |
| 1979 | Fairmont/Zephyr 200" Eng.                     |                  |           |                    |                        |                     |                       |                        |
|      | Federal Calif.                                | Fig. 1<br>Fig. 2 | 2<br>2    | 2 1/4"<br>2 5/16"  | .080<br>.150           | INDEX<br>INDEX      | .055<br>.130          | .150<br>.150           |
| 1980 | 200" Eng. Fed. A/T                            |                  |           |                    |                        |                     |                       |                        |
|      | Carb. No. EOZE-DA, EA<br>CARB. NO. EOB-AA, CA | Fig. 1<br>Fig. 1 | 2<br>2    | 2 5/32"<br>2 5/32" | .110<br>.100           | 2-RICH<br>2-RICH    | .070<br>.070          | .150<br>.150           |
| 1981 | 200" Eng. CANADA                              |                  |           |                    |                        |                     |                       |                        |
|      | Carb. No. EOB-AA, C                           | Fig. 1           | 2         | 2 5/32"            | .100                   | 2-RICH              | .070                  | .150                   |

Federal =ALL STATES EXCEPT CALIFORNIA

\*Check Engine Emission Decal

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