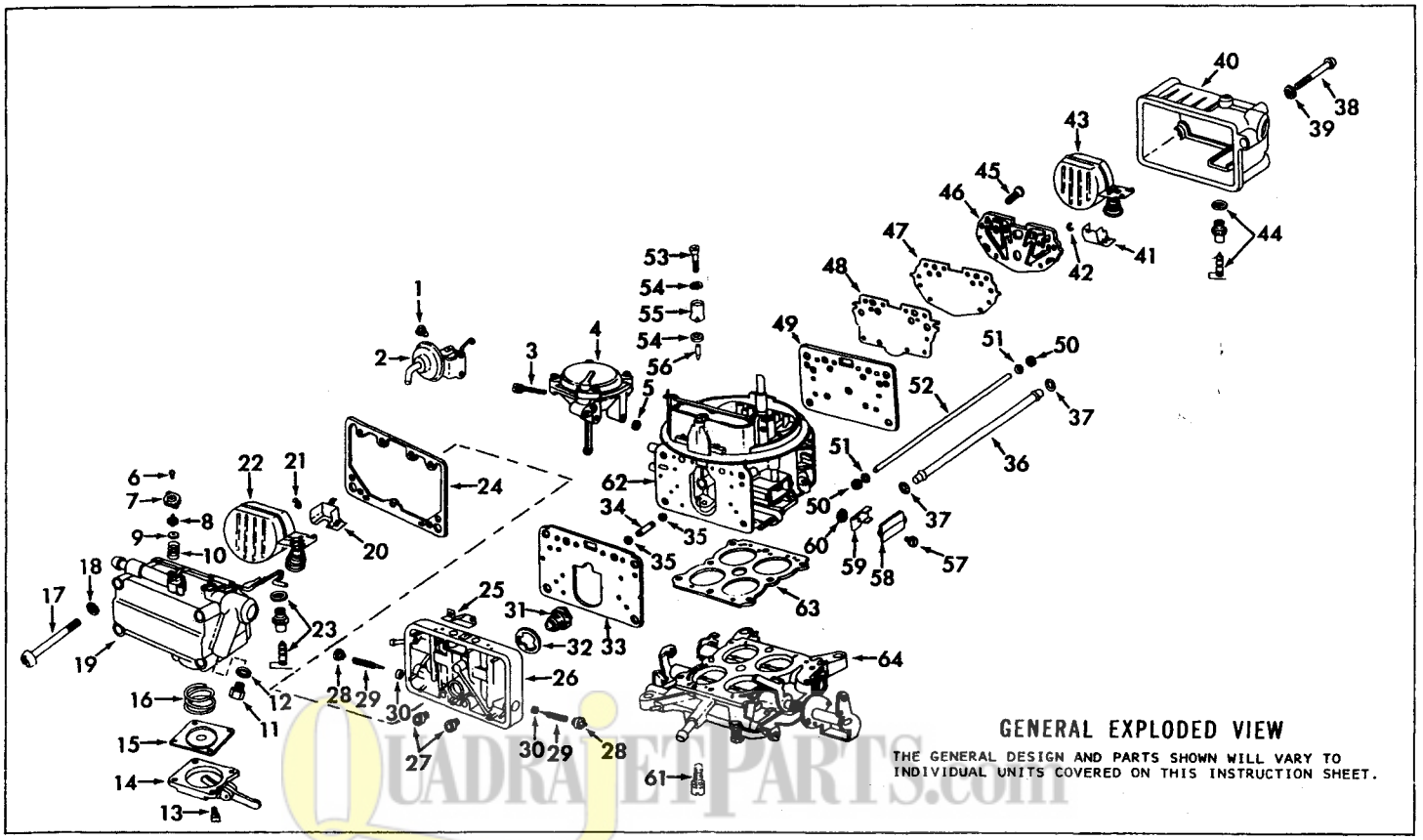
1975 TECHLIT CO.
PRINTED IN U.S.A.

# INSTRUCTION SHEET
## HOLLEY CARBURETOR MODEL 4160
### (INTERNAL NEEDLE AND SEAT)





GENERAL EXPLODED VIEW

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

QUADRAJETPARTS.com

## NOMENCLATURE

| REF. NO. | |
|---|---|
| 1. | SCREW & LOCKWASHER(2)-VACUUM BREAK ASSY. |
| 2. | VACUUM BREAK & LINK ASSY. |
| 3. | SCREW & LOCKWASHER(3)-DIAPHRAGM HOUSING ASSY. |
| 4. | DIAPHRAGM HOUSING ASSY.-SEC. THROTTLE |
| 5. | GASKET-SEC. DIAPHRAGM HOUSING |
| 6. | SCREW & LOCKWASHER(2)-VENT VALVE COVER |
| 7. | COVER-VENT VALVE |
| 8. | VENT VALVE-STEM |
| 9. | VALVE-VENT |
| 10. | SPRING-VENT VALVE |
| 11. | FITTING-FUEL INLET |
| 12. | GASKET-INLET FITTING |
| 13. | SCREW & LOCKWASHER(4)-PUMP COVER ASSY. |
| 14. | PUMP COVER ASSY. |
| 15. | PUMP DIAPHRAGM ASSY. |
| 16. | SPRING-DIAPHRAGM |
| 17. | SCREW(4)-PRIMARY FUEL BOWL |
| 18. | GASKET(4)-PRI. FUEL BOWL SCREW |
| 19. | FUEL BOWL ASSY.-PRIMARY |
| 20. | BAFFLE-PRI. NEEDLE & SEAT |
| 21. | RETAINER-FLOAT |
| 22. | FLOAT & SPRING ASSY.-PRI. |
| 23. | NEEDLE, SEAT & GASKET ASSY.-PRI. |
| 24. | GASKET-PRIMARY FUEL BOWL |
| 25. | VENT BAFFLE-PRI. FUEL BOWL |
| 26. | METERING BODY-PRIMARY |
| 27. | JET(2)-PRI. MAIN |
| 28. | CAP(2)-IDLE LIMITER |
| 29. | NEEDLE(2)-IDLE ADJUSTING |
| 30. | SEAL(2)-IDLE NEEDLE |
| 31. | VALVE-POWER |
| 32. | GASKET-POWER VALVE |
| 33. | GASKET-PRI. METERING BODY |
| 34. | TUBE-PUMP TRANSFER |
| 35. | O-RING(2)-PUMP TRANSFER TUBE |
| 36. | TUBE-FUEL LINE |
| 37. | O-RING(2)-FUEL LINE TUBE |
| 38. | SCREW(4)-SECONDARY FUEL BOWL |
| 39. | GASKET(4)-FUEL BOWL SCREW |
| 40. | FUEL BOWL ASSY.-SECONDARY |
| 41. | BAFFLE-SECONDARY NEEDLE & SEAT |
| 42. | RETAINER-FLOAT |
| 43. | FLOAT & SPRING ASSY.-SECONDARY |
| 44. | NEEDLE, SEAT & GASKET ASSY.-SEC. |
| 45. | SCREW(6)-SEC. METERING BODY |
| 46. | METERING BODY-SECONDARY |
| 47. | GASKET-SEC. METERING BODY PLATE |
| 48. | PLATE-SECONDARY METERING BODY |
| 49. | GASKET-SECONDARY METERING BODY |
| 50. | WASHER(2)-BALANCE TUBE |
| 51. | O-RING(2)-BALANCE TUBE |
| 52. | TUBE-BALANCE |
| 53. | SCREW-PUMP DISC. NOZZLE |
| 54. | GASKET(2)-PUMP DISC. NOZZLE |
| 55. | NOZZLE-PUMP DISC. |
| 56. | NEEDLE VALVE-PUMP DISC. |
| 57. | SCREW(2)-IDLE COMPENSATOR COVER |
| 58. | COVER-IDLE COMPENSATOR VALVE |
| 59. | VALVE-IDLE COMPENSATOR |
| 60. | GASKET-IDLE COMPENSATOR VALVE |
| 61. | SCREW & LOCKWASHER(6 OR 8)-THROTTLE BODY |
| 62. | MAIN BODY ASSY. |
| 63. | GASKET-THROTTLE BODY |
| 64. | THROTTLE BODY ASSY. |

## DISASSEMBLY

USE EXPLODED VIEW AS A GUIDE. THE NUMERICAL SEQUENCE MAY GENERALLY BE FOLLOWED TO DISASSEMBLE UNIT FAR ENOUGH TO PERMIT CLEANING AND INSPECTION. NOTE: PRIMARY SIDE (CHOKE SIDE) AND SECONDARY SIDE PARTS ARE NOT ALWAYS IDENTICAL. BE SURE TO MARK PARTS TAKEN FROM PRIMARY SIDE. SECONDARY THROTTLE DIAPHRAGM ASSY. (4)- IF TAKEN APART BE CAREFUL NOT TO TEAR DIAPHRAGM WHEN TAKING OUT OR INSTALLING COVER SCREWS.

## 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 COMPRESSED AIR AND CHECK CAREFULLY TO INSURE THOROUGH CLEANING OF OBSCURE AREAS. CAUTION: DO NOT SOAK PARTS WITH ATTACHED PLASTIC PARTS FOR A LONG PERIOD OF TIME. DO NOT SOAK ANY PARTS CONTAINING RUBBER OR DIAPHRAGM ASSEMBLIES.

## REASSEMBLY

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

## SPECIAL INSTRUCTIONS

THROTTLE BODY GASKET(63)-BE SURE HOLES ARE PROPERLY MATCHED TO THROTTLE BODY.

THROTTLE BODY SCREWS(61)-TORQUE EVENLY IN STAGES TO 50 INCH LBS.

POWER VALVE INSTALLATION(31)-USING PROPER WRENCH TORQUE TO 100 INCH LBS.

IDLE ADJ. NEEDLES(29)-TURN IN UNTIL LIGHTLY SEATED, THEN BACK OUT 1 TURN. (DO NOT INSTALL IDLE LIMITER CAPS AT THIS TIME WHEN USED.) NOTE: SOME LATE CARBURETORS HAVE A "BACKWARDS" IDLE ADJUSTMENT, TURN NEEDLES IN TO RICHEN THE MIXTURE, BACK NEEDLES OUT TO LEAN THE MIXTURE.

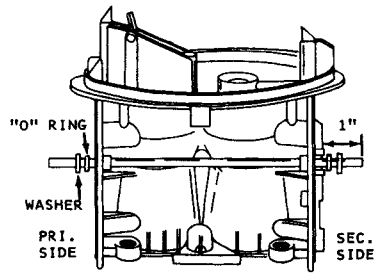
BOWL SCREW GASKETS(18)(39)-INSTALL GASKET ON SCREW BEFORE INSTALLING SCREW.

FUEL BOWL SCREWS(17)(38)-TORQUE EVENLY IN STAGES TO 25-30 INCH LBS.

O-RINGS-LUBRICATE LIGHTLY BEFORE INSTALLING.

1968-69 MODELS. DO NOT HAVE IDLE MIXTURE ADJUSTING NEEDLES (29) ON PRIMARY METERING BLOCK. REPLACED BY IDLE LIMITER SCREWS. FACTORY ADJUSTED AND SEALED. DO NOT REMOVE OR ADJUST. A SINGLE IDLE ADJUSTING SCREW IS LOCATED JUST INSIDE AIR CLEANER RING ON AIR HORN, DIRECTLY ABOVE PRIMARY METERING BLOCK. THIS SCREW HAS A LEFT HAND THREAD.

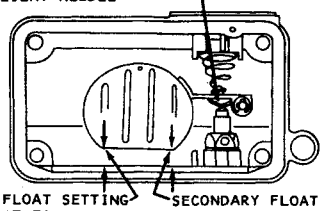
# ADJUSTMENTS




PASSENGER CARS TUBE IS PROJECTED 1 INCH FROM SECONDARY METERING BODY.

BALANCE TUBE POSITION FIG. 1

CAUTION
DO NOT EXERT PRESSURE ON RESILIENT NEEDLE VALVE.

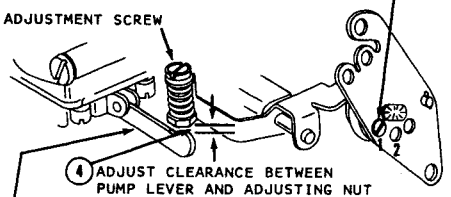



FUEL BOWL INVERTED, WEIGH OF FLOAT RESTING ON SEATED NEEDLE, MEASURE DISTANCE BETWEEN FLOAT AND INSIDE SURFACE OF FUEL BOWL.

DRY FLOAT LEVEL ADJUSTMENT FIG. 2

(2) HOLD THROTTLE IN WIDE OPEN POSITION

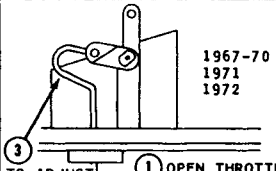
(1) PUMP CAM POSITION FOR NORMAL DRIVING, USE NO. 1 SETTING.




(4) ADJUST CLEARANCE BETWEEN PUMP LEVER AND ADJUSTING NUT (CLEARANCE IS .015)

(3) PUMP OPERATING LEVER HELD IN A FULLY COMPRESSED POSITION.

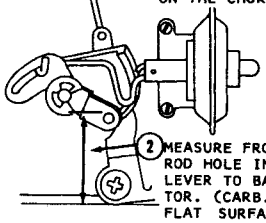
PUMP ADJUSTMENT FIG. 3



1967-70 1 23/32"
1971 1 17/32"
1972 1 9/16"

(3) TO ADJUST BEND ROD.

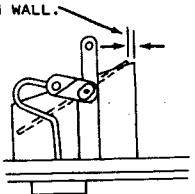
(1) OPEN THROTTLE AND CLOSE THE CHOKE VALVE BY PRESSING UP ON THE CHOKE CONTROL LEVER.



(2) MEASURE FROM TOP OF CHOKE ROD HOLE IN CHOKE CONTROL LEVER TO BASE OF CARBURETOR. (CARB. SETTING ON FLAT SURFACE.)

QUALIFYING CHOKE CONTROL LEVER FIG. 4

(3) MEASURE DISTANCE BETWEEN TOP EDGE OF CHOKE VALVE AND AIR HORN WALL.



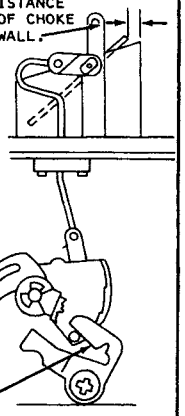
(4) TO ADJUST BEND CHOKE CONTROL LEVER TANG.

(2) CLOSE CHOKE BY PUSHING UP ON CHOKE CONTROL LEVER.

(1) PLACE FAST IDLE SPEED ADJUSTING TANG ON SECOND STEP OF FAST IDLE CAM AGAINST SHOULDER OF FIRST SET.

FAST IDLE CAM POSITION FIG. 5

(2) CHOKE HELD TOWARD CLOSED POSITION, MEASURE DISTANCE BETWEEN UPPER EDGE OF CHOKE VALVE AND AIR HORN WALL.

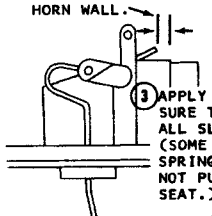


(1) THROTTLE HELD IN WIDE OPEN POSITION.

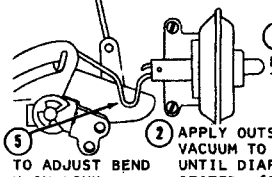
(3) TO ADJUST BEND UNLOADER TANG.

UNLOADER ADJ. FIG. 6

(4) MEASURE DISTANCE BETWEEN UPPER EDGE OF CHOKE VALVE AND AIR HORN WALL.



(3) APPLY LIGHT CLOSING PRESSURE TO CHOKE VALVE UNTIL ALL SLACK IS TAKEN UP. (SOME MODELS FULLY EXTEND SPRING LOADED STEM. DO NOT PULL DIAPHRAGM OFF ITS SEAT.)



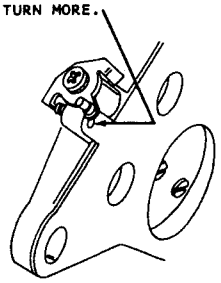
(1) PLACE FAST IDLE TANG ON HIGH STEP OF CAM.

(2) APPLY OUTSIDE SOURCE OF VACUUM TO DIAPHRAGM ASSY. UNTIL DIAPHRAGM IS FULLY SEATED. (10 INCH)

(5) TO ADJUST BEND U IN LINK.

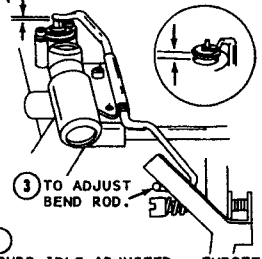
VACUUM BREAK ADJUSTMENT FIG. 7

SECONDARY THROTTLE STOP SCREW, BACK OUT UNTIL SECONDARY THROTTLE PLATES ARE CLOSED. TURN SCREW IN UNTIL IT CONTACTS STOP, THEN TURN SCREW IN 1/2 TURN MORE.



SECONDARY THROTTLE STOP ADJUSTMENT (WHEN USED) FIG. 8

(2) MEASURE DISTANCE (EARLY MODELS) BETWEEN RUBBER VALVE AND BOWL SURFACE SEAT. (LATE MODELS) BETWEEN VENT VALVE STEM AND OPERATING ROD.



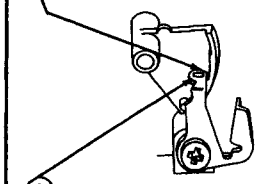
(3) TO ADJUST BEND ROD.

(1) CURB IDLE ADJUSTED. THROTTLE VALVES AT CURB IDLE POSITION.

BOWL VENT ADJUSTMENT (ON CAR) FIG. 9

(1) CURB IDLE ADJUSTED AS PER SERVICE MANUAL AND ENGINE DECAL.

(2) PLACE FAST IDLE TANG ON SECOND STEP AGAINST FIRST STEP SHOULDER. (CHECK R.P.M. USING TACHOMETER.)



(3) TO ADJUST BEND FAST IDLE TANG USING A SCREWDRIVER IN THE TANG SLOT. (BEND ONLY IN DIRECTION PERPENDICULAR TO THE CONTACT SURFACE OF THE CAM.)

FAST IDLE ADJUSTMENT (ON CAR) FIG. 10

# ADJUSTMENT DATA TABLE

| YEAR | MAKE | | FLOAT SETTING PRI. | FLOAT SETTING SEC. | FAST IDLE CAM POSITION | UNLOADER ADJUSTMENT | VACUUM BREAK ADJUSTMENT | BOWL VENT ADJUSTMENT | FAST IDLE R.P.M. | AUTO CHOKE SETTING |
|---|---|---|---|---|---|---|---|---|---|---|
| 1967 | CHRYSLER PRODUCTS | S/T | 1/4" | 9/32" | 1/16" | 5/32" | 7/64" | 3/32" | 700 L/S | 2-RICH |
| | 440" STD. V8 ENG. | A/T | 1/4" | 9/32" | 1/16" | 5/32" | 1/16" | 3/32" | 700 L/S | 2-RICH |
| 1968 | 440" V8 ENG. | ALL/T | 1/4" | 9/32" | 5/64" | 5/32" | 7/64" | 5/64" | 1400 2ND/S | 2-RICH |
| 1969 | 440" V8 ENG. | ALL/T | 1/4" | 9/32" | 5/64" | 5/32" | 1/16" | 5/64" | 1400 2ND/S | 2-RICH |
| 1970 | 383" V8 ENG. | S/T | 1/4" | 9/32" | 1/16" | 5/32" | 11/64" | (C.A.S. 5/64" | 2000 2ND/S | 2-RICH |
| | 383" V8 ENG. | A/T | 1/4" | 9/32" | 1/16" | 5/32" | 5/64" | E.C.S. 1/32") | 1800 2ND/S | 2-RICH |
| | 440" V8 ENG. | A/T | 1/4" | 9/32" | 1/16" | 5/32" | 5/64" | | 1600 2ND/S | 2-RICH |
| 1971 | 383" ENG. HEATED AIR | | 1/4" | 9/32" | 1/16" | 5/32" | S/T 11/64" | 1/64" | S/T 1800 2ND/S | 2-RICH |
| | | | 1/4" | 9/32" | 1/16" | 5/32" | A/T 5/64" | 1/64" | A/T 1700 2ND/S | 2-RICH |
| | FRESH AIR | | 1/4" | 9/32" | 1/16" | 5/32" | S/T 5/64" | 1/64" | S/T 1800 2ND/S | 2-RICH |
| | | | 1/4" | 9/32" | 1/16" | 5/32" | A/T 11/64" | 1/64" | A/T 1700 2ND/S | 2-RICH |
| 1972 | 440" V8 ENG. H.P. | S/T | 1/8" | 7/32" | 1/16" | 5/32" | 9/64" | 1/64" | 1800 2ND/S | — |
| | | A/T | 1/8" | 7/32" | 1/16" | 5/32" | 5/64" | 1/64" | 1600 2ND/S | — |

C.A.S.= CLEANER AIR SYSTEM
E.C.S.= EVAPORATION CONTROL SYSTEM

L/S= LOW STEP
2ND/S= SECOND STEP

QUADRAJET-PARTS.com