



General Instructions

- Take lots of pictures as you take your carburetor apart. This will give you a reference of where things go.
- Using a cookie sheet with folded up sides will help keep parts from falling on the floor.
- We suggest not removing the throttle shaft, valves, or choke shaft unless they are corroded, or very dirty. These parts can be easily damaged and are difficult to re-assemble.
- Instruction sheets that come with our carburetor kits are somewhat generic. It may not match your parts exactly.
- Do NOT use WD-40 around your carburetor. It reacts with ethanol.
- Using Silicon Spray Lubricant on the gaskets will help with sticking in case you need to take the carburetor apart again.
- Be careful after taking the top of the carburetor off. Turning the carburetor upside down may cause parts to fall out and you won't know where they were.
- Screws and jets that are frozen can often be removed after heating outside the screw or jet.
- Stuck check balls can be removed by heating the outside of where the check ball resides and tapping the carburetor on the work bench.
- Do not discard any parts until complete done. You may have to refer for size, or matching.

Cleaning:

- Clean with carburetor dis-assembled.
- Soak all parts except rubber & electrical in Simple Green for 2 hours. Aluminum parts will get discolored if left longer.
- Wash parts with hot water if available to remove all chemicals.
- Blow out each passage way taking special notice of the smaller ones. Test each passage that air goes through the entire passage.
- Blow out the idle mixture hole.

- Check any hole above the idle mixture hole (inside the bore). This is the idle discharge and often becomes plugged.
- A tooth brush can facilitate cleaning parts.
- Soda blasting, then washing again will make the carburetor look good any will clean any minor deposits.
- Any corrosion, or deposits that are hard to remove may indicate the passages are also corroded and the carburetor should be replaced.
- If your engine has been sitting for 6 months or more, the gas has probably turned, and the gas tank will need to be cleaned as well as the fuel lines. Flushing new gas through the tank will not be enough.

Assembly:

- Do NOT apply any gasket sealant on any of the gaskets. Gas will break sealant part and the particles will clog the small passages.
- Test your float.
 - Brass floats should be immersed into hot water. As the air inside expands any leak will be noticeable with air bubbles.
 - Plastic, or Nitrophyl floats should be weighed. The weight is in grams. Check our technical pages for any weight specification that we may have.
- Most gaskets will fit as expected, but you may have to trim some, especially under the venturis.
- Your kit may include multiple gaskets in order to get better coverage out of the kit. Use the one that fits the best. Look for any opening the gasket may leave allowing air into the carburetor. Some holes may be casting holes that don't lead to anything and do not have to be covered.
- Mounting gaskets for multiple bore carburetors do not have to have matching holes. Example a four-barrel gasket can be open in the middle instead of 4 holes as long as the carburetor has some kind of passage between bores. The passage is between primary, or secondary, not both.
- When adjusting the float be careful not to put any pressure on the needle. The viton tip is easily damaged.
- Most idle mixture screws can be cleaned using a soft wire wheel. Inspect for any scoring, which would indicate over tightening. Screw with scoring should be replaced.

Accelerator Pumps:

- On leather cups run your finger around the inside of the cup to break any manufacturer sealant.
- Apply 2 drops of oil to cups (leather, or rubber) before inserting into carburetor. Do not soak the cup in oil. The swelling of the cup needs to happen inside the carburetor. Allow the 2 drops of oil and the gas to do its job naturally.
- Twist the pump as you are inserting to help keep the cup from curling or folding over.
- Test your accelerator pump circuit before putting the top of the carburetor back on. Our technical pages have instructions on how to do this for most carburetor types.
- Pump wells are usually slight tapered, and the pump will not seal until it gets towards the bottom.

INSTRUCTION SHEET

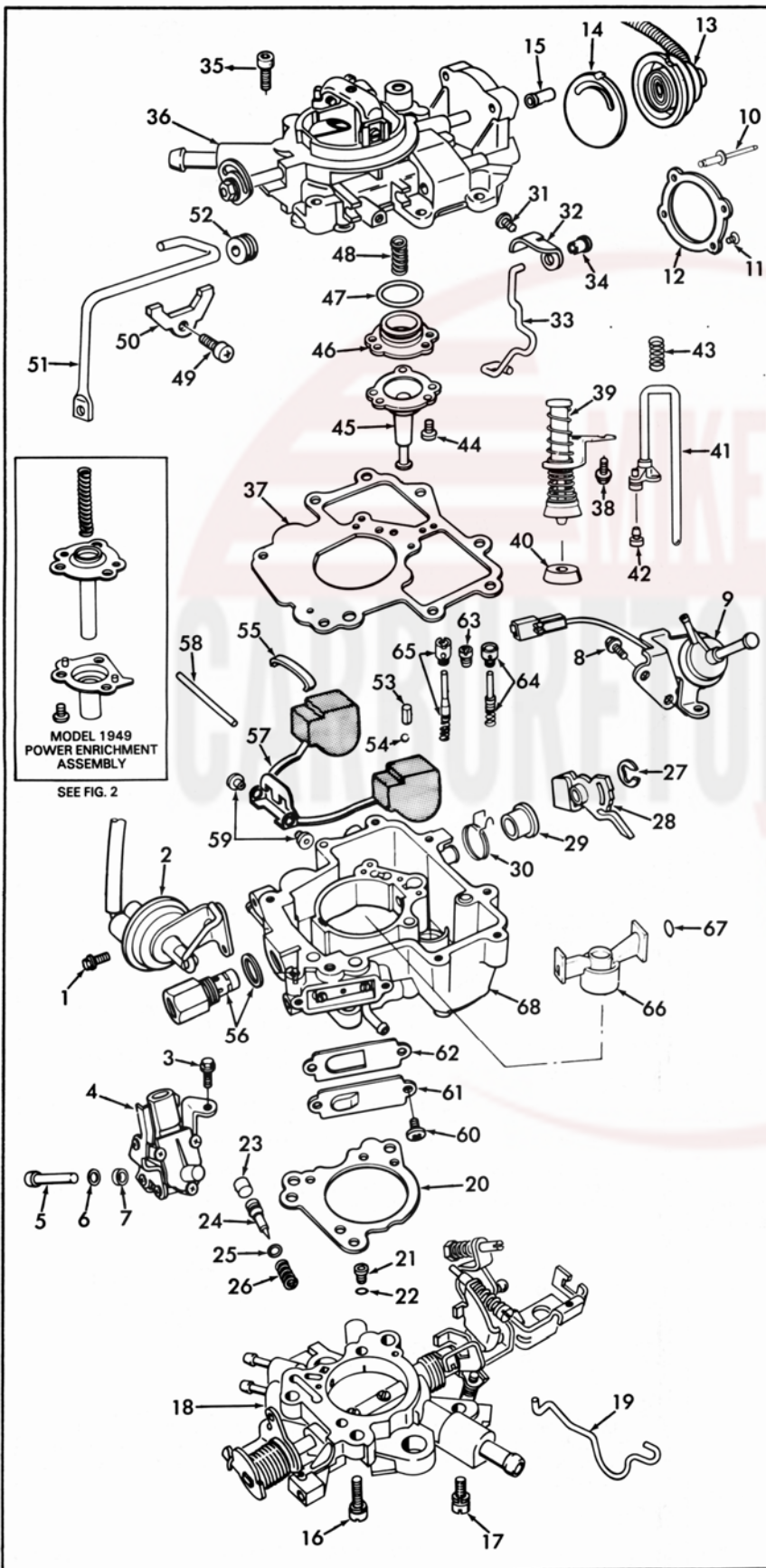
OFF VEHICLE CARBURETOR SERVICE

HOLLEY MODELS-6149/1949

50-645-3

GENERAL EXPLODED VIEW

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



DISASSEMBLY

USE THE EXPLODED VIEW AS A GUIDE. THE NUMERICAL SEQUENCE MAY GENERALLY BE FOLLOWED TO DISASSEMBLE UNIT FAR ENOUGH TO PERMIT CLEANING AND INSPECTION.

TO REMOVE POP RIVETS (10) FROM CHOKE COVER RETAINER, DRILL RIVET HEAD JUST ENOUGH TO COME LOOSE FROM RIVET BODY. USING A SMALL PUNCH, DRIVE REMAINING RIVET OUT OF HOLE.

TO REMOVE IDLE CHANNEL RESTRICTOR BUSHING (21) AND O-RING (22) TAKE A PAPERCLIP (.031" DIAMETER) BEND THE END AT A RIGHT ANGLE .045" LONG. INSERT THE PAPERCLIP THROUGH THE RESTRICTOR AND HOOK IT UNDER THE BOTTOM EDGE. GENTLY PULL THE RESTRICTOR AND O-RING FROM THE THROTTLE BODY.

TO REMOVE TAMPER RESISTANT IDLE MIXTURE PLUG (23). CENTER PUNCH AND DRILL A 3/32" DIA. HOLE THROUGH THE HARDENED STEEL PLUG. INSTALL AN EASY OUT INTO THE HOLE AND REMOVE PLUG. BEFORE REMOVING IDLE ADJUSTING NEEDLE, TURN IDLE NEEDLE IN COUNTING THE NUMBER OF TURNS IT TAKES TO LIGHTLY SEAT THE NEEDLE (RECORD FOR REASSEMBLY).

H. I. C.-HOT IDLE COMPENSATOR IS NOT REMOVABLE.

POWER VALVE ASSY'S. (64) & (65)-DO NOT MIX UP PARTS. KEEP SEPARATE.

BOOSTER VENTURI (66)-TO REMOVE LIGHTLY TAP FROM THE BOTTOM SIDE UNTIL FREE OF MAIN BODY.

NOMENCLATURE

REF. NO.	REF. NO.
1. SCREW (2)-CHOKE PULLOFF	35. SCREW (8)-BOWL COVER
2. CHOKE PULLOFF ASSEMBLY	36. BOWL COVER ASSEMBLY
3. SCREW (3)-SENSOR ASSEMBLY	37. GASKET-BOWL COVER
4. SENSOR ASSY.-THROTTLE POSITIONER	38. SCREW & LKWSHR.-PUMP ASSY.
5. PIN-PLUNGER	39. PUMP ASSEMBLY
6. RETAINER-SEAL	40. CUP-PUMP
7. SEAL-DUST (FELT)	41. ROD-POWER VALVE (MECHANICAL)
8. SCREW (3)-THROTTLE SOLENOID	42. PUCK-AUX. MAIN JET
9. SOLENOID ASSY.-THROTTLE	43. SPRING-POWER VALVE ROD
10. POP RIVET (2)-CHOKE COVER RETAINER	44. SCREW & LKWSHR.(3)-DIAPHRAGM ACTUATOR ASSY.
11. SCREW (2)-CHOKE COVER RETAINER	45. DIAPHRAGM ACTUATOR ASSY.-POWER VALVE (6149)
12. RETAINER-CHOKE COVER	46. DIAPHRAGM SEAT (6149)
13. ELECTRIC CHOKE COVER ASSY.	47. O-RING-DIAPHRAGM SEAT (6149)
14. SPACER-CHOKE INDEX	48. SPRING-DIAPHRAGM ACTUATOR (6149)
15. BUSHING-CHOKE COIL LEVER	49. SCREW-RETAINING CLAMP
16. SCREW (3)-THROTTLE BODY (L)	50. CLAMP-OPERATING ROD RETAINING
17. SCREW (1)-THROTTLE BODY (S)	51. ROD-PUMP OPERATING
18. THROTTLE BODY ASSEMBLY	52. GROMMET-PUMP OPERATING ROD
19. LINK-PUMP	53. WEIGHT-PUMP DISC. BALL
20. GASKET-THROTTLE BODY	54. BALL-PUMP DISC.
21. RESTRICTOR BUSHING-IDLE CHANNEL	55. RETAINER-FLOAT PIN
22. O-RING-RESTRICTOR BUSHING	56. NEEDLE & SEAT ASSY.
23. PLUG-IDLE ADJ. NEEDLE	57. FLOAT ASSEMBLY
24. NEEDLE-IDLE ADJUSTING	58. PIN-FLOAT HINGE
25. O-RING-IDLE ADJ. NEEDLE	59. BUSHING (2)-FLOAT PIN
26. SPRING-IDLE ADJ. NEEDLE	60. SCREW & LKWSHR. (2)-H.I.C. COVER
27. E-CLIP-FAST IDLE CAM	61. COVER-HOT IDLE COMPENSATOR
28. CAM-FAST IDLE	62. GASKET-H.I.C. COVER
29. BUSHING-SPRING (NYLON)	63. JET-MAIN
30. SPRING-F.I.C. ANTI-ENTRAPMENT	64. ENRICHMENT VALVE ASSY.-W.O.T.
31. SCREW & LKWSHR.-FAST IDLE LINK LEVER	65. ENRICHMENT VALVE ASSY.-MAIN
32. LEVER-FAST IDLE LINK	66. VENTURI-BOOSTER
33. LINK-FAST IDLE	67. O-RING-BOOSTER VENTURI
34. RETAINER-FAST IDLE LINK	68. BOWL ASSEMBLY

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 A 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 ASSEMBLY'S SUCH AS (2), (4), (9), (13), or (57) OR PARTS MADE OF RUBBER OR DIAPHRAGM ASSYS. IN ANY TYPE OF CLEANING SOLVENT.

REASSEMBLY

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

SPECIAL INSTRUCTIONS

SEE FIG. 14 FOR COMPLETE TORQUE SPECIFICATIONS.

O-RINGS-LIGHTLY COAT WITH OIL BEFORE INSTALLING.

BOOSTER VENTURI AND O-RING INSTALLATION-CAREFULLY FOLLOW INSTRUCTIONS TO PREVENT DAMAGE TO O-RING (ALSO SEE FIG. 1).

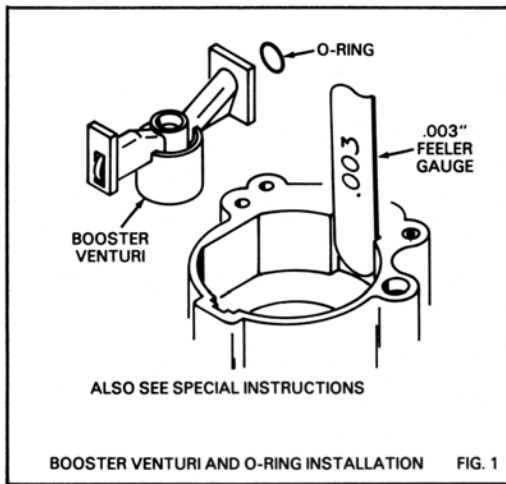
1. COAT O-RING LIGHTLY WITH OIL AND SET IN PLACE ON VENTURI.
2. INSERT .003" FEELER GAUGE IN VENTURI SLOT OF MAIN BODY.
3. PLACE VENTURI AND O-RING IN PLACE AND PRESS DOWN EVENLY UNTIL VENTURI IS COMPLETELY SEATED IN MAIN BODY.
4. HOLD VENTURI IN PLACE AND SLOWLY PULL FEELER GAUGE FROM MAIN BODY.

IDLE ADJUSTING NEEDLE (24)-TURN IN UNTIL LIGHTLY SEATED. THEN BACK OUT NUMBER OF TURNS RECORDED ON DISASSEMBLY. (INSTALL PLUG (23) AFTER COMPLETING ALL RUNNING IDLE ADJUSTMENTS ON VEHICLE).

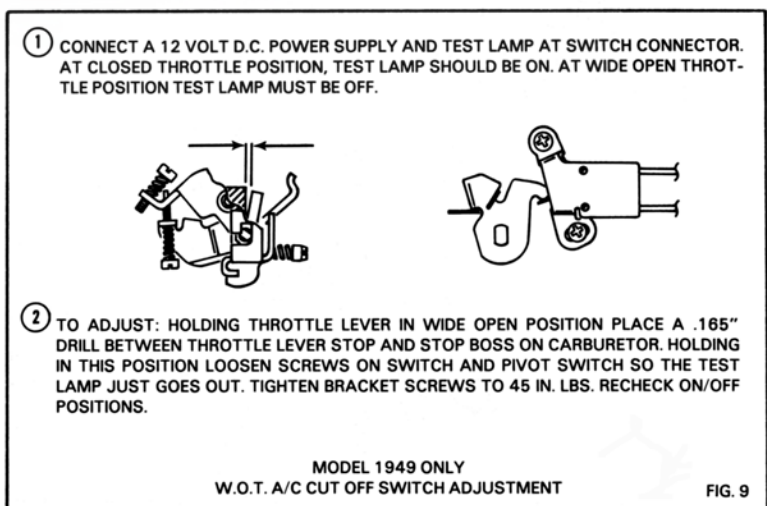
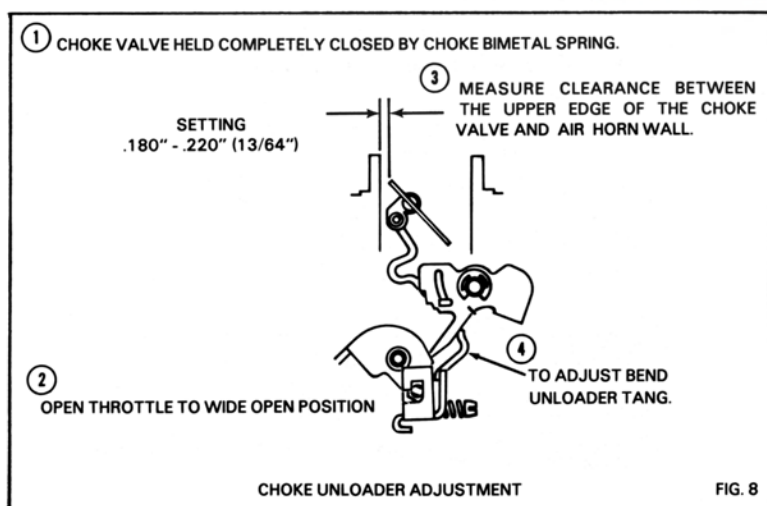
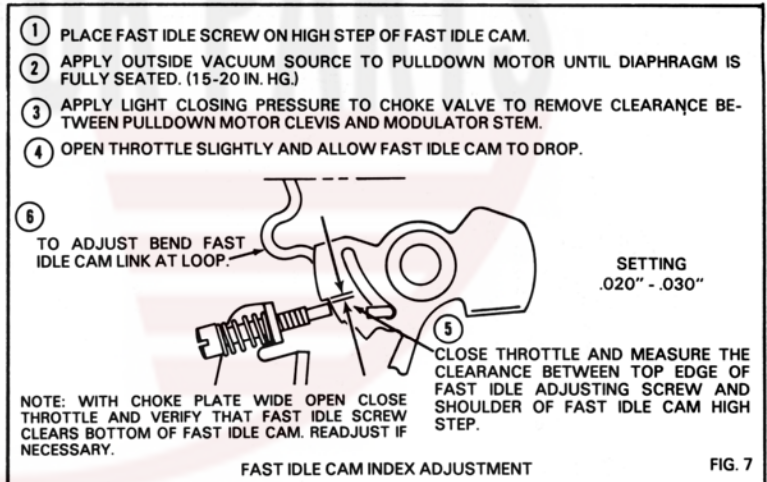
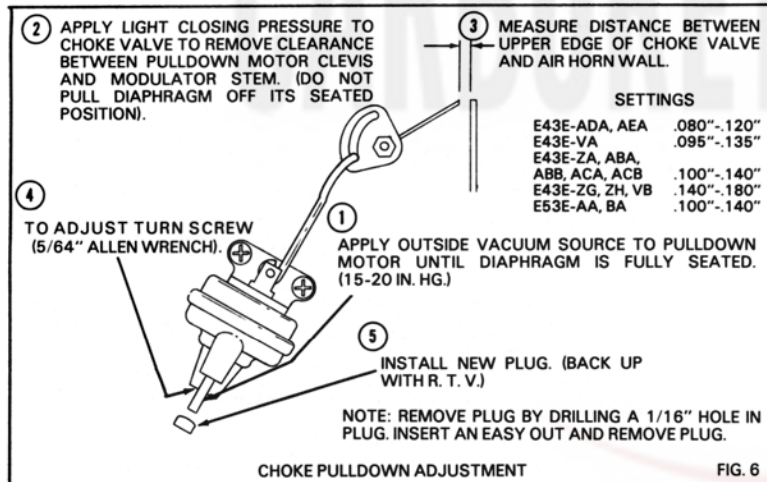
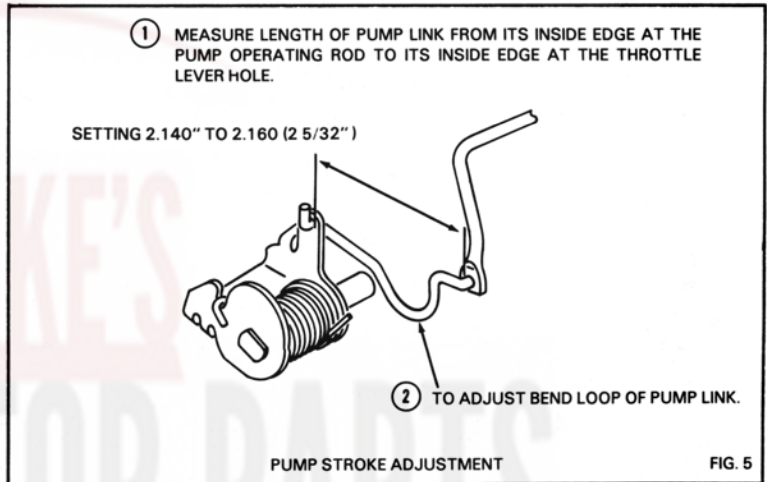
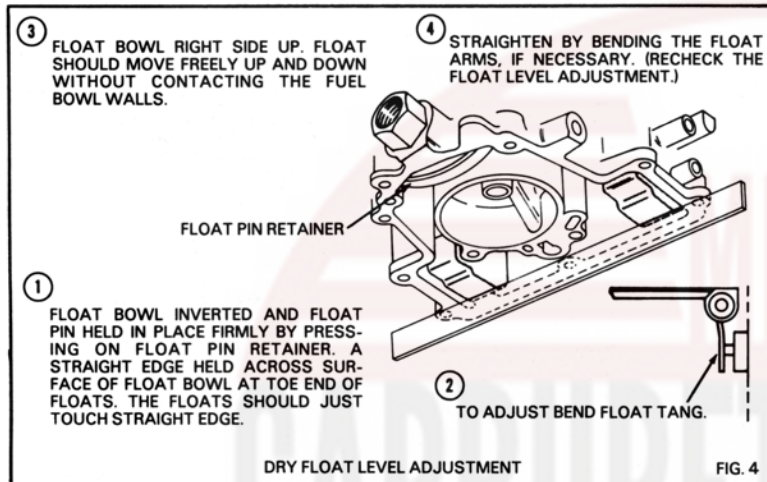
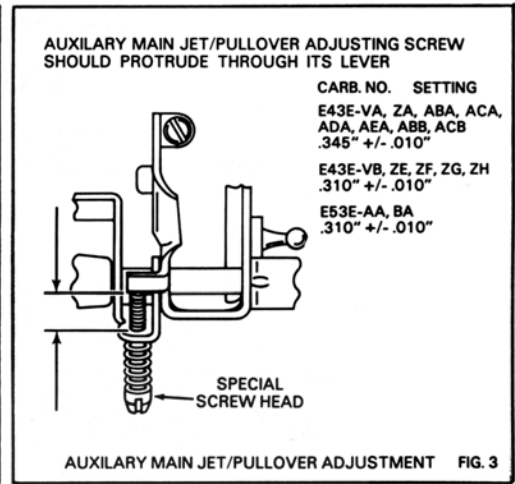
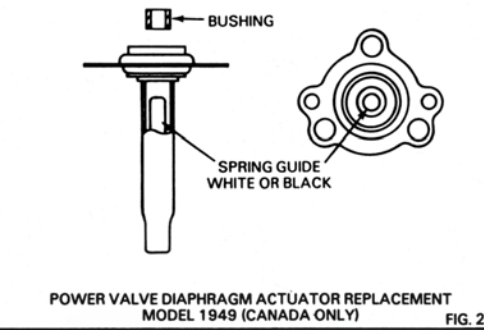
IDLE CHANNEL RESTRICTOR BUSHING AND O-RING-GENTLY PRESS IN WITH A FLAT END PUNCH UNTIL FLUSH WITH TOP OF THROTTLE BODY CASTING.

ELECTRIC CHOKE COIL ASSY. (13)-HAS A FIXED SETTING, IS NOT ADJUSTABLE. INSTALL POP RIVETS IN PROPER HOLES.

ADJUSTMENTS

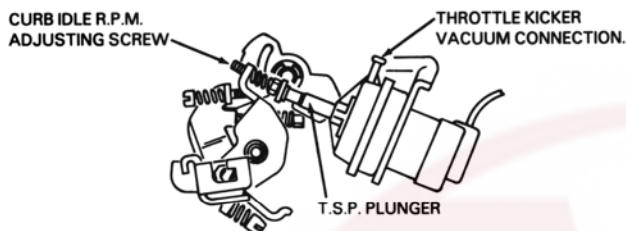


WHEN ASSEMBLY REMOVED FROM CARBURETOR HAS A WHITE SPRING GUIDE AND REPLACEMENT PART IN KIT HAS A BLACK SPRING GUIDE, INSTALL SMALL BUSHING ON BLACK GUIDE.
(WHEN REPLACING BLACK GUIDE WITH BLACK NO BUSHING IS USED.)
(DO NOT REPLACE BLACK GUIDE WITH WHITE AS IT WILL NOT WORK PROPERLY.)



NOTE: "A/C-ON RPM" IS NON-ADJUSTABLE. VERIFY THAT TSP PLUNGER EXTENDS WITH IGNITION ON.

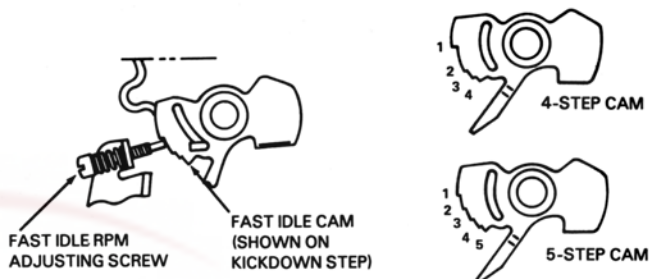
1. PLACE THE TRANSMISSION IN NEUTRAL OR PARK (PARKING BRAKE ON.)
2. DISCONNECT THROTTLE KICKER VACUUM LINE AND PLUG.
3. BRING ENGINE TO NORMAL OPERATING TEMPERATURE (COOLING FAN SHOULD CYCLE.)
4. PLACE A/C SELECTOR IN THE OFF POSITION.
5. PLACE TRANSMISSION IN SPECIFIED POSITION. (SEE ENGINE DECAL.)
6. ACTIVATE COOLING FAN BY GROUNDING CONTROL WIRE WITH JUMPER.
7. CHECK/ADJUST CURB IDLE RPM. IF ADJUSTMENT IS REQUIRED, TURN CURB IDLE ADJUSTING SCREW.
8. PLACE THE TRANSMISSION IN NEUTRAL OR PARK. REV THE ENGINE MOMENTARILY. PLACE TRANSMISSION IN SPECIFIED POSITION AND RECHECK CURB IDLE RPM. READJUST IF REQUIRED.
9. RECONNECT COOLING FAN CONTROL WIRE.
10. TURN THE IGNITION KEY TO THE OFF POSITION.
11. RECONNECT VACUUM LINE TO THROTTLE KICKER.



CURB IDLE RPM SPEED ADJUSTMENT

FIG. 10

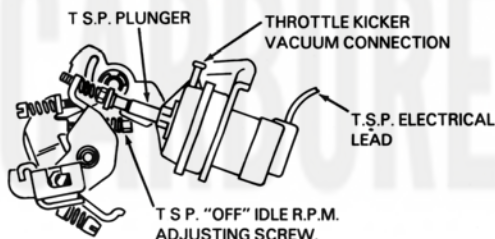
1. PLACE TRANSMISSION IN NEUTRAL OR PARK (PARKING BRAKE ON.)
2. BRING ENGINE TO NORMAL OPERATING TEMPERATURE.
3. TURN ENGINE KEY TO THE OFF POSITION.
4. PUT A/C SELECTOR IN THE OFF POSITION.
5. DISCONNECT VACUUM HOSE AT THE EGR VALVE AND PLUG.
6. PLACE THE FAST IDLE ADJUSTING SCREW ON THE SPECIFIED STEP OF THE FAST IDLE CAM (SEE ENGINE DECAL.)
7. START ENGINE WITHOUT TOUCHING THE ACCELERATOR PEDAL: CHECK/ADJUST FAST IDLE RPM TO SPECIFICATION. (SEE ENGINE DECAL.)
8. REV THE ENGINE MOMENTARILY, ALLOWING ENGINE TO RETURN TO IDLE. TURN IGNITION KEY TO OFF POSITION.
9. REMOVE PLUG FROM THE EGR VACUUM HOSE AND RECONNECT.



FAST IDLE RPM SPEED ADJUSTMENT

FIG. 11

1. PLACE THE TRANSMISSION IN NEUTRAL OR PARK (PARKING BRAKE ON.)
2. BRING ENGINE TO NORMAL OPERATING TEMPERATURE
3. DISCONNECT THROTTLE KICKER VACUUM LINE AND PLUG.
4. PLACE A/C SELECTOR TO OFF POSITION
5. DISCONNECT THE ELECTRICAL LEAD TO THE TSP AND VERIFY THAT PLUNGER COLLAPSES. CHECK ENGINE RPM TO SPECIFICATION (600 rpm.)
6. ADJUST TSP-OFF RPM TO SPECIFICATION.
7. SHUT ENGINE OFF, RECONNECT TSP ELECTRICAL LEAD AND THROTTLE KICKER VACUUM LINE.



"TSP OFF" RPM SPEED ADJUSTMENT

FIG. 12

THIS ADJUSTMENT SHOULD ONLY BE CHECKED/ADJUSTED IF THE THROTTLE POSITION SENSOR, ACTUATING PIN, OR SENSOR, HOUSING AND ACTUATING PIN ASSEMBLY MUST BE REPLACED DUE TO DAMAGE OR MALFUNCTION. IF THIS ADJUSTMENT BECOMES NECESSARY, IT MUST BE PERFORMED WITH CARBURETOR INSTALLED ON THE ENGINE AND ONLY AFTER CURB IDLE SPEED HAS BEEN SET TO SPECIFICATIONS.

1. INSTALL EEC-IV COMPUTER "BREAKOUT BOX" (ROTUNDA PART NUMBER T83L-50 -EEC-IV) BETWEEN THE EEC-IV COMPUTER 60 PIN TERMINAL AND THE 60 PIN TERMINAL AND THE 60 PIN VEHICLE WIRING HARNESS CONNECTOR.
2. SECURE CARBURETOR CHOKE PLATE IN THE WIDE-OPEN POSITION
3. TURN IGNITION KEY TO THE ON POSITION TO ACTIVATE THE T.S.P. (DO NOT START ENGINE.) OPEN THROTTLE SO THAT THE T.S.P. PLUNGER EXTENDS.
4. VERIFY THAT THE THROTTLE IS IN THE CURB IDLE POSITION (CONTACTING THE T.S.P. PLUNGER.)
5. CONNECT A.D.C. VOLTMETER ACROSS TERMINAL NUMBERS 46 AND 47 OF THE BREAKOUT BOX.
6. THROTTLE POSITION SENSOR VOLTAGE (ACROSS TERMINALS 46 AND 47 OF BREAKOUT BOX) SHOULD BE WITHIN SPECIFICATION (0.80 TO 0.90 VOLTS D.C.)
7. IF OUT OF SPECIFICATION, TURN ADJUSTMENT SCREW CLOCKWISE (AS VIEWED FROM ABOVE) TO INCREASE OR COUNTERCLOCKWISE (AS VIEWED FROM ABOVE) TO DECREASE THE OUTPUT VOLTAGE.
8. DISCONNECT D.C. VOLTMETER FROM "BREAKOUT BOX" AND "BREAKOUT BOX" FROM VEHICLE WIRING HARNESS.

THROTTLE POSITION SENSOR ADJUSTMENT (MODEL 6149 ONLY)

FIG. 13

TORQUE SPECIFICATIONS

REF NO.	DESCRIPTION	TORQUE SPEC.
65	ENRICHMENT VALVE SEAT-MAIN	20 INCH LB.
64	ENRICHMENT VALVE SEAT-W. O. T.	20 INCH LB.
63	MAIN JET	15 INCH LB.
60	H. I. C. COVER SCREWS	20 INCH LB.
56	NEEDLE & SEAT ASSEMBLY	150 INCH LB.
49	PUMP ROD RETAINING CLAMP SCREW	20 INCH LB.
44	P. V. DIAPHRAGM ACTUATOR ASSY. SCREWS (MODEL 1949)	8 INCH LB.
44	FEEDBACK DIAPHRAGM ACTUATOR ASSY. SCREWS (MODEL 6149)	4-5 INCH LB.
38	PUMP ASSEMBLY SCREW	20 INCH LB.
35	BOWL COVER SCREWS	45 INCH LB.
31	FAST IDLE LINK LEVER SCREW	10 INCH LB.
17	THROTTLE BODY SCREW (1 SHORT BLUE)-NEAR PCV TUBE	45 INCH LB.
16	THROTTLE BODY SCREWS (3 LONG-BLACK)	95 INCH LB.
11	CHOKE COVER RETAINER SCREWS	10 INCH LB.
8	THROTTLE SOLENOID SCREW	95 INCH LB.
3	SENSOR ASSEMBLY SCREWS	45 INCH LB.
1	CHOKE PULLOFF ASSEMBLY SCREWS	45 INCH LB.
0	CHOKE SHAFT NUT	18 INCH LB.

FIG. 14

NOTICE

THE INFORMATION AND SPECIFICATIONS CONTAINED HEREIN ARE BASED ON LATEST PRODUCT INFORMATION AVAILABLE AT THE TIME OF PUBLICATION. THE RIGHT IS RESERVED TO MAKE CHANGES AT ANY TIME WITHOUT NOTICE.

PLEASE REFER TO THE ENGINE DECAL, SERVICE SPECIFICATIONS AND TECHNICAL BULLETINS FOR REVISIONS TO THIS INFORMATION.