



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.

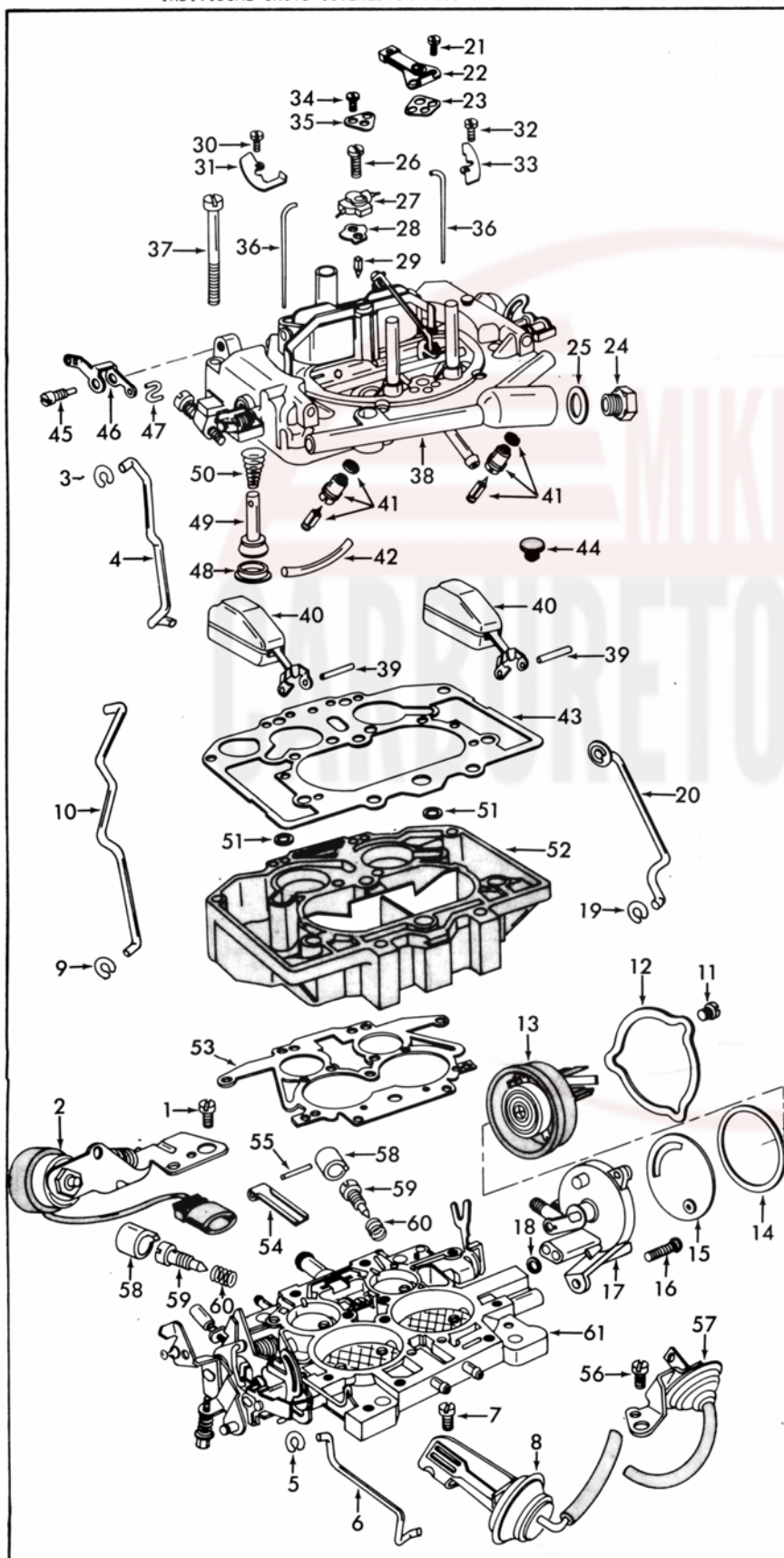
INSTRUCTION SHEET

CARTER CARBURETOR—"THERMO-QUAD"

50-473-1

GENERAL EXPLODED VIEW

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. NOTE: LEAVE CONNECTING RODS OR LINKS CONNECTED AT ONE END WHEN EVER POSSIBLE. TWO BOWL COVER SCREWS (37) ARE LOCATED BETWEEN CHOKE VALVE AND WALL OF AIR HORN. BOWL VENT VALVE (44) CAN EASILY BE REMOVED AND INSTALLED WITHOUT REMOVING LEVER AND ROD. TO REMOVE PUMP PLUNGER (49) USE A SMALL ROD PLACED ON END OF PLUNGER SHAFT AND TAP LIGHTLY DRIVING OUT INTAKE CHECK (48). DO NOT REMOVE IDLE LIMITER CAPS (58) UNLESS SERVICE CAPS ARE AVAILABLE. LIMITER CAPS CAN BE REMOVED BY INSTALLING A SHEET METAL SCREW IN THE CENTER OF THE CAP AND TURN CLOCKWISE.

NOMENCLATURE

REF. NO.	REF. NO.
1. SCREW-TSP ASSY.	31. PLATE-METERING ROD COVER
2. TSP ASSY.	32. SCREW-METERING ROD COVER
3. RETAINER-FAST IDLE ROD	33. PLATE-METERING ROD COVER
4. ROD-FAST IDLE	34. SCREW-STEP UP PISTON COVER
5. RETAINER-DELAYED CHOKE	35. PLATE-STEP UP PISTON COVER
6. ROD-DELAYED CHOKE PULLDOWN	36. ROD (2)-METERING
7. SCREW-DELAYED DIAPHRAGM ASSY.	37. SCREW (10)-BOWL COVER
8. DELAYED DIAPHRAGM ASSY.	38. BOWL COVER ASSY.
9. RETAINER-PUMP ARM CONNECTOR	39. PIN (2)-FLOAT LEVER
10. ROD-PUMP ARM CONNECTOR	40. FLOAT ASSY. (2)
11. SCREW (3)-CHOKE COVER CLAMP	41. NEEDLE, SEAT & GASKET ASSY. (2)
12. CLAMP-CHOKE COVER	42. TUBE-PUMP PASSAGE
13. CHOKE COVER & SPRING ASSY.	43. GASKET-BOWL COVER
14. GASKET-CHOKE COVER	44. VALVE-BOWL VENT
15. BAFFLE-CHOKE COVER	45. SCREW-PUMP ARM
16. SCREW (2)-CHOKE HOUSING	46. PUMP ARM
17. HOUSING-CHOKE	47. LINK-PUMP "S"
18. SEAL-CHOKE HOUSING	48. CHECK VALVE-PUMP INTAKE
19. RETAINER-CHOKE PULLOFF ROD	49. PUMP ASSY.
20. ROD, RETAINER & WASHER-CHOKE PULLOFF	50. SPRING-PUMP
21. SCREW (2)-HOT IDLE COMPENSATOR	51. O-RING (2)-MAIN WELL SEAL
22. VALVE-HOT IDLE COMPENSATOR	52. BOWL ASSY.-FUEL
23. GASKET-HOT IDLE COMPENSATOR VALVE	53. GASKET-THROTTLE BODY
24. FITTING-FUEL INLET	54. LEVER-STEP UP PISTON
25. GASKET-INLET FITTING	55. PIN-LEVER
26. SCREW-PUMP JET HOUSING	56. SCREW-CHOKE PULLDOWN
27. HOUSING-PUMP JET	57. DIAPHRAGM PULLDOWN ASSY.-CHOKE
28. GASKET-PUMP JET HOUSING	58. CAP (2)-IDLE LIMITER
29. NEEDLE-PUMP DISCHARGE CHECK	59. NEEDLE (2)-IDLE ADJUSTING
30. SCREW-METERING ROD COVER	60. SPRING (2)-IDLE ADJ. NEEDLE
	61. THROTTLE BODY ASSY.

CLEANING

CLEANING MUST BE DONE WITH CARBURETOR DISASSEMBLED. SOAK PARTS LONG ENOUGH TO SOFTEN AND REMOVE ALL FOREIGN MATERIAL. CAUTION: DO NOT SOAK PLASTIC BODY FOR A LONG PERIOD OF TIME. 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 DIAPHRAGM ASSEMBLIES, SOLENOIDS, ELECTRIC CHOKE COVER OR RUBBER PARTS IN CLEANING SOLVENTS.

REASSEMBLY

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

SPECIAL INSTRUCTIONS

VACUUM DIAPHRAGM ASSY. (8) (57)-LEAK-TEST BEFORE INSTALLING ON THE THROTTLE BODY.

IDLE ADJUSTING NEEDLES (59) - TURN IN UNTIL LIGHTLY SEATED THEN BACK OUT 1 1/2 TURNS.

O-RINGS (51) - BE SURE THEY ARE INSTALLED IN PRIMARY MAIN WELL CAVITIES OF PLASTIC BOWL.

PUMP PLUNGER (49) INSTALLATION - INSTALL PLUNGER SPRING (50) LARGE END IN FIRST THEN INSTALL PUMP. HOLD IN PLACE BY INSTALLING "S" LINK (47) WITH LOWER OPEN END TOWARDS CHOKE. THEN INSTALL NEW INTAKE CHECK ASSY. (48) AND TAP LIGHTLY INTO PLACE.

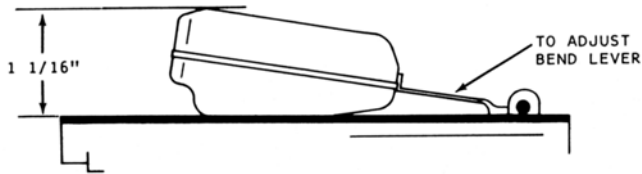
PUMP PASSAGE TUBE (42) - WHEN INSTALLING AVOID KINKING OF TUBE.

TSP ASSY. (2) - DO NOT MOUNT ON CARBURETOR UNTIL ALL BENCH ADJUSTMENTS HAVE BEEN MADE.

CHOKE COVER ASSY. (13) - DO NOT INSTALL UNTIL CHOKE OPERATING LEVER ADJUSTMENT IS MADE.

CHOKE BAFFLE PLATE (15) - INSTALL WITH DIMPLE IN THE MANIFOLD HEAT HOLE OF CHOKE HOUSING.

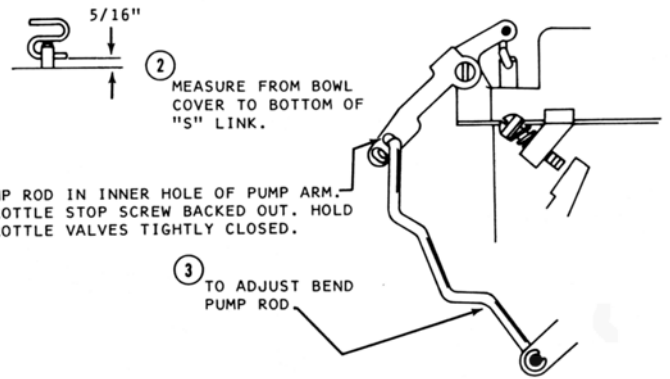
CAUTION: DO NOT EXERT
PRESSURE ON RESILIENT
NEEDLE VALVE.



BOWL COVER GASKET IN PLACE, COVER INVERTED
MEASURE FROM GASKET TO BOTTOM OF EACH FLOAT
AT TOE END.

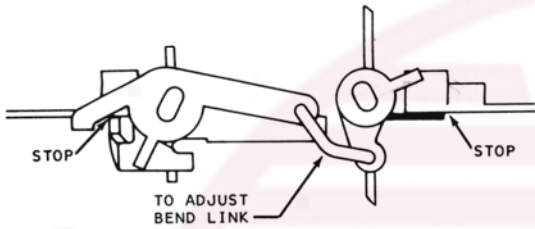
DRY FLOAT LEVEL ADJUSTMENT

FIG. 1



PUMP ROD ADJUSTMENT

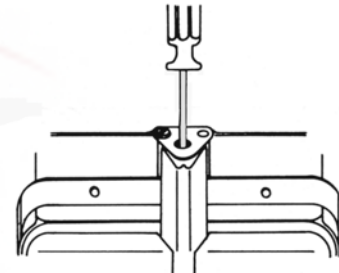
FIG. 2



OPEN THROTTLE VALVES TO WIDE OPEN POSITION. BOTH
PRIMARY & SECONDARY THROTTLE SHAFTS SHOULD CONTACT
THE STOPS ON THE THROTTLE BODY HOUSING AT THE SAME
TIME.

SECONDARY THROTTLE LINKAGE ADJUSTMENT

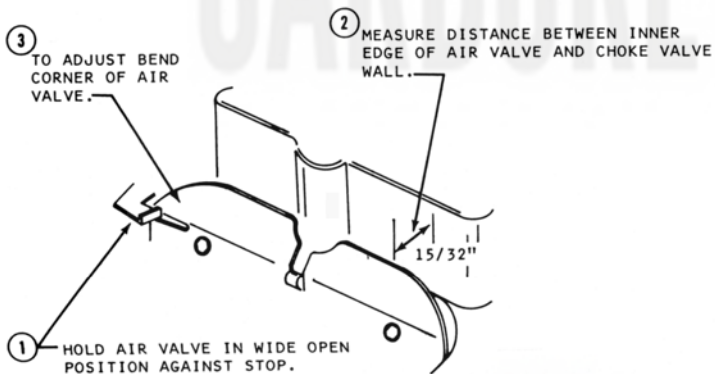
FIG. 3



1. THROTTLE VALVES TIGHTLY CLOSED.
2. PRESS DOWN ON STEP UP PISTON. TURN ADJUSTMENT SCREW IN
CENTER OF PISTON COUNTERCLOCKWISE, UNTIL PISTON IS IN
THE FULL DOWN POSITION. TURN SCREW CLOCKWISE UNTIL PISTON
STARTS TO MOVE UPWARD. TURN 1 1/2 ADDITIONAL TURNS.
3. TO OBTAIN BEST DRIVEABILITY, TURN SCREW CLOCKWISE (RICHER
METERING) COUNTERCLOCKWISE (LEANER METERING).

METERING ROD ADJUSTMENT

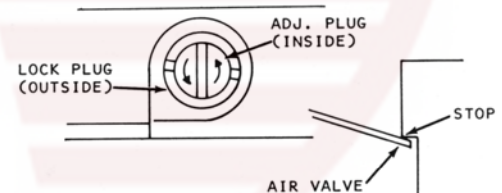
FIG. 4



AIR VALVE OPENING ADJUSTMENT

FIG. 5

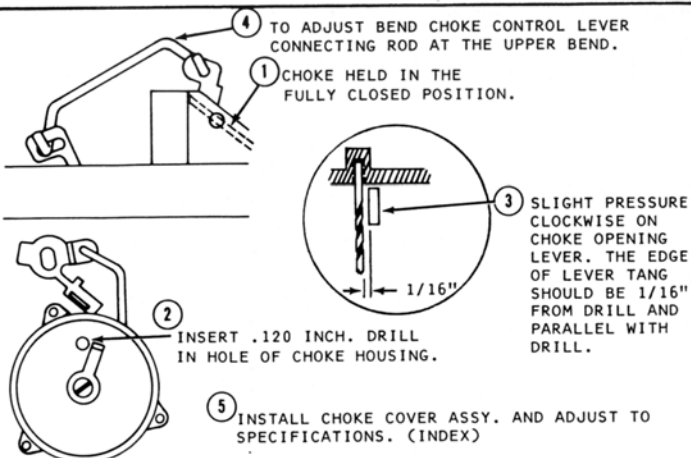
2. TURN ADJUSTMENT PLUG COUNTERCLOCKWISE UNTIL
AIR VALVE JUST CONTACTS STOP. THEN TURN 1 1/4
ADDITIONAL TURNS. HOLD IN THIS POSITION AND
TIGHTEN LOCK PLUG.



1. LOOSEN LOCK PLUG SO AIR VALVE FALLS OPEN FREELY.

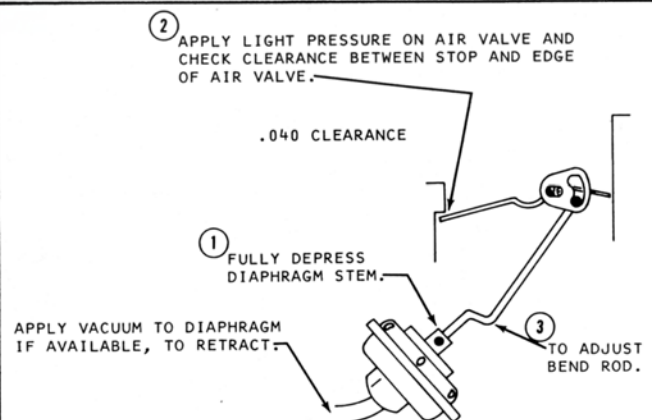
AIR VALVE SPRING ADJUSTMENT

FIG. 6



CHOKE CONTROL LEVER CONNECTING ROD ADJ.

FIG. 7



CHOKE DIAPHRAGM CONNECTOR ROD ADJUSTMENT

FIG. 8

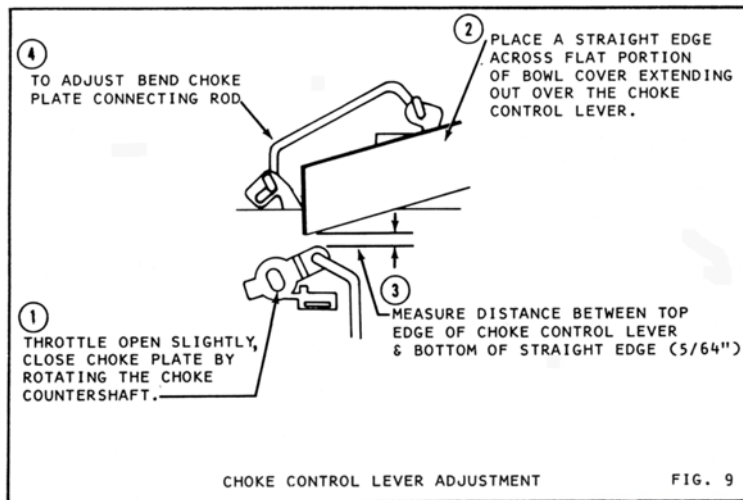


FIG. 9

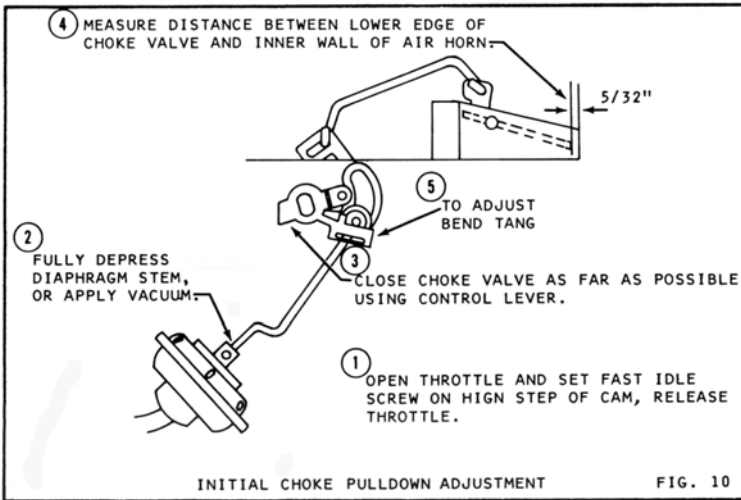


FIG. 10

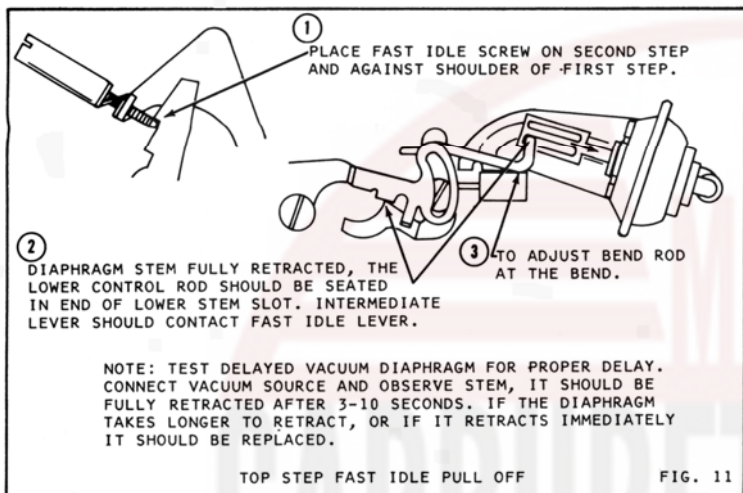


FIG. 11

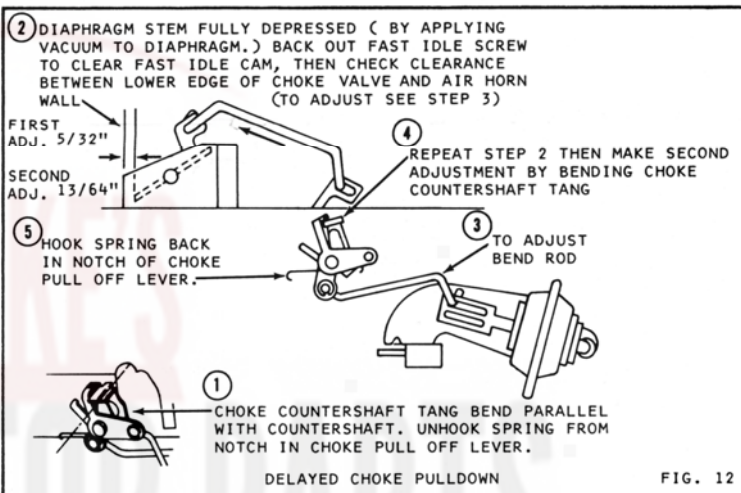


FIG. 12

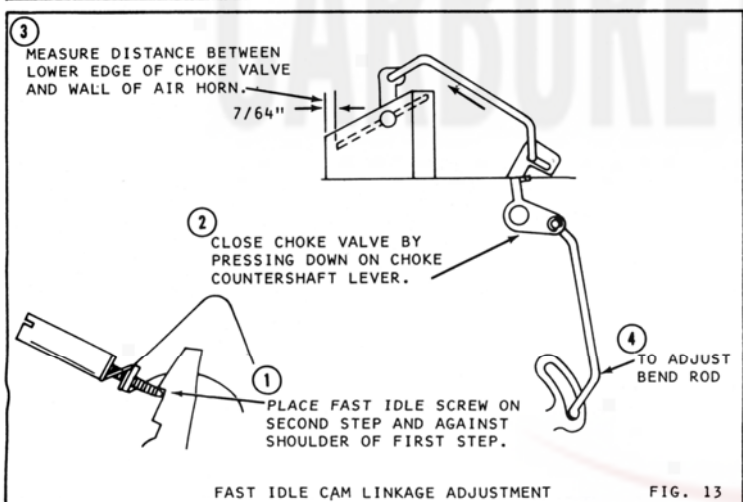


FIG. 13

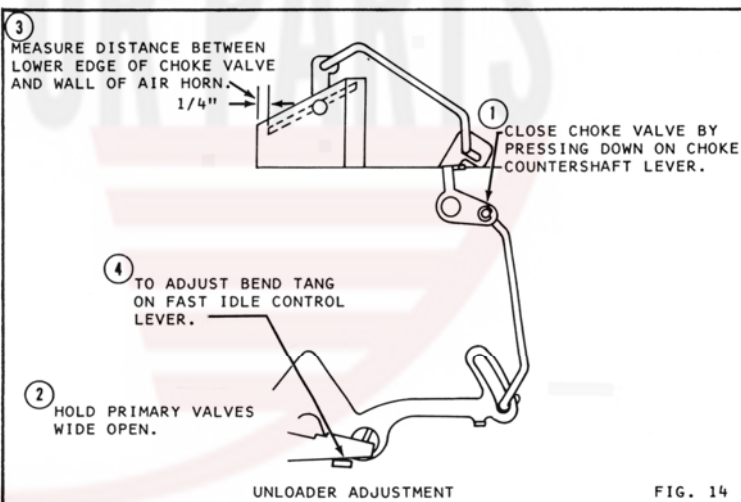


FIG. 14

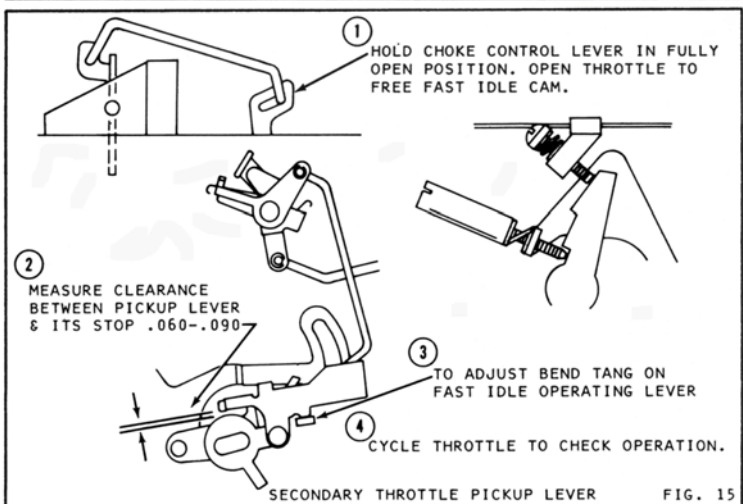


FIG. 15

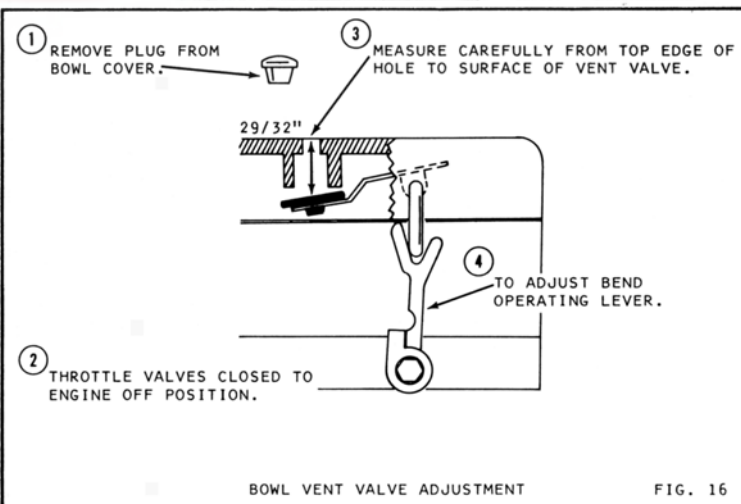
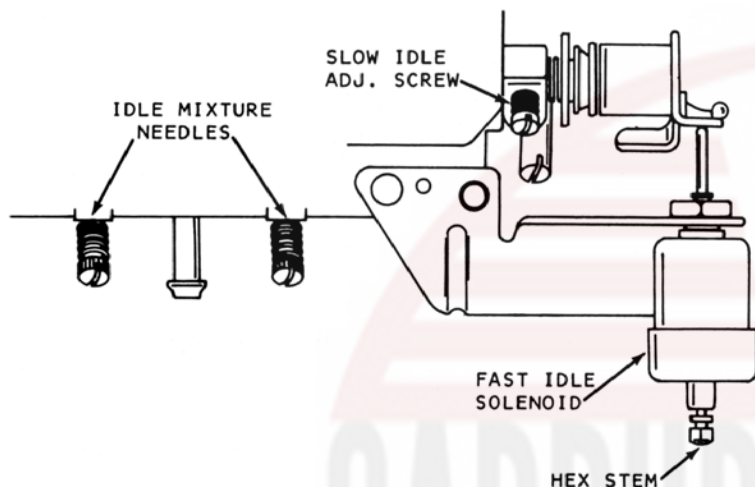


FIG. 16

USE FACTORY CAR MANUAL PROCEDURE FOR ADJUSTING CURB IDLE AND CO% CHECK IF AVAILABLE, AND SPECIFICATIONS SHOWN ON THE "VEHICLE EMISSION CONTROL INFORMATION" LABEL IN THE ENGINE COMPARTMENT.



SUPPLEMENT

CURB IDLE AND SOLENOID "OFF" IDLE SPEED ADJUSTMENT.

1. SET IGNITION TIMING PER CAR FACTORY SPECIFICATIONS AND PROCEDURE
2. RUN ENGINE 20 MINUTES AT FAST IDLE (SECOND STEP). CHOKE FULLY OPEN. RETURN TO IDLE POSITION.
3. SET PARKING BRAKE & BLOCK WHEELS. PLACE A/T IN DRIVE M/T IN NEUTRAL. A/C OFF. AIR CLEANER IN PLACE WHEN MAKING FINAL ADJUSTMENTS.
4. ADJUST SOLENOID ADJUSTING HEX STEM TO SPECIFIED CURB IDLE (HIGHER) R.P.M. LISTED ON ENGINE EMISSION DECAL USING A TACHOMETER. (SOLENOID LEAD MUST BE CONNECTED)
5. ADJUST IDLE MIXTURE NEEDLES TO OBTAIN THE HIGHEST R.P.M. AT THE LEANEST BEST IDLE SETTING. KEEP BOTH NEEDLES THE SAME NUMBER OF TURNS FROM THE SEATED POSITION. READJUST IDLE R.P.M. IF NECESSARY.
6. A/T IN NEUTRAL. DISCONNECT THROTTLE SOLENOID POSITIONER ELECTRIC LEAD. ADJUST "OFF" IDLE SPEED ADJUSTING SCREW TO (LOW) R.P.M. LISTED ON ENGINE DECAL. (CONNECT SOLENOID LEAD.)

CURB IDLE ADJUSTMENT

FIG. 17

1. CURB IDLE ADJUSTED, REMOVE AIR CLEANER. PLUG VACUUM LINE FROM MANIFOLD.
2. DISCONNECT VACUUM HOSE AT THE CARBURETOR SPARK PORT AND DISTRIBUTOR PRIMARY DIAPHRAGM. INSTALL A "JUMPER" HOSE DIRECTLY BETWEEN THE TWO.
3. DISCONNECT THE EGR VACUUM LINE AT THE VALVE AND PLUG LINE. START ENGINE.
4. PLACE FAST IDLE SCREW ON SECOND STEP AND AGAINST FIRST STEP OF FAST IDLE CAM. ADJUST SCREW TO PROPER R.P.M. RECONNECT HOSES & INSTALL AIR CLEANER.

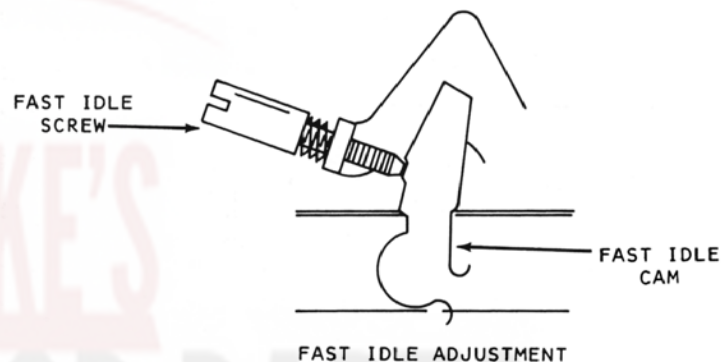


FIG. 18