



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:

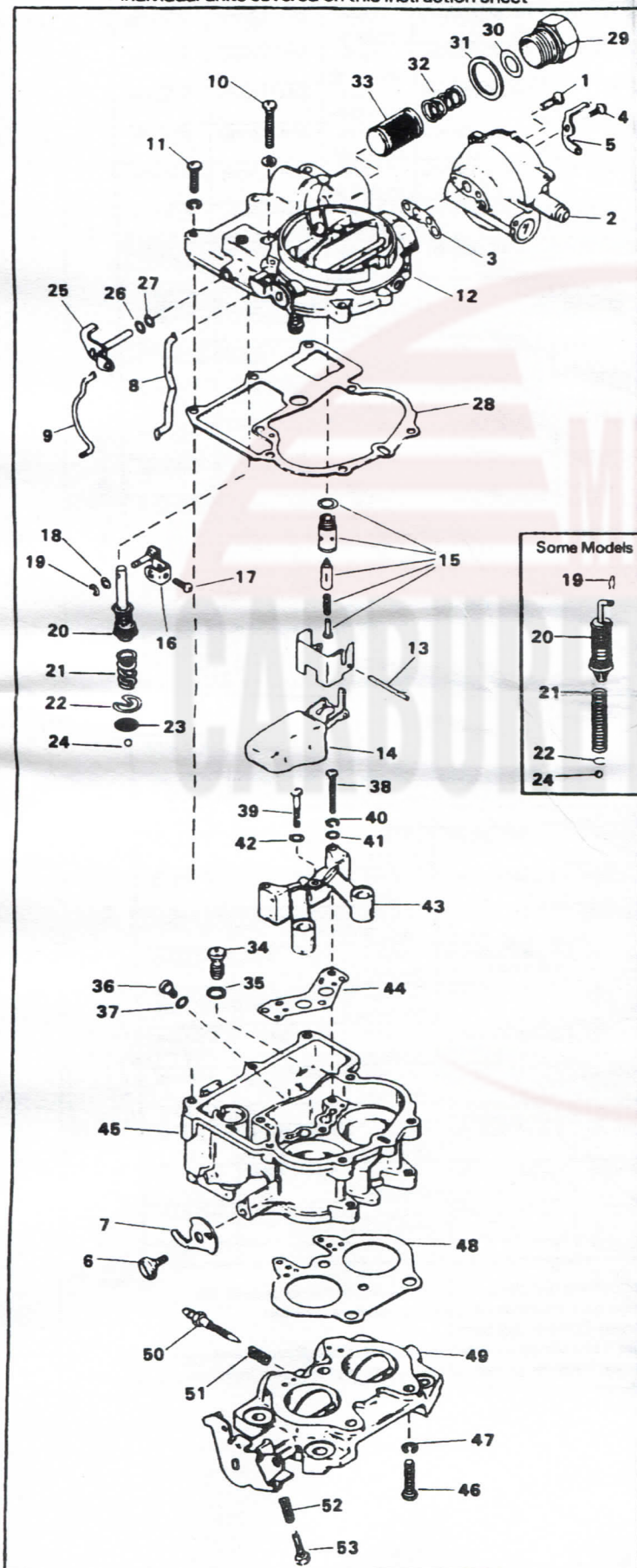
- On leather cups run your finger around the inside of the cup to break any manufacturer sealant.
- Apply 2 drops of oil to cups (leather, or rubber) before inserting into carburetor. Do not soak the cup in oil. The swelling of the cup needs to happen inside the carburetor. Allow the 2 drops of oil and 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 MERCARB TWO-BARREL

50-766-4

GENERAL EXPLODED VIEW

The general design and parts shown will vary to individual units covered on this instruction sheet



DISASSEMBLY

Use exploded view as guide. The numerical sequence may generally be followed to disassemble unit far enough to permit cleaning and inspection.

NOMENCLATURE

Reference Number	Reference Number
1. Screw, Choke Housing	28. Gasket, Bowl Cover
2. Choke Housing Assembly	29. Fitting, Fuel Inlet
3. Gasket, Choke Housing	30. Gasket, Fuel Inlet
4. Screw, Choke Lever	31. Gasket, Fuel Inlet
5. Lever	32. Spring, Fuel Filter
6. Screw, Fast Idle Cam	33. Filter
7. Fast Idle Cam	34. Power Valve Assembly
8. Choke Rod	35. Gasket, Power Valve
9. Pump Rod	36. Jet
10. Screw, Bowl Cover (Long)	37. Gasket, Jet
11. Screw, Bowl Cover (Short)	38. Screw, Venturi Assembly
12. Bowl Cover Assembly	39. Screw, Venturi Center
13. Pin, Float	40. Lockwasher
14. Float	41. Gasket
15. Needle & Seat Assembly	42. Gasket
16. Pump Shaft & Lever Assembly	43. Venturi Cluster
17. Screw, Pump Shaft Assembly	44. Gasket, Venturi Cluster
18. Washer, Pump Shaft	45. Float Bowl Assembly
19. Retainer, Pump Shaft	46. Screw, Throttle Body
20. Accelerator Pump Assembly	47. Lockwasher
21. Spring, Pump Assembly	48. Gasket, Throttle Body
22. Retainer, Spring	49. Throttle Body
23. Strainer	50. Needle, Idle Mixture Adjusting
24. Check Ball	51. Spring, Idle Mixture Screw
25. Accelerator Pump Lever	52. Screw, Idle Speed Adjusting
26. Washer, Inner	53. Spring, Idle Speed Screw
27. Washer, Outer	

CLEANING

Cleaning must be done with carburetor disassembled. Use a carburetor cleaning solvent to soak parts long enough to soften and remove all foreign material. 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 ensure thorough cleaning of obscure areas.

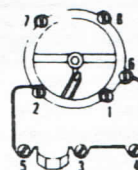
CAUTION: Do not soak float, solenoids, diaphragm units, plastic washers when used or rubber parts in cleaning solvents. Do not sand, wire brush or file on Teflon-coated shafts.

REASSEMBLY

Reassemble in reverse order of disassembly. Note special instructions and follow numerical outline in making adjustments necessary for carburetor being serviced.

SPECIAL INSTRUCTIONS

Idle adjusting needles: Turn each needle in lightly until seated, then back out two turns. (Do not install idle limiter caps at this time.)



Air Horn Tightening Sequence

The specifications in this chart replace the specifications found in the service manuals. See MerCruiser Service Bulletin 97-8.

CYL	MODEL/ ENGINE	CARBURETOR NUMBER	FLOAT LEVEL	FLOAT DROP	PUMP ROD	CHOKE SETTING	CHOKE UNLOADER	FLOAT WEIGHT
4	MCM 120/140	1389-8490A 2	3/8" (10mm) Solid-Needle * 9/16" (14mm) Spring-Needle	1-3/32" (27 mm)	1-5/32" (29mm)	1 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 120/140	1389-9350A 2	3/8" (10mm) Solid-Needle * 9/16" (14mm) Spring-Needle	1-3/32" (27 mm)	1-5/32" (29mm)	1 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 120/140	1389-9562A 1	3/8" (10mm) Solid-Needle * 9/16" (14mm) Spring-Needle	1-3/32" (27 mm)	1-5/32" (29mm)	1 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 2.5L/3.0L	3310-806077A 2	3/8" (10mm) Solid-Needle * 9/16" (14mm) Spring-Needle	1-3/32" (27 mm)	1-5/32" (29mm)	1 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 2.5/3.0L	3310-860070A 2	3/8" (10mm) Solid-Needle * 9/16" (14mm) Spring-Needle	1-3/32" (27 mm)	1-5/32" (29mm)	1 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 3.0L	1389-815396A 2	3/8" (10mm) Solid-Needle * 9/16" (14mm) Spring-Needle	1-3/32" (27 mm)	1-5/32" (29mm)	1 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 3.0L	3310-806078A 2	3/8" (10mm) Solid-Needle * 9/16" (14mm) Spring-Needle	1-3/32" (27 mm)	1-5/32" (29mm)	1 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 3.0L	3310-807504A 1	3/8" (10mm) Solid-Needle * 9/16" (14mm) Spring-Needle	1-3/32" (27 mm)	1-5/32" (29mm)	1 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 3.0L	3310-864940A01	3/8" (10mm) Solid-Needle * 9/16" (14mm) Spring-Needle	1-3/32" (27 mm)	1-5/32" (29mm)	1 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 3.0L TKS	3310-866140A02	9/16" (14mm) Spring-Needle	1-3/32" (27 mm)				9 Grams
	MCM 3.0LX	1389-815397A 2	3/8" (10mm) Solid-Needle * 9/16" (14mm) Spring-Needle	1-3/32" (27 mm)	1-5/32" (29mm)	1 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 3.0LX	3310-805924A 2	3/8" (10mm) Solid-Needle * 9/16" (14mm) Spring-Needle	1-3/32" (27 mm)	1-5/32" (29mm)	1 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 470	1389-8489A 5	3/8" (10mm) Solid-Needle * 9/16" (14mm) Spring-Needle	1-3/32" (27mm)	1-5/32" (29mm)	INDEX	5/64" (2mm)	9 Grams
	MCM 170/165	1389-9564A 1	3/8" (10mm) Solid-Needle * 9/16" (14mm) Spring-Needle	1-3/32" (27mm)	1-5/32" (29mm)	INDEX	5/64" (2mm)	9 Grams
	MCM 165/3.7L	3310-806079A 2	3/8" (10mm) Solid-Needle * 9/16" (14mm) Spring-Needle	1-3/32" (27mm)	1-5/32" (29mm)	INDEX	5/64" (2mm)	9 Grams
	MCM 165/3.7L	3310-860071A 2	3/8" (10mm) Solid-Needle * 9/16" (14mm) Spring-Needle	1-3/32" (27mm)	1-5/32" (29mm)	INDEX	5/64" (2mm)	9 Grams
6	MCM 175/185	3304-9353A 2	3/8" (10mm) Solid-Needle * 9/16" (14mm) Spring-Needle	1-3/32" (27mm)	1-5/32" (29mm)	2 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 175/4.3L	3304-9565A 1	3/8" (10mm) Solid-Needle * 9/16" (14mm) Spring-Needle	1-3/32" (27mm)	1-5/32" (29mm)	2 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 4.3L	3304-9565A 7	3/8" (10mm) Solid-Needle * 9/16" (14mm) Spring-Needle	1-3/32" (27mm)	1-5/32" (29mm)	2 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 4.3L	3310-806080A 2	3/8" (10mm) Solid-Needle * 9/16" (14mm) Spring-Needle	1-3/32" (27mm)	1-5/32" (29mm)	2 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 4.3L	3310-806972A 1	9/16" (14mm) Spring-Needle	1-3/32" (27mm)	1-5/32" (29mm)	2 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 4.3L	3310-807764A 1	9/16" (14mm) Spring-Needle	1-3/32" (27mm)	1-5/32" (29mm)	2 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 4.3L	3310-864941A01	9/16" (14mm) Spring-Needle	1-3/32" (27mm)	1-5/32" (29mm)	2 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 4.3L TKS	3310-866141A02	9/16" (14mm) Spring-Needle	1-3/32" (27 mm)				9 Grams
8	MCM 898/200	1389-8488A 2	3/8" (10mm) Solid-Needle * 9/16" (14mm) Spring-Needle	1-3/32" (27mm)	1-5/32" (29mm)	2 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 200	1389-9563A 1	3/8" (10mm) Solid-Needle * 9/16" (14mm) Spring-Needle	1-3/32" (27mm)	1-5/32" (29mm)	2 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 200/5.0L	1389-9670A 2	3/8" (10mm) Solid-Needle * 9/16" (14mm) Spring-Needle	1-3/32" (27mm)	1-5/32" (29mm)	2 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 5.0L	3310-806081A 2	9/16" (14mm) Spring-Needle	1-3/32" (27mm)	1-5/32" (29mm)	2 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 5.0L	3310-861080A 1	9/16" (14mm) Spring-Needle	1-3/32" (27mm)	1-5/32" (29mm)	2 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 5.0L	3310-861448A 1	11/32" (9mm) Spring-Needle	15/16" (24mm)	1-5/32" (29mm)	2 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 5.0L	3310-864942A03	11/32" (9mm) Spring-Needle	15/16" (24mm)	1-5/32" (29mm)	2 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 5.0L TKS	3310-866142A03	11/32" (9mm) Spring-Needle	15/16" (24mm)				9 Grams
	MCM 5.7L	3310-807312A 1	9/16" (14mm) Spring-Needle	1-3/32" (27mm)	1-5/32" (29mm)	2 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 5.7L	3310-861245A 1	11/32" (9mm) Spring-Needle	15/16" (24mm)	1-5/32" (29mm)	2 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 5.7L	3310-864943A01	11/32" (9mm) Spring-Needle	15/16" (24mm)	1-5/32" (29mm)	2 Lean clockwise	5/64" (2mm)	9 Grams
	MCM 5.7L TKS	3310-866143A03	11/32" (9mm) Spring-Needle	15/16" (24mm)				9 Grams

* Note: On engines experiencing flooding or rough idle, if all components and specifications are okay, it may be necessary to change to the spring-loaded needle & seat assembly. Installing a spring loaded needle and seat on a 4-cylinder engine can cause a lean out condition in extremely hard turns. (GM 153, 181 cid: Right turn.) (Mercury Marine 224 cid: Left turn.) Because of this potential lean out condition in extremely hard turns, you should make the boat owner aware of this condition before installing the spring-loaded needle and seat kit. The spring loaded needle and seat kit is the preferred one to use if you have a flooding problem at idle RPM. See MerCruiser Service Bulletin 97-8 for further information.

ADJUSTMENTS

SEE DATA TABLE FOR MEASUREMENTS

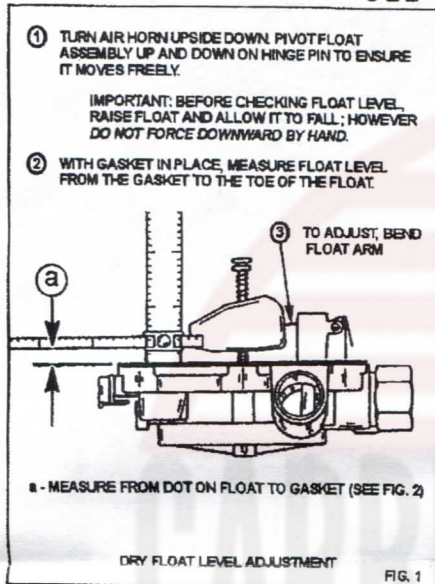


FIG. 1

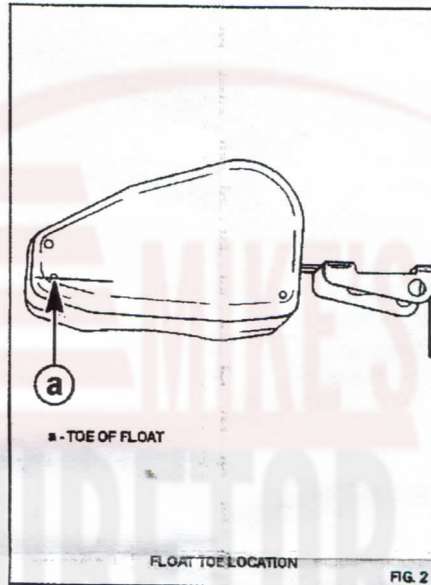


FIG. 2

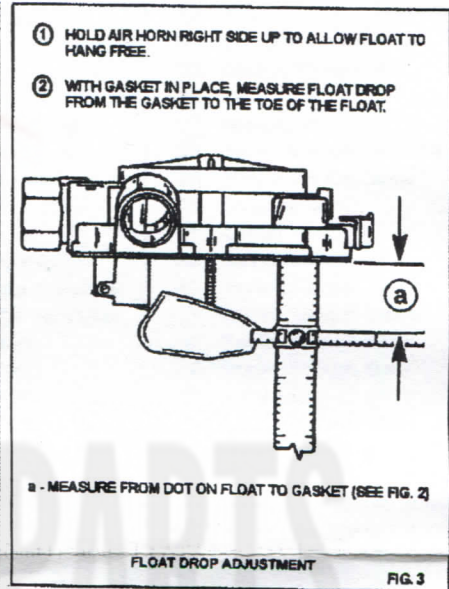


FIG. 3

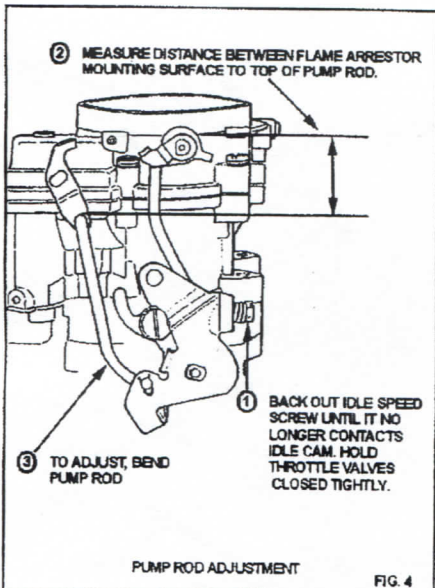


FIG. 4

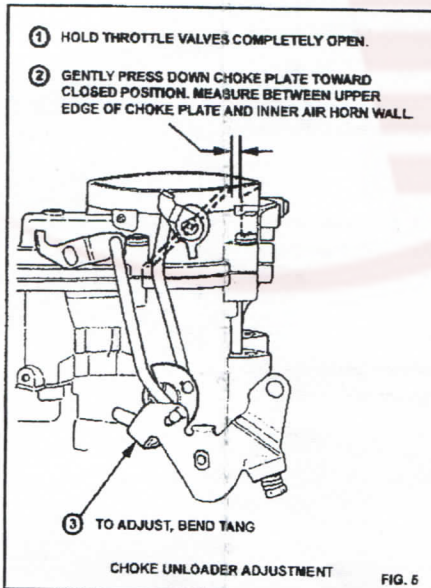


FIG. 5

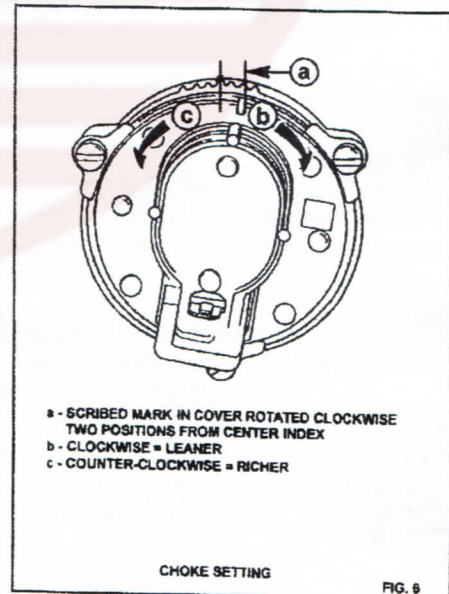


FIG. 6