

NUMBER: 84-21

CIRCULATE TO:
SERVICE MANAGER
PARTS MANAGER
MECHANICS
"Place in a Service
Bulletin Binder"

- A. MerCarb Acceleration "Bog" - MCM 120R/140R/470R/898R
- B. MerCarb Right Turn Lean Out - MCM 120R/140R
- C. MerCarb with No Adjustment on Idle Mixture Screw -
MCM 120R/140R/470R/170MR/898R/200MR

A. MERCARB ACCELERATION "BOG" - MCM 120R/140R/470R/898R

You may receive complaints that the above model engines "bog" on acceleration. We have found the problem to be the neoprene seal on the accelerator pump in the carburetor. The original seal will expand when subjected to gasoline containing alcohol. Many automotive regular leaded, non-leaded or premium gasolines sold today, contain alcohol, although it is not advertised as gasohol.

Accelerator pump kit (3302-9046) resists higher alcohol content in gasoline, but there are limits to the amount of alcohol which can be used. See MerCruiser Service Bulletin 84-22.

To correct the acceleration "bogging" condition, the following should be done:

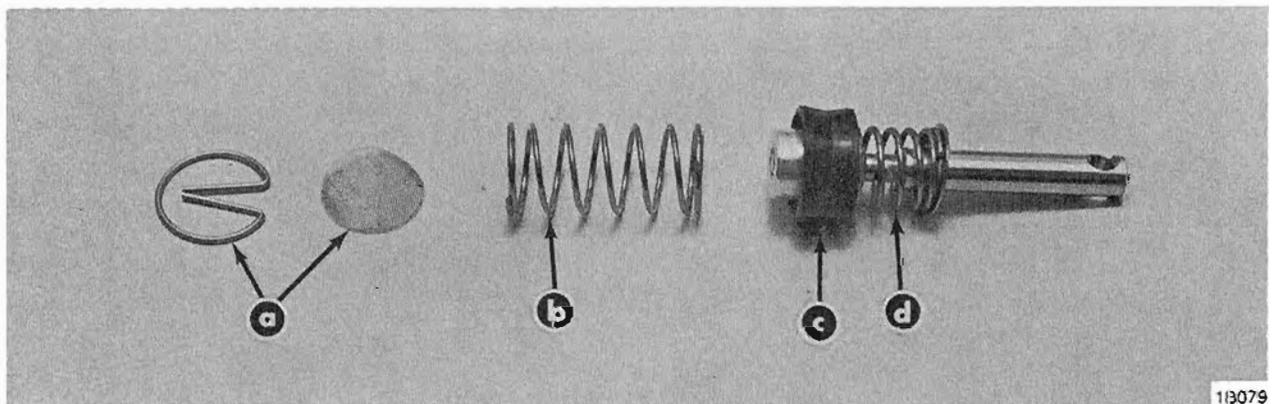
1. Replace accelerator pump with kit P/N 3302-9046. (Figure 1)

NOTE: All 3302-9046 kits shipped from Mercury Marine in the past have the new seal material.

IMPORTANT: Carburetors with a date code of 4501 and above have the new kit already installed. (Figure 2)

Starting engine serial number of these engines are:

MCM 120MR	6916496
MCM 140MR	6901349
MCM 170MR (470)	6916943
MCM 200MR (898)	6917588

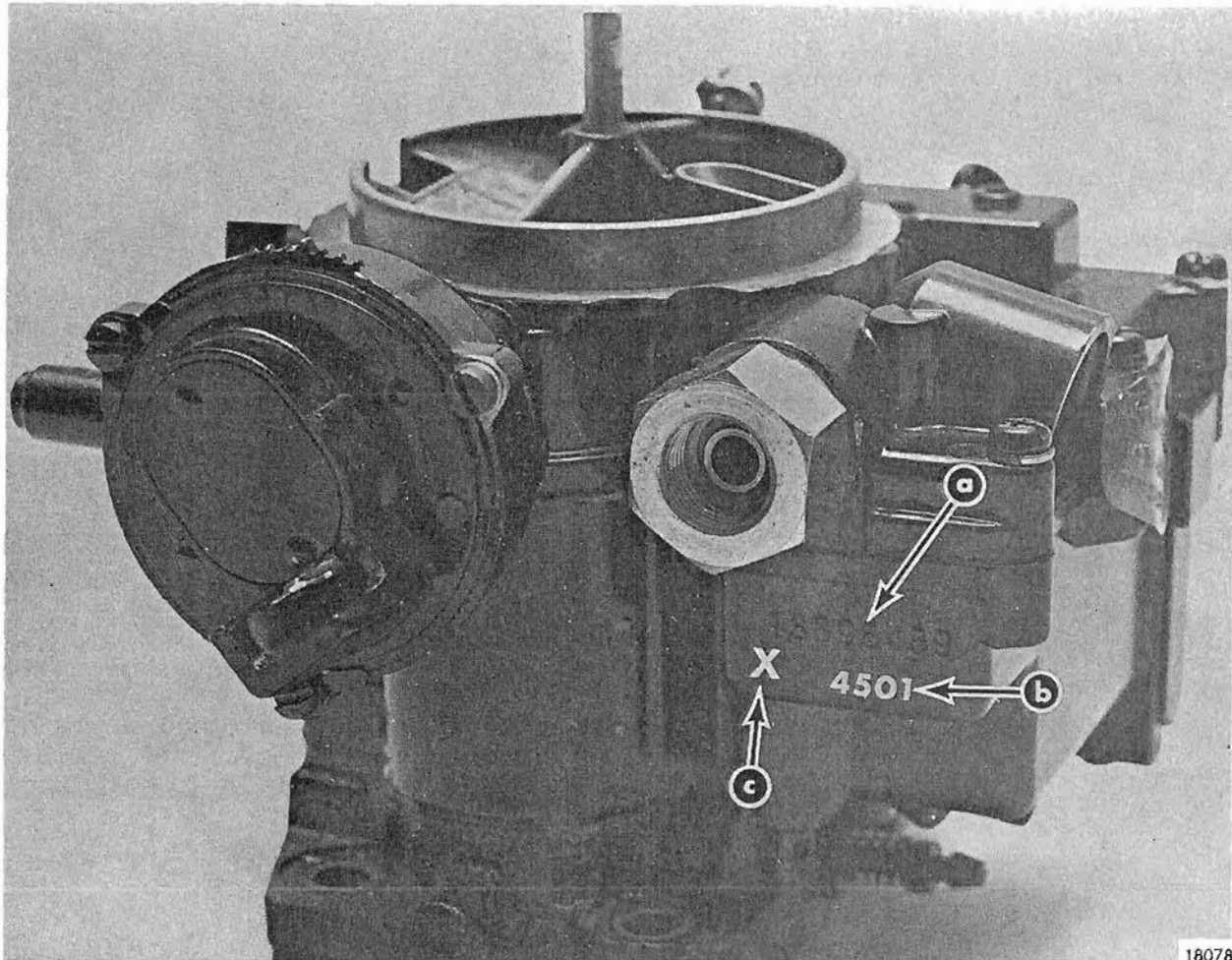


a - Screen and Clip
b - Return Spring

c - Double Lip Seal with New Material
d - Silver Colored Duration Spring

Figure 1. 3302-9046 Pump Kit

2. As a temporary fix, stronger duration springs (only) were sent to dealers. On carburetors that had only the duration spring changed, a new 3302-9046 Pump Kit should be installed.
3. The screen (in the bottom of the accelerator pump hole) should be left in. If screen is dented downward, toward check ball, replace screen.
4. Check pump rod adjustment as outlined on page 20 of the MerCarb Service Manual SIS-864.
5. After installing new kit, make an X at location shown in Figure 2.
6. Start engine and check timing.



- a - Part Number
- b - Date Code
- c - Mark with "X"

Figure 2. Carburetor Identification

Date Code Explanation: 4501

First Figure is Year

4 = 1984, 5 = 1985, etc.

Second Figure is Month

5 = May, 6 = June, 7 = July, etc., X = October, Y = November, Z = December

Third and Fourth Figure is Day of Month

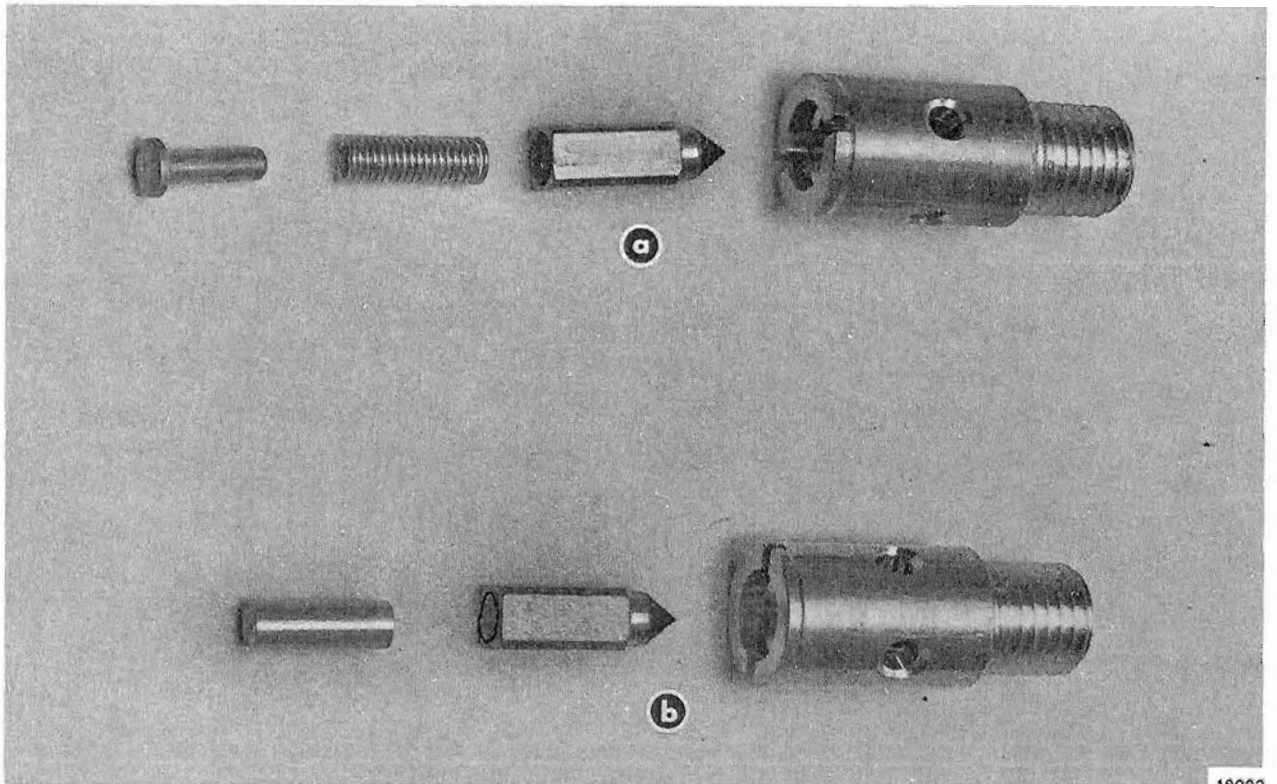
01 = First day, 02 = Second day, etc.

B. MERCARB RIGHT TURN LEAN OUT - MCM 120R/140MR

You may have a complaint about a right hand turn lean out. A good example would be, while pulling a water skier, the skier falls. The driver puts the boat in a hard right turn and accelerates to go back to the fallen skier. If the engine hesitates during this time, proceed as follows:

1. Replace original inlet seat kit with 3302-9407 Inlet Seat Kit. The original kit has a spring loaded needle while the new kit has a solid, two piece needle. (Figure 3)

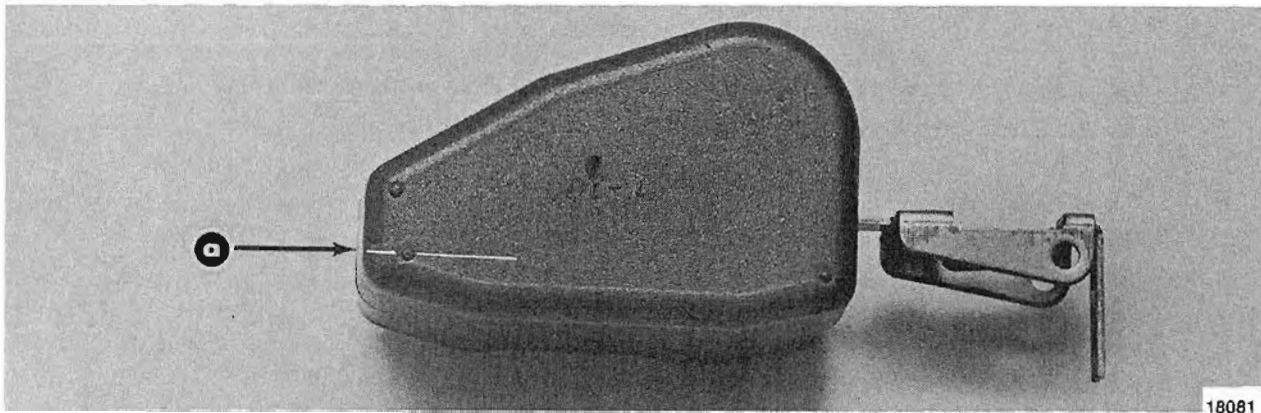
IMPORTANT: Carburetors with a date code of 4801 and above have the new 3302-9407 Inlet Seat Kit installed. Date code location is shown in Figure 2.



a - Original Spring Loaded Needle
b - New Two Piece Solid Needle

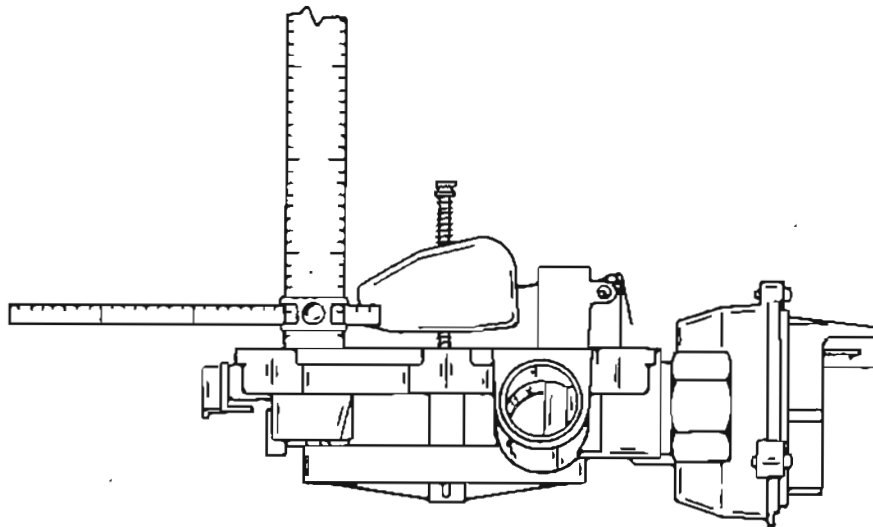
Figure 3. Difference Between Inlet Seat Kits

2. Reset float level to 5/16" (7.5mm) as shown in Figures 4 and 5. This float level is higher than original level.
3. DO NOT make mark on carburetor after this change has been made to it.



a - Measure from This Point to Air Horn Casting Surface

Figure 4. Float Assembly



392-H

Figure 5. Measuring Float Level

C. MERCARB WITH NO ADJUSTMENT ON IDLE MIXTURE SCREW - MCM 120R/140R/470R/170MR/898R/200MR

We have had several carburetors returned because of no idle mixture screw adjustment. The engine would run with mixture screw turned in against it's seat.

These carburetors were tried on engines that had 50+ hours on them. In most cases, idle mixture screw could be adjusted (lean to rich) with engine running at recommended idle 650-700 RPM in forward gear.

It is not uncommon (on new engines with 0 to 20 hours running time) to have the idle speed screw turned in to keep the engine running in forward gear. By doing this, however, the throttle plates are starting to open and now the idle mixture screw will have little or no adjustment.

If you have a carburetor with little or no idle mixture adjustment, run engine until it has reached normal operating temperature and proceed as follows:

1. Disconnect throttle cable.
2. Reset idle speed (RPM) screw so engine idles at 550-600 RPM in neutral gear.
3. Adjust idle mixture screw.
4. Reset idle speed screw until engine idles at 650-700 RPM in forward gear.
5. Adjust and connect throttle cable.
6. If there isn't any response to the idle mixture screw in step 2 and 3, order a new carburetor.