SERVICE BULLETIN

MERCRUISER STERN DRIVES and ENGINES

Number: 76-2
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CIRCULATE TO:	SERVICE MGR.	PARTS MGR.	MECHANICS	Place in Your "Service Bulletins" Binder

A. Anti-Siphon Devices Used in Conjunction with MerCruiser Engines
B. Steering Cable Installation and Adjustments

A. ANTI-SIPHON DEVICES USED in CONJUNCTION with MERCRUISER ENGINES

(Attach Bulletin Reference Sticker to P. 4B-2 of Your Service Manual.)

In order to meet proposed industry standards on built-in fuel tanks, some boat manufacturers are installing anti-siphon devices, such as anti-siphon valves, manually operated fuel shut-off valves or solenoid actuated fuel shut-off valves. While these devices may be helpful from a safety standpoint, a malfunction or misuse of the device may pose troubleshooting problems for the dealer mechanic and be harmful to the engine.

Following are some possible causes of restricted fuel flow from anti-siphon devices:

1. Anti-siphon valve
   a. Valve orifice too small.
   b. Valve stuck in partially closed position.
   c. Valve stuck in closed position.
   d. Valve fluctuates between open and closed position.
   e. Thread sealer from valve fitting clogs valve orifice.
   f. Air leaks around valve threads, thereby causing a vapor lock.
2. Solenoid operated fuel shut-off valve
   a. Solenoid does not function and leaves valve in closed position.
   b. Solenoid pulls up only partially and leaves valve in partially closed position.
   c. Air leaks around valve threads, thereby causing a vapor lock.
3. Manually operated fuel shut-off valves
   a. Valve left in completely closed position.
   b. Valve not fully opened.
   c. Air leaks around valve threads, thereby causing a vapor lock.

Some symptoms of restricted (lean) fuel flow are:

1. Loss of power.
2. Backfiring through the carburetor.
3. Engine cutout or hesitation upon acceleration.
4. Engine runs rough.
5. Engine quits and cannot be restarted.
6. Engine will not start.
7. Rapid valve seat deterioration.

Since any type of anti-siphon device must be located between the engine fuel inlet and the fuel tank outlet, a simple method of eliminating such a device (or bad fuel) as a potential problem source is to operate the engine with a remote fuel supply, such as a 6 gallon outboard fuel tank.

CAUTION: When using this procedure, extreme care must be taken that raw fuel is not allowed to spill into the engine compartment from the boat fuel system or your fuel connections. After the test is completed, reconnect the original fuel supply and check carefully for leaks.

(OVER)

If an anti-siphon device -- other than a manually operated shut-off valve left shut or not completely opened -- is found to be the cause of the problem, contact the boat manufacturer for replacement part or repair procedures.

B. STEERING CABLE INSTALLATION and ADJUSTMENTS

(Attach Bulletin Reference Sticker to PP 7A-1-5-7-9-11-12 of Your Service Manual.)

Field complaints reveal that many steering cables are not installed according to installation instructions. A common list of errors in installation follows:

1. **Cotter pins not installed in castle nuts -**
   Be sure that cotter pins are installed in castle nuts and that ends of cotter pins are bent over.
2. **Steering guide tube not lubricated -**
   Lubricate steering tube with Multipurpose Lubricant (C-92-63250) or equivalent.
3. **Coupler nut not torqued -**
   Torque nut to 35 to 40 ft. lbs. (4.84 to 5.53mkg)
4. **Adjusting nuts are not torqued -**
   Torque to 35 to 40 ft. lbs.

All boats should be inspected to be sure that these components have been installed and secured according to the installation instructions that accompany each unit.