



MERCRUISER SERVICE BULLETIN

Section: I (General Information)

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MerCruiser 4-&-6-Cylinder Engine Overheating

MERCRUISER 4-&-6-CYLINDER ENGINE OVERHEATING

Periodically, we receive complaints of MerCruiser engines overheating. The following list starts with the basic items to check and proceeds to the more remote possibilities. Each has been reported as a cause of overheating.

A. Slow Speed or Idle Operation

1. Drive belt slipping or recirculating pump not functioning.
2. Bleed line and fittings restricted. (If restricted, an air lock can occur in water cooling system).
3. Thermostat stuck, or small bleed hole in thermostat restricted.
4. Insufficient water pressure. Minimum idle water pressure 1-1/2 PSI @ 500 checked at water inlet to manifold. At high speed, 12-14 PSI with thermostat closed check at same location. If sufficient pressure is found, proceed to 5. If low, check a,b,c, following:
 - a. Impeller (burned, vanes broken off or badly worn).
 - b. Hose connections leak, hoses kinked or hose loose in gimbal housing.
 - c. Water pump gasket missing at base plate (leaking pressure).
5. Be sure that check valve in water inlet cover is not stuck or corroded on models so equipped.
6. With engine idling, squeeze water tube located at rear of cast iron manifold on overflow system (on those models so equipped) with pliers. If temperature drops, restrict outlet to 11/32" (8.7mm). Close elbow and redrill. This builds up pressure in cooling system and will compensate for other deficiencies which may have occurred in system.
7. It is possible that water flow is restricted by a piece of casting flash remaining in cast iron manifold. Check by removing front end cover and viewing with flashlite or attempt to push 1/4" weld rod into chamber of largest water passage at outside of manifold from front. If restricted, casting flash will occur about center of manifold.

B. Mid-Range and Full Throttle Operation

Items 1 thru 7 above may also cause overheating at full throttle. In addition, check such possibilities as:

1. Keel or other protrusion on bottom of boat, causing air stream around water intake holes in gear housing.
2. Excessive spark advance.
3. Lean fuel mixture.
4. Low oil pressure.