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CIRCULATE TO:
SERVICE MANAGER
PARTS MANAGER
MECHANICS

A. HOT WATER HEATER INSTALLATION ON MERCUISER ENGINES

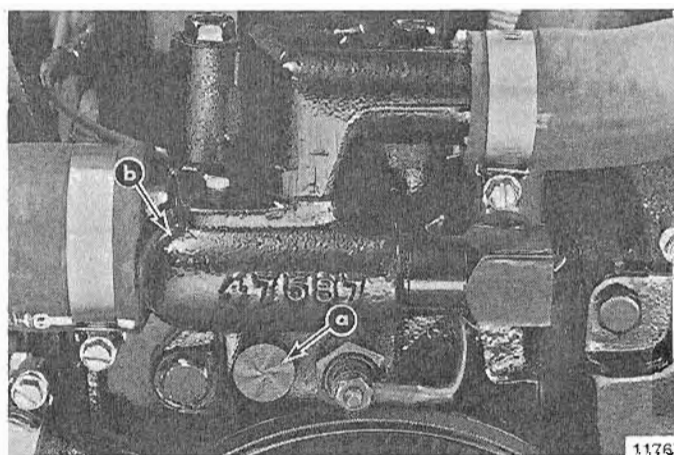
When connecting a cabin heater or hot water heater to a MerCruiser Engine, certain requirements must be met.

- Supply hose (from engine to heater) and return hose (from heater to engine) MUST NOT EXCEED $\frac{5}{8}$ " (15.8mm) I.D. (Inside Diameter).
- MCM/MIE 470, MCM 485 and other MerCruiser Engines equipped with a Closed Cooling System: Heater MUST BE LOWER than the fill cap on the heat exchanger. If the heater is higher than the fill cap on the heat exchanger and some coolant is lost in the system, an air pocket may form in the closed cooling system. This, in turn, can cause the engine to overheat.
- Make heater connections to MerCruiser engines ONLY AT LOCATIONS SHOWN in this Service Bulletin (for MCM 120/140/165) or as shown in installation instructions that accompany kits.
- ⊕ Check complete system for leaks after heater is connected into cooling system.
- ⊕ Check for overheating condition (of engine) after heater is connected into cooling system.

B. AUXILIARY HOT WATER HEATER INSTALLATION - MCM 120/140/165

An Auxiliary Hot Water Heater Kit is not available from Quicksilver, for the above model MerCruiser engines. To connect a cabin heater or hot water heater to these engines, use the following procedure.

1. Drain water from cooling system.
2. Remove plug from thermostat housing at location shown in Figure 1.



a - Plug ($\frac{3}{8}$ " - 18 NPT Plug Is Shown)
b - Thermostat Housing

Figure 1. Water Heater Supply Hose Connection Location

NOTE: If thermostat housing is equipped with a $\frac{1}{8}$ " - 27 NPT plug (same size as exhaust manifold drain plug), hole from which pipe plug was removed MUST BE rethreaded to $\frac{3}{8}$ " - 18 NPT. To rethread hole, remove thermostat housing and drill out hole to $\frac{37}{64}$ " then rethread using a $\frac{3}{8}$ " - 18 NPT tap. Blow out housing with compressed air to remove metal chips and reinstall housing with a new gasket. Torque bolts to 30 lbs. ft. (40.7 N.m). Hole in newer style thermostat housing is threaded to $\frac{3}{8}$ " - 18 NPT and requires no modification.

(OVER)

3. Coat threads of an appropriate size bayonet type fitting (obtained from a local source) with Perfect Seal (C-92-34227) and install into threaded hole. Tighten fitting securely.
4. Connect hot water heater supply hose to bayonet fitting and secure with a hose clamp.
5. Drill $\frac{3}{8}$ " (9.5mm) hole into circulating pump on front of engine. (Figure 2)

NOTE: By using grease on drill bit and being careful during drilling, most metal chips can be caught in grease. If this cannot be done, remove circulating pump for drilling. Clean pump thoroughly with compressed air, reinstall using new gasket.

- a. On some earlier model engines, a wooden plug and rubber cap or just a rubber cap is installed on circulating pump. Remove clamp and discard these pieces. (Figure 2)

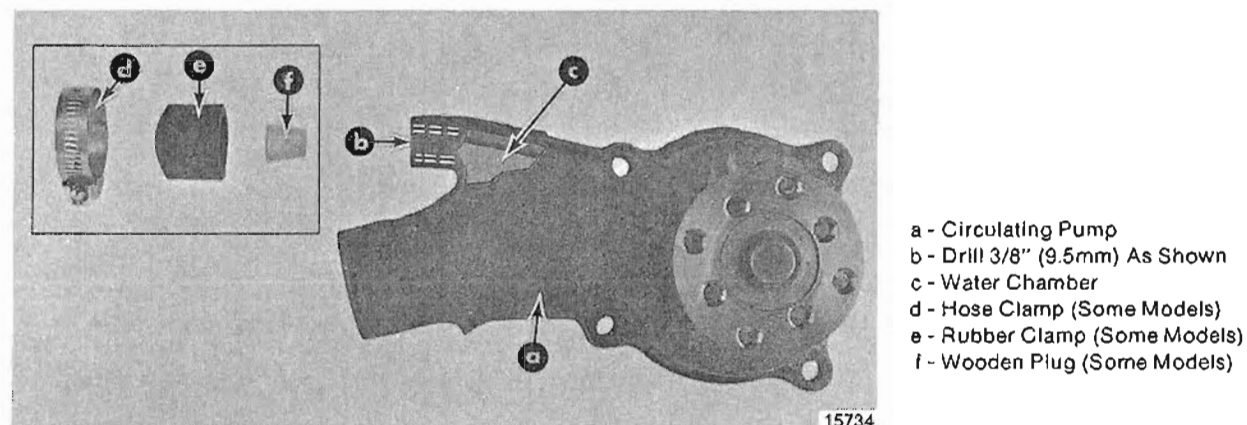


Figure 2. Water Heater Return Hose Connection Location

6. Connect hot water heater return hose to fitting on circulating pump and secure with hose clamps.
7. Support hoses, as required, to ensure that they do not rub or chafe against engine components.
8. With boat in the water, start engine and check for:
 - a. Leaks
 - b. Overheating

C. AUXILIARY HOT WATER HEATER INSTALLATION KITS - MERCUISER MODELS EXCEPT MCM 120/140/165

Listed below are the Auxiliary Hot Water Heater Installation Kits that are available for MerCruiser engines. Follow instructions that accompany each kit for installation.

MCM/MIE 470 and MCM 485	B-74567A2
MCM/MIE V-8 Engines (G.M. and Ford)	B-74567A1