## **SERVICE BULLETIN**

DATE:

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BULLETIN NUMBER: 95

MODEL:

A11

SUBJECT: Domestic Hot Water Heaters

PRINCIPLE

The heater is connected in series with the engine's freshwater circuit. This allows full water flow for maximum heat transfer to the heater. The series installation also avoids several potential pitfalls of installations in which the heater is in parallel with either the engine's by-pass or its internal freshwater circuit.

The only potential disadvantage of a series installation is flow restriction due either to a restrictive heater design, a large engine water flow (such as models W58, W80, W120), or a combination of both.

## Installation

The shorter the length of piping to and from the heater, the better. The elevation of the heater should assure that the top of its internal coil is no higher than the engine pressure cap. If the heater must be higher than this at any heel angle, then the optional remote fill tank must be installed to be the highest point of the circuit.

Piping between the engine and heater should rise continuously from the heater to the engine so that trapped air will rise automatically from the heater to the engine. If trapped air can rise to the heater, then a petcock or other convenient method of bleeding that air is a necessity.

Study the attached sketches. A convenient place to interrupt the engine cooling circuit is between the thermostat housing outlet and the exhaust manifold inlet. This is also the hottest water available. CAUTION: While most owners want the hottest water available, it is possible for scalding water or even steam to come from the faucets.

Since the heater is in series with the engine cooling water, any other convenient point of the circuit can also be interrupted for heater installation.

Some engine/heater combinations require that a "by-pass" nipple be installed in parallel with the heater. This is required to maintain an adequate fresh water flow for cooling capability. The table below shows the minimum diameter of "by-pass" nipples in these situations:

	HEATER		
MODEL	SENDURE	ALLCRAFT	RARITAN
W 30			3/8" NPT
W 40			3/8" NPT
พ 50			1/2" NPT
W58	1/2" NPT	1/2" NPT	3/4" NPT
W80	1/2" NPT	1/2" NPT	3/4" NPT
W120	1/2" NPT	1/2" NPT	3/4" NPT

Please see sketches on overleaf.



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