

**Seaward** Products

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WATER HEATERS

6/93

**OWNER'S MANUAL**  
**FOR**  
**ELECTRIC/HEAT EXCHANGER**  
**WATER HEATERS**

**MODELS:**

**S600, S650, S700, S750**

**S1100, S1150, S1200, S1250**

# IMPORTANT SAFETY INSTRUCTIONS

**WARNING:** When using electrical appliances, basic safety precautions to reduce the risk of fire, electric shock, or injury to persons should be followed, including:

1. READ ALL INSTRUCTIONS BEFORE USING THIS WATER HEATER.
2. This water heater must be grounded. Connect only to properly grounded outlet. See "GROUNDING INSTRUCTIONS" found on Page 3, Item 7.
3. Install or locate this water heater only in accordance with the provided installation instructions.
4. Use this water heater only for its intended use as described in this manual.
5. Do not use an extension cord set with this water heater. If no receptacle is available adjacent to the water heater, contact a qualified electrician to have one properly installed.
6. As with any appliance, close supervision is necessary when used by children.
7. Do not operate this water heater if it has a damaged cord or plug, if it is not working properly, or if it has been damaged or dropped.
8. This water heater should be serviced only by qualified service personnel. Contact nearest authorized service facility for examination, repair, or adjustment.

**SAVE THESE INSTRUCTIONS**

### **WARNING:**

This Water Heater is equipped with a heat exchanger. Extended engine coolant circulation through the heater may result in excessively hot water.

This Water Heater Tank and Heat Exchanger are made of aluminum. Do not use any caustic chemicals in Heat Exchanger or damage may occur. Use only engine manufacturers recommended coolant in coolant system. Damage that occurs to Heater due to chemical reaction by caustic chemicals is not under warranty.

### **CAUTION:**

Hydrogen gas can be produced in a hot water system served by these heaters that have not been used for a long period of time (generally 2 weeks or more.) Hydrogen gas is extremely flammable. To reduce the risk of injury under these conditions, it is recommended that the hot water faucet be opened for several minutes at the kitchen sink before using and electrical appliance connected to the hot water system. If hydrogen is present, there will probably be an unusual sound such as air escaping through the pipe as the water begins to flow. There should be no smoking or open flame near the faucet at the time it is open.

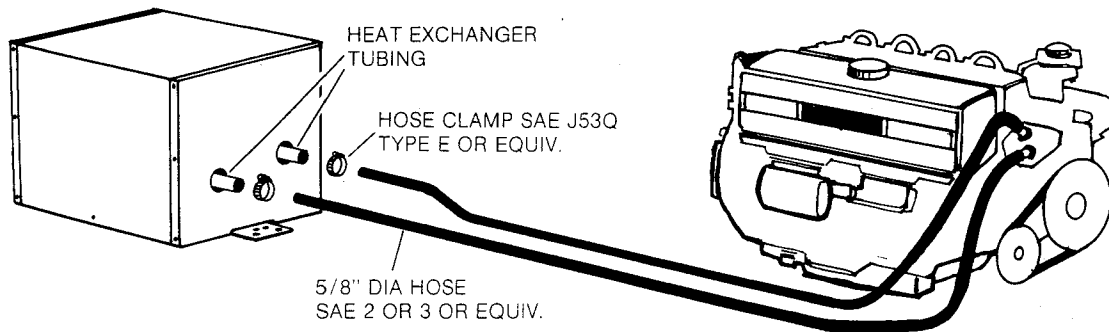
## **OPERATING INSTRUCTIONS**

1. Fill water system and completely fill tank.
2. Locate and turn remote electrical switch to "ON".
3. Turn switch to "OFF" position prior to draining water system.

NOTE: Do not operate heater without element being submerged in water.

## **MAINTENANCE**

1. Check heat exchanger lines for leaks at regular intervals. A leak in the system will cause coolant loss and may damage engine.
2. Flush tank periodically.
3. Drain tank if subjected to temperatures less than 32°F, to prevent freezing and possible damage.



## INSTALLATION

1. Locate water heater at or below engine level as close to engine as possible..
2. Secure mounting brackets to structure with eight #12 minimum screws or 1/4-20 minimum cap screws and nuts.
3. Connect cold water supply and hot water outlet to heater.
4. Connect heat exchanger system described in figure above.
5. Pressure temperature relief valve is factory installed. The pressure relief shall limit the pressure to 127.5 PSI (879.3 KPA) minimum, 150 PSI (1034.2 KPA) maximum.

The valve must be oriented, provided with tubing, or otherwise installed so that discharge can exit only within 6 inches above, or at any distance below the structural floor, and cannot contact any live electrical part.

Install replacement temperature and pressure protective equipment required by local codes, but not less than a combination temperature and pressure relief valve certified as meeting the requirements for relief valves and automatic gas shutoff devices for hot water supply systems, ANSI Z21.22 by a nationally recognized testing laboratory that maintains periodic inspection of production of listed equipment or materials.

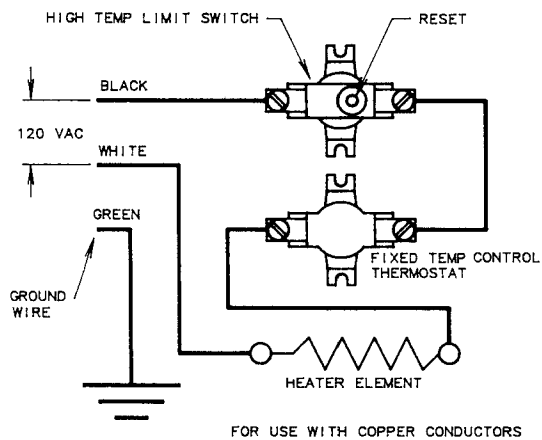
6. Connect the electrical supply by a qualified electrician. The electrical supply shall be permanent wiring, armoured cable or conduit, per national electrical code NFPA 70, with a minimum capacity of 1500 watts.
7. **GROUNDING INSTRUCTIONS:** The supply ground shall be connected to the green wire located in the water heater wiring compartment. Do not place switch in the grounding circuit.

Use a UL-Listed ON-OFF switch rated 15 AMP/120 VAC in the black supply line on 120 Volt models. Use a UL-Listed double pole ON-OFF switch rated 10 AMPS/220-240 VAC in the red and black supply lines on 220 Volt models.

The heater is equipped with a high limit switch which can be manually reset. If the limit switch activates, proceed as follows:

- Turn power off at main power panel or remote switch
- Remove wiring access cover
- Depress red button on high temperature limit
- Replace cover and turn power on
- If temperature limit switch reactivates, contact a Seaward Products authorized service center.

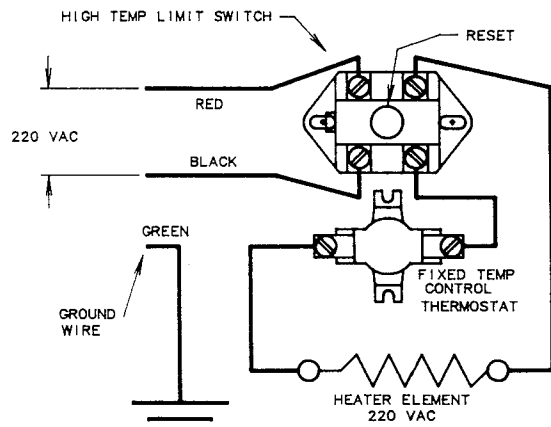
WIRING DIAGRAM FOR 120V



**CAUTION !**  
 TO REDUCE RISK OF SHOCK  
 OR FIRE USE ONLY ON A UTILITY  
 SYSTEM HAVING A MAXIMUM  
 120/250 VOLT, THREE WIRE SYSTEM.

120 VOLT AC

WIRING DIAGRAM FOR 240V



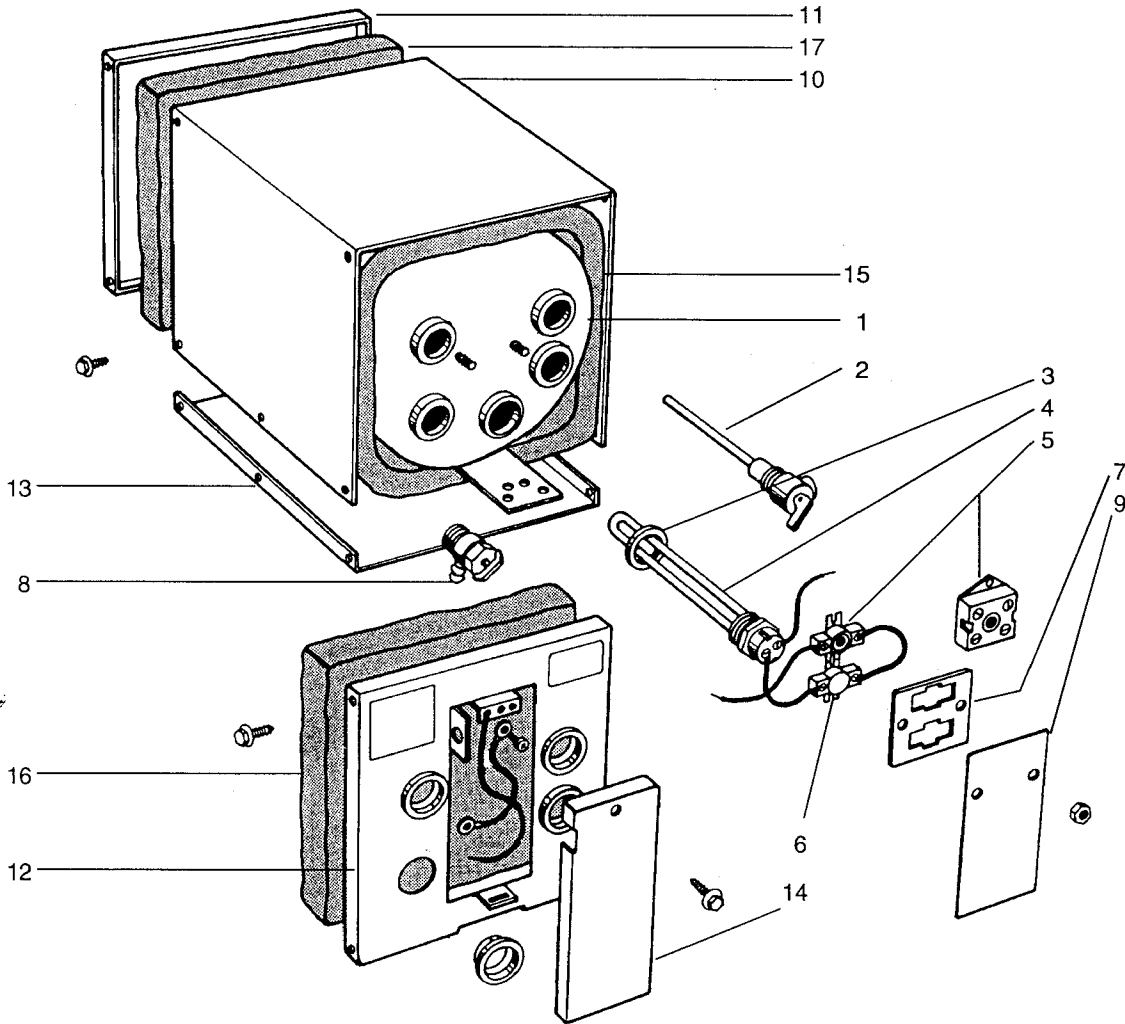
FOR USE WITH COPPER CONDUCTORS

240 VOLT AC

**PARTS LIST  
MODELS  
S600, S650, S700, S750  
S1100, S1150, S1200, S1250**

ITEM	MODEL NO.	PART. NO.	DESCRIPTION
1.	S600/S700 S1100/S1200	80253 80254	TANK ASSEMBLY
2.	ALL MODELS	73127	TEMPERATURE/PRESSURE VALVE
3.	ALL MODELS	73124	HEATING ELEMENT GASKET
4.	120 VOLT 240 VOLT	73364 73365	HEATING ELEMENT
5.	120 VOLT 240 VOLT	73128 73154	HIGH LIMIT SWITCH
6.	ALL MODELS	73129	THERMOSTAT
7.	120 VOLT 240 VOLT	73148 73171	THERMOSTAT MOUNTING PLATE
8.	ALL MODELS	73123	DRAIN VALVE
9.	ALL MODELS	73145	WIRE SHIELD
10.	S600 S700 S1100 S1200	73137 73283 73166 73287	JACKET
11.	S600 S700 S1100 S1200	73140 73286 73169 73290	BACK PANEL
12.	S600 S700 S1100 S1200	73139 73285 73168 73289	FRONT PANEL
13.	S600 S700 S1100 S1200	73138 73284 73170 73288	BASE
14.	S600/S1100 S700/S1200	73141 73291	WIRE ACCESS COVER
15.	S600/S700 S1100/S1200	73146 73175	INSULATION WRAP
16.	S600/S700 S1100/S1200	73147 73176	INSULATION FRONT
17.	S600/S700 S1100/S1200	73330 73331	INSULATION BACK

# EXPLODED VIEW



## **REPAIR PARTS**

Repair parts listed herein may be ordered through Seaward Products, Seaward Distributors and Dealers, or Dealer's Authorized Service Centers.

All parts will be shipped at prevailing prices.

When ordering repair parts, please give the following information:

1. The Part Number
2. The Part Description
3. The Model Number of the Heater
4. The Serial Number of the Heater

The Model Number and the Serial Number of the heater will be found on the rating plate located on the front panel.

For the Authorized Service Center nearest you, please contact Seaward Products.

### **CUSTOMER SERVICE**

***Seaward* Products**

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