

***Seaward* Products**

POST OFFICE BOX 566
INDUSTRY, CA 91715-1148
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WATER HEATERS

**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.

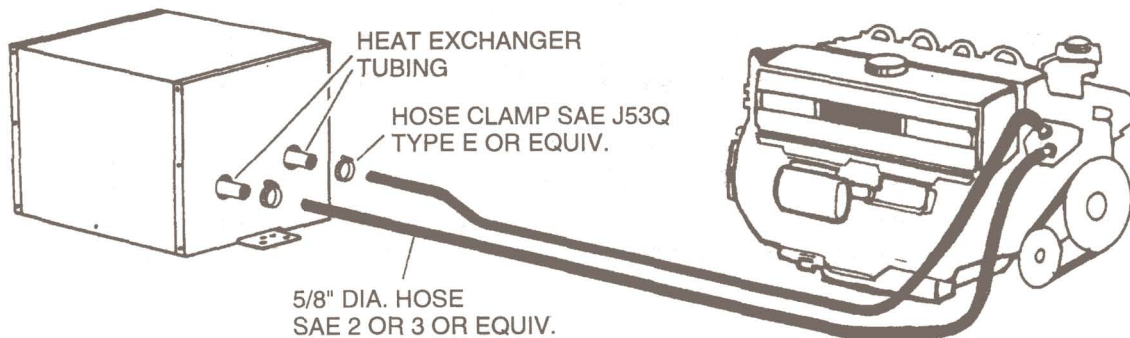
OPERATING INSTRUCTIONS

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.
4. The temperature/pressure valve may weep during initial operation. This is normal. The valve will seat itself with use.

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 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 as marked.
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, armored cable or conduit, per national electrical code NFPA 70, with a minimum capacity of 1500 watts.

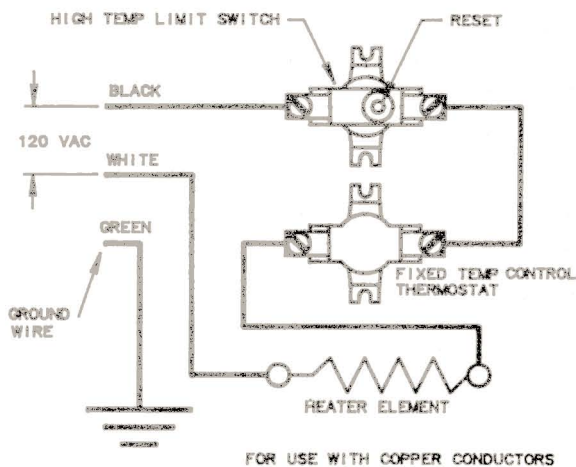
7. **GROUNDING INSTRUCTIONS:** The supply ground shall be connected to the green wire located in the water heater wiring compartment. Do not place switch in the grounding circuit.

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.

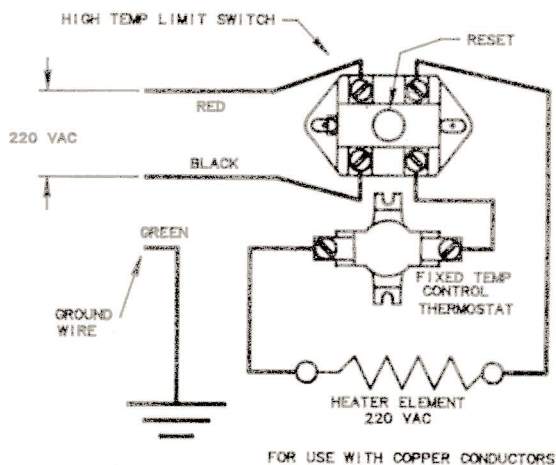
WIRING DIAGRAM FOR 120V



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



240 VOLT AC

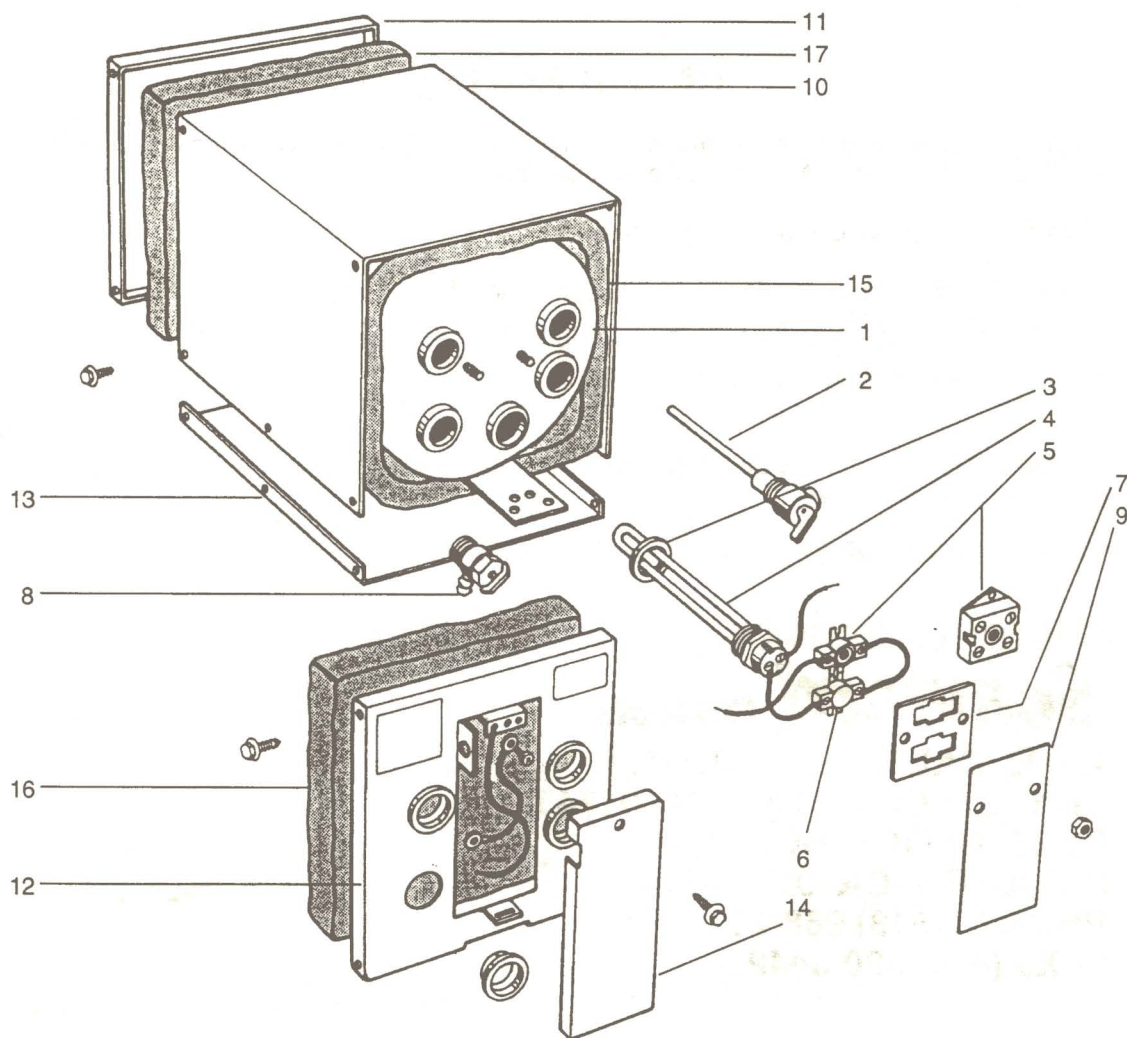
PARTS LIST

MODELS

S600, S650, S700, S750 S1100, S1150, S1200, S1250

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

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**

**15600 SALT LAKE AVENUE
CITY OF INDUSTRY, CA 91745
POST OFFICE BOX 91148
INDUSTRY, CA 91715-1148
PHONE: (818) 968-2117
FAX: (818) 330-5442**

LIMITED ONE YEAR WARRANTY

SEAWARD PRODUCTS warrants the products delivered will be:

- A. free from (1) encumbrances and (2) defects in material and workmanship under the normal use and service, and
- B. will meet applicable specifications and descriptions at time of delivery to BUYER.

The obligation of SEAWARD under this Warranty is limited to the repair, rework, or replacement, at SEAWARD'S option, any part or component thereof, which examination discloses to our satisfaction to have been nonconforming or defective. SEAWARD, after establishing customer's purchase date and determining problem to be under warranty, will either repair the product at their factory or authorized service center and allow labor and parts for (1) one year from purchase date. Transportation charges are the responsibility of the customer. Items not covered under warranty are

- (1) Porcelain Enamel
- (2) Glass
- (3) Routine Maintenance that may be required.

The foregoing Warranty and condition shall apply to any repaired, reworked, or replaced products, part or component supplied by SEAWARD. SEAWARD shall in no event be liable to BUYER or BUYER'S customers for any incidental or consequential damages, or loss of use, or other losses, however occasioned.

Implied Warranties of merchantability and of the fitness of the product for any purpose are warranted for a period of one year on parts and labor, SEAWARD makes no warranties, expressed or implied after that time.

Some states do not allow limitation on how long an implied warranty lasts or for the exclusion or limitations of incidental or consequential damages, therefore, the above limitations may not apply to you.

This Warranty is extended to the original purchaser only, unless purchased for purposes of resale.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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GALVANIC ISOLATORS

Because of overriding concerns for personal safety, a boat wired according to the prevailing standards of the American Boat and Yacht Council and plugged into a dock wired according to the National Electrical Code is subject to increased galvanic corrosion as small DC electric current move between boat and shore through the safety ground wire in the shore cord.

Since 1986, Galvanic Isolators have been widely used to interrupt the flow of harmful, low voltage currents that may cause galvanic corrosion. Today, most U.S. built boats with factory installed 110 or 220 volt shore power systems are equipped with Galvanic Isolators.

We feel that it is advisable to add a Galvanic Isolator to any vessel not so equipped. These devices are inexpensive and easily installed. If you have no local source for such a device, there is a reliable mail order source for corrosion information and equipment. Your water heater warranty does not cover galvanic corrosion.

Dutch Vandervort
Corrosion Clearing House
25 Encinal Place
Ventura, California 93001
Phone (805) 644-0399
Fax (805) 643-6366