

**Seaward** *Products*

WATER HEATERS



# **OWNER'S MANUAL**

## **FOR ELECTRIC HEAT EXCHANGER WATER HEATERS**

**MODELS:**

**S600, F600, S700, F700**

**S1100, F1100, S1200, F1200**

**Serial Number** \_\_\_\_\_

# 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 4, 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.

## 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 is made of aluminum. Some engine manufacturers recommend that the cooling system be flushed periodically. Caustic chemicals are commonly used. **Do not** flush caustic chemicals (such as Nalcool) through your system with the heat exchanger hooked up or damage **Will** occur to heater.

If flushing is required by your engine manufacturer, you must isolate heater from this process. After system flushing is complete and neutralized, you can then re-plumb heater. Make sure recommended automotive type premixed ethylene glycol coolants such as Prestone, Xerex, or Peak are used for replacement. 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 any 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.

Small amounts of electric currents may move to your boat through your shore cord, causing galvanic damage to your water heater. To help prevent possible damage, a galvanic isolator is recommended. Galvanic corrosion **is not** covered under warranty.

## NOTICE:

This temperature/pressure valve may weep during initial operation. This is normal. The valve will seat itself with use. A drain hose should be installed at this valve directed into bilge.

If the boat is connected to the dockside water system, make sure to turn off the system at the dock when not attended. Also make sure a pressure regulator is used to control pressure.

## 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 to help prevent buildups of deposits.
3. Protect against damage from freezing temperatures, (32°F. or less).

Please review the following:

- a.) Drain tank by fully opening drain valve. Open T & P valve to help relieve vacuum in tank. (See item 2 in exploded view.)
- b.) It is recommended you winterize your fresh water system. First complete step 3a, then follow instructions of your local supplier regarding chemicals to use and how to use them.

## CAUTION:

If heater has been run without water and now fails to work, push electric reset button high limit switch under wire access cover before calling for service.

## 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. Conditions not covered under warranty are: (1) Corrosion due to electrolysis (2) Cracking of the tank due to freezing water (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.

# **Seaward** Products

## 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 Water Heater, 4. The Serial Number of the Water Heater. The Model Number and the Serial Number of the Water 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

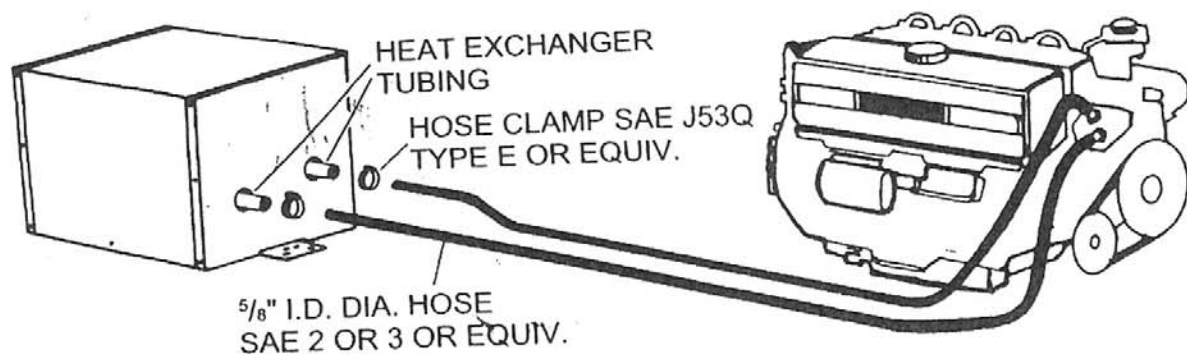
# **Seaward** Products

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## INSTALLATION

NOTE: DO NOT INSTALL THE WATER HEATER ON IT'S SIDE OR UP SIDE DOWN.

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, 1/2" N.P.T. fittings.
4. Connect heat exchanger system described in figure above. Make sure coolant system is completely purged of air and full of coolant before operating.
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 no more than 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.

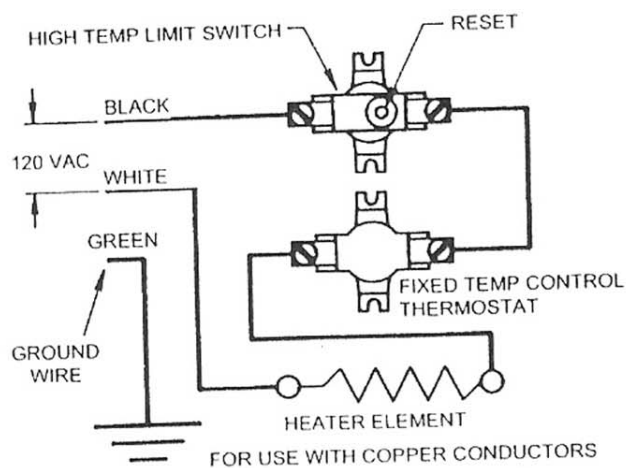
6. Connect the electrical supply by a qualified electrician. The electrical supply shall be permanent wiring, armored cable or conduit, per national electrical code NFPA 70, with a minimum capacity of 1500 watts.



On 120 volt circuits, use a UL approved 15 amp circuit breaker. On 240 volt circuits, use a 15 amp approved circuit breaker per leg.

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.
8. **RESET INSTRUCTIONS:** 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 switch
  - Replace cover and turn power on
  - If temperature limit switch reactivates, contact a Seaward Products authorized service center.

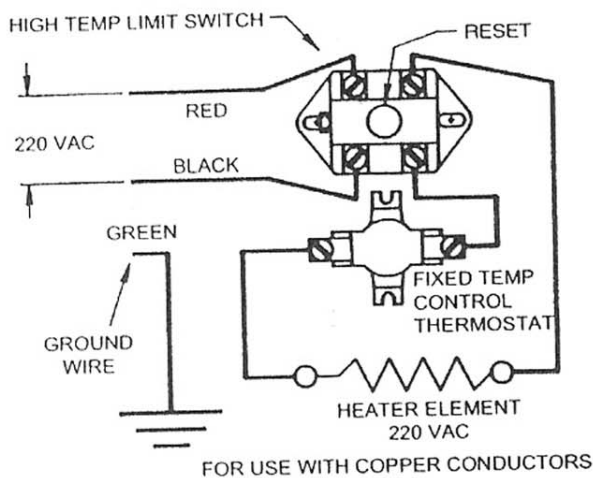
WIRING DIAGRAM FOR 120V



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/S700/F600/F700  
S1100/S1200/F1100/F1200

## EXPLODED VIEW

ITEM	MODEL NO.	PART. NO.	DESCRIPTION
1.	S600/S700 F600/F700 S1100/S1200 F1100/F1200	80253 80309 80254 80310	Tank Assembly Tank Assembly Tank Assembly
2.	ALL MODELS	73127	T&P Valve
3.	ALL MODELS	73124	Gasket, Element
4.	S600/S700/S1100/S1200 F600/F700/F1100/F1200	73364 74031	Heating Element High Limit Switch
5.	ALL 120V MODELS	74563	Thermostat
6.	ALL MODELS	73129	Mounting Plate, Switch
7.	ALL 120V MODELS	73148	Drain Valve
8.	ALL MODELS	73123	Wire Shield
9.	ALL MODELS	73145	Jacket
10.	S600/F600 S700/F700 S1100/F1100 S1200/F1200	73137 73283 73166 73942	Jacket Jacket Jacket
11.	S600 F600 S700 F700 S1100 F1100 S1200 F1200	73888 73286 73887 73169 73941 73290 73942 73890 73890 73285 73889 73168 73939 73289 73940	Back Panel Back Panel Back Panel Back Panel Back Panel Back Panel Front Panel Front Panel Front Panel Front Panel Front Panel Front Panel Front Panel Front Panel
12.	S600/F600 S700/F700 S1100/F1100 S1200/F1200	73138 73284 73170 73288	Base Base Base
13.	S600/F600/S1100/F1100 S700/F700/S1200/F1200	73141 73291	Access Cover Access Cover
14.	S600/F600/S700/F700 S1100/F1100/S1200/F1200	73146 73175 73147 74225	Insulation, Wrap Insulation, Front Insulation, Front
15.	S600/S700 F600/F700 S1100/S1200 F1100/F1200	74227 73331 74226 73331 74228	Insulation, Front Insulation, Back Insulation, Back Insulation, Back
16.	S600/S700 F600/F700 S1100/S1200 F1100/F1200	74227 73331 74226 73331 74228	Insulation, Front Insulation, Back Insulation, Back Insulation, Back
17.	S600/S700 F600/F700 S1100/S1200 F1100/F1200	74227 73331 74226 73331 74228	Insulation, Front Insulation, Back Insulation, Back Insulation, Back