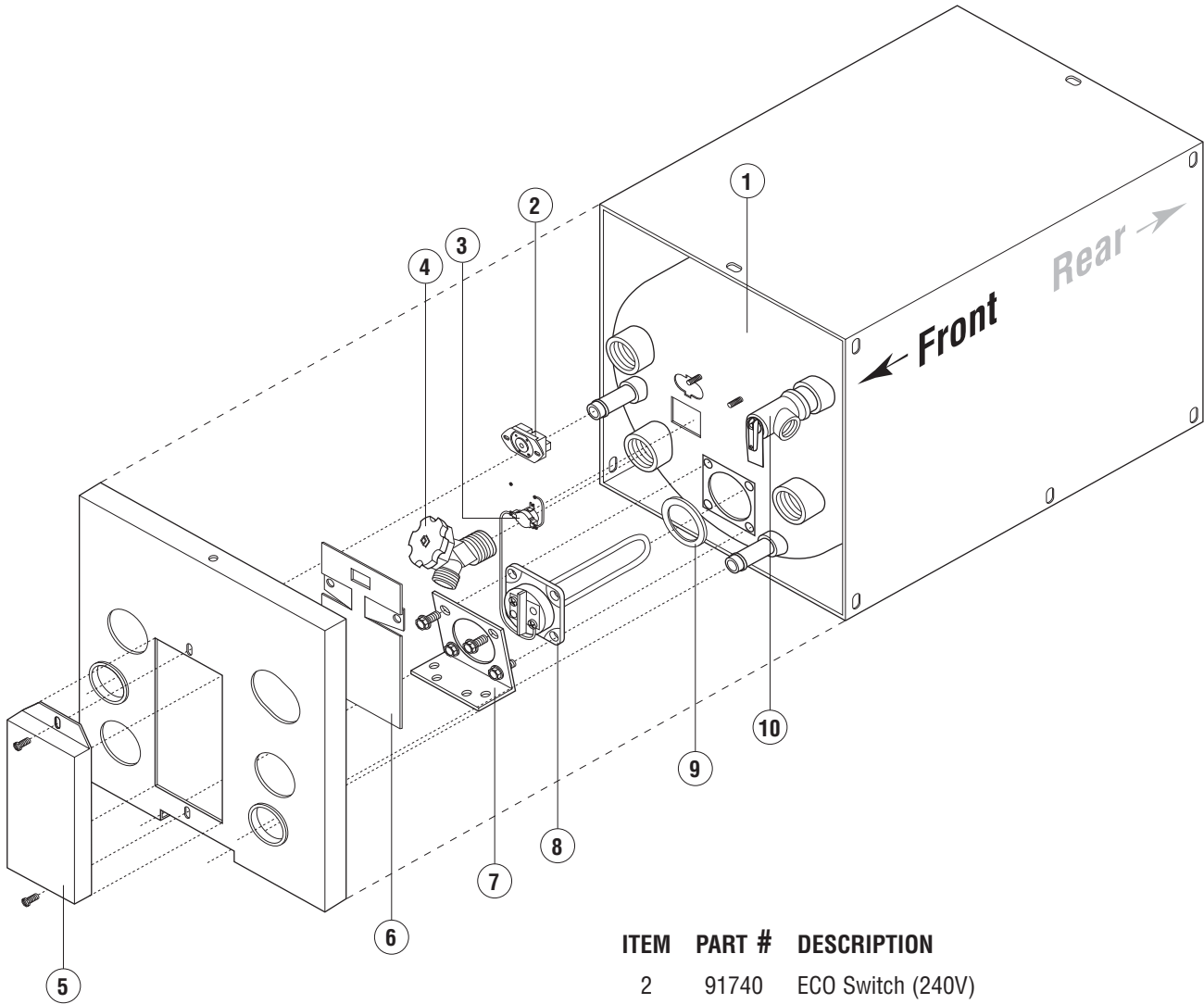


EHM 6
EHM 11

ELECTRIC WATER HEATER



ITEM	PART #	DESCRIPTION
	2	91740 ECO Switch (240V)
	3	92943 Thermostat (240V)
	4	93403 Drain Valve 3/4" (without handle)
	5	90045 Access Cover
	6	92236 Insulator
	7	91479 Front & Rear Hold Down Bracket (6 gal)
		91489 Front & Rear Hold Down Bracket (11 gal)
	8	91851 Heating Element (240V) and gasket
	9	91098 Gasket Heating Element (240V)
	10	91604 Relief Valve (850 KPA)
N/S	91459	Thermostat for Solenoid Valve (EHP10)
N/S	91782	Solenoid Valve (EHP10)
N/S	91781	Water Valves (EHP10)
N/S	92649	P & T Relief Valve Adapter

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LITERATURE NUMBER MPD 93759

MARINE WATER HEATER

ELECTRIC
Australia / New Zealand

Model #'s: EHM6-240-FHX-AU EHM11-240-FHX-AU
AS/NZS60335.2.21 CERTIFIED

ENGLISH

•Installation •Operation •Maintenance
Effective 07/23/08

SAFETY INFORMATION
FOR YOUR SAFETY
READ ALL INSTRUCTIONS BEFORE OPERATING APPLIANCE
REFER TO THE RATING PLATE FOR MODEL NUMBER

SAFETY ALERT SYMBOLS

Safety Symbols alerting you to potential personal safety hazards. Obey all safety messages following these symbols.

WARNING
avoid possible injury or death

CAUTION
avoid possible injury and/or property damage

Installer: Provide these instructions to the consumer.
Consumer: Keep documents for future reference.

WARNING
FIRE

- Do not smoke or have any flame near an open faucet.

If you have not used this water heater for more than two weeks, hydrogen gas may result. Under these conditions to reduce the risk of injury, open the hot water faucet for several minutes at the kitchen sink before you use any electrical appliance connected to hot water system.

If hydrogen is present, you will probably hear sounds like air escaping through the pipe as water begins to flow. Allow the water to flow until these sounds disappear.

INSTALLATION

- Position water heater on plywood floor (5/8" minimum). Locate at or below engine level. NOTE: Clearance 0" top, sides, back and bottom.
- MODEL EHM6:**
Secure to flooring with eight No. 12 x 3/4" wood screws through the front and rear hold-down bracket. See FIG 1-C.
MODEL EHM11
Secure to flooring with eight 12-24 UNC nuts and bolts and eight No. 12 type A washers (not included). See FIG 1-C.
- Connect both 1/2" NPT water lines (FIG 1-A hot water outlet female and FIG 1-B cold water inlet female). Always use pipe lubricant on threads when connecting hot and cold water couplings. It is recommended that a suitable plastic fitting be used.
- Fill water heater tank and check all connections for water leaks (FIG 1-A & B).
- Connect 5/8" diameter coolant hose to heat exchange tubes at rear or front of water heater (FIG 3-D). Use type E hose clamp or equivalent.

CAUTION
INJURY OR PROPERTY DAMAGE

- Maximum inlet water pressure 116 Pa (80 PSI).

FOR COOLANT LINE CIRCUIT:

- Push hose end (with clamp attached) onto tube as far as possible.
- Spread hose clamp, slide it past annular groove, release (FIG 3 A,B,C,D).
- Bleed air from the entire coolant system for proper operation of both engine and water heater.
- Connect electric supply at junction box (FIG 1-D) with armored cable or conduit with capacity of 1400 watts or greater (wiring FIG 5-6).

NOTE: For marine installation, use conductors as specified by sub chapter S, part 183.425, table 5 of chapter 1 - Coast Guard Dept. of Transportation Code of Fed. Reg. Title 33.

- To ground water heater, connect grounding wire from electrical service to green wire.
- EHM6, EHM11:**
Use Australian LISTED on/off switch rated for 15 amps/125V AC.
 - Fill the heater with water. Open the hot water faucet connected to the heater until all air is gone.
 - EHM6, EHM11:**
Connect to 240V AC supply (see wiring FIG 5).
- NOTE: OEM installation must incorporate a means for disconnection in accordance with the appropriate Australian Standards.
- Thermostat is factory set and is not adjustable.
 - Replace cover.

CAUTION
PRODUCT DAMAGE

- Do not operate without water in tank

- Turn remote switch to **ON**. Your water heater is now operating.
- NOTE: This water heater is equipped with temperature & pressure relief valve that complies with the standard for Relief Valves & Automatic Gas Shutoff Devices for Hot Water Systems, AS 1357.1 LN938 (FIG 2).
- NOTE: Allow for complete drainage of both valve and discharge line.

WARNING
SCALDING

- Pressure temperature relief valve is not serviceable, it must be replaced.
- Tampering with valve will result in scalding injury.
- Tampering with valve will void warranty.
- The valve or drain valve outlet pipe must not be sealed or blocked.

WARNING
EXPLOSION

- Do not place a valve, plug or reducing coupling on outlet port of pressure temperature relief valve or block the discharge opening.
- If you use a discharge line, do not use a reducing coupling or other restriction that is smaller than the outlet of the relief valve.
- Install temperature and pressure equipment, required by local codes, to protect against excessive pressures and temperatures.
- The Combination Temperature and Pressure relief valve must be installed into the water heater coupling provided and marked.
- Orient the valve or provide tubing so that any discharge from the valve will exit only within 6 inches above, or at any distance below the structural floor and cannot contact any live electrical part.

FOR REPLACEMENT PARTS:

- Do not install anything less than a combination temperature-pressure relief valve certified by a nationally recognized testing lab that maintains periodic inspection of product of listed equipment or materials, as meeting the requirements for Relief Valves and Automatic Gas Shutoff Devices for Hot Water Supply Systems, AS 1357.2. This valve must have a maximum set pressure not to exceed 850 kPa (123 DSI).
- Installation must conform with Australian codes.
- If you use an external electrical source, ground this unit. All wiring must comply with the applicable electrical codes.
- Use electrical metallic tubing, flexible metal conduit, metal clad cable, or nonmetallic-sheathed cable with grounding conductor. Wire must have a capacity of 1500 watts or greater. The wiring method must conform to the applicable Australian Code.

**⚠ WARNING
PERSONAL INJURY**

- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the appliance.

**⚠ CAUTION
PRODUCT DAMAGE**

- Label all wires before disconnecting when servicing controls.
- Verify proper operation after servicing.
- When using Romex® with a bare earth ground, take care to position ground wire so it does not contact the heating element terminals.

OPERATION

1. Check to be sure water completely fills the water heater tank.
2. Locate remote water heater operation switch. (see vehicle owners manual for location of switch).
3. Turn remote switch to ON.

**⚠ CAUTION
PRODUCT FAILURE**

- Inspect for leaks.

A leak in the heat exchanger or its connecting line could cause loss of coolant and subsequent engine failure.

We recommend installer provide a means for by-passing the engine coolant heat exchanger located on water heater. Frequently inspect connecting lines and heater to insure that a leak has not developed.

**⚠ WARNING
SCALDING INJURY**

- Engine coolant circulating through the heat exchanger for more than two hours will create excessively hot water.

- NOTE: The EHM can be equipped with a thermostatically controlled high efficiency heat exchange system which will prevent the water from becoming excessively hot.
4. This water heater is equipped with a manual reset high-temperature limit switch. If it should need to reset:
 - a. Turn the remote switch to the OFF position.
 - b. Remove the access cover. (see FIG 1-D)
 - c. Depress button on the high-temperature limit switch.
 - d. Replace access cover. Be sure you also replace insulation in cover.
 - e. If it malfunctions again, contact an authorized Atwood Service Center or 574-262-2655.

MAINTENANCE

1. Inspect all lines to and from the heat exchanger at regular intervals.

**⚠ WARNING
SCALDING INJURY**

- Turn off water heater and wait for storage water to cool before opening the drain plug to flush the tank.

**⚠ DANGER
DEATH**

- The operation of the thermal cut-out indicates a possibly dangerous situation. Do not reset the thermal cut-out until the water heater has been serviced by a qualified person.
- Water may drip from the discharge pipe of the pressure relief device and this pipe must be left open to the atmosphere.
- The pressure relief device is to be operated regularly to remove lime deposits and to verify that it is not blocked.
- The water heater can be drained by opening drain valve with proper hosing to a safe place.
- A discharge pipe connected to the pressure relief device is to be installed in a continuously downward direction and in a frost-free ambient.
- Failure to operate the relief valve handle at least once every six months may result in the water heater exploding. Continuous leakage of water from the valve may indicate a problem with the water heater.
- If the water supply pressure exceeds the rated pressure, a pressure reducing valve is to be fitted in the installation.

WINTERIZING (FLUSHING) INSTRUCTIONS

To insure the best performance of your water heater and add to the life of the tank, periodically drain and flush the water heater tank. Before long term storage or freezing weather drain and flush the tank.

1. Turn off main water supply (the pump or water supply (the pump or water hook up source).
2. Drain Water Heater Tank by removing the drain plug. If the water flows sporadically or trickles instead of a steady stream of water, we recommend the following action; first open the Pressure Temperature Relief Valve to allow air into the tank and secondly, take a small gauge wire or coat hanger and poke through the drain opening to eliminate any obstructions.
3. After draining the tank, because of the placement of the Drain Plug, approximately two quarts of water will remain in the tank. This water contains most of the harmful corrosive particles. To remove these harmful corrosive particles flush the tank with either air or water. Whether using air or water pressure, it may be applied through the inlet or outlet on the rear of the tank or the Pressure Temperature Relief Valve. (If using the Pressure Temperature Relief Valve the Support Flange must be removed). The pressure will force out the remaining water and the corrosive particles.

If you use water pressure, pump fresh water into the tank with the assistance of the on-board pump or use external water for 90 seconds to allow the fresh water to agitate the stagnant water on the bottom of the tank and force deposits through the drain opening. Continue repeating adding water and draining until the particles have been cleared from the water remaining in the tank.

4. Replace the Drain Plug and close the Pressure Temperature Relieve Valve. the approximately two quarts of water remining in the tank after draining will not cause damage to the tank should freezing occur.

PRESSURE-TEMPERATURE RELIEF VALVE

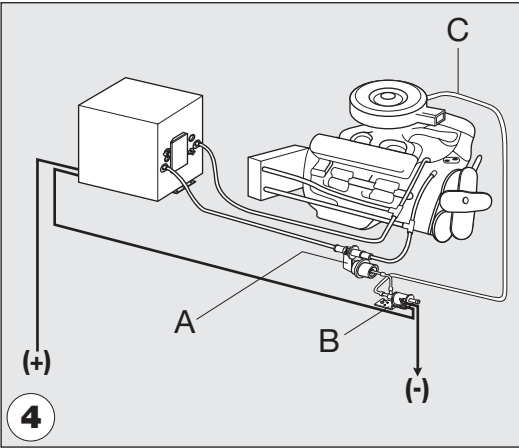
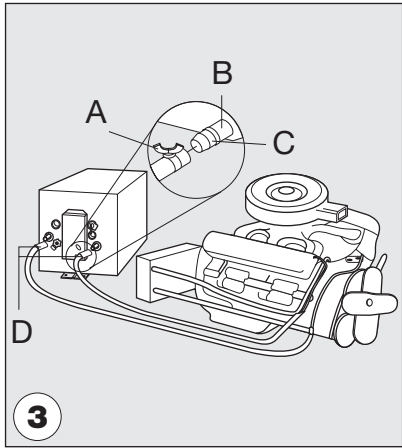
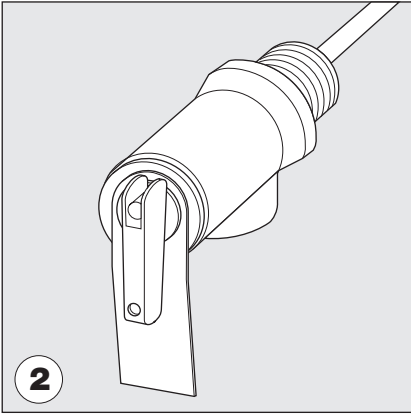
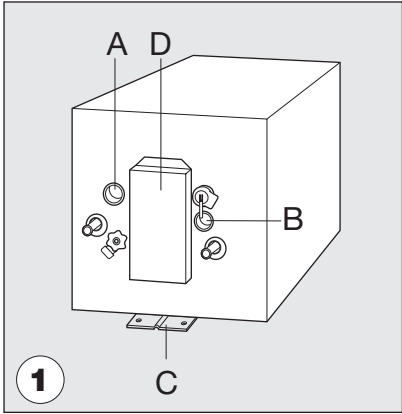
**⚠ WARNING
EXPLOSION**

- Do not place a valve, plug or reducing coupling on outlet part of pressure-temperature relief valve.
- Do not connect any restrictor or pressure relief device to the vent pipe of this water heater.

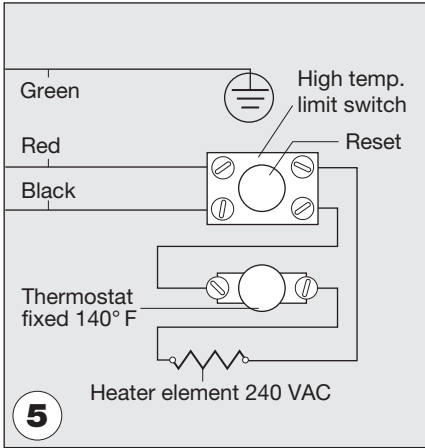
A Pressure Temperature Relief Valve, dripping while the water heater is running, DOES NOT mean it is defective. During normal expansion of water, as it is heated in the closed water system of a recreation vehicle, the Pressure Temperature Relief Valve will sometimes drip. The Atwood water heater tank is designed with an internal air gap at the top of the tank to reduce the possibility of dripping. In time, the expanding water will absorb this air and it must be restored.

**⚠ WARNING
SCALDING INJURY**

- Turn off water heater before opening pressure-temperature relief valve to establish air space. Storage water must be cool.



WIRING DIAGRAM FOR 240 AC UNITS



TO REPLACE THE AIR GAP FOLLOW THESE STEPS:

1. Turn off main water supply (the pump or water hook up source).
2. Let water cool or let run until cool.
3. Open the hot water faucet closest to the water heater.
4. Pull handle of pressure temperature relief valve straight out and allow water to flow until it stops.
5. Allow pressure temperature relief valve to snap shut; close faucet; turn on water supply.
6. Turn on water heater and test.

- At least once a year manually operate pressure-temperature relief valve (FIG 10).

When pressure-temperature relief valve discharges again, repeat above procedure. For a permanent solution, we recommend one of the following:

- Install a pressure relief valve in cold water inlet line to water heater and attach a drain line from valve to outside of coach. Set to relieve at 100-125 PSI.
- Install a diaphragm-type expansion tank in cold water inlet line. Tank should be sized to allow for expansion of approximately 15 oz. of water and pre-charged to a pressure equal to water supply pressure. These devices can be obtained from a plumbing contractor or service center.

FLUSHING TO REMOVE UNPLEASANT ODOR

A rotten egg odor (hydrogen sulfide) may be produced when the electro galvanic action of the cladding material releases hydrogen from the water. if sulfur is present in the water supply the two will combine and produce an unpleasant smell.

1. Turn off main water supply. Drain the water heater tank and reinstall drain plug. Remove the pressure-temperature relief valve. Mix solution of 4 parts white vinegar to two parts water. With a funnel, carefully pour solution into tank.
2. Cycle water heater with the above solution, letting it run under normal operation 4-5 times.
3. Remove the drain plug and thoroughly drain all water from the tank. Flush the water heater to remove any sediment. You may flush the tank with air pressure or fresh water. pressure may be applied through either the inlet or outlet valves on the rear of the tank or through the pressure-temperature relief valve coupling located on the front of the unit.

TO FLUSH TANK WITH AIR PRESSURE:
Insert your air pressure through the pressure-temperature relief valve coupling. With the drain valve open, the air pressure will force the remaining water out of the unit.

TO FLUSH TANK WITH WATER PRESSURE:
Fresh water should be pumped into the tank with either the onboard pump or external water pressure. Continue this flushing process for approximately 5 minutes, allowing the fresh water to agitate the stagnant water on the bottom of the tank and forcing the deposits through the drain opening.

4. Replace drain plug and pressure-temperature relief valve.
 5. Refill tank with fresh water that contains no sulphur.
- The Atwood water heater is designed for use in a recreation vehicle. If you use your vehicle frequently or for long periods of time, flushing the water heater several times a year will prolong the life of the storage tank.