



TORRID MARINE

YACHT QUALITY
MARINE WATER HEATERS
Since 1979

Marine Water Heaters Owner's Manual



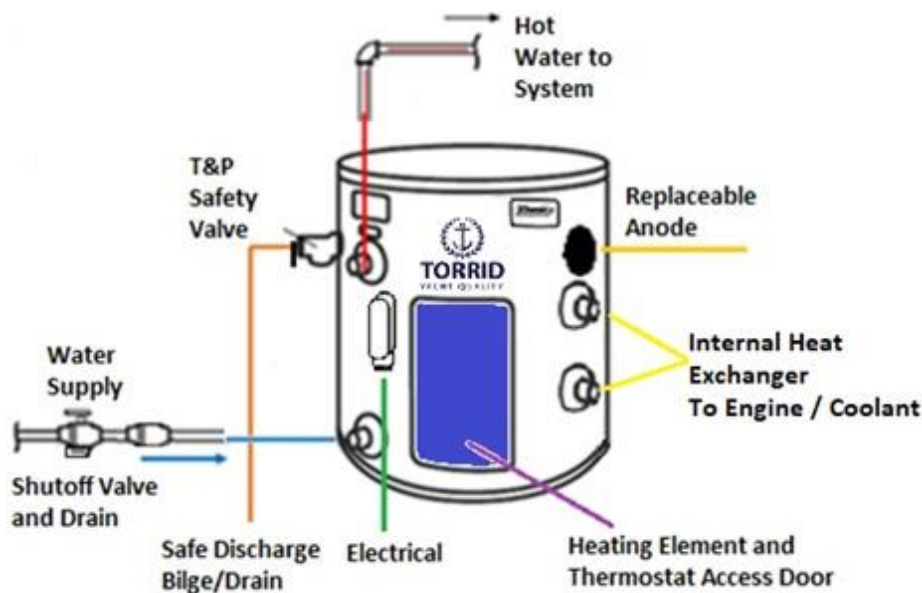


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Plumbing Configuration

Thank you for purchasing a new Torrid Marine Water Heater. This manual is meant to be read in its entirety to properly install and maintain your new Torrid Marine Water Heater and to help insure its long lasting, safe and reliable use. While Torrid Marine is always happy to offer advice, we highly recommend you choose a professional marine technician to install your new Torrid Marine Water Heater.



***Important:** Do not plug, cap or in any way restrict the T&P (Temperature and Pressure) relief valve. Plumb the T&P with an open, unobstructed drain line only. Water expands in the tank as it heats. If it does not have a place to expand, the pressure may rise, causing the T&P valve to momentarily open and discharge a small amount of water. This is not uncommon. We recommend installing the water heater in a manner that allows water to expand into a dedicated expansion tank and potential T&P discharge to be monitored. The installer is responsible to provide and properly fit all connections, including wiring, hoses, pipes, elbows, and diversion or shut-off valves. Installation of expansion tank and maintenance shut-off, isolation, drain or bypass valves (not provided) may be overlooked but is highly recommended.

***Warning:** To reduce the risk of electrical shock, disconnect from power supply before servicing the device.



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Installation Instructions

IMPORTANT: Torrid Marine recommends installation to be performed by experienced and qualified personnel only. Warranty does not cover any damage caused during installation. When using electrical appliances, safety precautions to reduce the risk of fire, electric shock, or injury to persons should be followed. To reduce the risk of electrical shock, disconnect from power supply before servicing the Water Heater. This Water Heater must be grounded to a properly grounded circuit. Use Water Heater only for intended use.

Read all instructions thoroughly before installing and operating

1. Secure the heater base in desired location, above or away from bilge water or water spray. Make sure to position Water Heater so that the thermostat electrical access door, all fittings and anode cap are easily accessible for routine maintenance. This is an electrical appliance and must be kept dry.
2. Additional strapping and brackets are recommended.
3. Furnish a dedicated and appropriately sized protected circuit breaker and wire gauge for water heater power demand (i.e., 15 amp for standard 1500-watt, 120-volt elements). Note: Circuit protection should be provided according to the requirements for a particular installation. For technical support, please contact Torrid Marine.
4. Turn off power at the dedicated circuit breaker. Check for live wire hazard before working with any wiring.
5. The freshwater inlet and outlet are $\frac{3}{4}$ " NPT. These too should be plumbed by an experienced professional.
6. Make sure all freshwater system and coolant connections are properly made and fill the hot water heater. Open a connected hot water faucet to allow air within the tank to escape and allow water to fill and run clear.
7. Verify that coolant level is adequate after connecting heat exchanger coolant lines.
8. Properly connect power leads to the Water Heater at the gray conduit box on the face of the Water Heater with an appropriately sized 3-wire connection, making certain that the green ground wire is connected to an active ground wire on the incoming power connection line.
9. A drain line should be fitted to the T&P and should extend below the base of the water heater, to bilge, or elsewhere. Relief valve will operate at 210° Fahrenheit and/or pressure of 100 PSI.
10. Energize the water heater at the breaker panel only after the tank has been filled with water.
11. Test and monitor for proper hot water production.

IMPORTANT NOTES:

- The thermostat is equipped with a high limit temperature electrical cutoff. This energy cutoff will operate if the water temperature exceeds 200° Fahrenheit. If element fails to heat, disable power at the breaker and investigate the cause. To reset the high limit via the thermostat red reset button, please refer to the maintenance section.
- All connections are $\frac{3}{4}$ " NPT. Drain water from heater if freezing of stored water is possible. Freezing can rupture water lines and /or water heater's internal tank.
- Do not rotate pre-installed outlet fitting or any fittings coming off the water heater. The outlet fitting is positioned so that the attached air-vent tubing end is at the top of the water storage tank; this helps eliminate trapped air. The black line on the outlet pipe nipple indicates the air vent position. This mark should be on top and pointed upward.
- Use care when check valves are installed before the Water Heater's inlet. The water will expand as it heats and must have a place to escape. Improperly placed check valves can cause the pressure relief valve to open.
- When installing and servicing the Water Heater, consideration should be given to disabling incoming water flow with a shut-off valve or electric pressure pump.





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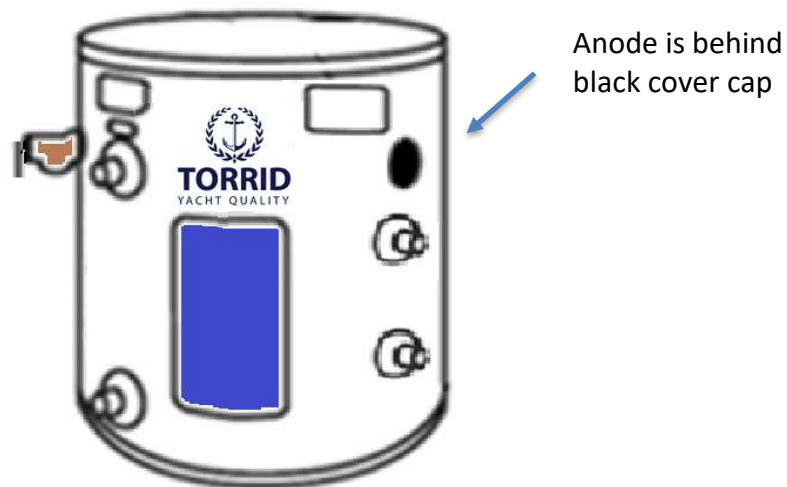
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IMPORTANT SAFETY NOTES CONTINUED:

- When operating the Water Heater from shore power, a galvanic isolator is highly recommended.
- All Torrid Marine Water Heaters are equipped with cathodic protection or a sacrificial anode. In certain circumstances, hydrogen gas is produced in a hot water system served by this heater that has not been used for a long period of time (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 or galley sink before using any electrical appliance connected to the hot water system. When hydrogen is present, there may 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.
- When operating this Water Heater, water temperatures may exceed 170 degrees Fahrenheit. This is hot enough to scald or burn on contact and may pose a health hazard, especially to children or persons sensitive to heat, including the risk of death. We recommend the use of an external thermostatic mixing valve to reduce this risk.
- Do not operate if wiring is damaged or if other damage has occurred to the Water Heater or related system.
- Warning – All Torrid Marine Water Heaters are intended for permanent installation. Do not use an extension cord to connect Water Heater to electrical source.
- Dry firing of the heating element can damage and/or shorten the life of the heating element.

Maintenance: How to Replace Anodes

All Torrid Marine Water Heaters feature anode protection, which offers some protection from internal corrosion. These anodes should be inspected annually and replaced as necessary when anode becomes approximately 50% depleted, particularly when the water used with the Water Heater is produced by a reverse osmosis water maker. New anodes are 7/8" in diameter and should be replaced when diameter is less than 5/8".





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Maintenance: How to Replace Anodes

1. Shut off power to the unit and drain the water level in the Water Heater below the anode height.
 2. Locate black plastic anode cover cap(s). This is on the front/side of the unit. **See Image 1.1** and remove.
 3. With a 1-1/16" socket wrench, remove the anode by rotating counter clockwise. **See Image 1.2.**
*Caution: if it has been two or more years since the anode has been inspected, you may be better off leaving it as-is. The threads can "weld" themselves in place if they have not been routinely inspected.
 4. Prepare the anode with PTFE thread tape and reinstall securely. Leave black cover off. **See Image 1.3.**
 5. Once tank refills and power is restored, check for leakage by placing a dry tissue just under the anode and allow the Water Heater to operate through several heating cycles. Remove tissue and inspect for dampness. If damp, tighten anode and repeat. If dry, discard tissue and replace black cover.
- Failure to inspect and replace anodes may significantly reduce the useful life of your Water Heater.
 - Anode inspection and replacement is critical for applications utilizing water produced by a water maker.
 - Improper or inadequate maintenance will void warranty.

See www.torridmarine.com for additional helpful information in the FAQ section.



Image 1.1 Locate anode and remove plastic cover.



Image 1.2 Remove anode with 1-1/16" socket.



Image 1.3 Install new anode with PTEF tape or sealant.

Replacement anodes and other consumable parts can be purchased at www.torridmarine.com.



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Maintenance: How to Reset High Limit Switch

The thermostat on Torrid Marine Water Heaters features a safety high limit electrical cutoff switch. This switch is designed to prevent the Water Heater from overheating and causing the element to continue to operate beyond normal operating temperatures. If for any reason the internal water heats beyond 200° Fahrenheit, the high limit switch should activate and will need to be reset.



Fig. 2.1 Remove the electrical access panel door.

High Limit Switch
(do not remove
plastic cover)



Fig. 2.2 Locate the reset button.

1. Turn off the electrical power for the unit at the breaker panel.
2. Remove the electrical access panel door. **See fig.2.1.**
3. Locate the red high limit button, located on the top of the thermostat. **See fig. 2.2.**
4. Push or depress the red button. NOTE: You may not feel it resetting, this is not uncommon.
5. Replace and secure the access door.
6. Restore power to the unit, allow it to reheat and test.

If the water heater is not operating after completing these steps, please consult your marine technician or call for technical support, 1-800-722-5123.



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Replacement Parts



Magnesium Anodes



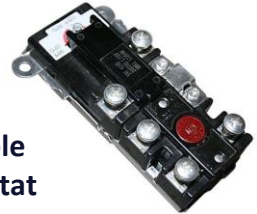
Incoloy Sheathed Stainless Steel Elements



3-Way Reverse Flushing Valves



T&P Relief Valve
100 psi 210 F



Adjustable Thermostat

All replacement parts are available online at www.torridmarine.com

Anode Size Chart for IX Series

Vertical Format Water Heaters		Horizontal Format Water Heaters	
IX Model	Side Anode	IX Model	Side Anode
6 Gallon	A12	6 Gallon	A12
10 Gallon	A12	10 Gallon	A12
15 Gallon	A12	17 Gallon	A18
17 Gallon	A12	30 Gallon	A28
20 Gallon	A12 or A18	40 Gallon	A28
30 Gallon	A12 or A18		
40 Gallon	A18 & A28		

Anodes should be inspected and possibly replaced every year as part of routine maintenance. This is particularly important if the fresh water in the water heater was produced by an onboard Reverse Osmosis fresh water maker. For non-water maker applications, every other year may be fine depending on circumstances. If you have never changed the anodes and it has been more than a few years since installation or last inspection, it is recommended to leave the anode in place as the threaded head may have "welded" itself in place and attempted removal risks catastrophic damage. Remember to drain or lower the water level in the water heater and allow it to cool before removing anode.





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TORRID MARINE WATER HEATER 5-YEAR WARRANTY

General:

We hereby warrant to the original owner of the Torrid Marine water heater that has been installed and operated in accordance with the printed instructions provided, and that has been properly maintained by or for the owner of the water heater to which this warranty applies. We will reimburse on a pro-rated basis the cost to furnish a replacement for, or at our option, to repair any part or water heater (excluding anodes) which, within five years from date of original purchase (see Conditions below), which may fail in normal use and service at its original installation location, because of any defect in workmanship, material, or design, subject to registration of the model, including serial number, at the time of purchase. The repaired or exchanged part of water heater will be warranted for only the unexpired portion of the original warranty on a pro-rata basis. Replacement parts or water heaters will be made available at our Bainbridge Island, Washington, United States of America, factory. Torrid Marine shall not be responsible for any removal, shipment, or installation costs. For purposes of this warranty, the effective date of the warranty begins at the date of purchase of the new Torrid Marine water heater by the end consumer but the warranty period will not exceed six years from the date of delivery by Torrid Marine of the new marine water heater to an authorized dealer or OEM manufacturer that stocks or installs new Torrid Marine water heaters.

Limitation on Implied Warranties:

Implied warranties, including the warranty of merchantability imposed on the sale of this water heater under the laws of the state of sale are limited to the term of one year from the date of original installation.

Limitation on Liability:

This warranty may not be expanded by oral representations. The liability of the company in the event of leakage or other malfunction is strictly limited to the furnishing of a replacement part or water heater, as provided herein, and the Company is not responsible hereunder for incidental property damage or personal injury, interim loss of use of the heater, related equipment, inconvenience, or other consequential cost or damage.

Conditions and Exceptions:

This warranty may be enforced only if the water heater remains in its original installation. The Company will not be responsible for leakage or malfunctions arising from:

- a). Defective installation and specifically, any installation made contrary to the written instructions furnished with the unit.
- b.) Failure to annually inspect and replace, as necessary, anodes which are designed to provide protection to the water heater.
- c). Failure to drain water heater during off-season storage to protect from freezing or other issues that may result from non-use.
- d). Misuse, and specifically operation or maintenance contrary to the written instructions furnished with the unit, removal of the magnesium anode, disconnection, alteration, or addition of non-approved components or apparatus, operation with power or at settings other than those set forth on the rating plate, or accidental or other exterior damage or abuse or misuse including freezing or wetting of the exterior.
- e). This warranty does not cover the production of noise, taste, odors, or discolored or rusty water.

How to Claim Under This Warranty:

If the owner has registered the marine water heater at time of purchase (<https://torridwaterheaters.com/warranty-1>), the owner upon discovering a defect should notify the Company in writing including the model and serial number of the unit, the date of purchase and installation and a description of the defect to: info@torridmarine.com. A legitimated copy of the purchase receipt must be provided. Including the above mentioned requirements. Upon receipt of this notice, the Company will determine whether to furnish a replacement part or water heater or to repair the defect and/or the value of the applicable prorated warranty. The Company reserves the right to verify defects by inspection. At the request of the Company, the owner will, at his or her expense, deliver the defective part or water heater to the factory or company designee.

