

Tartan 37 Technical Resources

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Chapter 4 - Plumbing

Section 1: Replacing the Water Heater

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The Tartan 37 came with a combination 120v AC and engine coolant water heater. By this time, the boat will likely need a first or second replacement. Here is how a new marine Raritan 12 gallon heater is installed, considering the cramped quarters in the engine compartment and lazarette.



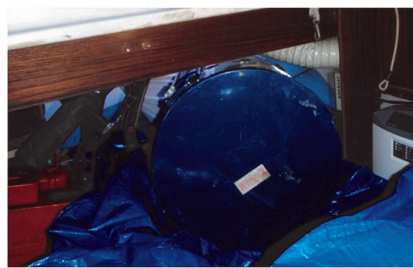
Start by removing the panels on both sides of the engine. By crawling into the starboard lazarette you have access to disconnect the hoses from the heater. Save them for measuring for replacements. Disconnect the AC wiring from the old heater.

Move aside and strap down anything that prevents pulling the water heater out through the port quarter berth. That will likely be the exhaust hose from the muffler to the transom and the blower hose.



Lay a plastic tarp on everything in the engine compartment and through the passage to the quarter berth. This keeps things from getting snagged.

Back in the starboard lazarette, remove the screws holding the water heater to its shelf. Bend the "L" brackets at the base of the water heater flat against the side of the water heater. This prevents them from snagging wires and such when the heater is removed from the engine compartment. Now roll the water heater on its side and shove it through the opening into the quarter berth. It helps to have someone in the quarter berth to help pull the heater through. Then carry it up the companion way hatch and into the cockpit.





The new Raritan heater comes in by the reverse path. It has a plastic flange around the bottom instead of the four "L" brackets that mounted the old unit to the shelf. Regardless of the make, put in extra screws with fender washers. Strap the unit down with two pieces of plumber's tape* over the top of the heater and down to the shelf. The photo was taken while trying to reuse the original strap setup. Best to make new straps. Galvanized plumber's tape* was used which is available at most hardware stores. Make two straps that cross at the top center of the water heater. Roll the ends of the tape over once before securing with screws through one of the existing holes in the tape. This will prevent the fender washer from cutting the strap. While you are in the mood, there are some additional modifications that will provide safety and convenience.

1. An expansion tank can be added to prevent water coming out the safety valve after motoring for several hours.
2. Without a check valve in the cold water hose at the water heater hot water can back up into the cold water side of the system. If this happens you get hot water out of the cold water valves at the faucets. A new check valve can be purchased at most hardware stores and installed between the cold water line and the water inlet at the water heater.

Tools used:

Pipe wrench (pipe connections at water heater - W/H)
Drop light (it's dark down there)
Cordless drill motor and bits (drilling new mounting holes for W/H)
5/16" socket wrench (hose clamps)
7/16" socket (tank mounting screws)
7/16" end wrench (tank mounting screws)
Screw driver (hose clamps/prying)
Utility knife (used to slit old hoses to ease removal)
Teflon tape (used to seal pipe threads)

*Plumber's tape is a metal strap material that comes in various widths (around 1" wide for this application), has holes punched in it at regular intervals and is flexible enough to form by hand. It can be cut with sheet metal shears or even a Dremel type tool.