Introduction to the TM water heater

Trail Manors come equipped with a water heater as a standard appliance. This is one of the most useful of appliances, since it enables you to wash dishes and take a shower in your TM. The heaters have changed a bit over the years.

The water heater in the early TMs had a capacity of 3 gallons, and heated the water using a propane flame. For these heaters, it was necessary to manually light the propane burner's pilot light with a match.

Later on, TM switched to a more capable water heater, the Suburban SW6DE. According to Suburban's web site (http://www.rvcomfort.com), that Model code means:

S = Suburban
W = water heater
6 = 6 gallon capacity
D = direct spark ignition (i.e., automatic ignition of the propane burner)
E = electric heating element

As indicated, this unit has a 6-gallon capacity, a great improvement over the earlier model when you step into the shower. It heats water using either propane, AC ("shore") power, or both. Again according to the web site, it is perfectly OK to turn on both simultaneously. In a campsite with hookups, I use the electric element most of the time, but before I step into the shower, I turn on the gas as well, to increase the recovery rate. Of course in remote campsites (dry camping/boondocking), water heating is done with gas alone. By the way, 6 gallons is not enough water for the long luxurious kind of shower you take at home. You will need to adopt the Navy shower routine – wet yourself down, turn off the water flow at the showerhead, and soap up. Then turn on the water and rinse. Six gallons is plenty for this.

THE GAS HEATING ELEMENT: This model has automatic ignition for the gas burner. There is a switch in front of the sink to light the gas burner. After you bleed the gas lines (see the tutorial on Gas), you simply flip the switch. A red light comes on to tell you that automatic ignition is in progress – the light goes out when the burner is lit.

THE ELECTRIC HEATING ELEMENT: In middle-aged TMs such as my 2002, the electric heating element is turned on and off by a switch on the water heater itself. You have to go outside and remove the grill over the water heater to flip this switch, as shown at the arrow in the figure below.

The electric heating element is located under the oblong black plastic cap just to the right of the switch. Once the cap is off, the element can be removed with a big socket wrench.

THE CARDINAL RULE OF WATER HEATERS: You must always make sure that the water heater is full of water before you turn on either heating element. If you dry fire it on gas, you probably have a few seconds, no more, to correct your mistake. If you dry fire it on electric, even for a moment, the electric element will probably burn up. It is not hard or expensive to replace the element, but it is always inconvenient.

MAINTENANCE: The water heater requires almost no maintenance. As with all gas appliances, you should check to be sure that the gas orifice is clean at the beginning of each camping season. The orifice is in the square opening in the left end of the big brass tube in the photo referenced above. In many parts of the country, tiny spiders, attracted by the smell of propane, make webs in the orifice and clog it. Remove the web material with a Q-tip.

Every year or so, you should check and replace the anode rod. This is a metal rod that projects into the water in the tank and prevents the tank from corroding. In doing so, it is itself consumed, and must be replaced periodically. Anode rods are cheap protection, and available at any RV dealer.

The anode rod is the big rusty hex nut at the bottom center of the picture above. You will need a 1-1/16” socket wrench to remove and replace it. While the rod is out, flush a lot of water through the tank to remove any accumulated sediment.

WINTERIZING: Unlike most campers and RVs, the TM’s plumbing system is designed to be gravity-drained. That means that if you open the four drain valves under the road-side of the trailer, and open the faucets inside, all the water will drain out of the system.

As a result of this design, you don't need to put antifreeze in system, and you don't need a water heater bypass. In fact, with two exceptions, you don't have to do anything else to prepare the water system for storage. The exceptions, noted in the Owner's Manual, are:
1. After draining the system, turn on the water pump for a few seconds to get the water out of its pumping chamber.
2. After draining the system, open the outdoor shower, turn on both valves and leave them on. Unscrew the shower head from the hose, shake the water out of the shower head, and store it inside the TM. Then drain as much water as you can from the hose, and reinsert it into the compartment.

Make no mistake – if you allow the TM to freeze when there is still water in the water heater, you will most likely destroy it. But if you read and follow the Owner's Manual, you will be fine.