

# FURNACE & WATER HEATERS

The coach furnace rarely has problems while water heaters are always going bad. Does the water have something to do with this? Nah! The water heater is exposed to the elements since its electronics are outside while the furnace is nicely protected from the weather inside the RV. Both of these units use igniters, which provide a spark to light the propane. Igniters wear out and have to be replaced usually depending on usage. **You should** have a spare igniter for each heater. Other than cleaning the burner every year when you get the RV ready for the spring season, you usually do not need to worry about the furnace.

As mentioned earlier make sure all of the water heater electrical connections are tight. If you have an older trailer your circuit board is exposed to the elements. You should **purchase** a new potted circuit board with the spare igniter so that when cleaning the old board no longer works you are ready to go. Another spare part of value is a low temperature thermostat, which sets the water temperature. These often go bad and if they open you will have no hot water. If it fails to close the water will stop heating when the high temperature thermostat operates. This is much too hot for a human being and you are likely to get burned. By the way you can usually get good parts discounts from the vendors at the International Rally so pick up your spares there.

A good modification is to purchase a variable (low temperature) thermostat, which allows you to set the water temperature to your liking. We reduce the temperature when our grandchildren are aboard and increase it when it is just my wife and I. This is installed in place of the fixed temperature thermostat. Keep the water heater compartment and the main burner orifice clean. Periodically clean the furnace compartment and its main burner. Learn how to adjust the main burner for the proper flame for both the water and coach heaters. The proper gap for the igniter is 1/8" between the electrode and ground. Clean the burners in alcohol and let them dry. You can use a round toothpick to clean the jets but never use a metal object since it can change the orifice opening. Wet the toothpick and twirl it in the jet. Circuit board contact cleaner will also work since it leaves no residue.

When something is not working correctly the first thing to check is the wire connections, particularly the grounds. By the way, if the ground screw can no longer be made tight replace it with the next larger screw. If that does not work then find another ground point. Do not just tighten as much as you can and hope it will hold, because it will fail before you reach your next stop. Sometimes you will need to carefully make a new hole for the ground connection. Be careful and don't drill a blind hole into the water tank (unfortunately, I have seen this a few times).

In all my years of camping I have never found a defective pressure-temperature relief valve. However, I have found many leaking valves. Often the camper is sold a new valve, which results in the leak being gone and the assumption that the old valve was faulty. The valves appear to leak only when the heater is operating. Most water heaters are designed to operate with an air gap at the top of the tank, which provides for expansion when the water is heated. When the valve leaks it is usually because this air gap is no longer present. To fix the problem turn off the heater and the water supply. Open a faucet in the RV and relieve the water pressure. Open the relief valve handle and keep it that way until the water stops flowing. Snap shut the valve handle and you will then have the air gap back with no more leaks.

When you are camping in cold weather, the water heater cycles quite a bit since the water in the tank cools off much faster. Just before I turn off the bathroom light to go to bed I also turn off the water heater. This stops the constant cycling during the night and also saves propane. Just don't forget to turn it back on in the morning when you brush your teeth.