

GIRARD TANKLESS WATER HEATER

TROUBLE-SHOOTING & END USER GUIDE

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GIRARD TANKLESS WATER HEATER

OPERATION OVERVIEW

This page is for Technical Support and Customer Service personnel.

The Girard Tankless Water Heater operates differently than tank water heaters.

Girard has provided much information to the installers and the end user of the product, but we felt that additional information would be useful. For this reason we have put together a small breakdown of the operation and explanation of the product. The goal is for those of you in Customer Service to use this information as talking points with the end user. The actual talking points/End Use Operating Guide is on the next page which can be mailed, emailed or faxed to the end user or other people that may need this information. Please do not send the End User all 4 pages.

OEM and Dealer personnel should use the End User Guide when performing their PDI, sales demonstrations and/or new owner *Walk-thrus*. Also, it is a good idea to review the operation when discussing the Girard Tankless Water Heater with potential customers.

We have found that most customers have no problem with the function and operation of the Girard Tankless Water Heater after a few tries. However it is important that the personnel explaining the operation to them are comfortable and understand the operation and performance of the Girard Tankless Water Heater.

FOR THOSE END USERS/CUSTOMERS REQUIRING ADDITIONAL HELP – In some instances the end user will not have the equipment to test the Water Heater for proper function. The item the end user will need is a digital thermometer. These are readily available at most discount stores that handle kitchen utensils, etc. and the cost is usually under \$10.00. Of course some end users won't have one or won't be willing to acquire one so the dealer will have to perform the temperature tests on the next page.

GIRARD TANKLESS WATER HEATER

END USER GUIDE

OPERATING INSTRUCTIONS FOR END USER

The Girard Tankless Water Heater operates differently than tank water heaters.

There are procedures that need to be done for the Water Heater to perform properly. The same is true for a tank water heater, but it is less critical for the tank model. Remember, the Girard Tankless Water Heater is giving immediate HOT water as you need it also, it has no recovery time and it is not storing a tank of pre-heated water.

The Girard Tankless Water Heater will heat incoming water approximately 40 to 60 degrees depending on the water flow rate. The typical shower temperature is between 98 – 104 degrees. As a comparison a hot tub is usually set between 103 – 106 degrees.

To check for the proper temperature rise (inlet cold water temperature to outlet hot water temperature) it is necessary to use a thermometer. Use a digital thermometer which provides immediate temperature readings. These are available at most discount/department stores in the kitchen utensil section. **DON'T** trust your hands for temperature tests since hands don't feel heat like the rest of your body.

OPERATING PROCEDURE

- Purge all of the air from all Cold and Hot water lines by opening up the faucets. Kitchen, bathroom sink, showers, outside shower/water faucets and washing machine water lines if applicable. Be sure to turn OFF the outside shower faucet rather than just closing the shower head OFF button. This procedure should be performed whenever the water lines have been emptied/drained.
- Go to the kitchen faucet and turn on the COLD water and note the temperature (allow sufficient time to get a valid reading). Let the water run into a cup and place the thermometer probe into the cup. Turn OFF the COLD water faucet and make a note of the COLD water temperature.
- Turn the Water Heater ON – ON/OFF Switch is located outside in the Water Heater compartment. You can leave this switch ON all season since it only draws power when a demand for HOT water.
- Turn Mode Switch to AUTO.
- At the kitchen sink, turn the HOT water faucet ON to about a medium water flow. Allow sufficient time for the HOT water to travel from the Water Heater to the faucet.
- Check the HOT water temperature. Let the water run into a cup and insert the thermometer probe into the cup. At the medium water flow rate you should see approximately a 40+ degree temperature rise. You can gradually adjust the HOT water flow (a very small adjustment) to adjust the HOT water temperature; don't look at the knob/lever but at the actual water flow. Allow sufficient time for the water to travel from the Water Heater to the faucet after each adjustment. Try to achieve a temperature up around 110 – 115 degrees. Let it run for a few minutes to confirm that the temperature is maintaining.
- The Water Heater will provide approximately a 40 – 60 degree temperature rise (from inlet water temperature) depending on the Hot water flow rate. So, if the inlet water temperature is 55 degrees, you should have Hot Water from approximately 95 degrees to 115 degrees (depending on the Hot Water flow).
- NOTE: If the water temperature starts cycling from Hot to Cold and then back to Hot it means the Water Heater is limiting so increase the hot water flow. The Water Heater has an Emergency Cut Off sensor that turns the burner off at approximately 122 degrees to prevent scalding.
- If you achieve the various temperatures at the kitchen sink move to the shower and perform the same test. Note – Certain Shower heads/fixtures may vary the results due to water flow/pressure.
- Contact your Girard Dealer or Service Center if you can't achieve the proper temperatures rises.
- Since the Girard Tankless Water Heater does not have a tank it does not need to pre-heat and store water to 130 to 140 degrees. Tank water heaters must heat the water hotter since they are trying to make 6, 10 or 12 gallons of Hot water last longer (so you can mix it with cold water to achieve the proper hot water temperature) and allow the end user a few minutes of Useable Hot Water temperatures. With the Girard Tankless Water Heater it is not necessary to "super-heat" the water since you do not have to mix Hot water with Cold water to achieve the Useable Hot water temperatures; it will provide all the Useable Hot water you need and will only draw power (to make that Hot water) when there is a demand for Hot Water.

GIRARD TANKLESS WATER HEATER
TECHNICAL SUPPORT INFORMATION
FOR TECHNICIAN USE - NOT FOR END USER USE!

IF THE RESULTS IN THE OPERATION ARE NOT SATISFACTORY

The Girard Tankless Water Heater burner will automatically adjust from 27,000 BTU to 34,000 BTU depending on the incoming water temperature if the MODE Switch is set in the AUTO position.

The Mode Switch is located inside the RV, it has two (2) positions; LOW and AUTO. LOW is 27,000 BTU and AUTO is either 27,000 BTU or 34,000 BTU. If in AUTO Mode, the sensor will determine *automatically* whether to be on LOW 27,000 BTU or HIGH 34,000 BTU. The High/Low sensor is located inside the Water Heater compartment. It is a bimetal disc that looks like a limit switch and it is attached to the incoming water line, between the flow switch and the copper heat exchanger (back of compartment, lower left side). There may be a condition where this High/Low switch may not shift FROM Low to High at the appropriate time and/or temperature when on AUTO Mode. When this condition occurs the Water Heater may be in “LOW Mode” than in “HIGH Mode” so the water does not heat properly. This complaint most likely occurs either in the Spring or Fall seasons.

In order to determine if this is a problem, we recommend that the tech does a manometer test on the Water Heater gas valve. The tap location is easily accessible from the outside in the Water Heater compartment. It is located near the bottom on the face of the Control Housing Panel (panel is on the left side). The gas valve is a dual BTU valve. When the Mode Switch is set in LOW Mode (27,000 BTU) the WCI pressure reading should be 6-7 water column inches. When the Mode Switch is set in AUTO Mode and the incoming water temperature is less than 65 degrees (F) the unit should be in HIGH Mode (34,000 BTU) and the WCI pressure should be 10 – 11 water column inches. If this is not at these pressures we recommend the HIGH/LOW sensor be by-passed. The following procedure will make the MODE Switch High/Low rather than Auto/Low. This is acceptable since the Water Heater was originally approved without the AUTO Mode.

BY- PASSING THE HIGH/LOW SENSOR

- OPEN THE WATER HEATER DOOR
- LOOK TO THE BACK LEFT OF THE WATER HEATER
- THE SENSOR IS LOCATED ON THE INCOMING WATER LINE, IT IS A BI-METAL SWITCH/DISC THAT LOOKS LIKE A LIMIT SWITCH. IT HAS TWO (2) BLACK WIRES ATTACHED TO IT WITH FEMALE SPADE TERMNALS.
- DISCONNECT BOTH BLACK WIRES AND ATTACH TOGETHER. YOU CAN EITHER; USE A DOUBLE MALE CONNECTOR, MAKE A DOUBLE MALE CONNECTOR WITH 2 MALE CONNECTORS AND A WIRE CONNECTED BETWEEN THEM OR CHANGE ONE OF THE FEMALE CONNECTORS TO A MALE CONNECTOR.
- WE DO NOT RECOMMEND THE RETAIL CUSTOMER PERFORM THIS CHANGE.

ONCE THIS CHANGE IS COMPLETED THE INTERIOR MODE SWITCH “AUTO” SETTING IS NOW “HIGH MODE” AND IN LOW SETTING WILL STILL BE “LOW MODE”. NOTE - IN WARMER CLIMATES/CONDITIONS IT MAY BE NECESSARY TO PUT MODE SWITCH IN “LOW” MODE.