



GIRARD PRODUCTS. LLC.

Owner's Manual

Winter Use Device: WUD

For use only with GSWH-1



Helps Protect the GSWH-1 from Freezing Temperatures that may cause damage to the unit.

- **Installation**
- **Operation**
- **Service and Maintenance**

Installation and service must be performed by a certified installer or service agency.

The WUD is certified for use with the Girard Tankless Water Heater System in RV's constructed for use where freezing temperatures are likely.

CAUTION:

Read and Follow
all the Safety Rules
and Instructions.

Girard Products LLC, 1361 Calle Avanzado, San Clemente CA 92673 U.S.A
Owner's Manual Part No. 1GWH9403

Patent Pending

Winter Use Device - WUD

Installer/Customer Responsibilities

- Read and observe all safety rules
- Keep these instructions and warranty for future reference
- If this device is purchased as an aftermarket item. Installation and Service must be performed by a certified installer or service agency.
- Do not attempt installation as a Do-it-Yourself project
- Follow all applicable State and Local Codes



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death. Failure to follow these alerts could result in Fire, Explosion or even Death.



WARNING – FIRE OR EXPLOSION

WARNING: These instructions must be followed exactly, or a fire or explosion may result causing property damage, personal injury or death.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- **FOR YOUR SAFETY - WHAT TO DO IF YOU SMELL GAS**
 - **DO NOT** attempt to light any appliance.
 - **DO NOT** touch any electrical switch, or use any phone or radio in the vehicle.
 - **DO NOT** start the vehicle's engine or electric generator.
 - Evacuate all persons from the vehicle.
 - Shut off the gas supply at the gas container or source.
 - Contact the nearest certified service technician or gas supplier for repairs.
 - If you cannot reach a certified service technician or gas supplier, contact the nearest fire department.
 - **DO NOT** turn on the gas supply until the gas leak(s) has been repaired.
 - Installation and service must be performed by a qualified installer or service agency.



WARNING! PRODUCT DAMAGE

- Freezing of the internal pipes and Heat Exchanger of the Model GSWH-1 water heater will result in severe damage not covered by warranty. For this reason it is not advisable to use the GSWH-1 in the winter unless the RV is manufactured for use in the winter and equipped with the Winter Use Device. Consult your OEM and or dealer for additional information.



CRITICAL INSTALLATION WARNINGS

- Installation and service must be performed by a qualified installer or service agency. This product is not designed for Do-it-Yourself Installation.
- Install **ONLY** in recreation vehicles (RV's) that are manufactured and properly insulated for use in areas where the risk of freezing temperatures are likely. RV's are recreation vehicles designed as temporary living quarters for recreation, camping, or travel use having their own power or towed by another vehicle. This Winter Use Device is **NOT** designed for use with any other appliance or product.
- **DO NOT** modify the Winter Use Device in any way. This is dangerous and will void the warranty.

USA AND CANADA - FOLLOW ALL APPLICABLE STATE AND LOCAL CODES

IN THE ABSENCE OF LOCAL CODES OR REGULATIONS REFER TO CURRENT STANDARDS OF:

- Recreational Vehicles ANSI A119.2/NFPA 501C.
- CSA standard Z240 RV Series, Recreational Vehicle.
- Park Trailers A119.5
- National Fuel Gas Code ANSI Z223.1 and/or CAN/CGA B149 Installation Codes
- Federal Mobile Home Construction & Safety Standard, Title 24 CFR, part 3280, or when this Standard is not applicable, the Standard for Manufactured Home Installations (Manufactured Home Sites, Communities and Set-Ups), ANSI A255.1 and/or CAN/CSA-Z240 MH Series, Mobile Homes.
- National Electrical Code ANSI/NFPA No. 70 and/or CSA C22.1



IMPORTANT!

- For proper operation, the GSWH-1 water heater requires a minimum water flow of 1.0 Gallon per Minute (gpm) for each Hot Water faucet it supplies.

WINTER USE DEVICE (WUD)

Description

Girard Products LLC offers a Winter Use Device (**WUD - Part# 1GWHAF**) as an option for use with the GSWH-1. The Winter Use Device helps protect the GSWH-1 water heater when freezing conditions are likely to occur by automatically activating the GSWH-1 for a short period of time. This is known as the Anti-Freezing Mode.

Anti-freezing Mode

To prevent freezing of the water in the water heater itself, the **WUD** utilizes a Thermostat and a **12VDC** solenoid valve to create a demand for hot water whenever the ambient temperature falls below 38°F. This will cause the unit to automatically light for a short period of time IF the GSWH-1 **SWITCH** is set to the '**ON**' position, the system is **POWERED** with 12VDC (the **PUMP** must be **ON**), **GAS** is available and **FRESH WATER** from the holding tank is provided to the water heater. Upon reaching a temperature of approximately 50° F the unit will automatically shut off and return to a stand by condition.



IMPORTANT!

- **The Anti-freezing Mode** function of the **WUD** is designed to prevent only the water in the **GSWH-1** internal water heater pipes from freezing, **NOT** the entire plumbing system of the RV.



IMPORTANT!

The **Winter Use Device** will work only when:

- The RV can provide a sufficient supply of fresh water.
- The water heater is adequately powered with **12VDC** and switched **ON**.
- The RV Water pump is switched **ON** and is working properly.
- There is sufficient **LP** Gas in the **LP** tank for the water heater to operate and the gas system is turned **ON**.



IMPORTANT!

- The Winter Use Device warranty is conditional on proper use. Provided that all the above conditions are met, any applicable warranty replacement and/or repairs are limited to the Girard Tankless Water Heater system and no other part of the plumbing or other RV subsystems.
- All models of the Girard GSWH-1 Tankless Water Heater (with or without the **Winter Use Device**) must be winterized if the RV is not in use and/or in storage.

C. Components

The **WUD** device consists of **two components**:

- 1) a **Thermostat** and
- 2) a **Solenoid**

1. Thermostat

A thermostat mounted on the Heat Exchanger of the water heater (Figure 1) and connected internally to the 12VDC power. The power connection is made after the **Power ON/OFF switch located on the GSW-1**; **NOTE**: power is **NOT** supplied unless the switch is in the **ON** position.

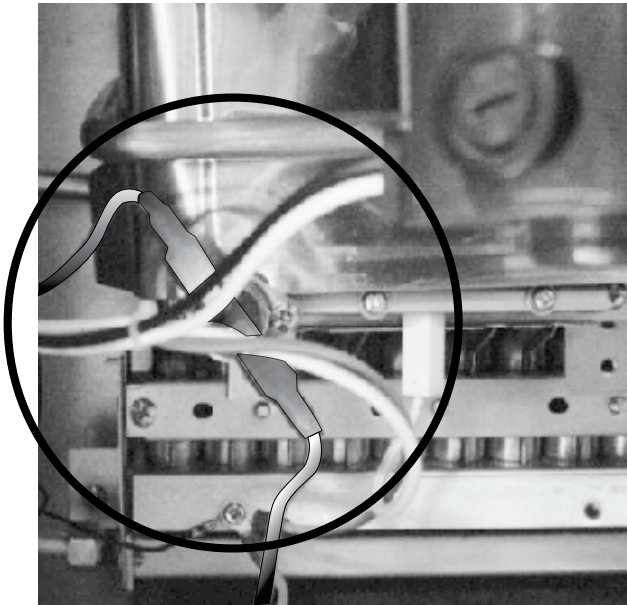


Figure 1

The output of the thermostat is provided at the electrical connections on the back of the water heater (Orange wire) to provide power to the Solenoid valve as needed (Figure 2).

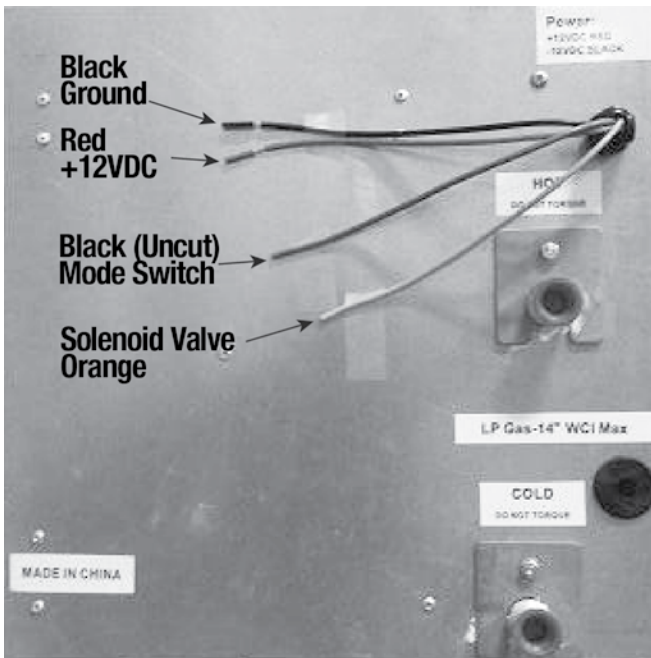


Figure 2

2. Solenoid Valve.

The Solenoid Valve may be located in either of two locations: **Option 1:** attached to the Hot Water Outlet on the back of the Water Heater (recommended) and plumbed both to the Hot Water System **AND** the fresh water tank; or **Option 2:** somewhere between the Water Heater and the Fresh Water Tank and plumbed to the system and the fresh water tank. Regardless of location, it must be plumbed properly (Note “IN” and “OUT” on Solenoid) to function correctly. Consult your OEM for the location if WUD was installed at time of production.

Note: In certain aftermarket installations access to the fresh water tank may not be possible. The solenoid out water line can be connected to a drain or routed to the ground but be aware that a patch of ice may form under the RV which may cause a hazardous condition.



CRITICAL INSTALLATION WARNING!

- If Option 2 is selected, the Solenoid Valve must be located where it is easily accessible should service be required. Girard will not be responsible for labor charges to locate and make accessible.

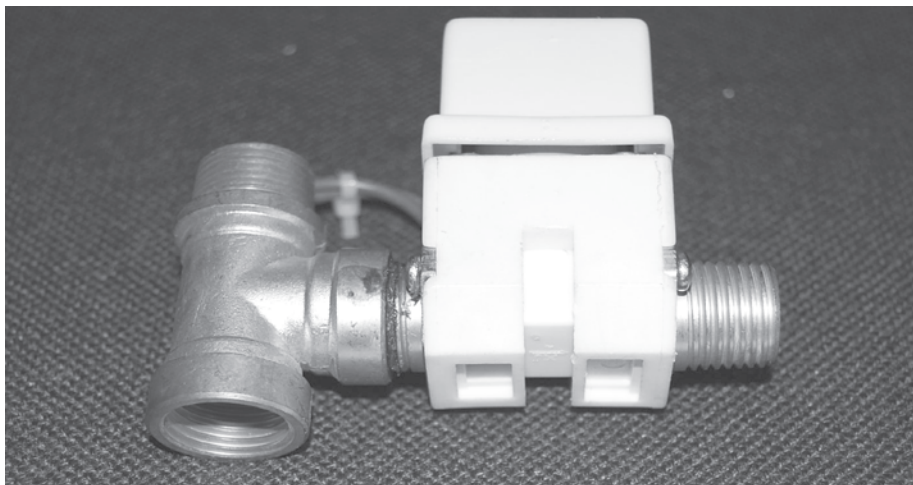


Figure 3

PEX tubing and connector may be used for the installation of the Solenoid Valve.

INSTALLATION, OPERATION, MAINTENANCE AND SERVICE



WARNING! PRODUCT DAMAGE!

- Freezing of the internal pipes and Heat Exchanger of the Model GSWH-1 water heater will result in severe damage not covered by warranty. For this reason it is not advisable to use the unit in the winter unless the RV is manufactured for use in the winter and equipped with this option. Consult your OEM for additional information.



WARNING! CAUTION!

- Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life
- Installation and service must be performed by a qualified installer, service agency
- This product is NOT designed nor intended for Do-it-Yourself Installation.

INSTALLATION



CRITICAL INSTALLATION WARNINGS!

- Installation and service must be performed by a qualified installer or service agency. This product is not designed for Do-it-Yourself Installation.
- Install **ONLY** in recreation vehicles (RV's) that are manufactured and insulated for use in areas where the risk of freezing temperatures is likely. RV's are recreation vehicles designed as temporary living quarters for recreation, camping, or travel use having their own power or towed by another vehicle. The Winter Use Device is **NOT** designed for any use with any other appliance or product.
- **DO NOT** modify the Winter Use Device in any way. This is dangerous and will void the warranty.

The following instructions apply to the most common type of installation for Girard Products Winter Use Device. Consult with Girard Products, LLC technical support or engineering department if you have any additional questions regarding your specific installation/application.

Plumbing Installations

Option 1 (Recommended)

The Solenoid is located on the back of the GSWH-1, attached directly to the water heater. With this option the Solenoid is provided with a T-Fitting attached.

1. Attach one side of the T-Fitting directly to the GSWH-1 Hot Water Outlet.
2. Plumb the other side of the T-Fitting to the Hot Water System.
3. Plumb the OUTLET side of the Solenoid to the Fresh Water Tank
4. Check for leaks

Option 2

The Solenoid is located somewhere between the water heater and the fresh water tank.



CRITICAL INSTALLATION WARNINGS!

- If Option 2 is selected, the Solenoid Valve must be located where it is easily accessible should service be required. Girard will not be responsible for labor charges to locate and make accessible.

1. Select a suitable location (Figure 5.) to install the Solenoid Valve, close to the **Fresh Water Tank** and to 12V power wires.
2. Locate the **HOT** water line closest to this location.
3. Insert a Tee in the line and connect a hot water line extension to the selected location.
4. Insert a Tee to the fresh **water tank** and connect the **“OUT”** port of the Solenoid Valve to the side port.
5. Connect the hot water line extension to the **“IN”** port of the Solenoid Valve.
6. **Check for leaks**

Note: In certain aftermarket installations access to the fresh water tank may not be possible. The solenoid out water line can be connected to a drain or routed to the ground but be aware that a patch of ice may form under the RV which may cause a hazardous condition.

B. Electrical

The wiring of the solenoid valve may be carried out with either 16AWG or 18AWG wires. Simply bring an extension of the orange wire from the Water Heater to the location of the solenoid valve and mount the orange wire on the Solenoid "IN" side electrical terminal and connect a ground wire to the Solenoid "OUT" side electrical terminal. The current draw of the valve at 12VDC is less than 350mA.

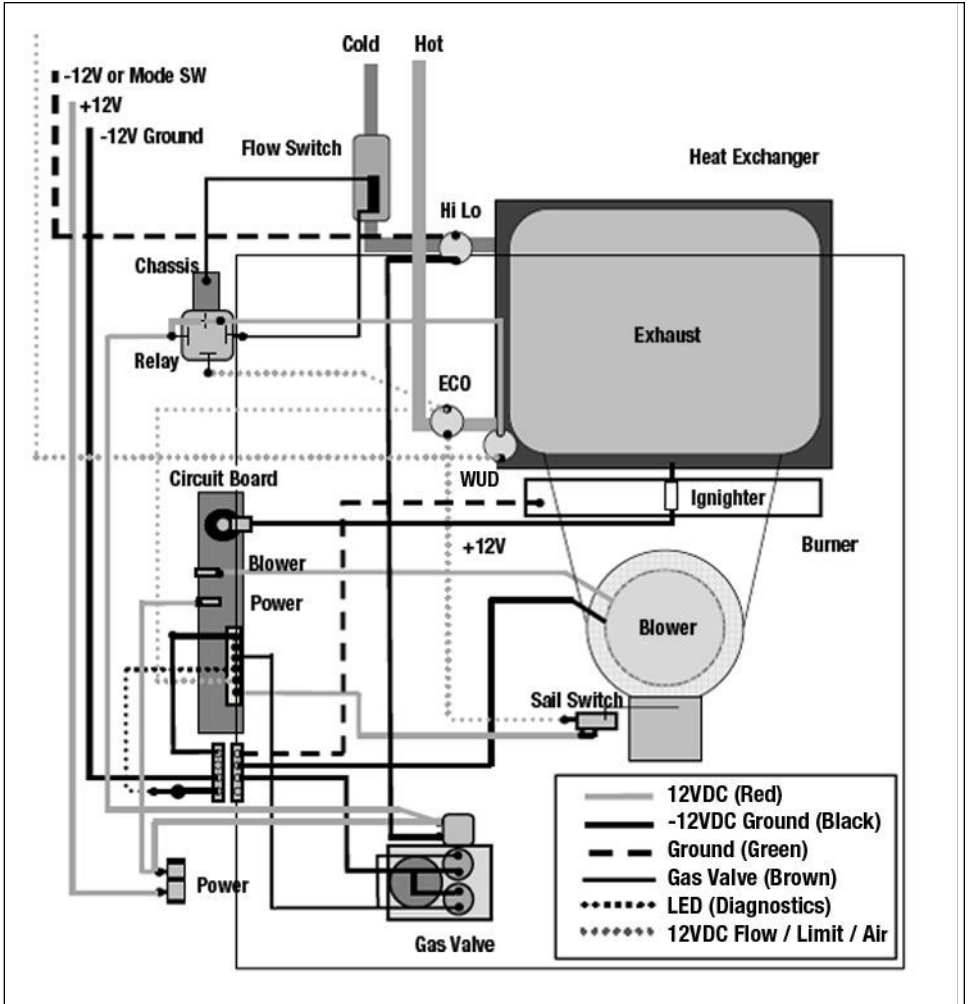


Figure 10

Operation

Anti-freezing Mode

The operation of the Anti-Freezing Mode in the **Winter Use Device (WUD)** is **TOTALLY AUTOMATIC**. IF the **GSWH-1 SWITCH** is set to the '**ON**' position, the system is **POWERED** with 12VDC (the **PUMP** must be **ON**), **GAS** is available i.e., turned **ON**, and **FRESH WATER** from the holding tank is provided to the water heater. Whenever the temperature of the thermostat mounted on the Heat Exchanger reaches a temperature of 38°F, the thermostat will close and the Solenoid valve powered through the Orange wire will open. This creates a demand for water which will cause the Water Heater to start. The Water Heater will operate until the thermostat reaches a temperature over 50 °F when it will open, causing the Solenoid Valve to close and the Water Heater to shut off. Typically the Water Heater will run for approximately 45 seconds.



NOTICE!

- The RV can provide a sufficient supply of fresh water.
- The water heater is adequately powered with 12VDC; and switched **ON**.
- The RV Water pump is switched **ON** and is working properly.
- There is sufficient LP Gas in the LP tank for the water heater to operate and the gas system is turned **ON**.

Maintenance

No special maintenance of the WUD components is required.

If you wish to add the Winter Use Device to your unit (Part#1GWH) please consult with your RV manufacturer to ensure your RV is properly insulated and designed for winter use.

Girard Products Winter Use Device warranty is conditional on proper use. Provided that all the conditions above are met, any applicable warranty replacement and/or repairs are limited to the Girard Tankless Water Heater and no other part of the plumbing or other RV subsystem.

All models of the Girard Tankless Water Heater (with or without the **Winter Use Device** must be winterized if the RV is not in use and/or in storage).

GIRARD PRODUCTS, LLC WUD (Winter Use Device) TWO YEAR LIMITED WARRANTY

Girard Products, LLC warrants to the original owner (purchaser) that this product will be free of defects in material or workmanship for a period of two years from the original date of purchase whether or not actual usage begins on that date. Girard Products liability hereunder is limited to the replacement of the part(s), repair of the part(s), or replacement of the product or part(s) with a reconditioned or new product/part(s) at the discretion of the Girard Products. This warranty is void if the product has been damaged by accident, unreasonable use, misuse, neglect, tampering or other causes not arising from defects in material workmanship. This limited warranty extends to the original owner of the product only, is not transferable and is subject to the following conditions:

1. For a period of two years from the date of purchase, Girard Products will replace any parts that are found defective and will pay a warranty service allowance directly to the **recommended** Girard Products Water Heater Service Center at rates mutually agreed upon between Girard Products and its recommended service centers. As an owner, you are required to provide proof of purchase date through a Bill of Sale or other appropriate record.
2. Replacement parts will be shipped FOB the shipping point within the Continental United States, Alaska and Canada to the recommended service center performing such repairs. **All freight, shipping and delivery costs shall be the responsibility of the owner.**
3. Service calls to customer's location are not considered part of these charges and are, therefore, the responsibility of the owner.
4. Before having warranty repairs made, confirm that the service center is a recommended service center for Girard Products, LLC Water Heaters. **DO NOT PAY THE SERVICE CENTER FOR WARRANTY REPAIRS WITHOUT PRIOR APPROVAL FROM GIRARD PRODUCTS, LLC; SUCH PAYMENTS WILL NOT BE REIMBURSED.**
5. The defective parts (or water heater) become the property of Girard Products, LLC and may need to be returned to Girard Products Technical Support Department. Girard Products reserves the right to examine the alleged defective part or water heater. All returned parts and/or product must be individually tagged with the water heater's model, serial number, date of installation and detailed explanation of defect.
6. This warranty does not cover the following:
 - WUD installation on any other brand of water heater.
 - WUD installation on the Girard Model GSWH-1 Water Heater in an RV that is not designed for Winter Use (check with your RV Manufacturer to ensure your RV is designed for Winter Use before installing the WUD).
 - Failure to have the WUD professionally installed.
 - Insufficient or no supply of Fresh Water from the Fresh Water Tank or Shore Water Connection.
 - Insufficient or no supply of 12 volt power (switch must be in the ON position to function).
 - Insufficient or no supply of LP Gas.
7. This warranty applies only if the unit is installed according to the installation instructions provided and complies with local and state codes.
8. The warranty period on replacement parts (or water heater) is the unused portion of the original warranty period or ninety (90) days, whichever is greater.
9. This limited warranty does not apply to damage caused by accident, abuse, misuse (including damage caused by service performed by anyone who is not a Girard Products LLC recommended installer), misapplication, alterations, modifications, water damage or freezing.
10. **THIS WARRANTY AND THE REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES AND CONDITIONS, WHETHER ORAL OR WRITTEN, EXPRESS OR IMPLIED. GIRARD PRODUCTS LLC SPECIFICALLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IF GIRARD PRODUCTS LLC CANNOT LAWFULLY DISCLAIM IMPLIED**

WARRANTIES UNDER THE LIMITED WARRANTY, ALL SUCH WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

NO RESELLER, AGENT, OR EMPLOYEE IS AUTHORIZED TO MAKE ANY MODIFICATION, EXTENSION OR ADDITION TO THIS WARRANTY. GIRARD PRODUCTS LLC IS NOT RESPONSIBLE FOR DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, OR UNDER ANY OTHER LEGAL THEORY, INCLUDING BUT NOT LIMITED TO LOST PROFITS, DOWNTIME, INCONVENIENCE, GOODWILL, EXPENSES FOR TRAVEL, LODGING, DAMAGE TO OR REPLACEMENT OF EQUIPMENT AND PROPERTY.

11. Some states and provinces do not allow the exclusion or limitation of incidental or consequential damages or exclusion or limitations on the duration of implied warranties or conditions, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary by state or province.

12. Replacement parts purchased outside of the original warranty carry a 90 day limited warranty.

13. Girard Products provides no warranty for products installed or warranty claims originating outside the continental United States, Alaska, Hawaii and Canada.

Service

The Winter Use Device is designed for use only with the Girard Tankless Water Heater. It is manufactured to the highest standards and is designed to provide years of trouble free use, but in the event you require service please follow the steps outlined below. Remember as an owner, you are required to provide proof of purchase date through a Bill of Sale or other appropriate record.

1. Contact Girard Products Water Heater Service Center or call the Girard Products Technical Support Department at 949-259-4024 or visit our website at www.greenrvproducts.com for a local recommended service center.

2. Call the service center, describe your problem and make an appointment, if necessary. **SERVICE CALLS TO THE CUSTOMER LOCATION ARE THE RESPONSIBILITY OF THE OWNER. DO NOT PAY THE SERVICE CENTER FOR WARRANTY REPAIRS WITHOUT PRIOR APPROVAL FROM GIRARD PRODUCTS, LLC; SUCH PAYMENTS WILL NOT BE REIMBURSED.** Be sure to provide purchase documentation regarding your Girard Products.

The Girard Products Winter Use Device is designed for use with the Girard Tankless Water Heater in recreation vehicles designed specifically for winter use. Any other use, unless authorized in writing by the Girard Products Engineering Department, voids this warranty.