



LPG GAS ON DEMAND Water Heater

Certified to ANSI Z21.10.3 / CSA4.3

Model 550-EC

3428 Hauck Road Suite G Cincinnati, OH. 45241

Phone: 513-641-4446 \* 800-934-9690

Fax: 513-641-0733 www.precisiontemp.com

This water heater design has been certified to ANSI Z21.10.3 / CSA 4.3 standards by the IAPMO. This water heater is not for use in space heating applications.

#### SERVICE CALLS & QUESTIONS

Locations and phone numbers of qualified Service Centers can be found at our website www.precisiontemp.com or call 800-934-9690 Ext. 110 to obtain service information.

WARNING: If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- -Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- WHAT TO DO IF YOU SMELL GAS
  - Evacuate all persons from the vehicle.
  - Shut off the gas supply at the gas container or source.
  - 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.
  - Contact the nearest gas supplier or qualified service technician for repairs.
  - If you cannot reach a gas supplier or qualified service technician, 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, service agency, OEM or the gas supplier. **Installation, Operation and Maintenance** Effective 3/23

#### **CRITICAL INSTALLATION WARNINGS**

- All combustion air must be supplied from outside the RV, and all products of combustion must be vented to outside the RV.
- DO NOT vent water heater with venting system serving another appliance.
- DO NOT vent water heater to an outside enclosed porch area.
- · Protect building materials from flue gasses.
- · DO NOT modify water heater in any way.
- DO NOT alter water heater for a positive grounding system.
- DO NOT HI-POT water heater unless electronic ignition system (circuit board) has been disconnected.
- DO NOT use battery charger to supply power to water heater even when testing.

USA and Canada – Follow all applicable state and local codes. In the absence of local codes or regulations, refer to the current standards of:

- Local codes or, in the absence of local codes, the National Fuel Gas Code, ANSI Z223.1/NFPA 54 and/or CSA B149.1, Natural Gas and Propane Installation Code.
- Local codes or, in the absence of local codes, the Standard on Recreational Vehicles, NFPA1192 and/or CAN/CSA-Z240 RV.
- CUTOUT Requirements
   OEM and aftermarket Unit can be installed in PrecisionTemp, Suburban, and Girard openings. Unit can also be installed through the wall from exterior, or prior to erecting wall into place at OEM manufacturing facility. Rough opening: 14.25"min 16.58" max High

13.5"min. – 17.25" max Wide 17"min Deep

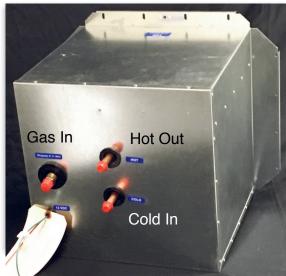
Rev. 3/23 1.

### **GENERAL INSTALLATION**

The following instruction describes the most common type of installation for the water heater. However, there are other approved methods such as baggage compartment and flush mounting. Consult your Field Auditor, Account Manager, or the PrecisionTemp Service Department if you have additional questions.

These steps assume the proper location has been determined and is being installed at the OEM prior to erecting the walls. NOTE: Parts bag that includes corner filler brackets and optional water fittings.

- 1. Locate the water heater on the floor of the coach at pre-determined location. The unit must be permanently supported at the same level as the bottom of the sidewall cutout (by the floor or a raised floor).
- 2. To install the unit on carpeting, assure the addition of metal or wood under the unit is added and extends a minimum of three inches beyond the width and depth of the appliance enclosure. Minimum clearance requirement is zero (except front door for proper operation and service).
- 3. If risk of future connection leakage and damage of adjacent area is of concern, install a drain pan under the unit with drainage to outside of vehicle.
- 4. Connect plumbing to water lines taking care to make correct "COLD" and "HOT" orientation. Connect 3/8" FM flared LP gas line to 3/8" M flared gas fitting.
  - Allow flexibility in water and gas lines so the unit can be pulled through the sidewall opening at lease one inch past the skin, allowing for sealing step.
  - b. Assure the water and gas line grommets continue to be intact and properly inserted in the case holes, with no gaps or openings where the line passes through the case.



**Rear View** 

# A CAUTION PRODUCT DAMAGE

All connections must be made using TWO (2) wrenches to avoid twisting and damaging lines. Damage voids the Warranty!

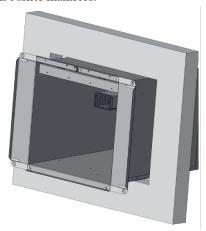
**5.** Cut the opening or orient the pre-fabricated opening. Frame with 2" x 2" lumber (or equivalent).

#### Installation in water heater opening

- 6. To **prevent water leaks**, caulk thoroughly around the backside of the flanges. Caulk the perimeter of the opening (or substitute 1" x 3/8" Butyl Tape).
- 7. Push the unit to the wall against the caulking and secure the corner brackets behind the unit flanges but snug to the corner of the enclosure. Complete the installation by inserting #8 screws in all the flange holes. An "air tight" seal must be the final result.
- 8. Place the access door on the lower flange pins aligning the holes in the bottom of the door. Carefully close the top edge of the door, being careful to align the flue opening with the flue tube and screw in the fastener.
- 9. The appliance must be <u>disconnected</u> from the gas supply piping system during any pressure testing of the system at test pressures in excess of ½ psi. The appliance must be <u>isolated</u> from the gas piping system during any pressure testing at test pressures equal to or less than ½ psi. Pressure inlet to valve, 13"
- 10. Turn on the gas and check the water heater and all connections for gas leaks with a leak detecting solution.
- 11. Turn on water supply line and check for water leaks.

#### W.C. maximum, 11"

W.C. minimum. Pressure at outlet of valve is factory set at 10: Burner manifold pressure is W.C. 8.9" W.C. +/- .2" at tap on burner manifold.



# MARNING FIRE AND/OR EXPLOSION

 DO NOT use matches, candles or other sources of ignition when checking for gas leaks.

#### PRESSURE RELIEF VALVE

THIS VALVE IS A SAFETY COMPONENT AND MUST NOT BE REMOVED FOR ANY REASON OTHER THAN REPLACEMENT. This water heater is equipped with a pressure relief valve that complies with the standard for Relief Valves and Automatic Gas Shutoff Devices for Hot Water Systems, ANSI Z21.22 / CSA 4.4. This valve protects against excessive water expansion only. This water heater has separate and dedicated protection for excessive heat.

If you use a discharge line, do not use a reducing coupling or other restriction smaller than the outlet of the relief valve. Allow complete drainage of both valve and line.

### FOR REPLACEMENT PARTS: Contact PrecisionTemp

- DO NOT install anything less than a pressure relief valve certified by a nationally recognized testing laboratory that maintains periodic inspection of product of listed equipment or materials, as meeting requirements for Relief Valves and Automatic Gas Shutoff Devices of Hot Water Supply Systems, ANSI Z21.22 / CSA 4.4. Valve must have maximum set pressure not to exceed 100 psi.
- Înstall replacement valve into opening provided and designated for this purpose on water heater.
- Installation must conform with local codes or in the absence of local codes, Standard on Recreational Vehicles, ANSI A119.2 or CAN/CSA-Z240RV.

#### WIRING INSTRUCTIONS

The heater must be connected to fully rectified 12 VDC power supply rated at 5 amps. Take care to assure the RED wire is connected to (positive) +12 VDC supply lead and the Green wire is connected to (negative) -12 VDC supply lead. Reversing polarity or connecting to AC power will damage the equipment which is not covered by warranty.

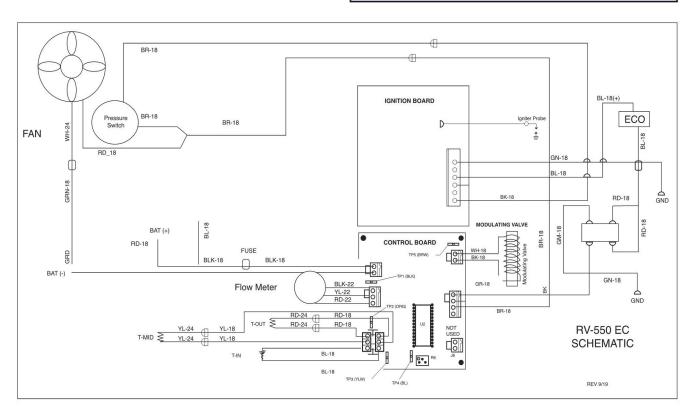
The appliance, when installed, must be electrically grounded in accordance with local codes or, in the absence of local codes, with the *National Electrical Code, ANSI/NFPA 70* and/or the *CSA C22.1, Canadian Electrical Code.* 

#### **CAUTION ELECTRICAL DAMAGE**

Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

# **△** WARNING FIRE AND/OR EXPLOSION

 DO NOT use matches, candles or other sources of ignition when checking for gas leaks.



### **HOW TO OPERATE YOUR WATER HEATER**

# **A** CAUTION

#### FIRE

· Do not smoke or have any flame near an open faucet.

If water heater has not been used for more than two weeks, hydrogen gas may form in water line. Under these conditions to reduce the risk of injury, open hot water faucet for several minutes at kitchen sink before you use any electrical appliance connected to hot water system.

If hydrogen gas is present, you will probably hear sounds like air escaping through the pipe as water begins to flow.

- 1) Pressurize the water system by turning on pump or city water pressure.
- 2) Purge all air from the system by turning on the faucets until a steady stream of water flows.
- 3) Turn on the 12V DC power supply.
- 4) Turn on the LP supply at the tank and the manual gas valve (if installed). The water heater will remain dormant until a water tap is opened and the heater senses water flow of at least 0.5 GPM.
- 5) Turn on the hot water tap to full open. The heater will fire up within several seconds and hot water will flow from the tap in the time it takes to traverse the lines from the heater to the faucet. (If this is the first usage, you may have to turn the water on and off several times to purge the LP gas lines of air. If the heater fails to light or the lockout lamp (optional) illuminates, turn the power switch OFF, then ON to reset the ignition control.
- 6) To shut off the water heater, shut off the water. Shut off power at remote switch or breaker.
- 7) Should overheating occur or the gas supply fail to shut off, turn off the "ON/OFF" power switch.

### A Note About "Navy Showers" When Dry Camping

It is recommended to take a shower just like you would at home. That is, leave the water running through the entire shower. The hot water system is designed to deliver a continuous, comfortable flow of hot water and that's the way it works best.

Shutting off the shower with the showerhead button wastes water. Each time this is done, the showerhead "trickles", filling the hot water line with cold water. This cold water has to be purged from the line each time the showerhead is turned back on. Tests have shown that this will not save water and sometimes uses more water than leaving the shower run continuously.

#### **General Information and Maintenance**

- Periodically inspect the venting systems to assure that it is clean with no obstruction.
- Keep appliance area clear and free from combustible materials, gasoline and other flammable vapors and liquids.
- LPG and Water systems must be turned on
- Have gas pressure tested periodically. (should be set at 11 inches of water column with three appliances running)
- Drain water at regular intervals (at least one time during the year)
- Drain water heater before storing the RV or Tiny home for the winter or when the possibility of freezing exist.
- Keep vent and combustion air grill clear of any obstructions.

#### **ELECTRONIC IGNITION MAINTENANCE**

- The water heater comes factory-equipped with a fused circuit board, which will protect the circuit board from wiring shorts. If the fuse should activate, the water heater will not operate. Before replacing the fuse, check for a short external to the board. Once the short is corrected replace the 5 amp fuse with a standard ATO style fuse. Do not install a fuse larger than 5 amps.
- If the fuse is good and the unit is inoperative, check for excessively high voltage to the unit (more than 14 volts).

### Winter Operation and Winterizing Water

This heater is equipped with freeze protection that helps prevent freezing under most conditions. In order for it to function, 12 VOLT AND GAS SUPPLY MUST REMAIN TURNED ON. This allows the burner to fire and electric elements to protect the system. Any freezing of the water heater or other plumbing components can cause severe damage that is not covered by warranty.

### Winter Traveling Operation:

In some areas all LPG appliances must remain off when coach is in motion. If this is the case, drain heater as follows:

- 1. Turn off water pump and the power and gas to the heater. Open the pressure relief valve by lifting the handle to a 90° position from the normal position.
- 2. Open at least one hot and cold water tap in the coach. This should drain the system.

### Winterizing Procedure:

Before storing the system for the winter, the plumbing system must be winterized. This can be done by either of the following methods:

- All water should be drained from the system. To do this, open one tap at a time using compressed air to purge the system of all water.
- Recommendations of your coach manufacturer should be followed. The water system can be filled with RV, nontoxic anti-freeze. When you see the anti-freeze coming from the hot water tap, the heater is protected.

# RV-550- EC and NSP-550-EC Component Layout



- 1. Hall Sensor Flow Meter
- Power Vent
- 3. Fluing Vacuum Switch
- 4. Combination Gas Valve
- 5. Igniter / Proofing Probe
- 6. Manifold and Burner
- 7. Finned Tube Heat Exchanger
- 8. Flue Hood
- 9. Flue Pipe
- 10. T-In Thermistor
- 11. T-Mid Thermistor
- 12. T-Out Thermistor
- 13. 165°F ECO
- 14. 100 PSI Pressure Relief Valve

## **NOT PICTURED**

- 15. Gas Modulation Valve
- 16. 12 VDC Relay
- 17. Control Board
- 18. Direct Spark Ignition Board

## **NOTE**

COMPONENT LAYOUT OF RV-550-EC IS IDENTICAL TO NSP-550-EC EXCEPT FOR FLUING ORIENTATION WHICH FLUES THROUGH TOP/FRONT RATHER THAN BOTTOM.



### 550-EC OPERATING INSTRUCTIONS

The 550-EC is designed to give a continuous flow of hot water as long as required and maintain temperature within the capacity of the heater (85°F temperature rise at one GPM). The temperature on your water heater has been factory set to approximately 120°F. It is not recommended that you change this setting. Doing so could result in dangerously hot temperatures that could result in severe injury. If it is necessary to change the setting refer to the Service Manual or call PrecisionTemp.

The heater is dormant until a hot water tap is opened. The heater will not fire at very low flows; i.e., under 0.5 GPM. During normal operation the 550-EC will have a steady flashing green LED light on the green control board. A red flashing LED indicates a self diagnostic trouble code; refer to the Service Manual or call PrecisionTemp for assistance. When adjusting water temperature it is best to start with hot only and slowly add cold into the mix until the desired temperature is reached.

NOTE: When using an "on/off" button on a showerhead or an outside wash down box, always turn off the hot and cold water valves when finished. Not doing so will result in cold water bleeding into the hot water system. This will either cause the water heater not to ignite or result in alternating warm and cold water.

## **Dry Camping**

RV showerheads are designed to drip when turned off and will allow the hot water line to be filled with cold water. When showering it is recommended that you leave the water running as you would at home. You will not run out of hot water and you will not waste additional water waiting for the cold water to purge from the water line every time the water is turned back on.

## **Winter Operation**

When operating the 550-EC in cold climate conditions the flow of water may have to be slightly restricted or slowed at the faucet to maintain the set temperature of 120 degrees.

NOTE: Your 550-EC is equipped with the Cold Weather Protection Package. 12vdc power and propane must be left on to protect the 550-EC from freezing in cold climate conditions.

Winter Driving Instructions: <u>Under no circumstances should you travel</u> <u>in freezing conditions without first draining water from the unit.</u> Follow the winter driving draining instructions prior to driving in freezing temperatures. Freezing is not covered under the product warranty.

# **550-EC Water Heater**

# **Winter Driving Draining Instructions**

- 1. Turn off water supply.
- 2. Open all hot water faucets.
- 3. Remove the 550-EC door and open the Pressure Relief Valve by moving the lever to the open position.
- 4. The water lines and the 550-EC will now drain.
- 5. When all water is drained from the hot water lines and the 550-EC Flowmeter is empty reinstall the water heater door. Leave the Pressure Relief Valve and hot water faucets open while driving.
- 6. The heater is now safe to drive in freezing temperatures.
- 7. Once your destination is reached close the 550-EC Pressure Relief Valve. Turn on water supply and close all hot water faucets once air is purged from the lines.



### **Routine Maintenance**

All faucet aerators and showerhead screens should be cleaned regularly. It is recommended that the 550-EC be inspected by a qualified service technician at least once a year. Particular attention should be paid to the following:

- 1. Inspect the air inlet openings and flue area to be clear of any debris or obstructions, (leaves, bug nests, spider webs, etc.)
- 2. Check that the heater mounting is secure to the coach and there are no areas for potential water leaks.
- 3. Open the cover of the heater and inspect for debris or obstructions under the burner or in flue hood.
- 4. Visually inspect wiring. Be sure there is no chafing of the insulation. Be sure that the direct spark ignition cable (black) wire is secured to the spark probe located at the lower right heat exchanger area.
- 5. Check for soot around the flue. Soot is a sign of incomplete combustion. If you find soot a qualified service technician should be notified to correct the problem.
- 6. The pressure relief valve should be manually activated once a year by moving the lever on the top of the valve 90°while power is turned off. Never perform this operation while the burner is operating or scalding could occur. Never plug the pressure relief valve. If the valve is actuating too frequently contact PrecisionTemp or replace valve.
- 7. Unplug all connectors and reconnect with power turned off. Inspect and clean corrosion from the ignition cable/spark probe connection and the ground wire connection.

**NOTE:** Should overheating occur or the gas supply fails to shut off, turn off gas valve at the supply tank. Immediately call a qualified service technician

WARNING: Always turn off the 12-volt power supply to the heater while the vehicle is moving and during any fueling operations. Operating this water heater or any other ignition source during fueling could cause a fire or explosion, which could result in serious injury or death. Trying to produce hot water while driving or moving may damage the 550-EC electrical components and cause a fire.

## IMPORTANT COLD WEATHER PROTECTION INFORMATION

WARNING: Do not disconnect the electrical supply or turn off the propane supply when temperatures are near or below freezing. The 550-EC freeze protection system will not work if the electrical power source or propane is disconnected. Your heater is equipped with the cold weather protection package (call PrecisionTemp for details).

**WARNING:** Under no circumstances should you travel during freezing conditions without first <u>draining</u> water from the 550-EC.

## **WINTERIZING**

## **Draining**

- 1. Turn off the power and gas supply to the 550-EC.
- 2. Turn off main water supply.
- 3. Open all hot water taps. (bathroom, kitchen, laundry, etc.)
- 4. Drain all water from plumbing lines.
- 5. Open pressure relief valve to drain remaining water from the 550-EC flowmeter and heat exchanger.
- 6. After completely draining the water system the heater can be winterized like any other RV by purging remaining water out of water lines.

**DO NOT** evacuate heater using compressed air, let the heater gravity drain by opening the Pressure Relief Valve, once completed leave the valve in the open position. The other method is to pump RV antifreeze solution through the hot and cold water system; no bypass valve is required.

PrecisionTemp
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service@precisiontemp.com

#### TROUBLESHOOTING

Most problems are easily remedied by consulting the trouble-shooting guide. If problems still persist, contact PrecisionTemp or an authorized service center. Only a qualified technician should do any work involving the gas system.

A periodic visual check of the burner flames should be done by observing the flame through the "spark probe opening" in the heat exchanger. There should be blue flame with minimum or no yellow tipping. There should be nothing obstructing the flow of combustion and ventilation air.

Burner maintenance should be performed by a PrecisionTemp Authorized Service Technician.

NOTE: The heater is dormant until it senses water flow. When a water tap is turned on to at least .5 GPM the burner will fire until water flow is turned off and the heater again goes dormant.

### **Heater Does Not Come On When The Water is**

- 1. Be sure power is on and panel breaker is not turned on. (Power vent not running) tripped.
- 2. Check electrical contacts. Be sure the connector is plugged into board. Using a voltmeter, check for 12Volts on this connector.
- 3. Be sure all electrical connectors are secure and the polarity is correct. (Red wire to positive terminal).
- 4. Fuse in power wire might be blown. Replace fuse.
- 5. Locate the ECO, high temperature switch (red and purple wires) at the upper right hand of the heat exchanger. Check for open circuit condition.
- 6. Be sure there is a battery in the system. Never connect the heater directly to a power converter. Some converters have circuits that are not pure DC. This can cause malfunctions or damage to the heater and is not covered by warranty.
- 7. Be sure that no water-mixing valve has been left in the on position, using the showerhead as a shut off. This will permit water to bypass the water heater and bleed cold water into the hot water system. Always turn off both hot and cold water valves after using.
- 8. Be sure that the bypass valve at the water plumbing connections is in the "off" position. An open valve can also permit water to bypass heater, causing it not to fire.

# There Is No Ignition When Water Is On (Power vent is running)

- 1. Be sure the gas valve at the tank is "On", there is gas in the tank and the gas line is purged of all air.
- 2. Be sure that water flow is at least .5 gallon per minute.
- 3. Check that the ignition wire is plugged into the spark tower on the ignition control and is not touching anything else.
- 4. Check flame site hole to see if igniter is sparking from the probe to the burner. Contact PrecisionTemp or your nearest authorized service representative.
- 5. Check that there are no cuts or breaks in the wire. Align it so that it is not in contact with anything but the terminal.
- 6. Be sure that the power vent fan has 12 volts to it when there is water flowing and there are no obstructions in the flue pipe.
- 7. Safety pressure switch may be out of adjustment. Contact PrecisionTemp or your nearest authorized service representative.

# No Water Flows From Tap When Tap is Turned on.

- 1. Be sure that water supply is turned on and that there are no obstructions.
- 2. Check by pass valve

# **Burner Turns On But Temperature Fluctuates Erratically.**

- 1. May be caused by excessive restriction at the water outlets, showerheads, aerators or water strainers. These should be cleaned and any showerhead flow restrictor removed.
- 2. If temperature fluctuates as the pump cycles, a pressure accumulator tank is needed in the water system. If you have an accumulator tank, check to see if it has become filled with water. If it has, drain it so that it contains air only.

# Heater Comes On But Rapidly Cycles On And Off.

- **1.** Water flow is too low. Increase flow at a tap. Clean all aerators and shower head screens to assure at least .5 GPM of water flow
- Water pump is not functioning properly. Repair or replace pump.
- 3. If the heater cycles as the pump cycles, a pressure accumulator tank is needed in the water system. If you have an accumulator tank, check to see if it has become filled with water. If it has, drain it so that it contains air only.
- 4. Air is in the water line. Bleed air by turning on all water taps.
- 5. Hot and cold water lines connected to heater are reversed. Correct by reversing their positions.

### **Burner Ignites But Water Temperature Is too low**

- The water flow may be so high as to exceed the capacity of the heater particularly if your supply water is very cold. Slow the water flow.
- 2. The gas pressure may be too low. Be sure the gas flow control valve is in full "on" position.
- 3. Check the gas pressure while the water is on at full flow. The LPG pressure should be the "manifold pressure" as shown on the specification label while the heater is running. A gas-testing gauge should be installed on the manifold tap so that it may be read while heater is running. If it is too low, turn up the gas regulator to the proper pressure. This should only be done by a qualified technician.
- 4. The gas flow may be too low due to improper gas line diameter (under 3/8 inch outside diameter). The gas line may be excessively long (over 20-30 feet) or the on/off solenoid at the tank (if you have one) may have an orifice that is too small (under 3/16th of an inch).
- 5. Check the heater door louvers and flue pipe for airflow obstructions and clean.

# Water Temperature Is Too Hot or No Temperature Control.

- 1. Fuel tank regulator is set too high and manifold pressure as described above. Have the regulator checked by a qualified technician.
- 2. Contact PrecisionTemp Technical Support.

# Low Heat Rise and Excessive Water Flow Is Required To Trigger Water Heater

If you find that your heater requires excessive flow to activate it (much over .5 gallon per minute), it is likely that you have cold water bleeding into the hot water side of your water system.

- 1. Check that valves and faucets are closed when not in use. If there is an on/off button on your showerhead, always turn the water valves off after the shower to prevent cold water from bleeding into the hot water system. This will keep the heater from functioning properly.
- 2. Be sure that the bypass valve at the water plumbing connections is in the "off" position. An open valve can also permit water to bypass heater, causing it not to fire.

If any problem persists, contact an authorized service center or *PrecisionTemp*.

# PrecisionTemp, Inc. WATER HEATER LIMITED WARRANTY

PrecisionTemp, Inc warrants to the <u>original owner</u> and subject to thebelow mentioned conditions, that this product will be free of defects in material or workmanship for a period of two years from the original date of purchase. PrecisionTemp's liability hereunder is limited to the replacement of the product, repair of the product, or replacement of the product with a reconditioned product at the discretion of the manufacturer. This warranty is void if the product has been damaged by accident, unreasonable use, neglect, tampering or other causes not arising from defects in material workmanship.

# This warranty extends to the original owner of the product only and is subject to the following conditions:

- For two years from the date of purchase, PrecisionTemp will repair or replace any part defective in material or workmanship. Some warranty parts may require a prepay before shipping. Once the defective part is returned and tested the prepay charge may be refunded based on findings.
- This warranty includes labor charges pre-authorized by PrecisionTemp, required to remove and replace the part. Service/Travel calls to the customers location are not considered part of these charges and are therefore the responsibility of the owners.
- 3. This warranty does not cover the following items classified as normal maintenance:
  - a. adjustment of gas pressure
  - b. cleaning or replacement of burner orifices
  - c. cleaning or adjustment of burner assembly
  - d. cleaning or adjustment of flue
  - e. adjustment of pressure relief valve
  - f. adjustment of spark probe

# 5. In the event of a warranty claim, the owner must contact, in advance PrecisionTemp Service Department at 800-934-9690 ext. 110.

Return parts (or water heater) must be shipped to PrecisionTemp "Prepaid". The defective parts (or water heater) become the property of PrecisionTemp and must be returned to the Service Department, PrecisionTemp, Inc. 3428 Hauck Rd. Cincinnati, OH 45241

- 6. This warranty applies only if the unit is installed according to the installation instructions provided and complies with local and state codes.
- 7. 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.

- 8. Damage or failure resulting from misuse (including failure to seek proper repair service), misapplication, alterations, water damage, or freezing are the owner's responsibility.
- 9. PrecisionTemp does not assume responsibility for any loss of use of vehicle, loss of time, inconvenience, expense for gasoline, telephone, travel, lodging, loss or damage to personal property or revenues. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.
- 10. Any implied warranties are limited to two (2) years. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.
- 11. Replacement parts (components or tanks) purchased outside of the original water heater warranty carry a 90 day warranty. This PrecisionTemp heater is designed for use in recreational vehicles, park models, mobile food carts, tiny homes, cabins, and marine applications for the purpose of heating water as stated in the "data plate" attached to the water heater. Any other use, unless authorized in writing by the PrecisionTemp Engineering Department, voids this warranty.

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