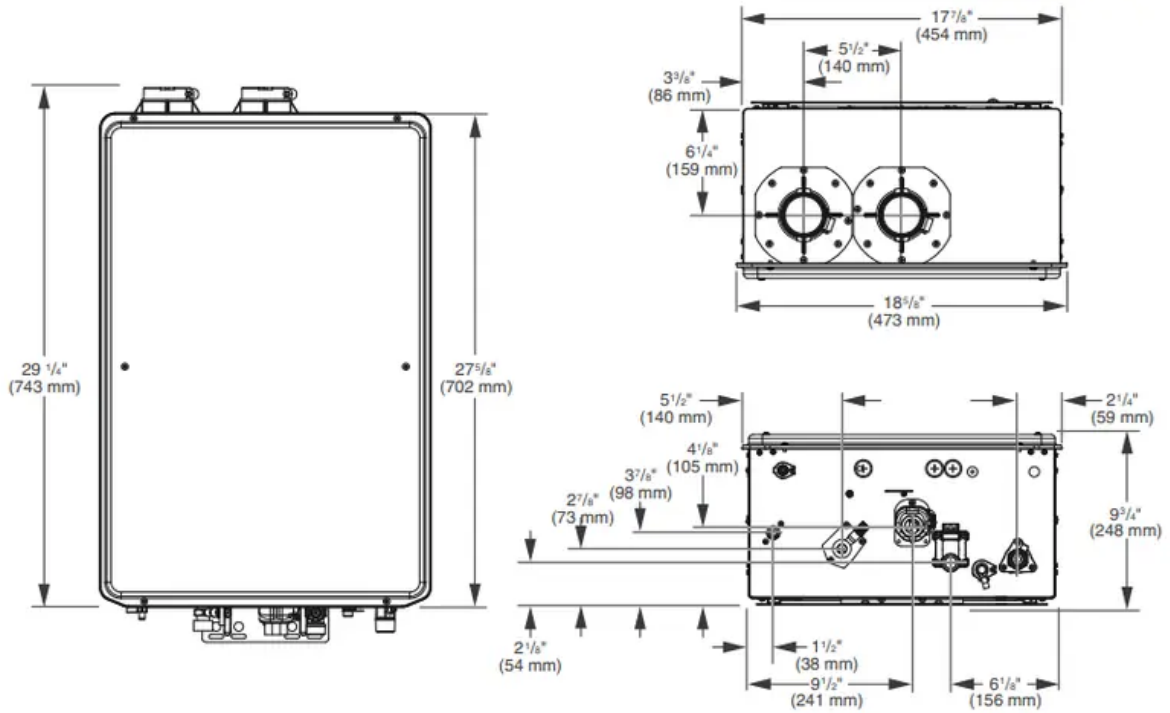
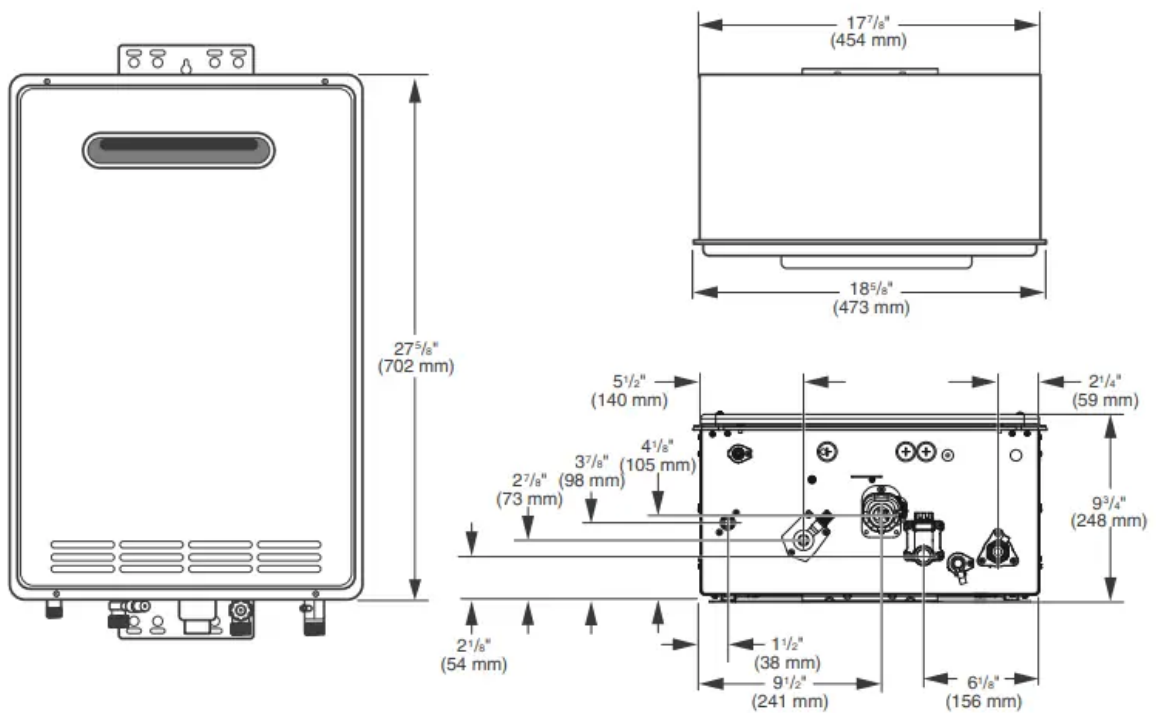


## PRODUCT INFORMATION

### Specifications – Direct-Vent Models



### Specifications – Outdoor Models



# Specifications

The following product information can be found from the rating label on this water heater.

- A. Model Number
- B. Serial Number
- C. Data Bar Code
- D. Heater Type
- E. Installation Type
- F. Type of Gas
- G. Max. Inlet Gas Pressure
- H. Min. Inlet Gas Pressure
- J. Recovery Rating
- K. Max. BTU Input Rating
- L. Min. BTU Input Rating
- M. Manifold Gas Pressure
- N. Certification Stamp
- P. Alternate Approval Stamp
- Q. Clearances

## English Rating Label

**MODEL NO. A**  
SERIAL NUMBER **B**  
**C**

**D** AUTOMATIC INSTANTANEOUS WATER HEATER  
FOR **E** INSTALLATION ONLY

TYPE OF GAS: **F** GAS  
MAX. INLET GAS PRESSURE: **G** "w.c.  
MIN. INLET GAS PRESSURE: **H** "w.c.  
RECOVERY RATING: **J** GALLONS/HR.  
MAX. WORKING PRESSURE: 150 psi  
ELECTRICAL RATING: 120V 60HZ LESS THAN 2 AMPS

MAX. INPUT: **K** BTU/HR.  
MIN. INPUT: **L** BTU/HR.  
MANIFOLD PRESSURE: **M** "w.c. (FOR MAX. INPUT)

**N**  
**P**  
**Q**

This appliance must be installed in accordance with local codes or, in the absence of local codes, the National Fuel Gas Code, ANSI Z223.1/NFPA 54 or the CSA B149.1, Natural Gas and Propane Installation Code.

"Suitable for water(heater) heating and space heating." The water heater shall not be connected to any heating system or component(s) previously used with a nonportable water heating appliance." A pressure relief valve listed as complying with the Standard for Relief Valves and Automatic Gas Shutoff Devices for Hot Water Supply Systems, ANSI Z21.22 shall be installed at the hot water outlet connection of the water heater at the time of installation of the heater. Local codes shall govern the installation of relief devices. For safe operation of the water heater, the relief valve(s) must not be removed or plugged. No valve shall be placed between the relief valve and the water heater. The relief from the discharge of the pressure relief valve shall be disposed of in a suitable place where it will cause no damage. Also there shall be no other reducing coupling or other restrictions installed on the discharge line to restrict flow. See Installation Manual Heading "PRESSURE RELIEF VALVES" for installation and maintenance of relief valve discharge line and other safety precautions. Turn off the electrical power and gas shutoff valves. Lift and release lever on the relief valve and check the manual operation of relief valve at least once a year. Make certain the discharged water is directed to a suitable drain. Avoid contact with hot water and prevent scalding.

MINIMUM CLEARANCE FROM COMBUSTIBLE OR NONCOMBUSTIBLE CONSTRUCTION: 12" SEE WIRING DIAGRAM FOR CLEARANCE TO WALL, 17" REAR CLEARANCE FROM MOUNTING BRACKET TO WALL, 12" TOP CLEARANCE FROM TOP OF HEATER TO CEILING, 12" BOTTOM CLEARANCE FROM BOTTOM OF HEATER TO FLOOR, 12" FRONT CLEARANCE FROM FRONT OF HEATER TO CLOSET DOOR. NOTE: 24" MINIMUM RECOMMENDED FRONT CLEARANCE FOR SERVICE AND MAINTENANCE. WIRING DIAGRAM BEHIND THE FRONT COVER.

FOR YOUR SAFETY: DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS AND LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

## English/French Rating Label

**MODEL NO. A**  
**NUMÉRO DE MODÈLE**  
SERIAL NUMBER **B**  
**C**  
**D** AUTOMATIC INSTANTANEOUS WATER HEATER  
CHAUFFE-EAU INSTANTANÉ AUTOMATIQUE

FOR **E** INSTALLATION ONLY  
POUR USAGE À **E** UNIQUEMENT

TYPE OF GAS: **F** GAS  
TYPE DE GAZ: **F** GAZ  
MAXIMUM INLET GAS PRESSURE: **G** "w.c.  
PRESSION MAXIMALE D'ALIMENTATION DE GAZ: **G** po. C.E.  
MINIMUM INLET GAS PRESSURE: **H** "w.c.  
PRESSION MINIMALE D'ALIMENTATION DE GAZ: **H** po. C.E.  
RECOVERY RATING: **J** GALLONS/HR.  
TAUX DE RÉCUPÉRATION: **J** GALLONS US/HR.  
MAXIMUM WORKING PRESSURE: 150 psi  
PRESSION MAXIMALE DE TRAVAIL: 150 lb/po2  
ÉTALONNAGE ÉLECTRIQUE: 60HZ MOINS DE 2 AMPÈRES

MAXIMUM INPUT: **K** BTU/HR  
ENTRÉE MAXIMALE: **K** BTU/HR.  
MINIMUM INPUT: **L** BTU/HR.  
ENTRÉE MINIMALE: **L** BTU/HR.  
MANIFOLD PRESSURE: **M** "w.c.  
(FOR MAXIMUM INPUT)  
PRESSION AU COLLECTEUR: **M** po. C.E.  
(POUR ENTRÉE MAXIMALE)

**N**  
**P**  
**Q**

This appliance must be installed in accordance with local codes or, in the absence of local codes, the National Fuel Gas Code, ANSI Z223.1/NFPA 54 or the CSA B149.1, Natural Gas and Propane Installation Code.

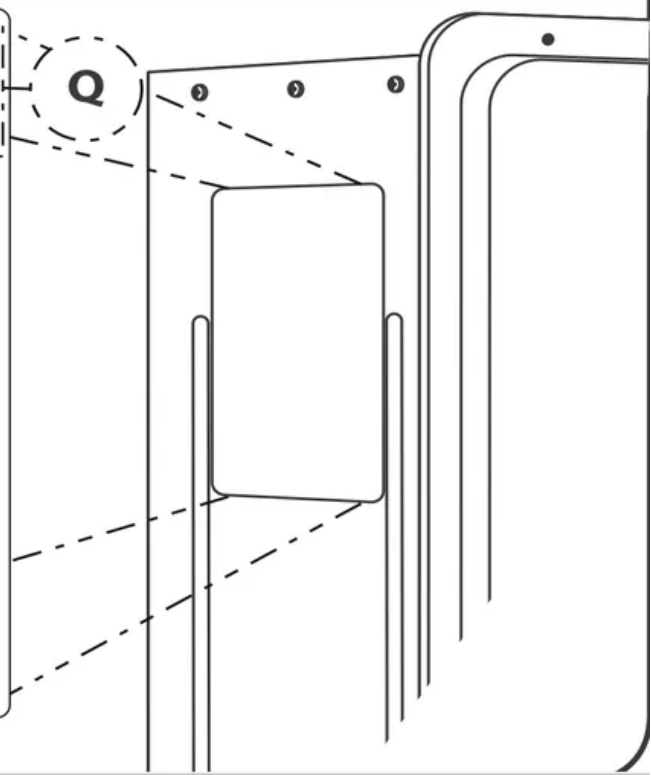
WIRING DIAGRAM BEHIND THE FRONT COVER.  
Cet appareil doit être installé conformément aux codes locaux ou, en l'absence de codes locaux, selon le code national du gaz, ANSI Z223.1/NFPA 54 ou la norme CSA B149.1, Code d'installation pour gaz naturel et propane.  
LE SCHEMA DE CÂBLAGE SE TROUVE DERRIÈRE CE COUVERCLE.

FOR YOUR SAFETY: DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS AND LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.  
POUR VOTRE SÉCURITÉ: NE PAS CONSERVER OU UTILISER D'ESSENCE OU AUTRES VAPEURS OU LIQUIDES INFLAMMABLES AUX ABORDS DE CET APPAREIL OU DE TOUT AUTRE.

MINIMUM CLEARANCE FROM COMBUSTIBLE OR NONCOMBUSTIBLE CONSTRUCTION: 1/2" SIDE CLEARANCE FROM FLANGED ENDS TO WALL; 0" REAR CLEARANCE-FROM MOUNTING BRACKET TO WALL; 12" TOP CLEARANCE-FROM TOP OF HEATER TO CEILING; 12" BOTTOM CLEARANCE-FROM BOTTOM OF HEATER TO FLOOR; 12" FRONT CLEARANCE-FROM FRONT OF HEATER TO CLOSET DOOR  
 NOTE: 24" MINIMUM RECOMMENDED FRONT CLEARANCE FOR SERVICE AND MAINTENANCE.  
 DÉGAGEMENT MINIMAL DE TOUTE CONSTRUCTION COMBUSTIBLE OU NON-COMBUSTIBLE: DÉGAGEMENT LATÉRAL DE 1/2 po. - DES EXTRÉMITÉS À FLASQUE AU MUR; 0 po. DE DÉGAGEMENT ARRIÈRE - DU SUPPORT DE MONTAGE AU MUR; DÉGAGEMENT DE 12 po. EN DESSOUS DU CHAUFFE-EAU AU SOL; 12 po. DE DÉGAGEMENT À L'AVANT DU CHAUFFE-EAU; AVIS: UN DÉGAGEMENT DE 24 po. À L'AVANT. EST RECOMMANDÉ POUR LE SERVICE ET L'ENTRETIEN.

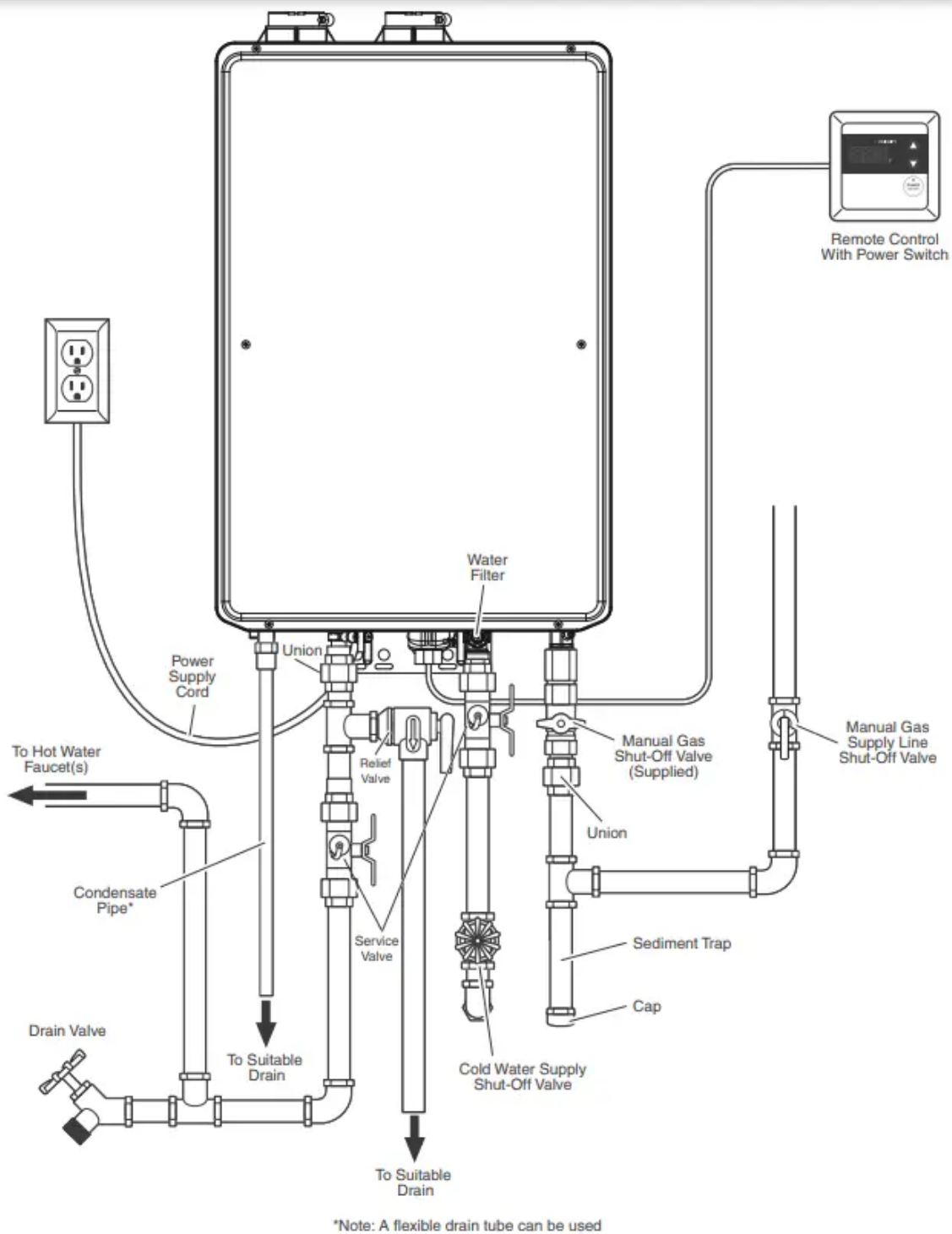
"Suitable for water (potable) heating and space heating." "The water heater shall not be connected to any heating system or component(s) previously used with a nonpotable water heating appliance." "Toxic chemicals, such as used for boiler treatment, shall not be introduced into the potable water heater used for space heating." "A pressure relief valve listed as complying with the Standard for Relief Valves and Automatic Gas Shutoff Devices for Hot Water Supply Systems, ANSI Z21.22 shall be installed at the hot water outlet connection of the water heater at the time of installation of the heater. Local codes shall govern the installation of relief devices. For safe operation of the water heater, the relief valve(s) must not be removed or plugged. No valve shall be placed between the relief valve and the water heater. The relief from the discharge of the pressure relief valve shall be disposed of in a suitable place where it will cause no damage. Also there shall be no other reducing coupling or other restrictions installed on the discharge line to restrict flow. See Installation Manual Heading, "PRESSURE RELIEF VALVES" for installation and maintenance of relief valve discharge line and other safety precautions." Turn off the electrical power and gas shutoff valve. Lift and release lever on the relief valve and check the manual operation of relief valve at least once a year." "Make certain the discharged water is directed to a suitable drain. Avoid contact with hot water and prevent water damage."

<<Convenable pour chauffage de l'eau (potable) et des locaux>> <<Le chauffe-eau ne doit pas être raccordé à tout système ou élément de chauffage précédemment utilisé avec un appareil de chauffage de l'eau non potable.>> <<Des produits chimiques toxiques, tels qu'utilisés pour le traitement de chaudière, ne seront pas présentés dans le chauffe-eau potable utilisé pour le chauffage des locaux.>>  
 <<Une soupape de sûreté de pression indiquée comme étant conforme à la norme pour les soupapes de sûreté et dispositifs d'arrêt automatique du gaz pour les systèmes d'alimentation en eau chaude, norme ANSI Z21.22, devra être installée au raccordement de sortie d'eau chaude du chauffe-eau au moment de l'installation du chauffe-eau. Les codes locaux devront régir l'installation des dispositifs de sûreté. Pour assurer le fonctionnement sécuritaire du chauffe-eau, la soupape de sûreté ne doit pas être enlevée ou obturée. Aucune soupape ne doit être placée entre la soupape de sûreté et le chauffe-eau. Le reflux provenant de l'évacuation de la soupape de sûreté doit être évacué vers un endroit convenable où il ne peut causer aucun dégât. Aussi, il ne doit y avoir aucun réducteur ou autre restriction sur la canalisation d'évacuation pour en restreindre son débit. Consulter la rubrique <<UNE SOUPAPE DE SÛRETÉ DE PRESSION>> du livret d'entretien pour l'installation et l'entretien de la canalisation d'évacuation de la soupape de sûreté, ainsi que d'autres mesures de sûreté. Couper toute alimentation électrique et fermer la soupape d'arrêt du gaz. Relever le levier d'évacuation de la soupape de sûreté et vérifier le fonctionnement manuel de la soupape de sûreté au moins une fois par an. S'assurer que l'eau évacuée est dirigée vers un drain adéquat. Éviter tout contact avec l'eau chaude. Éviter tous dégâts causés par l'eau.>>



## General Descriptions

### Typical Direct-Vent Water Heater (Shown Without Venting)

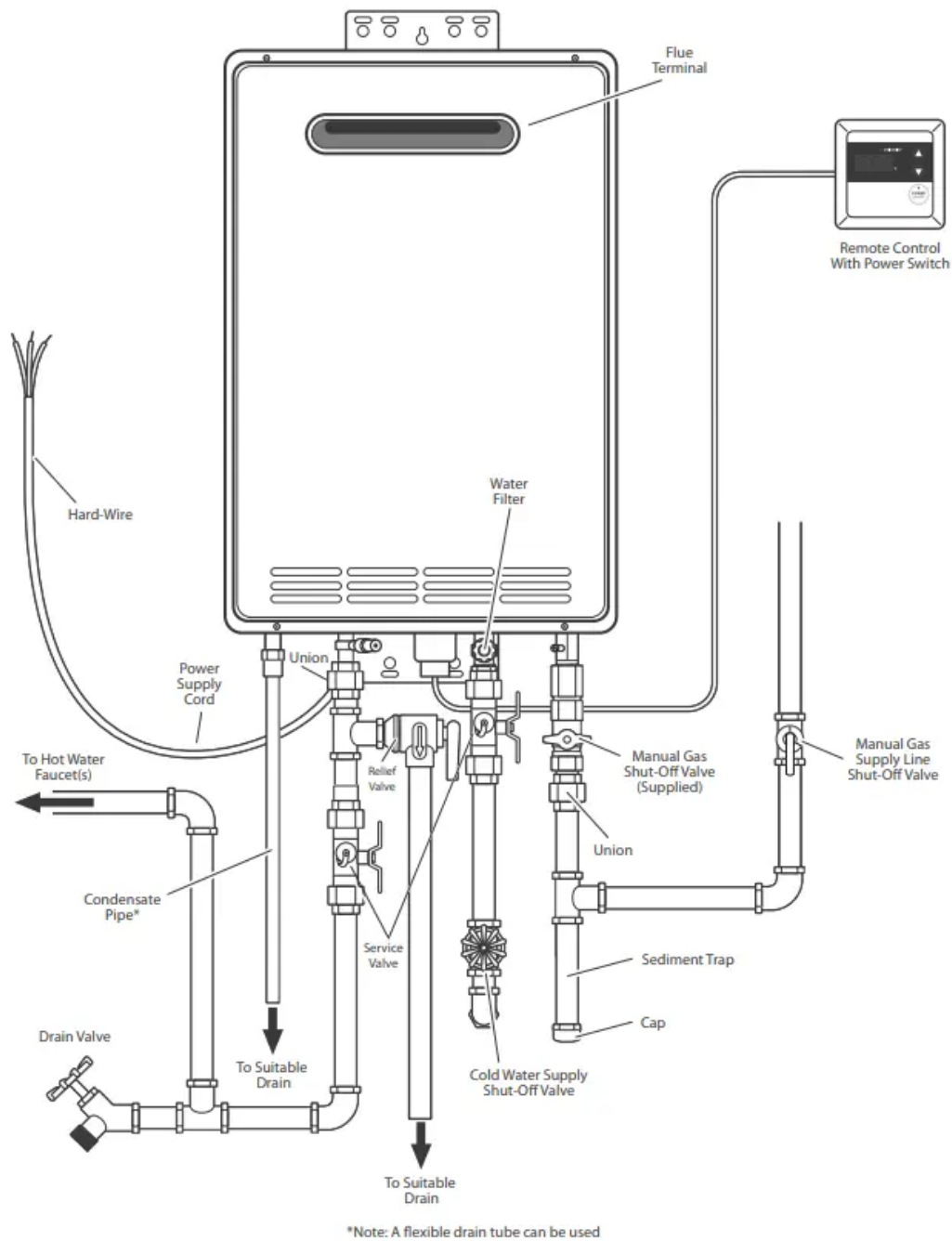


### Typical Outdoor Water Heater (No Venting Required)

This water heater is for OUTDOOR installation only.

**DANGER: DO NOT** install this water heater indoors or in a confined space. It is designed for outdoor installation only. Any other type of installation will result in death or serious personal injury.





## USING YOUR WATER HEATER

### Safety Precautions

- Flammable vapors can be drawn by air currents from surrounding areas to the water heater. Vapors can ignite causing death, personal injury, or product damage.
- DO NOT store or use flammable or combustible materials (gasoline, paint thinner, adhesives, solvents, newspapers, rags, mops, etc.) in the vicinity of the water heater or any other gas appliance. If they must be used, open doors and windows for ventilation, and shut off all gasburning appliances, including their pilot lights.

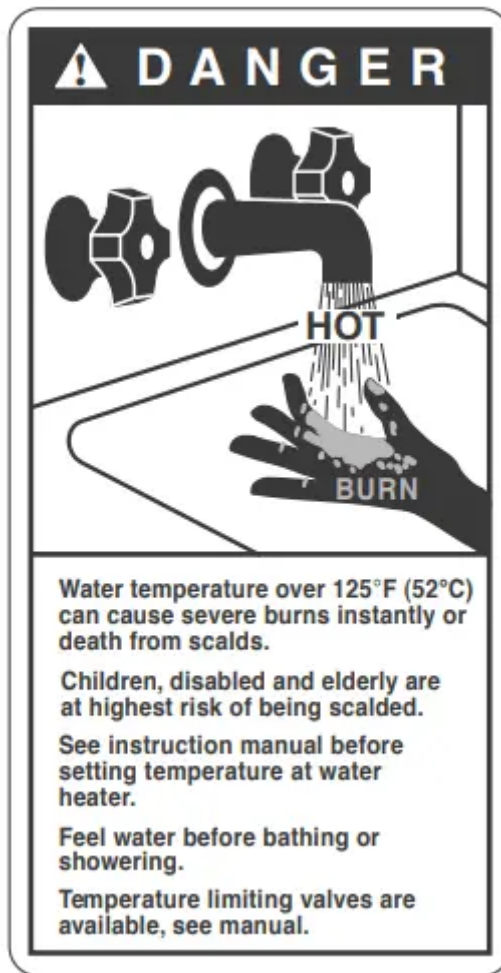
- DO turn off manual gas shut-off valve if water heater has been subjected to overheating, fire, flood, physical damage, or if the gas supply fails to shut off.
- DO NOT turn on water heater unless water and gas supplies are completely opened.
- DO NOT turn on water heater if cold water supply shut-off valve is closed.
- If there is any difficulty in understanding or following the operating and care instructions in this manual, it is recommended that you contact a qualified service technician to perform the work.

## Setting the Water Temperature

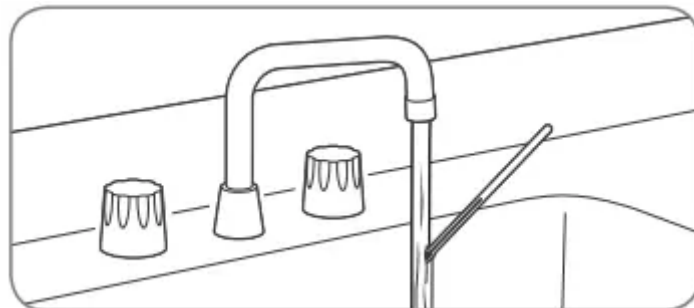
- DANGER: Water temperatures above 125°F (52°C) will result in death and/or severe burns from scalding.
- Safety and energy conservation are factors to be considered when selecting the water temperature setting. The temperature of the water in the water heater can be regulated by setting the temperature on the front of the remote control. Be sure to read and follow the warnings outlined on the pictured label.
- The recommended setting for the water temperature is 100°F (38°C). The remote control has been preset and shipped at the recommended temperature setting.
- Safety factors should be considered whenever altering the water temperature setting. The chart below may be used as a guide in determining the proper water temperature for your home.

### Time/Temperature Relationship in Scalds

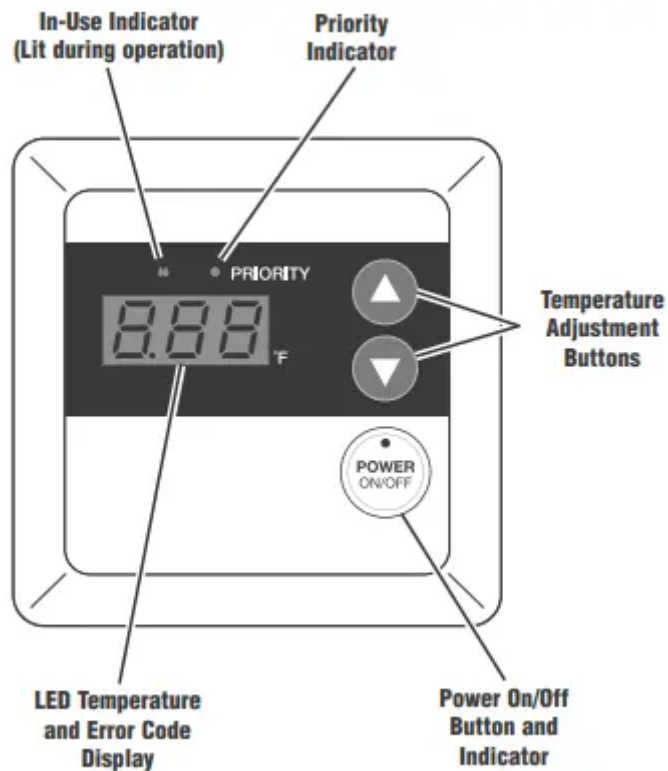
Water Temperature	Time to Produce a Serious Burn
120°F (49°C)	More than 5 minutes
125°F (52°C)	1 1/2 to 2 minutes
130°F (54°C)	About 30 seconds
135°F (57°C)	About 10 seconds
140°F (60°C)	Less than 5 seconds
145°F (63°C)	Less than 3 seconds
150°F (66°C)	About 1 1/2 seconds
155°F (68°C)	About 1 second



- Maximum water temperature occurs while the water heater burner is ON.
- To determine the water temperature: Turn on the hot water faucet and place a thermometer in the water stream.



- **NOTICE:** Water temperature at the faucet may vary depending on the season and the length of pipe from the water heater.
- The remote control temperature range is between 100°F (38°C) and 120°F (49°C). To adjust the temperature to a desired setting, press the UP or DOWN adjustment button on the face of the remote control. The new temperature set point will show on the LED display.



**NOTICE:**

- The temperature set point on the standard remote control cannot be increased above 112°F (44°C) when a hot water faucet is in the open position. To achieve temperatures above 120°F (49°C) or 85°F (29°C), contact a qualified service technician. Only factory-authorized remote control(s) should be used.
- The water heater may not operate with a small water flow. Increase the water flow and recheck. If it still does not operate with the hot water faucet completely open, increase the temperature setting on the remote control.

**Water Heater Facts**

**DANGER:** Water temperatures above 125°F (52°C) will result in death and/or severe burns from scalding.

- The hottest temperature water will be at the faucet closest to the water heater.
- Always remember to test the water temperature with your hand before use.
- Always supervise young children or others who are incapacitated.
- The water heater is equipped with a device that will shut off the gas supply to the burner if the water heater exceeds normal operating temperatures.
- Any water heater that has been subjected to fire, flood, physical damage, or been under water should be turned off at the manual gas shut-off valve and not used until it has been checked by qualified service personnel.

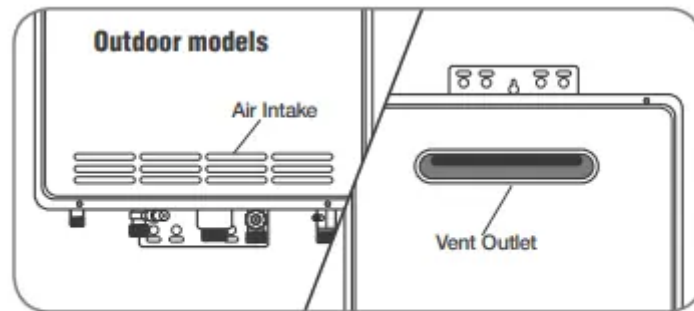


# CARING FOR YOUR WATER HEATER

## Water Heater Inspections

### Venting System (Direct Vent Only)

- The venting system should be inspected annually to ensure all of the vent sections are secure and airtight. Qualified service personnel are familiar with vent system inspections and may be contacted for advice.
- **WARNING:** DO NOT operate the water heater if the vent system shows signs of leaking exhaust. Leaking exhaust could lead to death, personal injury, and/or product failure.



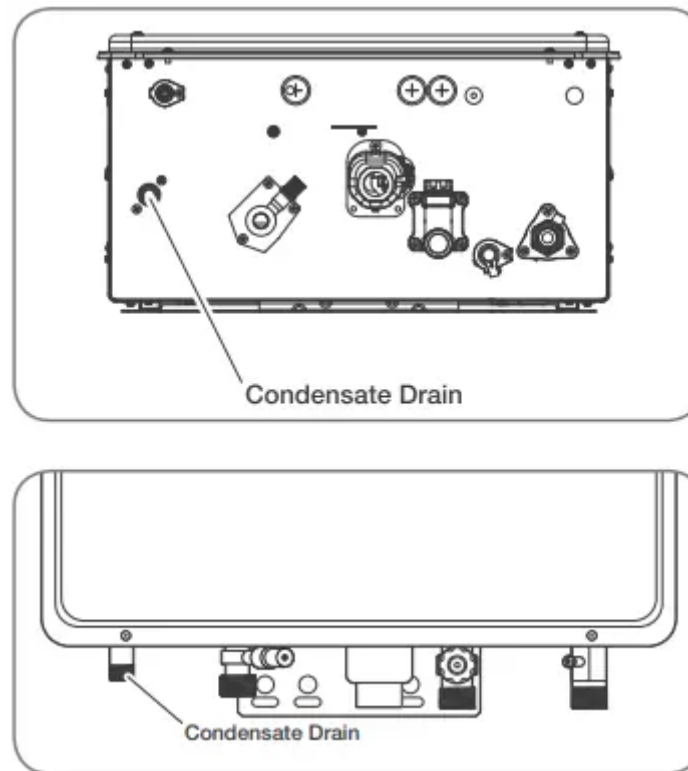
For outdoor models, check the air intake and vent outlet for blockage and/or debris.

- **DANGER:** Shock Hazard – Make sure the electrical power to the water heater is OFF before removing protective cover. Electric shock will cause death or serious personal injury

### Condensate Collector

#### CAUTIONS:

- Condensate is known to be acidic; refer to federal, state (provincial), and local codes for proper handling and discharge methods.
- DO NOT operate without the condensate collector drain connected and routed to a proper drain that can handle corrosive condensate. This could cause the system to malfunction or fail.

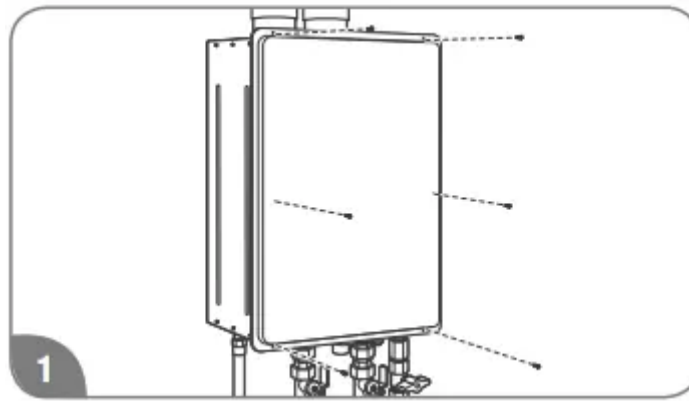


- On a regular basis, inspect the condensate drain line to ensure the condensate is draining properly.
- The condensate coming from the water heater is known to be acidic. The heater features a built-in condensate neutralizer that uses  $\text{CaCO}_3$  (calcium carbonate) in rock form as a medium.
- Periodically check the medium visually to ensure that it is not depleted and refill accordingly. It is recommended that you contact a qualified service technician to perform the work

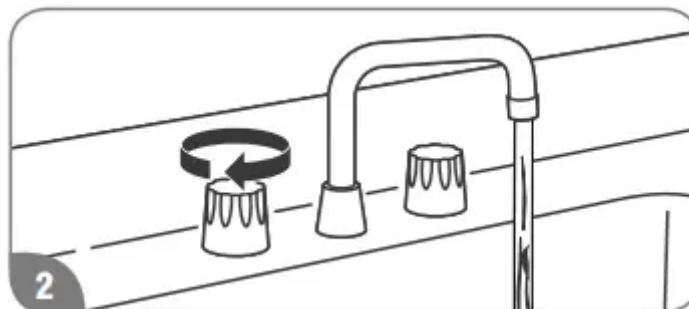
### **Burner**

- It is recommended the burner be annually inspected by a qualified service technician.
- **DANGER: Shock Hazard** – Removing the front cover panel exposes you to live electricity. Electric shock will cause death or serious personal injury.

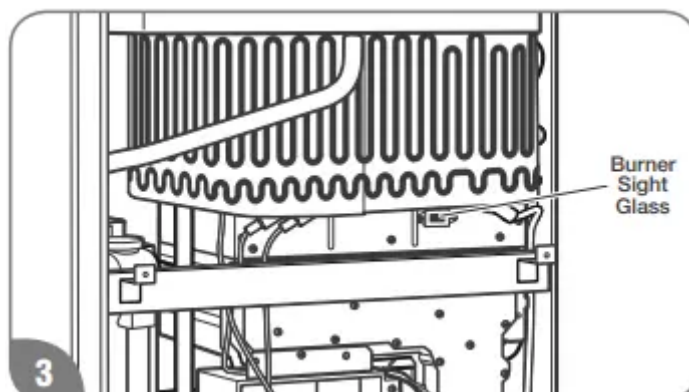
1. Remove 6 screws and the unit cover panel.



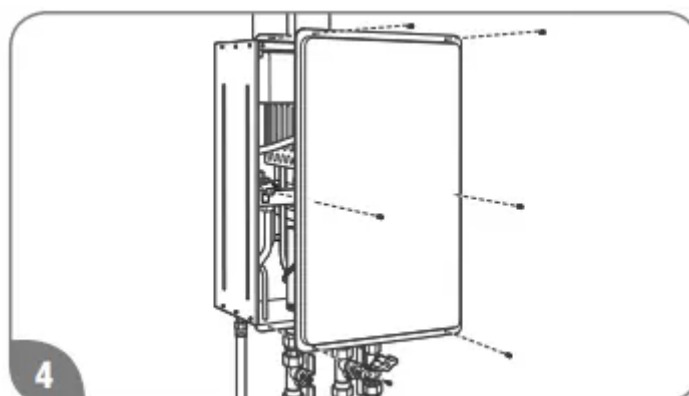
2. Turn on a hot water faucet.



3. While the water heater is operating, inspect the main burner flames through the burner sight glass. The flames should be blue when the main burner is firing.

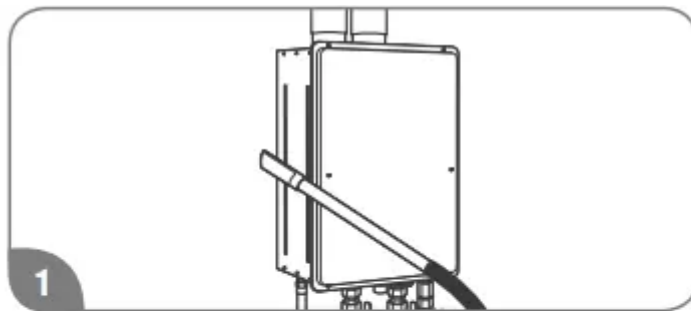


4. Turn off the hot water faucet and reinstall the unit cover panel.

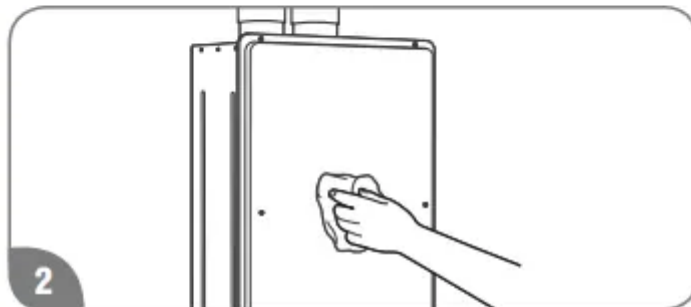


## Care and Cleaning

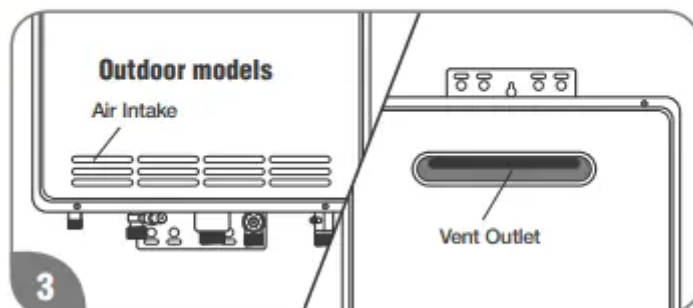
- **DANGER:** Shock Hazard – Make certain power to the water heater is OFF before removing protective cover for any reason. Electric shock will cause death or serious personal injury.
- **WARNING:** Combustible materials, such as clothing, cleaning materials, or flammable liquids, must not be placed against or next to the water heater. Fire or explosion can occur causing death, personal injury, and/or product damage
- . All care and cleaning to and around the water heater should only be performed with the water heater turned off and the electrical power supply disconnected.



Vacuum around the water heater to remove any dust, dirt, and/or lint buildup.



Clean the water heater and the remote control with a damp soft cloth and mild detergent. Gently wipe and completely dry all surfaces.

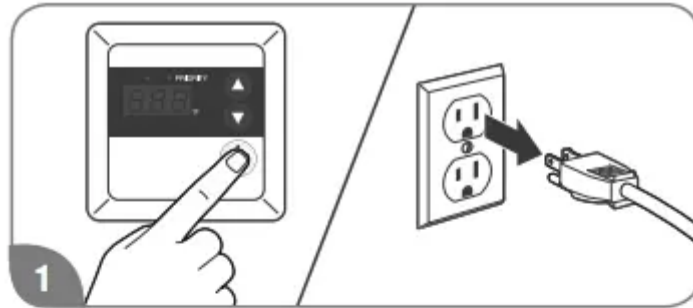


Check the air intake and vent outlet for blockage and/or debris.

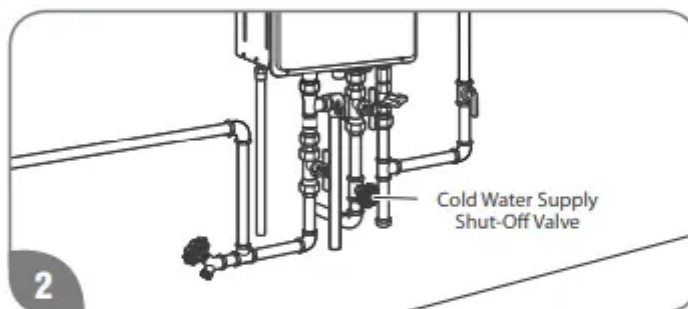
- **NOTICE:** The air intake requires a minimum of 12 in. (30 cm) of clearance between the air intake opening and any obstruction.

- Clean the water filter monthly, as described below and on the next page.

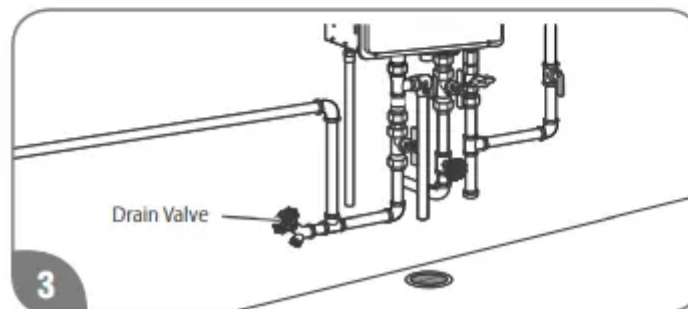
## Water Filter Cleaning



Turn off the water heater and disconnect the electrical power supply.



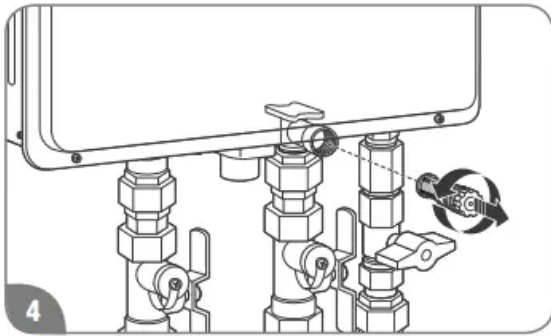
Turn off the water supply to the water heater.



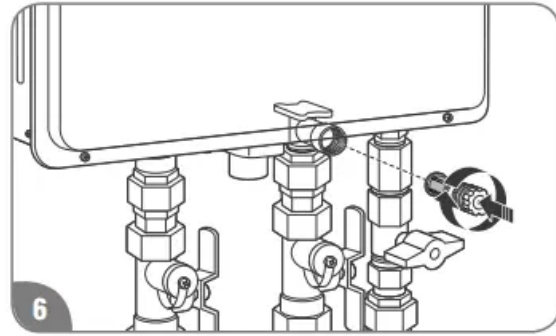
Drain the water heater. See "Draining the Water Heater" section.

CAUTION: DO NOT tap or force the filter during removal. This can deform and/or damage the filter.

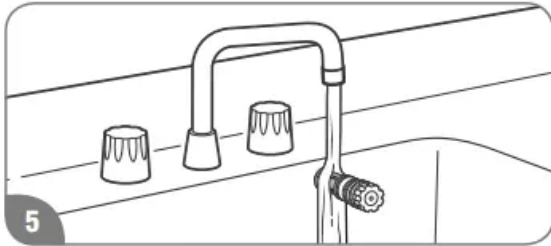
CAUTION: DO NOT overtighten the water filter. Overtightening can deform and/or damage the filter.



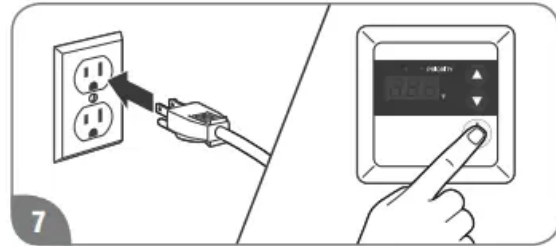
4 Unscrew the water filter from the base of the cold water inlet line and carefully slide it out of the line.



6 Replace the filter in the cold water inlet line and tighten until it is snug.



5 Clean the water filter under running water. To remove severe sediment and dirt, use a soft brush.



7 Turn on the water supply, reconnect the electrical supply, and turn on the water heater.

## Preventive Maintenance

**WARNING:** Failure to perform routine preventive maintenance can prevent the water heater from operating properly. Improper operation can cause carbon monoxide dangers, excessive water temperatures, and other potentially hazardous conditions resulting in death, personal injury, and/or product damage.

Properly maintaining your water heater will ensure dependable, trouble-free service

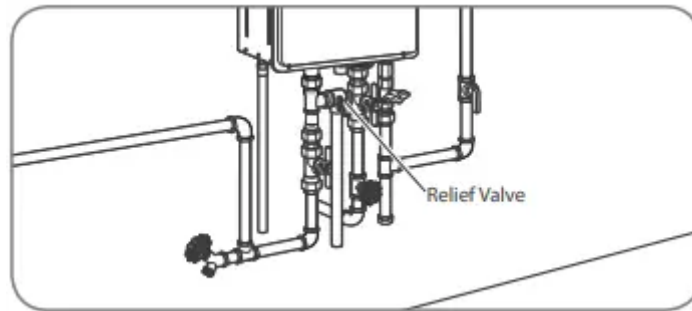
### User Preventive Maintenance

- Establish and follow a routine preventive maintenance program. The following suggested items should be included in your program.



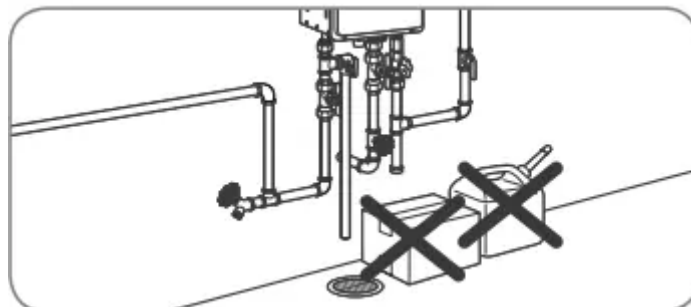
- Check and clean the water filter monthly. See “Water Filter Cleaning” on this Use and Care Manual.

- **WARNING:** Hot water is released during manual operation of the relief valve. Make sure all people and animals are clear from the area before performing this check to prevent death, personal injury, and/or property damage from hot drain water.



- Annually check the operation of the pressure relief valve annually. Lifting the lever handle on the pressure-relief valve opens the valve to flush hot water through the discharge line to the drain. After several gallons have drained, release the lever handle to close the valve and stop draining

NOTICE: If the pressure relief valve on the hot water heater discharges periodically, this may indicate a problem in the water system. Contact the water supplier or a plumbing contractor to correct the problem. DO NOT plug the relief valve outlet.



- Inspect and keep the area around the water heater clear and free of flammable materials, such as gasoline and other flammable vapors and liquids.
- Visually inspect the water heater for damage and/or denting. If present, contact a service personnel to verify proper operation.
- Check for abnormal sound during normal operation (e.g., hissing or banging noises). Contact a qualified service technician or plumbing contractor if abnormal sounds are noted.
- Check all gas and water pipes for leaks. See "Leak Testing " on this Use and Care Manual

NOTICE:

- DO NOT operate the water heater if you feel something is wrong with the unit.
- DO NOT allow children to operate or handle the unit.

After inspections, maintenance, and/or cleaning, ensure proper operation by turning on a hot water faucet.

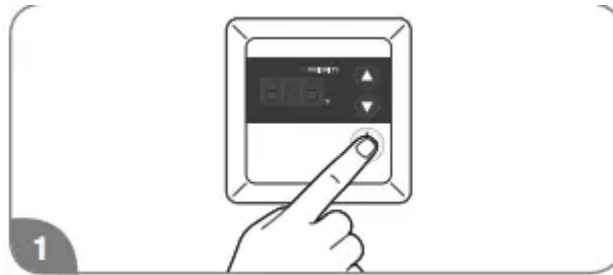
### Professional Preventive Maintenance

- It is recommended that a periodic inspection of the water heater burner, relief valve, air intake filter, water filter, and venting system be made by a qualified service technician.
- **WARNING:** Certain water conditions can damage the water heater and may cause defects, malfunctions or failures of the water heater that are not covered by the limited warranty. See "Water Quality" on this Use and Care Manual.

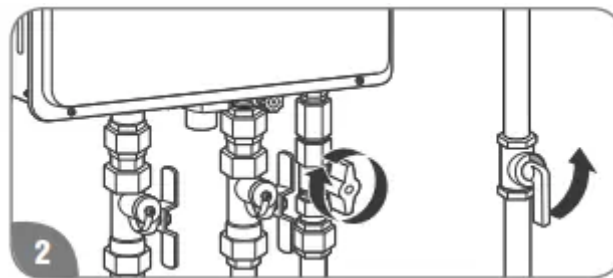
### Draining the Water Heater

**WARNING:** Failure to follow these draining instructions can cause serious personal injury from scalding and/or product damage.

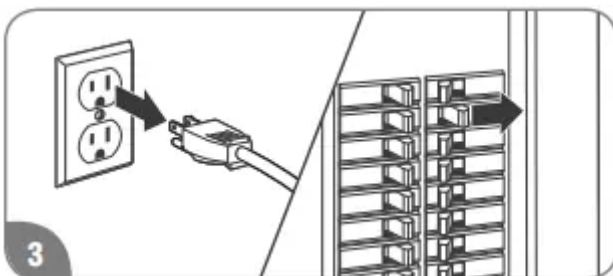
- Turn off the water heater by pressing the POWER ON/ OFF button on the remote control.



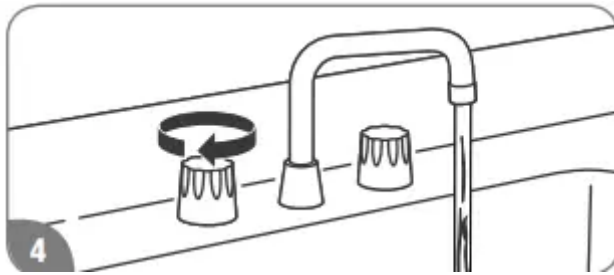
- Close the gas shut-off valve(s)



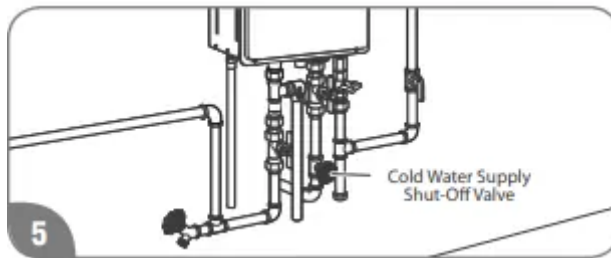
- At least 10 seconds after Step 1, unplug the water heater or disconnect the power supply at the circuit breaker box.



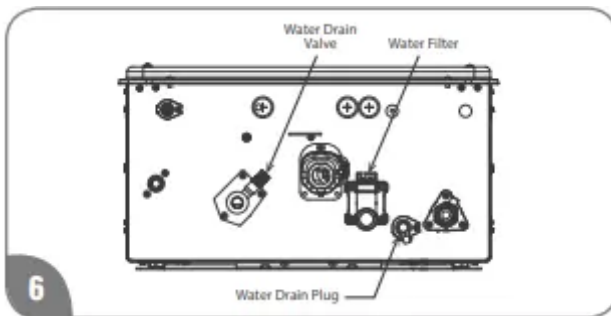
- Open all hot water faucets. Run the water until it is COLD; then shut off the faucet.



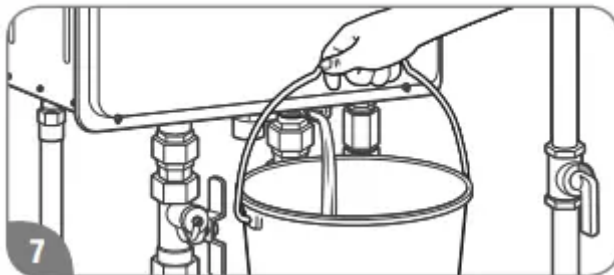
- Close the water shut-off valve.



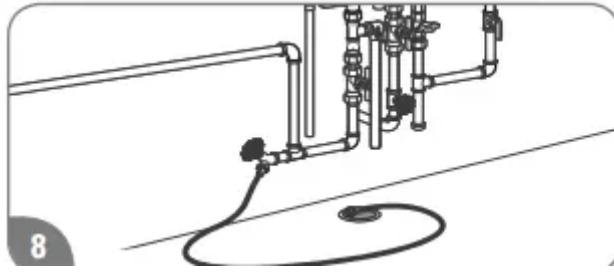
- Find the water drain valve, the water filter and the water drain plug located at bottom of the water heater.



- Using a suitable container to catch the water, remove the water drain plug located at bottom of the water heater, the water drain valve from the base of the hot water outlet line, and the water filter from the base of the cold water inlet line.

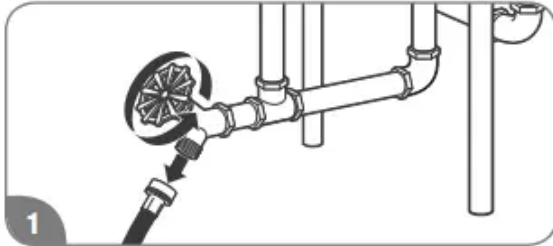


- Connect a garden hose to the drain valve in the hot water outlet line and place the other end in a suitable drain. Open the drain valve until all the water has drained from the water heater. Leave water heater as is until placed back in service

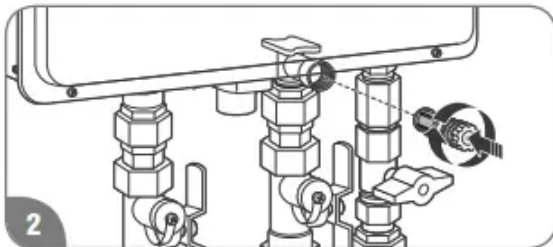


CAUTION: Even when drained properly, a small amount of water will remain in the water heater. In cold weather conditions, this water can freeze. If this happens, allow the defrost protection on the water heater at least 30 minutes to melt the frozen water. The water heater will not work properly until this water is thawed.

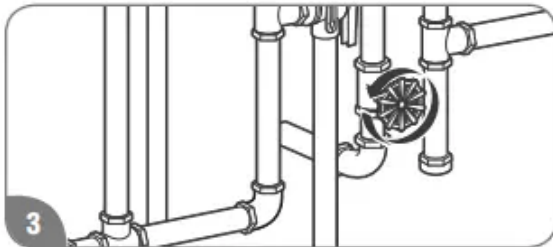
To put the water heater back in service:



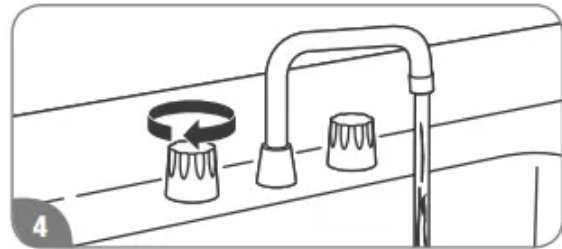
1 Disconnect drain hose. Make sure the drain valve is closed.



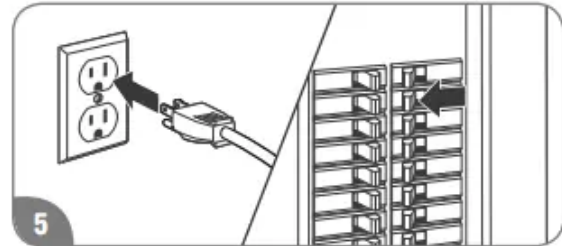
2 Reinstall the water filter in the base of the cold water inlet line, the water drain valve, and the water drain plug.



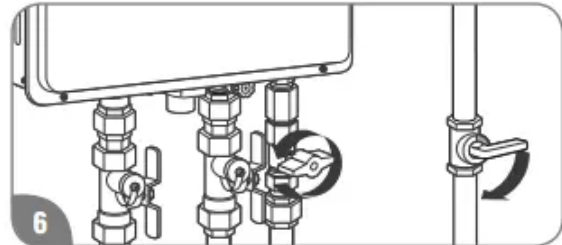
3 Open the water shut-off valve.



4 Open all hot water faucets and let run until all air has been purged from the lines. Close all hot water faucets.



5 Plug in the power cord or reconnect the power supply at the circuit breaker box.

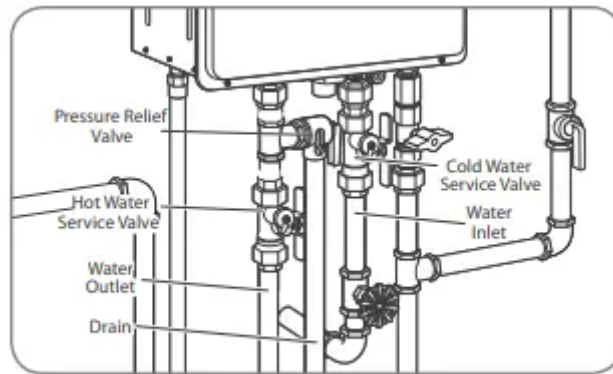


6 Open the gas shut-off valve(s).



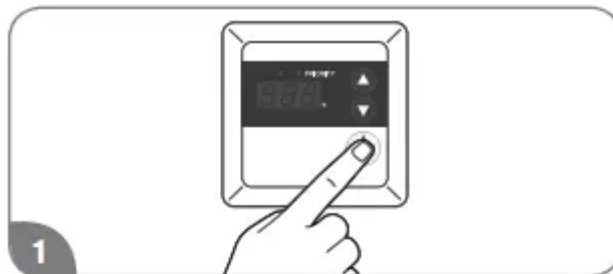
7 Press the POWER ON/OFF button on the remote control to restart the unit.

**Standard Drain Method:** Service isolator valve kits may be purchased from the manufacturer, distributor, or place of purchase. The kits include two full-port isolation valves to be used in the inlet and outlet water lines. These kits provide a means for full diagnostic testing and ease of system flushing and draining.

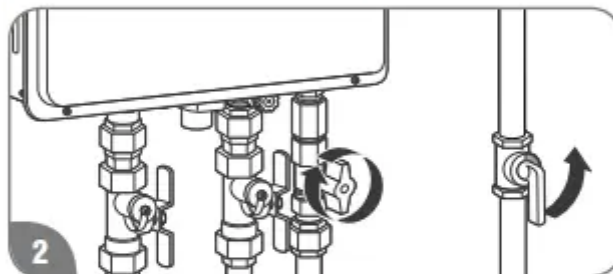


## Freeze Protection

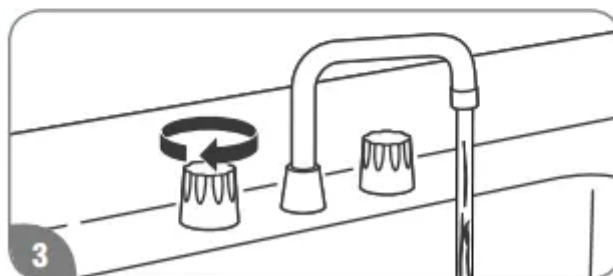
### Running Water Freeze Protection



Turn off the water heater by pressing the POWER ON/OFF button on the remote control.



Close the gas shut-off valve(s).



Open a hot water faucet slightly until the water stream is approximately 1/8 in. (0.3 cm). Be sure to check the flow periodically.

**WARNING:** Failure to drain the water heater can cause serious personal injury from scalding and/or product damage. Whenever the water heater may be exposed to freezing conditions, make sure

to completely drain the water from the unit. See "Draining the Water Heater. Freezing conditions come from the ventilation system on direct-vent models and from exposure to cold air on outdoor models. All of these water heaters are equipped with a freeze protection electric heater. This heater prevents freezing inside the water heater down to an ambient temperature of approximately -22°F (-30°C). These temperatures are all based on temperatures without wind. The heater only protects the internal components of the water heater.

**NOTICE:** Unplugging or disconnecting the power supply to the water heater will also disconnect the power to the freeze protection electric heater. External piping and valves require additional freeze protection. One method is to wrap insulation around the piping and valves. Another method is to turn on a hot water faucet and leave a small amount of water running at a faucet. This will protect the water heater, piping, and valves from freezing.

### **Vacation and Extended Shutdown**

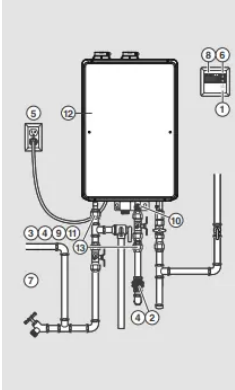
- **WARNING:** Failure to drain the water heater can cause serious personal injury from scalding and/or product damage.
- If the water heater is to remain idle for an extended period of time, the power and water to the heater should be turned off.
- The water heater and piping should be drained if they might be subjected to freezing temperatures. See "Freeze Protection" section on this Use and Care Manual.
- After an extended shutdown, the water heater's operation and controls should be checked by a qualified service technician.

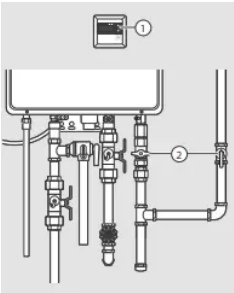
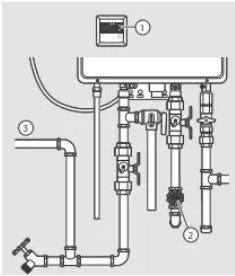
### **Troubleshooting Chart**

The information in the following troubleshooting chart may help you diagnose and/or fix a problem you may be experiencing. Please review this chart before calling for service assistance.

**DANGER:** Shock Hazard – Make certain power to the water heater is OFF before removing protective cover for any reason. Electric shock will cause death or serious personal injury.

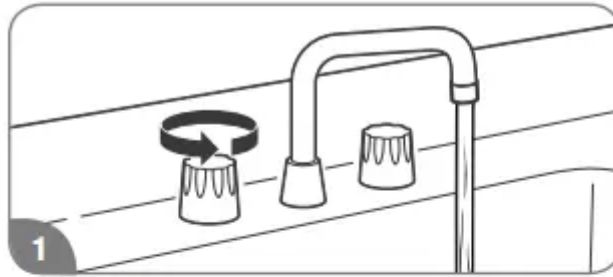
**WARNING:** For Your Safety, DO NOT attempt repair of electrical wiring, gas piping remote control, burners, vent connectors, or other safety devices. Refer repairs to a qualified service technician.

Problem	Possible Cause	Solution
<p>Not enough or no hot water.</p> 	<ol style="list-style-type: none"> <li>1. Unit is not ON.</li> <li>2. Water shut-off valve is not completely opened.</li> <li>3. Hot water faucet is not completely opened.</li> <li>4. Water piping is frozen</li> <li>5. Electrical power is disconnected or water supply is shut off.</li> <li>6. The temperature may be set too low</li> <li>7. Mixing valve malfunctions (if applicable).</li> <li>8. Error code displayed on the remote control.</li> <li>9. Not enough water demand.</li> <li>10. Water filter is clogged or dirty</li> <li>11. Fixture aerator is clogged or dirty</li> <li>12. Scale buildup in the heat exchanger.</li> <li>13. Hot and cold water lines reversed.</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn on the unit by pressing the POWER ON/OFF button.</li> <li>2. Check shut-off valve and open completely.</li> <li>3. Open hot water faucet completely. (The main burner goes off when incoming water volume is inadequate.)</li> <li>4. Allow piping to thaw.</li> <li>5a. Plug in the power cord or reconnect the power supply at the circuit breaker box. 5b. Completely open the water supply valve. (Inadequate water volume will cause the main burner to turn off.)</li> <li>6. Increase the temperature setting</li> <li>7. Check and replace the mixing valve.</li> <li>8. See “Service Error Code Chart” on page 26. If required, contact a qualified service technician</li> <li>9. Increase the hot water flow at the faucet.</li> <li>10. Clean the water filter.</li> <li>11. Clean the aerator.</li> <li>12. Check for error code. If required, contact a qualified service technician.</li> <li>13. Reverse the water lines.</li> </ol>
<p>Water not hot enough.</p>	<ol style="list-style-type: none"> <li>1. The temperature may be set too low.</li> <li>2. The gas valve is not completely opened</li> </ol>	<ol style="list-style-type: none"> <li>1. Increase the temperature setting at the remote control.</li> <li>2. Check and completely open the gas valve.</li> </ol>

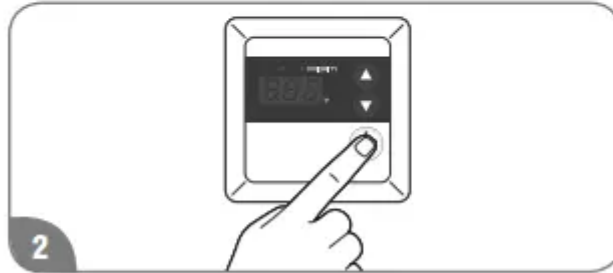
	<p>3. Gas supply pressure is low</p> <p>4. Bleed-over in one of the hot water fixtures.</p>	<p>3. Contact your gas utility company or gas contractor to verify the gas meter and gas piping size.</p> <p>4. Contact a dealer or a qualified service technician.</p>
<p>Water too hot</p> 	<p>1. Temperature is set too high.</p> <p>2. Water shut-off valve is not completely opened.</p> <p>3. Small amount of water has been heated.</p>	<p>1. Decrease the temperature setting at the remote control.</p> <p>2. Check and completely open the water shut-off valve.</p> <p>3. Increase the hot water flow at the faucet to allow more water to flow through the water heater.</p>
<p>Fan continues to rotate after the hot water faucet is closed.</p>	<p>The post-purge cycle clears flue gases.</p>	<p>Normal operation.</p>

### Service Error Code Chart

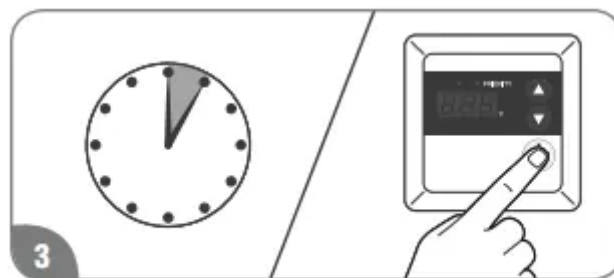
- Your water heater has an electronic diagnostic system built into it.
- When the water heater finds a problem, it displays an error code in the LED display on the remote control. The chart on the next page lists the error codes along with their possible problem and solution. Using this chart may help you diagnose and/or fix a problem you may be experiencing. Please refer to this chart before calling for service assistance.
- **DANGER: Shock Hazard** – Make certain power to the water heater is OFF before removing protective cover for any reason. Electric shock will cause death or serious personal injury.
- **WARNING: For Your Safety, DO NOT** attempt repair of electrical wiring, gas piping, remote control, burners, vent connectors, or other safety devices. Refer repairs to a qualified service technician. When an error code is displayed:



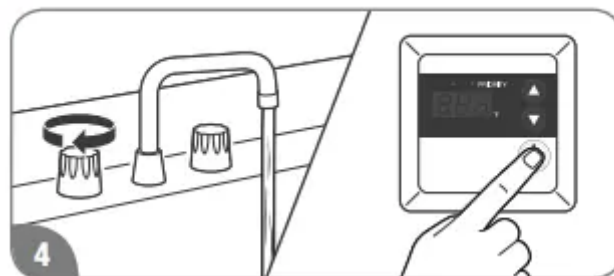
Turn off all the hot water faucets.



Turn off the water heater by pressing the POWER ON/OFF button on the remote control.



Wait about 5 minutes; then restart the water heater by pressing the POWER ON/OFF button.



Turn on a hot water faucet and recheck the remote control display. If the error code remains in the display:

1. Turn off the hot water faucet.
2. Turn off the water heater.
3. Unplug the water heater from power, wait about 30 seconds and plug back in.
4. Follow the error code chart information.
5. Restart the water heater, turn on a hot water faucet, and recheck the remote control display.

If the error code is still shown:

1. Turn off the hot water faucet.
2. Turn off the water heater.
3. Make note of the displayed error code and call for service assistance. See “Call for Assistance” section on this Use and Care Manual.

NOTICE: If the displayed error code is not listed in the chart, immediately turn off the water heater and call for service assistance.



Error Code	Possible Cause	Solution
1L	Water heater has buildup of lime deposits.	Contact a dealer or qualified service technician.
05	Air intake or vent exhaust opening may be blocked. The vent pipes on the vent termination may not be connected properly.	Remove any blockage. (Air intake requires 12 in. [30 cm] of clearance.) Contact a dealer or qualified service technician.
11	The gas shut-off valve is not fully opened.	Check shut-off valve and open completely.
12	Gas service has been interrupted LP gas is running low (LP models only)	Contact your gas utility company. Refill or replace your LP gas container
13	If this code is still displayed after taking the numbered steps above.	Contact a dealer or qualified service technician.
14	Water heater is overheating.	Contact a dealer or qualified service technician.
15	The heat exchanger is too hot.	Check for blockage in the vent. Contact a dealer or qualified service technician.
29	Neutralizer is clogged	Contact a dealer or qualified service technician.
31	Faulty inlet thermistor.	Contact a dealer or qualified service technician.
33	Faulty outlet thermistor.	Contact a dealer or qualified service technician
61 or 99	Faulty blower motor.	Contact a dealer or qualified service technician
65	Faulty water flow solenoid.	Contact a dealer or qualified service technician.
92	The neutralizer needs to be replaced soon.	The unit can be used for a while, but contact a dealer or qualified service technician.

93	The neutralizer must be replaced.	The unit cannot be used until the neutralizer is replaced. Contact a dealer or qualified service technician.
F1	Not enough water flow to operate the unit.	Increase the water flow from the fixtures.
88	Reminder of flushing the heat exchanger and/ or replacing the water treatment filter.	Contact a dealer or qualified service technician.

**Warning**

This content is compiled from multiple sources and is provided for reference purposes only. It may not be complete or fully applicable to all situations. If you are unable to resolve your issue, please contact the product manufacturer or an authorized service provider for official support.

