

# USER'S INFORMATION MANUAL

## CAST IRON GAS-FIRED HOT WATER AND STEAM BOILERS



### WARNING

If the information in this manual 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**
  - Do not try to light any appliance.
  - Do not touch any electrical switch; do not use any phone in your building.
  - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
  - If you cannot reach your gas supplier, call the fire department.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.



### AVERTISSEMENT

Assurez-vous de bien suivre les instructions données dans cette notice pour réduire au minimum le risque d'incendie ou d'explosion ou pour éviter tout dommage matériel, toute blessure ou la mort.

- Ne pas entreposer ni utiliser d'essence ni d'autres vapeurs ou liquides inflammables dans le voisinage de cet appareil ou de tout autre appareil.
- **QUE FAIRE SI VOUS SENTEZ UNE ODEUR DE GAZ:**
  - Ne pas tenter d'allumer d'appareils.
  - Ne touchez à aucun interrupteur. Ne pas vous servir des téléphones dans le bâtiment où vous vous trouvez.
  - Appelez immédiatement votre fournisseur de gaz depuis un voisin. Suivez les instructions du fournisseur.
  - Si vous ne pouvez rejoindre le fournisseur de gaz, appelez le service des incendies.
- L'installation et l'entretien doivent être assurés par un installateur ou un service d'entretien qualifié ou par le fournisseur de gaz.

The following terms are used throughout this manual to bring attention to the presence of hazards of various risk levels.



## **DANGER**

Indicates an imminently hazardous situation which, if not avoided, will result in death, serious injury or substantial property damage.



## **CAUTION**

Indicates a potentially hazardous situation which, if not avoided, may result in moderate or minor injury or property damage.



## **WARNING**

Indicates a potentially hazardous situation which, if not avoided, could result in death, serious injury or substantial property damage.

## **NOTICE**

Indicates special instructions on installation, operation, or maintenance which are important but not related to personal injury hazards.

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## **Basic Operation and Maintenance**

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## **DANGER**

There are no user serviceable parts on this boiler. Attempts to service this boiler by someone other than a qualified gas service technician could void the warranty, cause property damage, personal injury or loss of life.



## **CAUTION**

Should overheating occur or the gas supply fail to shut off, do not turn off or disconnect the electrical supply to the pump. Instead, shut off the gas supply at a location external to the appliance.

En cas de surchauffe ou si l'admission de gaz ne peut être coupée, ne pas couper ni débrancher l'alimentation électrique de la pompe. Fermer plutôt le robinet d'admission de gaz à l'extérieur de l'appareil.

Do not use this boiler if any part has been under water. Immediately call a qualified service technician to inspect the boiler and to replace any part of the control system and any gas control which has been under water.



## **WARNING**

Like all central heating appliances, this boiler is equipped with safety devices, which could cause it to shutdown, requiring service to restore normal operation. Where such a shutdown could result in damage from low temperatures (such as frozen pipes), do not leave the heating system unattended during cold weather unless alarms or other safeguards are in place to prevent damage.



## DANGER

**THERE ARE NO USER SERVICEABLE PARTS ON THIS BOILER. ATTEMPTS TO SERVICE THIS BOILER BY SOMEONE OTHER THAN A QUALIFIED GAS SERVICE TECHNICIAN COULD VOID THE WARRANTY, CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE.**

- Do not use this boiler if any part has been under water. Immediately call a qualified service technician to inspect the boiler and to replace any part of the control system and any gas control which has been under water.
- Should overheating occur or the gas supply fail to shut off, do not turn off or disconnect the electrical supply to the pump. Instead shut off the gas supply at a location external to the appliance/En cas de surchauffe ou si l'admission de gaz ne peut être coupée, ne pas couper ni débrancher l'alimentation électrique de la pompe. Fermer plutôt le robinet d'admission de gaz à l'extérieur de l'appareil.
- This boiler may have parts containing refractory ceramic fibers (RCF). See the safety information on page 8 if this boiler must be serviced or repaired.

- 1) This manual covers the proper care and use of your new cast iron, gas-fired hot water or steam boiler.
- 2) Instructions to safely light and shut down this boiler are shown on pages 6 & 7, as well as on a label affixed to the boiler.
- 3) All boilers are equipped with a flame rollout switch (Figure 1). This switch will shut the burners down in the event that flames exit the burner compartment through the front opening. If the boiler fails to fire, call a qualified heating service agency to diagnose and correct the problem.
- 4) All boilers are equipped with a blocked vent shut-off switch (Figure 2). This switch will shut the boiler down in the event that there is an excessive blockage in the vent system. This switch has a reset button, which must be pressed before the boiler can be restarted.

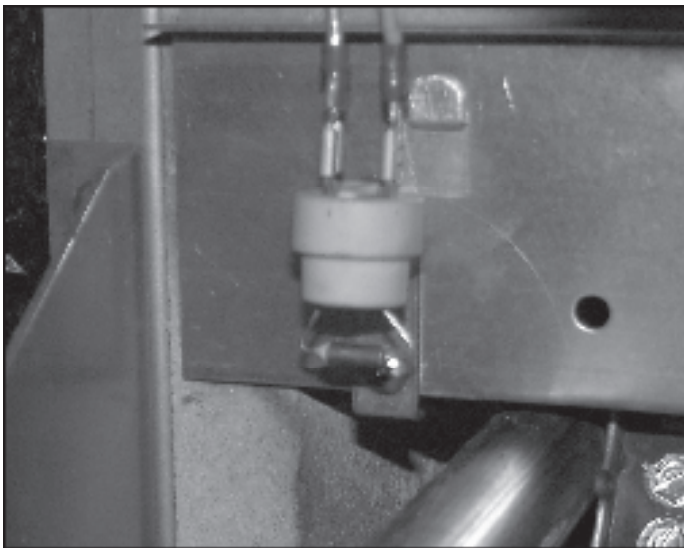


Figure 1: Flame Rollout Switch

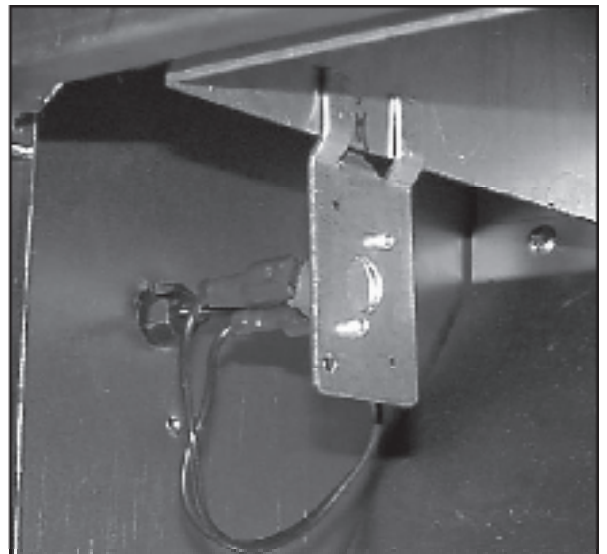


Figure 2: Blocked Vent Switch



## WARNING

- In the event that the flame rollout switch opens, the cause of the flame rollout must be diagnosed and corrected by a qualified gas service technician before the boiler is restarted.
- A “tripped” rollout switch must be replaced by an identical switch having the same temperature setting.



## WARNING

A shutdown of the burners due to the blocked vent switch is an indication that there is a problem with the vent system, such as a blockage. The blocked vent switch should only be reset after a qualified gas service technician has diagnosed and corrected the venting problem that caused the blocked vent switch to open.

### Maintenance

- 1) Safe reliable operation of this boiler depends upon proper periodic maintenance.
- 2) The following should be done on a **continuous basis**:
  - Keep the area around the boiler free of objects, which are flammable or which could obstruct the flow of air into and around the boiler.
  - Do not store or use sources of hydrocarbons such as bleaches, fabric softeners, paints, cleaners, refrigerants, and cat boxes near the boiler. Traces of these chemicals can be drawn into the boiler, causing severe corrosion damage to the boiler and/or objectionable odors.
  - Do not expose the boiler to large amounts of dust such as that generated by dry wall construction or woodworking.
- 3) A qualified gas service technician should perform the maintenance procedure shown in the installation manual on an **annual basis**.
- 4) The owner should visually inspect the venting system on a **monthly basis**. If any of the following conditions are found, the boiler should be shut down and a qualified gas service technician called to correct the problem before the boiler is placed back in service:
  - Loose joints, corrosion or other deterioration
  - Condensate leakage
  - Sags in horizontal runs of vent pipe
- 5) The owner should also perform a **monthly** visual inspection of the boiler and the surrounding system piping. To do this, remove the boiler jacket door. If any of the following are found, a qualified gas service technician should be consulted immediately:
  - Deterioration of the visible controls, wiring, and sheet metal components
  - Heating system water Leaks
  - Carbon (“soot”) in or near the burner compartment area

6) Steam Boilers Only – Steam boilers require the following maintenance:

- Some steam boilers are equipped with a float type low water cut-off (Figure 3). This control must be “blown down” on a **weekly basis, or more often if needed**. To do this, follow the instructions on the label adjacent to the low water cut-off.
- It will occasionally be necessary to add water to the boiler. In most cases this will be true even if the boiler is equipped with an automatic water feeder (most automatic water feeders maintain the water level at the minimum point required to assure boiler operation). On a **monthly basis**, turn the boiler off and wait at least 10 minutes for any water in the system to return to the boiler. Add water to the boiler until the water level in the glass is approximately 6” (about 3/4 of the way) from the bottom of the glass.



**WARNING**

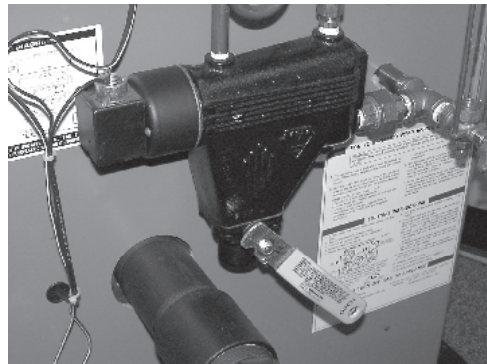
**Carbon (“soot”) in or near the burner compartment area is an indication of a potential carbon monoxide hazard. If carbon is found, the boiler should be shut down immediately and inspected by a qualified gas service technician. The cause of the sooting should be found and corrected before the boiler is restarted.**



**CAUTION**

- **Failure to regularly blow down the float type low water cut-off can result in severe damage to boiler.**
- **If it is necessary to either manually or automatically add water to the boiler more than once a month, a qualified gas service technician should inspect the system for leaks or defective vents. Frequent additions of fresh water could result in severe damage to boiler.**

Figure 3: Float Type Low Water Cut-off



7) Auxiliary Controls – Many boilers are installed with equipment not supplied with the boiler, but which is critical for safe, reliable operation of the boiler. Some examples of this type of equipment include:

- Zone Controls
- Boiler Feed Pumps
- Draft Inducers and Power Venters
- Motorized Combustion Air Louvers

Make sure that this equipment is maintained in accordance with its manufacturer’s instructions.

# LIGHTING INSTRUCTIONS FOR BOILERS EQUIPPED WITH HONEYWELL VR8204 AND VR8304 SERIES GAS VALVES (INTERMITTENT PILOT)

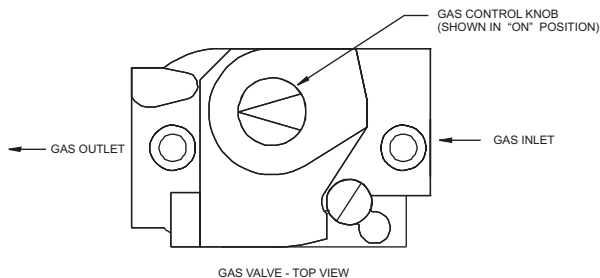
## FOR YOUR SAFETY READ BEFORE OPERATING

**WARNING:** If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- A. This appliance is equipped with an ignition device which automatically lights the pilot. Do not try to light the pilot by hand.
- B. BEFORE LIGHTING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
- WHAT TO DO IF YOU SMELL GAS**
- Do not try to light any appliance.
  - Do not touch any electric switch; do not use any phone in your building.
  - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

## OPERATING INSTRUCTIONS

1. STOP! Read the safety information above on this label.
2. Set the thermostat to lowest setting.
3. Turn off all electric power to the appliance.
4. This appliance is equipped with an ignition device which automatically lights the pilot. Do not try to light the pilot by hand.
5. Remove front access panel.
6. Rotate the gas control knob clockwise ↻ to OFF.
7. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you then smell gas, STOP! Follow "B" in the safety information above on this label. If you don't smell gas go to the next step.
8. Rotate the gas control knob counter clockwise ↻ to "ON".
9. Replace front access panel.
10. Turn on all electric power to the appliance.
11. Set thermostat to desired setting.
12. If the appliance will not operate, follow the instructions "To Turn Off Gas To Appliance" and call your service technician or gas supplier.



## TO TURN OFF GAS TO APPLIANCE

1. Set the thermostat to lowest setting.
2. Turn off all electric power to the appliance if service is to be performed.
3. Push in gas control knob slightly and turn clockwise ↻ to "OFF". Do not Force.

# LIGHTING INSTRUCTIONS FOR BOILERS EQUIPPED WITH ROBERTSHAW 7000DERHC SERIES GAS VALVES (INTERMITTENT PILOT)

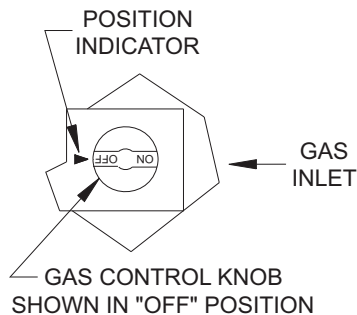
## FOR YOUR SAFETY READ BEFORE LIGHTING

**WARNING:** If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- A. This appliance is equipped with an ignition device which automatically lights the pilot. Do not try to light the pilot by hand.
- B. BEFORE LIGHTING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
- WHAT TO DO IF YOU SMELL GAS**
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  - Do not touch any electric switch; do not use any phone in your building.
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- If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

## OPERATING INSTRUCTIONS

1. STOP! Read the safety information above on this label.
2. Set the thermostat to lowest setting.
3. Turn off all electric power to the appliance.
4. This appliance is equipped with an ignition device which automatically lights the pilot. Do not try to light the pilot by hand.
5. Remove front access panel.
6. Rotate the gas control knob clockwise ↻ to OFF.
7. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you then smell gas, STOP! Follow "B" in the safety information above on this label. If you don't smell gas go to the next step.
8. Rotate the gas control knob counter clockwise ↻ to "ON".
9. Replace front access panel.
10. Turn on all electric power to the appliance.
11. Set thermostat to desired setting.
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## TO TURN OFF GAS TO APPLIANCE

1. Set the thermostat to lowest setting.
2. Turn off all electric power to the appliance if service is to be performed.
3. Push in gas control knob slightly and turn clockwise ↻ to "OFF". Do not Force.



## **Important Product Safety Information** **Refractory Ceramic Fiber Product**

### **Warning:**

This boiler may include parts that contain refractory ceramic fibers (RCF). RCF has been classified as a possible human carcinogen. When exposed to temperatures about 1805°F, such as during direct flame contact, RCF changes into crystalline silica, a known carcinogen. When disturbed as a result of servicing or repair, these substances become airborne and, if inhaled, may be hazardous to your health.

### **AVOID Breathing Fiber Particulates and Dust**

### **Precautionary Measures:**

Do not remove or replace RCF parts or attempt any service or repair work involving RCF without wearing the following protective gear:

1. A National Institute for Occupational Safety and Health (NIOSH) approved respirator
  2. Long sleeved, loose fitting clothing
  3. Gloves
  4. Eye Protection
- Take steps to assure adequate ventilation.
  - Wash all exposed body areas gently with soap and water after contact.
  - Wash work clothes separately from other laundry and rinse washing machine after use to avoid contaminating other clothes.
  - Discard used RCF components by sealing in an airtight plastic bag. RCF and crystalline silica are not classified as hazardous wastes in the United States and Canada.

### **First Aid Procedures:**

- If contact with eyes: Flush with water for at least 15 minutes. Seek immediate medical attention if irritation persists.
- If contact with skin: Wash affected area gently with soap and water. Seek immediate medical attention if irritation persists.
- If breathing difficulty develops: Leave the area and move to a location with clean fresh air. Seek immediate medical attention if breathing difficulties persist.
- Ingestion: Do not induce vomiting. Drink plenty of water. Seek immediate medical attention.