

HWX GAS BOILERS USER'S INFORMATION MANUAL



Intertek



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.

TO THE INSTALLER: THIS MANUAL IS THE PROPERTY OF THE OWNER AND MUST BE AFFIXED NEAR THE BOILER FOR FUTURE REFERENCE.

TO THE OWNER: THIS BOILER SHOULD BE INSPECTED ANNUALLY BY A QUALIFIED SERVICE AGENCY.

BASIC OPERATION

⚠ WARNING

Service on this boiler should be undertaken only by trained and skilled personnel from a qualified service agency.

⚠ 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.

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

A. General. This water boiler is a natural draft appliance and is equipped with controls for proper operation. All controls must be in proper working order. Contact a qualified service agency to provide annual maintenance as specified in Installation, Operation and Maintenance Manual.

1. **Limit.** See Figure 1. A device which automatically interrupts boiler operation when the water temperature exceeds the set point. Maximum allowable temperature is 240°F (115°C).

Original equipment with this boiler is a Honeywell L8148E1182. Boiler operation is interrupted when system temperature reaches cut-out temperature. Boiler operation resumes automatically when system temperature falls approximately 15°F (8°C) below the cut-out temperature. See also Figures 4 and 5 for limit sequence of operation.

2. **Flame Rollout Switch.** See Figure 1. A device which automatically interrupts boiler operation when flames or excessive heat are present in the combustion area. The control is a single use device. If the control is activated to interrupt boiler operation, do not attempt to place boiler in operation. Contact a qualified service agency.
3. **Blocked Vent Switch (Vent Safety Shutoff Switch).** See Figure 1. A device which automatically interrupts boiler operation when there is a blockage in the vent pipe or chimney. The control is a manual reset device. The control is located on the draft hood relief opening. If the control was activated to interrupt boiler operation, do not attempt to place boiler in operation. Contact a qualified service agency.

4. **Pilot.** The pilot provides the ignition source for the main burners. Your boiler has a standing (continuous) pilot or an intermittent pilot. The intermittent pilot ignites only when there is a call for heat and extinguishes when the call for heat ends. See Figures 6 and 7.
5. **Gas Valve.** The gas valve monitors pilot flame and regulates gas flow to the burners and pilot. See Figure 1.
6. **Safety Relief Valve.** A device which protects the boiler against excessive pressure. The safety relief valve can discharge a large amount of hot water - the installer should provide piping to discharge water near floor at a floor drain. If the safety relief valve discharges water, follow instructions TO TURN OFF GAS TO APPLIANCE (see Figure 2 or 3), and contact a qualified service agency.

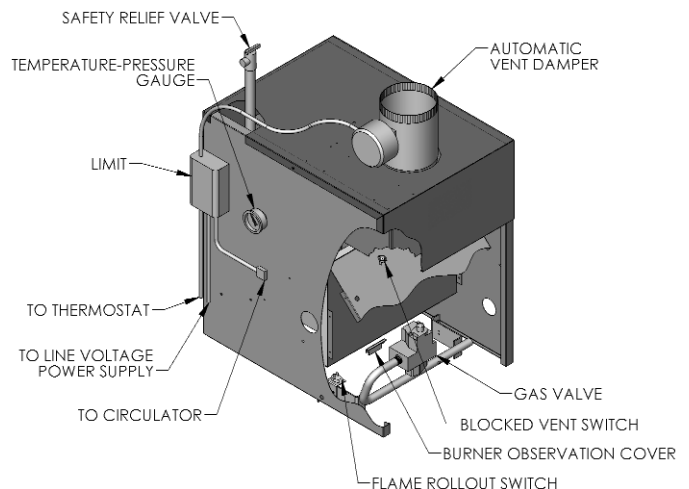


Figure 1: Control Locations

- B.** Instructions to place boiler in operation and to turn off the boiler are shown on the Operating or Lighting Instruction Label posted on the left side of the boiler. The instructions are also shown in Figures 2 and 3.
- C.** The Sequence of Operation is shown in Figures 4 and 5.

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 OPERATING 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.

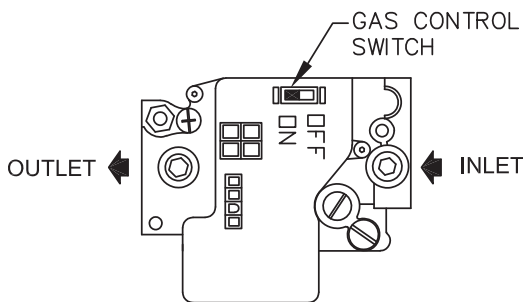
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to slide the gas control switch. Never use tools. If the switch will not slide by hand, don't try to repair 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.

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.

OPERATING INSTRUCTIONS

1. STOP! Read the safety information above on this label.
2. Set the thermostat or operating control 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. If the gas valve is not visible, remove control access panel.
6. If the gas control switch is not in the "OFF" position, slide the switch to "OFF".
7. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you 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. Slide the gas control switch to "ON".
9. Replace control access panel, if applicable.
10. Turn on all electrical power to the appliance.
11. Set thermostat or operating control 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 or operating control to lowest setting.
2. Turn off all electric power to the appliance if service is to be performed.
3. If the gas valve is not visible, remove the control

- access panel.
4. Slide the gas control switch to "OFF".
5. Replace control access panel, if applicable.

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Figure 2: Intermittent Ignition Operating Instructions

FOR YOUR SAFETY READ BEFORE LIGHTING

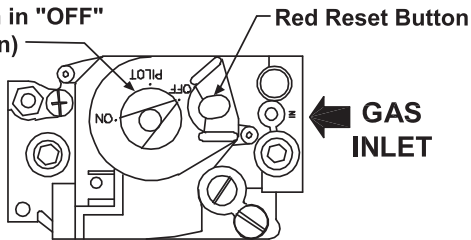
WARNING: If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury, or loss of life.

- A. This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.
- 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 instruction.
- 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.

LIGHTING 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. If the gas valve is not visible, remove control access panel.
5. If the gas control knob is not in the "OFF" position, turn the knob clockwise ↻ to "OFF".

Gas Control Knob (shown in "OFF" position)



6. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above on this label. If you don't smell gas, go to the next step.
7. Remove the pilot access panel, if supplied, located below and behind the gas valve directly above burner tubes.

8. Find pilot - follow metal tube from gas valve. The pilot is between two burner tubes



Pilot Burner

9. Turn the gas control knob counterclockwise ↺ to "PILOT".
10. Push in red reset button all the way and hold in. Immediately light the pilot with a match. Continue to hold the reset button in for about one (1) minute after the pilot is lit. Release button and it will pop back up. Pilot should remain lit. If it goes out, repeat steps 5 through 10.
 - If button does not pop up when released, stop and immediately call your service technician or gas supplier.
 - If the pilot will not stay lit after several tries, turn the gas control knob to "OFF" and call your service technician or gas supplier.

11. Replace pilot access panel, if applicable.
12. Turn gas control knob counterclockwise ↺ to "ON".
13. Replace control access panel, if applicable.
14. Turn on all electric power to the appliance.
15. Set thermostat to desired setting.

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. If the gas valve is not visible, remove the control access panel.
4. Turn the gas control knob clockwise ↻ to "OFF".
5. Replace control access panel, if applicable.

Figure 3: Standing Pilot Lighting Instructions

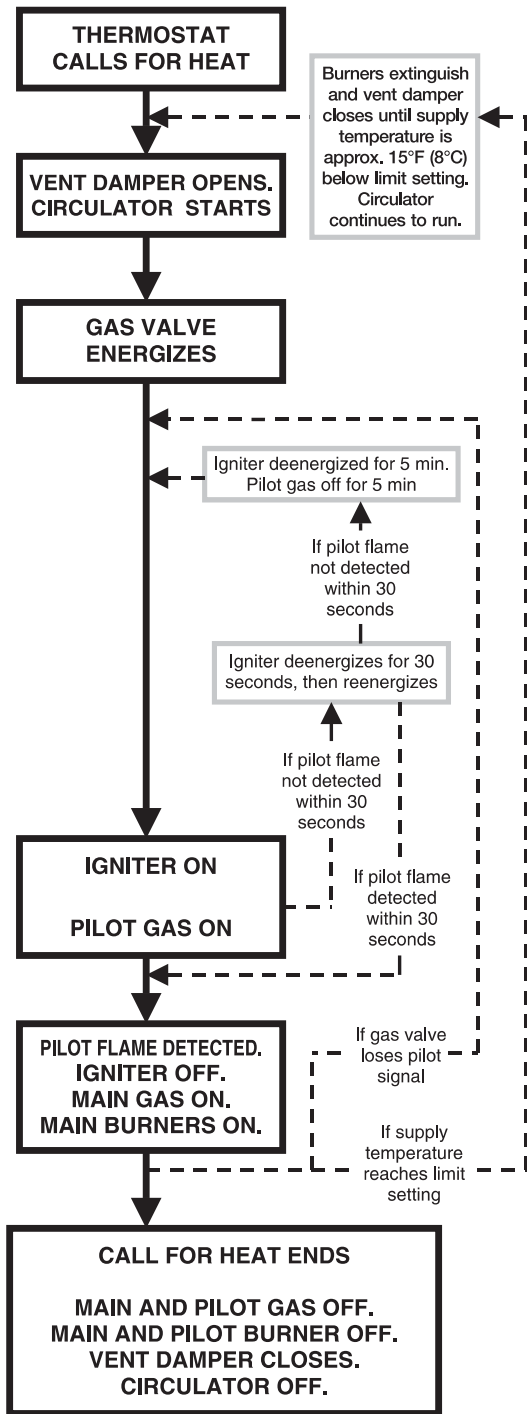


Figure 4: Intermittent Ignition Sequence of Operation

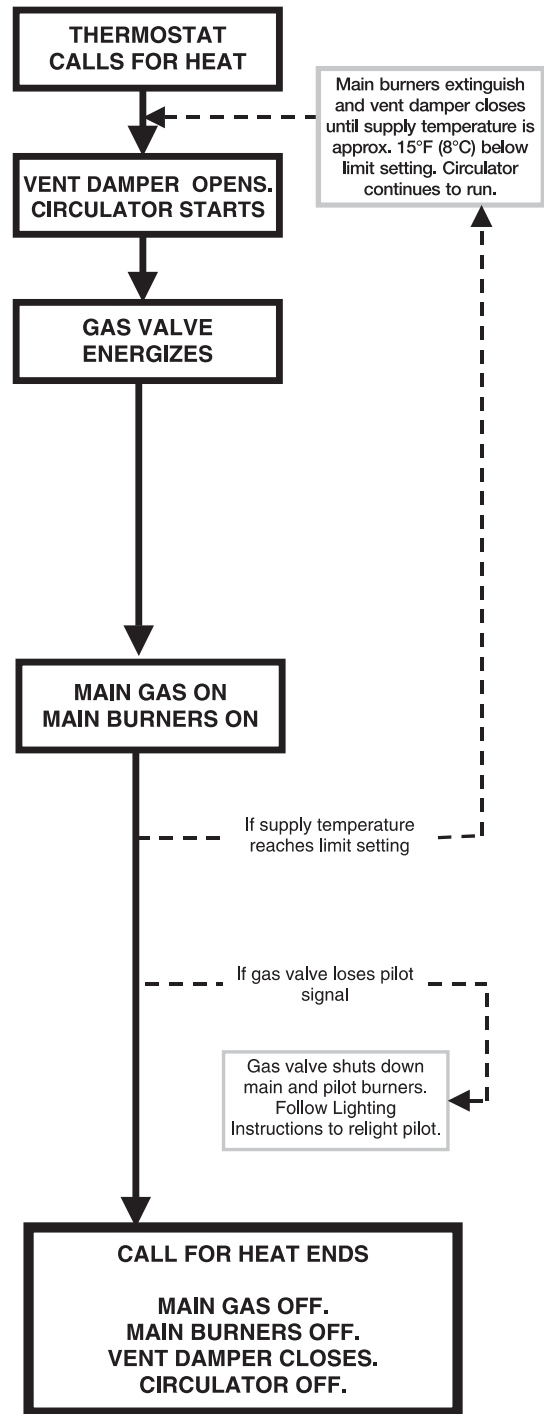


Figure 5: Standing Pilot Sequence of Operation

USER MAINTENANCE

⚠ WARNING**Product Safety Information
Refractory Ceramic Fiber Product**

This appliance contains materials made from refractory ceramic fibers (RCF). Airborne RCF, when inhaled, have been classified by the International Agency for Research on Cancer (IARC), as a possible carcinogen to humans. After the RCF materials have been exposed to temperatures above 1800°F (980°C), they can change into crystalline silica, which has been classified by the IARC as carcinogenic to humans. If particles become airborne during service or repair, inhalation of these particles may be hazardous to your health.

Avoid Breathing Fiber Particulates and Dust

Suppliers of RCF recommend the following precautions be taken when handling these materials:

Precautionary Measures:

Provide adequate ventilation.

Wear a NIOSH/MSHA approved respirator.

Wear long sleeved, loose fitting clothing and gloves to prevent skin contact.

Wear eye goggles.

Minimize airborne dust prior to handling and removal by water misting the material and avoiding unnecessary disturbance of materials.

Wash work clothes separately from others. Rinse washer thoroughly after use.

Discard RCF materials by sealing in an airtight plastic bag.

First Aid Procedures:

Inhalation: If breathing difficulty or irritation occurs, move to a location with fresh clean air. Seek immediate medical attention if symptoms persist.

Skin Contact: Wash affected area gently with a mild soap and warm water. Seek immediate medical attention if irritation persists.

Eye Contact: Flush eyes with water for 15 minutes while holding eyelids apart. Do not rub eyes. Seek immediate medical attention if irritation persists.

Ingestion: Drink 1 to 2 glasses of water. Do not induce vomiting. Seek immediate medical attention.

⚠ WARNING

Service on this boiler should be undertaken only by trained and skilled personnel from a qualified service agency. Inspections should be performed at intervals specified in the Installation, Operation and Maintenance Manual and this User's Information Manual. Maintain manuals in a legible condition.

Keep boiler area clear and free of combustible materials, gasoline and other flammable vapors and liquids.

Do not place any obstructions in boiler room that will hinder flow of combustion and ventilation air.

A. General Housekeeping (Continuous).

1. Keep boiler area clear and free of combustible materials and obstructions to the free flow of combustion and ventilation air to the boiler.
2. Do not store or use gasoline or other flammable vapors or liquids in the vicinity of the boiler or any other appliance.
3. Do not store or use sources of hydrocarbons in the vicinity of the boiler. Sources of hydrocarbons include bleaches, cleaners, chemicals, sprays, paint removers, fabric softeners and refrigerants.

B. Inspect Vent System (Monthly).

1. Vent pipe must be continuous to chimney with no separations, obstructions, or sags. Vent pipe must be supported at minimum 4 foot (122 cm) intervals and secured with sheet metal screws.
2. Chimney must not have signs of continuous wetness. If signs of continuous wetness are observed, contact a qualified service agency.

C. Inspect Pilot and Main Burner Flames (Monthly).

1. Remove control access panel (lower front jacket panel) by lifting and pulling out.
2. Adjust thermostat to lowest setting.
3. Loosen screws at Burner Observation Cover and remove cover by lifting. See Figure 1.

CAUTION
Burner Observation Cover may be hot!

4. Adjust thermostat to highest setting. Verify operation follows Sequence of Operation (see Figure 4 or 5).
5. View flames through observation port. See Figure 1.
6. Check pilot flame. See Figures 6 and 7. The pilot flame should be medium blue covering approximately 3/8" to 1/2" (10 to 12 mm) of the sensing probe. If the flame is yellow and lazy, follow instructions TO TURN OFF GAS TO APPLIANCE (see Figures 2 and 3), and contact qualified service agency.
7. Check main burner flames. See Figures 6 and 7. The flames should have clearly defined inner cones approximately 1 1/2" (40 mm) high and should have a very sharp blue color characteristic. If the flame is yellow and lazy, follow instructions TO TURN OFF GAS TO APPLIANCE (see Figures 2 and 3), and contact qualified service agency.

8. Adjust all thermostats to lowest setting to shut down boiler.
9. Replace burner observation cover and control access panel.
10. Adjust thermostats to normal setting.

D. Controls (as required by control manufacturer)¹.

1. Safety Relief Valve. Conduct try lever test as outlined in manufacturer's instruction tag on the safety relief valve.
2. Low Water Cut-off (if used). Follow instructions provided by control manufacturer.

E. General Inspection and Maintenance (Annual).

For continued safe operation a qualified service agency must provide a more detailed inspection of burners, heat exchanger and vent system, and provide maintenance as specified in the Installation, Operation and Maintenance Manual.

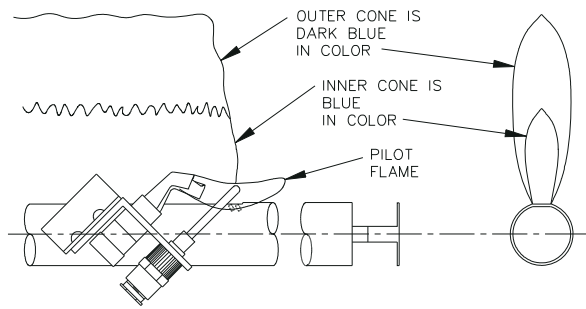


Figure 6: Standing Pilot Configuration and Flames

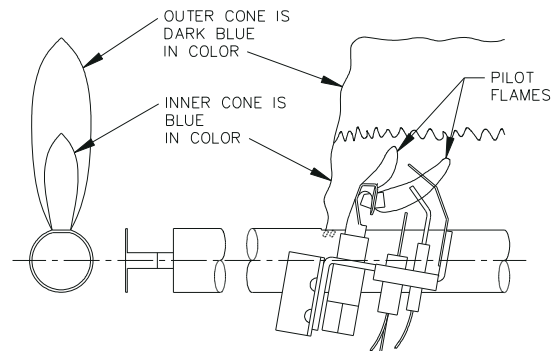


Figure 7: Intermittent Ignition Pilot Configuration and Flames

¹ Controls maintenance may be part of annual inspection and maintenance by a qualified service agency if annual frequency is specified by controls manufacturer.

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