



PRODUCT LITERATURE

Lennox Industries Inc.
Dallas, Texas

USER'S INFORMATION MANUAL

CAST IRON GAS FIRED WATER HEATING 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.

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 control system and any gas control which has been under water.

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

1- SAFETY INFORMATION

1- GENERAL

This boiler has few user serviceable parts. Maintenance and Service must be completed by qualified agency.

WARNING

Fire, explosion, asphyxiation and electrical shock hazard. Improper maintenance and service could result in death or serious injury. Read this manual and understand all requirements, including use of qualified agency where directed.

Become familiar with symbols identifying potential hazards.



This is the safety alert symbol. Symbol alerts you to potential personal injury hazards. Obey all safety messages following this symbol to avoid possible injury or death.

DANGER

Indicates a hazardous situation which, if not avoided, WILL result in death or serious injury

WARNING

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

CAUTION

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

Used to address practices not related to personal injury.

WARNING

Combustion chamber insulation in this product contains ceramic fiber material. Ceramic fibers can be converted to cristobalite in very high temperature applications. The International Agency for Research on Cancer (IARC) has concluded, Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group1). Avoid breathing dust and contact with skin and eyes. Use NIOSH certified dust respirator (N95). This type of respirator is based on the OSHA requirements for cristobalite at the time this document was written. Other types of respirators may be needed depending on the job site conditions. Current NIOSH recommendations can be found on the NIOSH website <https://www.cdc.gov/niosh/topics/silica/>. NIOSH approved respirators, manufacturers, and phone numbers are also listed on this website. Wear long-sleeved, loose fitting clothing, gloves, and eye protection. Apply enough water to the combustion chamber lining to prevent dust. Wash potentially contaminated clothes separately from other clothing. Rinse clothes washer thoroughly.

NIOSH stated First Aid. Eye: Irrigate immediately. Breathing: Fresh air.

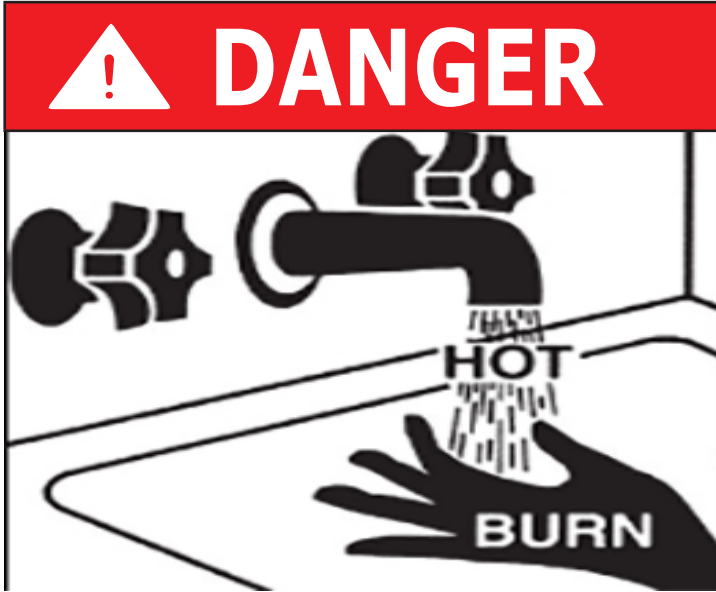
CAUTION

Laceration, burn hazard. Metal edges and parts may have sharp edges and/or may be hot. Use appropriate personal protection equipment to include safety glasses and gloves when installing or servicing this boiler. Failure to follow these instructions could result in minor or moderate injury.

**KEEP THIS MANUAL NEAR BOILER
RETAIN FOR FUTURE REFERENCE**

2 - SAFETY INFORMATION

FOR YOUR SAFETY READ BEFORE OPERATING



Hot Water Can Scald!

Water heated to temperature for clothes washing, dish washing and other sanitizing needs can scald and cause permanent injury.

Children, elderly, and infirm or physically handicapped persons are more likely to be permanently injured by hot water. Never leave them unattended in bathtub or shower. Never allow small children to use a hot water tap or draw their own bath.

If anyone using hot water in the building fits the above description, or if state laws or local codes require certain water temperatures at hot water taps, you must take special precautions:

- Use lowest possible temperature setting.
- Install some type of tempering device, such as an automatic mixing valve, at hot water tap or water heater. Automatic mixing valve must be selected and installed according to manufacturer's recommendations and instructions.
- Water passing out of drain valves may be extremely hot. To avoid injury:
 - Make sure all connections are tight.
 - Direct water flow away from any person.

Water Temperature Setting	1st Degree Burn Exposure Time For An Adult	2nd and 3rd Degree Burn Exposure Time For An Adult
120° F	1 minute	5 minutes
130° F	5 seconds	30 seconds
140° F	2 seconds	5 seconds
150° F	1 second	1.5 seconds
160° F	Instantaneous	0.5 seconds

Note: Warning for Infants, Children, and Elderly: Great care must be taken when exposing the aforementioned groups to warm or hot water as they can be badly burned in exposure times less than half of the time for an adult.

1.1 What To Do Should Overheating Occur

Do not turn off or disconnect electrical supply to pumps. Shut off gas supply at location external to appliance.

1.2 What To Do If Boiler Or Any Part Has Been Under Water

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

1.3 For Your Safety

Manufacturer recommends a carbon monoxide detector located on each floor of your home. Follow your detector's instructions for operation and verification. Some jurisdictions may, by law, require.

2 - LIGHTING INSTRUCTIONS



⚠ WARNING

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

- This appliance is equipped with an ignition device which automatically lights burner. Do NOT try to light this burner by hand.
- Before operating smell all around appliance area for gas. Be sure to smell next to floor because some gas is heavier than air and will settle to the floor.
- Use only your hand to turn the gas shutoff valve. Never use tools. If valve will not turn by hand, do not try to repair it, call a qualified service technician. Force or attempted repair may result in fire or explosion.
- Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect appliance and to replace any part of control system and any gas control which has been under water.
- Do not operate boiler if hot water boiler and system are not full of water to minimum pressure of 12 psi. Verify system is vented of air.

2.1 Operating Instructions

Stop! Read Safety information above.

- Set thermostat to lowest setting.
- Turn "**OFF**" all electrical power to appliance.
- This appliance is equipped with an ignition device which automatically lights the burner. **Do not try to light burner by hand!**
- Lift and remove front door.
- Turn gas control knob clockwise  to closed position. See Figure 2-1
- Wait 5 minutes for any gas to clear. Smell for gas, including near floor. If you smell gas, **STOP!** Follow instructions on this page: "**What To Do If You Smell Gas.**" If you do **not** smell gas, go to next step.
- Turn gas control knob counter clockwise  to open position.
- Turn "**ON**" electrical power to appliance.
- Set thermostat to desired setting.
- If the appliance will not operate, follow instructions TO TURN OFF GAS TO APPLIANCE and call your service technician or gas supplier.

⚠ CAUTION

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.

2.2 To Turn Off Gas To Appliance


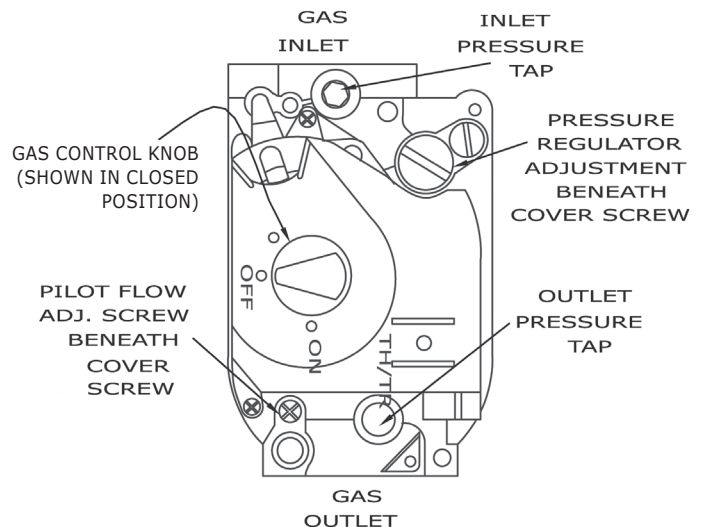
- Set thermostat to lowest setting.
- Turn "**OFF**" all electric power to appliance if service is to be performed.
- Remove access panel(s).
- Turn gas shutoff control knob clockwise  to closed position.
- Replace access panel(s).

FIGURE 1- 1 - GAS VALVE



3 - GENERAL INSTRUCTIONS

⚠ WARNING

Fire and Asphyxiation hazard. Do not attempt to place boiler in operation if safety switches shut the main burner gas off. Contact a qualified service agency. Failure to follow these instructions could result in death or serious injury.

3.1 Safety Features

- In event the flow of combustion products through boiler venting system becomes blocked, the blocked vent safety switch *will* shut main burner gas off. See *Figure 2*. If this condition occurs, **do not attempt to place boiler in operation. Contact a qualified service agency.**
- If boiler flue-ways become blocked, flame rollout safety switch *will* shut main burner gas off. See *Figure 2*. If this condition occurs, **do not attempt to place the boiler in operation. Contact a qualified service agency.**

3.2 Continuous

- Keep boiler area free from combustible materials, gasoline and other flammable vapors and liquids.
- Keep combustion air and vent terminations (outside building) free from trash, vegetation and other items capable of blocking flow.

3.3 Beginning of Each Heating Season

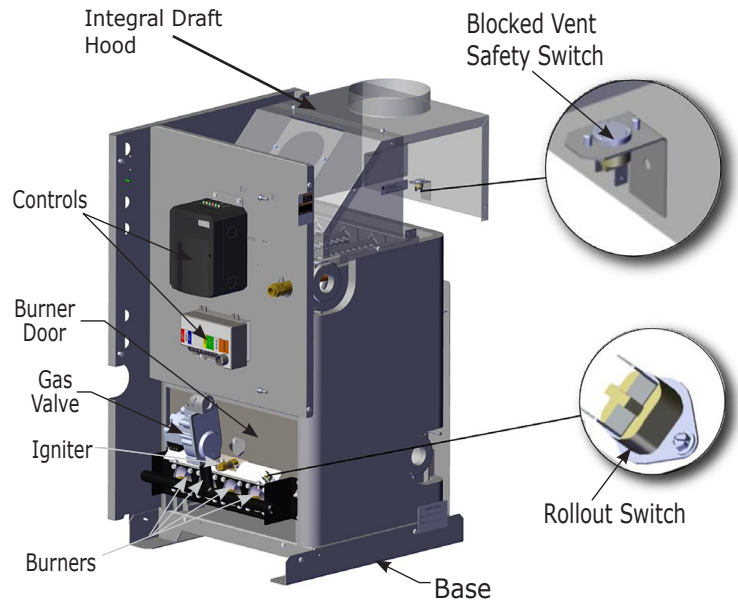
Contact qualified service agency to perform maintenance and cleaning per Installation, Operation and Maintenance manual.

Inspection will include examining all flue product carrying areas, vent system, burner and pilot flames. Will also include filling boiler with water if drained as part of End of Heating Season procedure.

3.4 Monthly

- Inspect combustion air and vent terminations verify they are unobstructed. Inspect vent piping for deterioration, leaks or sagging. Contact qualified agency, as necessary.
- Inspect system piping for leaks. Contact qualified agency, as necessary.
- Check air vent(s) for leakage.
- Follow OPERATING INSTRUCTIONS to return to normal operation.

FIGURE 2 - BOILER FLUE GAS PASSAGEWAYS



⚠ WARNING

Burn and scald hazard. Verify Safety Relief Valve discharge piping run to safe discharge location before conducting maintenance procedure. Contact qualified agency to correct improper piping.

3.5 Check According to Manufacturer's Instructions

Safety Relief Valve - Refer to manufacturer's instructions.

3.6 End of Heating Season, if boiler is not used for domestic hot water

- Follow instructions to TURN OFF GAS TO APPLIANCE. See section 2.2.
- Contact qualified agency to drain heating system (if system does not use antifreeze) if heating system is exposed to freezing temperatures while out of service.

Following information is requested for all service calls

(*Information can be found on boiler's rating plate)

Date of Installation: _____

*Boiler Serial Number: _____

* Boiler Model Number: _____

Installed By: _____

