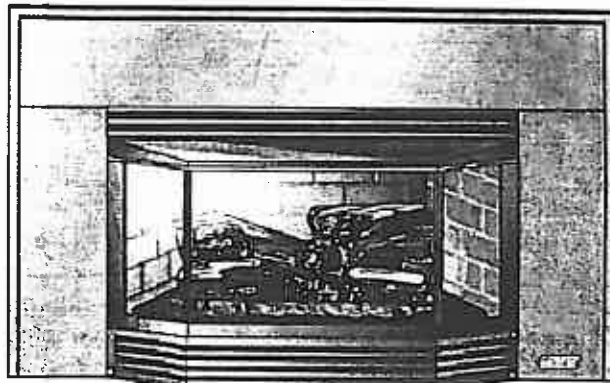


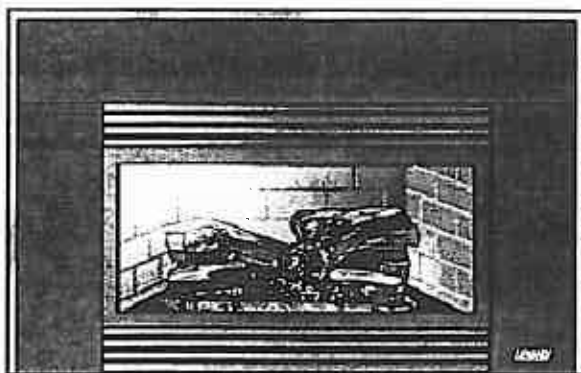


# INSTALLATION AND OPERATION MANUAL

## VENTED GAS FIREPLACE HEATER INSERT



*Shown with Bayview Window*



*Shown with Picture Window*

Suitable for installation into a masonry or factory built fireplace.

### ELITE® SERIES MODEL L20BI (B-Vent)

P/N 504,326M, Rev. E, 03/01

#### WARNING

If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, person 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 gas supplier. This appliance is only for use with the type(s) of gas indicated on the rating plate. This appliance is not convertible for use with other gases, unless a certified kit is used.



WH Report No.  
476-1834

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**IMPORTANT:** Read these instructions thoroughly and make sure you understand them before beginning the installation. Failure to follow these installation instructions may result in a possible fire hazard and will void the warranty. Do not attempt to alter or modify the construction of this appliance or its components. Any modification or alteration of construction will void warranty, certification, and listing of this appliance. These instructions are intended as a general guide and do not supersede local codes in any way. Consult authorities having jurisdiction before installation. Save this manual for future reference.

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## PACKAGING LIST

The assembled vented gas fireplace heater is packaged with:

- 1 - One log set and bag of ceramic coals located in the firebox area.
- 2 - One accessory package containing a literature package (Installation and operation instructions manual), bag of glowing embers, propane conversion kit (if needed to run on LP gas), one hose clamp (for exhaust collar), one #8 x 1/2" TEK screw (to secure draft hood to appliance) and two leveling bolts. This bag is located in the firebox area.
- 3 - One draft hood assembly.

The surround kit (purchased separately) is packaged with:

- 1- One Top Surround Panel.
- 2 - One Left Surround Panel.
- 3 - One Right Surround Panel With Trim & Controls.
- 4 - One left side Trim.
- 5 - One Top Trim.
- 6 - Ten Screws (8-32 x 3/8" self tapping screw with 1/4" hex head).

THIS APPLIANCE MUST BE FITTED WITH EITHER A PICTURE WINDOW OR BAY WINDOW KIT IN ORDER TO OPERATE SAFELY. DEPENDING ON WHICH IS SELECTED, THE PACKING LISTS ARE AS FOLLOWS:

The picture window kit (purchased separately) is packaged with:

- 1 ea. Picture Window Assembly
- 1 ea. Burner Cover Assembly
- 1 ea. Bottom Louver Assembly
- 1 ea. Upper Louver Assembly
- 7 ea. screws, #8 x 1/2", TEK
- 4 ea. wing nuts, 1/4"-20

The bay window kit (purchased separately) is packaged with:

- 1 ea. Bay Window Assembly
- 1 ea. Burner Cover Assembly
- 1 ea. Bottom Louver Assembly
- 1 ea. Upper Louver Assembly
- 1 ea. Decorative Hood
- 4 ea. wing nuts, 1/4"-20
- 3 ea. screws, #8 x 1/2", TEK

CHECK FOR SHIPPING DAMAGE. THE RECEIVING PARTY SHOULD CONTACT LAST CARRIER IMMEDIATELY IF ANY SHIPPING DAMAGE IS FOUND.

## INTRODUCTION



### ⚠ 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.



Model L20BI has been tested and certified by ITS (Intertek Testing Services). Listing mark is Warnock Hersey / Report # 476-1834. The L20BI is listed as a (B-Vent), Vented Gas Fireplace Heater.

The L20BI has been tested to ANSI Z21.88a-1999/CSA 2.33a-M99 Vented Gas Fireplace Heaters, CAN/CGA 2.17-M91 Gas Fired Appliances for Use at High Altitudes.

These vented gas fireplace heaters are natural convection, heat circulating gas fireplaces designed for residential applications. These heaters are designed to be installed into an existing masonry or factory built solid fuel burning fireplace only, using 4" listed B-Vent or listed liner from the appliance outlet to the chimney termination. The venting system must be routed through the existing fireplace flue system to the outside atmosphere.

This appliance is designed to operate on natural gas or propane (LP). It is factory set for use with Natural Gas and will require field conversion for use with Propane (a propane conversion kit is located inside the accessory package). The use of other fuels or combination of fuels will degrade the performance of this system and may be dangerous. This appliance uses a millivolt type control system consisting of a gas control valve with regulator (control to adjust for flame appearance and heat output), a standing pilot burner assembly, a thermopile, thermocouple, a piezo igniter, and ON/OFF switch. All exhaust gases must be vented outside the structure. Combustion air is drawn from the room where appliance is installed. **THE GAS BURNER SYSTEM ON THIS APPLIANCE DOES NOT REQUIRE 110 VOLT POWER TO OPERATE.** However, the heat circulation blower requires 110 Volt power (The use of the blower is optional). The blower operation is controlled by an ON/OFF switch and the blower speed can be adjusted from low to high by turning the blower rheostat dial.

Provide adequate clearances around air openings and adequate accessibility clearance for service and proper operation (see page 9). Never obstruct the front openings of the appliance.

This appliance requires an adequate supply of combustion and ventilation air. As an aid in determining whether or not these requirements have been satisfied, follow the procedure indicated in the section entitled Vent Operation Test and Spill Switch (see page 7). A make-up air provision may need to be installed in order to provide outside air directly to the vicinity of the appliance.

### ⚠ WARNING

Installation and service must be performed by a qualified installer, service agency or the gas supplier.

Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this appliance may result in property damage or personal injury.

The appliance should be inspected before use and at least annually by a Lennox service technician. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that control compartments, burners and circulating air passageways of the appliance be kept clean.

Due to high operating temperatures, the appliance should be located out of traffic and away from furniture and draperies.

This appliance must not be connected to a chimney flue servicing a separate solid fuel burning appliance.

This room heater is a vented gas appliance. Do not burn wood or other material in this heater.

Do not connect 110-120 vac to the gas control valve or control wiring system of this unit.

Children and adults should be alerted to the hazards of high surface temperature and should stay away to avoid burns or clothing ignition.

Young children should be carefully supervised when they are in the same room as the appliance.

### ⚠ CAUTION

Any safety screen or guard removed for servicing an appliance must be replaced prior to operating the appliance.

Clothing or other flammable material should not be placed on or near appliance.

Avertissement: surveiller les enfants. Garder les vêtements, les meubles, l'essence ou autres liquides à vapeur inflammables à côté de l'appareil.

## GENERAL INFORMATION

The installation must conform with local codes or in the absence of local codes, with:

In USA, The National Fuel Gas Code, ANSI Z223.1 (NFPA 54) - current edition.

In Canada, CAN/CGA-B149.1 (Installation Code for Natural Gas Burning Appliances and Equipment-current edition) and CAN/CGA-B149.2 (Installation Code for propane Gas Burning Appliances and Equipment-current edition) and other applicable codes.

The heat circulating blower has a flexible electrical cord that must be electrically grounded per local codes or per electrical codes:

In USA, NEC, ANSI/NFPA 70-latest edition.

In Canada, CSA C22.1-latest edition

### WARNING

**Electrical grounding instructions. This appliance is equipped with a three-pronged (grounding) plug for your protection against shock hazard and should be plugged directly into a properly grounded receptacle. Do not cut or remove the grounding prong from this plug.**

In some states or municipalities, a licensed gas fitter or plumber may be required to install this appliance. Check with the authority having jurisdiction for your locality for requirements in your area.

Provide for adequate combustion and ventilation air to the room where this appliance is to be installed.

This appliance must be installed into a masonry or factory built solid fuel (wood) burning fireplace only.

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

Solid fuel must not be used with this appliance.

On initial start-up, follow procedure as outlined on page 13 for appliance "break-in".

Never seal the opening at the rear of the stove.

Do not block air openings at the bottom of the cabinet wrapper with insulation or by other means.

This appliance may be used with a thermostat (see *Optional Wall Thermostat*). This appliance is certified for use in bedrooms. If installed in a bedroom in Canada, a thermostat IS required.

This appliance is tested and approved for installation at elevations of 0-2000 feet (0-610 meters). Consult local code and refer to ANSI Z223.1-latest edition for orifice resizing (see *High Altitude* on page 17). Consult with local authorities having jurisdiction.

DO NOT USE this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and replace any part of the control system and gas control, which has been under water.

Ne pas se servir de cet appareil s'il a été plongé dans l'eau, complètement ou en partie. Appeler un technicien qualifié pour inspecter l'appareil et remplacer toute partie du système de contrôle et toute commande qui ont été plongés dans l'eau.

## GAS PRESSURE (Also see page 12)

NATURAL GAS (NG)		
	Low	High
Inlet	4.5" WC minimum	7.0" WC maximum
Manifold	1.9" +/- .3" WC	3.5" +/- .3" WC
Input	21,500 BTU/hr	27,500 BTU/hr

PROPANE (LP)		
	Low	High
Inlet	11.0" WC minimum	13.0" WC maximum
Manifold	6.8" +/- .3" WC	10.0" +/- .3" WC
Input	21,500 BTU/hr	27,500 BTU/hr

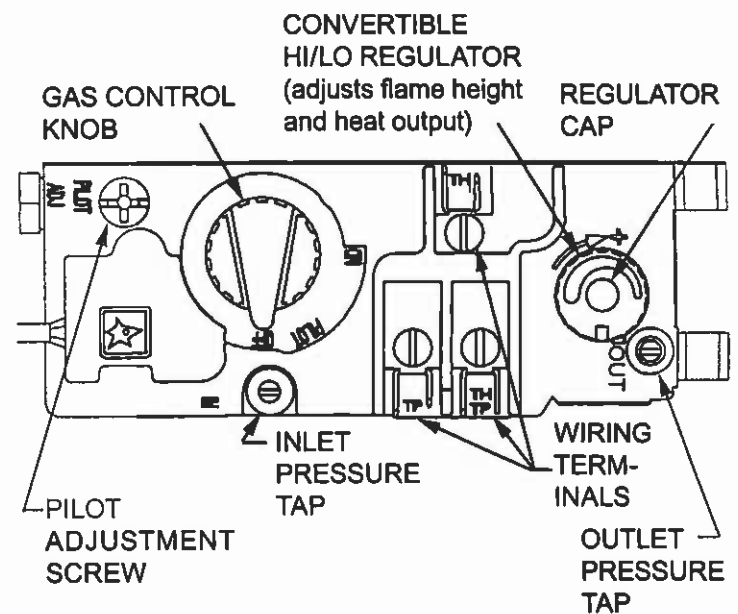
### Notes:

- WC = Water Column
- See page 12 for definitions of Inlet and manifold gas pressure.

### PRESSURE TAPS

Gas inlet and outlet (manifold) pressure taps are provided on the top right of gas control valve for a test gauge connection.

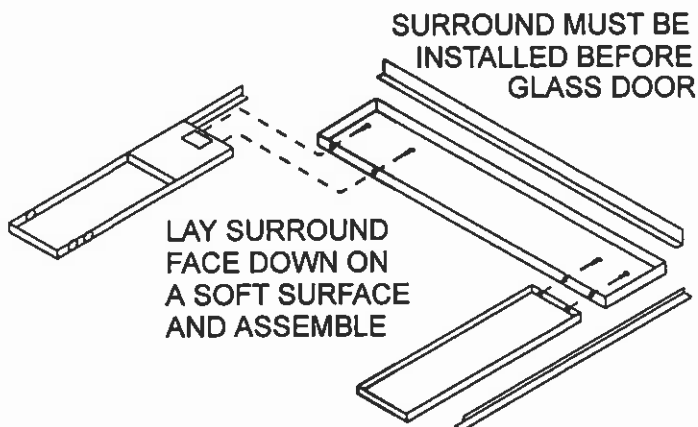
### GAS CONTROL VALVE DIAGRAM



## ASSEMBLY

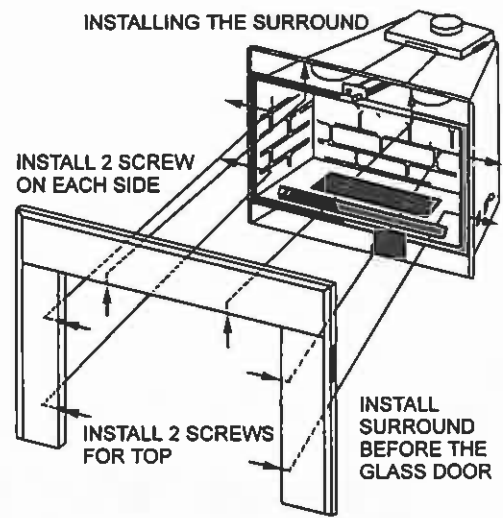
1. Remove insert from packaging and make sure all the components are present (See *Packaging List* on Table of Contents page). Install per instructions outlined in this manual.
2. This appliance is designed to operate on natural gas, or propane (LP). **It is factory set for use with Natural Gas and requires field conversion for use with Propane** (this kit is located in the accessory package). The use of other fuels or combination of fuels will degrade the performance of this system and may be dangerous. See *Propane Conversion Procedure*, pages 6 & 7.
3. If this appliance is to be installed at elevations above 2000 feet (610 meters) above sea level, a High Altitude Kit must be installed (see page 17).
4. Run gas supply line (page 12) and install appliance into fireplace as outlined in this manual.
5. If an optional remote control kit or wall thermostat is used, remove the control cover to access the gas valve. Connect the remote sensor unit or thermostat wire directly to the valve per the instructions provided with the kit (see *Wiring Diagram*, page 12).
6. Leveling Bolts - It may be necessary to level the appliance in some installations such as a recessed firebox floor (if the existing fireplace has a firebox floor which is lower than the hearth). If needed, install the 2 leveling bolts (1/4-20 x 3 1/2" long) into the threaded holes at the rear base of the insert. Adjust bolts until appliance is level.
7. Remove the surround kit components from the surround box (see Table of Contents page for the packaging list). Position each surround panel as shown (onto a soft, nonscratching surface). Next, fasten it in place with the screws provided (screws are 8-32 x 3/8" self tapping with a 1/4" hex head).

### SURROUND ASSEMBLY COMPONENTS (Shown Face Down)



8. Next, install the surround assembly onto appliance as shown in the following illustration. Plug in connectors from right surround panel into matching connectors on insert which are recessed on the right side.

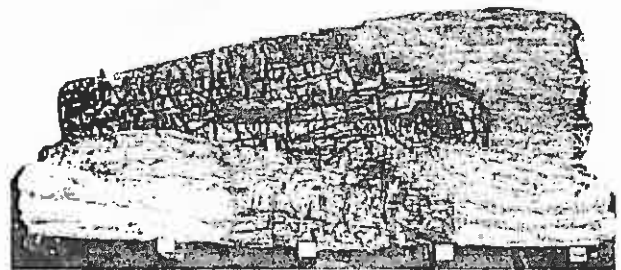
### INSTALLING THE SURROUND



9. Remove window kit components from box (see packaging list on Table of Contents page). Place components on a soft surface to avoid scratching (i.e. carpet). Install burner cover over burner located inside firebox (see illustrations on next page). Line up the holes with the burner bracket and secure with screws provided in kit. Align the front edge of burner cover so that it is flush with the front edge of the firebox opening. (Appliances with picture window) Install bottom louver onto insert using four of the screws provided in kit.
10. Position the holes on the bottom of the largest log over the pins in the rear of firebox. Carefully place the log onto the pins.



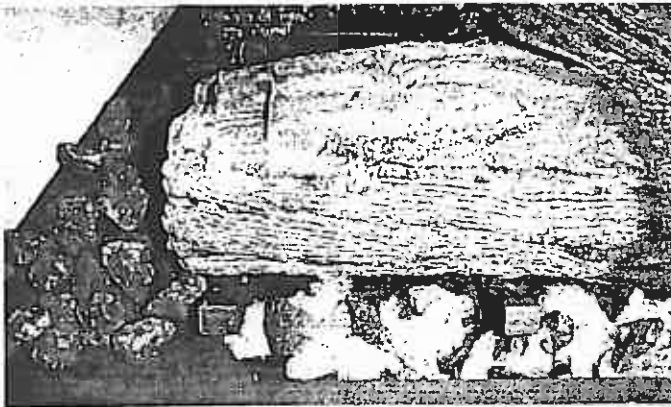
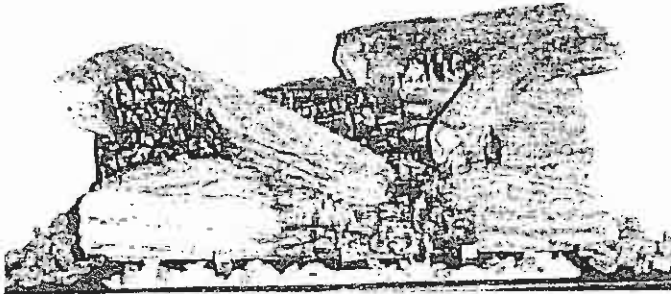
11. Place the front log as shown below.



12. Position the two top twigs as shown below ensuring that the positioning holes on the bottom of the twigs are placed onto the pins on the rear log.

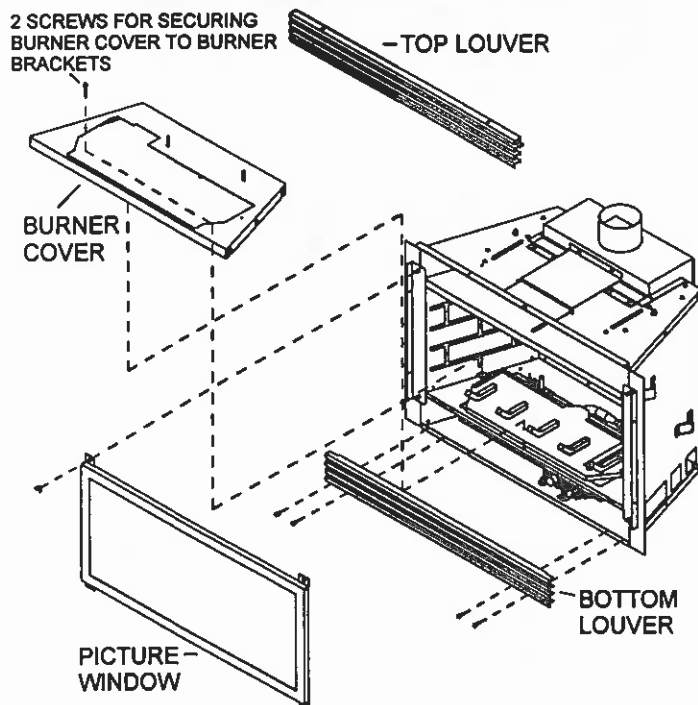


13. Break off nickel sized pieces of the ember wool material and spread it in front of the front log (over the burner ports) as shown below. Position the ceramic coals to the front and sides of the front log.

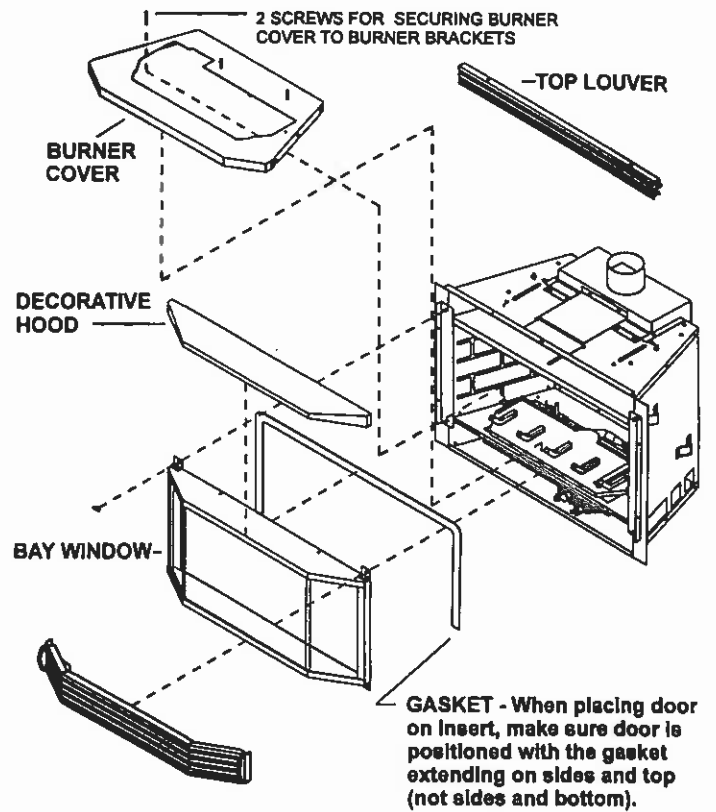


14. Install window assembly: Align the four holes in the corners of the window frame onto the 4 studs on face of insert. Use the 4 wing nuts provided to secure window assembly into place (Finger tight only. Be careful not to overtighten).

### PICTURE WINDOW ILLUSTRATION



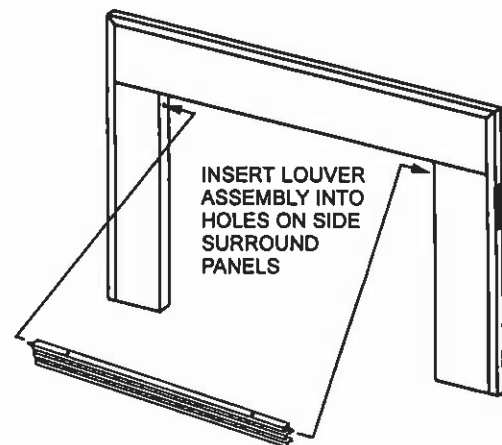
### BAY WINDOW ILLUSTRATION



15. (Appliances with bay window) Install the bottom louvered assembly onto insert by holding the two side handles and sliding it into place below window frame. Install the top decorative hood by setting it on top of the bay window assembly (see bay window illustration above).

16. Install top louver assembly as follows: Insert one pin on louver assembly into corresponding hole in side surround panel. Then press in the other pin and rotate louver assembly back into place until pin pops into corresponding hole on surround panel (suggestion: To avoid damage to the finish on the surround panels, place a small piece of cardboard over the pin as you depress it, then pull the cardboard out once the louver is in place).

Note: Pins on louver assembly are spring loaded. Be very careful not to damage the finish on the surround panels during installation.



## 1. GAS SUPPLY HOOKUP:

### ⚠ CAUTION

To avoid pipe compounds from entering system, apply compounds only to male pipe threads. Do not apply compound to the first two threads.

### ⚠ IMPORTANT

Compounds used on threaded joints of gas piping must be resistant to the actions of liquified petroleum gases.

A 24" flexible stainless steel connector with a 1/2" NPT ball valve (shut off) is provided to connect the incoming gas supply line to the appliance. Gas supply piping can be brought into the appliance through either the right or left side. Some areas may have restrictions against the use of flexible gas connectors. Check local codes. If the flex connector is not used, connection to valve fitting is 3/8" NPT.

A gas supply line must be run to the appliance by a qualified professional. The plumbing of the gas line must comply with National Standards; NFPA 54-*National Fire Protection Association/ANSI Z223.1-American National Standards Institute*; and local code.

Gas piping must not run in or through air ducts, clothes chutes, chimneys or gas vents, dumb waiters or elevator shafts.

Piping should be sloped 1/4" per 15 feet (6mm per 4.6m) upward toward the meter from the appliance. The piping must be supported at proper intervals every 8 to 10 ft.. (2.4m to 3.1m) using suitable hangers or straps.

The gas supply line must be purged of air before it is connected to the appliance.

An accessible, approved shutoff valve must be installed upstream of any connector so that the appliance may be isolated to allow service, removal, and replacement (within six feet of the appliance per NFPA 54, or twelve inches in some codes). A shut off valve is provided with this appliance.

The installer must provide a 1/8" NPT plugged tap in the field piping upstream of the gas supply connection to the appliance. The tap must be accessible for test gauge connection.

**Isolate Appliance Main Gas Valve During Testing** by closing its equipment shut-off valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig (3.48 kPa).

### ⚠ IMPORTANT

Appliance gas valves can be damaged if subjected to more than 1/2 psig (3.48 kPa) pressure. Therefore, when pressure testing the gas supply piping system in this pressure range, the appliance gas valve must be disconnected and isolated.

Make the connection to the gas supply line using the correct fitting required to the shutoff valve.

Install a drip leg where condensates might accumulate. Sediment traps, like drips and collection tees, are required to be installed. Traps collect moisture and intercept and hold foreign objects which might block orifices and valves. A drip leg should be installed in vertical pipe runs to the appliance.

After connecting the gas supply line to the appliance, do the following:

- a. Reinstall the door frame assembly.
- b. Light the appliance following the instructions on page 13 & 14 (See LIGHTING PROCEDURE).  
**WARNING: IF THE PILOT DOES NOT LIGHT AFTER 1 MINUTE, WAIT AT LEAST 5 MINUTES FOR GAS TO CLEAR BEFORE ATTEMPTING AGAIN.**
- c. Verify that the pilot and main burner ignition and operation are correct.
- d. Test all connections for leaks (factory and field) with a leak detector or soapy water solution.

### ⚠ CAUTION

Some soaps used for leak detection are corrosive to certain metals. Carefully rinse piping thoroughly after leak test has been completed. Do not use matches, candles, flame or other sources of ignition to check for gas leaks.

- e. With burner lit, check to make sure that the inlet gas and manifold pressures are correct (see *Gas Pressure*, page 2).
2. Adjust main burner flame if necessary (see page 12, #7).

**IMPORTANT:** In case emergency shutoff is required, shut off main manual gas valve and disconnect main power to appliance. These devices should be properly labeled by the installer.

## PROPANE CONVERSION KIT

(Only required if Propane gas is used)

This appliance is designed to operate on natural gas, or propane (LP). It is factory set for use with natural gas and requires field conversion for use with propane. The use of other fuels or combination of fuels will degrade the performance of this system and may be dangerous.

The conversion kit contains components required to convert this appliance from use with natural gas to use with propane (LP) Gas. All of the components in the propane conversion kit must be installed in order for the appliance to operate safely on propane.

### INSTALLATION TOOLS/SUPPLIES

7/16" Open end wrench

Small standard screwdriver

Pipe sealant compound (must be rated for use with LPG gas)

### PARTS LIST

Propane RB Regulator conversion screw (Red indicates LP gas)

Burner Orifices (various sizes are included with kit, see page

17 - ANSI Z223.1 Table to determine correct size)

Pilot Orifice

Label, Converted to (LP) Propane – Affix to valve

Label, Converted to (LP) Propane – Affix to stove body

## **▲ WARNING**

Conversion components must be installed by a qualified service agency in accordance with these instructions and all applicable codes and requirements of the authority having jurisdiction. If the information in these instructions is not followed exactly, a fire, explosion or production of carbon monoxide may result, causing property damage, personal injury or loss of life. The qualified service agency is responsible for the proper installation of this kit. The installation is not proper and complete until the operation of the converted appliance is checked as specified in these instructions.

### PROPANE CONVERSION PROCEDURE

1. Turn off Gas - Turn gas control knob to the off position, and shut off the gas supply to the valve. If necessary, disconnect appliance from gas supply.
2. Caution: The gas supply shall be shut off prior to disconnecting the electrical power, before proceeding with the conversion. Unplug blower power cord.
3. Select the appropriate orifice from the chart on page 17. If the required orifice is not provided in the kit, it can be ordered from Lennox.
4. Install the burner orifice. If this appliance is to be installed at elevations above 2000 feet (610 meters) above sea level a High Altitude Kit must be installed (see page 17).
  - a. Remove glass door (see page 4).
  - b. Remove logs, burner cover, and burner.
  - c. Use a 7/16" open-end wrench to remove gas burner orifice.
  - d. Replace the burner orifice with the appropriate burner orifice provided in this kit (see instruction #3).
  - e. Use pipe sealing compound rated for LP gas. **BE VERY CAREFUL THAT THE PIPE COMPOUND DOES NOT GET INSIDE OF THE ORIFICE (THIS COULD RESULT IN PLUGGING OF THE ORIFICE).** Using a 7/16" open-end wrench to tighten orifice - **DO NOT OVER TIGHTEN** (finger tight, then 1/2 turn maximum). \*Make sure the orifice is inserted fully into the primary air shutter fixed opening.
5. Adjust primary air shutter. Follow procedure on page 12 - Installation Check List, #7.
6. Replace Pilot Orifice - Using a 7/16" open-end wrench, remove the pilot burner hood. Replace the pilot orifice with the one supplied in the propane conversion kit. Then, reinstall the pilot burner hood. Ensure that the mark on the pilot hood is lined up with the mark on the pilot mounting plate.
7. High/Low Pressure Regulator
  - a. Remove regulator cap and conversion screw (see illustration).
  - b. Install the new conversion screw (Red = Propane LP gas, Blue = Natural Gas). Ensure that the conversion screw is finger tight. Install the new regulator cap.
  - c. Affix conversion label on gas control valve body where it can easily be seen.

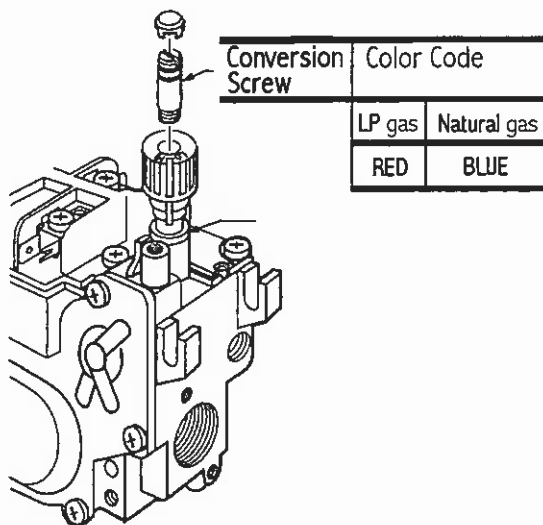
**Avertissement: cet équipement de conversion sera installé par une agence qualifiée de service conformément aux instructions du fabricant et toutes exigences et codes applicables de l'autorités avoir la juridiction. Si l'information dans cette instruction n'est pas suivie exactement, un feu, explosion ou production de protoxyde de carbone peut résulter le dommages causer de propriété, perte ou blessure personnelle de vie. L'agence qualifiée de service est esponsable de l'Installation propre de cet équipement. L'installation n'est pas propre et complète jusqu'à l'opération de l'appareil converti est chéque suivant les critères établis dans les Instructions de propriétaire provisionnées avec l'équipement.**

#### IN CANADA:

The conversion shall be carried out in accordance with the requirements of the provincial authorities having jurisdiction and in accordance with the requirements of the CAN1-B149.1 and .2 Installation code.

La conversion devra être effectuée conformément aux recommandations des autorités provinciales ayant juridiction et conformément aux exigences du code d'installation CAN1-B149.1 ET.2.





## PROVIDE ADEQUATE OXYGEN SUPPLY

Adequate ventilation must also be considered. First, there must be adequate amounts of air available to replace the air removed from the dwelling by this appliance. A 27,000 Btu/hour appliance requires approximately 270 cubic feet of combustion air per hour. In addition, other appliances in the dwelling will also remove air from the dwelling (exhaust fans, furnaces, clothes dryer, etc.). The size and use of the area served by the appliance, as well as the tightness of the house construction must be considered. If there is an inadequate amount of air to ensure proper combustion and venting then it may be necessary to bring in outside air to ensure proper appliance operation (i.e. Outside combustion air can be delivered to a floor register within the same room where the appliance is installed which would allow the appliance to draw upon the air as needed.)

## VENT OPERATION TEST AND SPILL SWITCH

**VENT OPERATION TEST:** A vent operation test is required as part of the installation to verify that proper venting conditions exist. This test should also be done periodically.

1. Ensure that the glass door is properly installed and the bottom louver assembly is in the open position.
2. **LIGHT THE APPLIANCE. ADJUST FLAME HEIGHT TO HIGHEST SETTING AND OPERATE FOR APPROXIMATELY 5-10 MINUTES.**
3. Close all the doors and windows in the room. Start all the exhaust fans in the dwelling and any other appliances which remove air from the dwelling (clothes dryer, etc.).
4. Use an open flame (preferably a wooden match) or smoke (cigarette, rope) to determine if the venting system is satisfying the draft requirements of the appliance. Note: The rate in which the exhaust leaves through the venting system determines the rate at which the combustion air is delivered (below the glass door). To test for proper vent operation, move the flame below the door (in front of the rectangular opening above valve). If smoke is drawn into the opening, the vent operation is adequate. If the flame or smoke is blown out or away from the opening, a venting problem exists and corrective action should be taken before operating the appliance.

**SPILL SWITCH** - This appliance is equipped with a spill switch which is designed to detect if the flue gases are not able to exit the vent system at an adequate rate (this could result in exhaust backing up into the dwelling). This switch is activated by heat and will automatically reset itself after it cools. A primary symptom of spillage is unexplained appliance shut-offs (flue spill switch being activated). Other symptoms of flue gas spillage at the draft hood may include condensation on walls and windows and/or noticeable odors. But spillage may also result in the release of carbon monoxide, a colorless, odorless, highly toxic gas.

A preliminary check for a field problem might include:

1. Check the vent sizing according to specifications, and vent configurations.
2. Examine entire venting system for faults such as disconnected joints or damaged vent sections.
3. Ensure vent and air openings are not obstructed.

8. Reinstall burner cover, logs, ember wool/ceramic rocks and glass front.
9. Purging Air From Supply Line:  
This should only be done by a qualified (& licensed where applicable) professional. Check with your local building official for qualifications required to perform this procedure.
10. Purge air from the gas line (see #9 above), then connect propane gas line to the appliance. Connect the fuel line to the insert inlet (1/2" NPT fitting) using the fitting required.
11. Perform leak Test.

### CAUTION

After this procedure is complete with appliance installed and connected to gas line, recheck the pilot connection and manifold fittings for leaks, using soapy water or a gas leak detector.

12. Lighting Procedure-See pages 13 & 14.

**Note:** If the gas control knob is turned to the "off" position after pilot has been lit, the appliance must be allowed to cool for at least five minutes before pilot flame can be relit .

13. Apply the propane conversion label to the rating label.

**The Appliance is ready for use with propane fuel as its only fuel.**

## REFERENCE INFORMATION

See the insert rating label and page 2 of this manual for the following reference information:

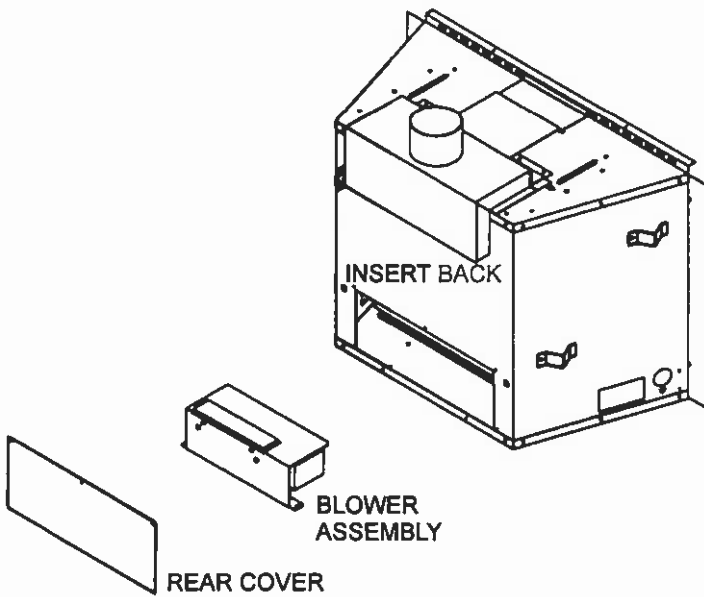
- Manifold Gas Pressure
- Inlet Gas Pressure
- Input Ratings

## BURNER FLAME APPEARANCE

A periodic visual check of burner flames should be performed. The burner flame should appear as indicated on page 13 - Burner Flame Appearance.

## ACCESSING THE HEAT CIRCULATING BLOWER FOR MAINTENANCE, ADJUSTMENT OR REPLACEMENT

1. Unplug 110-volt A.C. power supply to stove.
2. Shut off gas supply to stove.
3. Remove surround and surround trim.
4. Disconnect 4" flex connector from exhaust collar.
5. Pull insert body out of fireplace to gain access to back panel. Note: It may be necessary to disconnect gas supply line to stove.
6. Remove the rear cover to access the blower. Then unplug the blower wiring harness by disconnecting the plastic molex connector at the blower.
7. Remove the four 10-32 (k-lock) nuts that hold the blower assembly to the mounting bracket.
8. Clean, adjust or replace blower and reassemble in reverse order. Note: All gas supply connections must be leak tested and air must be purged from system.

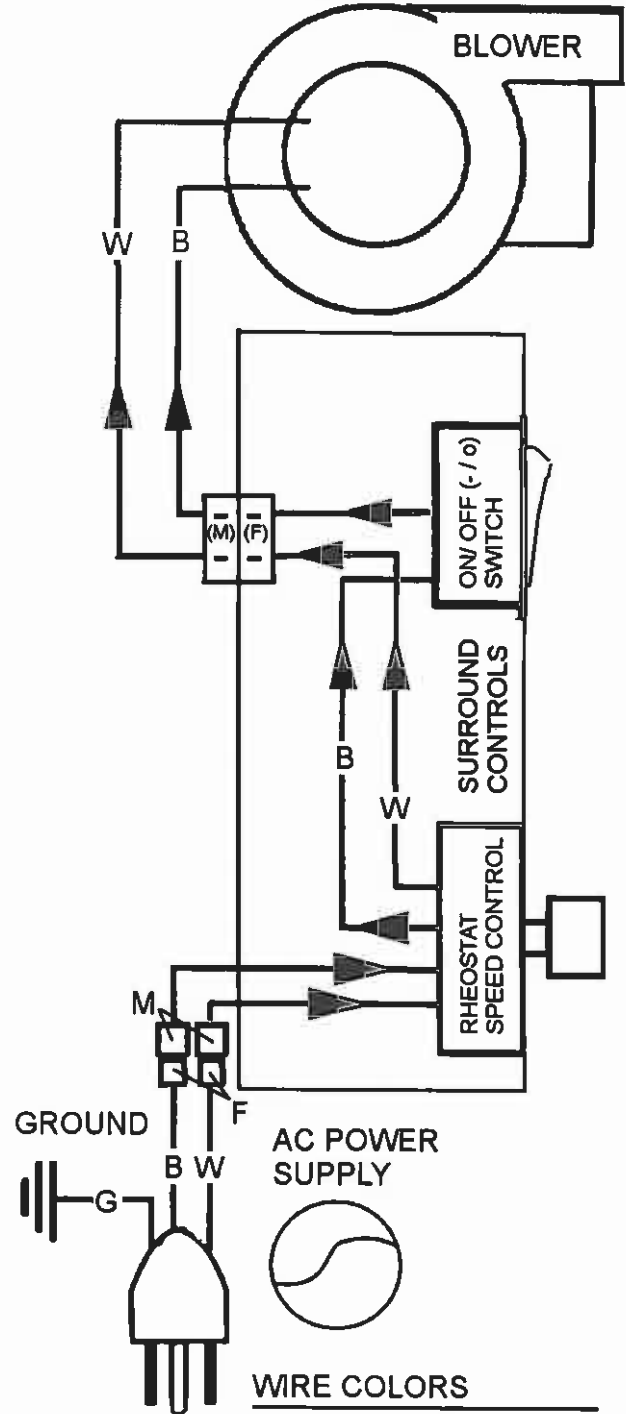


BLOWER OPERATION: See page 13.  
 CODE REQUIREMENTS: See page 2.

## BLOWER SYSTEM WIRING DIAGAM

### ⚠ WARNING

The blower is equipped with a three pronged (grounding) plug for your protection against shock hazard. The cord must be plugged into a properly grounded receptacle. Do not cut or remove the grounding prong from the plug.



#### WIRE COLORS

B = BLACK (POWER)  
 W = WHITE (COMMON)  
 G = GREEN (GROUND)

(F) FEMALE CONNECTOR  
 (M) MALE CONNECTOR

Consult your local authority having jurisdiction for requirements in your area.

Before the fireplace Insert is assembled and installed, you must consider whether the appliance must be converted for use with propane gas (see page 6). You must also consider the vent length requirements.

**CAUTION**

The fireplace in which this gas insert is to be installed must be thoroughly cleaned if it has been used to burn wood or synthetic logs. Have the chimney and all inside surfaces of the fireplace brushed and vacuumed so that no soot, embers, or loose combustion deposits can be drawn into the heat circulation blower and blown into the living area. If any portion of the chimney system shows signs of structural or mechanical weaknesses, such as: cracks, leaky joints, corroded or warped surfaces, the faulty portion must be repaired or replaced prior to installing this appliance.

**SELECTING A LOCATION**

**! WARNING**

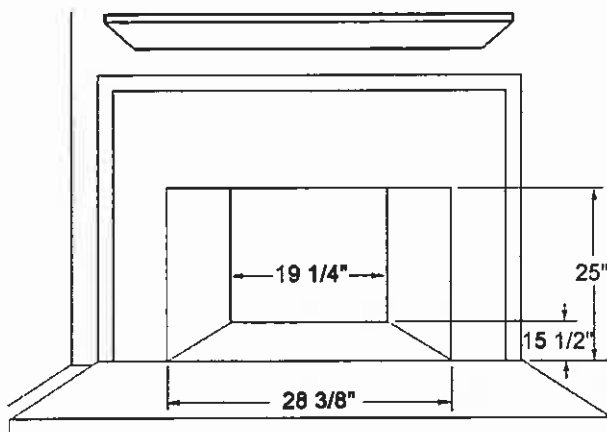
Do not install appliance in a corrosive or contaminated atmosphere. Meet all combustion and ventilation air requirements, as well as all local codes.

This appliance can be installed in most residential fireplace configurations. If installed close to an adjacent wall, ensure that the minimum clearances to combustible surfaces are maintained. A local building inspector should review your plans prior to installation.

**MINIMUM FIREPLACE DIMENSIONS**

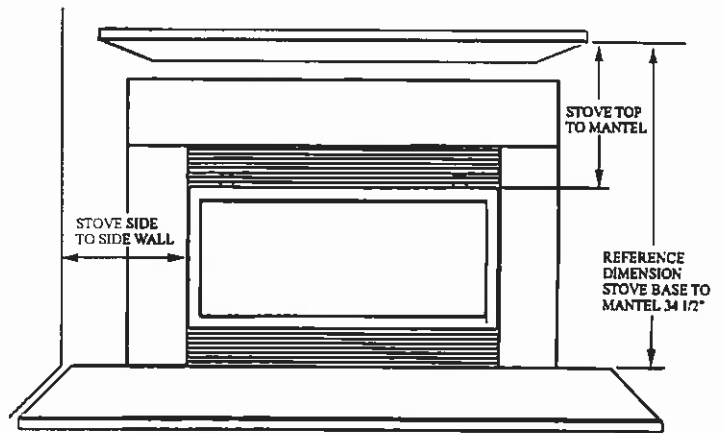
Approximate minimum dimensions of fireplace  
 Height: 25" (less draft hood: 20 3/4")  
 Width @ front: 28 3/8" @ 5" depth  
 Width @ back: 19 1/4" @ 15 1/2" depth  
 Depth: 15 1/2"

(See page 23 for actual Insert body dimensions).



**MINIMUM CLEARANCES TO COMBUSTIBLES**

- Minimum clearances from spacers/standoffs or surfaces to combustible construction.
- The clearances listed below are minimum distances (see *Venting Requirements*).
- Paint or lacquer used to finish the mantel must be heat resistant in order to avoid discoloration.



- Stove Top to Ceiling Minimum 36 in. / 915 mm
- Side Wall Minimum 12 in. / 305 mm
- Stove Top to Mantel Minimum 14 in. / 356 mm
- Mantel Projection Maximum 12 in. / 305 mm

This includes any projections such as shelves, window sills, mantels, etc. above the appliance.

- Floor Minimum 7 in. / 178 mm

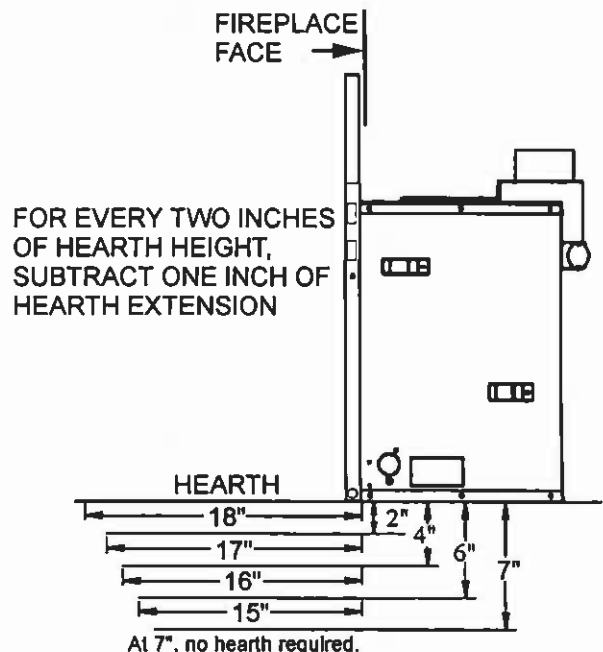
This clearance is not required if the hearth protection extends 18" (minimum) in front of the appliance. See *Hearth/Floor Protection* below.

**HEARTH/FLOOR PROTECTION**

If a 7" clearance to combustible flooring is not possible, a non-combustible hearth extending 18" in front of the appliance is required.

**Elevated Hearth:**

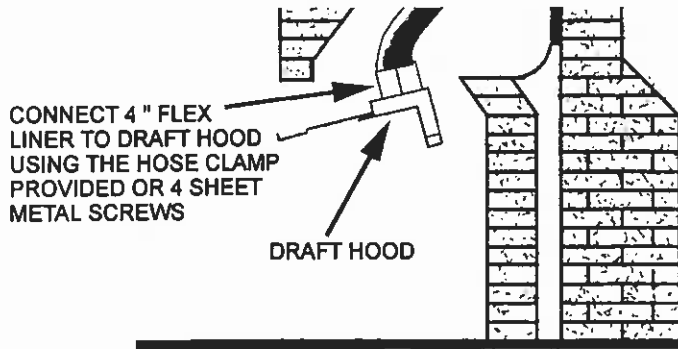
If hearth is elevated (see below), subtract one inch of hearth extension required for every two inches of height.



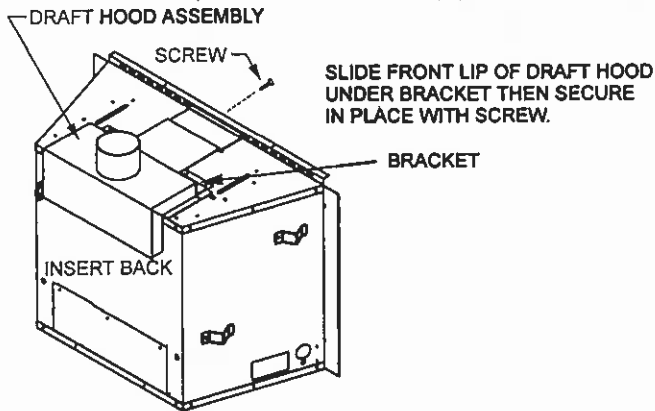
## INSTALLATION INTO A MASONRY FIREPLACE

**VENTING REQUIREMENTS:** These appliances require the use of 4" B-Vent or, a 4" UL1777 listed gas vent liner to the chimney termination to ensure proper operation. Follow all venting manufacturer's requirements and local building codes. A minimum vertical chimney height of 12' above the base of the appliance must be maintained. Elbows must not total more than 180° of direction change. Horizontal run of flue is limited to connection of two 90° elbows. The vent termination must be in accordance with the vent manufacturer's instructions. If a non-listed vent termination is used, it must extend 2' higher than any portion of a building within a horizontal distance of 10'.

**CONNECT LINER TO DRAFT HOOD:** For ease of installation, this appliance has a detachable draft hood. Locate the draft hood assembly (packaged along side of the appliance). First install the draft hood collar to the lower end of flue pipe or chimney flex liner using the stainless steel hose clamp provided or 4 sheet metal screws. Suspend the flue above the fireplace floor, making sure the bottom plate of the draft hood assembly is level with the insert top for attachment.

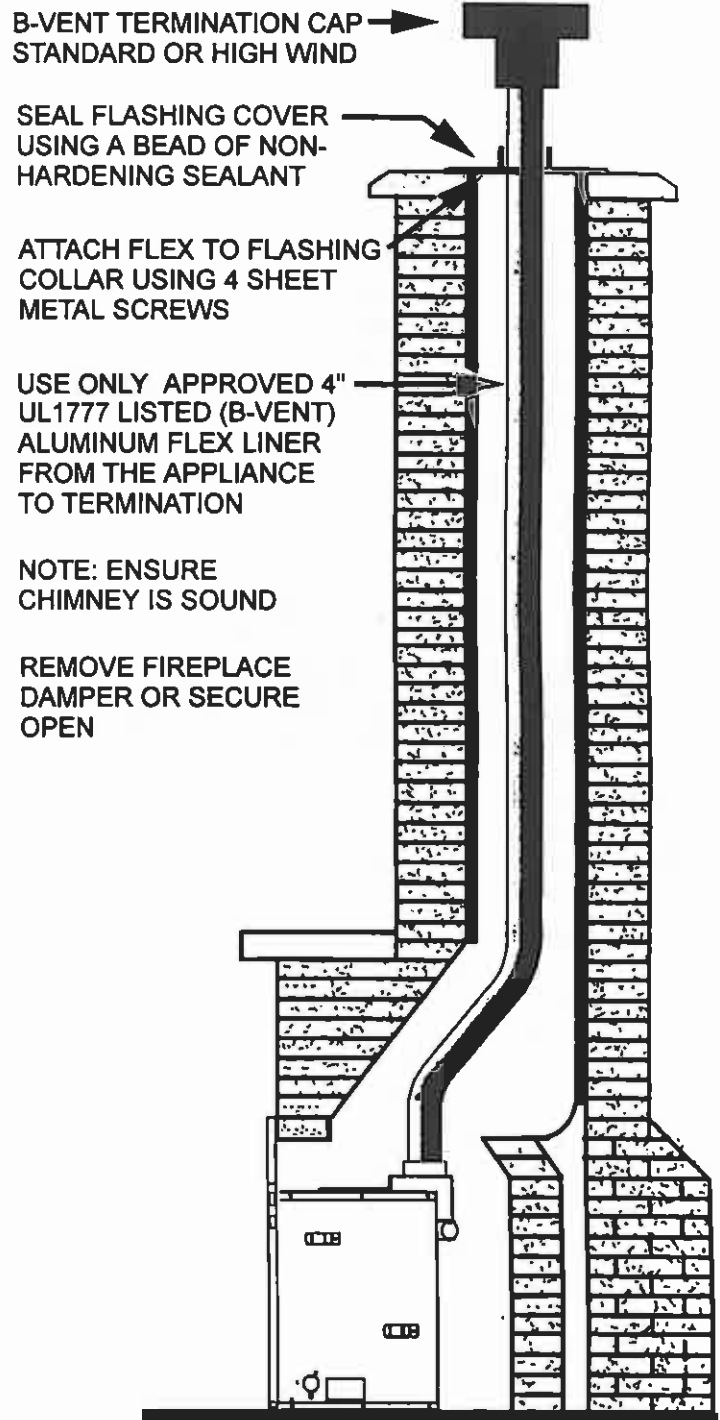


**INSTALL DRAFT HOOD ONTO APPLIANCE:** Slide the front lip of draft hood under bracket, then secure it in place with sheet metal screw provided in accessory package.



- Flexible vent pipe is packaged and shipped in its contracted state. When installing flexible vent pipe, its length may be expanded to twice its contracted size. This appliance is approved for 25 feet maximum vertical venting (from the outlet to termination).
- The flexible vent pipe must not be allowed to sag behind the fireplace.
- The fireplace structure in which this appliance is to be installed must comply with National Building Code for Fireplace and Chimneys (UBC 37).

## MASONRY FIREPLACE INSTALLATION DIAGRAMS



**NOTE: ENSURE CHIMNEY IS SOUND**

**REMOVE FIREPLACE DAMPER OR SECURE OPEN**

### ⚠ IMPORTANT

Under no circumstances, may separate sections of concentric flexible vent pipe be joined together.

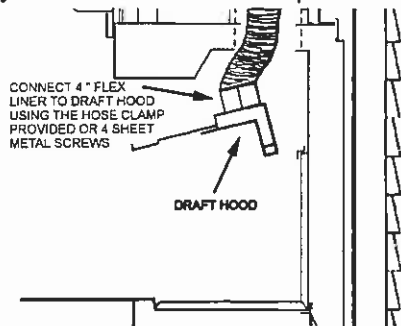
### WARNING

Do not substitute the heat-rated (UL1777) exhaust liner with any other type liner or a fire may result causing property damage, personal injury or loss

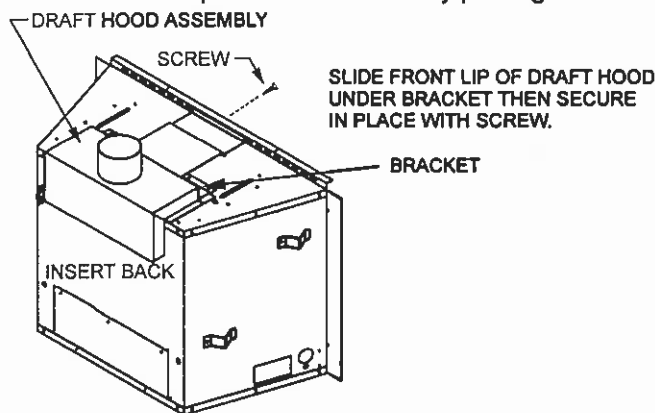
## INSTALLATION INTO A FACTORY BUILT FIREPLACE

**VENTING REQUIREMENTS:** These appliances require the use of 4" B-Vent or, a 4" UL1777 listed gas vent liner to the chimney termination to ensure proper operation. Follow all venting manufacturer's requirements and local building codes. A minimum vertical chimney height of 12' above the base of the appliance must be maintained. Elbows must not total more than 180° of direction change. Horizontal run of flue is limited to connection of two 90° elbows. The vent termination must be in accordance with the vent manufacturer's instructions. If a non-listed vent termination is used, it must extend 2' higher than any portion of a building within a horizontal distance of 10'.

**CONNECT LINER TO DRAFT HOOD:** For ease of installation, this appliance has a detachable draft hood. Locate the draft hood assembly (packaged along side of the appliance). First install the draft hood collar to the lower end of flue pipe or chimney flex liner using the stainless steel hose clamp provided or 4 sheet metal screws. Suspend the flue above the fireplace floor, making sure the bottom plate of the draft hood assembly is level with the insert top for attachment.



**INSTALL DRAFT HOOD ONTO APPLIANCE:** Slide the front lip of draft hood under bracket, then secure it in place with sheet metal screw provided in accessory package.

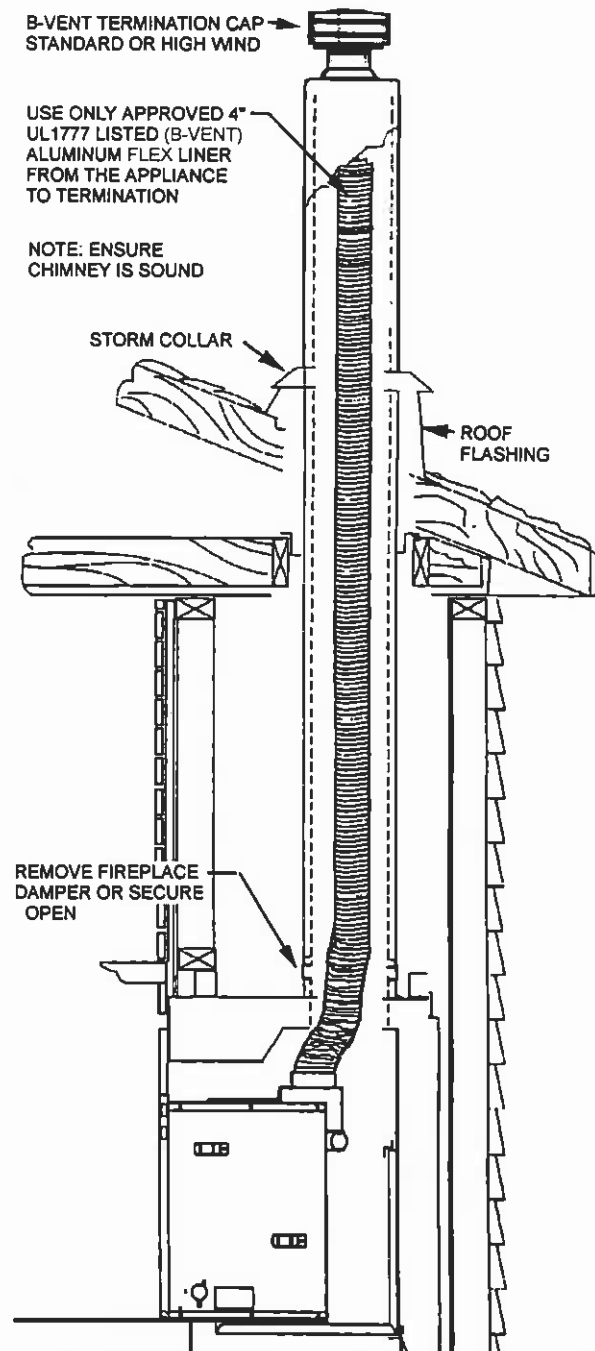


- Flexible vent pipe is packaged and shipped in its contracted state. When installing flexible vent pipe, its length may be expanded to twice its contracted size. This appliance is approved for 25 feet maximum vertical venting (from the outlet to termination).
- The flexible vent pipe must not be allowed to sag behind the fireplace.

### **▲ IMPORTANT**

**Under no circumstances, may separate sections of concentric flexible vent pipe be joined together.**

## FACTORY BUILT FIREPLACE INSTALLATION DIAGRAM



**WARNING - Do not substitute the heat-rated (UL1777) exhaust liner with any other type liner or a fire may result causing property damage, personal injury or loss of life.**

**CAUTION - When installing the L20BI into a factory built fireplace, the firebox must accept the insert without modification other than removing bolted or screwed together pieces such as smoke shelf/deflectors, ash lips, screen or door tracks and damper assemblies, that must be reinstalled to restore the fireplace to its original operating condition if the insert is removed and not replaced. The removal of any part must not alter the integrity or outer shell of the pre-engineered fireplace cabinet in any way.**

## CHECK LIST

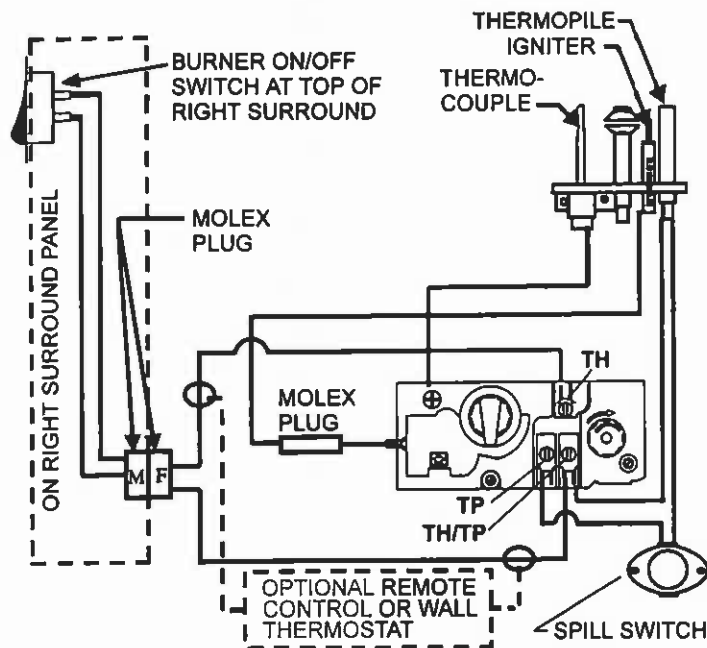
Read and understand these instructions before using this appliance.

1. Check that the log assembly is properly installed. Use caution when handling the log assembly as it may easily be damaged or broken.
2. Check to see that wiring is correct and enclosed.

## CAUTIONS

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

## BURNER WIRING DIAGRAM



3. Verify that the gas line has been purged of air.
4. Check that there are no gas leaks. If you smell gas, do not attempt to light this appliance. Follow safety instructions on the front of this manual.
5. Check that glass front is properly installed. **DO NOT** operate the appliance with the glass front off.
6. Check that the exhaust outlet on termination cap is unobstructed.
7. Burner air shutter opening to be: Natural Gas and Propane –  $\frac{3}{8}$ " gap. Some adjustment from standard may be necessary to achieve desired flame characteristics (see *Burner Flame Appearance*).

## FRONT BURNER AIR SHUTTER

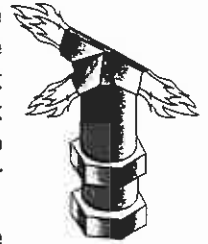


ADJUST GAP TO  $\frac{3}{8}$ "

## PILOT LIGHT ADJUSTMENT

To ensure proper gas valve operation, the pilot flame should impinge upon both the thermopile and the thermocouple. In some installations, the size of the pilot may have to be adjusted. If the pilot flame varies greatly from the diagram shown below, consult a Lennox service technician (see diagram on page 2 showing location of pilot adjustment screw). Pilot Flame Check:

1. Light pilot as outlined in lighting procedure on pages 13 & 14.
2. Observe the pilot flame. A torch-like flame should extend from each of the three pilot hoods. If the flame does not appear as shown here, contact a Lennox service technician. Do not attempt to operate the appliance without a proper pilot flame.
3. Turn the gas valve control knob to the "OFF" position and allow the appliance to cool before continuing.



## GAS PRESSURE ADJUSTMENT

There are two gas pressure regulators, which regulate the gas pressure to (and through) the appliance.

### Gas pressure ports (see diagram, page 2)

**INLET (IN)**—This port is used for checking gas pressure to the valve from the *Service Pressure Regulator* provided by the gas supplier (it regulates gas pressure to appliance). This regulator is outside the dwelling and is the responsibility of the gas supplier.

**MANIFOLD (OUT)**— This port is used for checking gas pressure from RB regulator on the gas valve (it regulates the pressure into the burner and controls flame height and heat output).

**Gas Manifold Pressure Test:** Pressure regulators are not likely to fail, but it is possible that it is improperly adjusted. An improperly adjusted appliance gas pressure regulator can cause:

- Gas pressure regulator set too high. The flames will appear too large, reaching the top of the firebox. The flame will lift off the burner surface.
- Gas pressure regulator set too low. The flames will appear small, barely reaching above the burner. It will look lazy and if low enough will cause flame to flashback into burner (flashback occurs when the flame burns quicker than the gas flows through the holes in the burner).

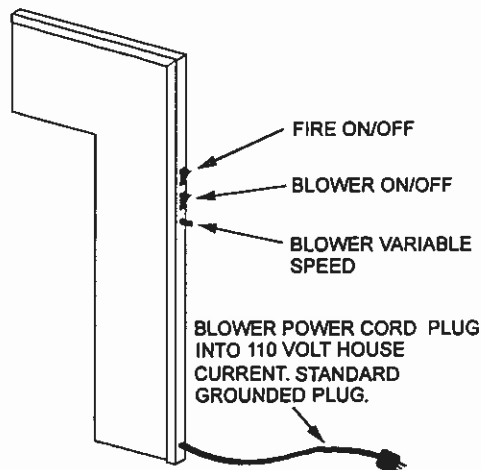
Confirm that the service pressure regulator is set correctly (call the gas company if supply pressure must be adjusted). Ensure that the flow capacity allows correct gas delivery (see NFPA 54. Gas Flow Capacity Tables). If the flame does not appear as it should, use a manometer to test the inlet and manifold gas pressures. Turn the flame height control to the highest setting for test.

**IMPORTANT:** All gas appliances on system must be set to maximum input pressure for the pressure test to be accurate.

## HEAT CIRCULATION BLOWER OPERATION

The appliance includes a 120 cfm blower assembly, an ON/OFF switch and a variable speed blower control rheostat. Plug the power cord into a 110-volt A.C. grounded power supply. Turn the fan ON/OFF switch to the "ON" position. Rotate the rheostat dial to the desired speed.

### CONTROLS DIAGRAM



Note: See electrical code requirements page 2.

## OPTIONAL WALL THERMOSTAT (P/N 10N64)

The wall thermostat needs to be capable of operation on 250 to 750 millivolts from the thermopile. To ensure proper operation, use only the correct size and type of thermostat wire as indicated below. The thermostat should be mounted central to the area to be heated about 5' above the floor. Run the wire so that it will not be subject to snagging or damage. To wire the thermostat, disconnect both wires from the ON/OFF switch at the control valve, then connect the two thermostat wires to the TH and TH/TP terminals. This will leave the ON/OFF switch inoperative. In this configuration, it is recommended that a thermostat with a built-in positive "OFF" be used to ensure main burner "OFF" control.

WHEN USING WIRE SIZE SHOWN BELOW, DO NOT EXCEED THE MAXIMUM LENGTH AS INDICATED.

Thermostat Wire Size	Maximum Length One Way
14 gage	100 feet
16 gage	64 feet
18 gage	40 feet
20 gage	25 feet

## OPTIONAL REMOTE CONTROL

Install and operate remote control per manufacturer's instructions provided with kit. See wiring diagram, page 12.

## APPLIANCE "BREAK-IN" PROCEDURE

There will be some odor during the first 15 hours of operation. This is caused from the curing of the stove paint and applying heat to the appliance components for the first time. The odor will dissipate quickly if windows are opened to allow increased air circulation.

**KEEP YOUR HOUSE WELL VENTILATED DURING THE INITIAL BURN. THE CHEMICAL SMELL AND HAZE EMITTED MAY SET OFF A SMOKE DETECTOR.**

## GLASS DOOR ASSEMBLY

**⚠ WARNING**

Do not operate appliance unless glass frame is properly installed. Glass must not be broken or cracked. If glass is damaged, replace with appropriate glass frame assembly available through Lennox repairparts. Substitution of any other than Lennox-specified glass can lead to property damage or personal injury.

Use only glass door assemblies certified for use with this appliance.

**CAUTION:** If the door assembly or glass is broken or damaged (in any way), these components must be replaced before heater can be safely operated. Use only components provided by Lennox as replacement parts and installed by a Lennox service technician. Do not substitute any other glass or components on this heater. Use of substitute components may lead to improper operation of heater and may be a safety hazard.

Do not strike glass. Do not slam door frame shut. This may lead to breakage and/or leakage of flue products into dwelling.

## LIGHTING PROCEDURE

**⚠ WARNING**

If overheating occurs or if gas supply fails to shut off, close the manual shut-off valve to the appliance before shutting off electrical supply.

1. Turn burner (fire) On/Off switch to the "Off" position.
2. Turn off all electric power to the appliance (unplug fan power cord).
3. Push in gas control knob slightly then turn it clockwise to the "OFF" position. NOTE: Knob cannot be turned from "PILOT" to "OFF" unless knob is pushed in slightly. Do not force. Wait 5 minutes to clear out any gas. If you smell gas, STOP! Follow safety information on the front cover of this manual. If you do not smell gas, go to the next step.
4. Turn gas control knob counterclockwise to "PILOT".
5. If the stove is being lit for the first time or after disconnection from gas lines, purge air from gas lines and connections.

6. Push the gas control knob down all the way and hold. Immediately light the pilot by pressing the igniter button. Continue to hold the gas control knob down for about 1 minute after the pilot is lit. Release the knob and it will pop back out. The pilot should remain lit. If it goes out, repeat steps 1 through 5, holding knob down for an additional 15 seconds. **WARNING: IF THE PILOT WILL NOT LIGHT AFTER 1 MINUTE, WAIT 5 MINUTES FOR GAS TO CLEAR BEFORE ATTEMPTING AGAIN.**

**▲ IMPORTANT**  
 If the gas valve control knob does not pop out when it is released, or if the pilot will not stay lit after several tries, turn the gas control knob clockwise to the OFF position and call a qualified service technician or the gas supplier.

If pilot will not stay lit after several tries, turn the gas control knob to "Off" and call a Lennox service technician or your gas supplier.

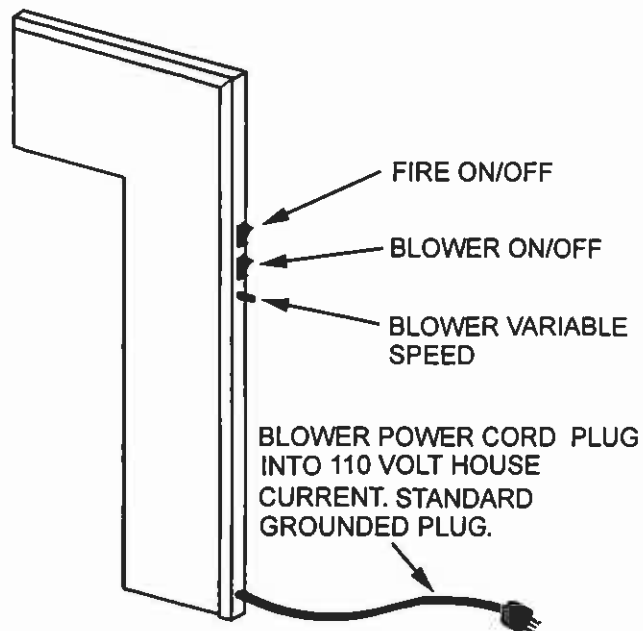
7. Turn gas control knob to the "ON" position
8. Turn the Burner On:
  - a. If the "fire" **ON/OFF Switch** is used (no thermostat or remote installed) Turn the ON/OFF switch to the "ON" position (see Burner and Blower Control Diagram on this page).
  - b. If the optional **Wall Thermostat** is used, set it above the room temperature setting so that it will be calling for heat.
  - c. If the optional **Remote control** is being used, follow the manufacturer's instructions included with the remote.

Once the burner circuit has been completed by one of these three components, the main burner should come on.

9. Adjust the HI/LO knob (flame height and heat output regulator) to desired setting.

Note: If valve gas control knob is turned to the off position after the pilot has been lit, the appliance must be allowed to cool for at least five minutes before pilot can be relit (magnet in valve will not lock in until cool).

**BURNER AND BLOWER CONTROL DIAGRAM**

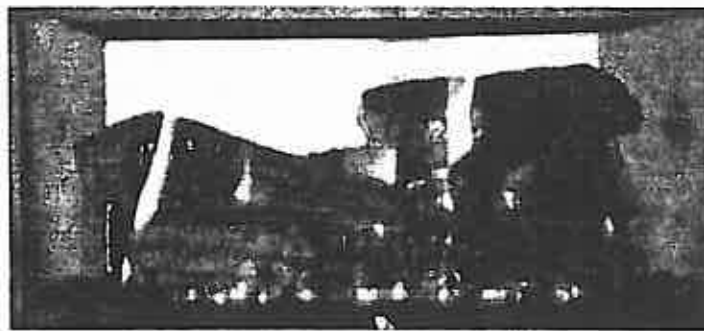


**BURNER FLAME APPEARANCE**

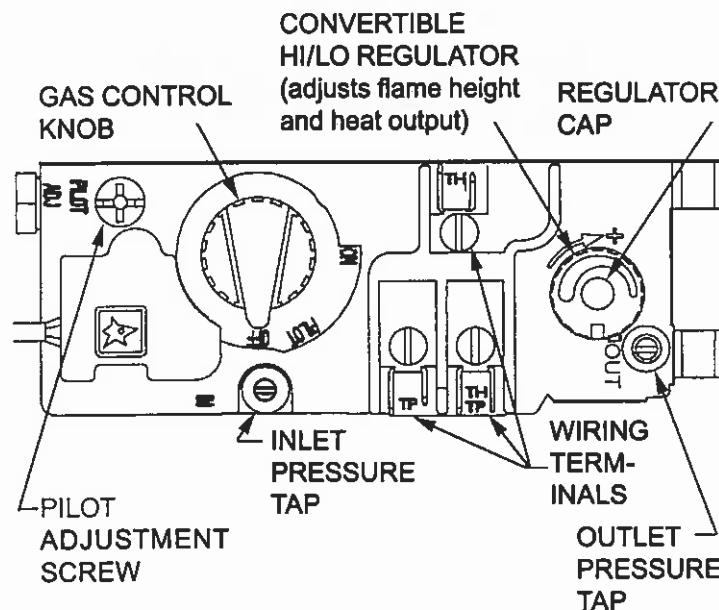
A periodic visual check of the burner flames should be performed. The burner flame should look like the picture shown below and have the following characteristics:

- Burner flames should have yellowish tips (it is normal for flame to appear blue during first 20 minutes of operation).
- No soot should form at burner flame tips.
- Flame should not rise off of burner (flame "lifting").

If the burner flame does not show proper appearance or behavior, as outlined here, consult a Lennox service technician.



**GAS VALVE CONTROL DIAGRAM**



**SHUTDOWN PROCEDURE**

For short periods of time, the main burner may be kept from operating by turning the gas control knob to "PILOT" or the ON/OFF switch to the "OFF" position. If either an optional wall thermostat or remote control is used, turn it off instead of the ON/OFF switch. The pilot burner will remain lit. For longer periods of shutdown, push the gas control knob down and turn to "OFF". This will shut off both the pilot and main burner. The pilot will have to be relit when resumed use of the appliance is desired. SEE LIGHTING PROCEDURE (pages 13 & 14).



## ANNUAL SERVICE REQUIREMENTS

### **⚠ CAUTION**

Before attempting to perform any service or maintenance, turn the electrical power to appliance OFF at disconnect switch.

### **⚠ WARNING**

All maintenance should be performed by a qualified service technician.  
Disconnect power, if applicable, and gas supply before servicing unit.

Do not clean or service this heater when hot.

## OPENING GLASS DOOR

### **⚠ WARNING**

Do not operate appliance unless glass frame is properly installed. Glass must not be broken or cracked. If glass is damaged, replace with appropriate glass/frame assembly available through Lennox repair parts. Substitution of any other than Lennox-specified glass can lead to property damage or personal injury.

Do not open door when stove is hot. See page 4 for instructions on removing the glass door assembly.

## LOG SET

### **⚠ WARNING**

Do not handle the ceramic logs while they are hot. Allow firebox to cool completely before performing any service. Pilot should be turned off before proceeding.

**Removing & Cleaning Logs** - Carefully remove the logs (removing top twigs, then lifting front log out, then rear log). Use care when handling the fiber logs, as they become quite fragile after curing. Remove any carbon deposits from the under side of the logs using a soft bristled brush. Do not use solvents, cleaning solutions or water on logs.

**Reinstalling Logs** - (To be done after burner and pilot assembly has been cleaned). Reinstall logs per log placement instructions (see page 3 & 4). Improper positioning of logs may create carbon build-up and will alter the performance of the stove.

**Replacing Logs** - If logs become broken or damaged and need replacement, use only the proper replacement logs from manufacturer, which can be purchased from a Lennox service technician. Place damaged logs in a sealed bag prior to disposal.

## CLEANING BURNER

Keep the burner and control compartment clean by using a clean, dry paintbrush and vacuum at least once a year.

With the logs removed, vacuum out any foreign matter (lint, carbon etc.) on the burner. Be sure the burner ports are "open."

## CLEANING PILOT ASSEMBLY

This procedure must be performed by a Lennox service technician who is familiar with the specific characteristics of this type appliance.

## CLEANING VALVE/AIR SHUTTER

Clean all lint and dust build-up around the control valve and air shutter on the burner. Inspect and clean with a brush or wire. Inspect the inlet of the air shutter for any spider webs or lint accumulation.

## INSPECT WIRING

### **CAUTIONS**

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

Inspect and clean all wire connections. Ensure that there is no melting or damage from rodents. Inspection should include:

- Terminals at the valve
- On/Off switch
- Wall Thermostat / Remote Control (optional parts)

## CHECK BURNER FLAME APPEARANCE

Visually check the flame of the burner periodically making sure the flames are steady and not lifting or floating (see page 14 - Burner Flame Appearance).

## INSPECT VENTING SYSTEM

The periodic examination of the venting system is required. This should be done before initial use and at least annually. The venting system must be inspected to ensure that the flow of combustion and ventilation air is not obstructed or inhibited. If the exhaust vent is disassembled for any reason, the Lennox service technician should follow the vent manufacturer's instructions for proper reassembly and sealing of the exhaust vent.

## CLEANING GLASS

(Also, see page 13, Glass Door Assembly). Do not use abrasive cleaners on glass.

The viewing glass should be cleaned periodically. Exterior glass may be cleaned with a glass cleaner as desired. Interior glass - use soap and water, or commercial glass cleaner recommended for stove glass.

*Note: Each time the appliance is lit, it may cause condensation and fog on the glass. This condensation and fog will disappear in a few minutes.*

**CLOSING THE GLASS DOOR**

ALWAYS MAKE SURE THE GLASS DOOR ASSEMBLY IS PROPERLY SECURED AND SEALED PRIOR TO OPERATING THE STOVE (also see page 13, *Glass Door Assembly*).

Keep the area near the appliance clear and free from combustible materials, gasoline and other flammable vapors and liquids.

**PERIODIC CHECK OF PILOT AND BURNER FLAMES IS REQUIRED**

Check the operation of the pilot and cycle the burner. Visually check the flame of the burner making sure the flames are steady; not lifting or floating. The flame color should be blue at the burner with yellow body and tops.

**Cycle appliance a minimum of 2 times**

- Watch for smooth burner ignition and shut down.
- Burner: Check flame patterns. Ensure that burner flame appearance does not vary greatly from diagram shown on page 14. The flame should be steady, not lifting, or floating.
- Pilot: Ensure pilot flame appearance does not vary greatly from diagram shown on page 12.

**SERVICE AND MAINTENANCE LOG**

Service Date	Service Technician	Service Description

**THERMOPILE/THERMOCOUPLE OPERATION**

- Thermopile: Millivolt production should be a minimum of 325 MV with pilot only.
- Thermocouple: Millivolt production should be a minimum of 14 MV with pilot only.

**DROP OUT RATE**

- TP 50-60 MV
- TP 1 1/2-2 Min. (3 max.) if longer, replace thermopile

**CHECK FOR CARBON MONOXIDE PRESENCE**

**CHECK FOR GAS LEAKS**

**CLEANING THE HEAT CIRCULATING BLOWER**

UNPLUG POWER CORD. See page 8 for instructions on accessing blower assembly. Remove any deposits from the blower inlets (accumulations of carpet fibers, pet hair, dust, etc.). Use a brush and/or light vacuuming for cleaning. The frequency of cleaning should be increased if pets are in the dwelling. The heat circulating blower is equipped with sealed lubricated bearings that do not need additional lubrication. For this reason, it is recommended that you do not try to add any drops of oil to them (excess oil can ruin the blower).

## HIGH ALTITUDE

### HIGH ALTITUDE KIT (P/N #95L96)

Note: Appliances using propane must be field converted using the LP Conversion Kit included with appliance.

For high altitude installations consult the local gas distributor or the authority having jurisdiction for proper rating methods. If the installer must convert the appliance to adjust for varying altitudes, the information label (provided in this optional kit) must be filled out by the installer and adhered to the appliance at the time of conversion.

USA and Canada - Appliance is tested and approved for elevations of 0-2000 feet (0-610 meters). Consult local code and refer to ANSI Z223.1-latest edition for orifice resizing. Consult with local authorities having jurisdiction.

At higher elevations (as defined above), replace the *burner orifice* to reduce input per the ANSI Z223.1 tables shown on this page. This is necessary because higher altitudes affect the atmospheric pressure and heat value of gaseous fuels. When installing this appliance at high altitudes, the rated input will be lower than at sea level. The reduced oxygen content in the air and lower gas density requires installing a different orifice in order to achieve clean combustion.

The High Altitude Kit includes several different size orifices (the size is stamped on the hex portion of each orifice). You will need to match altitude and fuel requirements from the correct chart to determine which size you will use. At elevations above 8000 feet (2439 meters), the orifices sizes 44, 45 & 55 are not included in this kit. These sizes can be ordered from an authorized Lennox dealer or the Lennox technician can drill the required size using an orifice drill. The orifice size 63 is included in this kit for that purpose. See the following procedure for drilling.

Drilling procedure: Starting from the backside of the #63 orifice, drill by hand using a numbered orifice drill. Since the orifice head is fairly thin, it can be easily bored to the required size. Use only finger turning pressure to turn the orifice drill to enlarge the hole. After the correct hole size is drilled, lightly debur both sides of the hole (i.e. use a 1/4" drill bit and very lightly turn it to chamfer the hole). This will eliminate the chance of the orifice whistling when the main burner is turned on.

### PARTS LIST

- 1ea. Orifice, size # 42 (.0935")
- 1ea. Orifice, size # 43 (.0890")
- 1ea. Orifice, size # 54 (.0550")
- 1ea. Orifice, size # 63 (.0370")
- 1ea. Instruction Sheet

## REPLACING BURNER ORIFICES

1. Remove glass door (See Page 4).
2. Remove logs, burner and burner cover.
3. Using a 7/16" open end-wrench, remove the gas burner orifice.
4. Replace the burner orifice with the new high altitude orifice, using pipe-sealing compound rated for gas. **BE VERY CAREFUL THAT THE PIPE COMPOUND DOES NOT GET INSIDE OF THE ORIFICE (THIS COULD RESULT IN PLUGGING OF THE ORIFICE).** Using a 7/16" end-wrench, tighten the new orifice - **DO NOT OVER TIGHTEN.** Make sure the orifice is inserted fully into the primary air shutter fixed opening.
5. Reinstall burner, burner cover, logs and ceramic rock wool. Reinstall door.

**AFTER THIS PROCEDURE IS COMPLETE WITH APPLIANCE INSTALLED AND CONNECTED TO GAS LINE, RECHECK THE PILOT CONNECTION AND MANIFOLD FITTINGS FOR LEAKS, USING SOAPY WATER OR A GAS LEAK DETECTOR.**

### U.S.A. AND CANADA REQUIREMENTS DRILL SIZING CHART / MAXIMUM SIZE VS ALTITUDE (ANSI Z223.1 Table)

Altitude	Natural Gas	Propane (LP)
Sea Level	* #40	■ #53
>2,000 Ft.	◆ #41	◆ #54
>3,000 Ft.	#42	#54
>4,000 Ft.	#42	#54
>5,000 Ft.	#42	#54
>6,000 Ft.	#43	#54
>7,000 Ft.	#43	#54
>8,000 Ft.	#44	#55
>9,000 Ft.	#44	#55
>10,000 Ft.	#45	#55

- \* As equipped from factory
- As provided in propane conversion kit (included in accessory package).
- ◆ Altitude - U.S.A. 0-2000 feet (0-610 meters) and Canada: For installations from 0-4,500 feet (0-1,372 meters) the orifices sizes (DMS) for natural and propane gas are (NG #40 and LP #53). See data plate for additional information. No derating required with the orifice as equipped from factory and manifold pressures and input ratings as shown on page 2 of this manual. For installation higher than altitudes shown above, reorifice per Gas Codes and product manual.

**Note: The ">" (greater than) symbol indicates elevations higher than number shown.**

## **TROUBLESHOOTING - To be performed by a Lennox service technician only**

### **1. IGNITER WILL NOT LIGHT THE PILOT AFTER REPEATED PRESSING OF THE IGNITER BUTTON.**

WARNING: IF THE PILOT WILL NOT LIGHT AFTER 1 MINUTE OF ATTEMPTING, WAIT FOR AT LEAST 5 MINUTES FOR GAS TO CLEAR BEFORE ATTEMPTING AGAIN.

- A. No gas.  
 Turn on gas.
- B. Air is not purged from gas lines.  
 Purge line by holding gas control (pilot/on/off) knob down in the pilot position until gas is available.
- C. Poor or no spark from piezo igniter.  
 Check for loose connection on igniter.  
 Check for spark. If electrode connection is correct and no spark, replace igniter.
- D. Misaligned electrode at pilot.  
 Spark should be extending approx. 1/8" to pilot hood. Adjust gap to give proper spark. Remove hands from electrode before pressing igniter button.
- E. Hood Misaligned.  
 Realign.
- F. Wire Disconnected.  
 Check wiring.

### **2. PILOT WILL NOT LIGHT.**

- A. Poor connection of thermocouple at valve.  
 Check thermocouple connection and tighten if necessary.
- B. Pilot knob not held down long enough or not fully depressed.  
 Fully depress pilot/on/off knob to bottom and hold down for 60 seconds.
- D. Main burner switch "ON".  
 Turn main burner switch "OFF"
- E. Faulty EMU.  
 Check valve. Replace valve if necessary.

### **3. PILOT LIGHT WILL NOT STAY LIT.**

- A. Improper pilot's adjustment.  
 Check pilot flame. Adjust flame, if necessary.
- B. Defective thermocouple.  
 Check thermocouple voltage with meter. Replace thermocouple if it does not meet the following specifications:
  - \* 14 MV minimum (no load i.e. bench test/disconnected from valve).
  - \* 10-14 MV (under load w/pilot only).
  - \* 6-9 MV (under load w/burner on).

Note: Wait 60-90 seconds after pilot engages before checking millivolt production.

### **4. PILOT DROPS OUT WHEN MAIN BURNER IS SWITCHED ON.**

- A. Main burner switch wired incorrectly.  
 Correct wiring (see page 12).
- B. Main burner wire shorted or stressed.  
 Check wire and correct if necessary.
- C. Faulty main burner EMU.  
 Check valve. \* Replace valve if necessary.
- D. Improper pilot adjustment.  
 Check pilot flame. Adjust flame if necessary.
- E. ON/OFF switch defective.  
 Check ON/OFF switch for proper connections. Connect wires across terminal at ON/OFF switch. If burner comes on, replace ON/OFF switch. If not, jumper junctions at valve. If burner comes on, replace wires.

### **5. BURNER WILL NOT COME ON.**

*With pilot lit, control knob and On/Off switch in "ON" position, no gas to burner.*

- A. Pilot is out.  
 Light pilot.
- B. Pilot/On/Off knob is in "Pilot" position.  
 Turn to "On" position.
- C. Burner On/Off switch is in "Off" position.  
 Turn to "On" position. Check ON/OFF switch for proper connections. Connect wires across terminal at ON/OFF switch. If burner comes on, replace ON/OFF switch. If not, jumper junctions at valve. If burner comes on, replace wires.
- D. Poor connection at spill switch or spill switch is defective.  
 Check connections or replace part if necessary.
- E. Wire connections are loose.  
 Check wire connections. Tighten or replace if necessary.
- F. Low millivolt output by thermopile.  
 Check millivolt production. Replace Thermopile if necessary.
- G. Excessive resistance through wires, connections, thermostat or remote control.  
 Check system resistance by turning the burner on.
  - Thermostat contacts CLOSED (or)
  - Fire On/Off Switch On (or)
  - Remote control On.Next, perform a millivolt check between terminals TP/TH and TH. Your reading should be 80 MV maximum (this is an approximate

number). The higher the number, the greater the resistance. Low resistance is desirable. If the millivolt reading is more than 80 MV, reduce resistance as follows:

- Clean and tighten wire connections at valve, Fire on/off switch and thermostat or remote sensor if applicable.
- If applicable, shorten thermostat lead wires and/or replace with heavier gage wire.
- If applicable, cycle thermostat rapidly (manually turn knob) to clean contacts. Note: Thermostat must be rated for low voltage.

### **6. BURNER TURNS OFF AFTER PERIOD OF TIME.**

- A. Spill switch is activated, has loose connections or is defective.  
 Have a Lennox Service Technician check venting system for blockage (ie. bird nest, damage, etc.). Ensure proper venting condition. Check spill switch connections. Note to technician: To check spill switch function, check continuity across terminals using a multimeter (volt meter) set to ohms. A "0" ohms reading indicates a good switch. An infinite ohms c "1" reading indicates a defective (c. open) switch.

### **7. GLASS DEVELOPS MILKY WHITE FILM (ON INSIDE).**

- A. Result of by-products in the fuel/mineral residues..  
 Use a good glass cleaner (preferably cream or paste) to remove.

### **8. GLASS FOGS UP.**

- A. A normal result of gas combustion.  
 No action necessary. After the heater has warmed up, the glass will clear.

### **9. BLUE FLAMES.**

- A. Normal during first 20 minutes.  
 No action is necessary. Flames will begin to turn more yellowish after about 20 minutes of burning.

### **10. STICKING VALVES.**

- A. Debris and moisture from the gas line clogging valve.  
 Improper plumbing, no drip leg in line to prevent travel of moisture and dirt. Replace damaged valve and correct plumbing.

### 11. FLAME NOISE (RUMBLING/GURGLING).

- A. Excessive primary air.  
☒ Adjust burner air shutter (see page 12, #7).

### 12. ORIFICE NOISE (BUZZ/WHISTLE).

- A. Debris lodged in orifice.  
☒ Clean orifice; replace if necessary.  
B. Burr in main burner orifice.  
☒ Debur or replace orifice.  
C. Excessive gas pressure.  
☒ Check inlet & manifold gas pressure.  
See page 12.

### 13. GAS SMELL

- A. Loose fittings may be allowing gas to escape.  
☒ Check all joints in the gas supply system and gas valve system for leaks. Use a proper leak check solution. NEVER USE AN OPEN FLAME TO CHECK FOR GAS LEAKS.

### 14. SOOT &/OR FLOATING FLAMES. USUALLY ACCOMPANIED BY THE ODOR OF ALDEHYDES.

- A. First Rule Out:  
Soot staining and soiling of carpets, drapes, windows & other household components can often be traced to the use of such items as candles, oil lamps, incense, and other misc. aromatic off-gassing materials.

Note 1.

**IF SOOT IS NOT PRESENT IN THE FIREBOX, IT CANNOT BE THE SOURCE OF THE EXTERNAL SOOT.**

Note 2.

What is Sooting: Free carbon produced by potentially dangerous improper or incomplete combustion of gas.

Note 3

What are Floating Flames: Lazy, ill-defined, quiet flame, which roll around sometimes completely off the port. Potentially dangerous incomplete combustion.

- ☒ Check appliance input rate (gas pressure: inlet and manifold, & burner orifice size) and reduce if necessary.  
☒ Insufficient secondary air due to

restricted exhaust flow or blocked secondary air inlet (Note: The rate at which the exhaust leaves determines the rate at which the secondary air is delivered. If this process happens too slowly there will be insufficient combustion air delivery). Exhaust venting not secured, vent termination interference. Blocked burners/flame impingement. Correct log & burner positioning.

- ☒ Insufficient primary air (yellow tipping): Adjust primary air. Ensure the air shutter opening is free from dust or debris.  
☒ IN ALL CASES: Annual Service Procedure should be performed.  
☒ Propane Appliances: LP tanks can suffer pressure decreases, which can result in sooting as it approaches empty.  
☒ Higher Elevations – Derate per manual (see high altitude).

### 15. BURNER FLASHBACK AIR/GAS MIXTURE IGNITES INSIDE BURNER NEAR ORIFICE.

This creates a roaring noise (like blowtorch). Production of carbon monoxide & aldehydes possible. Soot may clog inside of burner. Problem: Imbalance of gas flow velocity & burning speed pattern.

- A. Excessive primary air.  
☒ Reduce primary air, being careful to avoid yellow tipping.  
B. Burner input underrated  
☒ Check input rate. Check input pressure using a manometer. Replace \*RB regulator. Confirm correct gas pressure at house meter or tank (call gas company). Improper gas pipe size, correct plumbing. Confirm correct size burner orifice (see chart under "High Altitude").  
C. Valve leak if flashback occurs w/ burner valve in "OFF" position.  
☒ Replace valve.

### 16. DELAYED IGNITION (MAKES A SUDDEN "WHOOSH" NOISE AS BURNER LIGHTS).

- A. This is a buildup of gases prior to ignition. This is more prevalent with propane (LP) fuel, since propane gas is heavier than air (natural gas is lighter than air).  
☒ Primary air shutter closed too far.

Adjust shutter to correct gap.

- ☒ Burner ports plugged, not allowing proper flame travel. Clean ports.  
☒ Pilot is not positioned close enough to light up row on burner. Adjust pilot or burner location.  
☒ Logs placed improperly interfering with flame travel. Correct log positioning.  
☒ Appliance not properly derated for higher altitudes. Derate appliance.  
☒ Excessive gas pressure - Call gas company.

### 17. FLAME LIFTS FROM BURNER AND PILOT.

- A. Air Starvation. Poor connection of venting components.  
☒ Check vent exhaust and air intake component connections.

### 18. INTERMITTENT LIFTING AND CYCLING OF FLAME. POSSIBLE INTERMITTENT PILOT DROPOUT PROBLEMS.

- A. High wind conditions.  
☒ Install high wind cap  
B. Cap Obstructed.  
☒ Inspect termination cap for proper installation and ensure that it is not obstructed.  
C. External Environment - i.e. Buildings, trees, rooflines interfering w/ venting.  
☒ Correct installation.

### 19. AIR CIRCULATION BLOWER MAKES A HUMMING SOUND; BUT NO AIR IS BEING CIRCULATED.

- A. Blower impeller blades are dirty.  
☒ Disconnect electrical power to air circulation blower (unplug power cord). Access blower and clean blower impeller blades (see page 8).  
B. Blower speed control (rheostat) or Burner On/Off switch is defective.  
☒ Make sure the blower On/Off switch is in the "On" position. Make sure the power cord is properly plugged into a functioning outlet. Replace rheostat or On/Off switch if necessary.  
C. Heat circulating blower is defective.  
☒ Replace Blower.

POUR VOTRE SÉCURITÉ, LIRE AVANT L'ALLUMAGE




**Attention: le non-respect de ces recommandations peut provoquer une explosion ou un incendie résultant en des dégâts matériels, blessures ou décès.**

- A - Cet appareil est équipé d'une veilleuse qui doit être allumée manuellement. Suivre les instructions à la lettre lors de l'allumage de la veilleuse.
- B - AVANT D'ALLUMER L'APPAREIL, s'assurer qu'il n'y a pas d'odeur de gaz près de l'appareil ou près du sol où certains gaz plus lourds que l'air auront tendance à s'accumuler en cas de fuite.


**QUE FAIRE SI UNE ODEUR DE GAZ EST PRÉSENTE:**

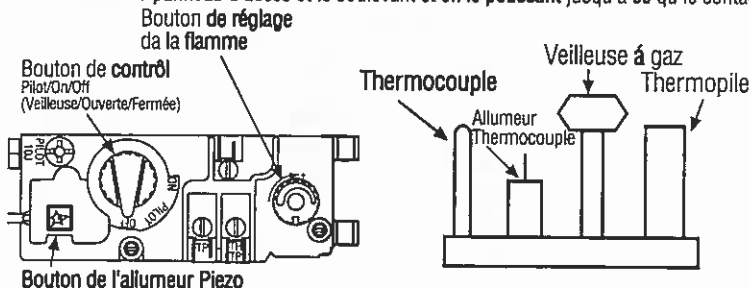
- Ne pas allumer d'appareil électroménager. • Ne pas toucher d'interrupteur électrique; ne pas utiliser de téléphone se trouvant dans le même bâtiment.
- Appeler immédiatement le distributeur du gaz depuis le téléphone d'une voisine. Suivre les instructions données par le distributeur du gaz. • S'il est impossible de joindre le distributeur du gaz, appeler les pompiers.
- C - Tourner ou pousser uniquement à la main le bouton de contrôle de gaz. Ne jamais utiliser d'outils. S'il est impossible de tourner ou de pousser le bouton à la main, ne pas essayer de le réparer. Appeler un technicien qualifié. Forcer le bouton ou tenter une réparation peut provoquer un incendie ou une explosion.
- D - Ne pas utiliser cet appareil si l'un des pièces ayant été mouillées. Appeler immédiatement un technicien qualifié pour une inspection et un remplacement des pièces ou dispositif de contrôle ou de distribution de gaz ayant été mouillées.

ALLUMAGE

- 1 - ARRETER ! Lire attentivement l'information ci-dessus.
- 2 - Couper l'alimentation électrique de l'appareil.
- 3 - Pour accéder au dispositif de contrôle de gaz, faire basculer le panneau d'accès vers le bas. Le panneau d'accès ou dispositif de contrôle trouve directement sous la fenêtre.
- 4 - Pousser légèrement le bouton de contrôle de gaz et faire tourner dans le sens des aiguilles d'une montre  pour le placer sur OFF. REMARQUE: Le bouton ne peut pas être tourné de PILOT à OFF s'il n'est pas légèrement enfoncé. Ne pas forcer.
- 5 - Attendre cinq (5) minutes pour s'assurer que tout le gaz a eu le temps de se dissiper. Si vous sentez une odeur de gaz, ARRETER! Suivre les instructions données en B ci-dessus. S'il n'y a pas d'odeur de gaz, passer à l'étape suivante.
- 6 - Repérer la veilleuse située à ou centre de la chambre de combustion, sous la bûche céramique arrière.
- 7 - Tourner le bouton de contrôle de gaz dans le sens inverse des aiguilles d'une montre  pour le placer sur PILOT.
- 8 - Cet appareil de chauffage est équipé d'un système d'ignition par étincelle (allumeur Piézo-électrique), devant être utilisé pour l'allumage de la veilleuse. Pousser complètement le bouton de contrôle de gaz et le maintenir dans cette position. Appuyer immédiatement sur le bouton (sur l'allumeur Piézo-électrique) situé à gauche du robinet de contrôle de gaz. L'étincelle produite par l'allumeur Piézo-électrique doit allumer la veilleuse. Continuer à maintenir le bouton de contrôle dans cette position pendant une (1) minute après d'allumage de la veilleuse. Relâcher le bouton de contrôle de gaz qui revendra en position initiale. La veilleuse doit rester allumée. Répéter les étapes 4 à 8 si elle s'éteint. Si le bouton de contrôle de gaz ne revient pas en position initiale une fois relâché, appeler immédiatement un technicien qualifié ou le distributeur du gaz.
- 9 - Tourner le bouton de contrôle de gaz dans le sens inverse des aiguilles d'une montre  pour le placer sur le position ON. Utiliser le commutateur à bascule situé sur le panneau de contrôle afin de contrôler le brûleur principal. Ajuster la flamme à la température souhaitée.
- 10 - Fermer le panneau d'accès et le soulevant et en le poussant jusqu'à ce qu'il y ait contact avec les aimants se fasse. Rétablir l'alimentation électrique à l'appareil.

COUPER L'ALIMENTATION EN GAZ DE L'APPAREIL

- 1 - Couper l'alimentation électrique à l'appareil pour besoins de réparation.
- 2 - Pour accéder au dispositif de contrôle de gaz, faire basculer le panneau d'accès vers le bas. Le panneau d'accès ou dispositif de contrôle trouve directement sous la fenêtre.
- 3 - Pousser légèrement le bouton de contrôle de gaz et faire tourner dans le sens des aiguilles d'une montre  pour le placer sur OFF. REMARQUE: Le bouton ne peut pas être tourné de PILOT à OFF s'il n'est pas légèrement enfoncé. Ne pas forcer.
- 4 - Fermer le panneau d'accès et le soulevant et en le poussant jusqu'à ce qu'il y ait contact avec les aimants se fasse.



**LENNOX**  
ELITE SERIES

60020210 Rev. A, 7/00

## SPECIFICATIONS

Approx. Sq. Ft.

Heating Capacity ~ 1200 square feet.

Flue Size 4" - Exhaust Outlet

Dimensions Into Fireplace

Height: 25" (less draft hood = 20 3/4")

Width @ front: 28 3/8" @ 5" depth

Width @ back: 19 1/4" @ 15 1/2" depth

Depth: 15 1/2"

Height ~ 24 3/4"

Height w/ Surround ~ standard-27 5/8", Large 31 1/4"

Width ~ 31 7/8"

Width w/ Surround ~ standard-41 1/4", Large 48 1/4"

Depth (overall) ~ 16 1/4" (w/picture window)

~ 19 5/8" (w/bay window)

Fuel Natural or LP Gas.

Gas Inlet 3/8" NPT.

Performance Variable Flame Control.

Features High Efficiency heat exchanger.

Natural convection & radiant heat.

Remote Control & Wall Thermostat capable

Safety Test

Listed by ITS (Intertek Testing Services. Listing mark is Warnock Hersey). The L20BI has been tested to ANSI Z21.88a-1999/CSA 2.33a-M99 Vented Gas Fireplace Heaters, CAN/CGA 2.17-M91 Gas Fired Appliances for Use at High Altitudes.

Heat Input 21,500 - 27,500 BTU's (Natural Gas)

21,500 - 27,500 BTU's (Propane)

Ship Weight 125 lb.'s.

Options: High Altitude Kit (p/n 95L96)

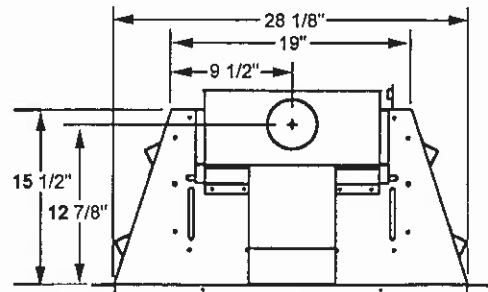
Remote Control s (p/n 26NO4 and 98K99)

Wall thermostat (p/n 10N64)

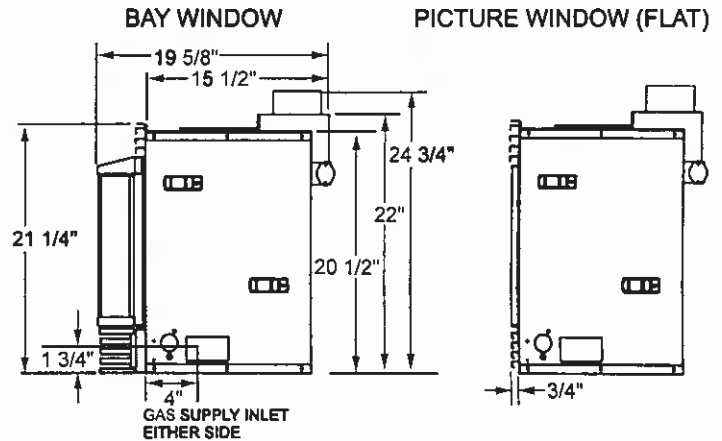
~ Dimensions shown are approximations only (+/- 1/4")

~ Square feet heating capacities are approximations only. They will vary depending upon the level of insulation, climate, house design, ceiling height, ambient outside temperatures and how the appliance is operated.

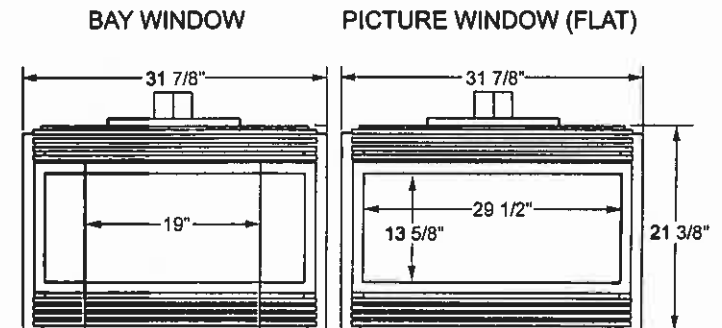
TOP VIEW



SIDE VIEW



FRONT VIEW



## SPECIFICATIONS

GAS TYPE			FLOOR PROTECTION	
Orifice Size	NATURAL GAS #40-098"	PROPANE #53-0595	Required if non-combustible hearth extends less than 18 inches from fireplace opening.	
Min./Max. Inlet Pressure	4.5/7.0" WC	11.0/13.0" WC	HIGH ALTITUDE	
Output BTU/Hr (efficiency)	20,785 (75.58%)	20,859 (75.85%)	Altitude - U.S.A. 0-2000 FT (0610M) and Canada 0-4500 FT (0-1372M)	
HIGH SETTING			No derating *	
Manifold Pressure	3.5" WC +/- .3	10.0" WC +/- .3	* With the orifice, manifold pressure and input ratings shown above.	
Input BTU/HR	27,500	27,500	Altitudes above 2000 FT (610 M) for U.S.A., and 4500 FT (1372M) for Canada, reorifice per manual and consult local codes.	
LOW SETTING			ELECTRICAL RATING	
Manifold Pressure	1.9" WC +/- .3	6.8" WC +/- .3	Blower (p/n 52L19) 120V, 60 Hz, 1.5 A	
Input BTU/HR	21,500	21,500	PROPANE CONVERSION	
MINIMUM CLEARANCES TO COMBUSTIBLES			This Appliance is equipped at the factory for the use with Natural Gas or Propane (LP). Appliances using propane must be field converted using the LP Conversion Kit supplied with appliance.	
Stove Top to Ceiling Height Min.		36 in. / 915 mm		
Side Wall Minimum		12 in. / 305 mm		
Stove Top to Mantel Minimum		14 in. / 356 mm		
Mantel Projection Maximum		12 in. / 305 mm		
Floor Clearance (required if hearth does not extend 18")		7 in. / 178 mm		
THIS LENNOX GAS FIREPLACE IS FOR USE ONLY WITH LENNOX APPROVED VENTING COMPONENTS AND TERMINATIONS.				

**SAFETY/LISTING (RATING) LABEL**

Brand Name: L20BI Flat/L20BI Bay  
 Vented Gas Fireplace Heater.  
 Foyer au gaz à évacuation.

**Warnock Hersey**

Serial Number



**L20BI**

No. de Serie

**VENTED GAS FIREPLACE HEATER -  
 NOT FOR USE WITH SOLID FUEL**

**FOYER AU GAZ À ÉVACUATION -  
 NE PAS UTILISER AVEC DU COMBUSTIBLE SOLIDE.**

Gas/Gaz Type

Natural

Propane

Controls: VS8520

Tested to: ANSI Z21.88a-1999/CSA 2.33a-M99

Vented Gas Fireplace Heaters

CAN/CGA - 2.17 - M91 Gas Fired Appliances for Use at High Altitudes.

Natural Gas Model: L20BIN Flat/L20BIN Bay

Normal Input 27,500 Btu/hr

Minimum Input 21,500 Btu/hr

Orifice - Main 40 dms

Manifold Pressure 3.5" w.c./c.e.

Minimum 1.9" w.c./c.e.

Min. Supply Pressure 4.5" w.c./c.e.

Altitude 0-2000' (610m) U.S.A.

0-4500' (1372m) Canada

Natural Gaz Modele: L20BIN Flat/L20BIN Bay

Alimentation

Puissance minimum

Grandeur de l'injecteur

Pression a la tabular d'alimentation

Pression a la tabular d'alimentation minimum

Pression d'alimentation minimum

Altitude

Propane Gas Model: L20BIP Flat/L20BIP Bay

Normal Input 27,500 Btu/hr

Minimum Input 21,500 Btu/hr

Orifice - Main 53 dms

Manifold Pressure 10" w.c./c.e.

Minimum 6.8" w.c./c.e.

Min. Supply Pressure 11" w.c./c.e.

Altitude 0-2000' (610m) U.S.A.

0-4500' (1372m) Canada

Propane Gaz Modele: L20BIP Flat/L20BIP Bay

Alimentation

Puissance minimum

Grandeur de l'injecteur

Pression a la tabular d'alimentation

Pression a la tabular d'alimentation minimum

Pression d'alimentation minimum

Altitude

Electrical Rating

115 V; 60 HZ;  
 less than 12 A.

moins de 12 ampères

Alimentation Electrique

Minimum Clearances to Combustibles -

Sidewall

12"/305mm

Mantel

14"/356mm

Ceiling

36"/915mm

Floor

7"/178mm

Degagements Minimum Des Materiaux  
 Combustible -

Mur Lateral

Manteau

Plafond

Sol

If a 7" clearance to combustible flooring in front of the appliance is not possible or desirable, a non-combustible hearth extending 18" in front of the appliance shall be installed.

For use with Natural Gas and L.P. Gas (Propane). A conversion kit, as supplied by the manufacturer, shall be used to convert this room heater to the alternative fuel.

Pour utilisation avec le gaz naturel et le propane. Une trousse de conversion fournie par le fabricant doit être utilisée pour passer d'un combustible à l'autre.

THIS VENTED GAS FIREPLACE HEATER IS NOT FOR USE WITH AIR FILTERS.

NE PAS UTILISER DE FILTRE À AIR AVEC CE FOYER AU GAZ À ÉVACUATION

FOR USE WITH GLASS DOORS CERTIFIED WITH THE APPLIANCE ONLY.

POUR UTILISATION UNIQUEMENT AVEC LES PORTES EN VERRE CERTIFIÉES AVEC L'APPAREIL.

Manufactured by LENNOX HEARTH PRODUCTS, Fullerton, CA

21320000 REV C



## WARNING/ATTENTION

Operation of this heater when not connected to a properly installed and maintained venting system or tampering with the vent safety shutoff system can result in carbon monoxide (CO) poisoning and possible death. *Si cet appareil fonctionne sans être raccordé à un système d'évacuation correctement installé et entretenu ou si le système d'évacuation est modifié, il peut en résulter un empoisonnement au monoxyde de carbone et la mort.*

This appliance must be installed in accordance with local codes, if any; if not, follow ANSI Z223.1 (In USA) and CAN/CGA-B149 (In Canada). *Ce radiateur doit être installé conformément aux exigences des codes locaux. S'il n'existe aucun code local, se conformer à la norme CAN/CGA-B149 en vigueur.*

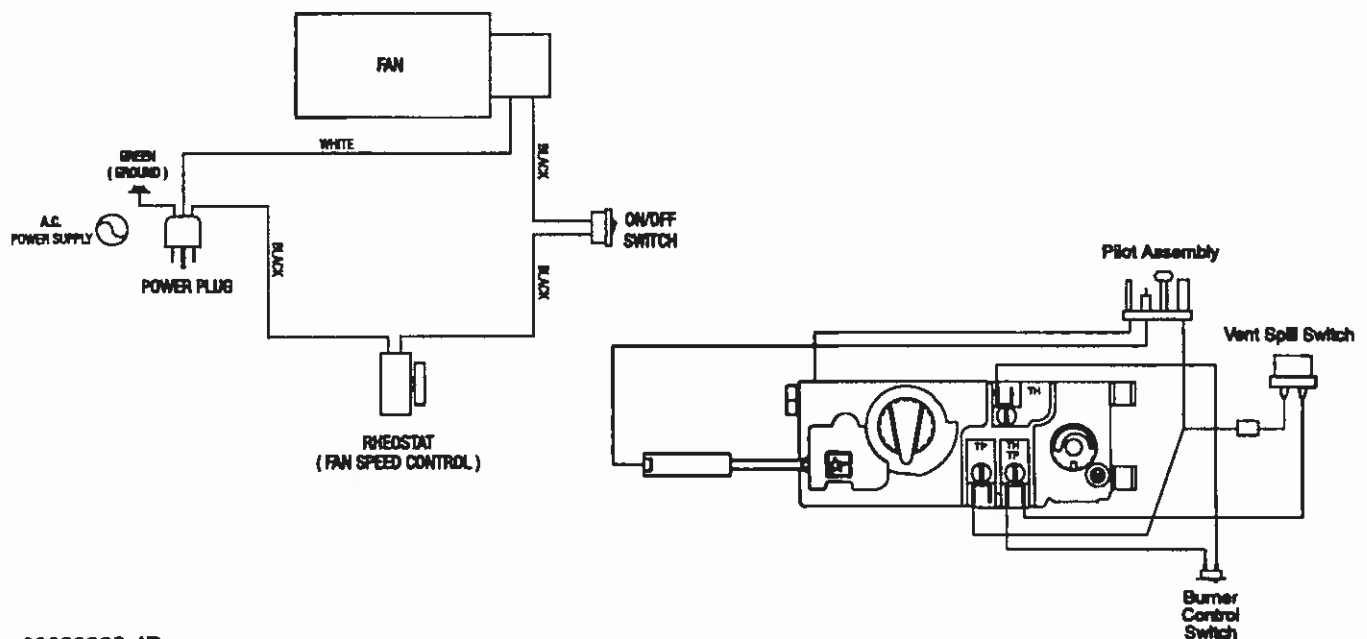
This appliance needs fresh air for safe operation and must be installed so there are provisions for adequate combustion and ventilation air. *Par mesure de sécurité ce radiateur requiert de l'air frais et doit être installé de façon à assurer un approvisionnement suffisant d'air de combustion et de ventilation.*

This heater must be properly connected to a venting system. This heater is equipped with a vent safety shutoff system. *Ce système de chauffage doit être correctement raccordé à un système de ventilation. Ce système de chauffage est équipé d'un dispositif de sécurité provoquant l'arrêt automatique.*

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to the owner's information manual provided with this appliance. For assistance or additional information consult a qualified installer, service agency or the gas supplier. *Une installation, un réglage, une modification, une réparation ou un entretien mal effectué peut causer des dommages à la propriété ou des blessures. Voir la notice de l'utilisateur qui accompagne l'appareil. Pour de l'aide ou d'autres renseignements consultez un installateur, ou un technicien agréé ou le fournisseur de gaz.*

Due to high surface temperatures, keep children, clothing and furniture away. Keep burner and control compartment clean. See installation and operating instructions accompanying appliance. *A cause de la température élevée des pavots, tenir éloignés les enfants, les vêtements et les meubles. Maintenir propres le brûleur et le compartiment de commande. Voir les instructions relatives à l'installation et au fonctionnement qui accompagnent le radiateur.*

## WIRING DIAGRAMS



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