



INSTALLATION AND OPERATION MANUAL

VENTED GAS FIREPLACE HEATER INSERT



Gas Fireplace insert utilizing conventional 4" B-Vent. Suitable for installation into a masonry or factory built fireplace.

MODEL L30 BI (B-Vent)

P/N 775031M, IR, 08/01



Report No.
189122-1027381

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.

IMPORTANT WARNINGS / CAUTIONS

CAUTION: Read this manual thoroughly before starting installation. For your safety, follow the installation, operation and maintenance instructions exactly without deviation. Failure to follow these instructions may result in a possible fire hazard and may void the warranty. If this appliance is not properly installed, a house fire may result. Contact local building or fire officials about restrictions and installation inspection in your area.

1. **WARNING:** Improper assembly, installation, adjustment, alteration, service or maintenance can cause injury and / or property damage, personal injury or loss of life.
2. Installation and service must be performed by a qualified installer, service agency or the gas supplier. Except when complying with local codes, any deviation from the installation and / or operating instructions contained in this manual will void the appliance warranty and may be hazardous.
3. The appliance should be inspected before use and at least annually by an authorized 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.
4. Failure to position the parts in accordance with the diagrams provided or failure to use only parts specifically approved with this appliance may result in property damage or personal injury.
5. The appliance must NOT be connected to a chimney flue serving a separate solid-fuel burning appliance.
6. Solid fuel must not be used with this appliance (Do not burn wood or other material in this heater).
7. Do not connect 110-12 VAC (residential line voltage) to the gas control valve or control wiring system of the unit.
8. **WARNING:** The appliance area must be kept clear and free from combustible materials, gasoline and other flammable vapors and liquids.
9. **CAUTION: HOT WHILE IN OPERATION.** An appliance hot enough to warm your home can severely burn anyone touching it. Keep children, clothing and furniture away. Contact may cause skin burns. Do not let children touch the appliance. Train them to stay a safe distance from the unit.
10. Do not place clothing or other flammable material on or near the gas appliance. The minimum clearances must be maintained for all combustible surfaces and materials including; furniture, carpet, drapes, clothing, wood, papers, etc.
11. Due to high operating temperatures, this appliance should be located out of traffic and away from furniture, draperies and not in windy or drafty areas.
12. Any safety screen or guard removed for servicing must be replaced prior to operating the appliance.
13. **WARNING:** Use only the glass door certified with this appliance. Exercise caution to protect glass from impact. Do not operate the appliance with broken glass or use substitute materials.
14. **DO NOT USE** this appliance if any part has been under water. Immediately call an authorized Lennox service technician to inspect the appliance and replace any part of the control system and gas control which has been under water.
15. Do not use a blower insert, heat exchanger insert or other accessory not approved for use with this appliance.
16. This appliance is not for use with air filters.
17. Any change to this heater or its controls can be dangerous.
18. This appliance is only for use with the type of gas indicated on the rating label (located inside control panel). This appliance is not convertible for use with other fuel unless a certified kit is used.
19. This appliance is equipped with a safety control system (spill switch) designed to protect against improper venting of combustion products or vent blockage.
20. Provide adequate clearances around air openings and adequate accessibility clearance for service and proper operation. Never obstruct the front openings of the appliance. Never seal the opening at the rear of the insert.
21. This appliance requires an adequate supply of combustion and ventilation air. Provisions must be made to ensure an adequate supply of combustion and draft hood dilution air to the room where the appliance is installed.
22. It is imperative that the flow passages of the vent termination cap remain unrestricted.
23. **WARNING:** Do not modify the venting system, appliance, or controls in any way. Be advised, any modification can be dangerous.
24. **WARNING:** This appliance must be properly connected to a venting system. Operation of this gas appliance when not connected to a properly installed and maintained venting system can result in carbon monoxide (CO) poisoning and possible death. This appliance must be installed into either a masonry or factory built solid fuel (wood) burning fireplace 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.
25. **SAVE THESE INSTRUCTIONS.**

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TESTING / LISTING

This appliance is tested and certified as safe for residential use by an internationally recognized testing and certification agency. The safety tests are conducted in accordance with American National Standards Institute (ANSI) requirements. The L30 BI appliance is tested, certified, and listed by the CSA, AGA, CGA to ANSI Z21.88 - 1998 Vented Gas Fireplace Heaters and CSA 2.33 - 1998 Vented Gas Fireplace Heaters.

Approved Venting: This appliance may be vented with any listed class B chimney components installed in accordance with manufacturers' instructions. See page 8.

PACKAGING LIST

This appliance is packaged with an accessory package, which contains the following:

- One - Installation and operation instructions manual.
- One - Warranty.
- One - Log set.
- One - Embers (Bag of mineral wool).
- One - 9' electrical power cord.
- One - Lintel Catch (fireplace support bracket).
- One - Screw, ¼ - 20 x ½" Plated (to secure lintel catch to outer casing).
- Four - Leveling bolts. ¼ - 20 x 2 ¾" Hex.

The following kits are also required to install this appliance:

- Transition bay window to surround kit (see page 25)
L30 BIFP, CAT. NO. 46L99
- Surround Kit (2 sizes available, see page 25)
L30 BI6, CAT. NO. 46L97 (Standard)
L30 BI10, CAT. NO. 46L98 (Large)

USING THIS MANUAL

Please read and carefully follow all of the instructions found in this manual. Please pay special attention to the safety instructions provided in this manual. Following the Homeowner's Care and Operation Instructions included here will assure that you have many years of dependable and enjoyable service from your appliance.

CONGRATULATIONS ON THE PURCHASE OF YOUR NEW GAS APPLIANCE MANUFACTURED BY LENNOX HEARTH PRODUCTS.

When you purchased your new gas fired insert, you joined the ranks of thousands of concerned individuals whose answer to their home heating needs reflects their concern for aesthetics, efficiency and our environment. We extend our continued support to help you achieve the maximum benefit and enjoyment available from your new gas fired insert.

It is our goal at Lennox Hearth Products to provide you, our valued customer, with an appliance that will ensure you years of trouble free warmth and pleasure.

Thank you for selecting a Lennox Hearth Products gas fired insert as the answer to your home heating needs.

Sincerely,
All of us at Lennox Hearth Products

PLANNING YOUR INSTALLATION

LOCAL AND NATIONAL CODE REQUIREMENTS

The installation of these appliances 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.

Air Circulation Blower: The blower electrical power cord should be connected to a standard 115 volt, A.C., 60 hertz cycle, electrical outlet (wall receptacle) that is electrically grounded per local codes or per electrical codes:

In USA, NEC, ANSI / NFPA 70-1987.

In Canada, CSA C22.1

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

WARNING: To avoid electrical shock, always ensure that the power cord is unplugged (i.e., there is no electrical power to the circulation blower) before handling the circulation blower or performing any work on the appliance.

High Altitude: Gas inputs shown are for elevations up to 4500 feet. For elevations above 4500 feet, contact your gas supplier or qualified service technician regarding the necessary deration of appliance (deration: replacing burner orifice with a smaller one to reduce input). Ratings must be reduced at the rate of 4 percent for each 1,000 feet above sea level. Refer to (for USA) NFPA 54 / ANSI Z223.1-latest edition for orifice resizing.

This appliance may be used with a thermostat or remote control (see Optional Accessories, page 25). This appliance is certified for use in bedrooms. If installed in a bedroom in Canada, a thermostat IS required.

TOOL / EQUIPMENT LIST

The following tools and equipment are recommended for completing the partial assembly required when the appliance is installed:

- 7/16", 3/4" open end wrenches.
- 1/4", 3/8" nut drivers.
- Pipe wrench.
- Phillips head screw driver.
- Flat head screwdriver.
- Pipe sealant compound.
- Leak test fluid "U" tube manometer or pressure gauge (0 - 16" (inches water column) H₂O scale.

GAS PRESSURE (WC = Water Column)

Minimum inlet gas supply pressure for the purpose of input adjustment:

Natural Gas - 4.5" WC min. - 10.5" WC max.

Propane (LP) - 11" WC min - 13.0" WC max.

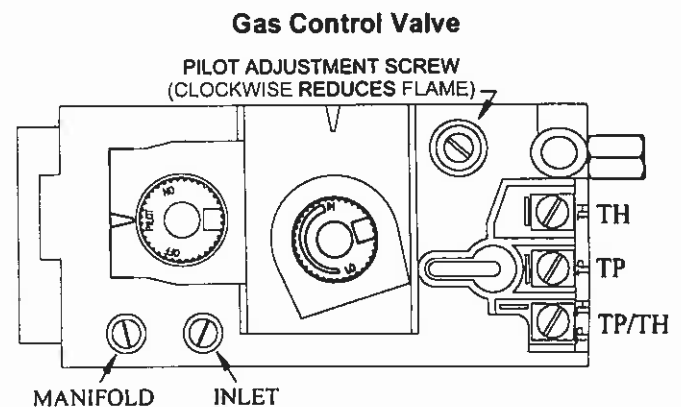
Manifold gas supply pressure:

LOW		HIGH
Natural Gas - 1.7" WC	(to)	3.5" WC
24,000 BTU/hr		37,000 BTU/hr
Propane (LP) 6.3" WC	(to)	10" WC
25,000 BTU/hr		35,000 BTU/hr

PRESSURE TAPS

Gas Inlet Pressure Tap - Located on bottom left of gas valve.

Gas Outlet (Manifold) Pressure Tap - Located on bottom left of gas valve (to the right of the inlet pressure tap).



Pressure Testing: See *Pressure Testing* on page 9.

⚠ 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.

PLANNING YOUR INSTALLATION

QUESTIONS TO ASK LOCAL BUILDING OFFICIAL

Correct installation is critical and imperative for reducing fire hazards and perilous conditions that can arise when gas appliances function improperly. The appliance must be installed per manufacturers' instructions.

Gas appliance equipment and installations must conform to appropriate local codes and applicable state and federal requirements. Familiarity with these requirements before installation is essential. Important considerations to discuss with local building officials include:

1. Applicable codes (i.e. Uniform Mechanical Code, State or Regional Gas Codes, National Fuel Gas Code)?
2. Local amendments?
3. Recognized testing lab: CSA / AGA.
4. Is a permit required - cost?
5. In some states or municipalities, a licensed gas fitter or plumber may be required to install this appliance. Check with your local building official for requirements in your area (i.e. Is a license required for installation of gas supply line)?
6. Maximum amount of gas pipe without a pressure test - type of test required?
7. Are below grade penetrations of the gas line allowed?
8. Is concealed gas piping allowed?
9. Specific requirements of concealed fittings?
10. Is rigid pipe to appliance required?
11. Allowed piping materials?
12. Shut-off valve required within 4 feet of the firebox?
13. May the shut-off valve be concealed?
14. Rooms where the installation is not allowed?

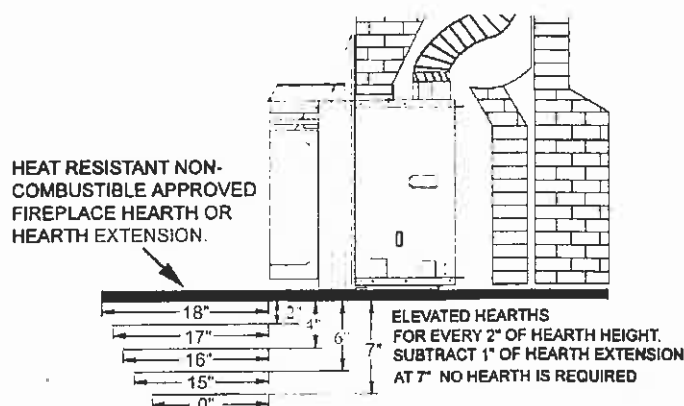
In the absence of local codes, installation should conform to the National Fuel Gas Code, also known as ANSI Z223.1-NFPA 54.

PLANNING YOUR INSTALLATION

FLOOR PROTECTION

If a 7" clearance to combustible flooring is not possible, a non-combustible approved fireplace hearth or hearth extension extending 18" in front of the appliance is required. For elevated hearths subtract 1" of hearth extension required for every 2" of hearth height (i.e. If hearth is elevated 4" above the floor, a 17" minimum hearth protection is required). If a hearth extension is used it must be a 3/8" (minimum) UL approved hearth pad or equivalent. If the floor protection is to be stone, tile, brick, etc., it must be mortared or grouted to form a continuous non-combustible surface (See *Using Alternate Material As Floor Protector* on this page).

HEARTH PROTECTION



USING ALTERNATE MATERIAL AS A FLOOR PROTECTOR / HEARTH EXTENSION

The alternate material used as a hearth extension must be constructed of a durable noncombustible material having an equal or better insulating value (lower k value) of $k = 1.28 \text{ BTU/IN FT}^2 \text{ HR } ^\circ\text{F}$ or a thermal resistance that equals or exceeds $r = 78 \text{ HR } ^\circ\text{F FT}^2 \text{ IN/BTU}$. With these values, determine the minimum thickness/material required using the formula and the table shown here (see chart - *Alternative Floor Protection Materials*).

Note: Any noncombustible material having a thickness of 1" whose k value is less than 1.28 or whose r value is more than .78 is acceptable. If the alternate material used has a higher k value or lower r value will require a greater thickness of the material used. In some cases, if the k value is less or the r value higher, a thinner material may be used.

Methods of determining floor protection equivalents

To determine the thickness required for any material when either the k or r values are known:

T_M = Thickness of material in inches

K_M = K value of desired material

T_L = Minimum listed thickness

Example: Micore CV230 is to be used for the floor protection. How thick must this material be?

The following **formulas** give the means of determining minimum thickness required of alternate materials.

Using the **k formula**:

$$\text{Desired Thickness of the alternate material} = \frac{k \text{ value of desired material (per inch)}}{k \text{ value of listed material (per inch)}} \times \text{Minimum thickness of Listed Material}$$

$$T_M (\text{inches}) = \frac{K_M}{1.28} \times T_L$$

$$T_M (\text{inches}) = \frac{0.43^*}{1.28} \times 1"$$

Answer using $k = 0.34 \times 1" = 0.34 = 3/8"$
3/8" thickness Micore will be required.

Using the **r formula**:

$$T_M (\text{inches}) = \frac{0.78}{r_M} \times T_L$$

$$T_M (\text{inches}) = \frac{0.78}{2.33^*} \times 1"$$

Answer using $r = 0.34 \times 1" = .034 = 3/8"$
3/8" thickness Micore will be required.

At times it is important to know what combination of materials are acceptable for use as floor protection. The "R values" are used to determine acceptable combinations of materials because "R values" are additive where r and k values are not.

$$"R \text{ value}" = \frac{1}{k} = r \times \text{thickness of material used}$$

ALTERNATIVE FLOOR PROTECTION MATERIALS

Listed Material	Values		Min. Thick
	k (per inch)	r (per inch)	T_L
Millboard	1.28	0.78	1"
Alternative Materials	Values		Min. Thick
	k (per inch)	r (per inch)	T_L
Wonderboard	1.92	0.56	1 1/2"
Common brick	5.00	0.20	3 7/8"
Cement mortar	5.00	0.20	3 7/8"
Ceramic tile	12.5	0.08	9 3/4"
Marble	11.0	0.09	8 5/8"
Micore CV230 (U.S. Gypsum)	0.43	2.33	3/8"
Ceraform 126 (Johns-Manville)	0.27	3.70	1/4"

Example: Given that the required "R value" for a suitable floor protector used must be equal to or greater than:

$$"R" = r \times T_L = 0.78 \times 1" = 0.78.$$

PLANNING YOUR INSTALLATION

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

Before this appliance is assembled and installed, you must consider whether the appliance must be converted for use with propane gas (see page 25) for information on ordering an optional Propane Conversion Kit). 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.

CAUTION - When installing the L30 BI 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.

SELECTING A LOCATION

⚠ WARNING

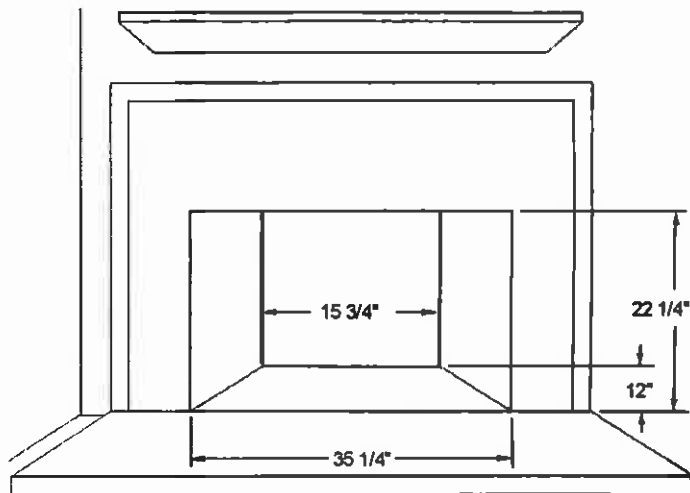
Do not install appliance in a corrosive or contaminated atmosphere. Meet all combustion and ventilation air requirements, as well as all local codes.

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

Approx. Minimum Dimensions of Fireplace	Height: 22 1/4" (less flue outlet collar: 20 1/4")
	Width @ front: 35 1/4"
	Width @ back: 15 3/4" @ 11 3/4" depth
	Depth: 12"

(See page 26 for actual insert body dimensions).



MINIMUM CLEARANCES TO COMBUSTIBLES

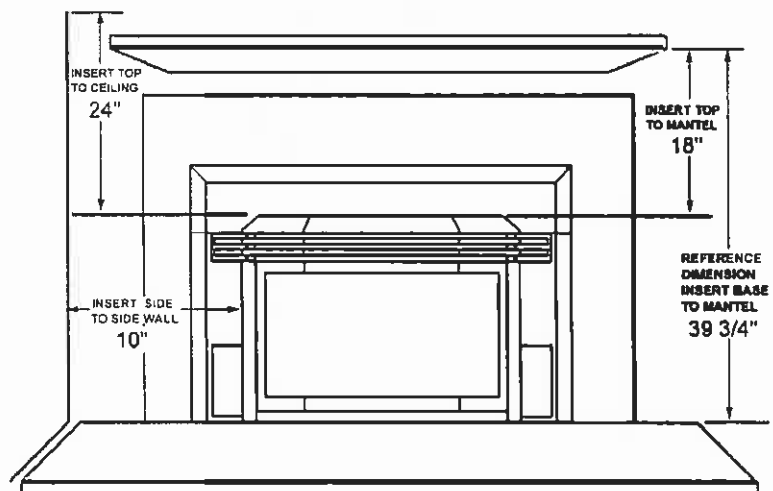
- Minimum clearances from spacers/standoffs or surfaces to combustible construction.
- The clearances listed below are minimum distances (see page 8 for *Venting Requirements*).
- Paint or lacquer used to finish the mantel must be heat resistant in order to avoid discoloration.

Insert Top to Ceiling Minimum	24 in. / 610 mm
Side Wall Minimum	10 in. / 255 mm
Insert Top to Mantel Minimum	18 in. / 458 mm
Mantel Projection Maximum	12 in. / 305 mm

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

Floor, Combustible	7 in. / 178 mm
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This clearance is not required if there is hearth protection as specified on page 6.



PLANNING YOUR INSTALLATION

⚠ IMPORTANT

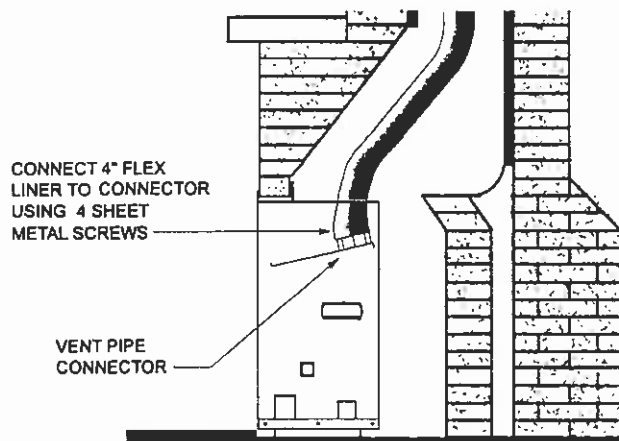
Under no circumstances, may separate sections of concentric flexible vent pipe be joined together.

VENTING REQUIREMENTS: This appliance requires the use of 4" B-Vent listed gas vent liner to the chimney termination to ensure proper operation. Follow all vent manufacturers' requirements and local building codes. The minimum vertical chimney height required is 12', the maximum is 25' (measured from flue outlet to termination). 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'.

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

Vent Pipe Connector Attachment to Liner: For ease of installation, this appliance has a detachable vent pipe connector located on top of the firebox. To install the vent pipe connector to the liner, first remove it from the firebox (by sliding it forward until it clears the retaining brackets). With the outer casing installed, connect the flex liner to the vent pipe connector collar as illustrated below. Secure the liner to the collar on the vent pipe connector using 4 sheet metal screws.

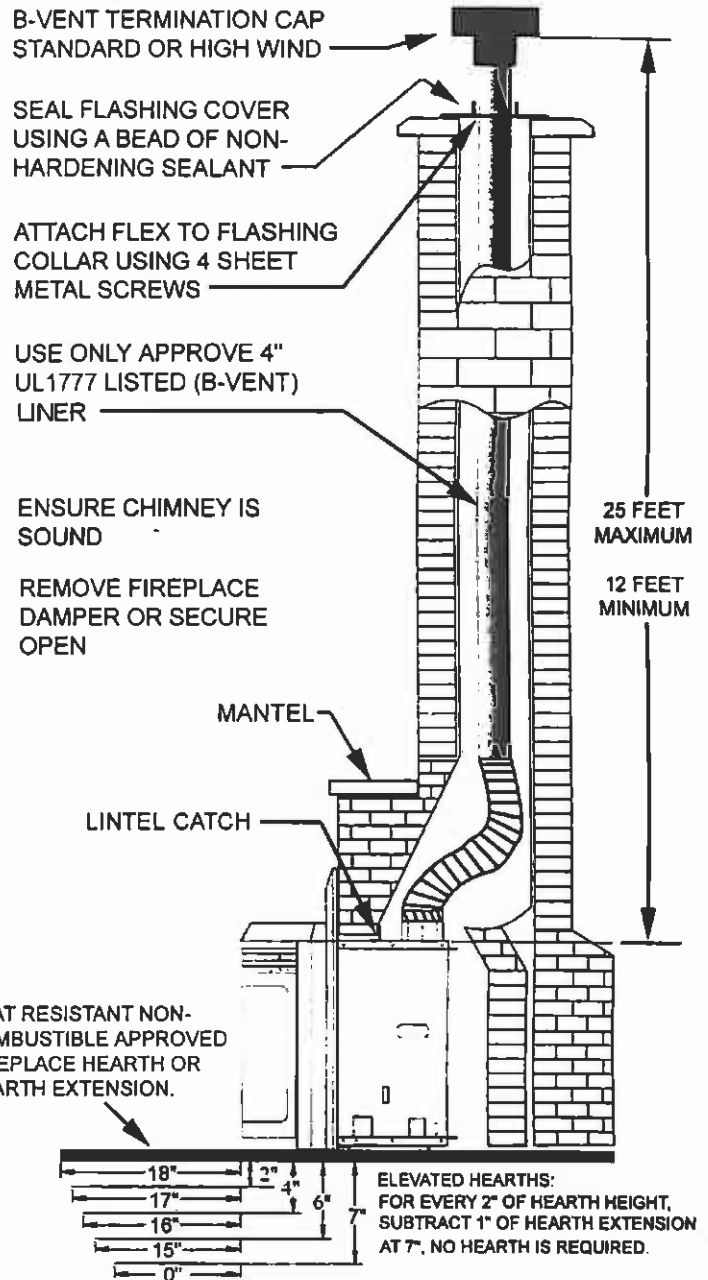
Connecting Vent Pipe Connector to Liner



Reattach vent pipe connector to firebox as outlined on page 8 (also see page 13, instruction #16 and *Body Components illustration* on page 10).

IMPORTANT: The vent pipe connector must be positioned all the way forward on firebox for proper heater operation.

Model: L30 BI (B-Vent) Venting Requirements Masonry or Factory Built Fireplace Installation



- 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. The flexible vent pipe must not be allowed to sag behind the fireplace.
- This appliance must be installed into either a masonry or factory built solid fuel (wood) burning fireplace 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.
- Draft hood / vent pipe connector must be installed for proper heater operation.

PLANNING YOUR INSTALLATION

GAS SUPPLY HOOKUP

If using pipe other than black iron pipe see NFPA 54-National Fire Protection Association / ANSI Z223.1-American National Standards Institute; and local code for specific requirements for the type of pipe used. Alternative gas piping systems such as CSST may be used subject to local code and proper sizing.

⚠ CAUTION

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

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 female type inlet for the gas supply line.

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 (See Air Purging Procedures on this page).

An accessible, approved shut-off 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.

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

PRESSURE TESTING:

- The appliance main gas valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psi (3.5 kPa).
- The appliance must be isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psi (3.5 kPa).

Make the connection to the gas supply line using the correct fitting required to the shut-off 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.

Supply Line Size Requirements

The proper gas line diameter must be used to run from the supply regulator (at the gas company meter) to the appliance. Never use galvanized or plastic pipe. Refer to the table below for suggested sizing of the gas supply line.

Suggested Sizing of Schedule 40 Pipe Supply Line

Schedule 40 Pipe Length (Feet)	Schedule 40 Pipe Inside Diameter (Inches)	
	Natural Gas	LP Gas
0-10	1/2	3/8
10-40	1/2	1/2
40-100	1/2	1/2
100-150	3/4	1/2
150-200	3/4	1/2

Use an approved pipe sealant compound for NPT fittings. After all pipe connections are made, apply normal gas line pressure: 7.0" W.C. for natural gas; 11.0" W.C. for LP gas (propane) and use an approved leak detection solution to test for the tightness of each pipe connection joint.

⚠ IMPORTANT

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

IMPORTANT: All connections must be checked for leaks with a leak detector or soapy water solution. Never check for gas leakage with an open flame!

⚠ 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.

* Note: 1/2 psi = 14" WC (inches water column).

AIR PURGING PROCEDURES:

Purging Air From Supply Line - Check with local building official for license requirements to perform this procedure.

1. With coupling loose at supply line turn gas supply line valve on.
2. When gas flows, turn supply valve off.
3. Connect coupling, check for gas leaks, and wait 5 minutes before lighting.

Purging Air From Appliance - Purge air from appliance by holding gas control valve down in the pilot position until pilot will light.

DO NOT LIGHT A MATCH IF YOU SMELL GAS - Depress gas control knob to allow gas flow to pilot. If the Match "blows", there is air in the line (purge line). If the flame is straight and tall, there is no gas pressure.

INSTALLATION

Before beginning the assembly / installation process, the following preparations should be completed:

- Run gas supply line to the fireplace where insert is to be installed (See Gas Supply Hook-up, page 9).
- If an optional remote control kit or wall thermostat is used, route wires to the fireplace. For more information on the following kits, see page 24:

RC-STAT, Cat. No. 98K99, Deluxe Remote Control
RC, Cat. No. 26N04, Standard Remote Control
WTK, Cat. No. 89L36, Wall Thermostat Kit

- Install B-Vent liner system components into existing fireplace (see page 8).
- Plan for electrical outlet (wall receptacle) access to the right side of insert (for plugging in blower power cord. See *Air Circulation Blower*, page 4). The power cord reach is approximately 6 ½ feet from the outside bottom edge of the right side surround panel.

- If installation is higher than 4500 feet above sea level, a derated orifice is required (see instruction # 7, this page).
- If propane (LP) gas is to be used, Natural Gas to Propane conversion kit is required (see instruction # 8, this page). The following optional kit is required for LP gas use:

LPCK2030, 52L22 NG to LP Conversion Kit

The following 2 kits are required to install this appliance:

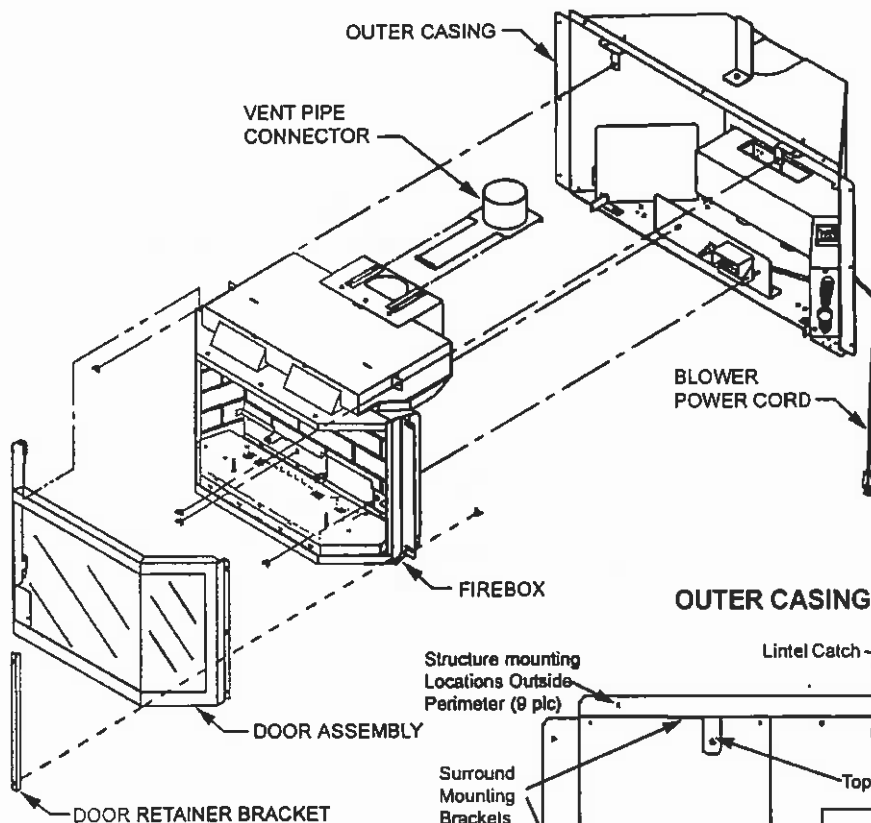
Transition bay window to surround kit (see page 13 for installation instructions, #21 and # 22).

L30 BIFP, CAT. NO. 46L99

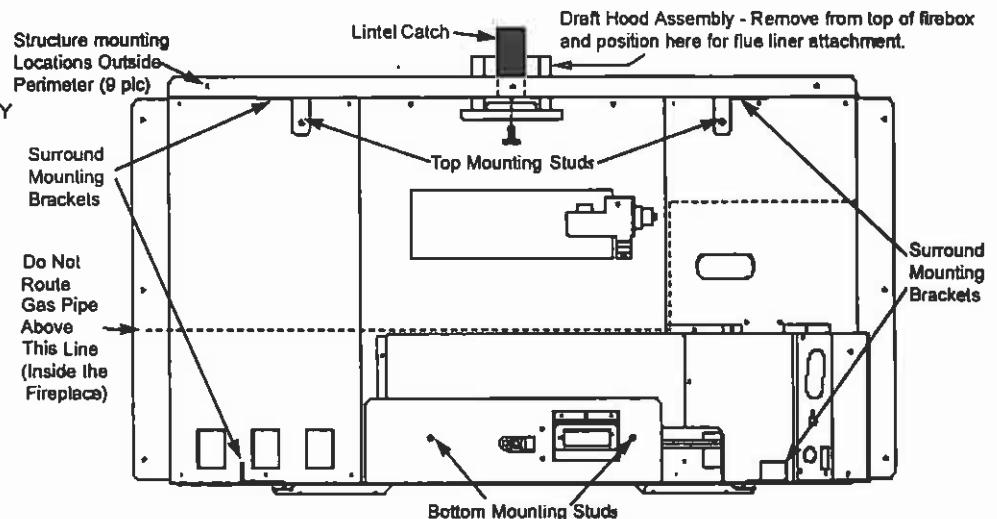
Surround Kit (See page 25 for size specifications. See pages 12 for installation instructions, # 15 and #16))
L30 BI6, CAT. NO. 46L97 (Standard)
L30 BI10, CAT. NO. 46L98 (Large)

Refer to these 2 illustrations for assembly instructions 1 through 19 on pages 11 through 14.

BODY COMPONENTS ASSEMBLY ILLUSTRATION



OUTER CASING DIAGRAM (FRONT VIEW)



INSTALLATION

Assembly:

1. Remove Shipping Carton:

Remove the shipping carton from pallet. Ensure that all the components are present (See Packaging List on page 3). The Log set box, bag of embers and accessory package positioned in front of appliance should be set aside until needed.

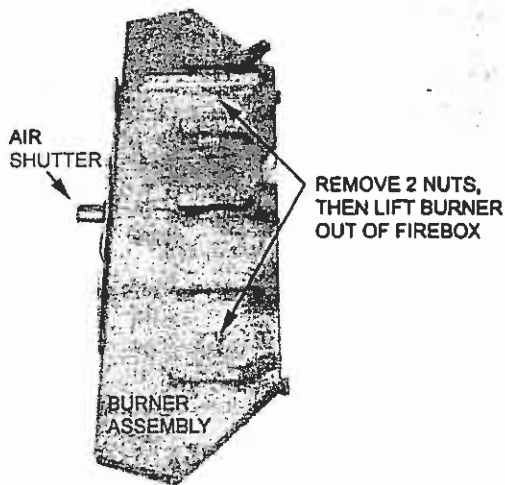
2. Remove Door:

Remove door assembly from insert and set aside (see *Door Operation* for removal instructions, on page 18).

3. Remove Burner:

The burner assembly can be removed from the firebox by removing the 2 nuts as shown in the following picture.

Lift Burner Up and Out of Firebox



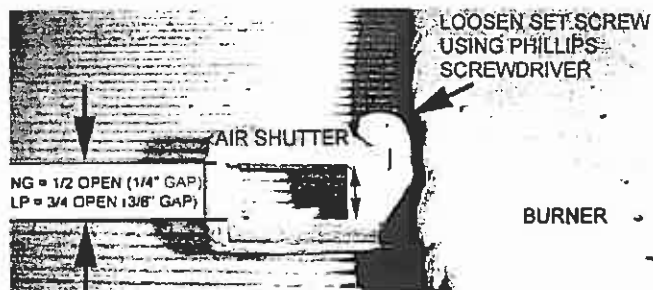
4. Adjust Air Shutter:

Check that the burner air shutter gap is adjusted for the type of fuel used (adjust if necessary). The air shutter opening to be:

Natural Gas – 1/2 open (1/4" gap)

Propane (LP) – 3/4 open (3/8" gap)

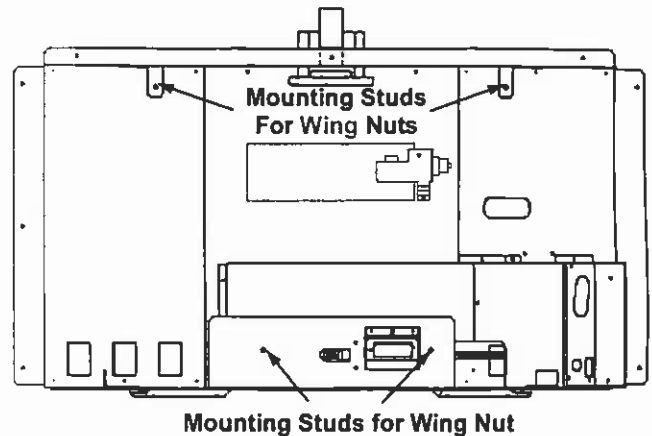
Some adjustment from standard may be necessary for the desired flame characteristics (see *Burner Flame Appearance*, page 21). Adjust gap as shown in following picture.



5. Unbolt Firebox from Casing and Remove:

Remove the four wing nuts that secure the firebox to the top and bottom mounting studs on the outer casing (see following illustration). Pull the firebox forward and out of the outer casing.

Remove The 4 Wing Screws Which
Secure Firebox to Outer Casing
(Front View of Outer Casing)



6. Elevations Higher than 4500' elevation Only Install Derated Burner Orifice:

If this appliance is to be installed at an elevation higher than 4500' (1370m) above sea level, replace the main burner orifice with a smaller one to reduce input (see High Altitude, page 4). A derated orifice can be obtained through your gas supplier or qualified service technician.

7. Propane (LP) Gas Use Only

Install a Natural Gas to Propane Conversion Kit:

This appliance is designed to operate on natural gas, or propane (LP). It is factory set for use with Natural Gas and requires a field conversion for use with Propane (see page 25 for ordering information). The use of other fuels or combination of fuels will degrade the performance of this system and may be dangerous.

8. Unbolt Outer Casing from Pallet

Remove the bolts that secure outer casing to the wooden pallet.

9. Position the Outer Casing inside the Fireplace:

Make sure that the base of the casing is resting on a flat non-combustible surface inside the fireplace. If the fireplace floor is recessed, install and adjust the leveling bolts (provided) as follows:

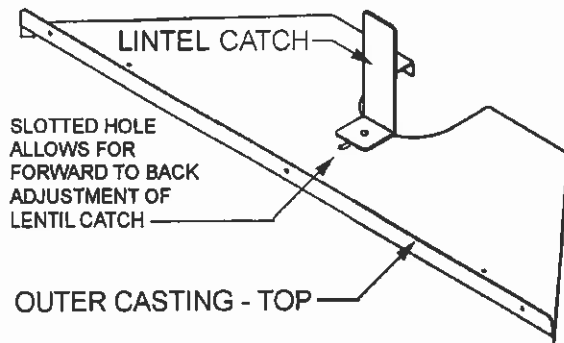
Leveling Bolts - It may be necessary to level the appliance in some installations such as a recessed firebox floor (if the existing fireplace has a firebox floor that is lower than the hearth). If needed, install the 4 leveling bolts (1/4-20 x 3 1/2" long) into the threaded holes at the base of the casing. Adjust bolts until outer casing is level in fireplace.

INSTALLATION

10. Install Lintel Catch:

All installations will not be able to use this stabilizer (installation is recommended, if the height & configuration of the fireplace will allow it). Its' purpose is to keep unit as secure from movement as possible. To install, position the lintel catch onto the top of the outer casing as shown in the following illustration. Loosely thread the screw provided through the slotted hole on ceiling of outer casing into the lintel catch (leave it loose so you can adjust it later).

Thread Screw through Outer Casing Top into Lintel Catch



11. Position Gas Line Inside of Outer Casing

When routing the gas line inside the outer casing, make sure that it remains below the surface of the blower (see *Outer Casing Diagram*, page 10), so that it will not be able to interfere with the firebox.

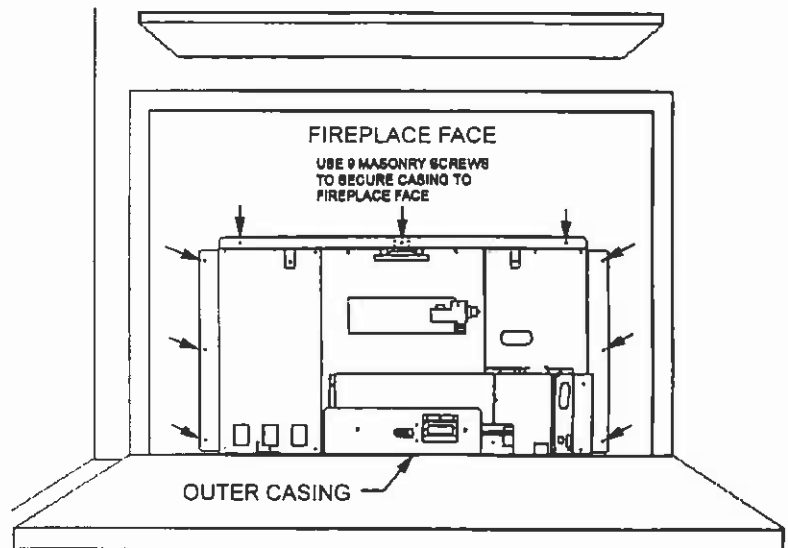
12. Install Liner to Vent Pipe Connector

Attach the vent connector collar to the vertical vent pipe using four sheet metal screws spaced equally around the circumference of the pipe (see *Vent Pipe Connector Connection*, page 8).

13. Secure Outer Casing to Fireplace

After completing all hookups and connections, the outer casing will need to be secured to the fireplace structure. Slide the lintel catch forward and tighten screw to steady the outer casing to the fireplace lintel (ref. Instruction # 10 above). Install 9 masonry screws (not included) to secure the outer casing to the fireplace face (see following illustration).

Use 9 Masonry Screws to Secure Outer Casing to Fireplace Face



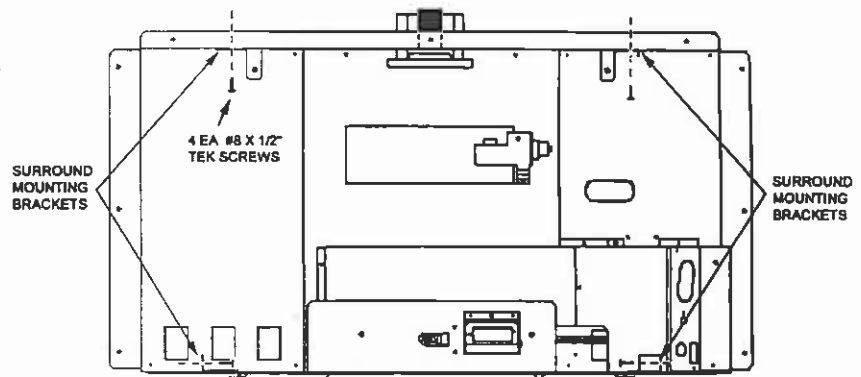
14. Assemble Surround

Assemble surround assembly per instructions provided with surround kit.

15. Secure Surround Assembly to Outer Casing

Position the assembled surround to the front of the outer casing. Position surround assembly on top of the upper surround mounting brackets on outer casing. Position surround sides to the outside of the lower surround mounting brackets. Secure in place in 4 places with the black 1/4" Tek screws (see the following 3 illustrations).

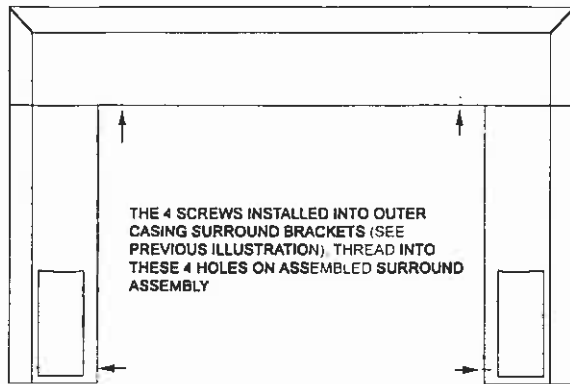
Install Screws into Surround Mounting Brackets Inside the Outer Casing.



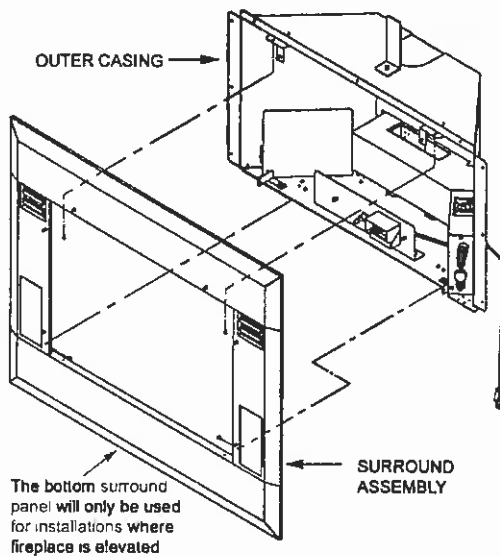
INSTALLATION

15. Continued...

Thread Screws from Outer Casing Brackets Into Holes in Surround



Surround to Outer Casing Assembly Illustration



16. Install Firebox into Outer Casing

Place the firebox into the outer casing keeping the vent pipe above the draft hood. Push the firebox back and align the vent pipe connector so that the outside horizontal flanges are ready to slide underneath the clips at the top of the draft hood. Pull on the handle at the front of the vent pipe while pushing back on the firebox, until the vent connector makes direct contact with the back of the draft hood. Align the mounting studs on the top and bottom of the outer casing with mounting holes in the firebox. Fasten the firebox to the outer casing with four wing nuts (see illustration on page 11, instruction # 5).

17. Reinstall Burner Assembly into Firebox.

Reverse instructions on page 11 (instruction # 3).

18. Install Log Set and Embers:

Install the decorative logs and glowing embers as outlined in the following procedure.

WARNING: If logs are not installed according to the directions in this manual, flame impingement and improper combustion could occur and result in excessive production of carbon monoxide (CO), a colorless, odorless, toxic gas.

This appliance is equipped with a five-piece log set. Carefully install the logs into the firebox as shown in the following illustrations. All logs should fit down onto pins and mounts provided. This will ensure a proper flame and safe combustion.

- Carefully place the largest log in the rear of the firebox as shown in the following illustration.

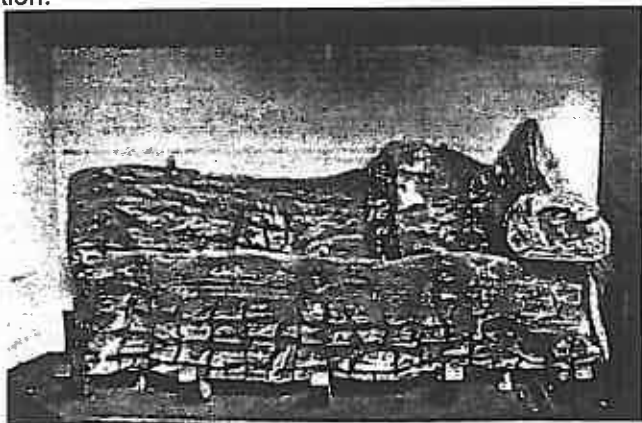


- Install the front log as shown in the following illustration.



INSTALLATION

- c. Install the right top twig as shown in the following illustration.



- d. Install the center top twig as shown in the following illustration.



- e. Install the left top twig and embers as shown in the following illustration.



Glowing Embers

One package of ember material has been included with this gas appliance. You will not need to use the entire bag (additional ember material is provided for your future maintenance needs).

IMPORTANT: The quantity and placement of the ember material can affect stove performance therefore it is very important that it be placed as shown in the following picture.

Proper Placement of Ember Material: Unpackage and divide the fine ember material (mineral wool) into thumbnail sized fluffy pieces. Distribute the pieces over the top of the front burner ports and filling the area in front of and beneath the forward log and running the full length of the log.



19. **Reinstall Door (see page 18)-** Place the door on the firebox and secure to the hinge with two hinge pins. Install the door bracket and mount to the firebox door bracket with two wing nuts. The door has been factory aligned. If additional adjustment is needed, loosen the two nuts on the hinge side of the firebox and realigned the door. Make sure that the wing nuts mounting the door bracket are tight.

INSTALLATION

22. Assemble and Install *Transition Bay Window to Surround Kit* onto Surround Assembly.

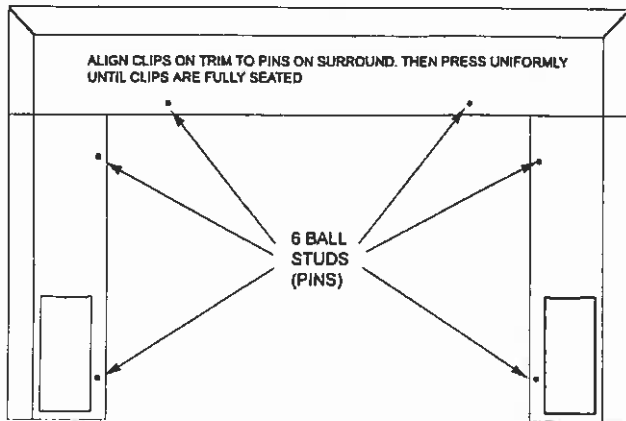
This kit is required for all installations. Contact your dealer to order. Follow assembly instructions provided with kit.

Transition bay window to surround kit
L30 BIFP, CAT. NO. 46L99

IMPORTANT: The following is to be done AFTER the installation checklist has been completed (see page 16).

- Evenly align the clips on the backside of the assembled trim assembly with the ball studs (pins) on the front of assembly surround assembly.
- Press trim assembly onto surround pins (uniformly) until ball studs are fully seated into clips.

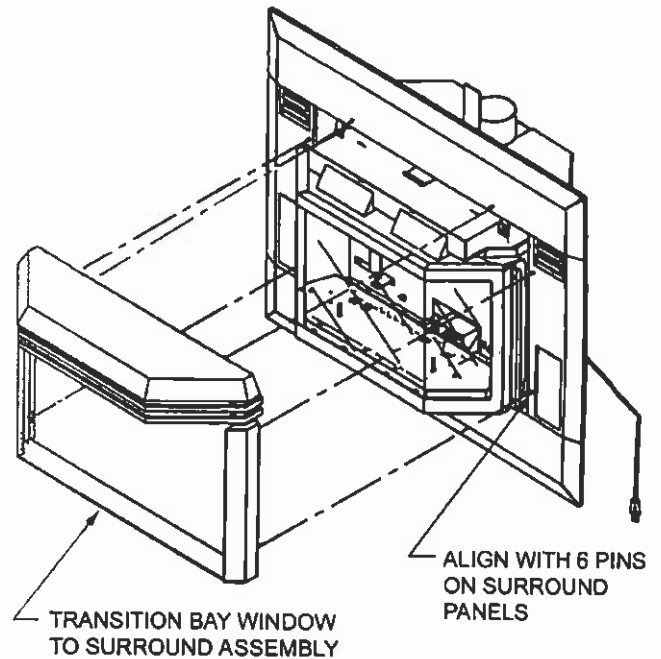
Front View Of Assembled Surround
See Surround Kit Instructions for Assembly



Front View Of Assembled Trim
Align the 6 Clips on Trim Back with Surround Pins



Assembly Diagram



IMPORTANT NOTE: The two gold trim pieces are plated with 24-karat industrial grade gold which require curing to harden the gold. Once the gold is cured it will never tarnish. Prior to burning this appliance, the gold trim should be cleaned thoroughly with a good window cleaning solution and a soft cloth. Do not use any metal polishes or abrasives to clean the gold surface or clean when unit is hot. Any oils or fingerprints left on the gold could become permanent blemishes if the insert is burned prior to their removal. After the first few fires, the gold will cure.

INSTALLATION

INSTALLATION CHECK LIST

Read and understand these instructions before using appliance. Go through this installation checklist:

- ❑ Ensure that the log set is properly installed. Use caution when handling the logs. See pages 13 and 14.
- ❑ Ensure door frame assembly is properly installed. See *Door Assembly* on page 18.

WARNING: Do not operate appliance with the glass front removed, cracked or broken. Replacement of the glass should be done by a qualified technician.

- ❑ Ensure venting termination cap is unobstructed.
- ❑ Check to see that wiring is correct and is enclosed inside the insert cabinet (See page 22).
- ❑ Verify that the gas line has been purged of air.
- ❑ Test all connections for leaks (factory and field) with a leak detector or soapy water solution. If you smell gas, do not attempt to light this appliance. Follow safety instructions on the front cover of this manual.
- ❑ Ensure burner air shutter is adjusted to proper gap for fuel type being used (see *page 11, Adjust Air Shutter*).
- ❑ Light the appliance following the instructions on page 16 (*Care and Operation*). Relight the main burner in both the HI, and LO positions, and verify proper burner ignition and operation.

NOTE: Upon the initial firing of you new gas insert, you will notice a strong odor. This will last up to two hours. It is recommended to open the windows to allow fresh air to circulate into the room.

WARNING: If the pilot does not light after 1 minute, wait at least 5 minutes for gas to clear before attempting again.

- ❑ With burner lit, check to make sure that the inlet gas and manifold pressures are correct (see *Gas Pressure*, page 4 & 9). Verify that the pilot and main burner ignition and operation are correct.

VENT OPERATION TEST AND SPILL SWITCH

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.
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, burning 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 (the opening below the door is where the combustion air draws in). 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 shut the burner off if the flue gas is not properly vented at an adequate rate or if the vent pipe is not properly connected to the appliance. This switch is activated by heat (activation disconnects burner operation). The spill switch will automatically reset itself after it cools. A primary symptom of flue gas spillage is unexplained burner outages.

Other symptoms of flue gas spillage may include: condensation on walls and windows and/or noticeable odor. 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.

CARE AND OPERATION

FOR YOUR SAFETY READ BEFORE LIGHTING

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

A. This appliance has a pilot which must be lit. When lighting the pilot, follow these instructions exactly.

B. **BEFORE LIGHTING** smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

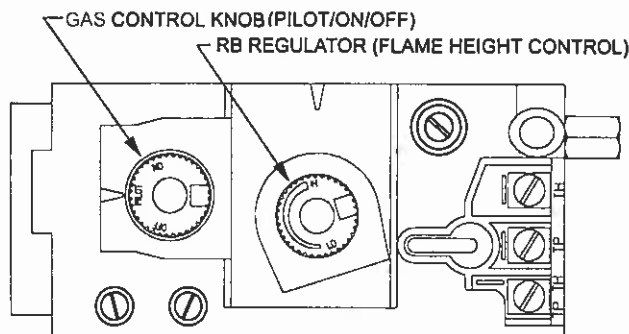
WHAT TO DO IF YOU SMELL GAS:

- Do not try to light any appliance.
- Do not touch any electric switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

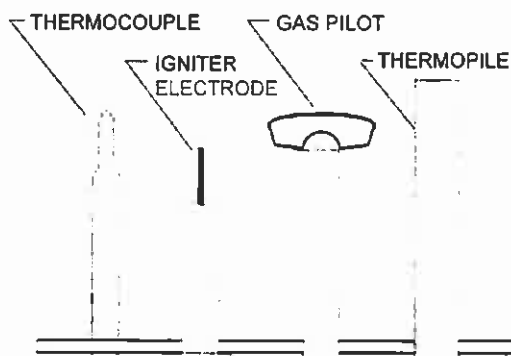
C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.

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

Gas Control Valve




Pilot Assembly





LIGHTING AND SHUTDOWN INSTRUCTIONS


1. STOP! Read the safety information on this page or on label (on appliance).
2. Turn off all electrical power to the appliance (unplug blower power cord). Make sure the burner ON/OFF switch is in the OFF position.
3. To gain access to the gas controls, swing the control access door open. The control access door is located directly under the window.

4. Push in gas control knob slightly and turn clockwise  to "OFF."

NOTE: Knob cannot be turned from "PILOT" to "OFF" unless knob is pushed in slightly. Do not force.

5. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above on this label. If you don't smell gas, go to the next step.
6. Visually locate the pilot located in the center of the firebox beneath the rear ceramic log.
7. Turn knob on gas control counterclockwise  to "PILOT."
8. This appliance contains a spark ignition system (piezo igniter), which is used to light the pilot. Push in the gas control knob all the way and hold it in. Immediately press the button on the piezo igniter located to the left of the gas control knob. The spark produced by the piezo igniter should light the pilot. Continue to hold the control knob in for about one (1) minute after the pilot is lit. Release the gas control knob and it will pop back up. Pilot should remain lit.
 - If it goes out, repeat steps 4 through 8.
 - If the knob does not pop up when released, stop and immediately call your service technician or gas supplier.
 - If the pilot will not stay lit after 3 or 4 tries, turn the gas control knob to "OFF" and call your service technician or gas supplier.
9. Turn gas control counterclockwise  to "ON." Use rocker switch, located either on the control panel or the exterior side panel, to operate main burner. Adjust variable pressure dial (RB Regulator / Flame Height Control) to set burner flame to desired heat output.
10. Swing the control access door closed.
11. Turn on electrical power to the appliance (plug in blower power cord. See page 19, *Circulation Blower Operation*.)

TO TURN OFF GAS TO THE APPLIANCE

1. Turn off all electric power to the appliance if service is to be performed.
2. To gain access to the gas controls, swing the control access door open. The control access door is located directly under the window.
3. Push in gas control knob slightly and turn clockwise  to "OFF."

NOTE: Knob cannot be turned from "PILOT" to "OFF" unless knob is pushed in slightly. Do not force.
4. Swing the control access door closed.

CARE AND OPERATION

DOOR OPERATION

The glass door is mounted on hinges at the left side of the firebox and is secured in the closed position by two draw latches mounted on the right side of the firebox. The latch tension is preset at the factory. Over time, adjustment of the latch tension may be necessary to maintain a tight door seal. This adjustment can be made by spinning the latching rod in the rod guide. Care should be exercised to not adjust the tension too high.

Caution: Never operate the appliance with the glass door open.

If glass door removal is required for replacement or maintenance, the door can be removed. Do not attempt to remove or replace broken glass in the door assembly. Contact your Lennox dealer for glass replacement.

To Remove Door:

1. Remove the glass door assembly from appliance as follows:
 - a. Remove the two wing nuts on the backside of door retainer bracket (see following picture).



- b. Remove the door retainer bracket by pulling it forward and off.



- c. Rotate door to the full open position (see following picture). Lift the door up and off the hinge pins. Set door aside.



2. To reinstall door, reverse steps 1a through 1c.

"BREAK-IN" PERIOD




The finish on this appliance is a high temperature paint that requires time and temperature to completely cure. The curing process will take 2 or 3 burns (heat up and cool down periods). We recommend that you ventilate the house during the initial burns. The paint emits non-toxic odors during this process.

KEEP YOUR HOUSE WELL VENTILATED DURING THE CURING PROCESS TO PREVENT ACTIVATION OF YOUR HOME SMOKE DETECTOR.

Do not turn on a blower during the break-in period. Do not place anything on the insert surface until the paint is completely cured. Do not attempt to repaint the insert until the paint is completely cured. If the surface later becomes stained or marred, it may be lightly sanded and touched up with spray (See *Small Area Paint Touch-Up*, page 20). Paint is available at your local authorized Lennox Hearth Products dealer. Never attempt to paint a hot insert.

CARE AND OPERATION

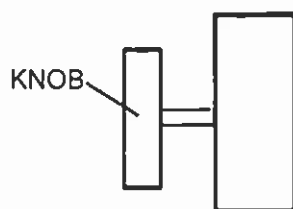
CIRCULATION BLOWER OPERATION

The speed of the circulation blower is controlled using the speed control rheostat (see following illustration) located behind the access door on right surround panel. The blower system is designed with a variable speed control allowing an infinite range of blower settings to meet the customer's needs. With the rotary switch turned fully CCW , the blower is off. Turning the switch CW  will activate the blower at its maximum speed. Further rotation of the switch in the CW direction will reduce the speed of the blower. At approximately 270° of CW  rotation, the switch provides a minimum setting for blower speed.

Thermostatic feature: With the control switch in any "ON" position, the circulation blower is designed to automatically begin operation approximately 12 minutes after lighting the main burner. The blower will turn off approximately 15 minutes after the main burner is shut-off.

VARIABLE SPEED CONTROL FOR AIR CIRCULATION BLOWER

SIDE VIEW SHOWN



MAINTENANCE

Always Turn Off Gas Control Valve Before Cleaning. Annual Maintenance Should Only Be Performed By A Qualified Service Technician:

LOG SET

Removing & Cleaning Logs - Carefully remove the logs (removing top logs, then lifting front log out, then rear log). Use care when handling the fiber logs, as they become quite fragile after curing. Use a small soft-bristled brush (e.g., a nylon paintbrush) to remove soot, dust or debris that may have accumulated on the burner or log set. Remove the logs and burner, and clean them outside the home in a location with plenty of fresh air ventilation. Avoid breathing fine particulates of dust that may be generated. See pages 13 and 14, *Installing Log Set* for instructions on reinstalling logs.

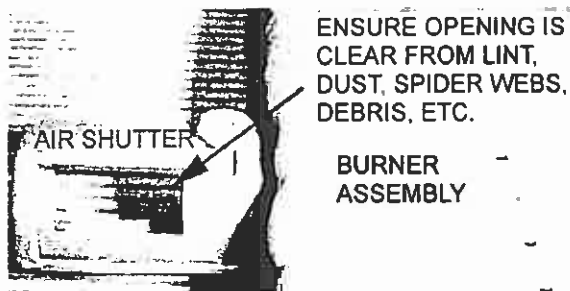
Replacing Logs - If logs become damaged by accident or improper handling and need replacement, use only the proper replacement logs from manufacturer, which can be purchased from your local dealer. See page 24.

CLEANING BURNER

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

CLEANING VALVE / AIR VENTURI

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



INSPECT WIRING / CAUTIONS:

- 1) Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation.
- 2) Verify proper operation after servicing.
- 3) 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 kits)

VENTING SYSTEM

A periodic examination of the venting system must be performed to ensure that the flow of combustion air is not obstructed. We recommend that you have your gas appliance checked yearly by your independent Lennox dealer.

CLEAN EXTERNAL SURFACES

External surfaces should be kept clean and dust removed from air inlets to the appliance. The flow of combustion and ventilation air must not be obstructed. The appliance must be kept clear and free from combustible materials, gasoline and other flammable vapors and liquids.

SMALL AREA PAINT TOUCH-UP

The insert body is painted with a quality high-temperature stove paint. Use only model TSPK-C Stove Paint, Catalog # 19L92. Do not touch-up this appliance with any other paint.

Using one small piece of 320 grit sand paper and lightly sand the blemish so that the edges are "feathered" or smooth to the touch between the painted and bare surfaces. Do not let the sand paper gum up with paint, as this will cause scratches on the metal surface. If there are any scratches, use 600 grit sandpaper instead. Mask off surfaces you do not want painted. Paint lightly over the bare surface first as this will act as an undercoat. Then paint over a larger area in smooth even strokes to blend.

See *Break-In Period* on page 18 for information on curing the paint.

CLEANING GLASS

The window on the gas appliance is made from a clear ceramic material and may be cleaned when cool with any non-abrasive product designed for use on glass windows. **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, condensation may fog the glass. This condensation and fog will disappear in a few minutes.

CLEANING BLOWER INTAKE

The blower air intake requires cleaning at least once a year to remove lint, dust, etc. If there are pets in the dwelling, the intake should be cleaned at least twice a year.

MAINTENANCE

Always Turn Off Gas Control Valve Before Cleaning. Annual Maintenance Should Only Be Performed By A Qualified Service Technician:

PERIODIC CHECK OF PILOT AND BURNER FLAMES

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.

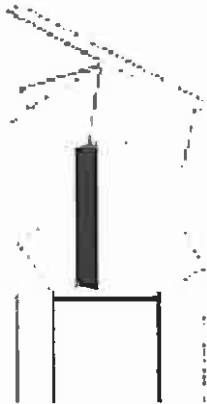
Cycle unit a minimum of 2 times

- 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 this page.
- Pilot: Ensure pilot flame appearance does not vary greatly from diagram shown below.

PILOT FLAME APPEARANCE

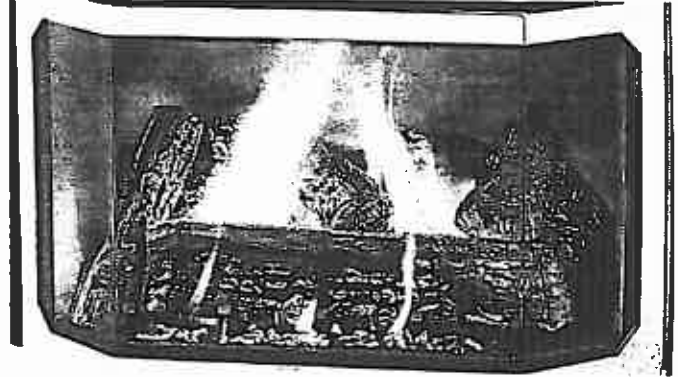
A proper pilot flame should consist of torch-like flame issuing from the pilot hood as shown in illustration below.

Proper Pilot Appearance



BURNER FLAME APPEARANCE

A periodic visual check of the pilot and burner flames should be performed. If either the pilot or burner flame do not show proper appearance or behavior, as outlined here, consult a qualified gas appliance technician.



A proper burner flame is shown above. The burner flame should have the following characteristics after initial start-up (let appliance burn 15 to 20 minutes prior to accessing flame appearance):

- Excessive impingement (contact of flame with logs) should not occur.
- Rear burner flames should have yellowish tips; no soot should form at burner flame tips.
- Flames should not raise off of burner (no "lifting" of flame).

Air Shutter Adjustment

The flame can be adjusted to give the proper flame appearance and to prevent sooting on the window or logs by adjusting the position of the primary air shutter (located at the rear center inlet to the burner). The air shutter should be positioned approximately 1/2 open for Natural Gas and approximately 3/4 open for LP Gas. . See page 11, *Burner Air Shutter*.

NOTE: During periods of high natural gas demand, the gas supplier may add "make-up gases" to the pipeline. This addition will change the composition of the supply gas, and may cause a change in burner flame appearance. You may also notice soot formation on the logs and viewing windows. Check with your gas supplier if you suspect a change in the composition of your gas supply.

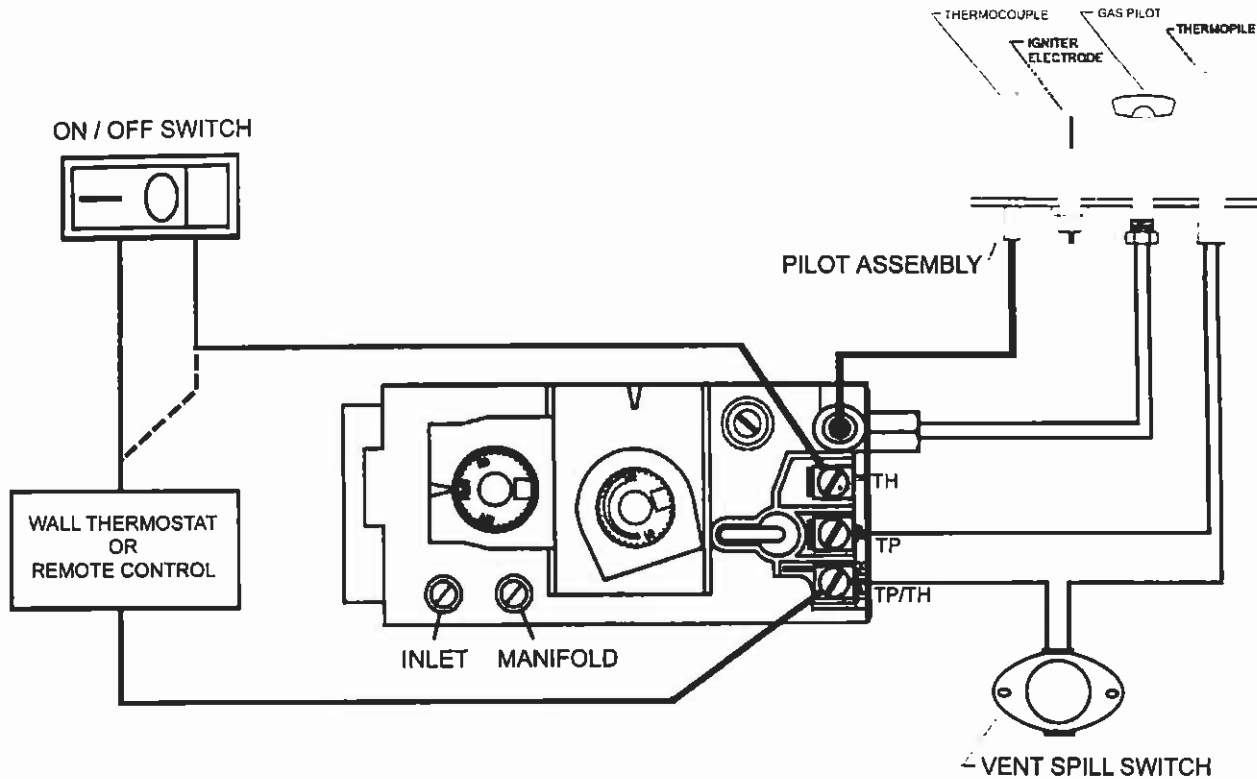
WIRING DIAGRAMS

GAS CONTROL AND SAFETY SYSTEM WIRING DIAGRAM

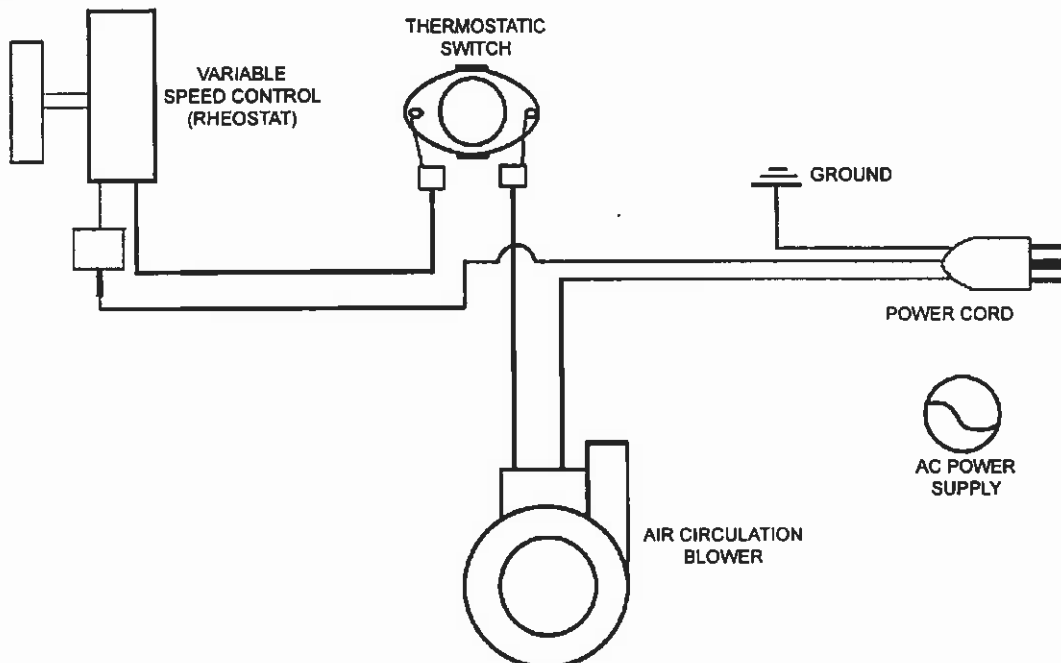
CAUTION: Label all wiring prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

The gas control wiring diagram shown here should be used by service technicians for guidance when troubleshooting problems with the pilot safety (millivolt) system or burner remote control system or when locating system components for repair / replacement. Note: If replacement of any of the original wire is necessary, use 105°C thermoplastic wiring.

GAS CONTROL WIRING DIAGRAM



CIRCULATING BLOWER WIRING DIAGRAM



TROUBLESHOOTING *Qualified Technicians Only*

PROBLEM	CAUSE(S)	SOLUTIONS
1) Pilot will not light, and Piezo Igniter does not produce a heavy blue spark.	a. Electrode wire (at Piezo Igniter) not pushed completely on. b. Piezo igniter is defective	<ul style="list-style-type: none"> • Make sure connections are solid. • Replace piezo igniter.
2) Pilot will not light, but Piezo Igniter produces a heavy blue spark.	a. Incorrect lighting procedure. b. No gas to appliance due to shut valves or disconnected gas lines.	<ul style="list-style-type: none"> • Carefully follow the lighting / operating instructions found in the appliance of this owner's manual. • Check for multiple gas shut-offs; check gas supply lines.
3) Pilot will not stay lit.	a. Thermocouple is not firmly connected to control valve. b. Pilot flame is not directed to top of thermocouple. c. Thermocouple is defective. Make sure connection is solid.	<ul style="list-style-type: none"> • Ensure thermocouple is fully inserted into pilot assembly. • Replace thermocouple.
4) Pilot flame stays lit, but main burner will not light.	a. Burner control switch (on control panel) is in "OFF" position; or thermostat (if installed) is turned off or temperature setting is too low. b. Electrical wiring is damaged or poorly connected c. One of the following components may be defective: burner control switch, thermostat, vent spill switch, or thermopile.	<ul style="list-style-type: none"> • Position the burner control switch to "ON"; or adjust the thermostat. Refer to manufacturer's instructions for thermostat. • Refer to Control and Safety Wiring Diagram (page 20) and check electrical connections. • Refer to Control and Safety Systems Wiring Diagram (page 20). Electrically bypass components one at a time and replace defective item.
5) Main burner stays lit for up to 10 minutes and then shuts off, pilot flame remains lit.	a. Vent is blocked; flue gas is "spilling", which activates the spill switch and shuts down the appliance. b. The house is negatively pressurized resulting in spill switch activation.	<ul style="list-style-type: none"> • Examine venting system for blockage. Remove any blockage. • Open a window to see if the problem is corrected.
6) Smell of gas	a. Loose fittings may be allowing gas to leak out	<ul style="list-style-type: none"> • Check all joints for leakage: pilot assembly, gas supply system, main burner assembly, pilot and burner adjustment screws. Use a proper leak check solution. WARNING: Never use an open flame to check for leaks.
7) A thin coating of black soot forms on the window. NOTE: See page 20, <i>Cleaning Glass</i> .	a. Burner primary air inlet is restricted or blocked. b. Flames make contact with logs or other surfaces. c. Improper venting.	<ul style="list-style-type: none"> • Be sure all openings (fresh air inlets) in insert are free from dust and debris. Re-check these areas periodically. • Make sure ceramic logs are in their correct positions. • Check for flue blockage, disconnected flue, improper installation. Make appropriate corrections.
8) A white coating forms on windows, logs, and / or inside walls of firebox.	a. Residues / impurities being burned off.	<ul style="list-style-type: none"> • Follow cleaning guidelines outlined in the MAINTENANCE section of this manual.
9) Circulation blower makes a humming sound, but there is no circulation air.	a. Impeller blades in circulation blower are dirty. b. Circulation blower is defective.	<ul style="list-style-type: none"> • Disconnect electrical power to circulation blower, access blower and clean impeller blades as outlined in the MAINTENANCE section of this manual. • Replace blower.

REFERENCE INFORMATION FOR QUALIFIED TECHNICIAN:

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.

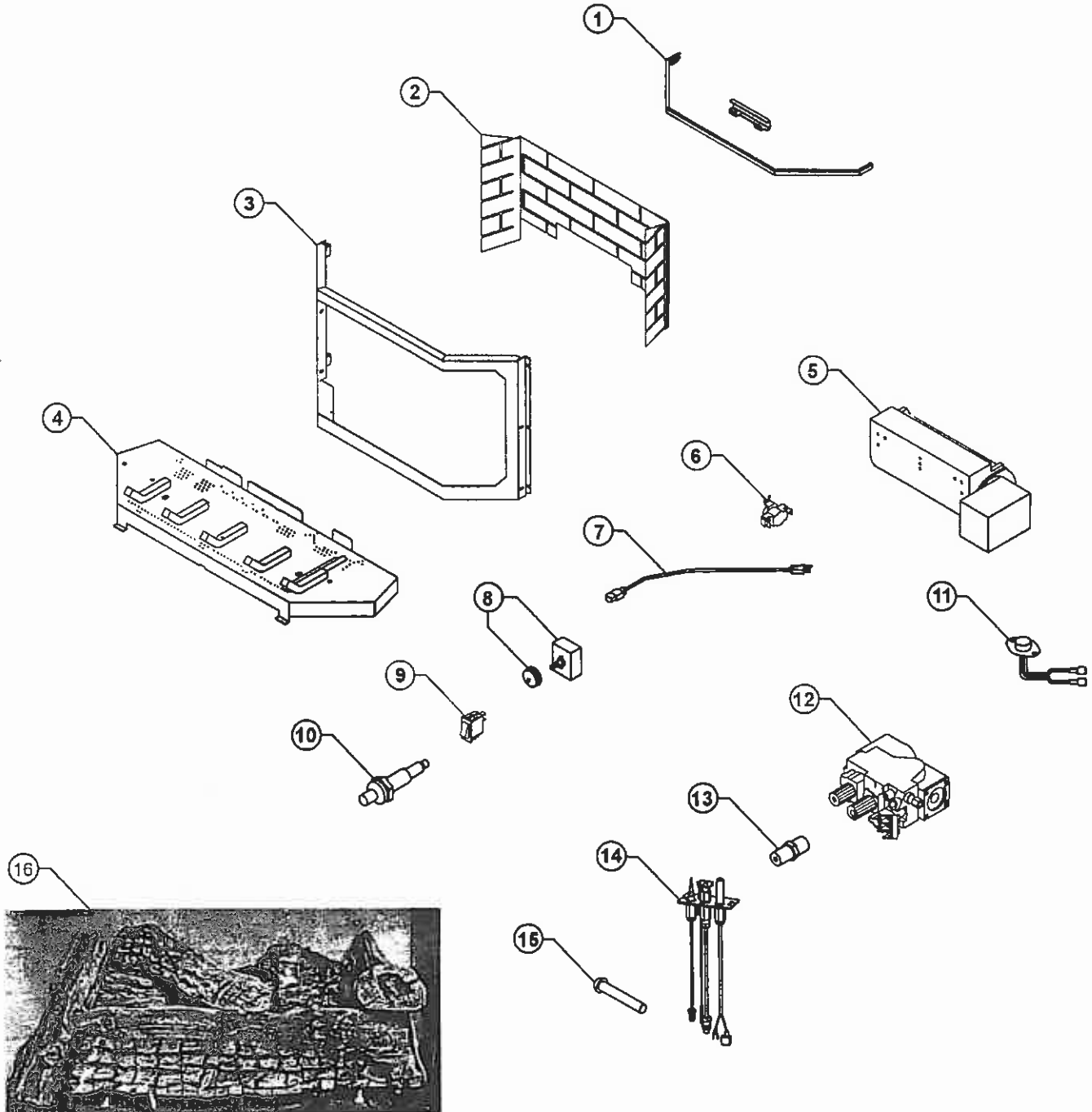
Drop out rate

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

REPLACEMENT PARTS - Model L30 BI

Item #	Description	Catalog #
1	Upper Trim Assembly	52L34
2	Brickaded Interior Kit (BRK-L30)	14M06
3	Window Frame, Gold	52L30
4	Burner Assembly	17M61
5	Blower, Air Circulating	52L19
6	Thermal Fan Switch	52L12
7	Power Cord (Blower)	52L17
8	Rheostat, (Speed Control for Blower)	52L03
9	On / Off Switch, Burner	52L13

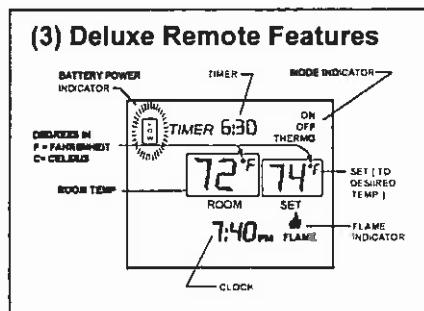
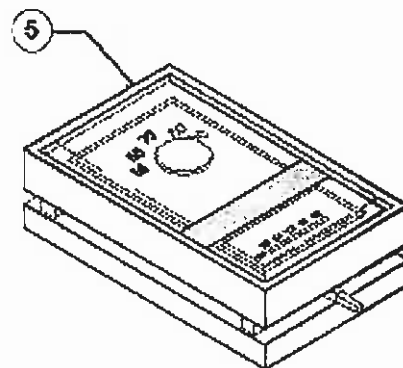
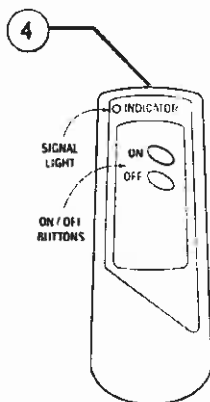
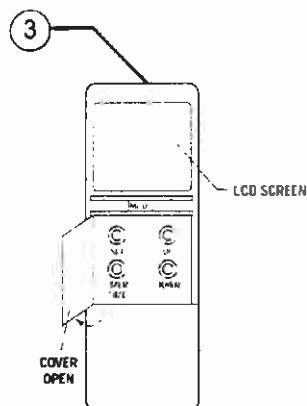
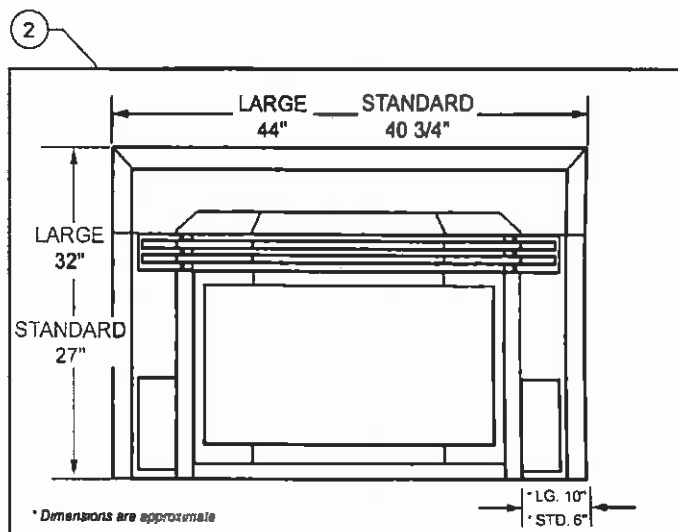
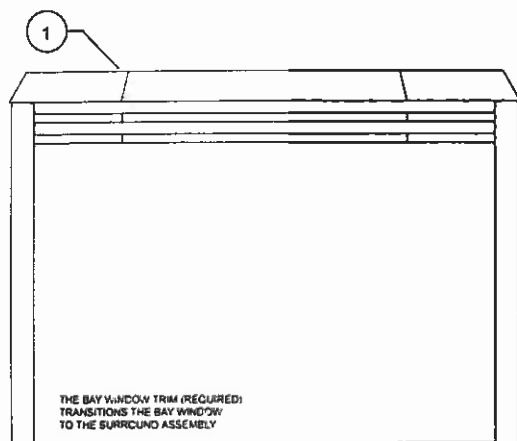
Item #	Description	Catalog #
10	Igniter, Push Button Piezo	52L11
11	Spill Switch	52L18
12	Control Valve NG	52L05
13	(0-4,500') Orifice, #31, NG	52L27
13	(0-4,500') Orifice, #50, LPG	52L08
13	(4500') Orifice, #32, NG	52L06
13	(4500') Orifice, #51, LPG	52L09
14	Pilot Assembly NG	52L15
15	Hinge Pin Set	52L16
16	Log Set	17M59
17	Wire Set (All Wires)	52L28



OPTIONAL ACCESSORIES

Item #	Description	Catalog # (Model)
1	Transition Bay Window to Surround	46L99 L30 BIFP
2	Surround, 6" Standard Charcoal	46L97 L30 BI6
2	Surround, 10" Large Charcoal	46L98 L30 BI10
3	Deluxe Remote Control (Thermostatically controlled)	98K99 (RC-STAT)

Item #	Description	Catalog # (Model)
4	Remote Control (Standard On / Off)	26N04 (RC)
5	Wall Thermostat Kit	89L36 (WTK)
6	NG to LP Conversion	52L22 (LPCK2030)
7	Touch-up Spray Paint Kit, Charcoal	19L92 (TSPK-C)



SPECIFICATIONS: Model L30 BI

Approx. Sq. Ft.

Heating Capacity 1500 sq. ft.

Flue Size 4" / B-Vent

Height Overall
w/Standard Surround – 27"
w/Large Surround – 32"

Height to Flue
Outlet 22"

Width Overall
w/Standard Surround – 40 3/4"
w/Large Surround – 44"

Depth Overall 20 1/4"

Fuel
Natural Gas (standard)
(or) LP Gas (convertible).
Gas inlet 3/8" NPT-Male / Flex Line
(or) remove flex, 3/8" NPT-Female Flare.

Performance
Features
Variable Flame Control.
High Efficiency Heat Exchanger.
Natural Convection & Radiant Heat.
Standing Pilot / Operates During Power
Outages. Remote Control & Wall
Thermostat Capable.

Technical
Features
SIT 820 Nova Combination Gas Control
Valve, Millivolt . Safety Shut
Down Sensor (Spill Switch).
Pan Burner with Tuned Ports.
Radiant & Fan Assisted Convection
Heat

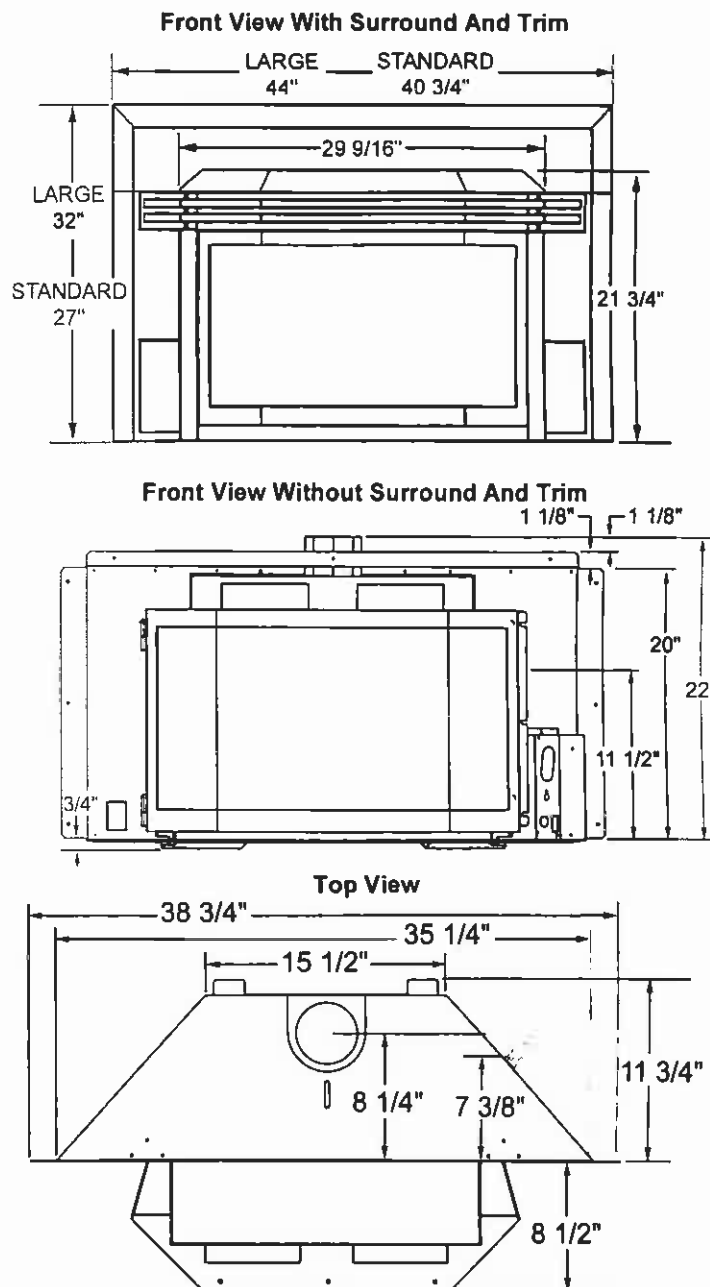
Safety Test
Tested and certified by CSA to ANSI
standards. Z21.88 – (1998) • CSA 2.33 -
(1998) Vented Gas Fireplace Heater.

Heat Input
24,000 to 37,000 BTU's (Nat. Gas)
25,000 to 35,000 BTU's (Propane)

Ship Weight 150 lb.'s

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

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



SPECIFICATIONS				
GAS TYPE	NATURAL GAS	PROPANE (LP)	CLEARANCES TO COMBUSTIBLES	
Orifice Size	#31 -.120	#50-.070"	Side Wall Minimum	10 in. / 254 mm
Minimum Supply Pressure	4.5" WC	11" WC	Mantel Height	
Maximum Supply Pressure	10.5" WC	13.0" WC	(from insert top to mantel).	18 in. / 457 mm
HIGH SETTING			Ceiling Height Minimum	In. / mm
Manifold Pressure	3.5" WC	10.0" WC	Floor Protection – An approved fireplace hearth/ hearth extension must extend 18" to the front of the insert if the appliance is not elevated 7" above com- bustible flooring.	
Input BTU / HR	37,000	35,000		
LOW SETTING				
Manifold Pressure	1.7" WC	6.3" WC		
Input BTU / HR	24,000	25,000		
Altitude - U.S.A. & Canada 0-4,500 ft. (0-1370m), no derating is required (with the orifice, manifold pressure and input ratings shown above). Altitudes above 4,500 ft. /1370 m, reorifice per manufacturer instructions and consult local codes.				
This Appliance is equipped at the factory for the use with Natural Gas. Appliances using propane must be field converted using LP Conversion Kit (Cat. No. 52L22).				

Model Name: L30 BI
 Vented Gas Fireplace Heater.
 Foyer au gaz à évacuation.



Serial Number
 No. de Serie

L30 BI

**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: ES82

Tested to: ANSI Z21.88-(1998)
 CSA 2.33 (1998) Vented Gas Fireplace Heater

Natural Gas Model: L30 BI
 Input (0-4500") 37,000 Btu/hr
 Output 26,640 Btu/hr
 Minimum Input 24,000 Btu/hr
 Orifice 31 dms
 Manifold Pressure 3.5" w.c./c.e.
 Min. Supply Pressure 4.5" w.c./c.e.

Natural Gaz Modele: L30 BI
 Ailmentation (0-1370m)
 Production
 Pulssance minimum
 Grandeur de l'injecteur
 Pression a la tubular d'alimentation
 Pression d'alimentation minimum

Propane Gas Model: L30 BI
 Input (0-4500") 35,000 Btu/hr
 Output 25,900 Btu/hr
 Minimum Input 25,000 Btu/hr
 Orifice 50 dms
 Manifold Pressure 10" w.c./c.e.
 Min. Supply Pressure 11" w.c./c.e.

Propane Gaz Modele: L30 BI
 Ailmentation (0-1370m)
 Production
 Pulssance minimum
 Grandeur de l'injecteur
 Pression a la tubular d'alimentation
 Pression d'alimentation minimum

Electrical Rating 115 V; 60 HZ;
 less than 12 A.
 Power Comsumption 100W

Alimentation Electrique
 Consommation d' énergie

Minimum Clearances to Combustibles
 Measured to main body
 Sidewall 10"/254mm
 Mantel 18"/457mm
 Ceiling 24"/610mm
 Floor 7"/178mm

Degagements Minimum Des Materiaux
 Combustible mesures au corps principal
 Mur Lateral
 Manteau
 Plafond
 Sol

18" floor protection is required in front of appliance if unit is not elevated 7" above combustible flooring.

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 etre utilisée pour passer d'un combustible a l'autre.

LENNOX[®]

HEARTH PRODUCTS

1110 West Taft Avenue

Orange, CA 92865

