

Installation/Owner's Manual

Appliance Setup, Care and Operation

INSTALLER: Leave this manual with party responsible for use and operation.

OWNER: Retain this manual for future reference.

Contact your dealer with questions regarding installation, operation or service.

NOTICE: DO NOT discard this manual!



Natural Blaze Series

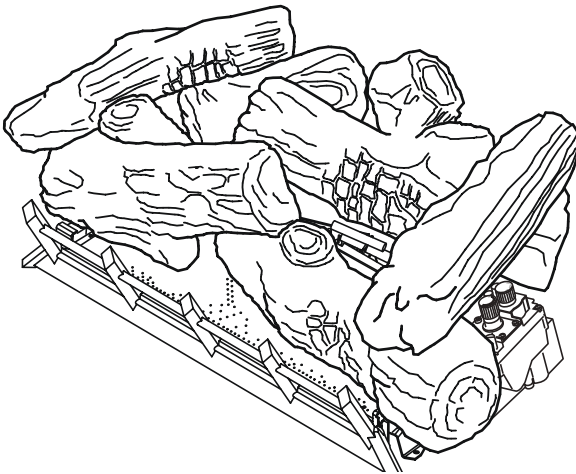
Models:

NB18NV/PV

NB24NV/PV

NB18NIF/PIF

NB24NIF/PIF



▲ WARNING:

FIRE OR EXPLOSION HAZARD

Failure to follow safety warnings exactly could result in serious injury, death, or property damage.

- **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.
 - Leave the building immediately.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - If you cannot reach your gas supplier, call the fire department.
- Installation and service must be performed by a qualified installer, service agency, or the gas supplier.

In the Commonwealth of Massachusetts installation must be performed by a licensed plumber or gas fitter.

See appliance installation manual for additional Commonwealth of Massachusetts requirements.

- **DO NOT** install this unit in a bedroom or bathroom.

▲ Safety Alert Key:

- **DANGER!** Indicates a hazardous situation which, if not avoided will result in death or serious injury.
- **WARNING!** Indicates a hazardous situation which, if not avoided could result in death or serious injury.
- **CAUTION!** Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
- **NOTICE:** Used to address practices not related to personal injury.

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NOTE: Monessen vent free gas logs are hand painted for ultimate beauty and realism. As a result, some variation in color and shading will occur from set to set. This is intentional and designed to make each product unique, as found in nature.

Installation Standard Work Checklist

ATTENTION INSTALLER: *Follow this Standard Work Checklist*

This standard work checklist is to be used by the installer in conjunction with, not instead of, the instructions contained in this installation manual.

Customer: _____
Lot/Address: _____

Date Installed: _____
Location of Fireplace: _____

Installer: _____

Model (circle one): NB18NV, NB18PV, NB18NIF, NB18PIF
NB24NV, NB24PV, NB24NIF, NB24PIF

Dealer/Distributor Phone # _____

Serial #: _____



WARNING! Risk of Fire or Explosion! Failure to install appliance according to these instructions could lead to a fire or explosion.

Gas Log Install Sections 2 and 5

Verified that the chimney has been cleaned. (pg. 13)
Verified clearances to combustibles.
Gas Logs are leveled and secured.
See page 8 for adequate provisions for combustion and ventilation
air have been verified.

YES

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☐
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IF NO, WHY?

Gas Section 4

Proper appliance for fuel type.
Leak check performed and inlet pressure verified.
Verified proper air shutter setting for installation type.

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☐

Electrical Section 5

Switch wires properly installed.

☐
☐

Embers & Logs Section 6

All packaging and protective materials removed (inside & outside of appliance).
Embers and logs installed correctly.
Accessories installed properly.

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☐

Finishing Section 3

Verified all clearances meet installation manual requirements.
Mantels and wall projections comply with installation manual requirements.

☐
☐

Manual bag and all of its contents are removed and the log set
given to party responsible for use and operation.
Started log set and verified no gas leaks exist.

☐
☐

Hearth & Home Technologies recommends the following:

- Photographing the installation and copying this checklist for your file.
- That this checklist remain visible at all times on the appliance until the installation is complete.

Comments: Further description of the issues, who is responsible (Installer/ Builder/ Other Trades, etc) and corrective action needed _____

Comments Communicated to party responsible _____ by _____ on _____
(Builder / Gen. Contractor/) (Installer) (Date)

➔ = Contains updated information.

1 Product Specific and Important Safety Information

A. Appliance Certification

MODEL: NB18NV/PV, NB24NV/PV, NB18NIF/PIF

NB24NIF/PIF

LABORATORY: CSA

TYPE: Unvented Room Heater

STANDARD: ANSI Z21.11.2-2016 (Unvented Heaters)

ANSI Z21.60-2017-CSA 2.26-2017 (Decorative Gas Appliances for Installation in Solid-Fuel Burning Fireplaces)

This product is listed to ANSI standards for "Unvented Room Heaters" and applicable sections of "Gas Burning Heating Appliances for Manufactured Homes" and "Gas Fired Appliances for Use at High Altitude."

NOTICE: This installation must conform with local codes. In the absence of local codes you must comply with the National Fuel Gas Code, ANSI Z223.1-latest edition in the U.S.A.

NOT INTENDED FOR USE AS A PRIMARY HEAT SOURCE.

This appliance is tested and approved as either supplemental room heater or as a decorative appliance. It should not be factored as primary heat in residential heating calculations.

B. BTU Specifications

Models		Maximum Input BTU/h	Minimum Input BTU/h	Orifice
NB18NV	(0-2000 FT)	28,000	19,000	#38
NB18PV	(0-2000 FT)	27,000	22,000	#52
NB24NV	(0-2000 FT)	37,000	25,000	3.00 mm
NB24PV	(0-2000 FT)	36,000	28,000	#49
NB18NIF	(0-2000 FT)	28,000	19,000	#38
NB18PIF	(0-2000 FT)	27,000	22,000	#52
NB24NIF	(0-2000 FT)	37,000	25,000	3.00 mm
NB24PIF	(0-2000 FT)	36,000	28,000	#49

NOTE: For LP models an external regulator is required to reduce supply pressure to a maximum of 13" w.c.

C. Gas Pressures

	NATURAL	PROPANE (LP)
Inlet Minimum	5.0" w.c.	11.0" w.c.
Inlet Maximum	10.5" w.c.	13.0" w.c.
Gas Valve Manifold Pressure Setting	3.5" w.c.	10" w.c.
Pilot Regulator	3.5" w.c.	—

NATURAL GAS: An external regulator is required to reduce supply pressure to a maximum of 10½" w.c. on natural gas systems operating at higher pressure.

PROPANE/LPG: An external regulator is required to reduce supply pressure to a maximum of 13" w.c.

Pilot/ODS

The gas log heater is fitted with a specially designed safety pilot (ODS assembly) which senses the amount of oxygen available in the room and shuts the gas log heater off if the oxygen level begins to drop below a satisfactory level. The pilot can only be relit when adequate fresh air is available.

D. High Altitude Installations

NOTICE: If the heating value of the gas has been reduced, these rules do not apply. Check with your local gas utility or authorities having jurisdiction.

When installing above 2000 feet elevation: Reduce input rate 4% for each 1000 feet above sea level.

Check with your local gas utility to determine proper orifice size.

E. Non-Combustible Materials Specification

Material which will not ignite and burn. Such materials are those consisting entirely of steel, iron, brick, tile, concrete, slate, glass or plasters, or any combination thereof.

Materials that are reported as passing **ASTM E 136, Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 °C** shall be considered non-combustible materials.


2 Getting Started

A. Design and Installation Considerations


Installation MUST comply with local, regional, state and national codes and regulations. Consult insurance carrier, local building inspector, fire officials or authorities having jurisdiction over restrictions, installation inspection and permits.

Before installing, determine the following:

- Where burner assembly and log set are to be installed.
- Gas supply piping.
- Whether optional accessories—devices such as a wall switch or remote control—are desired.
- Approved wood burning masonry fireplace or vent-free fireplace.



Installation and service of this appliance should be performed by qualified personnel. Hearth & Home Technologies recommends HHT Factory Trained or NFI certified professionals.



Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. For assistance or additional information, consult a qualified service technician, service agency or your dealer.

B. Tools and Supplies Needed

Before beginning the installation be sure that the following tools and building supplies are available.

- Tape measure
- Gloves
- Voltmeter
- Manometer
- Phillips screwdriver
- Safety glasses
- Flat blade screwdriver
- Soapy water solution for gas leak testing
- Electric drill and bits (1/4 in. magnetic)
- External regulator (for propane/LPG only & 1/2 psi Natural gas system)
- Piping which complies with local codes
- Pipe sealant approved for use with propane/LPG (Resistant to sulfur compounds)
- Manual shutoff valve
- Sediment trap
- Tee joint
- Pipe wrench

C. Inspect Appliance and Components

- Carefully remove the appliance and components from the packaging.
- Logs are packaged and sold separately.
- Report to your dealer any parts damaged in shipment.
- **Read all of the instructions before starting the installation. Follow these instructions carefully during the installation to ensure maximum safety and benefit.**

WARNING! Risk of Fire or Explosion! Damaged parts could impair safe operation. DO NOT install damaged, incomplete or substitute components. Keep appliance dry.

Hearth & Home Technologies disclaims any responsibility for, and the warranty will be voided by, the following actions:

- Installation and use of any damaged appliance.
- Modification of the appliance.
- Installation other than as instructed by Hearth & Home Technologies.
- Installation and/or use of any component part not approved by Hearth & Home Technologies.

Any such action may cause a fire hazard.

WARNING! Risk of Fire, Explosion or Electric Shock! DO NOT use this appliance if any part has been under water. Call a qualified service technician to inspect the appliance and to replace any part of the control system and/or gas control which has been under water.



WARNING: This product and the fuels used to operate this product (liquid propane or natural gas), and the products of combustion of such fuels, can expose you to chemicals including benzene, which is known to the State of California to cause cancer and reproductive harm. For more information go to: www.P65Warnings.ca.gov.

CAUTION

Gloves are recommended when handling refractory and logs to prevent skin irritation from loose fibers. Logs are fragile; handle with care.

D. Check Parts

Verify contents to ensure you have received all parts. You should have the following:

NB Models

- Unvented gas log burner assembly
- Two (2) bags of crushed volcanic rock
- Installation/operating instructions
- Two (2) Anchoring Screws
- Ceramic fiber or refractory logs
- Rock wool
- Grate assembly
- On/off log switch assembly (MV models only)
- RC300 remote control (IFP models only)
- Double A batteries (IFP models only)

The following options may be used with the millivolt controlled heater. These options are *not* packaged with the log set.

- Hand-held remote with receiver (MV)
- Wall switch with 15' wire
- HILOKTN/P (an accessory kit for flame adjustment from a hand held remote)

Carefully inspect the contents for shipping damage. If any parts are missing or damaged, immediately inform the dealer from whom you purchased the appliance. **Do not attempt to install any part of the appliance unless you have all parts in good condition.**

E. Installation Information

⚠ WARNING

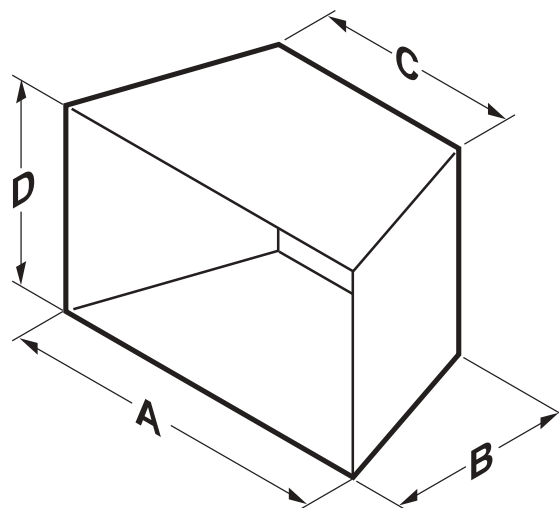
This appliance is for installation only in a solid-fuel burning masonry or UL127 factory-built fireplace or in listed ventless firebox enclosure. It has been design certified for these installations.

Exception: DO NOT install this appliance in a factory-built fireplace that includes instructions stating it has not been tested or should not be used with unvented gas logs.

Use manufacturer's installation and clearance requirements as defined in their manual.

The NB18, 24, 30 series unvented room heaters are approved for installation into the following unvented fireboxes: MCFU, LCFU, GCFU, GRUF, BUF and Exacta.

The Natural Blaze Series unvented room heaters may also be installed into a Ventless Firebox Enclosure for Gas Fired Decorative Type Unvented Room Heaters per ANSI Z21.91 (typically referred to as a "universal firebox"), as long as firebox hearth dimensions meet the minimum hearth dimensions shown below. See Figure 2.1.



Model	A	B	C	D
NB18 w/18" Log	26"	13"	18"	17"
NB24 w/24" Log	29"	13"	22¼"	17"
NB24 w/30" Log	33"	13"	25¼"	17"
NB18IF w/18" Log	28½"	13"	20¼"	17"
NB24IF w/24" Log	31"	13"	25¼"	17"
NB24IF w/30" Log	35"	13"	25¼"	17"

Figure 2.1 - Minimum Dimensions for Engine, Logs & Firebox

Placement in Fireplace with a Restrictive Barrier

The following are guidelines for placing a gas log set in a fireplace that has a restrictive barrier on the fireplace for vented appliance only. See Figure 2.2.

Height of Restriction (x)	Minimum Depth of Fireplace/Firebox
No Restriction	13"
0" to 3"	16"
Greater than 3"	*

**Any barrier greater than 3" placed in front of the gas log set is not recommended by the manufacturer.*

NOTE: Non-combustible material such as refractory brick may be used to line the floor of the fireplace in order to raise the height of the gas log set in relation to a restrictive barrier. If the unit is raised, the minimum height dimension listed in the homeowner's manual must be met or exceeded.

NOTE: If the log set is equipped with a remote receiver, a restrictive barrier may reduce the battery life by increasing the ambient temperature inside the fireplace. Placement of the receiver outside of the fireplace will extend the battery life.

⚠ WARNING

Barriers such as the bottom of a glass door frame placed in front of a gas log set can change the air flow characteristics of the fireplace which in turn can cause the unit to overheat and malfunction when installed as a vented log set.

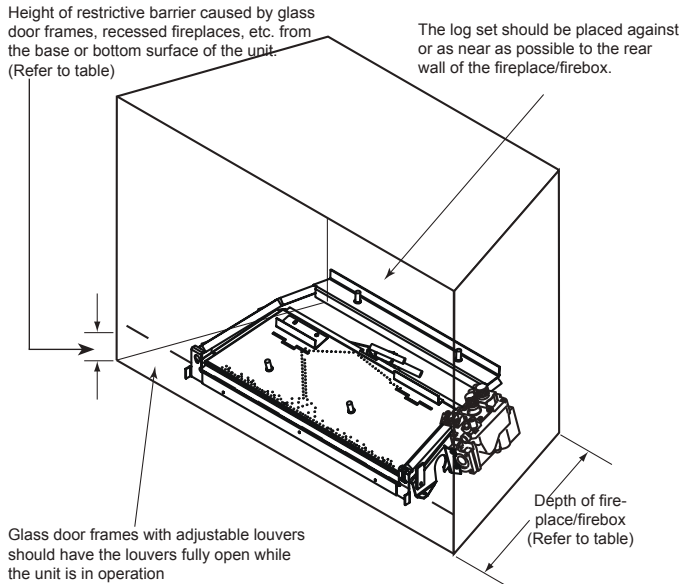


Figure 2.2 - Reference Drawing of a Natural Flame Log Set in an Enclosure with Glass Door or Barrier Installed

⚠ WARNING

Do not install the heater:

- Where curtains, furniture, clothing, or other flammable objects are less than 36" from the front of the heater.
- In high traffic areas.
- In windy or drafty areas.

⚠ WARNING

Gloves are recommended when handling logs to prevent skin irritation from loose fibers. Logs are fragile—handle with care.

F. Adequate Combustion Ventilation Air

This heater shall not be installed in a confined space or unusually tight construction unless provisions are provided for adequate combustion and ventilation air.

The National Fuel Gas Code, (ANSI Z223.1/NFPA54), defines a confined space as a space whose volume is less than 50 cubic feet per 1,000 BTU per hour (4.8m³ per kw) of the aggregate input rating of all appliances installed in that space, and an unconfined space as a space whose volume is not less than 50 cubic feet per 1,000 BTU per hour (4.8 m³ per kw) of the aggregate input rating of all appliances installed in that space. Rooms communicating directly with the space in which the appliances are installed, through openings not furnished with doors, are considered a part of a confined space.

Unusually tight construction is defined as construction where:

- Walls and ceilings exposed to the outside atmosphere have a continuous water vapor retarder with a rating of 1 perm (6 x 10⁻¹¹ kg per pa/sec-m²) or less with openings gasketed or sealed, and
- Weather stripping has been added to windows and doors, and
- Caulking or sealants are applied to areas such as joints around window and door frames, between sole plates and floors, between wall-ceiling joints, between wall panels, at penetrations for plumbing, electrical and gas lines and other openings.

The following formula can be used to determine the maximum heater rating per the definition of unconfined space: Refer to Figure 2.3.

$$\text{BTU/Hr} = \frac{(L_1 + L_2) \text{ Ft} \times (W) \text{ Ft} \times (H) \text{ Ft}}{50}$$

Consider two connecting rooms with an open area between, with the following dimensions:

$$L_1 = 15\frac{1}{2} \text{ Ft.}, L_2 = 12 \text{ Ft.}, W = 12 \text{ Ft.}, H = 8 \text{ Ft.}$$

$$\text{BTU/Hr} = \frac{(15\frac{1}{2} + 12) \times (12) \times (8)}{50}$$

If there were a door between the two rooms the calculation would be based only on the room with the heater.

$$\text{BTU/Hr} = \frac{(15\frac{1}{2}) \times (12) \times (8)}{50}$$

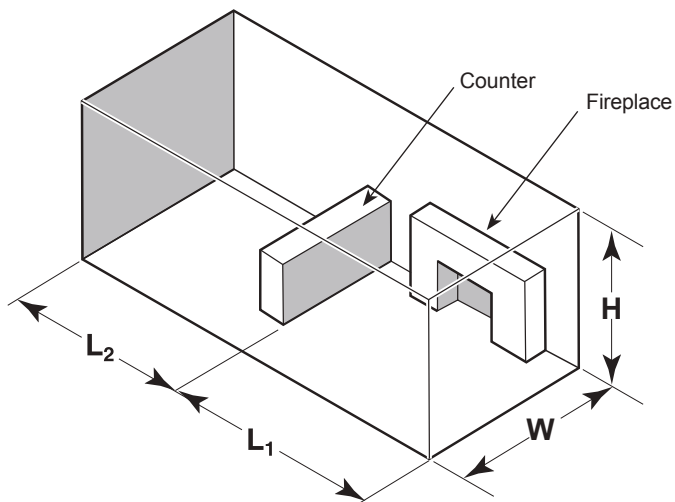


Figure 2.3

⚠ WARNING

If the area in which the heater may be operated does not meet the required volume for indoor combustion air, combustion and ventilation air shall be provided by one of the methods described in the *National Fuel Gas Code, ANSI Z223.1/NFPA 54*, the *International Fuel Gas Code* or applicable local codes.

3 Clearances and Height Requirements

A. Clearances and Height Requirements

⚠ WARNING

The dimensions shown in *Figures 3.1 through 3.8* and defined in the fireplace manufacturer's instructions are minimum clearances to maintain when installing this heater. Left and right clearances are determined when facing the front of the heater.

When heater is installed into a ventless firebox, minimum clearances, as specified by the ventless firebox manufacturer, must be met.

Follow these instructions carefully to ensure safe installation. Failure to follow instructions exactly can create a fire hazard.

Sidewall and ceiling clearances: The *sides* of the fireplace opening must be **at least 16"** from any combustible wall. The *ceiling* must be **at least 42"** from the top of the fireplace opening.

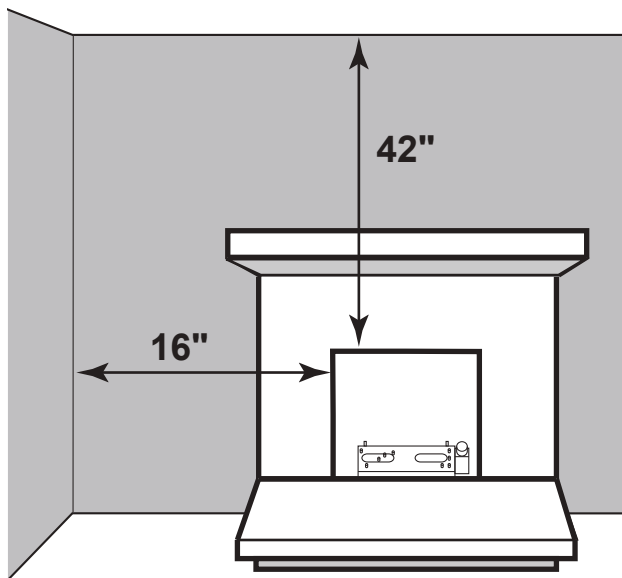


Figure 3.1 - Sidewall and Ceiling Clearances

Heat resistant material (minimum requirements) with no wooden mantel or other combustible projection:

To install the gas logs into a fireplace with no wooden mantel, shelf or other combustible projection above the fireplace opening, measure the heat resistant material height, according to *Figure 3.2* and **TABLE A**.

Heat resistant materials such as slate and marble must be **at least 1/2" thick**. Sheet metal should not be installed onto combustible material.

IMPORTANT: If you cannot meet these minimum clearances you must operate the heater with chimney flue damper open. Refer to "Installing Vented Applications" found on page 13.

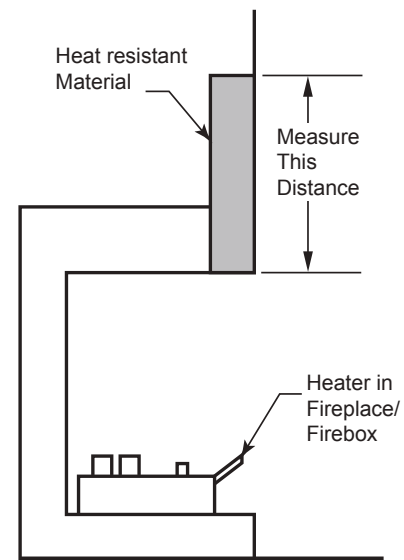


Figure 3.2 - Measure Heat Resistant Material

Table A — Heat Resistant Material Requirements with No Mantel or Combustible Projection

Heat Resistant Material Measurement	Requirements for Safe Installation	
	NB18	NB24
12" or more	Hood not required	Hood not required
8" or less than 12"	Hood not required	Extend heat resistant material to 12" or install hood. <i>Figure 3.3</i>
Less than 8"	Extend heat resistant material to 8" AND install hood. <i>Figure 3.3</i>	Extend heat resistant material to 8" AND install hood <i>Figure 3.5</i> . OR Extend heat resistant material to a height of at least 12".

Heat resistant material (minimum requirements) with wooden mantel or other combustible projection:

To install the heater with a wooden mantel, shelf or other combustible projection above, first measure the heat resistant material shown in *Figure 3.3*, then refer to Table B.

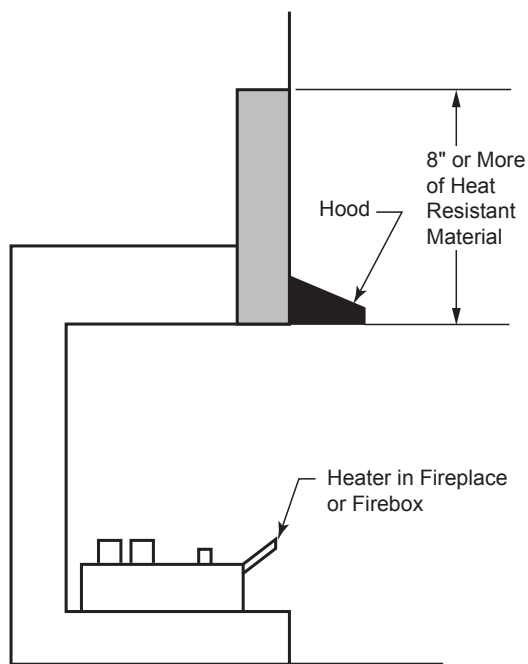


Figure 3.3 - Measuring Heat Resistant Material for Mantel

Table B - Heat Resistant Material Requirements Height and Mantel Location

Heat Resistant Material Measurement	Requirements for Safe Installation with Wooden Mantel, Shelf or other Combustible Projection	
	NB18	NB24
12" or more	Hood not required. Observe profiles (side elevations) shown in <i>Figure 3.6</i> .	Hood not required. Observe profile (side elevations) shown in <i>Figure 3.6</i> .
8" or less than 12"	Install hood and observe profiles shown in <i>Figure 3.5</i> OR Extend heat resistant material to at least 12" and observe profiles shown in <i>Figure 3.6</i> .	Install hood and observe profiles shown in <i>Figure 3.5</i> OR Extend heat resistant material to at least 12" and observe profiles shown in <i>Figure 3.6</i> .
Less than 8"	Extend heat resistant to at least 8", install hood and observe profiles shown in <i>Figure 3.5</i> OR Extend heat resistant material to at least 12" and observe profiles shown in <i>Figure 3.6</i> .	Extend heat resistant material to at least 8", install hood and observe profiles shown in <i>Figure 3.5</i> OR Extend heat resistant material to at least 12" and observe profiles shown in <i>Figure 3.6</i> .

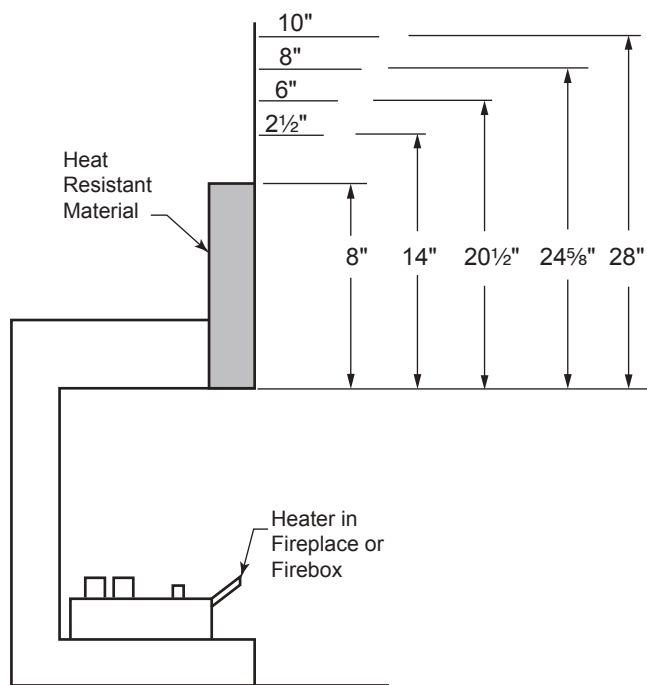


Figure 3.4 - Minimum Mantel Clearance with No Hood — NB18

Example: A mantel may project from the wall a maximum of 2½" at a minimum of 14" above the opening, and a maximum of 6" at a minimum of 20½" above the opening.

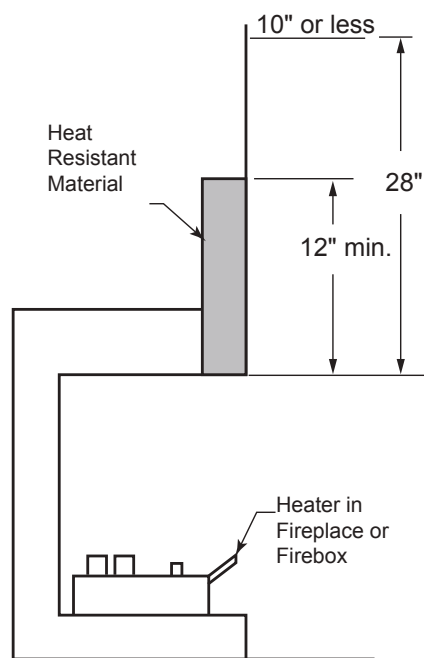


Figure 3.6 - Minimum Mantel Clearance with No Hood — NB18/24

Example: The bottom of the mantel may project from the wall a maximum of 10" at a minimum of 28" above the opening.

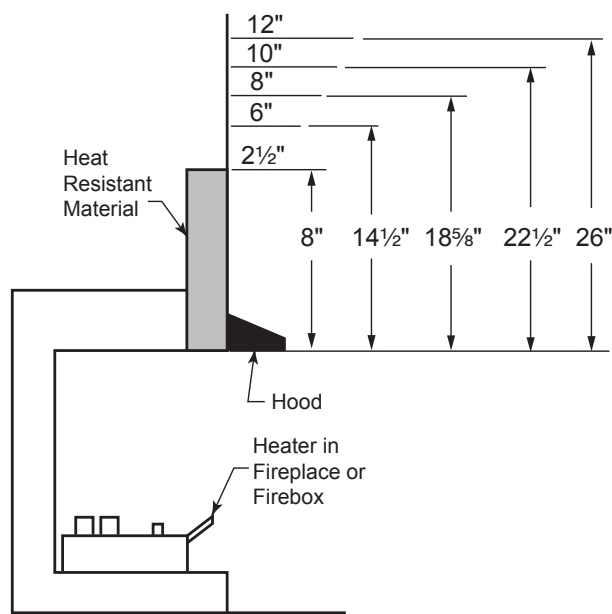


Figure 3.5 - Minimum Mantel Clearance with Hood — All Models

Example: A mantel may project from the wall a **maximum** of 2½" at a **minimum** of 8" above the opening, and a maximum of 6" at a **minimum** of 14½" above the opening.

The gas log heater must be installed at least 1 $\frac{3}{8}$ " above any combustible flooring material, such as carpeting or tile, which is closer than 14" to the base of the fireplace. The minimum distance must be maintained from the top surface of carpeting, tile, etc. *Figure 3.7*

OR

The gas log heater may be installed nearer to the floor if a minimum of 14" of noncombustible material such as slate or marble is installed between the base of the fireplace and the combustible flooring. *Figure 3.8*

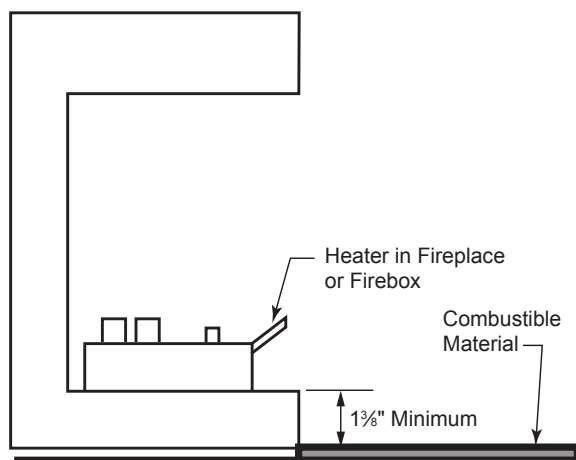


Figure 3.7 - Minimum Clearance above Combustible Flooring

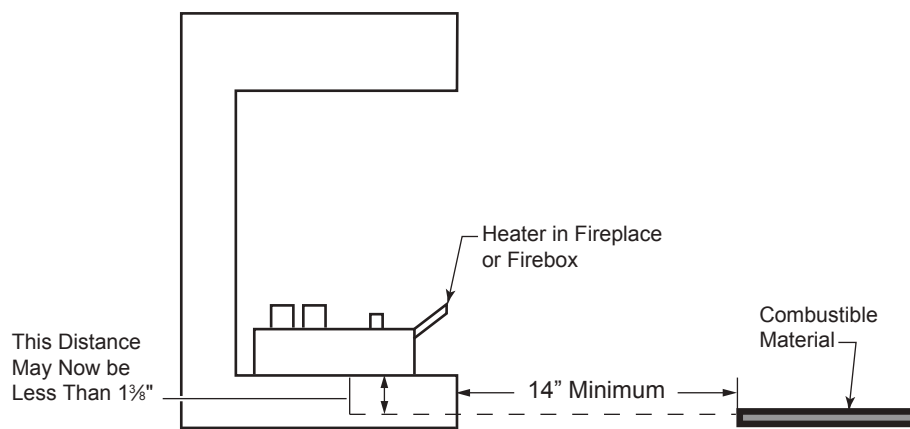


Figure 3.8 - Minimum Clearance above Combustible Flooring with Noncombustible Material Installed at Base of Fireplace

⚠ WARNING

Before installing in a solid fuel burning fireplace, The chimney flue and firebox must be cleaned of soot, creosote, ashes and loose paint by a qualified chimney cleaner.

⚠ WARNING

This log set can be installed in a solid fuel burning fireplace (masonry fireplace or manufactured fireplace) with a working flue and constructed of non combustible material or in a vent-free firebox.

Exception: DO NOT install this appliance in a factory-built fireplace that includes instructions stating that it has not been tested or should not be used with unvented gas logs. This log set may be installed as a vented log set.

⚠ WARNING

The use of thermostat is not allowed on vented log application. It is only allowed on unvented room heater classification.

Before Fully Installing the Unit:

- Turn **OFF** the gas supply to the fireplace or firebox.
- Seal any fresh air vents and/or ash clean-out doors located on the floor or wall of the fireplace. If left unsealed, drafting may cause pilot outage or sooting. Use a heat resistant sealant. **Do not seal the chimney flue damper.**

Vented Application Installations — NB & NBIF Only

Intellifire Plus ODS (IFP) and millivolt controlled gas logs may be installed as a vented decorative log set in compliance with ANSI Z21.60 and National Fuel Gas Code, Section 6.6. **Since, the gas logs are operated with the damper open, non-combustible material and minimum mantel requirements do not apply.**

NOTE: The use of a thermostat is prohibited in vented log installations.

B. Before installing the appliance:

- Turn off gas supply to fireplace or firebox.
- Have the fireplace floor and chimney professionally cleaned to remove ashes, soot, creosote or other obstructions. Have this cleaning performed annually after installation.
- Seal any fresh air vents or ash clean-out doors located on floor or wall of fireplace. If not, drafting may cause pilot outage or sooting. Use a heat-resistant sealant.

Install and operate the appliance as directed in this manual.

C. Damper stop installation:

A damper stop must be provided with the unit. Contact your dealer to obtain one. The damper stop must be installed as shown in *Figure 3.9* to prevent full closure of the fireplace damper blade and provide a minimum 29 square inch flue opening.

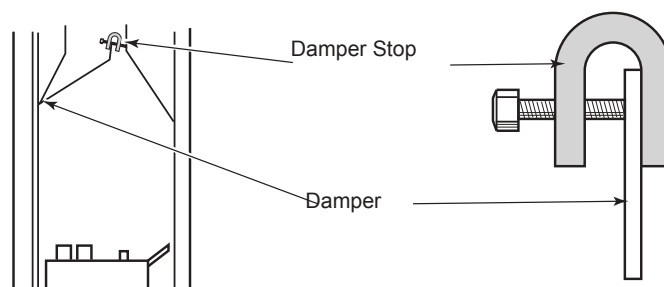


Figure 3.9 - Damper Stop Installation.

⚠ WARNING

When this log set is installed in a vented application, the damper must be clamped to be fully open.

D. Assembly Procedure

1. Center the burner assembly inside the fireplace or firebox. Make certain that the front of the burner assembly sits inside the front edge of the fireplace or the firebox.
2. Anchor holes are located on the right and left sides of the brackets attached to the engine base. After centering the burner assembly correctly, mark the holes on the fireplace or firebox floor. Drill two (2) 5/32" diameter holes approximately 1 1/4" deep. Anchor the two anchoring screws shipped with the unit using 1/4" hex head chuck and secure the burner assembly to the fireplace through the holes drilled earlier. See Figure 3.10.
3. Anchor the grate to the fireplace/firebox floor using the screws provided. See Figure 3.10.

Proper installation of the grate is essential to prevent any movement of the gas logs and controls during operation.

⚠ WARNING

You must secure the gas log heater to the fireplace floor. If not, the entire unit may move when you adjust the controls. Movement of unit may cause shifting of the gas logs which leads to sooting and improper burning. Grate movement could cause a gas leak.

Special care is required if you are installing the unit into a sunken fireplace. You must raise the fireplace floor to allow access to gas log controls. This will ensure adequate air flow and guard against sooting. Raise the fireplace floor using noncombustible materials, as described in Placement in a Fireplace with Restrictive Barrier on Page 6.

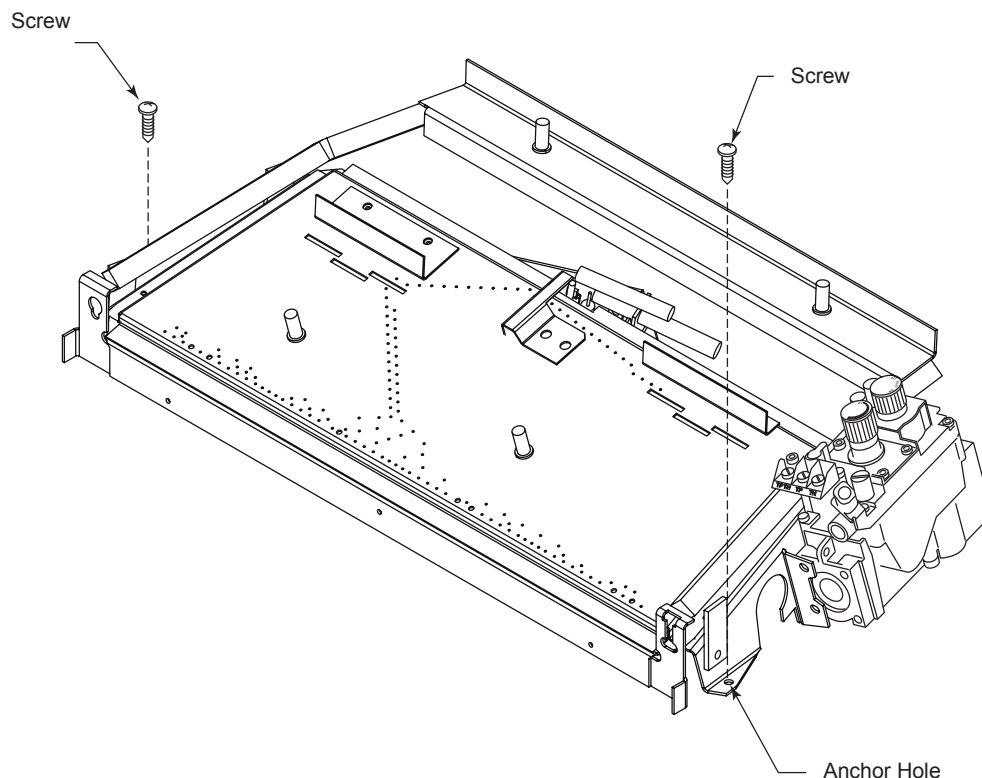


Figure 3.10 - Securing Heater to Floor of Fireplace/Firebox

4 Gas Information

⚠ WARNING

Use new black iron or steel pipe. Internally tinned copper or copper tubing can be used per National Fuel Code, section 2.6.3, providing gas meets hydrogen sulfide limits, and where permitted by local codes. Gas piping system must be sized to provide minimum inlet pressure (Listed on Data Plate) at the maximum flow rate (BTU/hr). Undue pressure loss will occur if the pipe is too small.

A manual shutoff valve must be installed upstream of the appliance. Union tee and plugged 1/8" NPT pressure tapping point should be installed upstream of the appliance.

A. Gas Line Connection

NOTICE: A qualified gas appliance installer must connect the heater to the gas supply. Consult all local codes.

IMPORTANT: Hold heater valve firmly with a wrench to prevent movement when connecting to inlet pipe.

Always use an external regulator for all propane/LPG heaters and high pressure one to two-pound systems only, to reduce the supply tank pressure to a maximum of 13" w.c. This is in addition to the internal regulator in the heater valve.

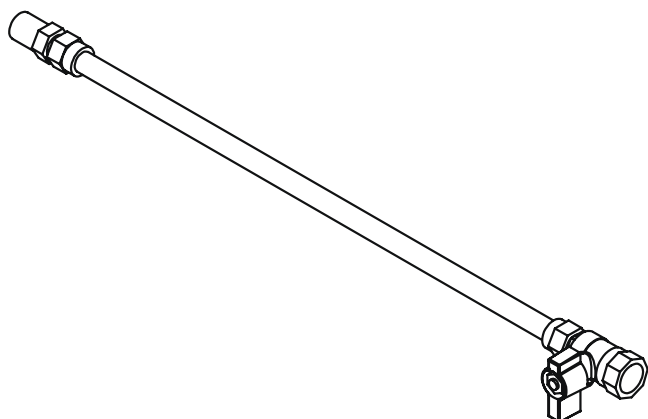


Figure 4.1 Gas Connection

⚠ WARNING

CHECK GAS TYPE: The gas supply must be the same as stated on the heater's rating plate. If the gas supply is different, **DO NOT INSTALL THE HEATER.** Contact your dealer for the correct model.

⚠ WARNING

Connecting directly to an unregulated propane/LPG tank can cause an explosion.

The heater gas inlet connection is a 3/8" NPT at the valve. On all control type units, the inlet connection is on the right side of unit. To connect from the opposite side, route the pipe around the back portion of the unit.

When tightening up the joint to the valve, hold the valve securely to prevent movement.

Test all gas joints from the gas meter to the heater valve for leaks using a gas analyzer or soap and water solution after completing connection. **DO NOT USE AN OPEN FLAME.**

Check the gas pressure with the appliance burning and the control set to **HIGH**.

B. Fuel Type

- This appliance is equipped for either natural or propane gas. **Field conversion is not permitted.**
- Make sure the appliance is compatible with available gas types.

C. Gas Pressure

- Optimum appliance performance requires proper input pressures.
- Gas line sizing requirements will be determined in ANSI Z223.1 National Fuel Gas Code in the USA.
- Pressure requirements are:

	NATURAL	PROPANE (LP)
Inlet Minimum	5.0" w.c.	11.0" w.c.
Inlet Maximum	10.5" w.c.	13.0" w.c.
Gas Valve Manifold Pressure Setting	3.5" w.c.	10" w.c.
Pilot Regulator	3.5" w.c.	—



WARNING! Risk of Fire or Explosion! High pressure will damage valve. Low pressure could cause explosion.

- Verify inlet pressures. Verify minimum pressures when other household gas appliances are operating.
- Install regulator upstream of valve if line pressure is greater than 1/2 psig.
- Valve pressure taps are accessible by removing the right side log. See Figure 4.2.

Note: Have the gas supply line installed in accordance with local codes, if any. If not, follow ANSI Z223.1. Installation should be done by a qualified installer approved and/or licensed as required by the locality. (In the Commonwealth of Massachusetts installation must be performed by a licensed plumber or gas fitter).

D. Gas Service Access

Depending upon local code, a manual gas shutoff, in a readily accessible area may be required and located upstream from the appliance.

⚠ WARNING	
 	<p>Fire Risk.</p> <p>Explosion Hazard.</p> <p>High pressure will damage valve.</p>
	<ul style="list-style-type: none"> • Disconnect gas supply piping BEFORE pressure testing gas line at test pressures above 1/2 psig.
	<ul style="list-style-type: none"> • Close the manual shutoff valve BEFORE pressure testing gas line at test pressures equal to or less than 1/2 psig.

E. Check Gas Pressure

Millivolt

The valve regulator controls the burner pressure which should be checked at the pressure test point.

Turn captured screw counter clockwise two or three turns and then place tubing to pressure gauge over test point (use test point "OUT" closest to control knob). After taking pressure reading, be sure and turn captured screw clockwise firmly to re-seal. Do no over torque. Check for gas leaks. See Figure 4.2.

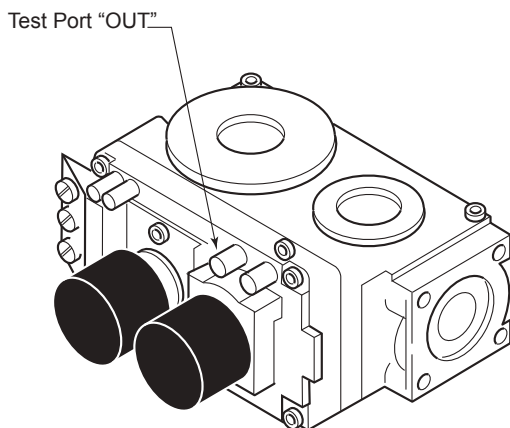


Figure 4.2 - Pressure Test Point Location Millivolt Control

Intellifire Plus ODS (IFP)

Check the gas pressure with the appliance burning and the control set to **HIGH**.

The valve regulator controls the burner pressure which should be checked at the pressure test point.

Turn captured screw counterclockwise two or three turns and then place tubing to pressure gauge over test point. Use test point "A" closest to gas inlet. After taking pressure reading, be sure and turn captured screw clockwise firmly to re-seal. Do not over torque. Check for gas leaks. See Figure 4.3.

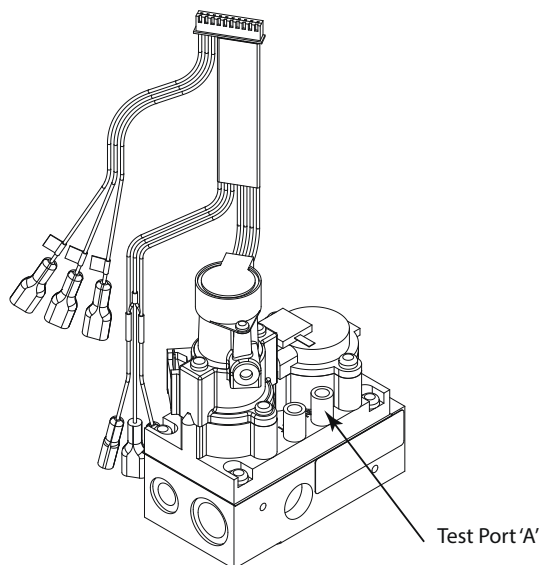


Figure 4.3 Pressure Test Point Location

5 Electrical Information

A. General Information

WARNING! Risk of Shock or Explosion! DO NOT wire 110-120 VAC to the valve or to the appliance wall switch. Incorrect wiring will damage controls.

NOTICE: This appliance must be electrically wired and grounded in accordance with local codes or, in the absence of local codes, with **National Electric Code ANSI/NFPA 70-latest edition**.

- Wire the appliance junction box to unswitched 110-120 VAC. This is required for proper operation of the appliance.
- A 110-120 VAC circuit for this product must be protected with ground-fault circuit-interrupter protection, in compliance with the applicable electrical codes, when it is installed in locations such as in bathrooms or near sinks.
- Low voltage and 110/120 VAC voltage cannot be shared within the same wall box.

Electrical Service and Repair

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

WARNING! Risk of Shock! Replace damaged wire with type 105° C rated wire. Wire must have high temperature insulation.

Accessories Requirements

- This appliance may be used with a wall switch, or optional wall mounted thermostat and/or a remote control.

Wiring for optional Hearth & Home Technologies approved accessories should be done now to avoid reconstruction. Follow instructions that come with those accessories.

CAUTION

Label all wires before disconnecting when servicing controls. Wiring errors can cause improper and dangerous operation.

WARNING

Do not connect wall switch to 110 V circuit.

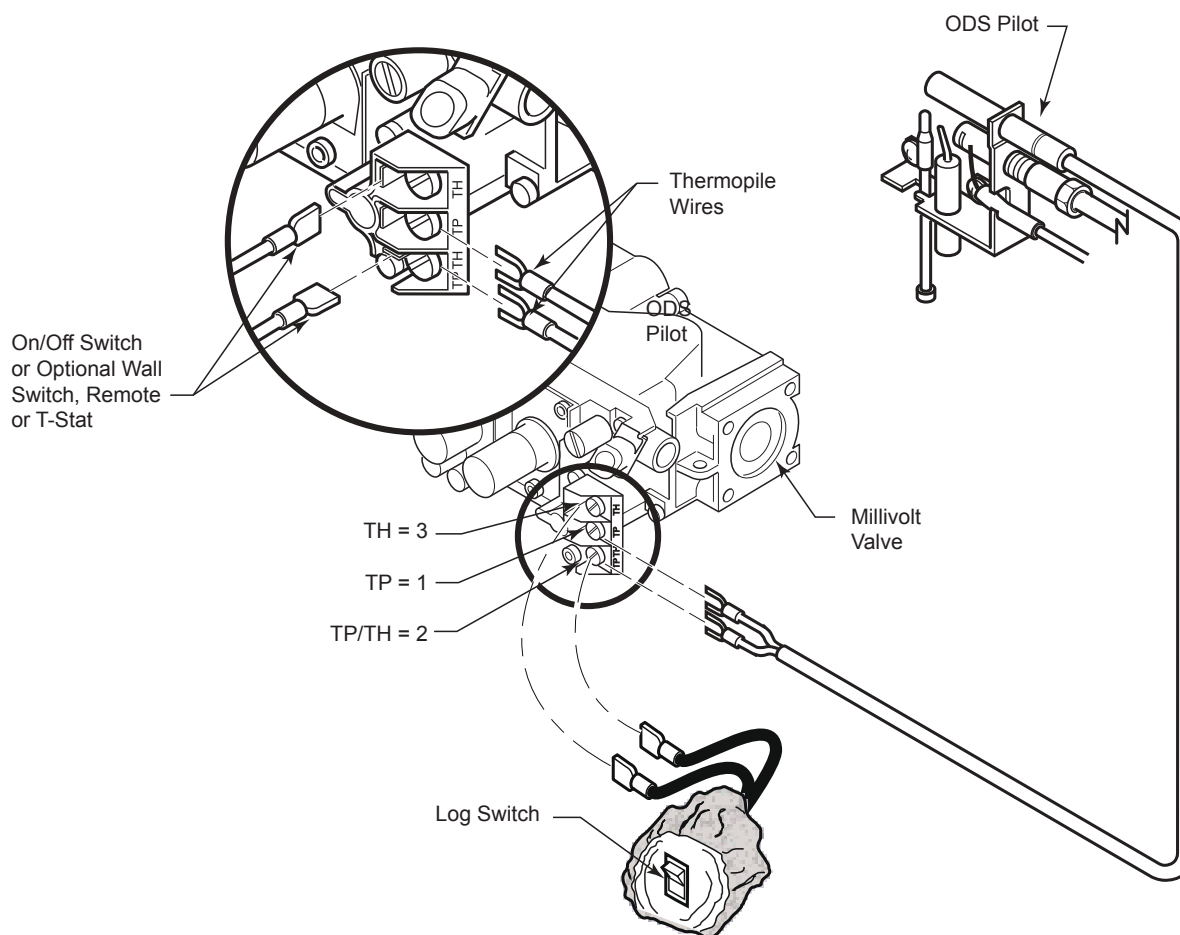
WARNING

Electrical connections should only be performed by a qualified, licensed electrician. Main power must be off when connecting to main electrical power supply or performing service. All wiring shall be in compliance with all local, city and state codes. The appliance, when installed, must be electrically grounded in accordance with local codes or in the absence of local codes, with the National Electrical Code ANSI/NFPA 70 (latest edition) and Canadian Electrical Code, CSA C22.1.

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

B. Connect Optional Wall Switch or Thermostat (vent free application only)

1. Use 18 awg, two-wire cable, 15 feet maximum length.
2. At one end of the cable, connect both wires to the wall switch or thermostat. At the other end, connect one wire to TP/TH and one wire to TH, using fork terminal or connect the wall switch/thermostat to the two male (0.25") terminals on the left side of the unit. The color of the wires does not matter.



NOTE: Log switch wires are not factory connected. Connect log switch wires to the TP/TH and TH valve terminals as shown.

C. Connect Remote Receiver

1. Set remote receiver. See instructions included in receiver kit.
2. Unplug the two terminals for the log switch from the valve, connect the piggy back terminal of the receiver to the TH and TP/TH on the valve. Slide the terminal of the log switch onto the piggy back terminal on the receiver

NOTE: Do not allow wires to touch grate or burner.

NOTE: Heat reduces battery life. You can protect the receiver and extend battery life by mounting receiver in wall or other location outside the fireplace.

D. Check System Operation

The millivolt system and individual components may be checked with a millivolt meter having a 0-1000 mV range. Conduct each check shown in chart below by connecting meter test leads to terminals as indicated.

1. Complete Millivolt System Check

(“A” Reading - Thermostat contacts CLOSED - Control Knob “ON” - Main burner should turn ON)

- a. If the reading is more than 175 millivolts and the automatic valve still does not come on, replace the control.
- b. If the closed circuit reading (“A” reading) is less than 175 millivolts, determine cause for low reading, proceed to Section B below.

2. Thermopile Output Reading Check

(“B” Reading - Thermostat contacts OPEN - Main burner OFF)

1. Check gas pressure to the unit. If gas pressure is within minimum and maximum on data plate, then check pilot voltage, 500 millivolts minimum. If the minimum millivolt reading is not obtainable, replace pilot.

Check Test	To Test	Connect Meter Leads to Terminals	Switch or Thermostat Contacts	Meter Should Read
A	Complete System	2 and 3	Closed	Minimum 175
B	Thermopile Output	1 and 2	Open	Minimum 500

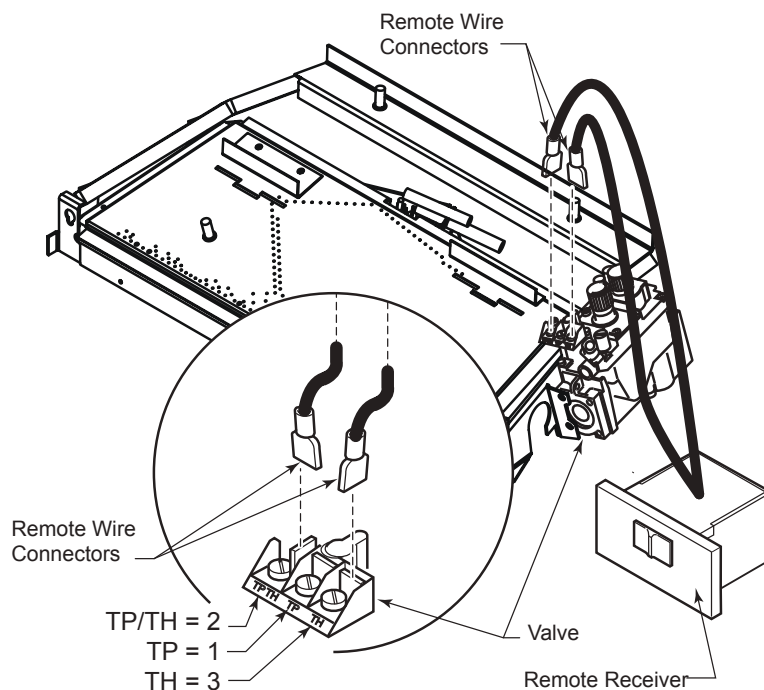


Figure 5.2 - Installing Remote Receiver

E. Wiring Requirements

IntelliFire™ Plus ODS Ignition System Wiring

- Wire the appliance junction box to 110-120 VAC for proper operation of the appliance.

WARNING! Risk of Shock or Explosion! DO NOT wire IFP ODS controlled appliance junction box to a switched circuit. Incorrect wiring will override IFP ODS safety lock-out.

- Refer to Figure 5.4, IFP ODS Wiring Diagram.
- This appliance is equipped with an IntelliFire™ Plus control valve which operates on a 6 volt/1.5 AMP system.
- Install 4 AA cell batteries into the battery pack before use. See Figure 5.3

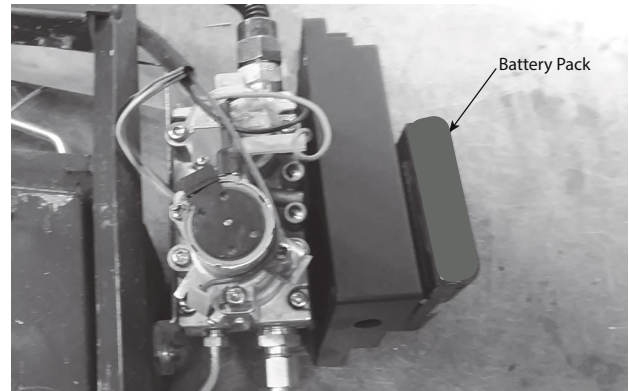
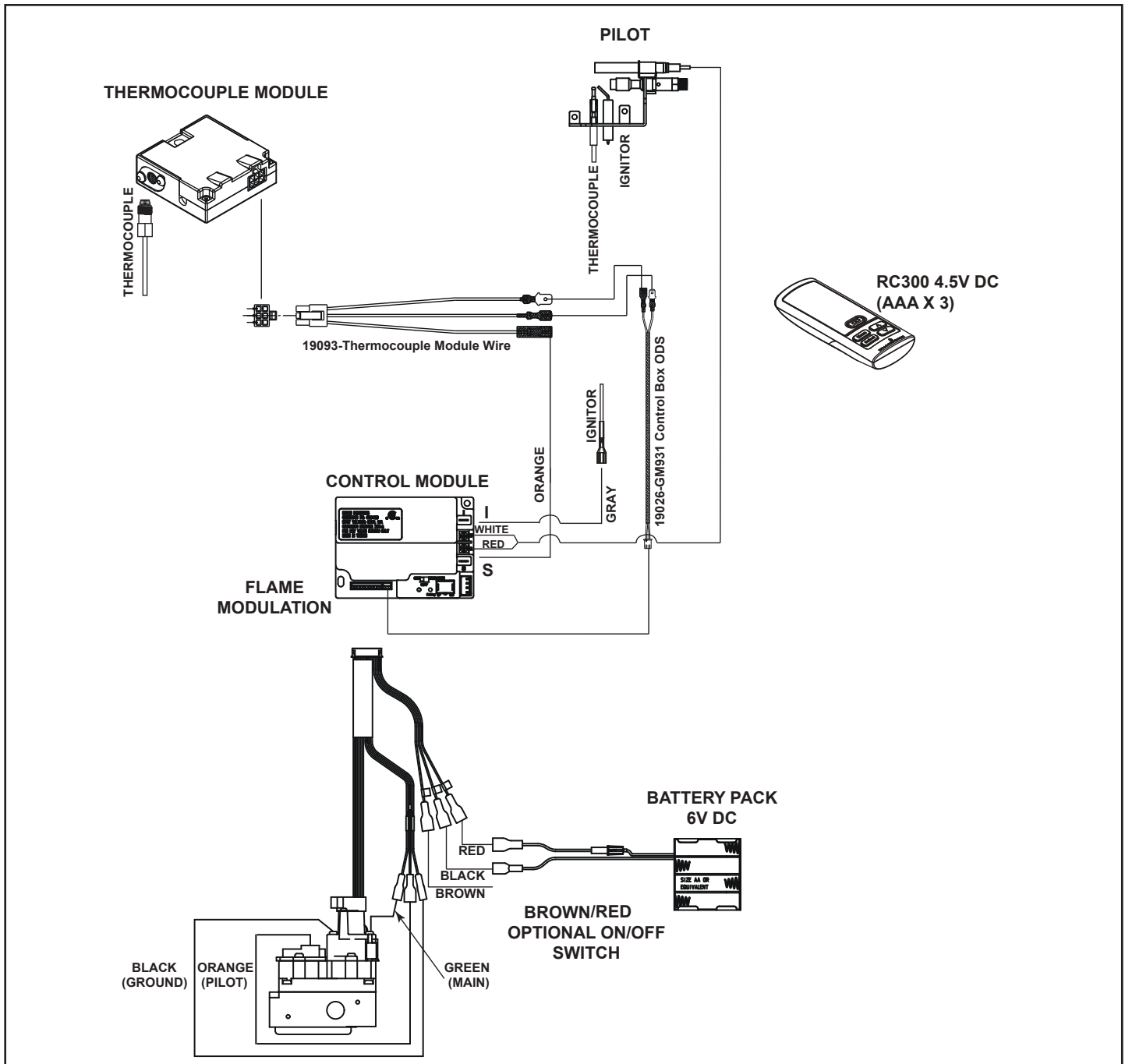


Figure 5.3 Battery Pack Location



► Figure 5.4 IntelliFire™ Plus ODS Wiring Diagram (Battery Only)

F. Detailed Component Operating Instructions— Intellifire™ Plus ODS (Battery Only)

Control Module Operation

1. The control module has an ON/OFF/REMOTE selector switch that must be set. See Figure 5.5.

OFF Position: Appliance will ignore all power inputs and will not respond to any commands from a wall switch or remote. The unit should be in the OFF position during installation, service, battery installation, fuel conversion, and in the event that the control goes into LOCK-OUT mode as a result of an error code.

ON Position: Appliance will ignite and run continuously in the HI flame setting, with no adjustment in flame output. This mode of operation is primarily used for initial installation.

REMOTE Position: Appliance will initiate commands from an optional wired wall switch and/or the wireless remote (RC300).

2. If using a wired wall switch with the module in REMOTE mode, the appliance will ignite and run continuously in the HI flame setting, with no adjustment in flame output.
3. The control module has safety feature that automatically shuts down the heater after 9 hours of continuous operation without receiving a command from the RC300 remote.
4. If you intend to use both an optional wired wall switch and the RC300 remote control to operate your fireplace, the wall switch will override any commands given by the remote.
5. Battery life will be shortened if the flame adjustment feature is used frequently on the RC300 remote control.

6. Module Reset

This module may lock-out under certain conditions. When this occurs, the appliance will not ignite or respond to commands. The module will go into lock-out mode by emitting three audible beeps, then continuously displaying a RED/GREEN error code at its status indicator LED.

- Locate the module selector switch. (See Figure 5.5).
- Set the module selector switch to the OFF position.
- Wait five (5) minutes to allow possible accumulated gas to clear.
- Set the module selector switch to ON or REMOTE position.
- Start the appliance.

WARNING! Risk of Explosion! DO NOT press the module reset switch more than one time within a five minute time period. Gas could accumulate in firebox. Call a qualified service technician.

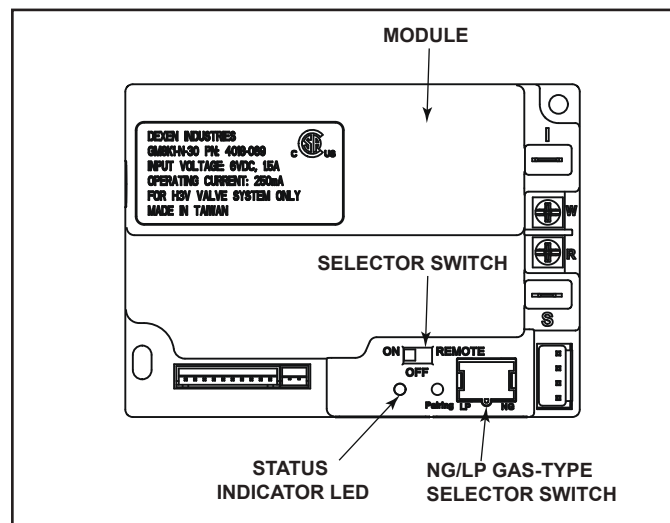


Figure 5.5 Control Module

Nine Hour Safety Shutdown Feature

The appliance has a safety feature that automatically shuts down the heater after nine hours of continuous operation without receiving a command from the wall switch or optional remote.

Appliance ON/OFF

Use the IntelliFire™ Plus Remote Control to control the ON/OFF function of the appliance. Follow instructions included with the remote control. If desired, a wall switch may be installed to control the ON/OFF function of the appliance.

6 Gas Log Sets

A. Grate and Log Installation

⚠ WARNING

The positioning of the logs is critical to the safe and clean operation of this heater. Sooting and other problems may result if the logs are not properly and firmly positioned in the appliance. Never add additional logs or embellishments such as pine cones, vermiculite or rock wool to the heater. Only use the logs and rock wool supplied with the unit.

Failure to position the parts in accordance with diagrams below or to use only parts specifically approved for this heater may result in property damage or personal injury.

BEFORE YOU BEGIN

This unit is supplied with ceramic fiber logs. Do not handle these logs with your bare hands. **Always wear gloves to prevent skin irritation from ceramic fibers.** After handling the logs, wash your hands gently with soap and water to remove any traces of fibers.

CAST IRON GRATE INSTALLATION

Install the cast iron grate by inserting screw head on back of right side of grate into the "I" shaped slot on front right corner of unit. After moving screw head to the bottom of the "I" slot, insert the screw head on the back of the left side of grate into the keyhole slot on the left front of unit. See Figure 6.1.

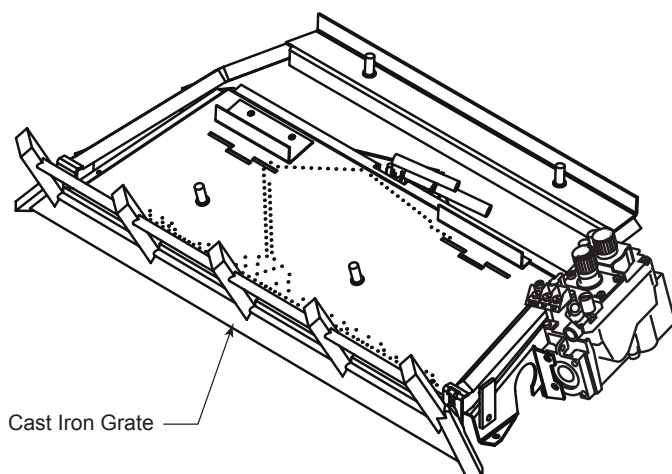
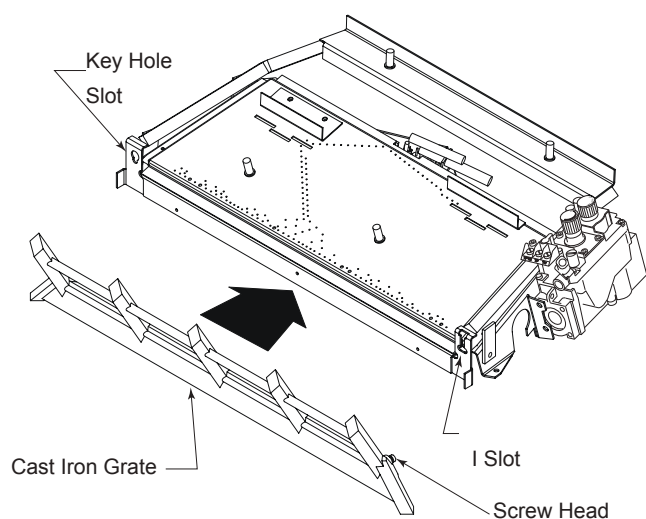


Figure 6.1 - Grate Installation

⚠ WARNING

- Gloves are recommended when handling logs to prevent skin irritation from loose fibers. Logs are fragile - handle with care.
- Use only rock wool provided with log set.
- DO NOT ADD ADDITIONAL ROCK WOOL.

Wash hands after placing rock wool. Itching may occur.

NOTE: Installation instructions are the same for 18", 24" and 30" log sets. Pictures used in this instruction illustrate the 24" set. Some variation may exist between the images and the set included with the instructions.

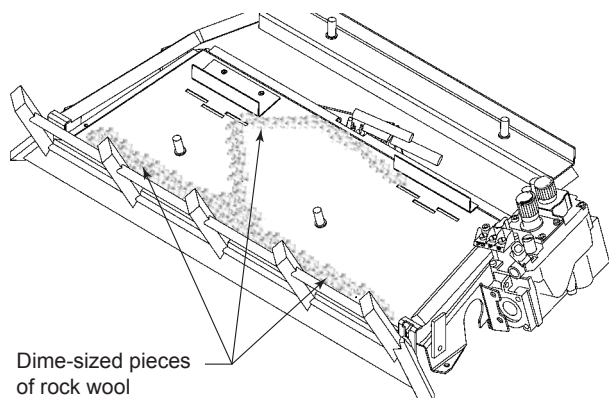


Figure 6.2 - Rock Wool Placement

B. INSTALL 18", 24" AND 30" (F, R) BERKLEY OAK LOGS PLACEMENT

1. Place the #1 log (the "chunk") on the grate bar right side of the burner adjacent to the controls. See Figure 6.3 .
2. Place front right log (#2) on right pin located on burner and right grate bar. See Figure 6.4. Slide Log #1 forward so that it is tight against log #2.

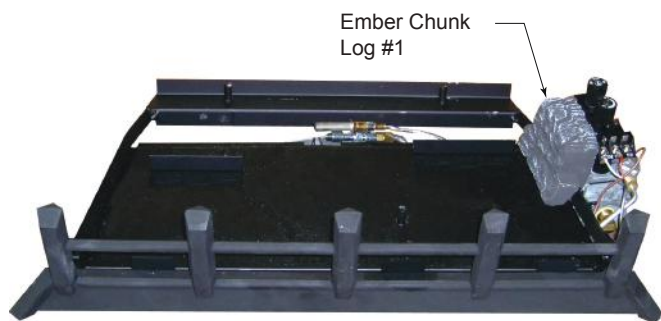


Figure 6.3 - Log #1 Placement

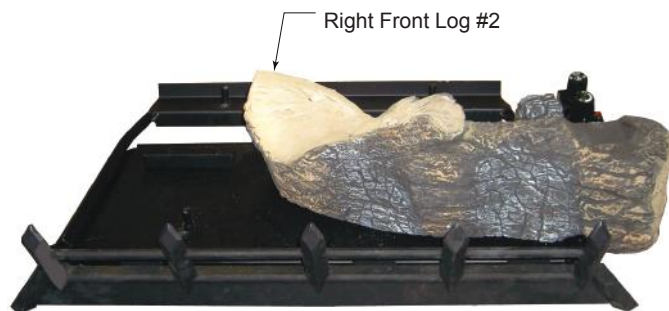


Figure 6.4 - Log #2 Placement

3. Place right rear log (#3) on pin located on rear support bracket and rest left side of log on front right log. See Figure 6.5.



Figure 6.5 - Log #3 Placement

4. Place left rear log (#4) on pin located on rear support bracket on left side. See Figure 6.6.

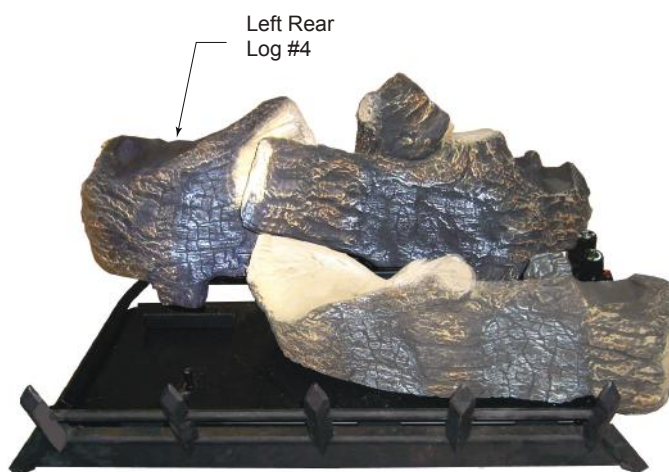


Figure 6.6 - Log #4 Placement

5. Place left front log (#5) on left pin located on burner and left grate bar. Rest top right portion of log on right front log. See Figure 6.7.

Left Front Log #5



Figure 6.7 - Log #5 Placement

6. Place top left log (#6) on unit by placing grooved portion of log onto left grate bar with bark facing outward. Rest front part of log in groove on left front log. See Figure 6.8.

Middle Left Log #6



Figure 6.8 - Log #6 Placement

7. Place left top log (#7) on left rear log (#4) and left front log (#5) using locating grooves on bottom of #7 and locating blocks on logs #4 and #5. See Figure 6.9.

Left Top Log #7



Figure 6.9 - Log #7 Placement

8. Place right top log (#8) onto right rear (#3) and right front (#2) logs using locator on bottom of right top log. See Figure 6.10.

Left Top Log #7

Right Top Log #8



Figure 6.10 - Log #8 Placement

PLACE THE DECORATIVE ROCK

Optional volcanic rock may be placed around the unit on the floor of the firebox. Be sure to avoid any areas on the burner itself.

CAUTION

DO NOT sprinkle volcanic rock on the logs, around the pilot, or on or near burners. This may cause sooting. Place volcanic rock only on the floor of the fireplace.

During initial operation of the new heater, new burning logs and/or rock wool will give off a paper burning smell and orange flames will be present. Simply open the windows for a few hours to vent the odor.

C. INSTALL 18", 24" AND 30" (F,R) HIGHLAND OAK LOGS PLACEMENT

1. Place the #1 log (the "chunk") on the grate bar right side of the burner adjacent to the controls. See Figure 6.11.

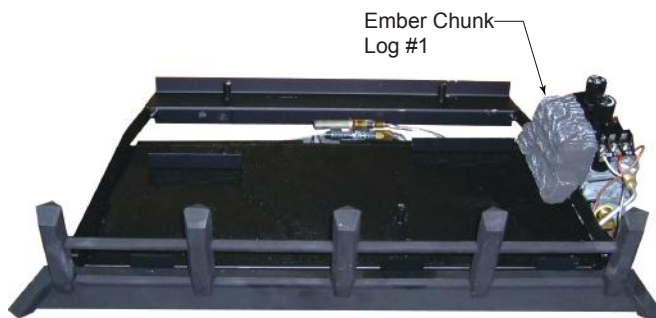


Figure 6.11 - Log #1 Placement

2. Place front right log (#2) on right pin located on burner and right grate bar. See Figure 6.12. After placing front right log, ensure log is fully upright and tilting towards the back of the burner.

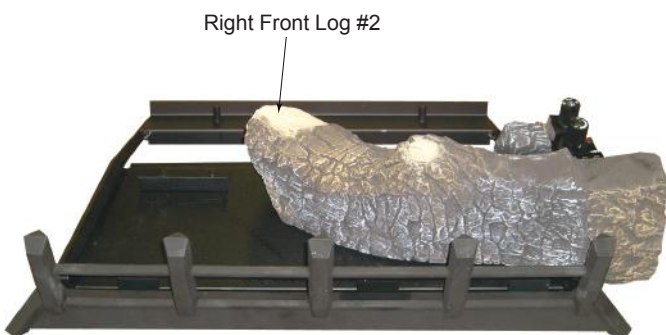


Figure 6.12 - Log #2 Placement

3. Place right rear log (#3) on pin located on rear support bracket and rest left side of log on front right log. See Figure 6.13. After placing right rear log, ensure log is fully upright and does not tilt forward. Slide #1 log ember chunk back to contact right rear log.



Figure 6.13 - Log #3 Placement

4. Place left rear log (#4) on pin located on rear support bracket on left side and left grate bar. See Figure 6.14.



Figure 6.14 - Log #4 Placement

5. Place left front log (#5) on left pin located on burner and left grate bar. Rest top right portion of log on right front log. See Figure 6.15.



Figure 6.15 - Log #5 Placement

6. Place top left log (#6) on left rear log (#4) and left front log (#5) using locating grooves on bottom of #6 and locating blocks on logs #4 and #5. See Figure 5.15.
7. Place right top log (#7) on right rear log (#3) and right front log (#2) using locators on the bottom of log #7 and locators on logs #2 and #3. See Figure 6.16.

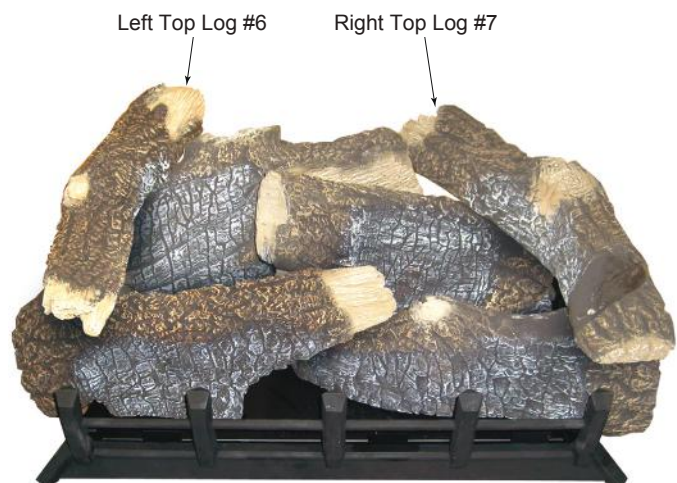


Figure 6.16 - Log #6 & #7 Placement

- Place small right front top log (#8) on log #7 and log #2 using locating grooves on the bottom of log #8 and locating blocks on log #7 and log #2. See Figure 6.17.



Figure 6.17 - Log #8 Placement

PLACE THE DECORATIVE ROCK

Optional volcanic rock may be placed around the unit on the floor of the firebox. Be sure to avoid any areas on the burner itself.

CAUTION

DO NOT sprinkle volcanic rock on the logs, around the pilot, or on or near burners. This may cause sooting. Place volcanic rock only on the floor of the fireplace.

During initial operation of the new heater, new burning logs and/or rock wool will give off a paper burning smell and orange flames will be present. Simply open the windows for a few hours to vent the odor.

D. STONY CREEK SC18/24/30-R LOGS PLACEMENT

- Place bottom log (#1) on two (2) pins on rear of grate assembly and push towards rear as far as possible. See Figure 6.18.

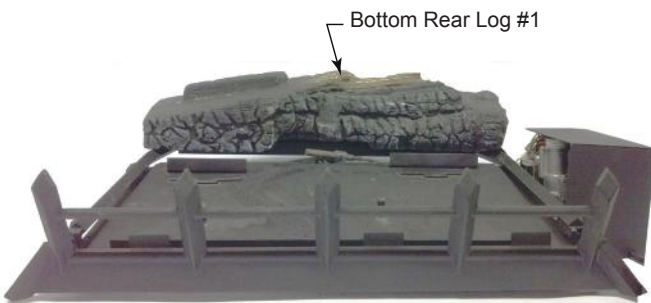


Figure 6.18 - Log #1 Placement

- Place the ember chunk (#2) with notch on both ends on the grate bar right side of the burner adjacent to the controls. Push towards rear as far as possible. See Figure 6.19.
- Place the ember chunk (#3) with notch on one end on the grate bar left side of the burner with notch towards rear. Push towards rear as far as possible. See Figure 6.19.



Figure 6.19 - Log #2 & #3 Placement

- Place front bottom right log (#4) on right pin located on burner and right grate bar. Figure 6.20.



Figure 6.20 - Log #4 Placement

- Place front bottom left log (#5) on left pin located on burner and left grate bar. The right side of the log should rest on log #4. See Figure 5.20.
- Place mid right log (#6) on bottom rear log (#1) and front bottom right log (#4) by placing notch on bottom of log on locating block on log #1. Place front of log in notch of log #4. See Figure 6.21.

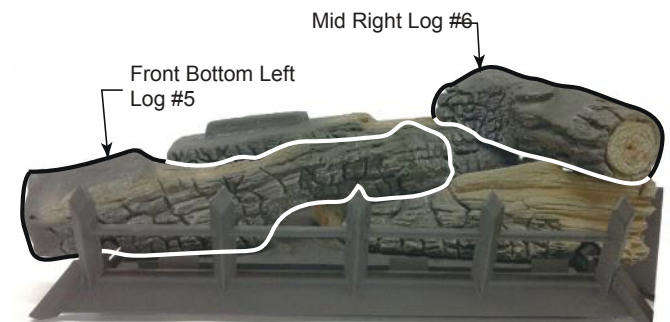


Figure 6.21 - Log #5 & #6 Placement

7. Place mid rear log (#7) on bottom rear log (#1) and mid right log (#6) by placing notch on bottom of log onto locating block on log #1. Right side of log will rest on log #6. See Figure 6.22.



Figure 6.22 - Log #7 Placement

8. Place mid left log (#8) on mid rear log (#7) and front bottom log (#5) by placing notches on bottom of log onto locating blocks on log #7 and log #5. See Figure 6.23.
9. Place center log (#9) onto front bottom left log (#5) by placing notch on bottom of log #9 onto locating block on log #5. The flat triangle-shaped end of log #9 should be towards front with pointed end of log resting on bottom rear log (#1). See Figure 6.23.

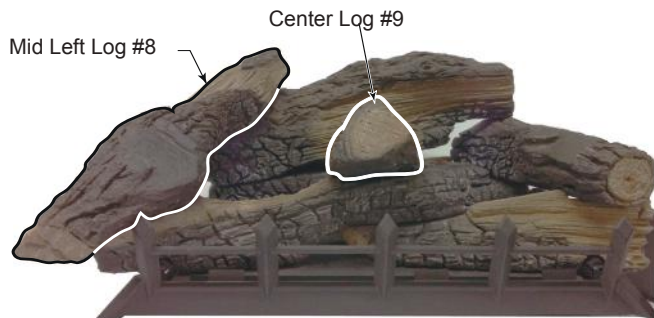


Figure 6.23 - Log #8 & #9 Placement

10. Place top front right log (#10) onto mid right log (#6) by placing notch on bottom of log onto locating block on log #6. Rest bottom end of log onto grate bar. See Figure 6.24.
11. Place top front left log (#11) onto mid left log (#8) by placing notch on bottom of log onto locating block on log #8. Rest bottom end of log onto grate bar. See Figure 6.24.

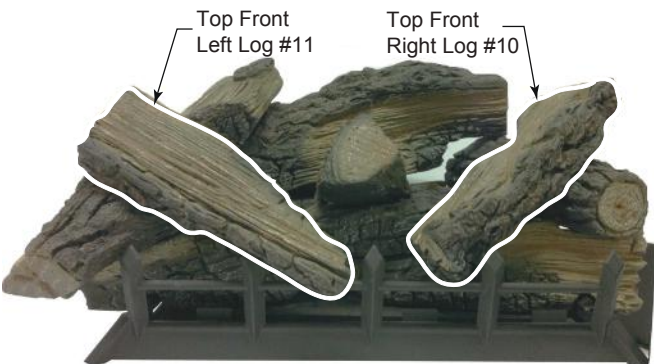


Figure 6.24 - Log #10 & #11 Placement

12. Place log #12 onto mid left log (#8) and mid rear log (#7) by placing notch on bottom of log onto locating block on log #8. Rest right end of log onto top of log #7. See Figure 6.25.

Log #12 (SC2430EK Enhancement Kit)



Figure 6.25 - Log #12 Placement

13. Place log #13 onto log #12 and top front right log (#10) by placing notch on bottom of log onto locating block on log #12. Rest bottom of log onto log #10 and center log (#9). See Figure 6.26.



Figure 6.26 - Log #13 Placement

E. BEACHCOMBER LOGS PLACEMENT

1. Place the rear log (#1) on the rear pins located on the log support bar. See Figure 6.27.

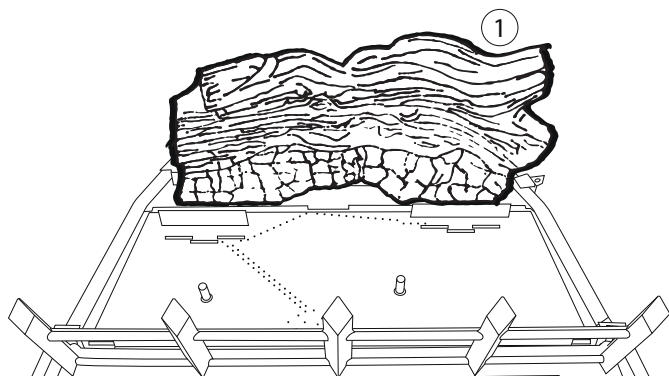


Figure 6.27 - Log #1 Placement

2. Place the front left log (#2) on the pin located on the right side of the burner. See Figure 6.28.

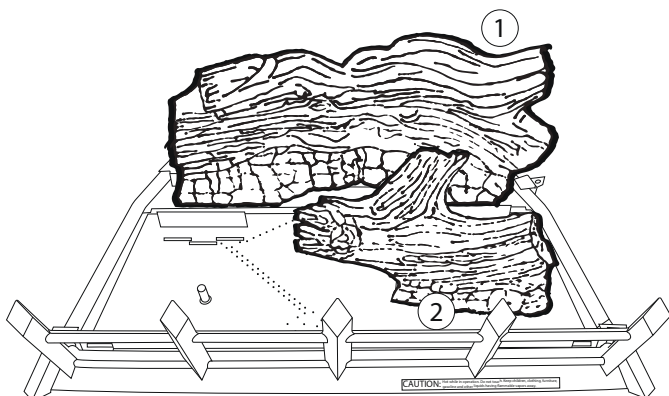


Figure 6.28 - Log #2 Placement

3. Place the front center log (#3) on the pin located on the left side of the burner. See Figure 6.29.

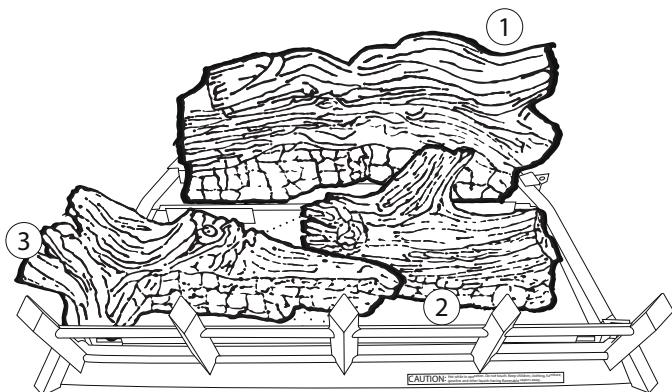


Figure 6.29 - Log #3 Placement

4. Place the right log (#4) on the bar located on the right side of the burner. See Figure 6.30.

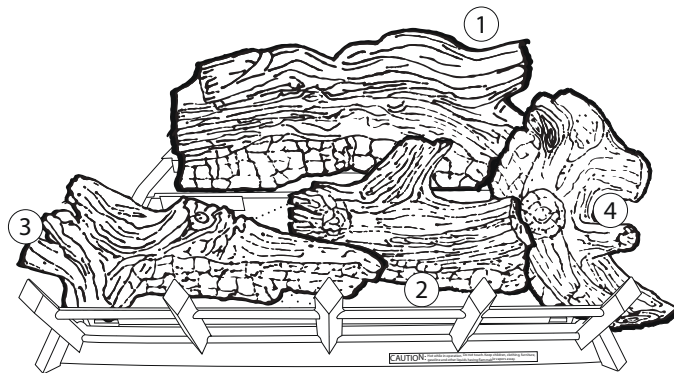


Figure 6.30 - Log #4 Placement

5. Place the top left log (#5) on the left side of the burner allowing the log to rest on top of the front left log (#2). See Figure 6.31.

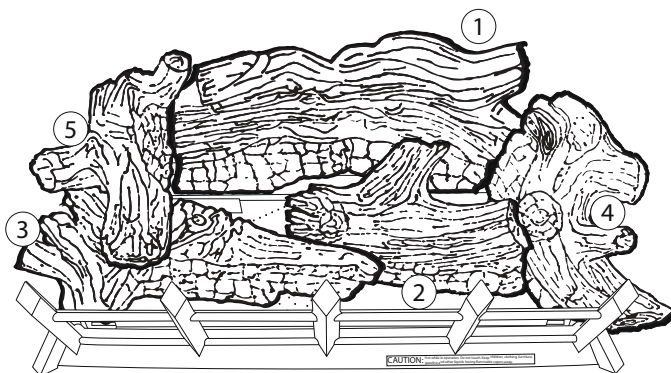


Figure 6.31 - Log #5 Placement

6. Place the top center log (#6) to the right of the pilot orifice allowing the log to rest on top of the front right log (#3) and the front left log (#2). See Figure 6.32.

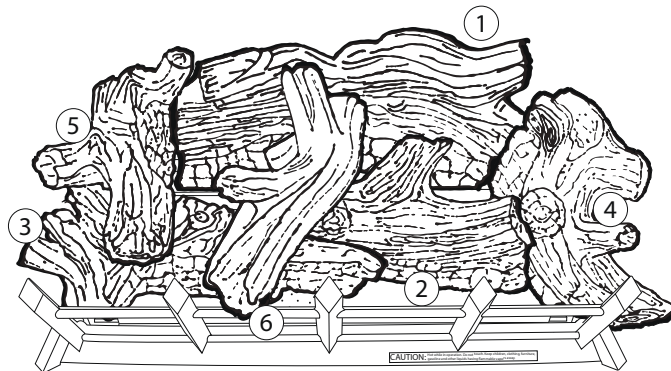


Figure 6.32 - Log #6 Placement

PLACE THE DECORATIVE ROCK

Optional volcanic rock may be placed around the unit on the floor of the firebox. Be sure to avoid any areas on the burner itself.

CAUTION

DO NOT sprinkle volcanic rock on the logs, around the pilot, or on or near burners. This may cause sooting. Place volcanic rock only on the floor of the fireplace.

During initial operation of the new heater, new burning logs and/or rock wool will give off a paper burning smell and orange flames will be present. Simply open the windows for a few hours to vent the odor.

F. Flame Appearance

Flames from the pilot and burner should be visually checked as soon as the heater is installed. In addition, periodically check the flames visually during operation.

Check the Pilot Flame (refer to lighting instructions)

The pilot flame must always be present when the heater is in operation. It should just touch the top of the thermocouple tip for natural. Refer to Figure 6.33 for correct pilot flame.

If the pilot flame does not touch the thermocouple, then the main burner cannot function reliably. Figure 6.34 for incorrect shape of pilot flame.

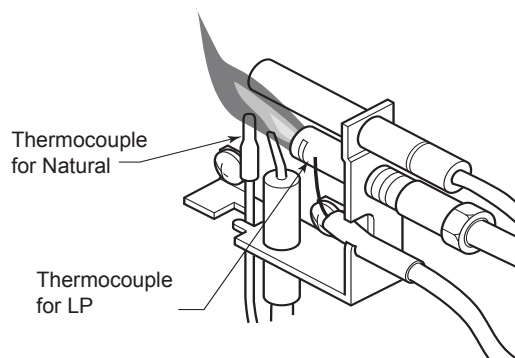


Figure 6.33 - Correct Appearance of Pilot Flame

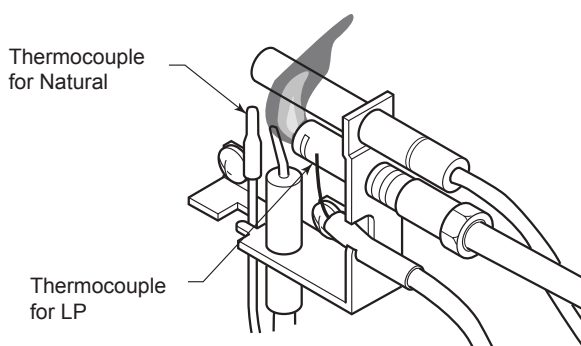


Figure 6.34 - Incorrect Appearance of Pilot Flame

In normal operation at full rate after 15 minutes, the following flame appearances should be observed:

Burner will have a random pattern of yellow flames as shown in Figure 6.35. There should be glowing embers on the front burner. **NOTE: The front flames and embers will be an opaque orange color during the burn off time.**

CAUTION: After a 15 minute pre-heat period, observe all yellow flames to ensure there is no impingement with any log. If any yellow flame is contacting any log, turn off log set and allow to cool. Remove all logs and carefully reinstall following log placement instructions precisely. Relight burner and check again for impingement of any flame on log. If flame impingement cannot be eliminated, contact your installer or dealer for assistance. Flame impingement on logs may create soot and possible property damage.

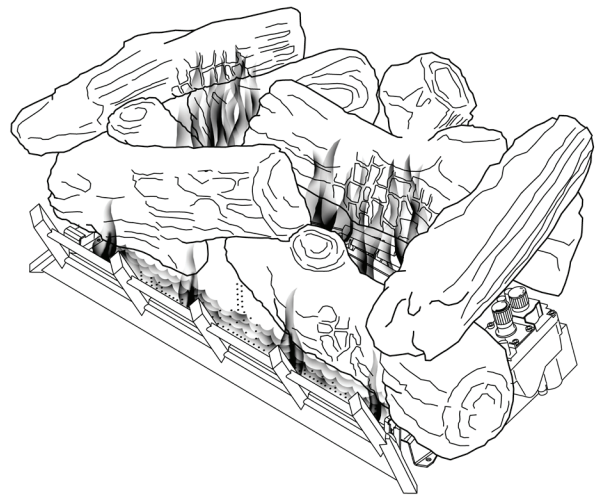


Figure 6.35 - Correct Appearance of Rear Flames

G. Operating Instructions

Avoid any drafts that alter burner flame patterns. Do not allow fans to blow directly into the fireplace. Do not place a blower inside the burn area of the firebox. Ceiling fans may create drafts that alter flame patterns. Sooting and improper burning will result.

During manufacturing, fabricating and shipping, various components of this appliance are treated with certain oils, films or bonding agents. These chemicals are not harmful, but may produce annoying smoke and smells as they are burned off during the initial operation of the appliance, possibly causing headaches or eye or lung irritation. *This is a normal and temporary occurrence.*

The initial break-in operation should last four hours with the burner at the highest setting. Provide maximum ventilation by opening windows or doors to allow odors to dissipate. Any odors remaining after this initial break-in will be slight and will disappear with continued use.

This appliance must not be used with glass doors in the closed position. This can lead to pilot outages and severe sooting outside the fireplace.