

# QUADRA-FIRE®

## CASTILE-B PELLET STOVE

### Owner's Manual Installation and Operation

**Models:**  
CASTILE-MBK-B  
CASTILE-OW-B  
CASTILE-OW-B  
CASTILE-OW-B  
CASTILE-OW-B



Tested and  
Listed by  Portland  
Oregon USA  
OMNI-Test Laboratories, Inc.



**Service parts list has been removed from this manual.  
Refer to Owner's Manual or individual service parts list.**

### CAUTION



• Important operating and maintenance instructions included.

### SAVE THESE INSTRUCTIONS

• Read, understand and follow these instructions for safe installation and operation.

• Leave this manual with party responsible for use and operation.

**DO NOT  
DISCARD**

### WARNING



**Please read this entire manual before installation and use of this pellet fuel-burning room heater. Failure to follow these instructions could result in property damage, bodily injury or even death.**

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- Do not overfire - If any external part starts to glow, you are overfiring. Reduce feed rate. Overfiring will void your warranty.
- Comply with all minimum clearances to combustibles as specified. Failure to comply may cause house fire.

### CAUTION

Tested and approved for wood pellets and shelled field corn fuel only. Burning of any other type of fuel voids your warranty.

### CAUTION

- Check building codes prior to installation.
- Installation **MUST** comply with local, regional, state and national codes and regulations.
  - Contact local building or fire officials about restrictions and installation inspection requirements in your area..

### WARNING



### HOT SURFACES!

Glass and other surfaces are hot during operation AND cool down.

### Hot glass will cause burns.

- Do not touch glass until it is cooled
- NEVER allow children to touch glass
- Keep children away
- CAREFULLY SUPERVISE children in same room as fireplace.
- Alert children and adults to hazards of high temperatures.

### High temperatures may ignite clothing or other flammable materials.

- Keep clothing, furniture, draperies and other flammable materials away.

### NOTE

To obtain a French translation of this manual, please contact your dealer or visit [www.quadrafire.com](http://www.quadrafire.com)

Pour obtenir une traduction française de ce manuel, s'il vous plaît contacter votre revendeur ou visitez [www.quadrafire.com](http://www.quadrafire.com)

# Congratulations

## and Welcome to the Quadra-Fire Family!

Hearth & Home Technologies welcomes you to our tradition of excellence! In choosing a Quadra-Fire appliance, you have our assurance of commitment to quality, durability, and performance.

This commitment begins with our research of the market, including 'Voice of the Customer' contacts, ensuring we make products that will satisfy your needs. Our Research and Development facility then employs the world's most advanced technology to achieve the optimum operation of our stoves, inserts

and fireplaces. And yet we are old-fashioned when it comes to craftsmanship. Each unit is meticulously fabricated and surfaces are hand-finished for lasting beauty and enjoyment. Our pledge to quality is completed as each model undergoes a quality control inspection.


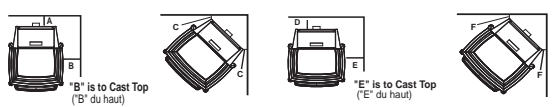
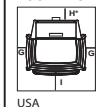
We wish you and your family many years of enjoyment in the warmth and comfort of your hearth appliance. Thank you for choosing Quadra-Fire.

**NOTE: Consult insurance carrier, local building inspector, fire officials or authorities having jurisdiction over restrictions, installation inspection and permits.**

### Label Location: Back of Appliance

**Test Lab & Report No.**

**Model Name Serial Number**

<p>Tested and Listed by  Portland Oregon USA OMNI-Test Laboratories, Inc.</p>	<p>Report / Rapport 061-S-77d-6.2</p>	<p><b>QUADRA-FIRE</b></p>	<p>Castile Pellet Stove</p>	<p>SERIAL NO. / NUMÉRO DE SÉRIE <b>007</b></p>	
<p>Listed Solid Fuel Room Heater/Pellet Type. Also suitable for Mobile Home Installation. This appliance has been tested and listed for use in Manufactured Homes in accordance with OAR 814-23-9000 through 814-23-909. OMNI-Test Laboratories, Inc. has determined that this appliance complies with Canadian Standards Association (CSA) B415.1 and Title 40 of the U.S. Code of Federal Regulations, Part 60, SubPart AAA OMNI-Test Laboratories Accreditation: The Standards Council of Canada, the American National Standards Institute, and the U.S. Environmental Protection Agency.</p> <p>Tested to: ASTM E1509-95, ULC S627-00, ULC/ORD-C1482-M1990 Room Heating Pellet Burning Type, (UM) 84-HUD FOR USAGE ONLY WITH PELLETTIZED WOOD OR SHELLLED FIELD CORN FUEL. Do not use any other type of fuel.</p> <p>Input Rating: 30,000 Btu/hr Electrical Rating: 115 VAC, 60 Hz, Start 4.1 Amps, Run 1.1 AMPS. Route power cord away from unit. Do not route cord under or in front of appliance. Do not obstruct the space beneath the heater.</p> <p>DANGER: Risk of electrical shock. Disconnect power supply before servicing. Replace glass only with 5mm ceramic available from your dealer. To start, set thermostat above room temperature, the stove will light automatically. To shutdown, set thermostat to below room temperature. For further instruction refer to owner's manual. Keep viewing and ash removal doors tightly closed during operation.</p>					
<p><b>PREVENT HOUSE FIRES</b></p> <p>Install and use only in accordance with manufacturer's installation and operating instructions. Contact local building or fire officials about restrictions and inspection in our area.</p> <p><b>WARNING - FOR MOBILE HOMES:</b> Do not install appliance in a sleeping room. An outside combustion air inlet must be provided. The structural integrity of the mobile home floor, ceiling and walls must be maintained. Refer to manufacturer's instructions and local codes for precautions required for passing chimney through a combustible wall or ceiling. Inspect and clean vent system frequently in accordance with manufacturer's instructions.</p> <p>DO NOT CONNECT THIS UNIT TO A CHIMNEY SERVING ANOTHER APPLIANCE. Use a 3" or 4" diameter type "L" or "PL" venting system.</p>			<p><b>PREVENTION DES FEUX DE MAISON</b></p> <p>Installez et utilisez en accord avec les instructions d'installation et d'opération du fabricant. Contactez le bureau de la construction ou le bureau des incendies au sujet des restrictions et des inspections d'installation dans votre voisinage. Ne pas obstruer l'espace au dessous de l'appareil.</p> <p><b>AVIS - Pour Les Maisons Mobiles:</b> Ne pas installer dans une chambre à coucher. Un tuyau extérieur de combustion d'air doit être installé et ne doit pas être obstrué lorsque l'appareil est en usage. La structure intégrale du plancher, du plafond et des murs de la maison mobile doit être maintenue intacte. Référez-vous aux instructions du fabricant et des codes locaux pour les précautions requises pour passer une cheminée à travers un mur ou un plafond combustibles, et les compensations maximales. Inspectez et nettoyez la cheminée fréquemment. Ne pas connecter cet appareil à une cheminée servant un autre appareil. Utilisez system de ventilation "L" ou "P" diamètre 76mm ou 102mm.</p>		
<p><b>MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS</b></p>  <p>*B* is to Cast Top ("B" du haut) *E* is to Cast Top ("E" du haut)</p> <p>Note 1: In residential installations, when using Parts 811-0890, (3 in. - 3 in. Top Vent Adapter) and 812-3570 (3 in. - 6 in. Offset Adapter), 24 gauge 6" single wall flue connector may be used.</p> <p>Note 1: Dans les installations résidentielles, lorsque les pièces 811-0890, (dessus de l'adaptateur de ventilation 76mm - 76mm) et 812-3570 (le ressort de l'adaptateur 76mm-152mm), un tuyau connecteur de 6" pour mur simple de calibre 24 peut être utilisé.</p> <p>Note 2: In manufactured home installation, when using Part 811-0890, (3 in. - 3 in. Top Vent Adapter) and 812-3570 (3 in. - 6 in. Offset Adapter), use listed double wall flue connector. An Outside Air Kit (Part 811-0872), must be used with manufactured home installation.</p> <p>Note 2: Pour l'installation dans les maisons préfabriquées, lorsque les pièces 811-0860, (dessus de l'adaptateur de ventilation 76mm - 76mm) et 812-3570 (le ressort de l'adaptateur 76 mm-152 mm), utilisez un tuyau connecteur enregistré pour mur double. Un assemblage d'air extérieur (pièce 811-0872), doit être utilisé pour l'installation dans les maisons préfabriquées.</p>		<p><b>ESPACES LIBRES MINIMUM DES MATERIAUX COMBUSTIBLES:</b></p> <p>A Back Wall to stove / Mur Arrière du poêle 27/51mm B Side Wall to Cast Top / Mur De Côté du haut 67/152mm</p> <p><b>CORNER INSTALLATION / NSTALLATION DU COIN :</b> C Side Wall / Mur De Côté 27/51mm</p> <p><b>VERTICAL 3" - 6" ADAPTER KIT (PART 812-3570) INSTALLATION:</b> UN ASSEMBLAGE POUR ADAPTEUR 3" - 6" (PIÈCE 812-3570) POUR INSTALLATION VERTICALE: D Back Wall to Flue Pipe / Mur Arrière tuyau rigide 3/76mm E Side Wall to Cast Top / Mur De Côté du haut 67/152mm</p> <p><b>CORNER INSTALLATION WITH VERTICAL ADAPTER KIT:</b> INSTALLATION DU COIN AVEC UN ASSEMBLAGE D'ADAPTEUR VERTICAL: F Side Wall / Mur De Côté 27/51mm</p> <p><b>ALCOVE INSTALLATION / INSTALLATION DE L'ALCÔVE:</b> Min. Alcove Height: / Une hauteur minimum de l'alcôve 437/1092mm Min. Alcove Side Wall: / Une hauteur minimum mur de côté de l'alcôve 67/152mm Max. Alcove Depth: / La profondeur maximum de l'alcôve 367/914mm</p>		<p><b>FLOOR PROTECTION / PROTECTION DU SOL</b></p>  <p>*Non-combustible floor protection must extend beneath the flue pipe when installed with horizontal venting or under the Top Vent Adapter with vertical installation. RECOMMENDED IN USA; REQUIRED IN CANADA</p> <p>USA G = 67/152mm H = 215/51mm I = 67/152mm</p> <p>CANADA G = 203 mm H = 51 mm I = 457 mm</p> <p>*Un protecteur incombustible de plancher doit s'étendre sous le conduit de cheminée pour une installation de ventilation horizontale ou sous un adaptateur de ventilation de dessus pour une installation verticale.</p> <p>ETATS-UNIS - RECOMMANDÉ; CANADA - REQUIERT Le poêle doit être placé sur une assise non combustible s'étendant tout autour de lui, comme les schémas l'indiquent. Mesurez la distance du devant (I) de la surface de la porte vitrée. 7021-131C</p>	

 **CAUTION:** HOT WHILE IN OPERATION DO NOT TOUCH, KEEP CHILDREN, CLOTHING AND FURNITURE AWAY. CONTACT MAY CAUSE SKIN BURNS. SEE NAMEPLATE AND INSTRUCTIONS. Operate this unit only with fuel hopper lid closed. Failure to do so may result in emissions of products of combustion from the hopper under certain conditions. Maintain hopper seal in good condition. Do not over fill the hopper.

**ATTENTION:** CHAUD LORS DE L'OPERATION. NE PAS TOUCHER. GARDEZ LES ENFANTS ET LES VÊTEMENTS LOIN DE L'ESPACE DÉSIGNÉ DE L'INSTALLATION. LE CONTACT PEUT CAUSER DES BRÛLURES À LA PEAU. VOIR L'ÉTIQUETTE ET LES INSTRUCTIONS. Opérez cet appareil uniquement avec le couvercle de la trémie fermé. Le défaut de ne pas suivre les instructions peut résulter, sous certaines conditions, en une combustion des émissions des produits venant de la trémie. Ne pas remplir la trémie trop pleine. 7014-197C

**QUADRA-FIRE**  
**CASTILE PELLET STOVE**

2012 2014 2015

JAN FEB MAR APR MAY JUNE  
JULY AUG SEPT OCT NOV DEC

U.S. ENVIRONMENTAL PROTECTION AGENCY  
This model is exempt from EPA certification under 40 CFR 60.891 by definition (Wood Heater) (90-to-Part 60)

Report / Rapport 061-S-77d-6.2  
Made in U.S.A. of U.S. and imported parts.  
7021-131C

**Mfg. Date**

**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:** Indicates practices which may cause damage to the fireplace or to property.

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# 1

## Listing and Code Approvals

### A. Appliance Certification

Model:	Castile Pellet Stove
Laboratory:	OMNI Test Laboratories, Inc.
Report No.	061-S-77d-6.2
Type:	Solid Fuel Room Heater/Pellet Fuel Burning Type
Standard:	ASTM E1509-04, ULC S627-00 and ULC/ORD-C1482-M1990 Room Heater Pellet Fuel Burning type and (UM) 84-HUD, Mobile Home Approved.

### B. Mobile Home Approved

This appliance is approved for mobile home installations when not installed in a sleeping room and when an outside combustion air inlet is used.

The structural integrity of the mobile home floor, ceiling, and walls must be maintained.

The appliance must be properly grounded to the frame of the mobile home and use only Listed pellet vent Class "L" or "PL" connector pipe.

A Quadra-Fire Outside Air Kit must be installed in a mobile home installation. You must order the Outside Air Kit separately.

**Note:** The appliance is also approved for installation into a shop.

### C. Glass Specifications

This appliance is equipped with 5mm ceramic glass. Replace glass only with 5mm ceramic glass. Please contact your dealer for replacement glass.

### D. Electrical Rating

115 VAC, 60 Hz, Start 4.1 Amps, Run 1.1 Amps

**NOTE:** Some generator or battery back-up systems may not be compatible with the micro-processor electronics on this appliance. Please consult the power supply manufacturer for compatible systems.

**NOTE:** This installation must conform with local codes. In the absence of local codes you must comply with the **ASTM E1509-95, ULC S627-00 ULC/ORD-C-1482-M1990 (UM) 84-HUD**

### E. BTU & Efficiency Specifications

<b>Particulate Emissions Rating:</b>	1.8 grams/hr
<b>*BTU Output:</b>	8,500 - 28,200 / hr
<b>Heating Capacity:</b>	up to 1,500 sq. ft. depending on climate zone
<b>Hopper Capacity:</b>	45 lbs
<b>Fuel:</b>	Wood Pellets or Shelled Corn
<b>Shipping Weight:</b>	214 lbs
<b>Efficiency</b>	78%

\*BTU output will vary, depending on the brand of fuel you use in your appliance. Consult your Quadra-Fire dealer for best results.

These heaters meet the US Environmental Protection Agency's emissions limits for pellet heaters. Under specific conditions the PS35 stove has been shown to deliver heat at rates ranging from 8,500 to 28,200 BTU/hr.

**WARNING! Risk of Fire!** Hearth & Home Technologies disclaims any responsibility for, and the warranty and agency listing will be voided by the above actions.

#### DO NOT:

- Install or operate damaged appliance
- Modify appliance
- Install other than as instructed by Hearth & Home Technologies
- Operate the appliance without fully assembling all components
- Overfire
- Install any component not approved by Hearth & Home Technologies
- Install parts or components not Listed or approved.

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage.

For assistance or additional information, consult a qualified installer, service agency or your dealer.

**NOTE:** Hearth & Home Technologies, manufacturer of this appliance, reserves the right to alter its products, their specifications and/or price without notice.

Quadra-Fire is a registered trademark of Hearth & Home Technologies.

# 2

## Getting Started

### A. Design, Installation & Location Considerations

#### 1. Appliance Location

**NOTICE:** Check building codes prior to installation.

- 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.

It is a good idea to plan your installation on paper, using exact measurements for clearances and floor protection, before actually beginning the installation

Consideration must be given to:

- Safety, convenience, traffic flow
- Placement of the chimney and chimney connector.
- If you are not using an existing chimney, place the appliance where there will be a clear passage for a factory-built listed chimney through the ceiling and roof.
- Installing an optional outside air kit would affect the location of the vent termination.

Since pellet exhaust can contain ash, soot or sparks, you must consider the location of:

- Windows
- Air Intakes
- Air Conditioner
- Overhang, soffits, porch roofs, adjacent walls
- Landscaping, vegetation

When locating vent and venting termination, vent above roof line when possible.

**Warning! Risk of Fire** Damaged parts could impair safe operation. Do NOT install damaged, incomplete or substitute components.

**CAUTION!** If burning shelled field corn, you must use approved venting specifically designed for corn to prevent corrosion or degradation. Follow the instructions from the venting manufacturer.

**NOTICE:** Locating the appliance in a location of considerable air movement can cause intermittent smoke spillage from appliance. Do not locate appliance near:

- Frequently open doors
- Central heat outlets or returns

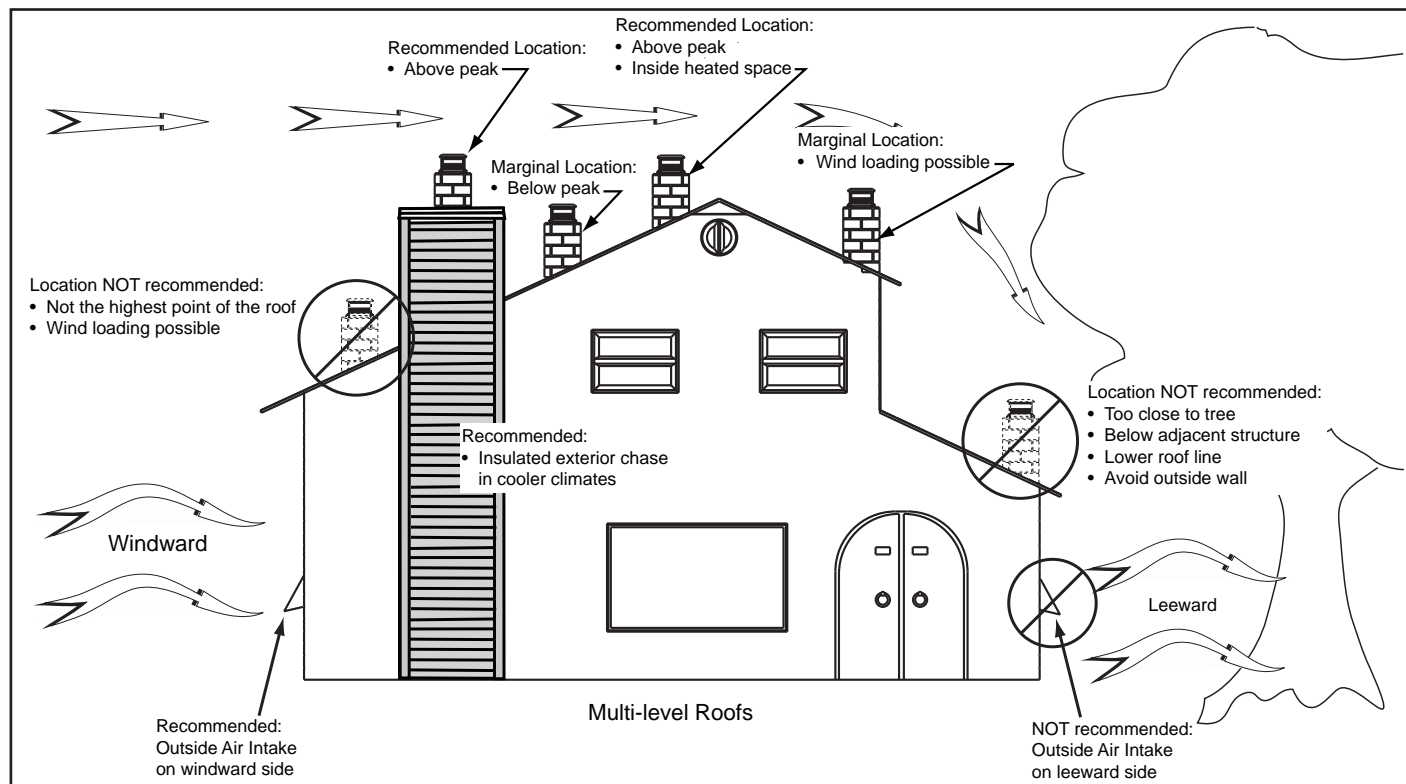



Figure 5.1



**B. Locating Your Appliance & Chimney**

Location of the appliance and chimney will affect performance.

- Install through the warm airspace enclosed by the building envelope. This helps to produce more draft, especially during lighting and die-down of the fire.
- Penetrate the highest part of the roof. This minimizes the effects of wind loading.
- Locate termination cap away from trees, adjacent structures, uneven roof lines and other obstructions.
- Minimize the use of chimney offsets.
- Consider the appliance location relative to floor and ceiling and attic joists.
- Take into consideration the termination requirements on **Page 11**.

 <b>CAUTION</b>
<ul style="list-style-type: none"> <li>• DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVICING ANOTHER APPLIANCE.</li> <li>• DO NOT CONNECT TO ANY AIR DISTRIBUTION DUCT OR SYSTEM.</li> </ul>

**C. Thermostat Location**

The thermostat’s location will have some effect on the appliance’s operation. When the thermostat is located close to the appliance, it may require a slightly higher temperature setting to keep the rest of the house comfortable. If the thermostat location is in an adjacent room or on a different floor level, you will notice higher temperatures near the appliance.

**D. Draft**

Draft is the pressure difference needed to vent appliances successfully. When an appliance is drafting successfully, all combustion byproducts are exiting the home through the chimney.

Considerations for successful draft include:

- Preventing negative pressure
- Location of appliance and chimney

**NOTICE:** *Hearth & Home Technologies assumes no responsibility for the improper performance of the chimney system caused by:*

- *Inadequate draft due to environmental conditions*
- *Downdrafts*
- *Tight sealing construction of the structure*
- *Mechanical exhausting devices*

**E. Negative Pressure**

**WARNING! Risk of Asphyxiation!** *Negative pressure can cause spillage of combustion fumes and soot.*




Negative pressure results from the imbalance of air available for the appliance to operate properly. It can be strongest in lower levels of the house.

Causes include:

- Exhaust fans (kitchen, bath, etc.)
- Range hoods
- Combustion air requirements for furnaces, water heaters and other combustion appliances
- Clothes dryers
- Location of return-air vents to furnace or air conditioning
- Imbalances of the HVAC air handling system
- Upper level air leaks such as:
  - Recessed lighting
  - Attic hatch
  - Duct leaks

To minimize the effects of negative air pressure:

- Install the outside air kit with the intake facing prevailing winds during the heating season
- Ensure adequate outdoor air for all combustion appliances and exhaust equipment
- Ensure furnace and air conditioning return vents are not located in the immediate vicinity of the appliance
- Avoid installing the appliance near doors, walkways or small isolated spaces
- Recessed lighting should be a “sealed can” design
- Attic hatches weather stripped or sealed
- Attic mounted duct work and air handler joints and seams taped or sealed

 <b>WARNING</b>
<div style="display: flex; align-items: center;">  <div> <p><b>Fire Hazard.</b></p> <ul style="list-style-type: none"> <li>• Do not operate appliance before reading and understanding operating instructions.</li> <li>• Failure to operate appliance properly may cause a house fire.</li> </ul> </div> </div>


**F. Fire Safety**

To provide reasonable fire safety, the following should be given serious consideration:


- Install at least one smoke detector on each floor of your home.
- Locate smoke detector away from the heating appliance and close to the sleeping areas.
- Follow the smoke detector manufacturer’s placement and installation instructions and maintain regularly.
- Conveniently locate a Class A fire extinguisher to contend with small fires.
- In the event of a hopper fire:
  - Evacuate the house immediately.
  - Notify fire department.


**G. Tools And Supplies Needed**

<b>Tools and building supplies normally required for installation, unless installing into an existing masonry fireplace:</b>	
Reciprocating Saw	Safety Glasses
Channel Locks	Framing Square
Hammer	Electric Drill & Bits (1/4")
Phillips Screwdriver	1/4" Self-Tapping Screws
Tape Measure	
Plumb Line	<u>May also need:</u>
Level	Vent Support Straps
Framing Material	Venting Paint
Hi-temp Caulking Material	
Gloves	

**H. Inspect Appliance & Components and Pre-Use Check List**

1.		Place the appliance in a location near the final installation area and follow the procedures below:
2.		Open the appliance and remove all the parts and articles packed inside the Component Pack. Inspect all the parts and glass for shipping damage. Contact your dealer if any irregularities are noticed.
3.		All safety warnings have been read and followed.
4.		This Owner’s Manual has been read.
5.		Floor protection requirements have been met.
6.		Venting is properly installed.
7.		The proper clearances from the appliance and chimney to combustible materials have been met.
8.		The masonry chimney is inspected by a professional and is clean, or the factory built metal chimney is installed according to the manufacturer’s instructions and clearances.
9.		The chimney meets the required minimum height.
10.		All labels have been removed from the glass door.
11.		Plated surfaces have been wiped clean, if applicable.
12.		Thermostat or remote has been installed.
13.		A power outlet is available nearby.


 **WARNING**




Inspect appliance and components for damage. Damaged parts may impair safe operation.

- Do NOT install damaged components.
- Do NOT install incomplete components.
- Do NOT install substitute components.

Report damaged parts to dealer.

 **WARNING**



**Fire Risk.**

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.
- Operating appliance without fully assembling all components.
- Operating appliance without legs attached (if supplied with unit).
- Do NOT Overfire

**Or any such action that may cause a fire hazard.**

# 3 Dimensions and Clearances

## A. Appliance Dimensions

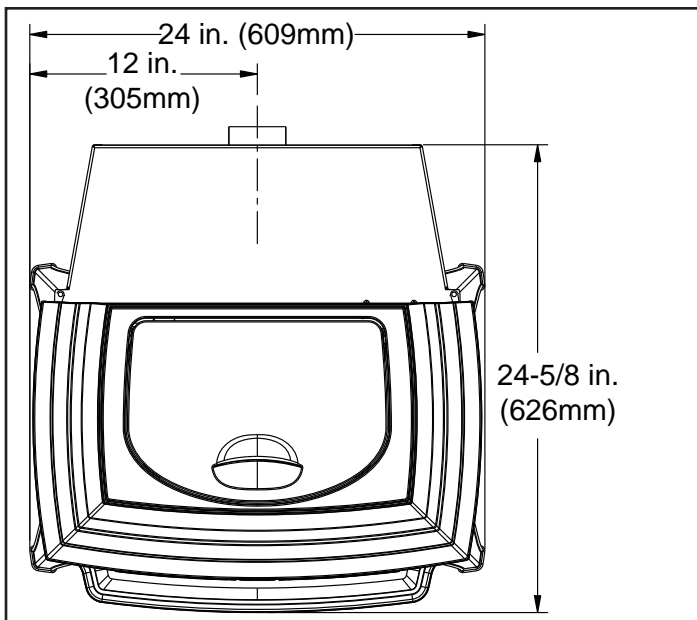


Figure 8.1 - Top View

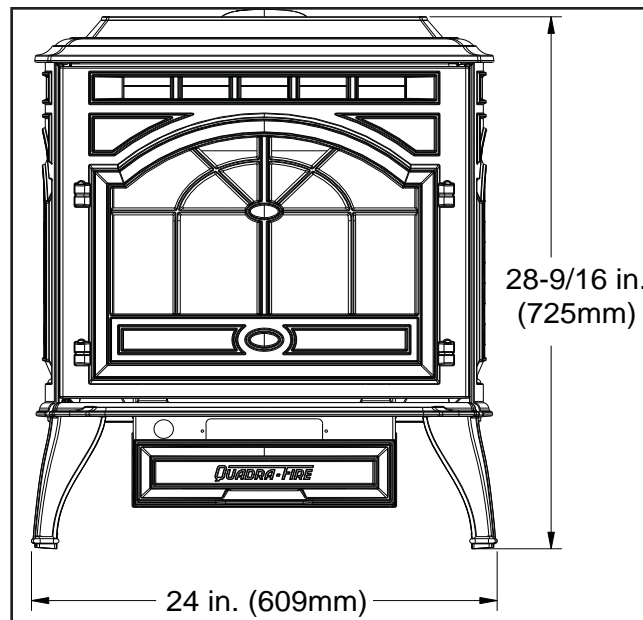


Figure 8.2- Front View

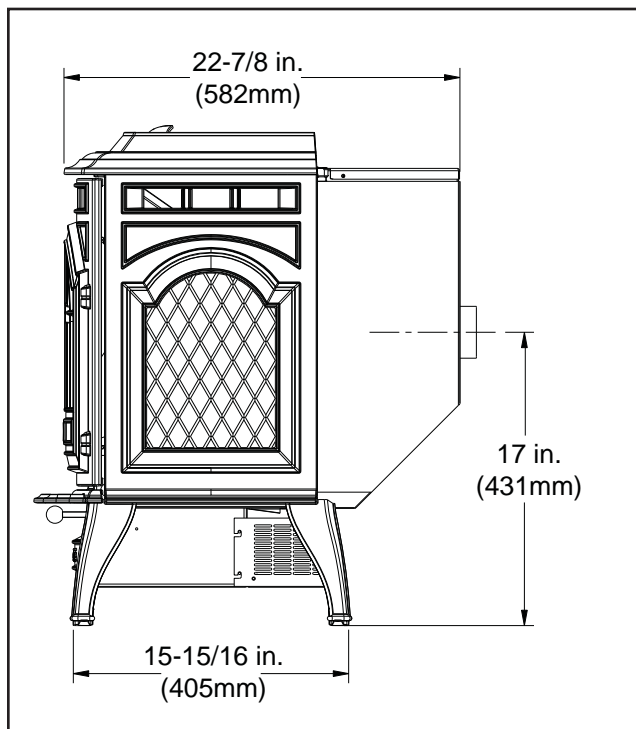


Figure 8.3 -Side View

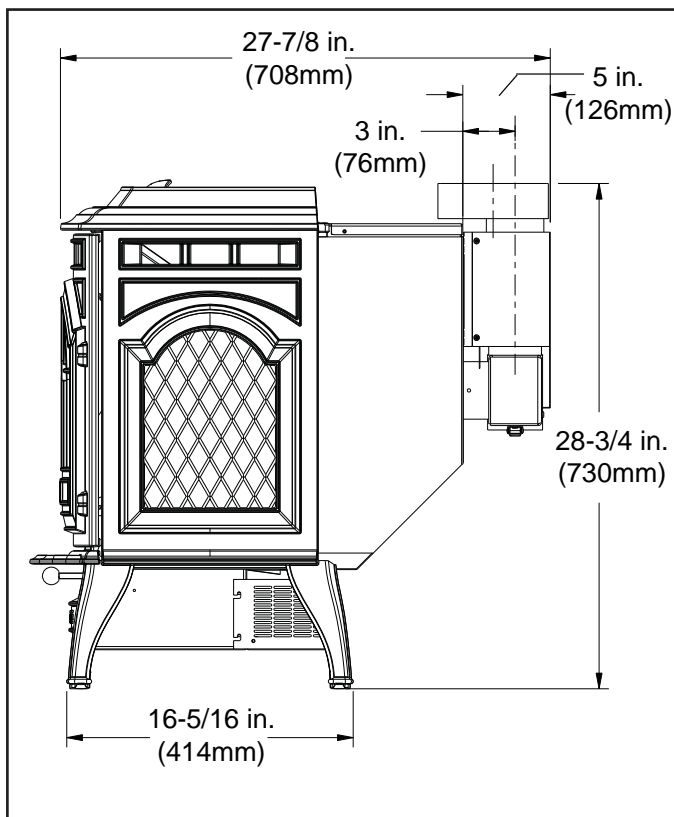
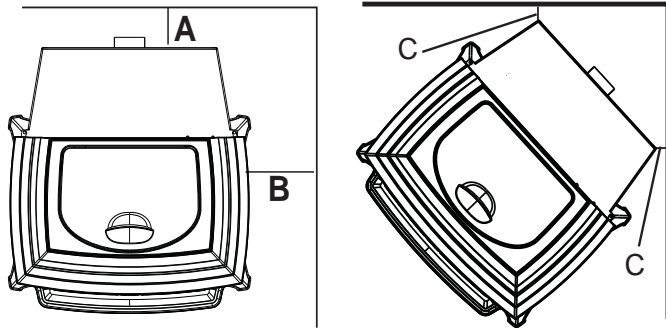


Figure 8.4 - Side View with Top Vent Adapter



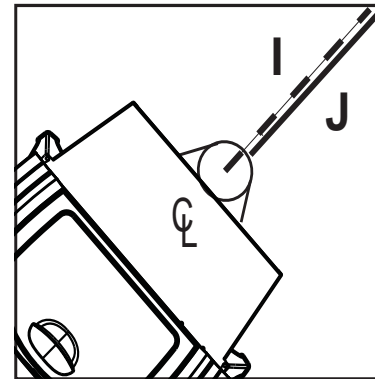
**B. Clearances to Combustibles (UL and ULC)**



Alcove Installation	Inches	Millimeters
Minimum Alcove Height	43	1092
Minimum Alcove Side Wall	6	152
Minimum Alcove Width	38	965
Maximum Alcove Depth	36	914

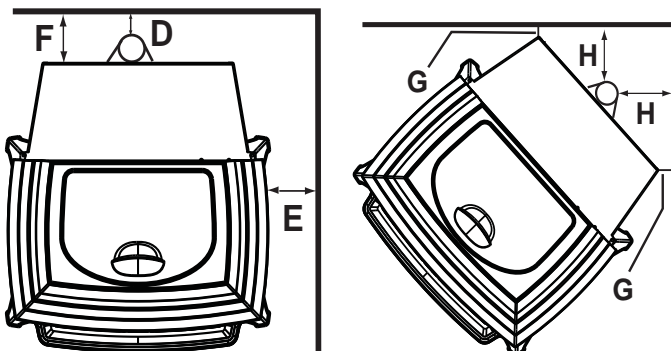
Straight Back Against Wall		Inches	Millimeters
<b>A</b>	Back Wall to Appliance	2	51
<b>B</b>	Side Wall to Appliance	6	152

Corner Installation		Inches	Millimeters
<b>C</b>	Walls to Appliance	2	51



Dimension to Corner		Inches	Millimeters
<b>I</b>	Flue Center Line	10-3/8	264
<b>J</b>	Back of Top Vent Adapter	9-1/8	232

**Installations with:  
3 to 3 inch Top Vent Adapter and  
3 to 6 inch Offset Adapter Kit**



Vertical Installation		Inches	Millimeters
<b>D</b>	Back Wall to Flue Pipe	3	76
<b>E</b>	Side Wall to Cast Top	6	152
<b>F</b>	Back Wall to Appliance	7	178

Corner Installation		Inches	Millimeters
<b>G</b>	Walls to Appliance	2	51
<b>H</b>	Side Wall to Flue Pipe	3	76

**⚠ WARNING**

Fire Risk.  
Comply with all minimum clearances to combustibles as specified.

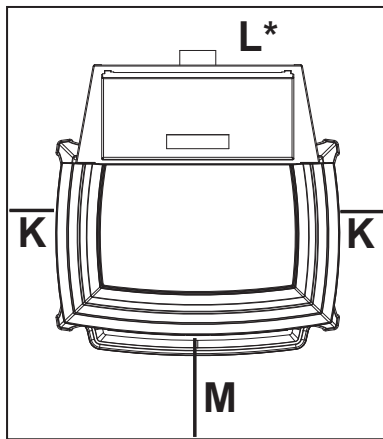
Failure to comply may cause house fire.

**NOTE:**

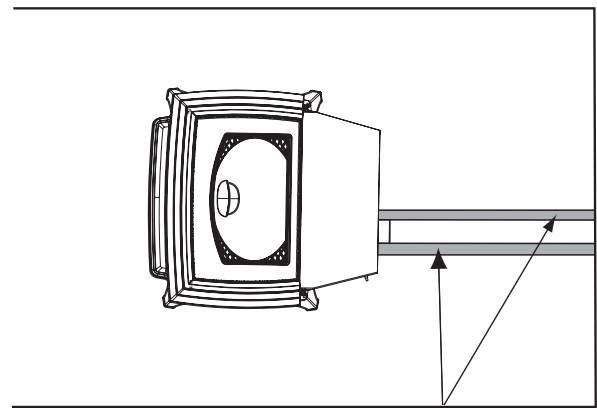
- Illustrations reflect typical installations and are FOR DESIGN PURPOSES ONLY.
- Illustrations/diagrams are not drawn to scale.
- Actual installation may vary due to individual design preference.

**C. Hearth Pad Requirements (UL and ULC)**

Use a non-combustible floor protector, extending beneath appliance and to the front, sides and rear as indicated. Measure front distance “M” from the surface of the glass door.



**Figure 10.1**



Must extend 2 inches (51mm) beyond each side of pipe (shaded area)

**Figure 10.2**

**USA Installations**

Hearth Pad Requirements		Inches	Millimeters
<b>K</b>	Sides	2	51
<b>L*</b>	Back	2	51
<b>M</b>	Front	6	152

**CANADA Installations**

Hearth Pad Requirements		Inches	Millimeters
<b>K</b>	Sides	8	203
<b>L*</b>	Back	2	51
<b>M</b>	Front	18	457

**\*L Exception for Horizontal Installations:**

**See Figure 10 2**

**USA INSTALLATIONS:** A non-combustible floor protection is recommended extending beneath the flue pipe when installed with horizontal venting or under the Top Vent Adapter with vertical installation.

**CANADA INSTALLATIONS:** A non-combustible floor protection extending beneath the flue pipe is **required** with horizontal venting or under the Top Vent Adapter with vertical installation.


# 4 Vent Information



## A. Chimney and Exhaust Connection

1. **Chimney & Connector:** Use 3 or 4 inch (76-102mm) diameter type "L" or "PL" venting system. It can be vented vertically or horizontally.
2. **Mobile Home:** Approved for all Listed pellet vent. If using the 3 inch (76mm) vertical Top Vent Adapter Kit or the 3 to 6 inch (76-152mm) Top Vent Offset Adapter, use Listed double wall flue connector. A Quadra-Fire Outside Air Kit must be used with manufactured home installations.
3. **Residential:** The 3 inch (76mm) vertical Top Vent Adapter Kit and the 3 to 6 inch (76-152mm) Top Vent Offset Adapter are tested to use 24 gauge single wall flue connector or Listed double wall flue connector to Class A Listed metal chimneys, or masonry chimneys meeting International Conference of Building Officials (ICBO) standards for solid fuel appliances.
4. **INSTALL VENT AT CLEARANCES SPECIFIED BY THE VENT MANUFACTURER.**
5. Secure exhaust venting system to the appliance with at least 3 screws. Also secure all connector pipe joints with at least 3 screws through each joint.
6. **DO NOT INSTALL A FLUE DAMPER IN THE EXHAUST VENTING SYSTEM OF THIS UNIT.**
7. **DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.**

**NOTE: All pipe must be welded seam pipe whenever possible. Seal pipe joints with high temperature silicone (500°F [260°C] minimum rated only). Do not put silicone inside of pipe.**

**NOTE: If burning shelled field corn, you must use approved venting specifically designed for corn. Follow the instructions from the venting manufacturer.**

 <b>WARNING</b>	
	Fire Hazard.
	<ul style="list-style-type: none"> <li>• Only LISTED venting components may be used.</li> <li>• NO OTHER vent components may be used. Substitute or damaged vent components may impair safe operation.</li> </ul>

 <b>WARNING</b>	
	Vent surfaces get HOT, can cause burns if touched. Noncombustible shielding or guards may be required

## B. Venting Termination Requirements

### CAUTION

Do not terminate vent in any enclosed or semi-enclosed area such as a carport, garage, attic, crawl space, under a sun deck or porch, narrow walkway or closely fenced area, or any location that can build up a concentration of fumes such as a stairwell, covered breezeway, etc.

1. Termination must exhaust above air inlet elevation. It is recommended that at least 60 inches (1.5m) of vertical pipe be installed when appliance is vented directly through a wall. This will create a natural draft, which will help prevent the possibility of smoke or odor venting into the home during a power outage. It will also keep exhaust from causing a nuisance or hazard by exposing people or shrubs to high temperatures. The safest and preferred venting method is to extend the vent vertically through the roof.
2. Distance from doors and opening windows, or gravity or ventilation air inlets into building:
  - a. Not less than 48 inches (1.2m) below;
  - b. Not less than 48 inches (1.2m) horizontally from;
  - c. Not less than 12 inches (305mm) above.
3. Distance from permanently closed windows:
  - a. Not less than 12 inches (305mm) below, horizontally from or above.
4. Distance between bottom of termination and grade should be 12 inches (305mm) minimum. This is conditional upon plants in the area, and nature of grade surface. The grade surface must be a noncombustible material (i.e., rock, dirt). The grade surface must not be lawn. Distance between bottom of termination and public walkway should be 84 inches (2.13m) minimum.
5. Distance to combustible materials must be 24 inches (610mm) minimum. This includes adjacent buildings, fences, protruding parts of the structure, roof overhang, plants and shrubs, etc.
6. Termination Cap Location (Home Electrical Service)
  - Side-to-side clearance is to be the same as minimum clearance to vinyl inside corners.
  - Clearance of a termination cap below electrical service shall be the same as minimum clearance to vinyl soffits.
  - Clearance of a termination cap above electrical service will be 12 inches minimum.
  - Location of the vent termination must not obstruct or interfere with access to the electrical service.

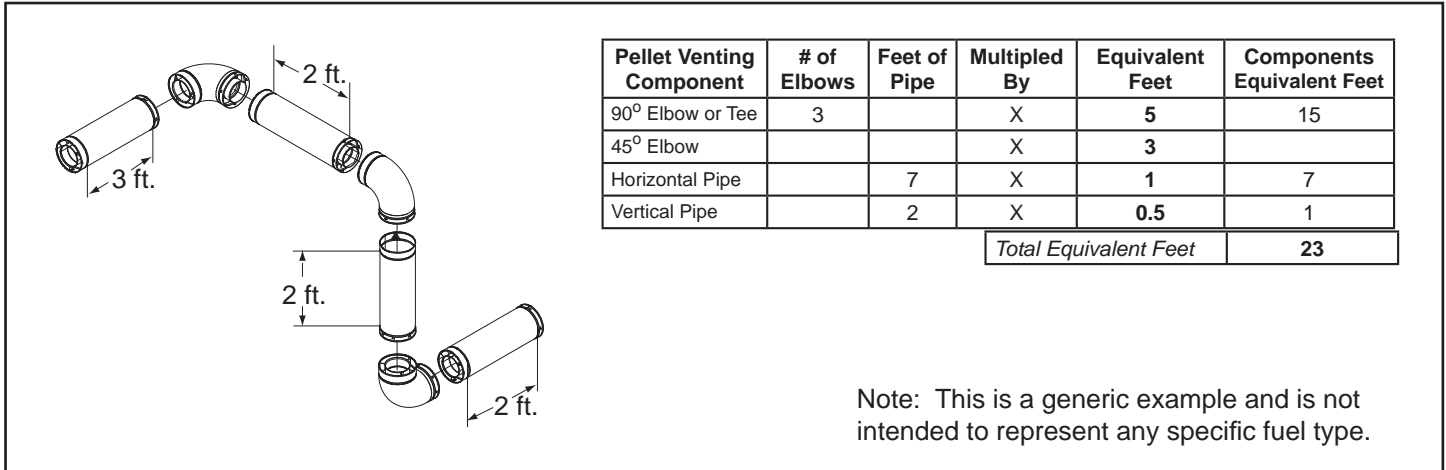
**C. Equivalent Feet of Pipe**

The table below can help you calculate the equivalent feet of pipe which is a method used to determine pellet vent size.  
**Figure 12.1**

**⚠ WARNING**

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to the owner's information manual provided with this appliance. For assistance or additional information consult a qualified installer, service agency or your dealer.

**Example of 3 Elbow-Rear Vent Termination Calculaton**



Note: This is a generic example and is not intended to represent any specific fuel type.

**Figure 12.1**

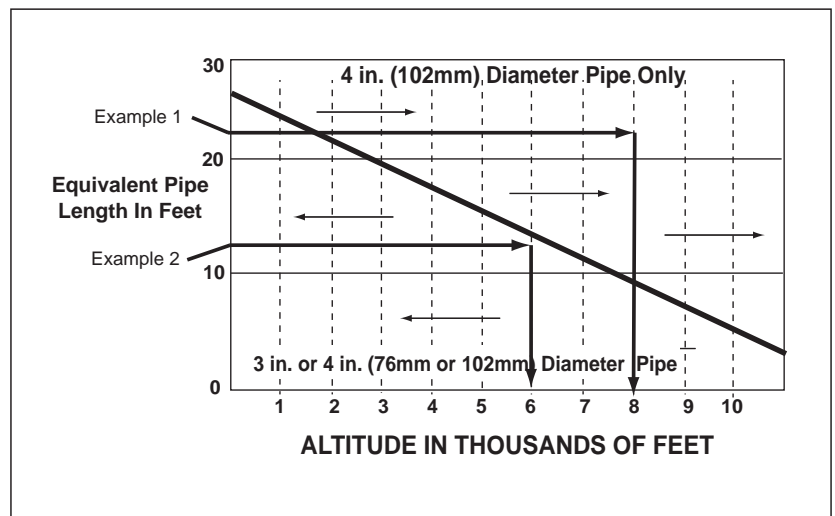
**D. Pipe Selection Chart**

The chart will help you in determining proper venting size according to the equivalent feet of pipe calculated above and the altitude above sea level of this installation. **See Figure 12.2.**

Locate the calculated equivalent feet of pipe on the vertical left side of the chart. Move to the right horizontally on the chart until you reach your altitude above sea level.

If you fall below the diagonal line, 3 or 4 inch (76 to 102mm) pipe may be used. If it is anywhere above the diagonal line, a 4 inch (102mm) diameter pipe is required.

The chart reveals that a 90° elbow is 5 times as restrictive to the flow of exhaust gases under positive pressure as 1 foot of horizontal pipe, and a foot of horizontal pipe is twice as restrictive as a foot of vertical pipe.



**Figure 12.2**

**Example 1:** If the equivalent length of pipe is 23 feet (7m) with altitude of 8,000 feet (2438m) you must use 4 inch (102mm) diameter type “L” or “PL” vent.

**Example 2:** If the equivalent length of pipe is 12 feet (3.7m) with altitude of 6,000 feet (1829m) you may use 3 or 4 inch (76 to 102mm) diameter type “L” or “PL” vent

# 5 Venting Systems

## A. Alcove

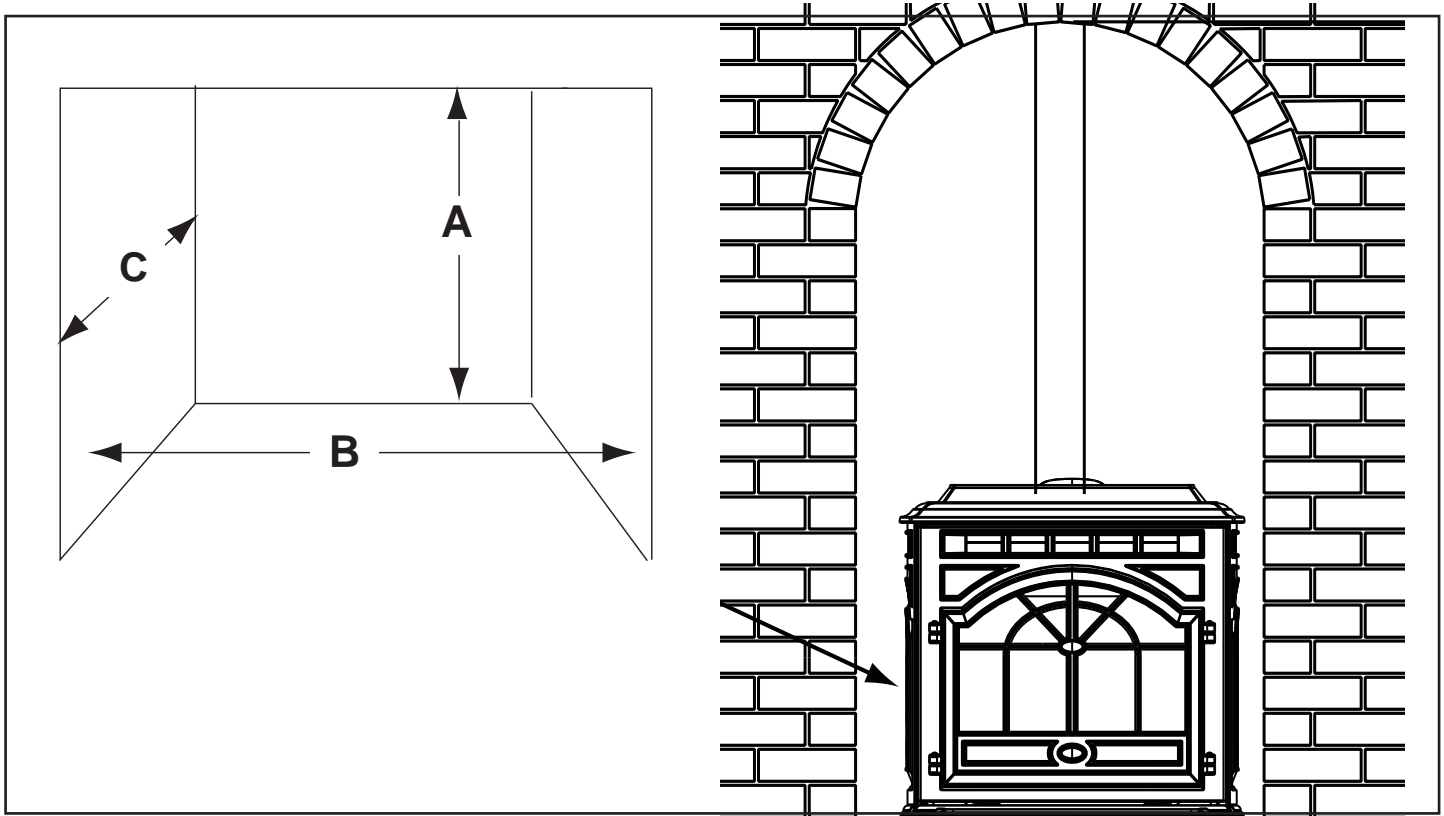


Figure 13.1

		Minimum		Maximum	
		Inches	Millimeters	Inches	Millimeters
<b>A</b>	Height	43	1092	n/a	n/a
<b>B</b>	Width	38	965	n/a	n/a
<b>C</b>	Depth	n/a	n/a	36	914
<b>D</b>	To Side Wall	6	152	n/a	n/a

All minimums listed are to a combustible surface.

**NOTE:**

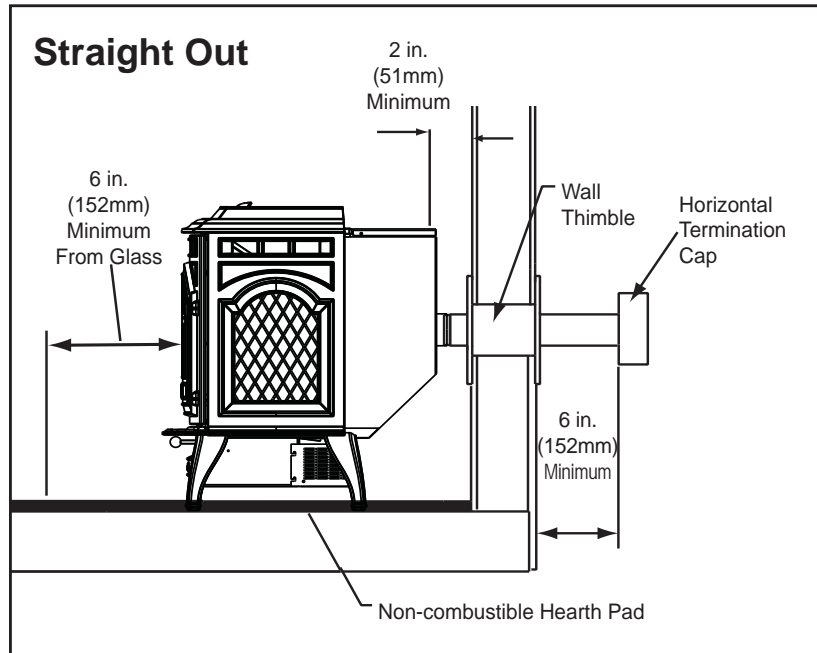
- Illustrations reflect typical installations and are FOR DESIGN PURPOSES ONLY.
- Illustrations/diagrams are not drawn to scale.
- Actual installation may vary due to individual design preference.



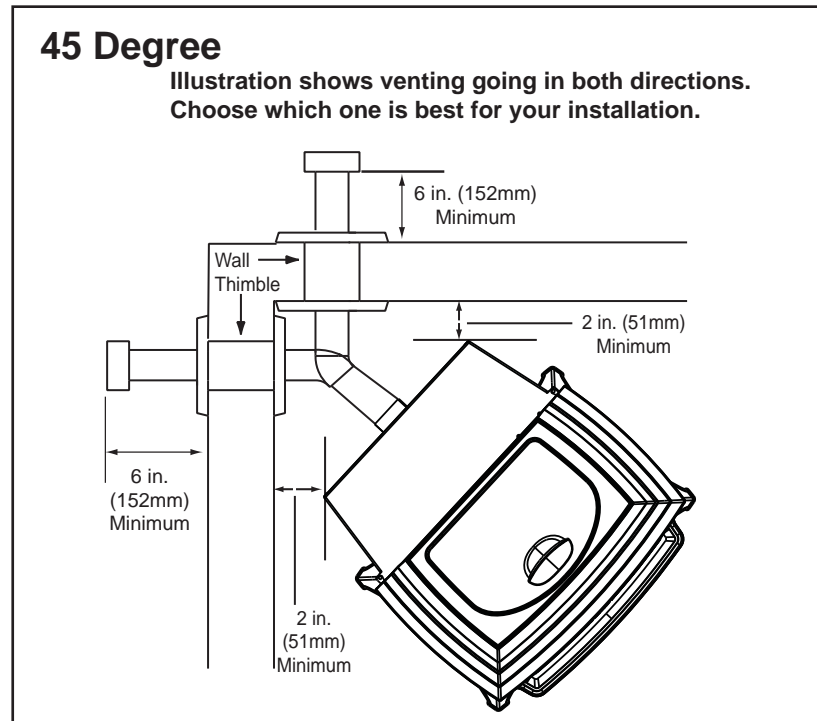
**B. Through The Wall**

Horizontal termination cap must be a minimum of 6 inches. (152mm) from the wall. Approved for mobile home installations. Must use 3 or 4 inch (76-102mm) "L" or "PL" listed pellet venting or listed double wall pipe and a Quadra-Fire Outside Air Kit in mobile homes.

**NOTE:**  
In Canada, where passage through a wall or partition of combustible construction is desired, the installation shall conform to CAN/CSA-B365



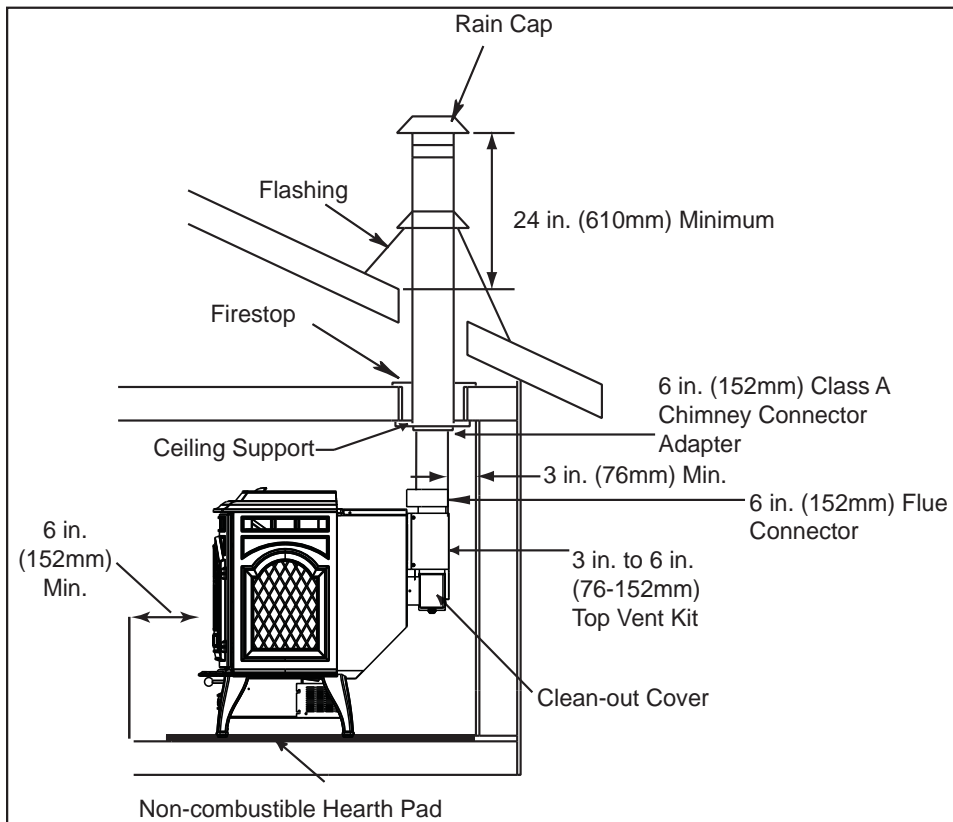
**Figure 14.1**



**Figure 14.2**

**NOTICE:**  
Please note that while the minimum clearance for the termination cap is 6 inches (152mm) there is the possibility of soot buildup around the termination area. If this occurs we suggest to move the termination further away from the house to prevent it.

**C. Vertical**

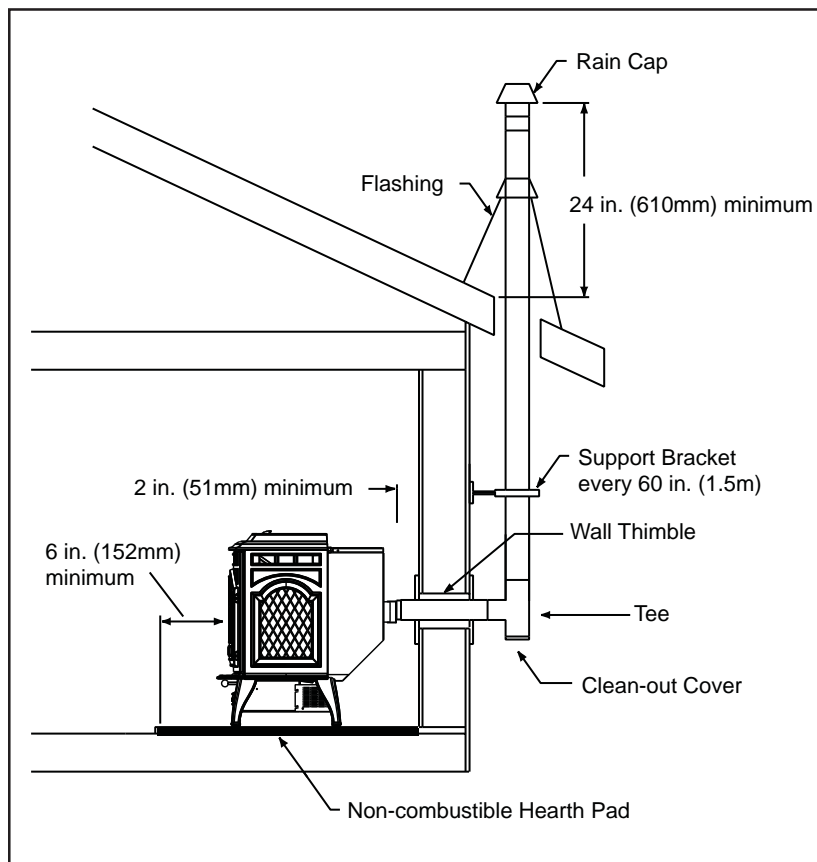


We recommend a minimum of 60 in. (1.5m) vertical, however above the eave is preferred.


Both installations are approved for mobile home installations. Must use 3 or 4 inch (76 to 102mm) "L" or "PL" listed pellet venting or listed double wall pipe and Quadra-Fire Outside Air Kit in mobile homes. Single wall pipe is approved for residential installations only.

**Figure 15.1**


**D. Through The Wall & Vertical**



**Figure 15.2**



**WARNING**

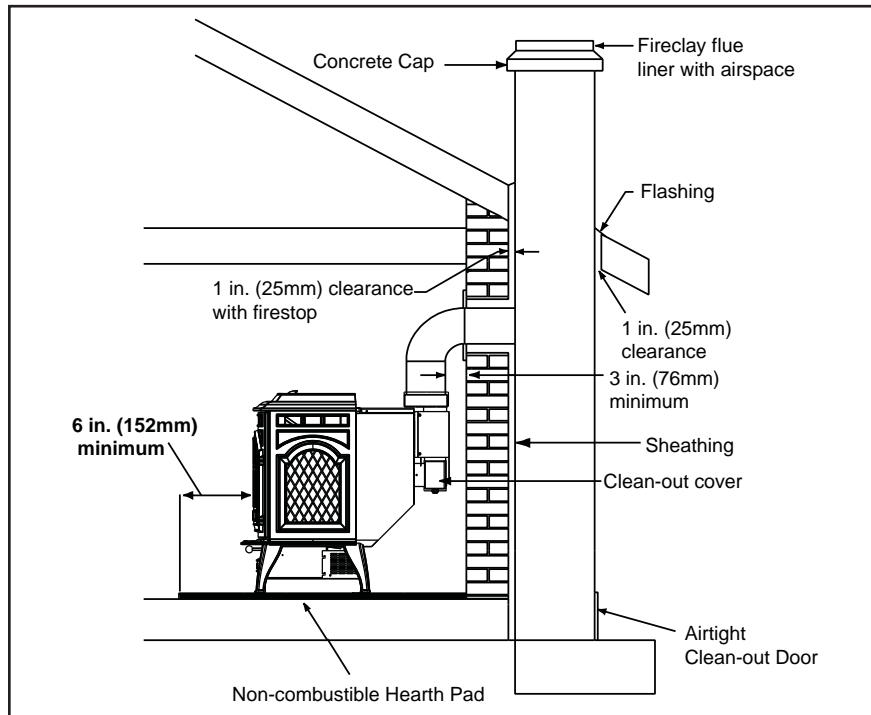


**Fire Hazard**

Inspection of Chimney:

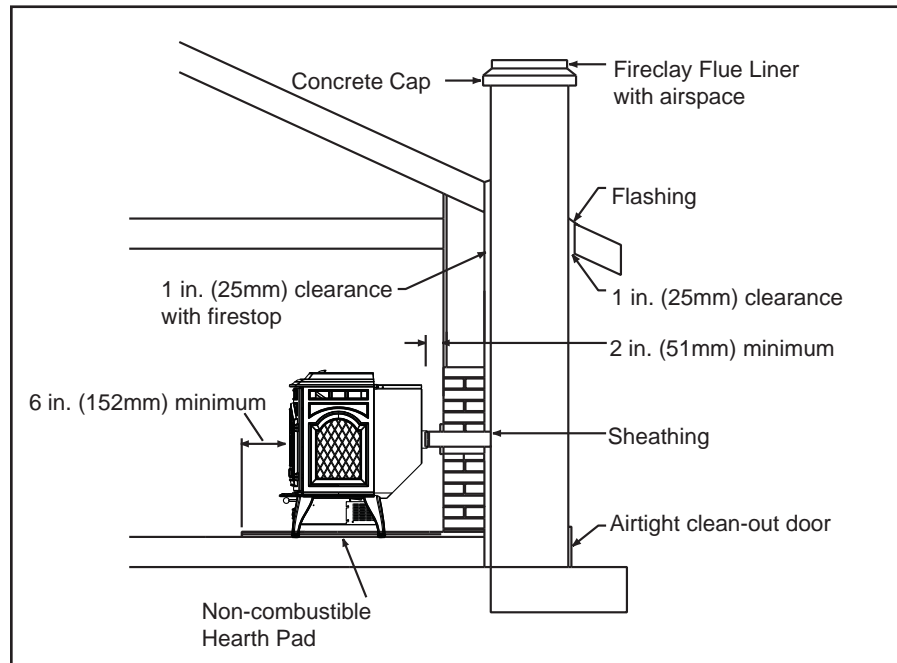
- Masonry chimney must be in good condition.
- Meets minimum standard of NFPA 211
- Factory-built chimney must be minimum 6 in. (152mm) UL103 HT.

**E. Masonry**



**Figure 16.1**

**F. Alternate Masonry**



**Figure 16.2**



# 6 Mobile Home

## A. Mobile Home Installation

**You must use a Quadra-Fire Outside Air Kit for installation in a mobile home.**

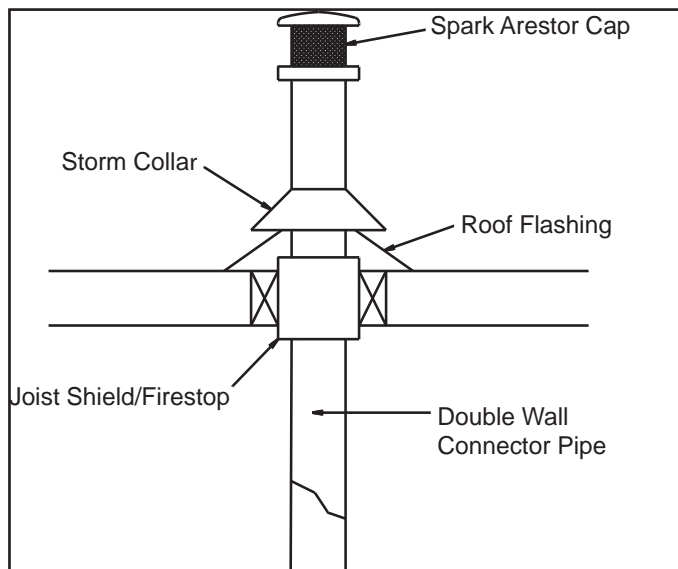
1. An outside air inlet must be provided for the combustion air and must remain clear of leaves, debris, ice and/or snow. It must be unrestricted while the appliance is in use to prevent room air starvation which causes smoke spillage. Smoke spillage can also set off smoke alarms.
2. The combustion air duct system must be made of metal. It must permit zero clearance to combustible construction and prevent material from dropping into the inlet or into the area beneath the dwelling and contain a rodent screen.
3. The appliance must be secured to the mobile home structure by bolting it to the floor (using lag bolts). Use the same holes that secured the appliance to the shipping pallet.
4. The appliance must be grounded with #8 solid copper grounding wire or equivalent, terminated at each end with an NEC approved grounding device.
5. Refer to clearances to combustibles and floor protection requirements on **pages 9 & 10** for listings to combustibles and appropriate chimney systems.
6. Use silicone to create an effective vapor barrier at the location where the chimney or other component penetrates to the exterior of the structure.
7. Follow the chimney manufacturer's instructions when installing the vent system for use in a mobile home.
8. Installation shall be in accordance with the Manufacturers Home & Safety Standard (HUD) CFR 3280, Part 24.

 <b>WARNING</b>
Installation must comply with Manufactured Home and Safety Standard (HUD), CFR 3280, Part 24.


 <b>WARNING</b>
 <b>Asphyxiation Risk.</b> NEVER INSTALL IN A SLEEPING ROOM. Consumes oxygen in the room.

<b>CAUTION</b>
THE STRUCTURAL INTEGRITY OF THE MOBILE HOME FLOOR, WALL AND CEILING/ROOF MUST BE MAINTAINED  Do NOT cut through: <ul style="list-style-type: none"> <li>• Floor joist, wall, studs or ceiling trusses.</li> <li>• Any supporting material that would affect the structural integrity.</li> </ul>

<b>CAUTION</b>
Never draw outside combustion air from: <ul style="list-style-type: none"> <li>• Wall, floor or ceiling cavity</li> <li>• Enclosed space such as an attic or garage</li> </ul>



**Figure 17.1**

 <b>WARNING</b>
Products of combustion generate carbon monoxide and different fuels generate different levels. Carbon monoxide <ul style="list-style-type: none"> <li>• Only use approved fuels in this appliance.</li> <li>• Always keep door shut during operation</li> </ul> <p>CO can kill you before you are aware it is in your home. At lower levels of exposure, CO causes mild effects that are often mistaken for the flu. These symptoms include headaches, dizziness, disorientation, nausea and fatigue. The effects of CO exposure can vary greatly from person to person depending on age, overall health and the concentration and length of exposure.</p>

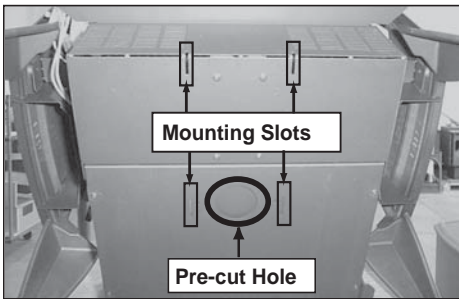
# 7 Appliance Set-Up

## A. Outside Air Kit Instructions

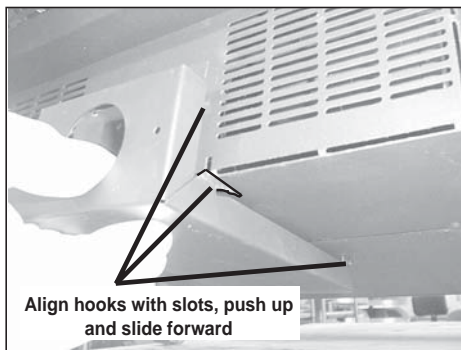
**Parts Included in Kit:** 1 piece of 2 inch x 3 foot flex hose, 2 hose clamps, 1 collar assembly, 1 termination cap assembly, 1 trim ring, 12 screws.

**Tools Needed:** Phillips headscrewdriver; wire cutters; hole saw or jig saw.

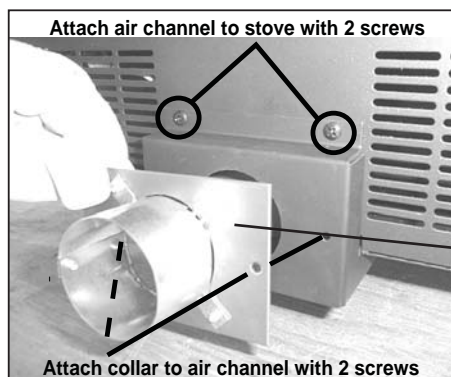
1. **Figure 18.1** shows bottom of convection blower mount and pre-cut air vent opening for reference only. Air channel should be mounted with stove in upright position.
2. Align hooks in air channel with slots in convection blower mount and ash box, **Figure 18.2**. Push up and slide forward.
3. Secure air channel to appliance with 2 screws and secure the collar assembly to the air channel with 2 screws. **Figure 18.3**.



**Figure 18.1**



**Figure 18.2**

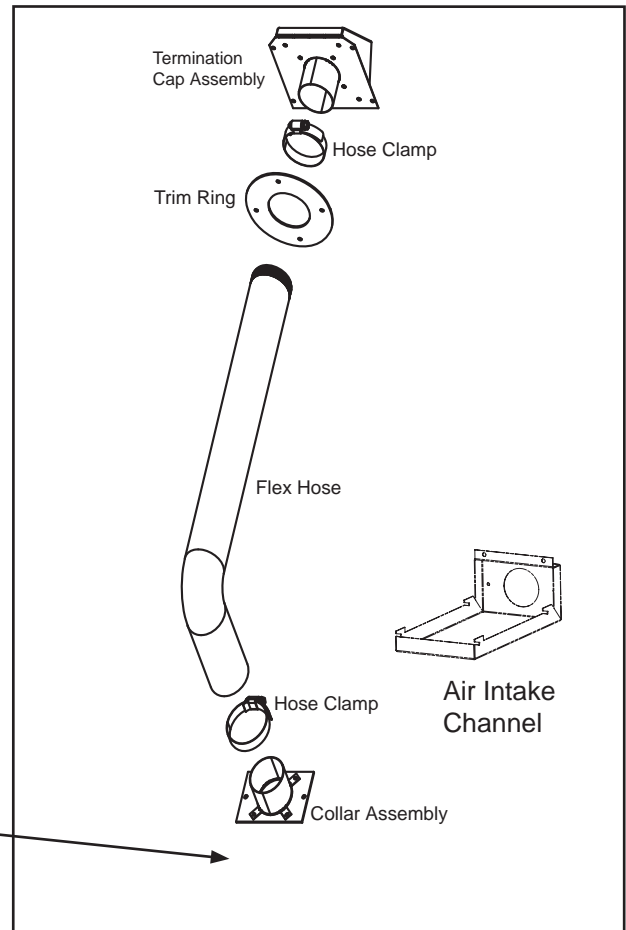


**Figure 18.3**

### CAUTION

- Never draw outside combustion air from:
- Wall, floor or ceiling cavity
  - Enclosed space such as an attic or garage

1. Measure distance from floor to air vent opening in appliance and mark location on wall.  
Use saw to cut opening in wall. Cut a 2-1/2 to 3 inch (64-76mm) opening on inside wall and a 3 to 3-1/2 inch (76-89mm) opening on outside of house.
2. Use hose clamp to secure flex pipe to collar assembly.
3. Slide trim ring over flex pipe and run pipe through wall.
4. Attach hose to outside termination cap with second hose clamp.
5. Secure termination cap to outside surface.
6. Secure trim ring to interior wall.



**Figure 18.4**



## B. Leg Leveling System

1. Thread Allen bolts through nuts until flush. **Figure 19.1.** The Allen bolts and nuts are included in the component pack inside the stove firebox.
2. Slide assembled nuts and bolts into slots on legs with the nuts on the bottom. **Figure 19.2.** Use a 5/32 in. (3.96mm) Allen wrench to adjust legs up and down to desired level. **Figure 19.3**

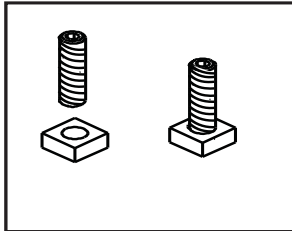


Figure 19.1

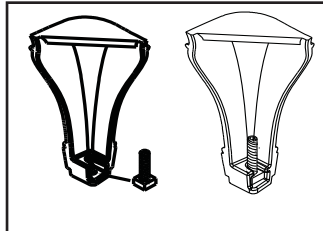


Figure 19.2

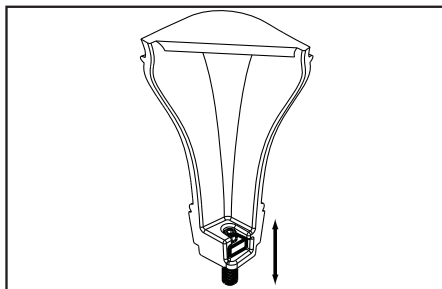


Figure 19.3 - Bolt fully extended

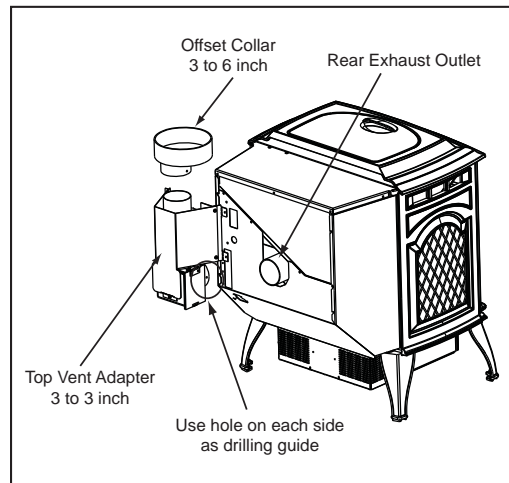


Figure 19.4

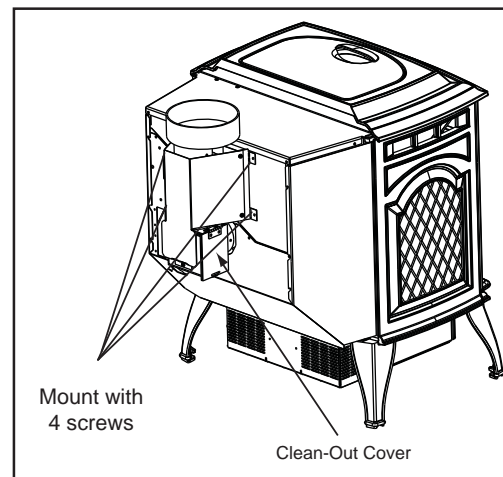


Figure 19.5

## C. Top Vent Adapter Installation

3 to 3 inch Top Vent Adapter  
3 to 6 inch Top Vent Offset Adapter

### Installing the Top Vent Adapter

1. Put a layer of high temperature silicone on the 3 inch (76mm) rear exhaust outlet. **Do not put silicone inside of pipe.** **Figure 19.4**
2. Slide the top vent adapter onto the rear exhaust outlet and adjust the assembly to a vertical position. **Figure 19.4**
3. Drill 4 holes with #26 drill bit (provided) into the back of the appliance using the outer shield as a pattern (make sure the assembly is vertical). **Figure 19.4**
4. Install the 4 mounting screws.
5. Drill 2 holes with #26 drill bit through the rear exhaust outlet using the 2 holes already in the short horizontal pipe in the top vent adapter as a guide. Install the 4 screws. **Figure 19.5.**
6. Install the vent pipe into the top vent adapter (be sure to silicone all joints).

## D. Rear Vent and Rear Vent to Top Vent Adapter Installation

### Rear Vent

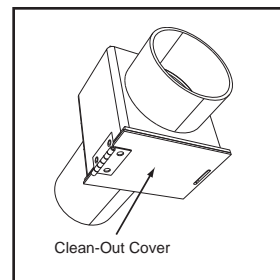


Figure 19.6

### Rear to Top Vent

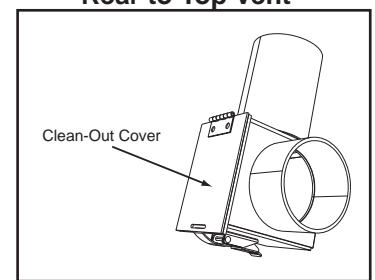


Figure 19.7

1. Put a layer of high temperature silicone on the 3 inch (76mm) exhaust outlet. **Do not put silicone inside of pipe.** **Figure 19.4**
2. Slide the adapter onto the rear exhaust outlet and adjust the assembly to the appropriate position.
3. Install the vent pipe into the adapter (be sure to silicone all joints)

**E. Optional Log Set Placement Instructions****CAUTION**

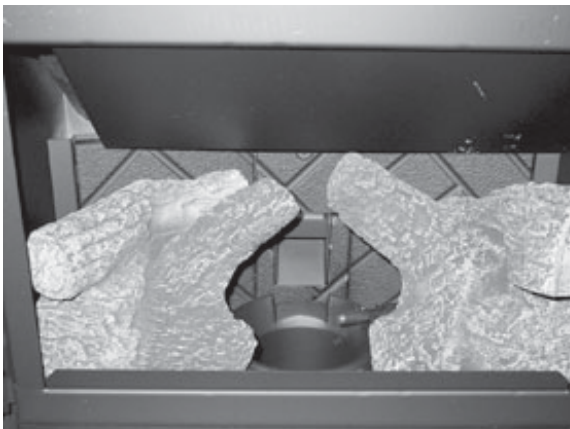
Logs are FRAGILE. Use extreme care when handling or cleaning logs.

**2 PIECE LOG SET INSTALLATION**

1. Open door to expose the firebox.
2. Install the left log first and then the right log. **Figure 20.1**
3. Lean the logs against the cast iron brick in the back of the firebox.
4. Push the logs to the far left and far right against the sides of the firebox. **Figure 20.2.**
5. To clean the logs, use a vacuum cleaner and a soft brush attachment or a paint brush.



**Figure 20.1**



**Figure 20.2**

**NOTE:**

Due to the abrasive nature of a pellet appliance fire, the logs are not covered under warranty. Any placement variation other than shown here can cause excessive heat and shall void the appliance warranty.


## F. Thermostat Installation

1. A 12 volt AC thermostat is required to operate this pellet appliance. You may use the included wall mount thermostat or purchase an optional programmable thermostat or remote control. It is equipped with an adjustable heat anticipator. The current rating is .05 amps. The anticipator needs to be adjusted to the lowest setting available.
2. When mounting a thermostat on a wall, be sure to follow your thermostat installation instructions carefully.

**NOTE: Thermostat must be mounted level for accurate readings. The thermostat should be mounted on an inside wall and not in direct line with the appliance convection air.**

**NOTE: If the thermostat is located too close to the appliance, you may need to set the temperature setting slightly higher to maintain the desired temperature in your home.**

3. There is a 4 screw terminal block located on the back lower right corner of the stove directly above the power cord inlet. The center 2 screws are for the thermostat wires.



**CAUTION**

Shock hazard.

- Do NOT remove grounding prong from plug.
- Plug directly into properly grounded 3 prong receptacle.
- Route cord away from appliance.
- Do NOT route cord under or in front of appliance.

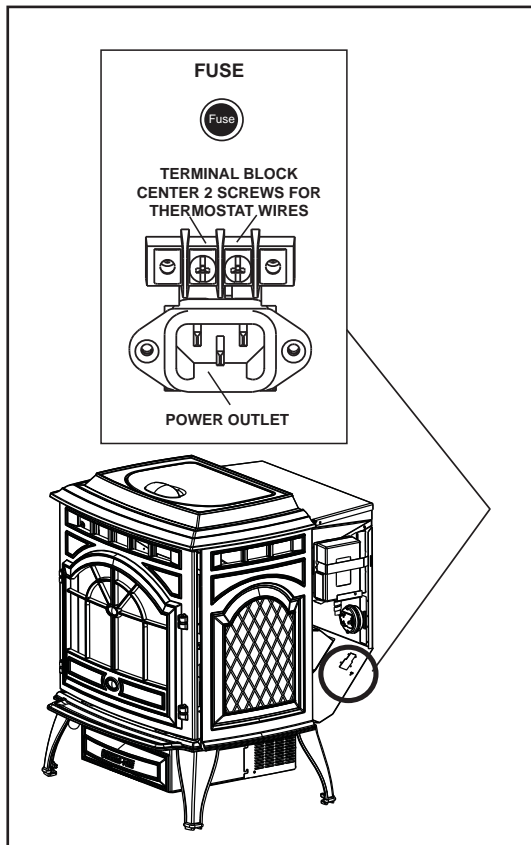


Figure 21.1

# 8 Operating Instructions

## A. Fuel Size, Material and Storage



### 1. Wood Pellets

Fuel pellets are made from sawdust or wood by-products. If the source material is hardwood, they can have a higher mineral content, creating more ash. Fuels containing bark will also have higher ash content. Minerals and other noncombustible materials such as sand will turn into a hard, glass-like substance called a clinker when heated to the extreme temperatures our firepot reaches. This is what forms clinkers in the bottom of the firepot. Trees from different areas will vary in mineral content. That is why some fuels produce more clinkers than others. Pellets are manufactured in either 1/4 inch or 5/16 inch (6-8mm) diameter and should be **no more than 1-1/2 inches (38mm) in length**. Pellet lengths may even vary by lot from the same manufacturer which is why the feed rate may need to be adjusted occasionally. **If you burn pellets longer than 1-1/2 inches (38mm) you may have an inconsistent fuel feed rate and/or missed ignitions.**

Pellet fuel quality can greatly fluctuate. We recommend using premium grade fuel with ash content less than 1%. Even in some fuel labeled "premium" ash content can vary from bag to bag and possibly exceed 1%. High ash fuel, or lack of maintenance, can cause the firepot to fill up and thus create a potential for smoking, sooting and possible hopper fires.

Always burn dry fuel. Burning fuel with high moisture content takes heat from the fuel and tends to cool the appliance, robbing heat from your home. Damp pellet fuel can clog the feed system.

We recommend that you buy fuel in multi-ton lots whenever possible. Buying large quantities of fuel at once will greatly reduce the number of times the feed adjustments will need to be made. However, we do recommend trying various brands before purchasing multi-ton lots to ensure your satisfaction.

 <b>WARNING</b>	
	<p><b>Fire Risk</b></p> <ul style="list-style-type: none"> <li>High ash fuels, or lack of maintenance, can cause the firepot to overfill. Follow proper shutdown procedure if ash buildup exceeds half way point in firepot.</li> <li>Failure to do so could result in smoking, sooting and possible hopper fires. It void your warranty</li> </ul>

### 2. Shelled Field Corn

Extensive factory and field testing has demonstrated shelled field corn to be an efficient and very economical fuel. We recommend the use of a 50-50 blend of corn and wood pellets. The only change in operation is that the feed rate may require a slight adjustment. The BTU output of the appliance varies slightly compared to pellets, depending on the quality of the



### Shelled Field Corn (Cont'd)

corn used. In cases where it is acceptable for the appliance to run full time, 100% corn will work after the fire has been started using wood pellets.

When purchasing corn to burn in your appliance, read the ingredient label very carefully. **Do NOT purchase fuel that contains any additives** such as oils (i.e. soybean oil) and meals as it will result in poor unit performance. If you are buying corn the only ingredient that should be listed is corn. Shelled field corn must be 15% or less moisture content. The corn must be clean and free from debris. Never burn corn straight from the field. Stalk parts, excessive fines and cob remnants, etc. will clog the auger mechanism. Corn with excessive grain dust must be screened by sifting with 3/16 (4.76mm) inch mesh screening.

Do not burn treated seed corn in your appliance. Seed corn is treated with chemical pesticides that are harmful or fatal if swallowed; therefore, seed corn is dangerous to have in the house, especially where children can reach it. Burning treated seed corn in your appliance will void your warranty and will destroy the exhaust system on the unit.

When changing to a different fuel, be sure to empty the hopper of the previous fuel and vacuum the hopper before you fill it with the new fuel.

 <b>WARNING</b>	
	<p>Risk of Chemical Poisoning.</p> <ul style="list-style-type: none"> <li>Do <u>Not</u> burn treated seed corn</li> <li>Chemical pesticides are harmful or fatal if swallowed</li> <li>Burning treated seed corn will void your warranty</li> </ul>

### 3. Storage

Wood pellets should be left in their original sealed bag until using. This will prevent moisture absorption.

Shelled corn should be stored in a tight container where it will not absorb moisture from damp or wet floors. This will also prevent rodents from becoming a problem.

Do not store any pellet fuel within the clearance requirements or in an area that would hinder routine cleaning and maintenance.

## B. General Operating Information

### 1. Thermostat Calls For Heat

The appliance is like most modern furnaces; when the thermostat calls for heat, your appliance will automatically light and deliver heat. When the room is up to temperature and the thermostat is satisfied, the red call light will go off and the appliance will shut down.

### 2. Heat Output Controls

This appliance is equipped with a heat output control switch that has three settings or burn rates; low, medium and high. The appliance will turn on and off as the thermostat demands. When the thermostat calls for heat, the appliance will start up at the burn rate for which it is set. If the appliance is set at one of the lower settings, it will run quieter but take longer to heat up an area than if it were set at a higher burn rate. Regardless of the burn rate, when the area is warm enough to satisfy the thermostat, the appliance will shut off.

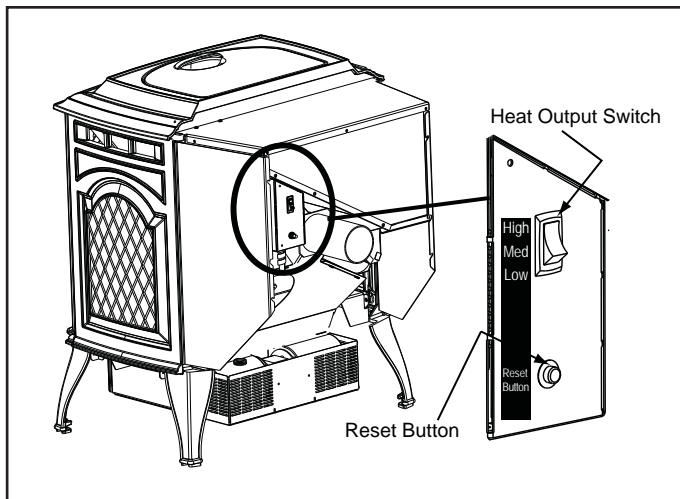


Figure 23.1

## WARNING



Fire Hazard.  
Keep combustible materials, gasoline and other flammable vapors and liquids clear of appliance.

- Do NOT store flammable materials in the appliance's vicinity.
- DO NOT USE GASOLINE, LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID OR SIMILAR LIQUIDS TO START OR "FRESHEN UP" A FIRE IN THIS HEATER.
- DO NOT BURN GARBAGE OR FLAMMABLE FLUIDS SUCH AS GASOLINE, NAPHTHA OR ENGINE OIL.
- DO NOT USE CHEMICALS OF FLUIDS TO START THE FIRE.
- Keep all such liquids well away from the heater while it is in use.
- Combustible materials may ignite.

## C. Before Your First Fire

1. First, make sure your appliance has been properly installed and that all safety requirements have been met. Pay particular attention to the fire protection, venting and thermostat installation instructions.
2. Double check that the ash drawer and firebox are empty!
3. Check the position of the thermocouple, located above the firepot, and make sure that it protrudes approximately 3/4 inch (19mm) into the firepot.
4. Close the front door.

**IMPORTANT DETAIL: The tip of the thermocouple must be in contact with the inside end of the thermocouple cover or missed ignitions can occur.**

## D. Starting Your First Fire

1. A thermostat is required for proper operation of this appliance, except for corn. At this time, fill the hopper with pellets, set the thermostat to its lowest setting. Plug the power cord into nearby outlet.
2. The exhaust blower will stay on for approximately 18 minutes even though the thermostat is not calling for heat. This is normal.
3. Locate the heat output control switch mounted on the back of the appliance in the upper right corner. **Figure 23.1.** Turn it to the "high" setting by pushing the top of the control switch in and then adjust the thermostat to its highest setting. Remove the right side panel and the red call light located to the left of the control box will be on. **Figure 24.1 on page 24.** This indicates the thermostat is calling for heat.
4. The fuel feed system and the igniter should now be on.
5. For your first fire it will be necessary to press the reset button once approximately 2 minutes after start up and again in 5 minutes. This will fill the feed system and allow the appliance to begin dropping pellets. The appliance will continue to run as long as the thermostat is calling for heat.
6. Once the appliance has ignited, let it burn for approximately 15 minutes, then set the thermostat to the desired room temperature. Adjust the heat output control switch to the desired setting.



**E. Fire Characteristics**

A properly adjusted fire with the heat output control switch set on “high” has a short active flame pattern that extends out of the firepot approximately 4 inches (102mm). If the fire has tall flames with black tails and seems somewhat lazy, the feed rate will need to be reduced. This is done by sliding the fuel adjustment control rod down, which will reduce the feed. If the fire is not 4 inches (102mm) tall, slide the fuel adjustment control rod up to increase the feed. A medium and low setting will give a shorter flame. The flame will rise and fall somewhat. This is normal.

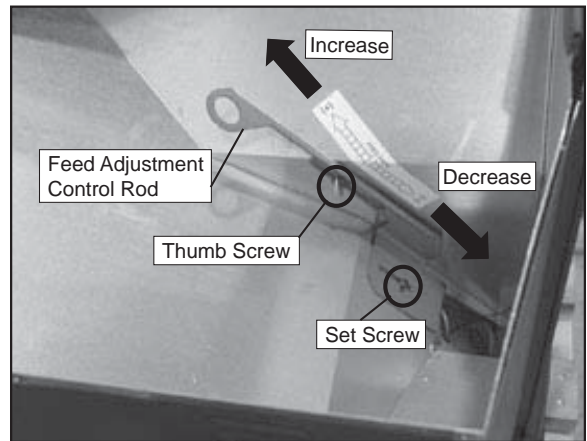
**F. Ignition Cycles**

1. During each ignition cycle, it is normal to see some smoke in the firebox. The smoke will stop once the fire starts.
2. The convection blower will automatically turn on after your appliance has reached the set temperature on the “high” setting. This blower transfers heat from your appliance into the room, and will continue to run after the thermostat has stopped calling for heat until the appliance has cooled down.
3. Occasionally the appliance may run out of fuel and shut itself down. When this happens, the red call light will be on. **Figure 24.1**. To restart it, fill the hopper and press the reset button. **(See Figure 23.1, page 23)**. When you press the reset button the red call light will go out. Release the button and the light will come back on. You should see a fire shortly. If not, follow the instructions on **page 23**, of “Starting Your First Fire”.

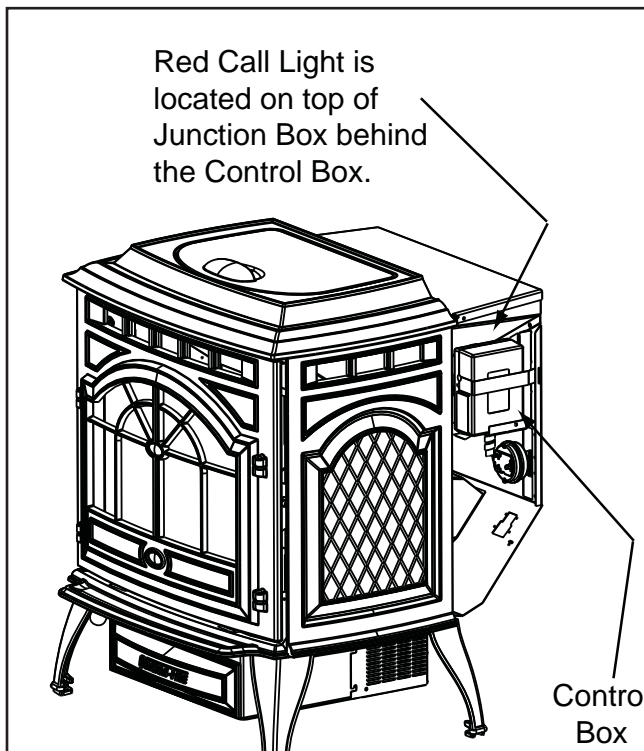
**G. Feed Rate Adjustment Instructions**

The feed adjustment control rod is factory set, and should be adequate for most fuels. However, if the flame height is too high or too low, you will need to adjust the feed rate. Wait until the appliance has been burning for 15 minutes before making your adjustments and allow 15 minutes for feed adjustment to take effect.

1. Loosen the set screw 1/4 to 1/2 turn during set-up of appliance. This will allow movement of the feed adjustment control rod. Do not re-tighten set screw. **Figure 24.2**.
2. Loosen the thumb screw.
3. Adjust the feed adjustment control rod upward towards the “+” symbol to increase the feed rate and flame height or down towards the “-” symbol, to decrease the feed rate and flame height.
4. Re-tighten the thumb screw.



**Figure 24.2**



**Figure 24.1**

**H. Frequently Asked Questions**

ISSUES	SOLUTIONS
1. Metallic noise.	1. Noise is caused by metal expanding and contracting as it heats up and cools down, similar to the sound produced by a furnace or heating duct. This noise does not affect the operation or longevity of your appliance.
2. Ash buildup on glass.	2. This is normal. Clean the glass.
3. Glass has turned dirty.	3. Excessive build up of ash. The lower burn settings will produce more ash, the higher burn settings produce less. The more it burns on low the more frequent cleaning of the glass is required.
4. Fire has tall flames with black tails and is lazy.	4. The feed rate needs to be reduced or the firepot needs cleaning. Heat exchanger or exhaust blower needs cleaning.
5. Smokey start-up or puffs of smoke from the airwash.	5. Either the firepot is dirty or there is too much fuel at start-up and not enough air. Close down feed rate 1/4 inch at a time until this no longer happens.
6. Large flame at start-up.	6. This is normal. Flame will settle down once the fire is established.

**CAUTION**

Odors and vapors released during initial operation.

- Curing of high temperature paint.
- Open windows for air circulation.

Odors may be irritating to sensitive individuals.



**WARNING**



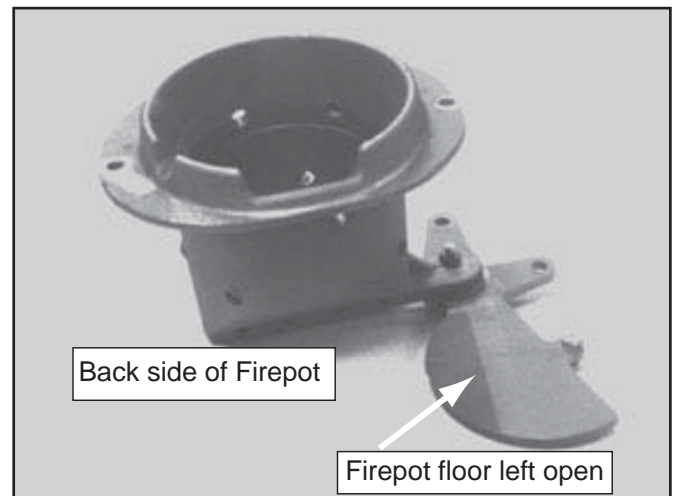
Fire Risk

Do NOT operate appliance:

- With appliance door open.
- Firepot floor open.
- Cleaning slide plates open.

Do NOT store fuel:

- Closer than required clearances to combustibles to appliance
- Within space required for loading or ash removal.



**Figure 25.1 - DO NOT LEAVE FIREPOT FLOOR OPEN**

# 9 Troubleshooting

With proper installation, operation, and maintenance your appliance will provide years of trouble-free service. If you do experience a problem, this troubleshooting guide will assist a qualified service person in the diagnosis of a problem and the corrective action to be taken. ***This troubleshooting guide can only be used by a qualified service technician.***

Symptom	Possible Cause	Corrective Action
Plug in appliance - No response.	No current to outlet. 7 amp fuse defective. #3 snap disc tripped or defective. Control box defective.	Check circuit breaker at service panel. Replace fuse. Reset or replace snap disc. Replace control box.
Call light on. No fire. No fuel in firepot.	Out of fuel. #2 snap disc may be defective. Vacuum switch not closing, no vacuum.  Control box defective.	Check hopper. Fill with fuel. Replace snap disc. Check exhaust blower is plugged in and operating. Check vacuum switch is plugged in. Check vacuum hose is in good condition, clear and connected at both ends. Check thermocouple is in good condition and plugged in properly. Make sure venting system is clean. Make sure front door is closed. Replace control box.
Call light on. No fire. Partially burned fuel in firepot.	Firepot clean-out plate not closed.  Firepot is dirty (missed ignition).	Check that firepot clean-out plate is fully closed.  Clean firepot. Make sure there is no clinker in the firepot.  Clinkers may have to be broken up with firepot scraper tool or other means.
Call light on. No fire. Unburned pellets in firepot.	Firepot clean-out plate not closed.  Firepot is dirty.  Ignition hole blocked.  Igniter not working.  Control box defective.	Check that firepot clean-out plate is fully closed.  Clean firepot. Make sure there is not a clinker in the firepot. Clinkers may have to be pushed out of firepot with firepot scraper tool or other means.  Scrape with solid piece of wire.  Remove ash pan to see if igniter is glowing red on start-up. Check igniter wires for good connection. Replace igniter using 1/4 inch male /female spade connectors.  Replace control box.
Slow or smoky start-up.	Firepot clean-out plate not closed.  Firepot is dirty.  Excessive amount of fuel at start-up.	Check that firepot clean-out is fully closed.  Clean firepot. Make sure there is not a clinker in the firepot. Clinkers may have to be pushed out of firepot with firepot scraper tool or other means.  Reduce feed rate using feed rate adjustment control rod located inside hopper.

Symptom	Possible Cause	Corrective Action
Slow or smoky start-up (Cont'd)	Dirty exhaust and/or venting system.	Check for ash build up in unit, including behind rear panels, firebox, heat exchanger, exhaust blower and venting.
Feed system fails to start.	Out of fuel. #2 snap disc may be defective.  Vacuum switch not closing. No vacuum.  Feed system jammed or blocked.  Feed spring not turning with feed motor.  Feed motor defective or not plugged in.	Check hopper, fill with fuel. Replace snap disc. Firebox door must be closed securely.  Check exhaust blower is plugged in and operating. Check vacuum switch is plugged in. Check vacuum hose is in good condition, clear and connected at both ends. Check thermocouple is in good condition and plugged in properly. Make sure venting system is clean. <b>NOTE:</b> High winds blowing into the venting system can pressurize the firebox causing loss of vacuum.  Empty hopper of fuel. Use a wet/dry vacuum cleaner to remove remaining fuel, from hopper, including feed tube. Check feed chute for obstructions. Loosen 2 feed assembly mounting screws and lightly shake feed assembly.  Check that set screw is tight on feed spring shaft at end of feed motor.  Check connections on feed motor, replace if defective.
No call light. Unit does not begin start sequence.	Thermostat not set to a high enough temperature. Snap Disc #3 tripped. No power. Fuse blown. Connections at thermostat and/or appliance not making proper contact. Defective thermostat or thermostat wiring.  Control box defective.	Adjust thermostat above room temperature. Reset snap disc. Connect to power. Replace fuse. Check connections at thermostat and appliance. Replace thermostat or wiring. NOTE: To test thermostat and wiring, use a jumper wire at the thermostat block on the unit to by-pass thermostat and wiring.  Replace control box.
Unit fails to shut off.	Call light on.	Turn thermostat off. If call light does not go out, disconnect thermostat wires from unit. If call light does go out, thermostat or wires are defective.

Symptoms	Possible Cause	Corrective Action
Convection blower fails to start.	#1 snap disc defective.  Blower not plugged in.  Blower is defective.  Control box is defective.	Replace snap disc.  Check that blower is plugged into wire harness.  Replace blower.  Replace control box.
Exhaust blower fails to start or does not shut off.	Blower not plugged in.  Blower is clogged with ash.  Blower is defective.  Control box is defective.	Check that blower is plugged into wire harness.  Clean exhaust system.  Replace blower.  Replace control box.
Large, lazy flame, orange color. Black ash on glass.	Dirty appliance. Poor fuel quality, high ash content.   Firepot clean-out plate not completely closed.   Excessive amount of fuel.	Clean unit, including firepot, heat exchangers and venting system. Remove stainless steel baffle from firebox to clean ash from on top of baffle. Clean behind rear brick panels. Change fuel brand to premium.   Check that firepot clean-out plate is fully closed.   Reduce feed rate using feed rate adjustment control rod located inside hopper.
Nuisance shutdowns.	Low flame.  Sawdust buildup in hopper.  Feed motor is reversing.  Defective thermocouple.  Defective control box.  Firepot more than 1/2 full.	Increase feed by opening feed rate adjustment control rod located inside hopper.  Clean hopper, <b>see page 30</b> .  Check for good connections between feed motor and wire harness.  Replace thermocouple.  Replace control box.  See <b>page 33</b> for detailed instructions for "High Ash Fuel Content Management"
Appliance calls for heat. Call light illuminates. Exhaust blower starts. No feed or igniter.	Thermocouple is defective or not properly plugged in.    Defective control box.	Check connections on thermocouple or replace if defective. A flashing yellow light on the control box indicates a problem with the thermocouple.   Replace control box.

# 10 Maintaining & Servicing Your Appliance

## A. Proper Shutdown Procedure

**CAUTION**

**Shock and Smoke Hazard**

- Turn down thermostat, let appliance completely cool and exhaust blower must be off. Now you can unplug appliance before servicing.
- Smoke spillage into room can occur if appliance is not cool before unplugging.
- Risk of shock if appliance not unplugged before servicing appliance.

**Follow the detailed instructions found in this section for each step listed as referenced in the chart below.**

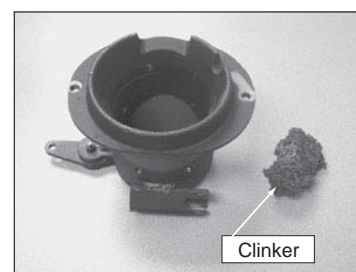
## C. General Maintenance

### 1. Types of Fuel

Depending on the type of fuel you are burning will dictate how often you have to clean your firepot.

If the fuel you are burning has a high dirt or ash content or you are burning shelled field corn, it may be necessary to clean the firepot more than once a day.

Dirty fuel will cause clinkers to form in the firepot. A clinker is formed when dirt, ash or a non-burnable substance is heated to 2000°F (1093°C) and becomes glass-like. See **“C” page 33** in this section for more details on fuels with high ash content.



**Figure 29.1 - Clinker**

## B. Quick Reference Maintenance Chart


Cleaning or Inspection	Frequency		Daily	Weekly	Monthly	Yearly
Ash Pan	Every 5 bags of fuel	OR		X		
Ash Removal from Firebox	More frequently depending on the fuel type or ash build-up	OR		X		
Beneath Heat Exchanger	Every 1 ton of fuel	OR			X	
Blower, Combustion (Exhaust)	More frequently depending on the fuel type	OR				X
Blower, Convection	More frequently depending on the operating environment.	OR				X
Door Latch Inspection	Prior to heating season	OR			X	
Exhaust Path	More frequently depending on ash build-up	OR				X
Firebox - Prepare for Non-Burn Season	At end of heating season	OR				X
Firepot - Burning pellets - hardwood	Every 3 bags	OR	X			
Firepot - Burning pellets - softwood	Every 5 bags	OR	X			
Firepot - Burning Corn	Every 1 bag	OR	X			
Glass	When clear view of firepot becomes obscure	OR		X		
Heat Exchanger & Drop Tube	Every 1 ton of fuel	OR			X	
Hopper	Every 1 ton of fuel or when changing fuel types	OR			X	
Top Vent Adapter	More frequently depending on the fuel type or ash build-up	OR				X
Venting System	More frequently depending on the fuel type	OR				X

**NOTICE:** These are recommendations. Clean more frequently if you encounter heavy build-up of ash at the recommended interval or you see soot coming from the vent. **Not properly cleaning your appliance on a regular basis will void your warranty.**



**2. Cleaning Firepot with Cleaning Rod & Firepot Scraper**

- **Frequency:** Daily or more often as needed
- **By:** Homeowner
  - a. The appliance must be in complete shutdown and cool and the exhaust blower off. If you are just cleaning the firepot, there is no need to unplug the appliance.
  - b. Pull firepot cleaning rod OUT a couple of times to help shake debris loose. If rod is hard to pull, it may be necessary to use your firepot clean-out tool to chip away material that has built up on the bottom plate of the firepot and to push out any clinkers. Larger clinkers may have to be removed from the top of the firepot. Corn clinkers can be especially difficult to break up.
  - c. The firepot floor plate must be fully closed when finished. **See Figure 25.1 on page 25.**


	<b>WARNING</b>
	<p><b>Fire Risk</b></p> <p>NEVER pull firepot cleaning rod or cleaning slide plates out when appliance is operating.</p> <ul style="list-style-type: none"> <li>• The cleaning slide plates must be fully CLOSED when appliance is operating.</li> <li>• Hot pellets may fall into ashpan and start a fire or mis-starts due to lack of vacuum.</li> </ul>

**3. Ash Removal from Firebox**

- **Frequency:** Weekly or more frequently depending on ash build-up.
- **By:** Homeowner
  - a. There must not be any hot ashes in the firebox during cleaning so allow the appliance to completely cool. The firebox ash should be removed every time the firepot is cleaned. Frequent cleaning of the ash in the firebox will help slow down the build-up of ash in the exhaust blower and vent system.
  - b. Plug in your appliance, if unplugged, and turn the thermostat on and immediately shut it off to start the exhaust blower on its cycle time. It will pull fly ash out the exhaust instead of into the room.
  - c. Open cast hinged face. Directly underneath the firebox door and to the left and right of the firepot are 2 cleaning slide plates with finger holes. Pull both slide plates out and then open the glass door. Sweep the remaining ash from the firebox into the 2 open holes. A paint brush works well for this. Close slide plates.
  - d. This ash is deposited in the same ash pan as the firepot debris. The ash pan should be emptied every time you clean the firebox. Remember to place the ash and debris into a metal or noncombustible container.

**Ash Removal from Firebox (Cont'd)**

- e. The 2 cleaning slide plates must be fully closed when cleaning is complete. **See Disposal of Ashes.**

	<b>WARNING</b>
	<p><b>Disposal of Ashes</b></p> <ul style="list-style-type: none"> <li>• Ashes should be placed in metal container with tight fitting lid.</li> <li>• Ashes should be retained in closed container until all cinders have thoroughly cooled.</li> </ul>

**4. Cleaning Ash Pan**

- **Frequency:** Weekly or every 5 bags of fuel
- **By:** Homeowner
 

Locate the ash pan underneath the firepot. Open the bottom ash door and slide the ash pan straight out. Empty into a non-combustible container and re-install ash pan. **See Disposal of Ashes.**

**5. Disposal of Ashes**

- **Frequency:** As needed
- **By:** Homeowner
 

Ashes should be placed in a steel container with a tight-fitting lid. The container of ashes should be moved outdoors immediately and placed on a non-combustible floor or on the ground, well away from combustible materials, pending final disposal.

If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled. Other waste shall not be placed in this container.

**6. Cleaning the Hopper**

- **Frequency:** Monthly or after burning 1 ton of fuel
- **By:** Homeowner
 

After burning approximately 1 ton of fuel you will need to clean the hopper to prevent sawdust build-up.

A combination of sawdust and pellets on the auger reduces the amount of fuel supply to the firepot. This can result in nuisance shutdowns and mis-starts.

  - a. The appliance must be in complete shutdown. Allow the appliance to completely cool down.
  - b. Empty the hopper of any remaining pellets.
  - c. Vacuum the hopper and feed tube.

### 7. Cleaning Heat Exchanger Chambers & Drop Tube

- **Frequency:** Monthly or every 1 ton of fuel
- **By:** Homeowner

**WARNING**

Heat exchanger cleaning rods may be warm to the touch. For safety purposes wear gloves.

Do not pull heat exchanger cleaning rods while appliance is operating.

Push cleaning rods IN when done, DO NOT leave cleaning rods OUT. Injury can occur.

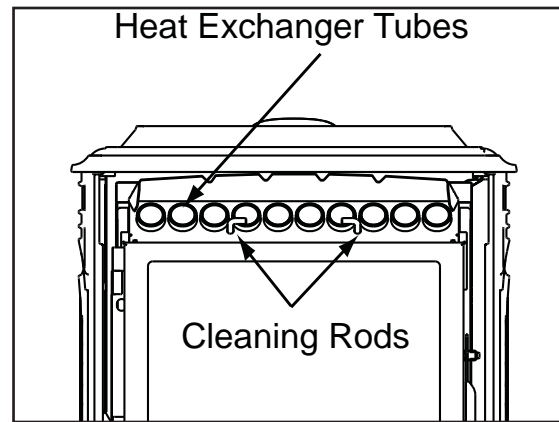
The amount of ash buildup in the firepot will be a good guide to determine how often you should clean the heat exchangers.

- Allow the appliance to completely cool down before pulling the cleaning rods. Turn the thermostat on and then immediately off to start the exhaust blower on its cycle time. It will pull fly ash out the exhaust instead of into the room. Open the cast hinged face to access the 2 cleaning rods. **Figure 31.1.**
- Locate the 2 rods directly underneath the heat exchanger tubes. Rods are bent at a 90° angle for easy handling.
- To clean, pull the rods straight out until it stops, approximately 5-1/2 inches (140mm). Slide the rods OUT and IN a couple of times.

### 8. Cleaning the Exhaust Path

- **Frequency:** Yearly or more frequently depending on ash build-up.
- **By:** Homeowner
  - Appliance must be completely cool.
  - Open cast hinge face. Remove right brick and thoroughly vacuum the area and continue throughout the rest of the firebox.
  - Replace right brick and close cast hinge face.

**NOTE: There are heavy duty vacuum cleaners specifically designed for solid fuel appliance cleaning.**



**Figure 31.1**

### 9. Cleaning Beneath Heat Exchanger

- **Frequency:** Monthly or after burning 1 ton of fuel
- **By:** Homeowner
  - Be sure the appliance is allowed to cool, has been unplugged and the exhaust blower is off
  - A more thorough cleaning is needed to remove the excess ash that is left behind from the use of the cleaning rods for the heat exchanger tubes.
  - The ash will be resting on the back of the baffle. This will require removing the cast baffle. Please refer to **page 35** for a detailed explanation of removing the baffle.

### 10. Soot and Fly Ash: Formation & Need for Removal in Exhaust Venting System.

- **Frequency:** Yearly or more frequently depending on ash build-up.
- **By:** Qualified Service Technician/Homeowner

Be sure the appliance is allowed to cool, has been unplugged and the exhaust blower is off.

The products of combustion will contain small particles of fly ash. The fly ash will collect in the exhaust venting system and restrict the flow of the flue gases.

At start-up if there is incomplete combustion, or if there is a shutdown or incorrect operation of the appliance it will lead to some soot formation. This will collect in the exhaust venting system.

The venting system may need to be cleaned at least once a year or more often depending upon the quality of your fuel or if there is a lot of horizontal pipe sections. Ash will build up more quickly in the horizontal sections.

**11. Cleaning Convection Blower - Requires No Lubrication**

- **Frequency:** Yearly or as needed
- **By:** Qualified Service Technician / Homeowner

The convection blower is located at the bottom rear of the stove. It is housed inside the screen box. See **page 34-35** for detailed instructions on removing the blower.

The blower has two impellers, one on each side of the motor. They should be cleaned at least once each year or more often as needed.

**12. Cleaning Exhaust Blower - Requires No Lubrication**

- **Frequency:** Yearly or as needed
- **By:** Qualified Service Technician
- **Task:** Contact your local dealer.

**13. Door Latch Inspection**

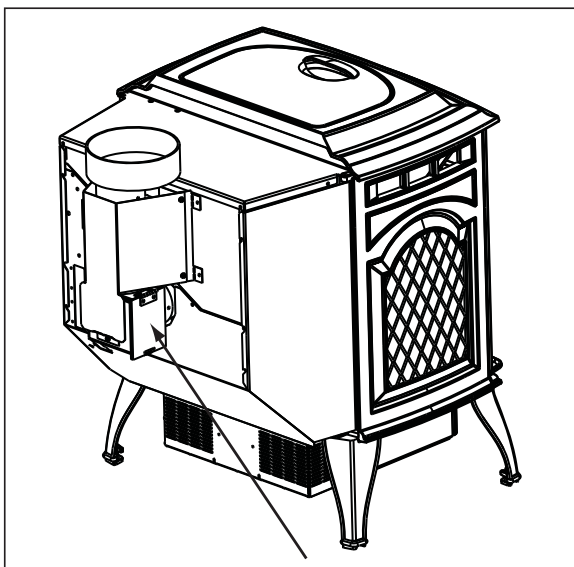
- **Frequency:** Prior to heating season
- **By:** Homeowner

The door latch is non-adjustable but the gasketing between the glass and firebox should be inspected periodically to make sure there is a good seal.

**14. Cleaning the Top Vent Adapter**

- a. The appliance must be in complete shutdown and the exhaust blower should be off. Allow the appliance to completely cool down.
- b. Open the clean out cover. **See Figure 32.1.**
- c. Sweep out any ash build-up.

**NOTE:** *There are heavy duty vacuum cleaners specifically designed for solid fuel appliance cleaning.*

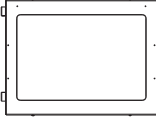


**Figure 32.1**

**15. Cleaning the Glass**

- **Frequency:** When clear view of the firepot becomes obscure
- **By:** Homeowner
  - a. Appliance must be completely cool before cleaning glass.
  - b. Use a damp paper towel or any non-abrasive glass cleaner. Wipe off with dry towel.

**CAUTION**




Handle glass assembly with care.

**When cleaning glass:**

- Avoid striking, scratching or slamming glass.
- Do NOT clean glass when hot.

- Do NOT use abrasive cleaners.
- Use a hard water deposit glass cleaner on white film.
- Refer to maintenance instructions.

**WARNING**



Handle glass with care.

- Inspect the gasket to ensure it is undamaged.
- Do NOT strike, slam or scratch glass.
- Do NOT operate appliance with glass assembly removed.

- Do NOT operate with glass cracked, broken or scratched.

**16. Preparing Firebox for Non-Burn Season**

- **Frequency:** Yearly
- **By:** Homeowner
  - a. Be sure the appliance is allowed to cool, has been unplugged and the exhaust blower is off.
  - b. Remove all ash from the firebox and vacuum thoroughly.
  - c. Paint all exposed steel, including cast-iron.
    - Use the Touch-Up paint supplied with the appliance; or;
    - Purchase paint from your local dealer.
    - Must use a high-temperature paint made specifically for heating appliances.

## D. High Ash Fuel Content Maintenance

- **Frequency:** When the ash build-up exceeds more than half way up the firepot.
- **By:** Homeowner

Poor quality pellet fuel, or lack of maintenance, can create conditions that make the firepot fill quickly with ashes and clinkers.

This condition makes the appliance susceptible to overflowing the firepot with pellets which may result in smoking, sooting and possible hopper fires. **Figure 33.1** shows an example where the firepot overfills, pellets back up into the feed tube and ash has accumulated in the firebox.

An inefficient and non-economical method of burning of fuel caused by poor quality pellet fuel is shown in **Figure 33.2**.

The correct flame size when good quality, premium pellet fuel is burned is shown in **Figure 33.3**.

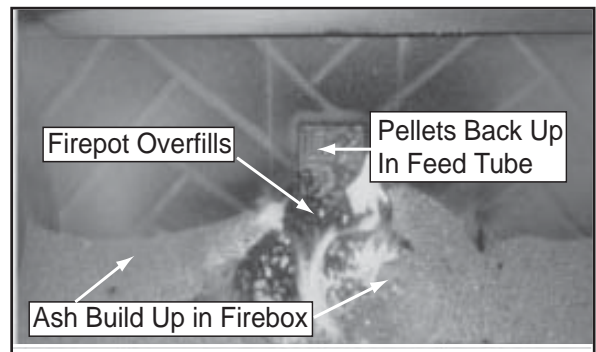
If the ash buildup exceeds the half way point in the firepot **IMMEDIATE ATTENTION AND CLEANING IS REQUIRED.**

## E. Soot or Creosote Fire

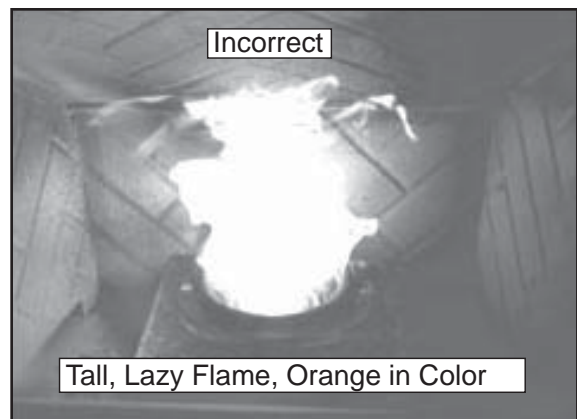
Establish a routine for the fuel, wood burner and firing technique. Check daily for creosote build-up until experience shows how often you need to clean to be safe. Be aware that the hotter the fire the less creosote is deposited, and weekly cleaning may be necessary in the mild weather even though monthly cleaning may be enough in the coldest months. Contact your local municipal or provincial fire authority for information on how to handle a chimney fire.

**In the event of a soot or creosote fire, close the firebox door, exit the building immediately and contact the proper fire authorities.**

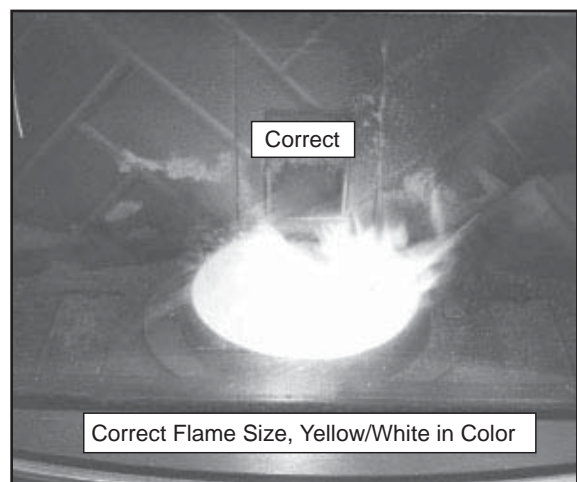
**DO NOT under any circumstances re-enter the building.**



**Figure 33.1**



**Figure 33.2**



**Figure 33.3**



## F. Blower Replacement

### 1. Combustion Blower Replacement

**NOTE: The convection blower must be removed before the exhaust blower can be removed.**

- a. Turn down thermostat, let appliance completely cool and then unplug appliance before servicing.
- b. Remove both side curtains by loosening 2 screws (do not remove) and pull side panels away.
- c. Remove 4 screws from the back screen and pivot the top of the screen toward you leaving the bottom attached to stove. **Figure 34.1.**
- d. Remove 2 screws to remove the thermostat block and disconnect the 2 yellow wires.
- e. Remove the 2 screws from the power inlet and rotate it through the hole and out of the screen, leaving the wires attached.
- f. Disconnect the vacuum hose and both wires (orange and red) from the vacuum switch attached to the rear screen.
- g. Remove both wires from exhaust blower (blue and double white).
- h. Remove 6 screws using a flathead screwdriver or a 1/4" nutdriver. Retain screws for use on replacement blower. **Figure 34.2.**
- i. Remove exhaust blower and gasket.
- j. Install new gasket and blower. Discard blower housing if not needed.
- k. Re-install in reverse order.

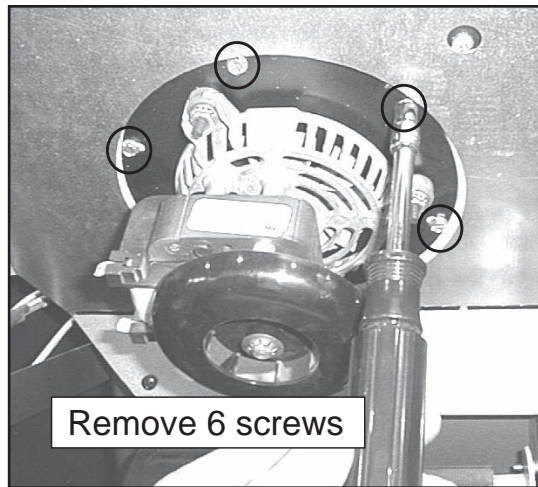


Figure 34.2

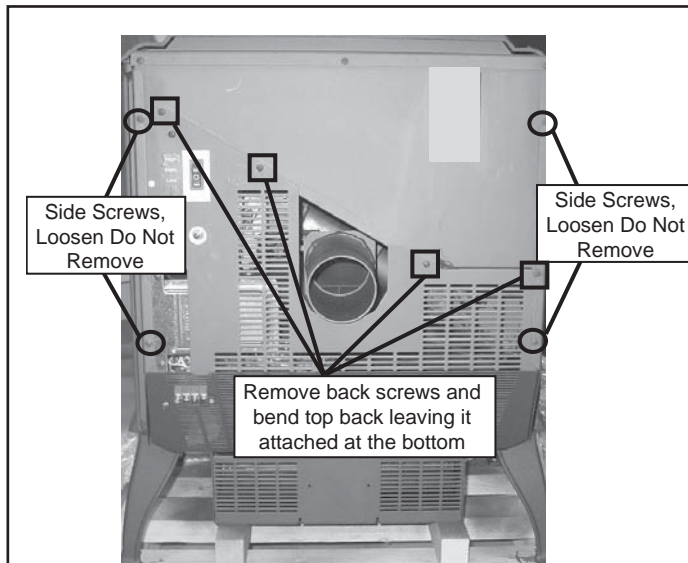


Figure 34.1

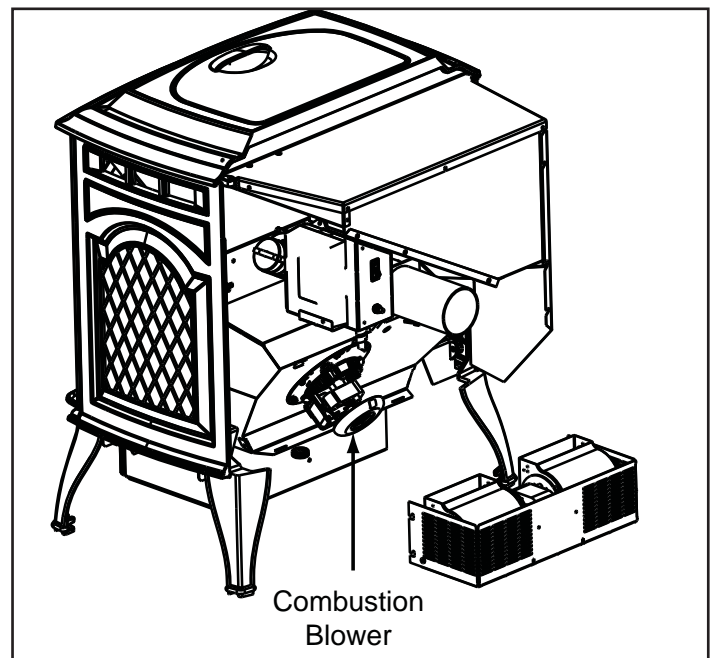


Figure 34.3

## F. Blower Replacement (Cont'd)

### 2. Convection Blower Replacement

- Turn down thermostat, let appliance completely cool and then unplug appliance before servicing.
- The convection blower is located at the bottom rear of the appliance and is housed inside a screen box. Remove the 2 screws facing forward in the center of the blower chamber at the very back of the appliance.
- If an outside air kit is installed on the appliance, these screws attach the intake air channel piece of the outside air kit to the appliance. Remove the 2 screws and pull backwards on the channel and it will slide down and away from the appliance. The air channel, collar and outside air hose will be removed as one piece.
- There are 2 screws on each side of the housing. Loosen all 4 screws, but do not remove them. Lift the blower housing up slightly and slide towards you. **Figure 35.1.**
- Remove the left side panel by loosening 2 screws (do not remove) and pull side panel away. Unplug the 2 black blower wires by disconnecting the spade connectors.
- To remove blower from the housing, remove 2 screws in the front of the housing and very carefully bend the 2 housing sides out and bend the back of the housing away from the blower. This allows for room to access the back 2 screws and nuts (4 total) that is securing the blower to the housing.
- Remove blower and replace with new blower.
- Re-install in reverse order.

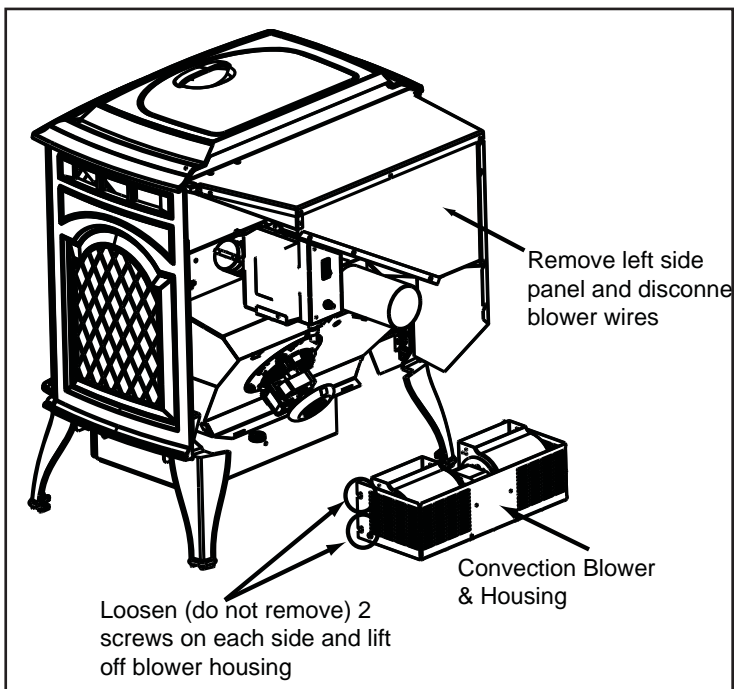


Figure 35.1

## G. Baffle & Brick Set Removal

- Follow proper shutdown procedures in Section 10.
- The top baffle has a hook on the bottom left side that rests on the top lip of the cast brick. There is a tab on the bottom right side that hooks into the side bracket. Remove the top baffle by first pulling the baffle forward until back edge drops down. Then slide baffle back until the front edge clears the shelf that it had been resting on. **Figure 35.2**
- The top baffle must be removed before you can remove the right and left brick. Remove the right brick by holding top lip of brick and lifting up, then push outside edge back. Slide brick to the right until it is flush with the firebox. Rotate the inside edge of the brick forward and remove brick. Repeat for left brick. **Figure 35.3.**

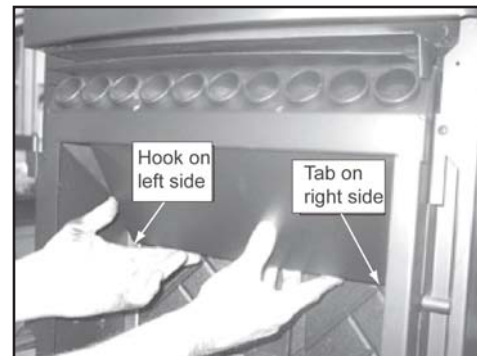


Figure 35.2

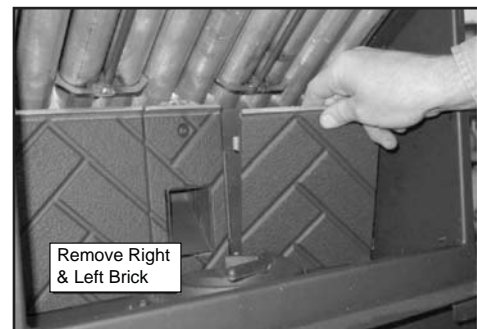


Figure 35.3

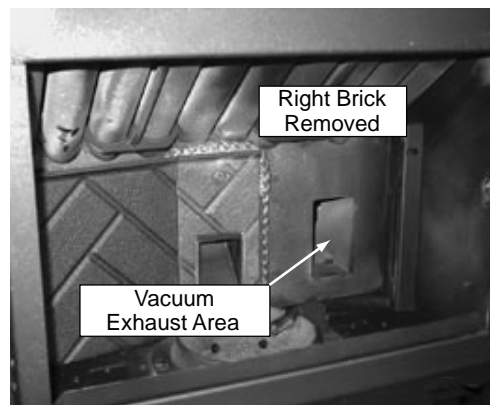
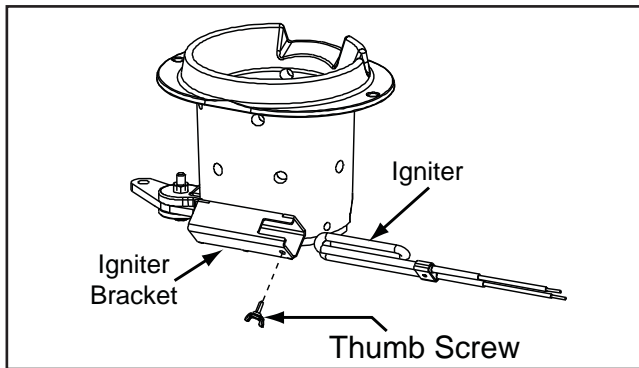


Figure 35.4



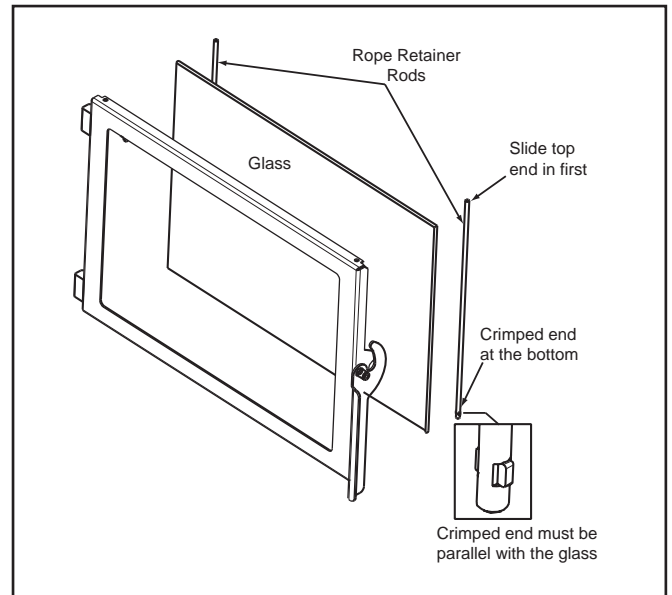
**H. Igniter Replacement**



**Figure 36.1**

1. Turn down thermostat, let the appliance completely cool and then unplug appliance before servicing.
2. Open the ash door and remove the ash pan. Remove the right side panel by loosening 2 screws (do not remove) and pull side panel away.
3. The wire leads to the igniter are connected to the wire harness (black wires) with 1/4 inch male / female spade connectors. Disconnect the spade connections. Loosen the thumb screw and slide igniter out.
4. Install new igniter into the chamber and tighten the thumb screw.
5. Re-connect the wires to the 2 leads with the spade connectors. Double check that the igniter wires are clear of any movement, i.e. ash pan, firepot cleaning rod, cleaning slide plates, etc.
6. Re-install the ash pan, close the ash removal door.

4. Slide the retainer rod into the top hole first, and then line up the bottom crimped end with the hole in the door. The crimped end must be parallel with the glass in order to insert it into place. **Figure 36.2.**



**Figure 36.2**

**I. Glass Replacement**

**⚠ WARNING**

- Glass is 5mm thick high temperature heat-resistant ceramic glass.
- DO NOT REPLACE with any other material.
- Alternate material may shatter and cause injury

1. Open the face and remove door from the appliance by lifting door off of hinge pin and lay on a flat surface face down.
2. Using a screwdriver, tap the bottom of the rope retainer rod to push it up out of the hole. The top end of the rod will slide up. Swing the rod toward you from the bottom and remove the rod. Repeat for other side.
3. Remove old glass and replace with new glass.

**J. Damaged/Broken Component Replacement**

1. Replacement of broken or damaged components should only be completed by a trained or qualified technician.
2. In the event that you find a damaged component, please contact your local dealer, to send a service technician to complete the removal and replacement of the parts.

# 11

## Reference Materials

When describing the location of a component, it is always **AS YOU FACE THE FRONT OF THE APPLIANCE**.

### A. Component Function

#### 1. Control Box

- The control box is located on upper right side of appliance, behind the right side panel and above the vacuum switch.
- There is a light located inside of the control box. The internal light will turn green when the appliance has reached a temperature of 175°F (79°C) in the firepot, and will turn red when it reaches 600°F (315°C).
- There is also an internal blue light located in the upper left corner of the control box. When you plug in the appliance the blue light will automatically start blinking 6 times in a row for 60 seconds and then will stop.

#### NOTE:

Do **NOT** open the control box. This will void the warranty. Follow proper shutdown procedures first if you need to plug in or remove the control box.

#### 2. Convection Blower

The convection blower is mounted at the bottom rear of the appliance. There are 2 impellers, one on each side of the motor. The convection blower pushes heated air through the heat exchange system into the room.

#### 3. Combustion Blower

The combustion blower is located on the right side of appliance and is designed to pull the exhaust from the appliance and push it out through the venting system.

#### 4. Feed System

The feed system is located on the right side of the appliance and can be removed as an entire assembly. The assembly includes the feed motor, mounting bracket, bearing and feed spring (auger). The hollow feed spring (auger) pulls pellets up the feed tube from the hopper area and drops them down the feed chute into the firepot.

#### 5. Firepot

The firepot is made of high quality ductile iron and has a cleaning pull-out rod. The floor of the firepot opens for cleaning when you pull out the rod. Be sure that the floor returns to a completely closed position or your appliance will not operate properly.

#### 6. Fuse

The fuse is located on the front of the junction box on the right side of appliance. The fuse will blow should a short occur and shut off power to the appliance.

#### 7. Heat Exchangers

The heat exchangers transfer hot air from the exhaust system into convection air. Remove the stainless steel top baffle to access the heat exchangers. There are 2 clean out rods located under the heat exchangers.

#### 8. Heat Output Switch

The heat output switch is located on the upper right rear corner. The function of the heat output switch is to regulate the burn rates; low, medium and high settings.

#### 9. Hopper Switch

The hopper switch is located in the upper right hand corner of the hopper. This switch is designed to shut down the feed motor whenever the hopper lid is opened.

#### 10. Igniter

The igniter is mounted on the base of the firepot. Combustion air travels over the red hot igniter creating super heated air that ignites the pellets.

#### 11. Junction Box And Wiring Harness

The junction box is located on the right side of the appliance, behind the right side panel. The junction box and wiring harness are replaced as one component.

#### 12. Power Supply

The power outlet is located on the right rear of the appliance on the front of the junction box. Check the wall receptacle for 120 volt, 60 Hz (standard current). Make sure the outlet is grounded and has the correct polarity. A good surge protector is recommended. When operating with a generator you need a least 600 watts of power, or with an inverter at least 800 watts of power available for the appliance during the start cycle.

#### 13. Red Call Light

The red call light is on the front of the junction box, behind the control box. The function of the red call light is to indicate that the thermostat is calling for heat.

#### 14. Reset Button

The reset button is located on the back of the appliance on the upper right corner of the side panel under the heat output control switch. The function of the button is to momentarily open the thermostat circuit, which restarts the system.

#### 15. Thermocouple

The thermocouple is located on top of the firepot inside the thermocouple cover (ceramic protection tube). The thermocouple sends a millivolt signal to the control box indicating the preset temperatures of the green and red lights have been obtained.

**16. Thermostat**

The appliance is designed to run on a 12 volt AC thermostat. The heat anticipator should be set on the lowest setting available.

**17. Snap Disc #1 (Convection Blower) 110°F**

Snap disc #1 is located on the right side of the appliance on the top of the heat exchanger box. There are 2 purple wires connected to it. This snap disc turns the convection blower on and off as needed. Power is always present at snap disc #1.

**18. Snap Disc #2 (Fuel Delivery Interrupt) 250°F**

Snap disc #2 is also located on the back side of the feed drop tube. There are 2 orange wires connected to it. This snap disc will turn off the feed system which will turn off the appliance if an overfire condition should occur or if the convection blower should fail to operate. If this occurs the snap disc will automatically reset itself.

**19. Snap Disc #3 (Back Burn Protector) 250°F**

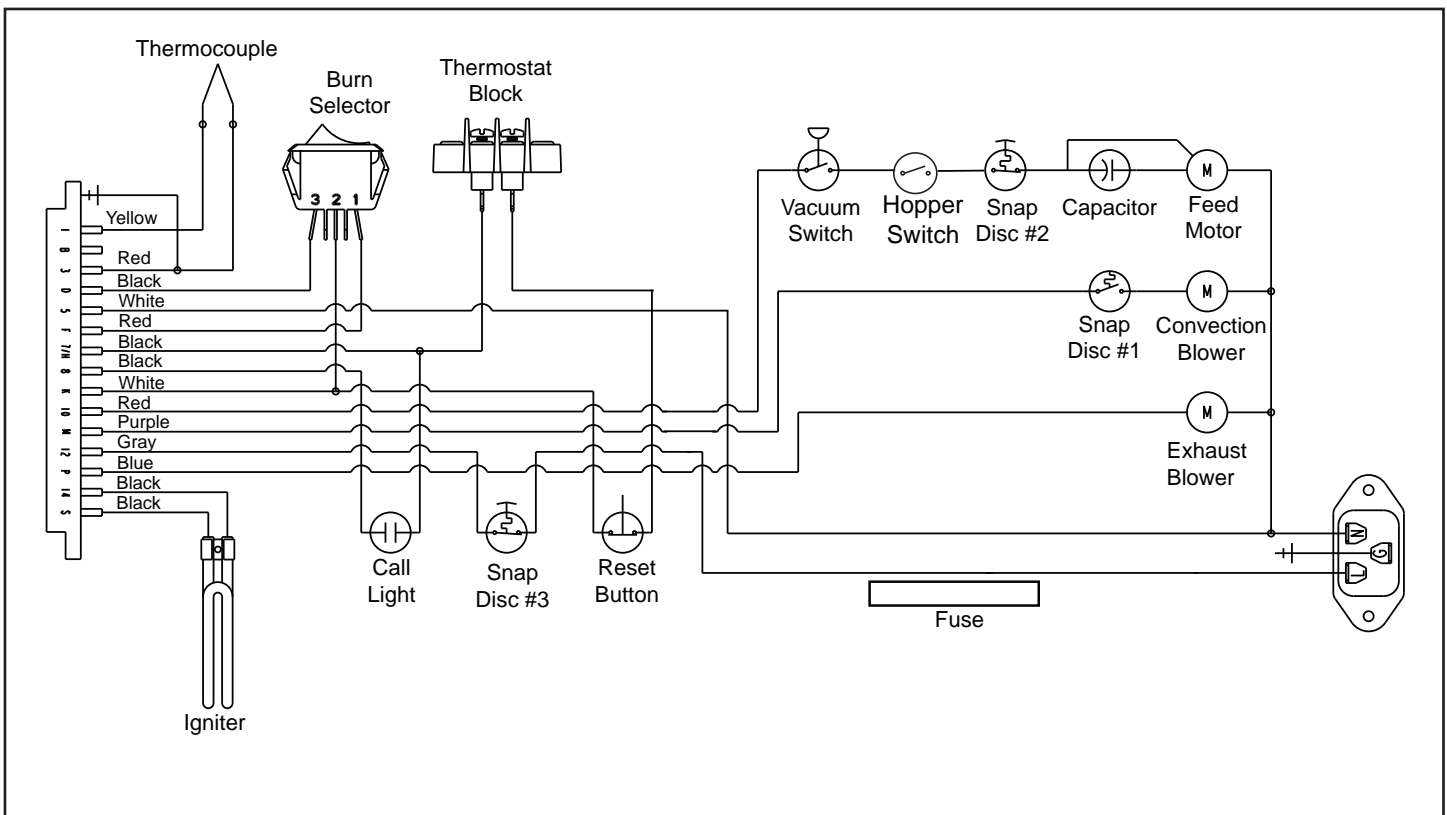
Snap disc #3 is mounted on the back of the auger tube in the center of the appliance and has a red reset button. To access it remove the right side panel. If the fire tries to burn back into the feed system or push exhaust up the feed tube, this snap disc will shut the entire system off. This disc must be manually reset.

**20. Vacuum Switch**

The vacuum switch is located on the right side of the appliance behind right side panel. This switch turns the feed system on when vacuum is present in the firebox. The vacuum switch is a safety device to shut off the feed motor if the exhaust or the heat exchanger system is dirty or plugged or if the firebox door is open.

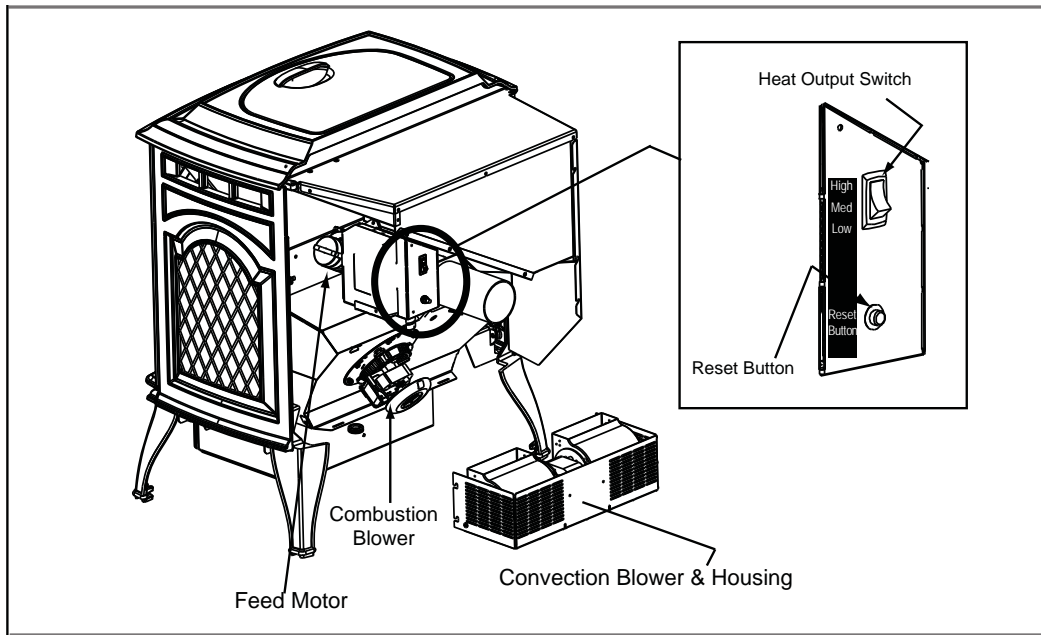
**21. Wiring Harness**

See Figure 38.1 below.

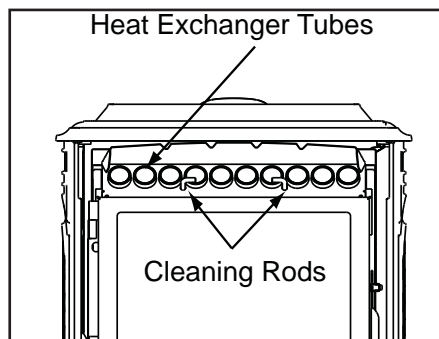


**Figure 38.1**

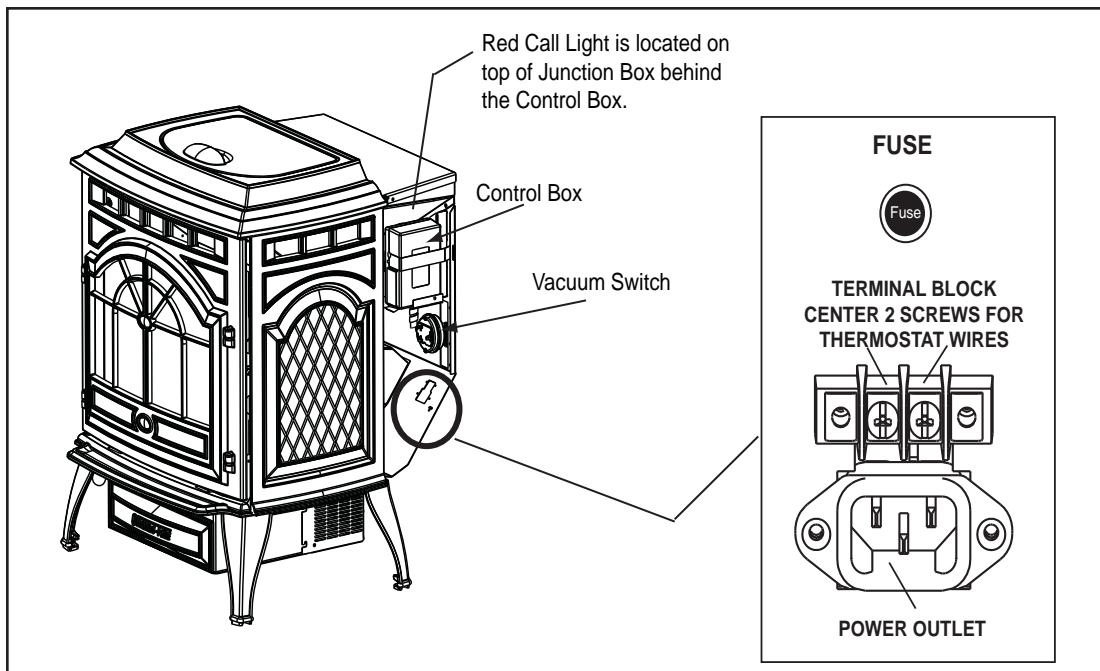
**B. Component Locations**



**Figure 39.1**



**Figure 39.2**



**Figure 39.3**

**C. Warranty Policy**

**Castile Pellet Insert**



**Hearth & Home Technologies Inc.  
LIMITED LIFETIME WARRANTY**

Hearth & Home Technologies Inc., on behalf of its hearth brands ("HHT"), extends the following warranty for HHT gas, wood, pellet, coal and electric hearth appliances that are purchased from an HHT authorized dealer.

**WARRANTY COVERAGE:**

HHT warrants to the original owner of the HHT appliance at the site of installation, and to any transferee taking ownership of the appliance at the site of installation within two years following the date of original purchase, that the HHT appliance will be free from defects in materials and workmanship at the time of manufacture. After installation, if covered components manufactured by HHT are found to be defective in materials or workmanship during the applicable warranty period, HHT will, at its option, repair or replace the covered components. HHT, at its own discretion, may fully discharge all of its obligations under such warranties by replacing the product itself or refunding the verified purchase price of the product itself. The maximum amount recoverable under this warranty is limited to the purchase price of the product. This warranty is subject to conditions, exclusions and limitations as described below.

**WARRANTY PERIOD:**

Warranty coverage begins on the date of original purchase. In the case of new home construction, warranty coverage begins on the date of first occupancy of the dwelling or six months after the sale of the product by an independent, authorized HHT dealer/ distributor, whichever occurs earlier. The warranty shall commence no later than 24 months following the date of product shipment from HHT, regardless of the installation or occupancy date. The warranty period for parts and labor for covered components is produced in the following table.

The term "Limited Lifetime" in the table below is defined as: 20 years from the beginning date of warranty coverage for gas appliances, and 10 years from the beginning date of warranty coverage for wood, pellet, and coal appliances. These time periods reflect the minimum expected useful lives of the designated components under normal operating conditions.

Warranty Period		HHT Manufactured Appliances and Venting							Components Covered
Parts	Labor	Gas	Wood	Pellet	EPA Wood	Coal	Electric	Venting	
1 Year		X	X	X	X	X	X	X	All parts and material except as covered by Conditions, Exclusions, and Limitations listed
2 years				X	X	X			Igniters, electronic components, and glass
		X	X	X	X	X			Factory-installed blowers
			X						Molded refractory panels
3 years				X					Firepots and burnpots
5 years	1 year			X	X				Castings and baffles
7 years	3 years		X	X	X				Manifold tubes, HHT chimney and termination
10 years	1 year	X							Burners, logs and refractory
Limited Lifetime	3 years	X	X	X	X	X			Firebox and heat exchanger
90 Days		X	X	X	X	X	X	X	All replacement parts beyond warranty period

See conditions, exclusions, and limitations on next page.

**Castile Pellet Insert****WARRANTY CONDITIONS:**

- This warranty only covers HHT appliances that are purchased through an HHT authorized dealer or distributor. A list of HHT authorized dealers is available on the HHT branded websites.
- This warranty is only valid while the HHT appliance remains at the site of original installation.
- Contact your installing dealer for warranty service. If the installing dealer is unable to provide necessary parts, contact the nearest HHT authorized dealer or supplier. Additional service fees may apply if you are seeking warranty service from a dealer other than the dealer from whom you originally purchased the product.
- Check with your dealer in advance for any costs to you when arranging a warranty call. Travel and shipping charges for parts are not covered by this warranty.

**WARRANTY EXCLUSIONS:**

This warranty does not cover the following:

- Changes in surface finishes as a result of normal use. As a heating appliance, some changes in color of interior and exterior surface finishes may occur. This is not a flaw and is not covered under warranty.
- Damage to printed, plated, or enameled surfaces caused by fingerprints, accidents, misuse, scratches, melted items, or other external sources and residues left on the plated surfaces from the use of abrasive cleaners or polishes.
- Repair or replacement of parts that are subject to normal wear and tear during the warranty period. These parts include: paint, wood, pellet and coal gaskets, firebricks, grates, flame guides, light bulbs, batteries and the discoloration of glass.
- Minor expansion, contraction, or movement of certain parts causing noise. These conditions are normal and complaints related to this noise are not covered by this warranty.
- Damages resulting from: (1) failure to install, operate, or maintain the appliance in accordance with the installation instructions, operating instructions, and listing agent identification label furnished with the appliance; (2) failure to install the appliance in accordance with local building codes; (3) shipping or improper handling; (4) improper operation, abuse, misuse, continued operation with damaged, corroded or failed components, accident, or improperly/incorrectly performed repairs; (5) environmental conditions, inadequate ventilation, negative pressure, or drafting caused by tightly sealed constructions, insufficient make-up air supply, or handling devices such as exhaust fans or forced air furnaces or other such causes; (6) use of fuels other than those specified in the operating instructions; (7) installation or use of components not supplied with the appliance or any other components not expressly authorized and approved by HHT; (8) modification of the appliance not expressly authorized and approved by HHT in writing; and/or (9) interruptions or fluctuations of electrical power supply to the appliance.
- Non-HHT venting components, hearth components or other accessories used in conjunction with the appliance.
- Any part of a pre-existing fireplace system in which an insert or a decorative gas appliance is installed.
- HHT's obligation under this warranty does not extend to the appliance's capability to heat the desired space. Information is provided to assist the consumer and the dealer in selecting the proper appliance for the application. Consideration must be given to appliance location and configuration, environmental conditions, insulation and air tightness of the structure.

**This warranty is void if:**

- The appliance has been over-fired or operated in atmospheres contaminated by chlorine, fluorine, or other damaging chemicals. Over-firing can be identified by, but not limited to, warped plates or tubes, rust colored cast iron, bubbling, cracking and discoloration of steel or enamel finishes.
- The appliance is subjected to prolonged periods of dampness or condensation.
- There is any damage to the appliance or other components due to water or weather damage which is the result of, but not limited to, improper chimney or venting installation.

**LIMITATIONS OF LIABILITY:**

- The owner's exclusive remedy and HHT's sole obligation under this warranty, under any other warranty, express or implied, or in contract, tort or otherwise, shall be limited to replacement, repair, or refund, as specified above. In no event will HHT be liable for any incidental or consequential damages caused by defects in the appliance. Some states do not allow exclusions or limitation of incidental or consequential damages, so these limitations may not apply to you. This warranty gives you specific rights; you may also have other rights, which vary from state to state. **EXCEPT TO THE EXTENT PROVIDED BY LAW, HHT MAKES NO EXPRESS WARRANTIES OTHER THAN THE WARRANTY SPECIFIED HEREIN. THE DURATION OF ANY IMPLIED WARRANTY IS LIMITED TO DURATION OF THE EXPRESSED WARRANTY SPECIFIED ABOVE.**







# QUADRA-FIRE®

## CONTACT INFORMATION:

Hearth & Home Technologies  
1445 North Highway  
Colville, WA 99114  
Division of HNI INDUSTRIES

Please contact your Quadra-Fire dealer with any questions or concerns.  
For the number of your nearest Quadra-Fire dealer  
log onto [www.quadrafire.com](http://www.quadrafire.com)

### CAUTION



#### DO NOT DISCARD THIS MANUAL

- Important operating and maintenance instructions included.
- Read, understand and follow these instructions for safe installation and operation.
- Leave this manual with party responsible for use and operation.

DO NOT  
DISCARD

### We recommend that you record the following pertinent information for your CASTILE-B FS PELLET STOVE

Date purchased/installed: \_\_\_\_\_

Serial Number: \_\_\_\_\_ Location on appliance: \_\_\_\_\_

Dealership purchased from: \_\_\_\_\_ Dealer phone: \_\_\_\_\_

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

This product may be covered by one or more of the following patents: (United States) 4593510, 4686807, 4766876, 4793322, 4811534, 5000162, 5016609, 5076254, 5113843, 5191877, 5218953, 5263471, 5328356, 5341794, 5347983, 5429495, 5452708, 5542407, 5601073, 5613487, 5647340, 5688568, 5762062, 5775408, 5890485, 5931661, 5941237, 5947112, 5996575, 6006743, 6019099, 6048195, 6053165, 6145502, 6170481, 6237588, 6296474, 6374822, 6413079, 6439226, 6484712, 6543698, 6550687, 6601579, 6672860, 6688302B2, 6715724B2, 6729551, 6736133, 6748940, 6748942, 6769426, 6774802, 6796302, 6840261, 6848441, 6863064, 6866205, 6869278, 6875012, 6880275, 6908039, 6919884, D320652, D445174, D462436; (Canada) 1297749, 2195264, 2225408, 2313972; (Australia) 780250, 780403, 1418504 or other U.S. and foreign patents pending.

HEARTH & HOME  
technologies