



# Clydesdale

(Model 8492)

Hybrid  
Wood Burning  
Fireplace Insert



## OWNER'S MANUAL

Installation And  
Operating Instructions



PFS Report F20-631



We recommend that our products be installed and serviced by professionals who are certified in the U.S. by NFI (National Fireplace Institute), or by W.E.T.T. (Wood Energy Technology Transfer) in Canada.

[www.nficertified.org](http://www.nficertified.org)  
[www.wettinc.ca](http://www.wettinc.ca)

**SAVE THIS OWNER'S MANUAL  
FOR FUTURE REFERENCE**

**PLEASE READ THIS ENTIRE OWNER'S MANUAL BEFORE YOU INSTALL AND USE YOUR  
NEW CLYDESDALE WOOD INSERT.**

**If this room heater is not properly installed, a house fire may result.**

**To reduce the risk of fire, follow the installation instructions.**

**Failure to follow these instructions can result in property damage, bodily injury, or even death.**

**Conforms to UL Std. 1482-11  
Conforms to ULC Std. S628-93**

**CONTACT LOCAL AUTHORITIES WITH JURISDICTION (BUILDING DEPARTMENT or FIRE  
OFFICIALS), ABOUT PERMITS REQUIRED, RESTRICTIONS AND INSTALLATION  
INSPECTION IN YOUR AREA.**

Clydesdale Model 8492  
6400-41427  
R: 3/29/2022

# Notes on Stove Operation and Efficiency

## **Rating:**

You have purchased a Hearthstone Clydesdale 8492 tested to EPA Method 28, 28A and 5H, 40 CFR Part 60 where applicable. This wood heater is certified to comply with the U.S. Environmental Protection Agency 2015 particulate emissions standard and is approved for sale after May 15, 2020. It is certified at 1.16 gr/hr. emission rate and under specific test conditions has been shown to deliver heat at rates ranging from 14,829 to 32,588 Btu (output).

This wood heater has a manufacturer-set minimum allowable low burn rate that must not be altered. It is against federal regulations to alter this setting or otherwise operate this wood heater in a manner inconsistent with operating instructions in this manual.

Please refer to the Warranty section of this manual for registration instructions. In case of warranty claims, please contact the point of original sale or the nearest authorized Hearthstone dealer. Our dealer network processes all warranty claims. Authorized Hearthstone dealers can be located at [www.hearthstonestoves.com](http://www.hearthstonestoves.com).

This heater is designed to burn natural wood only. Higher efficiencies and lower emissions generally result when burning air-dried seasoned hardwoods, as compared to softwoods or to green or freshly cut hardwoods. **DO NOT BURN:** *Garbage, lawn clippings, material containing rubber (including tires), materials containing plastic, waste petroleum products paints or paint thinners, asphalt products, materials containing asbestos, construction or demolition debris, railroad ties, pressure treated wood, manure or animal remains, salt water driftwood or other previously saltwater saturated materials, unseasoned wood, paper products, cardboard, plywood or particleboard. Burning these materials may result in a release toxic fumes or render the heater ineffective and cause smoke.* This prohibition against burning these materials does not prohibit the use of fire starters made from paper, cardboard, sawdust, wax and similar substances for the purpose of starting a fire in the Clydesdale wood insert.

Following the maintenance guidelines set forth in this manual will help ensure the efficient use of your wood heater and minimize visible emissions. Having your stove inspected by a trained professional on a regular basis will greatly increase the potential for recognizing potential impacts to efficiency.

Proper draft is important to the efficient operation of your heater. Refer to the Normal Operation section of this manual for information regarding adequate draft. Both excessive and sub-minimum draft can affect the efficiency of your wood heater. Excessive draft can lead to over-consumption of fuel, lower overall heating capacity of the insert and potential over firing. Low draft can result in inefficient burns, low heat output, expulsion of smoke into the living area when opened and an increased potential for build-up of flammable materials in the flue.

## **Efficiency:**

Efficiency was measured and weighted using EPA Method 28R and CSA B415-10 methodology. A weighted average was used to calculate the overall efficiency across all of the 4 burn rate categories using the higher heating value (HHV). The weighted average efficiency is 79% (HHV).

To maximize the efficient use of your woodstove insert, make sure it is sized properly for the space you plan to heat. An oversized insert will often be forced to burn at a lower and dirtier burn rate. Consult with your dealer for sizing and correctly placing the insert in your home. Maximizing the efficiency of your wood insert will heat your house quickly, burn cleaner and use less wood.

Refer to the Choosing Firewood section of this manual for appropriate fuel selection. Seasoned firewood is typically at or below 20% moisture content. This can be measured with any number of hand-held moisture meters available through your local hearth shop. Follow instructions included in the meter you purchase to measure fuel wood moisture content. Burn only dry, seasoned wood as using wet wood will greatly reduce your efficiency.

## **CO Emissions:**

The Clydesdale 8492 has the following CO emission (g/hr.) rates by burn level: Category 1 –0.56 Category 2 –1.26 Category 3 –.79 and Category 4 – 1.79. In general, the higher burn rate that can be safely maintained without over-firing the stove the cleaner the stove will operate. Wet wood or unapproved fuel described above can greatly affect the emissions of a wood burning stove.

## **Smoke/Fire/CO Detectors:**

It is highly recommended that smoke and CO detectors be installed throughout the heated space when a wood burning heater is installed. Be certain to install these devices not only in the area where the wood appliance is located, but also in bedrooms, hallways leading to other areas of the house and all common areas of the heated space. Check the batteries in these devices and assure operation by performing whatever test operations are recommended by the manufacturer.

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# INTRODUCTION

Congratulations! You have just invested in a most unique wood burning Fireplace Insert – the Clydesdale Model 8492 is a clean burning EPA certified, TruHybrid™ wood burning Fireplace Insert. You can be proud to join the Hearthstone family with our Premier Cast Iron Wood Burning Fireplace Insert.

The generous firebox depth and width allows for loading of wood up to 22 inches long!

Your purchase ensures years of clean, comfortable heat with minimal maintenance. The Clydesdale blends modern, TruHybrid™ technology with the unique beauty and heating qualities of soapstone (used as the firebox lining) and cast iron. Soapstone is well known for its even heat production and long heat-retaining ability. We trust that you will appreciate the quality of our handcrafted product.

Please read this manual in its entirety. Its purpose is to familiarize you with your wood insert's safe installation, proper break-in, operation and maintenance. It contains information that is useful to you now, and in the years to come. Keep it handy and refer to it as needed.

Use these instructions as well as national, state, and local building codes to install your wood insert. Ensure to maintain the designated chimney liner and wood insert clearances to walls, ceilings, hearth, and other combustible surfaces. This will help reduce the risk of fire. Failure to follow these instructions can result in property damage, bodily injury, and even death.

- **SAFETY NOTICE:**

**AN IMPROPERLY INSTALLED STOVE CAN RESULT IN A HOUSE FIRE. FOR YOUR SAFETY, CAREFULLY FOLLOW THE INSTALLATION DIRECTIONS. CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA.**

The safety of your will depend on many factors, some of which include: distance to combustible objects, correct venting, and adequate chimney maintenance. Should you have any questions, do not hesitate to contact your dealer for additional information.

This Clydesdale Model 8492 wood insert is warranted through your dealer by:

**Hearthstone Quality Home Heating Products, Inc®**  
317 Stafford Ave.  
Morrisville, Vermont 05661, USA  
[www.Hearthstonestoves.com](http://www.Hearthstonestoves.com)

## CODES

When you install your Clydesdale woodstove insert, it is imperative that you adhere to all Federal and local codes. Obtain these codes from either of the following sources:

**American National Standards Institute, Inc. (ANSI)**  
1430 Broadway  
New York, NY 10018  
www.ansi.org

**National Fire Protection Association, Inc. (NFPA)**  
Battery March Park  
Quincy, MA 02269  
www.nfpa.org

If you are installing your Clydesdale in a mobile or manufactured home, follow the guidelines described in the Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 3280 (United States).

## SAFETY INFORMATION

**Read and understand this Owner's Manual thoroughly before installing and using this Fireplace Insert.**

**Make sure to install your Fireplace Insert:**

- According to the manufacturer's recommendations
- In accordance with all applicable codes
- With the proper sized chimney liner

**When using your insert, follow these safety precautions:**

- **Never** modify this fireplace insert in any way.
- **Never** burn kiln dried, painted or treated wood in this fireplace insert.
- **DO NOT BURN GARBAGE.** Never burn garbage or trash, colored or glossy paper, solvents, plywood, artificial logs, cardboard, or driftwood, in this fireplace insert.
- **Never** burn coal in this stove.
- **DO NOT BURN FLAMMABLE FLUIDS.**
- **DO NOT USE CHEMICALS OR FLUIDS TO START THE FIRE.** **Never** use gasoline, kerosene, charcoal lighter fluid, or other flammable fluids to start or invigorate the fire. These fuels will cause dangerous burning conditions in the stove. Keep all such materials away from the fireplace insert.

- **Never** use a wood grate or other device to elevate the fire.
- **Never** allow logs in the firebox to hit the glass when the door is closed.
- **Never** slam the door or use the door to force wood in to the stove.
- **Never** over-fire your fireplace insert. (See page 28)
- **Never** put articles of clothing or candles on a hot stove.
- Never connect the stove to a flue used by another appliance.
- **Never** connect to or use in conjunction with any air distribution ductwork unless specifically approved for such installations

**Other safety guidelines:**

- Keep all combustible items such as furniture, drapes, clothing, and other items, at least 36" (0.92 m) from the stove (See page 9)
- Install a CO/smoke detector, preferably in an area away from your wood stove.
- Keep a fire extinguisher handy. We recommend the type rated "A B C."
- Dispose of ashes properly. (See page 28)
- Keep children and pets away from the stove when it is burning; they could be seriously injured by touching a hot stove.
- Clean your chimney system as needed.
- Make-up combustion air may be required if:
  1. This solid-fuel-fired appliance does not draw steadily, smoke rollout occurs, fuel burns poorly, or back-drafts occur whether or not there is combustion present.
  2. Existing fuel-fired equipment in the house, such as other fireplaces or other heating appliances, smell, do not operate properly, suffer smoke roll-out when opened, or back-draft whether or not there is combustion present.
  3. Opening a window slightly on a calm (windless) day alleviates any of the above symptoms.
  4. The house is equipped with a well-sealed vapor barrier and tight-fitting windows and/or has any powered devices that exhaust house air.

5. There is excessive condensation on windows in the winter.
6. A ventilation system is installed in the house.

If these or other indications suggest that infiltration air is inadequate, additional combustion air should be provided from the outdoors.

## PERIODIC CHECKLIST

Perform each of these tasks at the specified intervals.

### At the End of Every Week:

- Empty ashes from the firebox, sooner if the firebox is full.

### At the Beginning of Every Other Month:

- Depending upon your use of the stove, visually inspect the chimney connector and chimney for creosote. (See page 3)
- Check door seals using the "dollar bill test." - When the stove is cool, shut the door on a dollar bill. If the bill pulls out without any resistance, then your stove's door is not sealing properly. To tighten the seal, adjust the door latch mechanism or change the door gasket.
- Inspect the face of the catalytic combustor for fly ash and soot. Use an ash rated vacuum with a soft-bristled brush attachment to vacuum fly ash if present. It is recommended to visually inspect the catalytic combustor at least 3 times during the heating season, or every 2 months.

### At the End of Every Season:

- Have chimney/ liner and connection to the insert inspected and cleaned by a professional
- Thoroughly clean out the firebox of the Fireplace Insert.
- Inspect all door gasket material and replace if worn, frayed, cracked or extremely hard.
- Replace any badly cracked refractory soapstone in the firebox.
- Clean dust away from the ash lip assembly and grills.
- Remove the Ash Lip Cover and inspect the blower assembly - clean if necessary.

## EMERGENCY PROCEDURES

If you have a stovepipe or chimney fire, follow these instructions:

1. If the fire is too threatening, leave the area and call the fire department immediately! If not, perform the next three steps.
  2. Close the primary air control.
  3. Close the stovepipe damper (if present).
  4. Close the bypass damper
  5. Keep the stove front door closed!
- **WARNING: DO NOT ATTEMPT TO PUT OUT A STOVEPIPE OR CHIMNEY FIRE BY THROWING WATER ONTO THE STOVE, STOVEPIPE, OR CHIMNEY. THE EXTREMELY HIGH TEMPERATURE OF SUCH FIRES CAN CAUSE INSTANTANEOUS STEAM AND SERIOUS BODILY HARM.**

Once the chimney fire expires, leave the primary air control and bypass handle closed and let the fire in the stove die out completely. Inspect the stove, stovepipe, and chimney thoroughly for any sign of damage before firing the stove again. You must correct any damage before using your stove again.

Contact your local municipal or provincial fire authority for information on how to handle a chimney fire. Have a clearly understood plan to handle a chimney 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 mild weather even though monthly cleaning may be enough in the coldest months.

# SPECIFICATIONS

**Maximum Heat Output:** 60,000 BTU per hour of cordwood (based on independent laboratory test results).

**Size of Heated Area:** Up to 2,000 square feet.

**Firebox Capacity:** 2.4 cubic feet or 48 pounds of wood (The amount and weight of wood contained per cubic foot of firebox volume can vary from 15 to 36 lbs. per cubic foot depending on type of wood, moisture content, packing density and other factors. As a constant for comparison and test purposes, we are assuming 20 lbs. of seasoned hardwood per cubic foot of firebox volume).

**Maximum Log Length:** 22" (55.88 cm)

**Height:** 23.12" (58.72 cm)

**Width:** 31.38" (80.31 cm)

**Depth:** 24.81" (63 cm)

**Front Door Size:** 22" wide x 11.5" high (55.88 x 29.21 cm)

**Chimney Liner Size:** 6" (152 mm) diameter

**Metal Chimney:** 6" (152 mm) inside diameter

**Masonry Chimney:** 6" (15.2cm) inside diameter (Round flue)

8" x 8" (20 x 20cm) (square flue)

**Flue Exit:** Top exit only

**Actual Weight:** 550 pounds

**Castings Finish:** Painted Matte or Porcelain Enamel

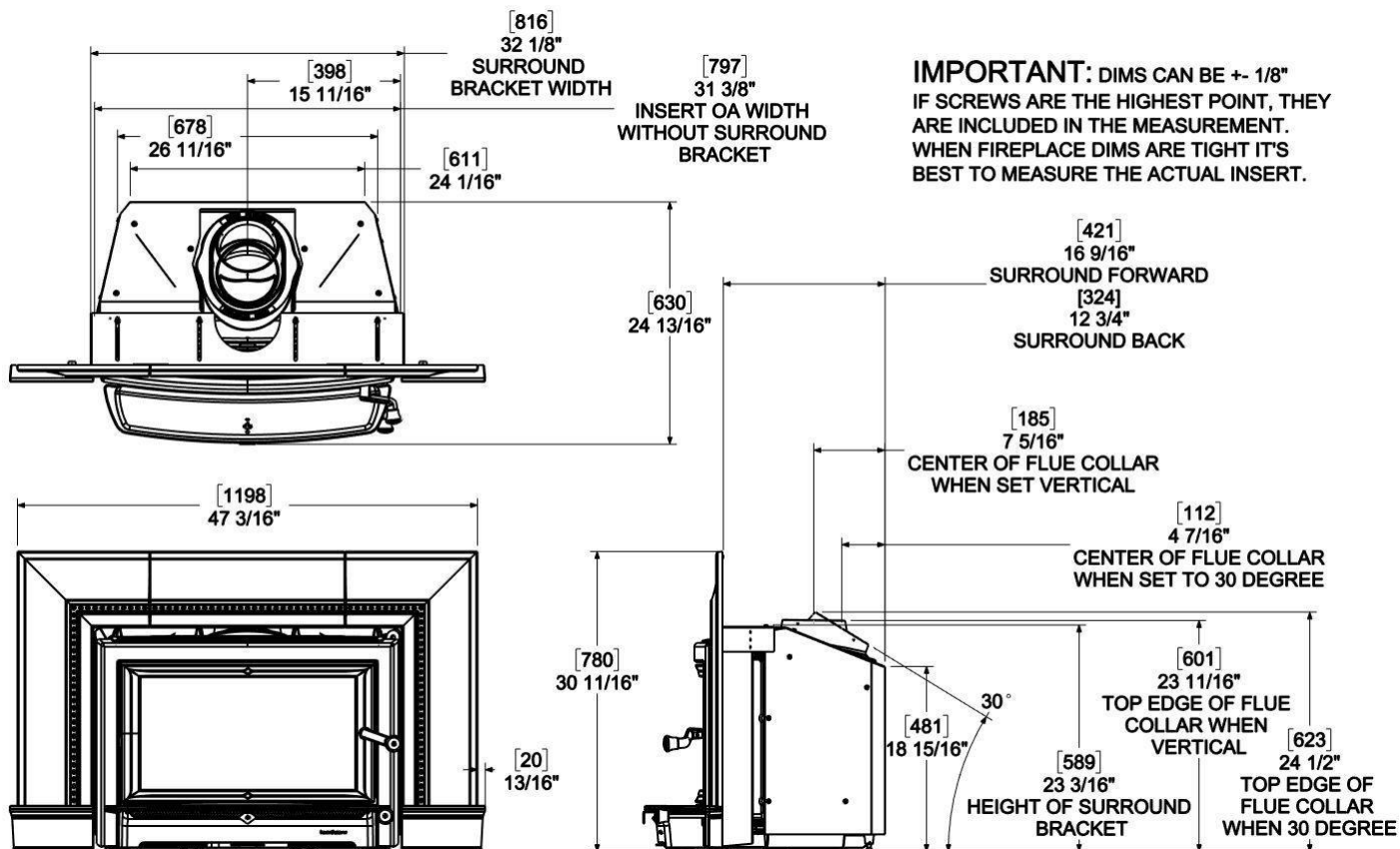


Figure 1 – Clydesdale Dimensions

# INSTALLATION

## UNPACKING

Hearthstone packages your Clydesdale Fireplace Insert with the greatest care so that it ships safely. Under certain circumstances, however, damage can still occur during transit and handling. When you receive your Fireplace Insert, unpack it carefully, inspecting it, and all parts for damage. Also, ensure that all parts are included. If any parts are damaged or missing, please contact your dealer immediately.

## PACK LIST

- 1- Clydesdale 8492 Fireplace Insert
  - 1- Façade and Ash Lip w/ blower (in place on insert)
  - 1- Façade Top Grill (in place on insert)
  - 2- Catalysts (ships in firebox)
  - 1- Surround Kit Box (ships on top of insert)
- In Firebox:
- 2- Boxes, Refractory Stone Kit (A & B)
  - 1- Bag, Wood Handle Kit (2 handles and 2 screws).
  - 1- Envelope, Owner's Manual Packet
  - 1- Pouch, Touch-up Paint (Enamel only)

## *Pre-Installation Prep*

When installing this unit in a fireplace, you must attach the provided metal label (3300-148) to the fireplace prior to installing the insert (see illustration on page 9).

**WITH ALL CHIMNEYS, A POSITIVE CONNECTION MUST BE MADE BETWEEN THE FIREPLACE INSERT'S FLUE COLLAR AND THE CHIMNEY (see page 9)**

Ensure that the Fireplace Insert will have enough clearance to combustible materials in the vicinity. These combustibles can include walls, floor, ceiling, fireplace mantle, and chimney decor. You must carefully consider the clearances to all of these combustibles before actually connecting your Fireplace Insert.

Read this chapter to obtain a sound understanding of how to properly install your Fireplace Insert. Contact the following agency for more information:

**National Fire Protection Agency**  
Batterymarch Park  
Quincy, MA 02269  
1-800-344-3555  
1-617-770-3000  
[www.nfpa.org](http://www.nfpa.org)



# Venting Components & Configuration

## Installing a Venting System

- **DO NOT CONNECT THIS UNIT TO ANY AIR DISTRIBUTION DUCT OR SYSTEM**

**Secure all joints, including attaching the flue liner to the Fireplace Insert's flue collar, with three sheet metal screws.** Install #10 x 1/2" (3 mm x 13 mm) sheet metal screws into the holes pre-drilled in the flue collar. Eliminating the screws can cause joints to separate from the vibrations that result from a creosote chimney fire.

Remember, the NFPA has recommended minimum clearances for chimney connectors to combustibles such as walls and ceilings. Once the Fireplace Insert is installed at safe distances from these combustible surfaces, it is important to maintain these connector clearances for the remainder of the installation.

## Connecting Your Wood Fireplace Insert

You can connect your Clydesdale to a prefabricated metal chimney or a masonry chimney. See *Figure A* for an example to aid in connections.

- **With all chimneys, a positive connection must be made between the fireplace insert's flue collar and the chimney.**

In an existing Masonry Chimney:

1. Connect the insert to a listed 6" stainless steel flexible connector that connects to a listed 6" stainless steel liner extending the full length of the chimney.
2. In all cases, a sealed block off plate, or a plug of other noncombustible material such as unfaced fiberglass insulation, must be installed at the damper area of the existing fireplace to seal the chimney from the room air.

The fireplace insert must be installed with a continuous chimney liner with a minimum diameter of 6" extending from the fireplace insert to the top of the chimney. The chimney liner must conform to the class 3 requirements of chimney liner standards ULC-S635 or ULC-S640.

- **Do not use aluminum or galvanized steel pipe as a connector or chimney liner. These materials are not suitable for solid fuel burning applications.**

## Connecting to a Prefabricated Metal Chimney

Before installing the stove in a factory-built fireplace, the fireplace must have the following characteristics:

- 1) Listed per UL 127 or ULC S610.
- 2) Include a full height listed chimney liner meeting ULC-S635 or ULC-S640 standards.
- 3) The means to prevent room air passage to the chimney cavity of the fireplace.
- 4) Does not disturb the airflow in or within the fireplace when installed (louvers, or cooling air inlet or outlet ports must not be blocked).
- 5) Not be altered in any way, except for the following:
  - a) External trim pieces which do not affect the operation of the fireplace can be removed, providing they are stored on or within the fireplace for re-assembly if the insert is removed.
  - b) The chimney damper can be removed to install the chimney liner.
- 6) Must not have blocked circulating chambers (if available).
- 7) The means for removing the insert to clean the chimney flue.
- 8) Have a permanent metal warning label (provided with the Clydesdale—see following illustration) attached to the fireplace by riveting it to the outside wall, stating that the fireplace must be restored to its original condition for safe use without the insert.

THIS FIREPLACE HAS BEEN ALTERED TO ACCOMMODATE A FIREPLACE INSERT AND SHOULD BE INSPECTED BY A QUALIFIED PERSON PRIOR TO RE-USE AS A CONVENTIONAL FIREPLACE

3300-148

**WARNING: DO NOT CONNECT THE FIREPLACE INSERT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.**

Ensure the size of the chimney's flue is appropriate for the Clydesdale. The Clydesdale requires a 6" (152 mm) inside diameter flue for new installations. A 6" diameter flue provides adequate draft and performance. You can use an 8" (203 mm) diameter existing flue with a reducer. An oversized flue contributes to creosote accumulation. (In this case, bigger is NOT better.)

There are two ways to install a prefabricated metal chimney:

- An *interior* installation where the chimney passes inside the residence through the ceiling and roof.
- An *exterior* installation where the chimney passes through the wall behind the Fireplace Insert then up the outside of the residence.

Whenever possible, choose an interior chimney. An interior chimney heats quickly and retains its heat; thus promotes a better draft and discourages the formation of creosote. An exterior chimney does not benefit from the surrounding warmth of the building, so it typically operates at lower flue temperatures than an interior chimney. An exterior chimney's draft is not as strong and may experience increased creosote accumulation.

- **REMOVE THE DAMPER OR LOCK IT OPEN.**

## Connection to a Masonry Chimney

Hire a professional to examine the masonry chimney for cracks, loose mortar, and other signs of deterioration and blockage before connection. If the chimney needs repairs, complete them before installing and using your Fireplace Insert. Do not install your Fireplace Insert until the chimney is safe for use.

The masonry chimney must be lined from the insert to the flue cap with a listed 6" stainless steel flexible connector that connects to a listed 6" stainless steel liner extending the full length of the chimney.

Use the following checklist to ensure that your masonry chimney meets these minimum requirements:

### Chimney wall construction:

- A brick, modular block, rubble or stone wall at least 4" (102 mm) thick.

### Flue liner:

- Minimum ceramic flue liner thickness of 5/8" (16 mm). Installed with refractory mortar and with at least 1" (25 mm) air space.
- An equivalent listed chimney flue liner system meeting class 3 requirements of chimney liner standards ULC-S635 or ULC-S640.

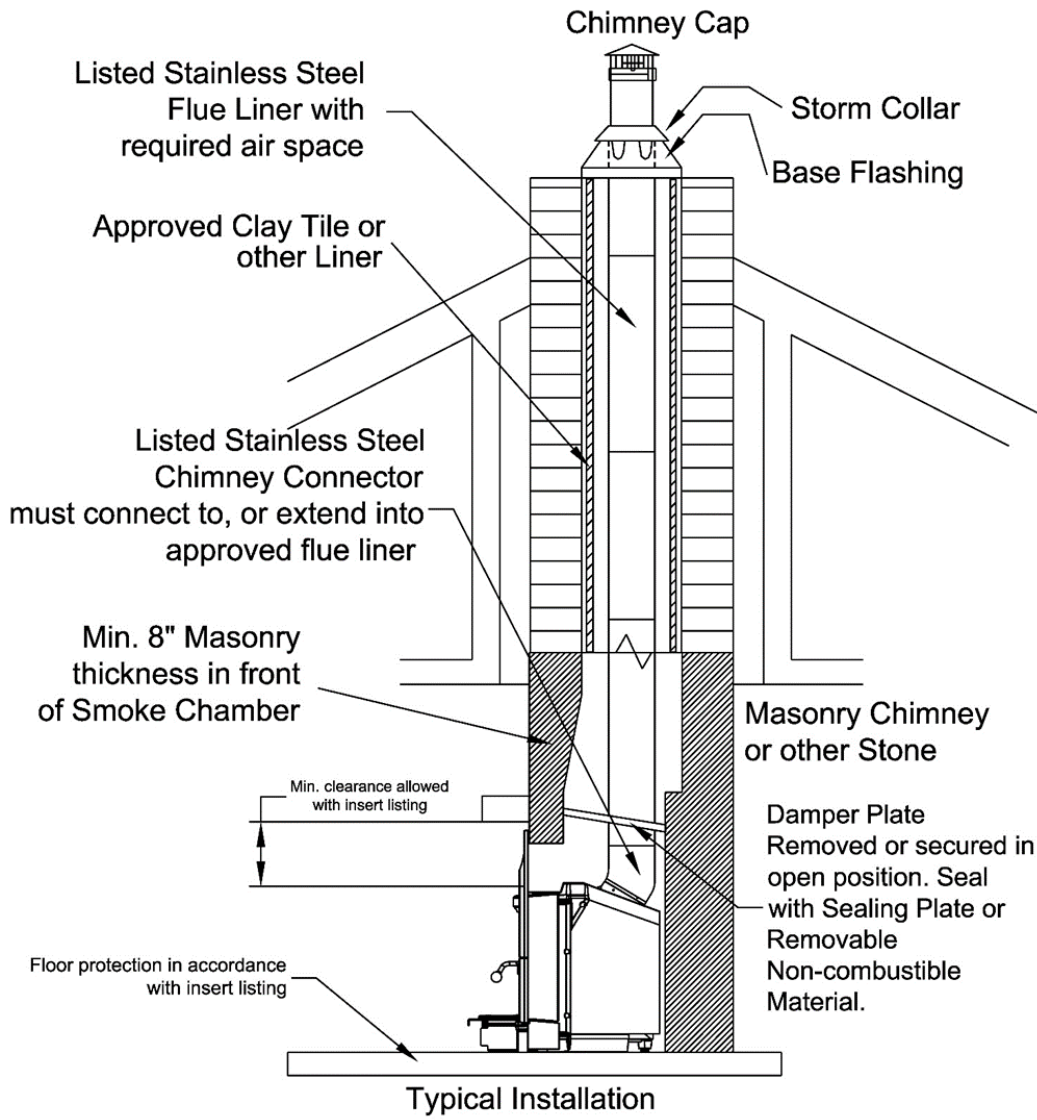
### Interior chimney requirements:

- At least 2" (51 mm) clearance to combustible structure
- Fire stops installed at the spaces where the chimney passes through floors and/or ceiling.
- Insulation must be 2" (51 mm) from the chimney.

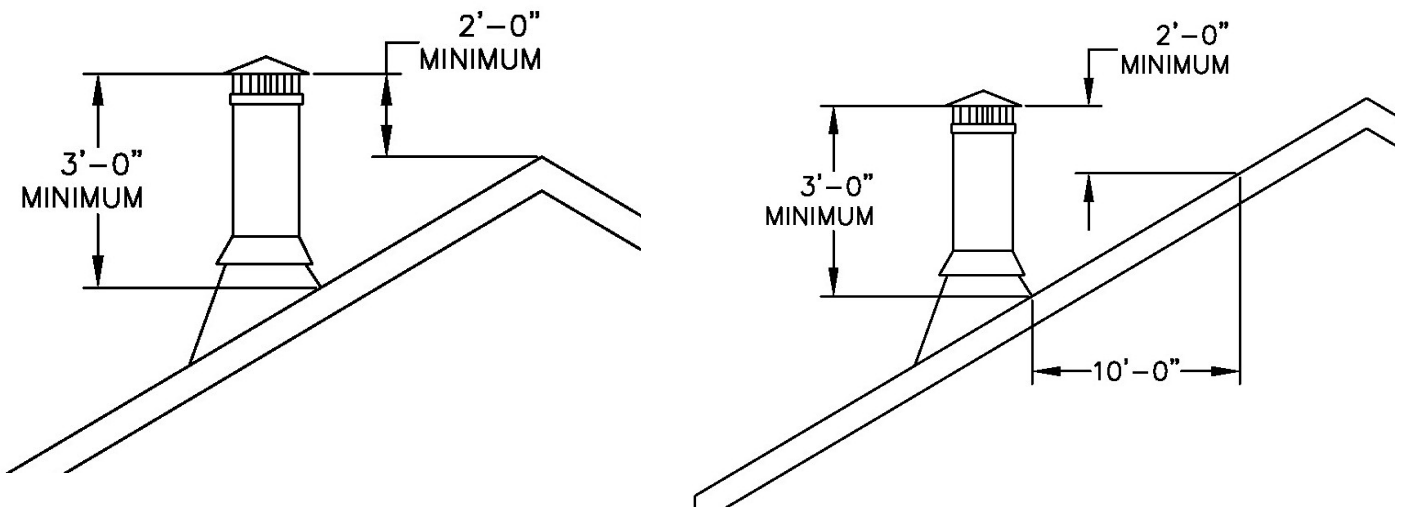
### Exterior chimney requirements:

- At least 1" (25 mm) clearance to combustible structure.
- Chimney height requirements: (See page 11)
- At least 3 feet (0.9 m) higher than the highest part of the roof opening through which it passes.
- At least 2 feet (0.6 m) higher than any part of the roof within 10 feet (3 m) measured horizontally from the top of the chimney. This Fireplace Insert requires a minimum chimney height of 13 feet (4 m). The maximum recommended chimney height is 30 feet (9m).
- **IMPORTANT: You must seal the damper area around the chimney liner to prevent room air from entering the chimney cavity of the fireplace.**
- **WARNING: DO NOT REMOVE BRICKS OR MORTAR FROM THE EXISTING FIREPLACE!**

**(Exception)** Removal of masonry or steel (including the damper plate) from the smoke shelf and adjacent damper frame if necessary to accommodate a chimney liner, provided their removal will not weaken the structure of the fireplace and chimney, and will not reduce protection for clearance to combustible materials to less than required by the National Building Code.



**Figure A – CONNECTING TO A MASONRY CHIMNEY**



## Hearth Requirements & Floor Protection

Combustible flooring must be protected with a covering of noncombustible material (slate, marble tiles, other noncombustible material can be used for this purpose). The floor protection must extend beyond the body of the Fireplace Insert at the minimum as follows. Insulation below the non-combustible material must be R1.5 insulation below hearth protection OR bottom of insert installed minimum 7" above hearth protection with R0 insulation (13.25" if measured from bottom of fuel opening).

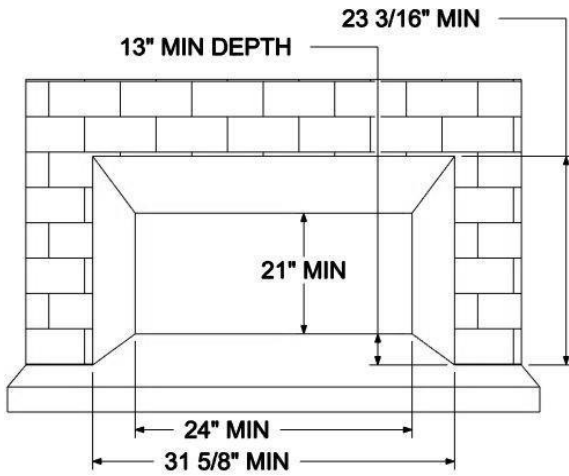
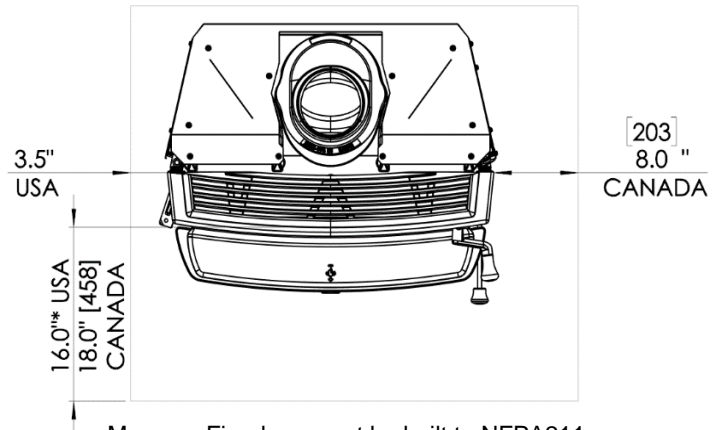


Figure 2 – Minimum Fireplace Dimensions



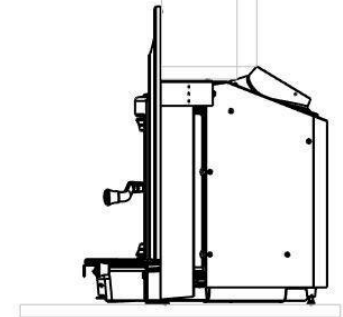
Masonry Fireplace must be built to NFPA211 standards.

\*Measured from fuel door opening.

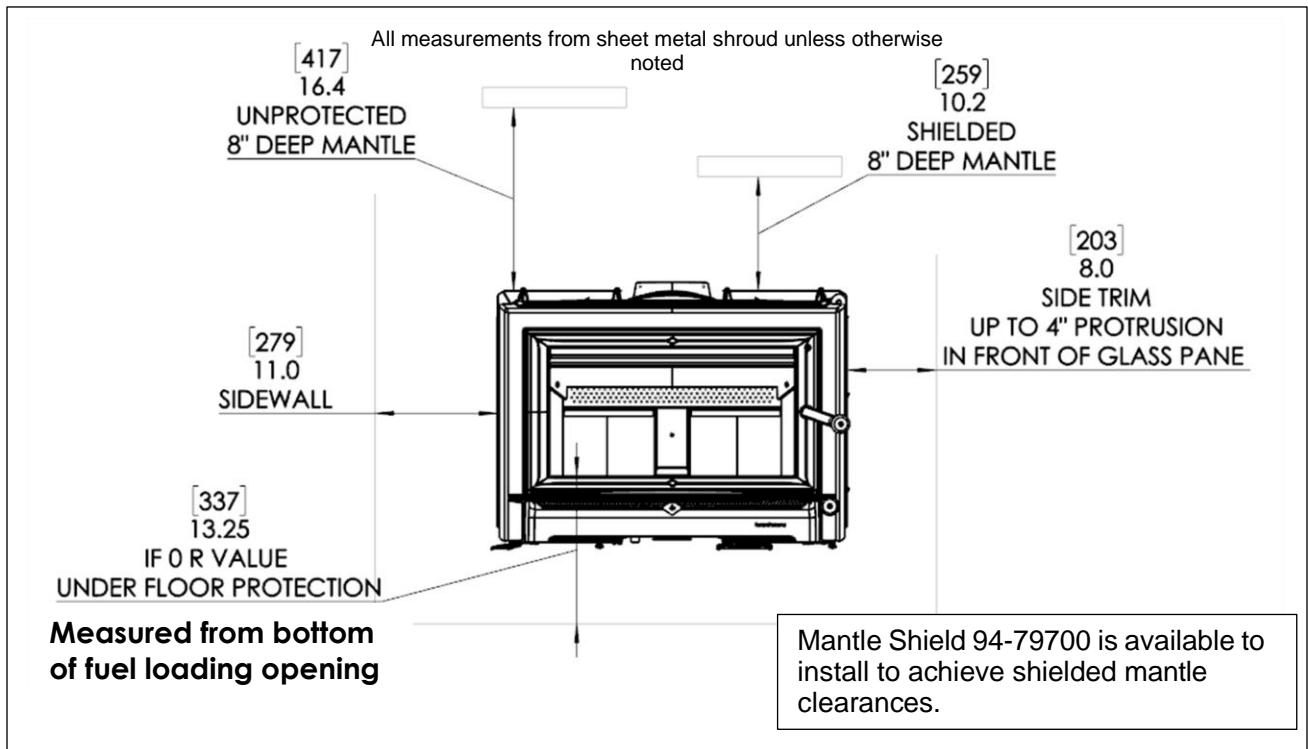
R1.5 insulation below hearth protection **OR** bottom of insert installed minimum 7" above hearth protection with R0 insulation.

### Figure 3 – Hearth Requirements

9 11/16" MAX LINTLE  
AT 24 1/2" MIN HEIGHT  
7 11/16" MAX LINTLE  
AT 23 3/16" MIN HEIGHT



## Clearances to Combustibles

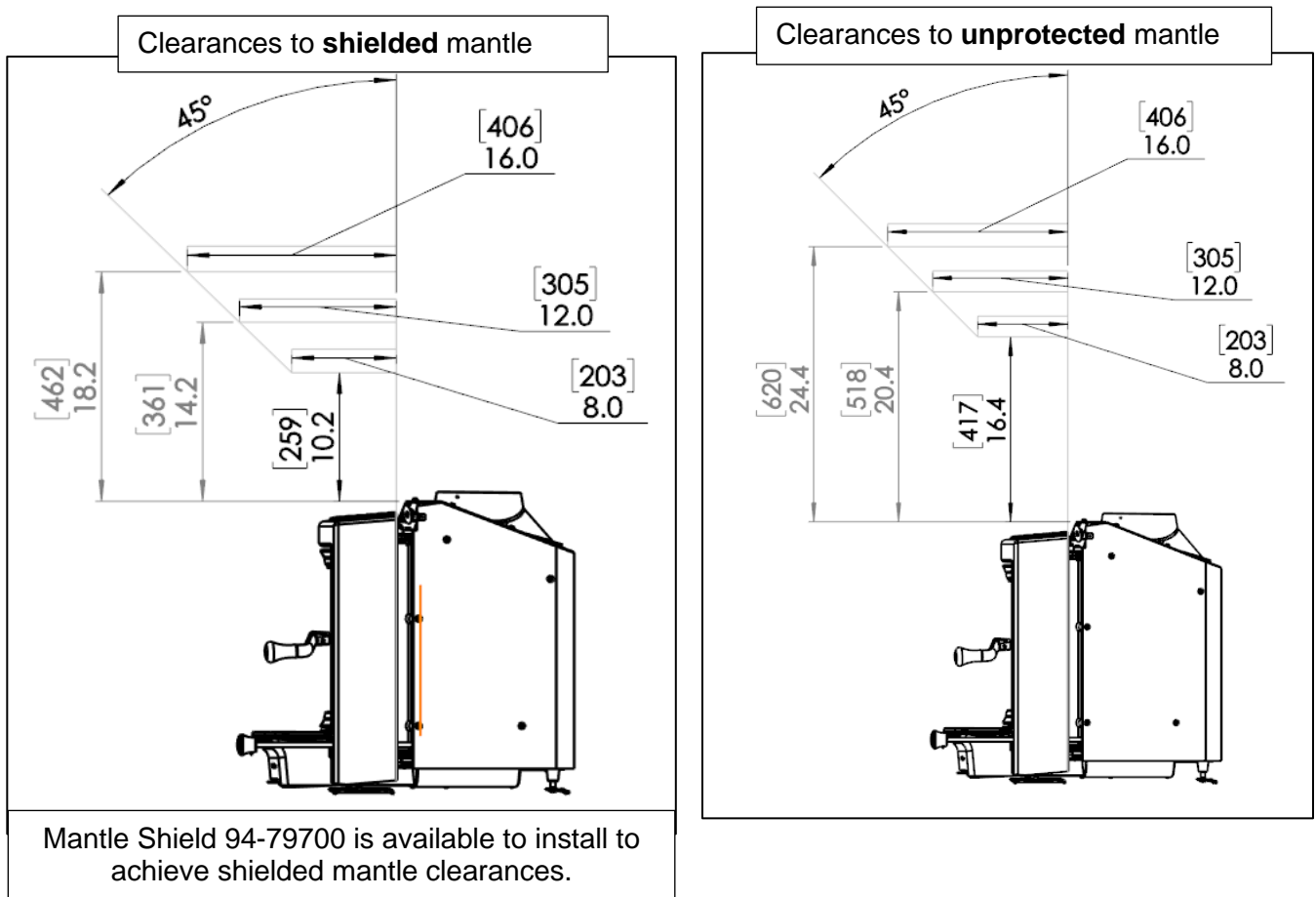


## Clearances to NFPA 211 Protected Surfaces

You can reduce the clearances to combustible surfaces by using any National Fire Protection Agency (NFPA) approved wall protection system. Refer to NFPA 211 for specific and complete details:

### National Fire Protection Agency

Battery March Park  
 Quincy, MA 02269  
 1-800-344-3555  
 1-617-770-3000  
 www.nfpa.org



**Familiarizing yourself with the stove:**

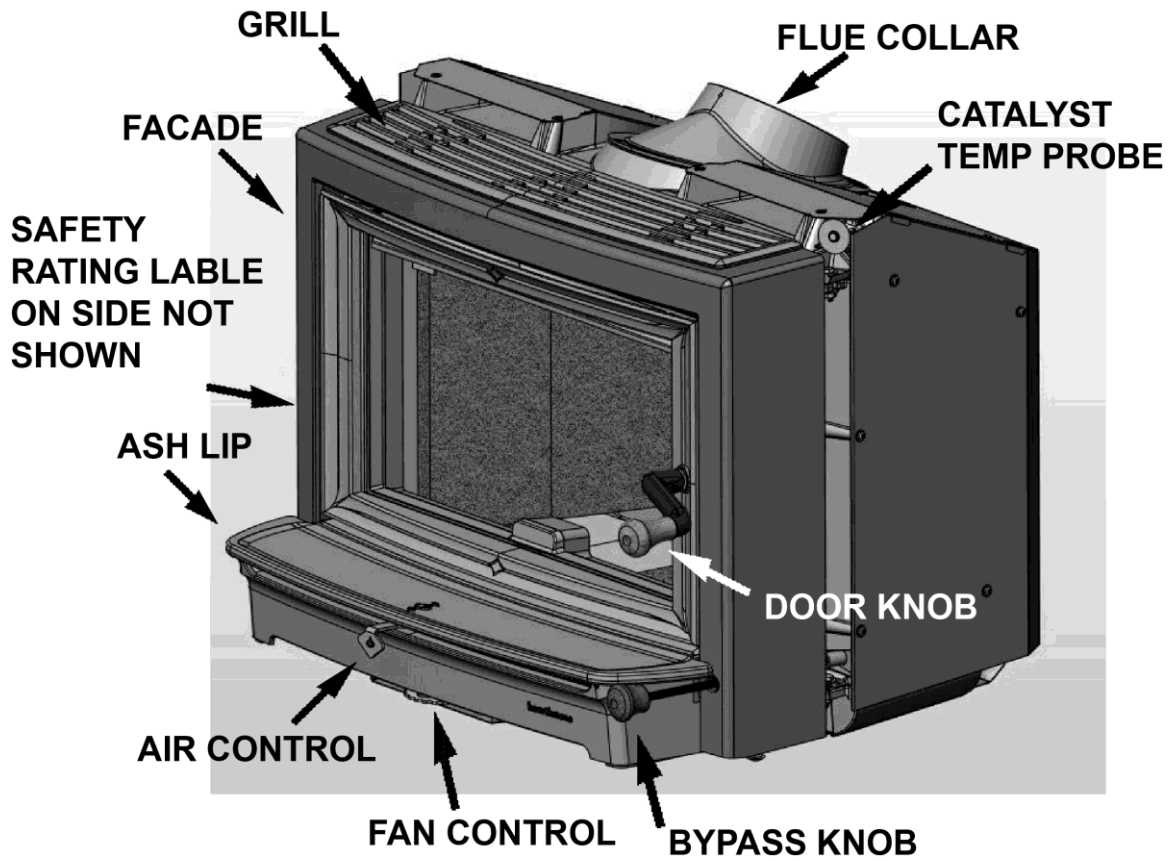


Figure 5 – Exterior Features of The Clydesdale



## Unpacking and Installing the Insert

**Step One:** Remove the contents of the firebox. This will include the owner's manual packet, two boxes of soapstone refractory bricks, a bag of two catalyst, and a pouch containing enameltouch-up (if applicable).

**Step Two:** Remove the Clydesdale from the pallet (see Figure 6).

Locate the four mounting clips attached to the leveling bolts (two in the front and two in the back) which secure the insert to the shipping pallet. Remove the lag bolts and clips with a 1/2" wrench. The front two clips are under the Facade (see figure 6). Removing the facade and ash lip will ease clip removal and handling the insert. **When working on or around enamel parts handle them with care.**

1. Remove Ash Lip by backing out the setscrews just below both front corners of the ash lip. Then with the door opened wide, lift the front edge of the ash lip slightly (avoid making contact with door) and move it to the left (If the door hinges are on the left move ash lip to the right.) and out from under the door. Remove the grill (see figure 5). Remove the bypass knob from the push-pull rod.
2. Close the door to within 1 inch, turn the door handle to the 12 o'clock position. Grip the facade (see figure.5) by the sides, close to the height of the ash lip, and pull the bottom of the façade out about 2 inches to clear the door and handle, lift slightly and slide facade off of bypass rod.

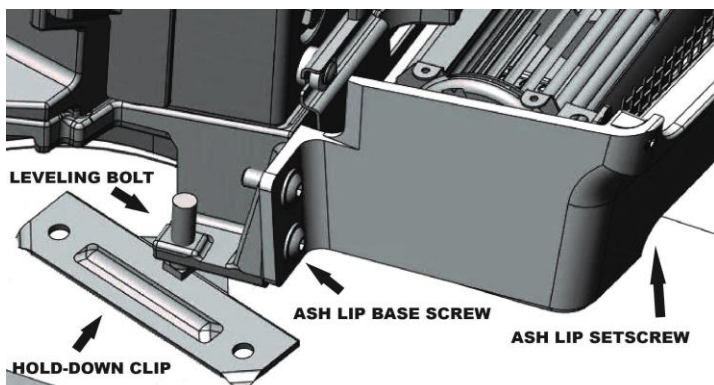


Figure 6 – Pallet Mounting Clip Detail (Left Front Shown - Façade and Ash lip Removed)

**Step Three:** Measure fireplace for flue arrangement. Determine the position of the insert in relationship to where the chimney liner enters the fireplace. The flue collar can be installed at 30 degrees as well as vertical. See figure 1.

**Step Four:** Remove Flue Collar from Insert.

The flue collar bolts can be accessed through the fuel loading door opening. To get at the bolts a few steps must first be taken:

1. Remove the baffle halves by lifting the right side of the baffle support off of the stone retainer. Slide the baffle support to the right and detach it from the left side (see figure 7).

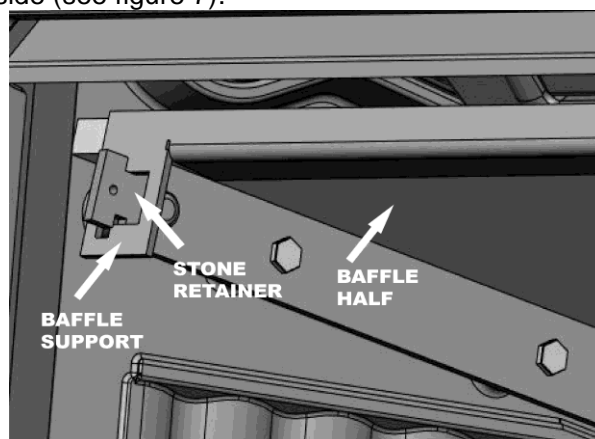


Figure 7 – Baffle Support and Baffle Half (left side)

2. Slide baffle halves, one at a time to the front of the stove and remove. Note: The baffles can be broken by mishandling. Take care not to bump or crush them.
3. Remove the access plate (see figure 8) using a 7/16" socket wrench.

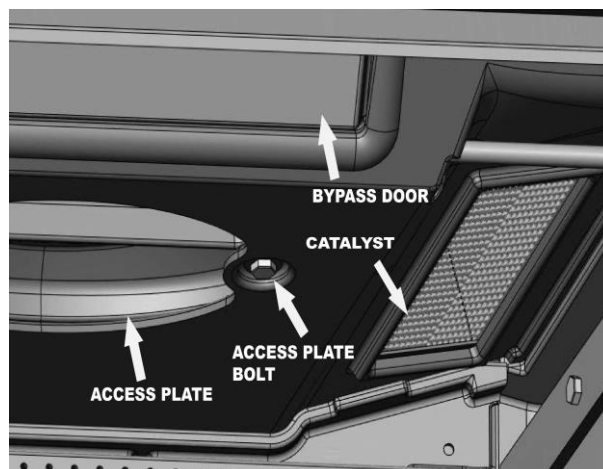


Figure 8– Access Plate and Catalyst Detail Half (left side shown)

4. Remove flue collar from insert. Once collar is removed, hand tighten bolts to keep the long section of locks pointing to center. This position will aid in handling collar from inside stove and keep them from flopping around. A good view of bolts can be had by looking through the bypass door opening.

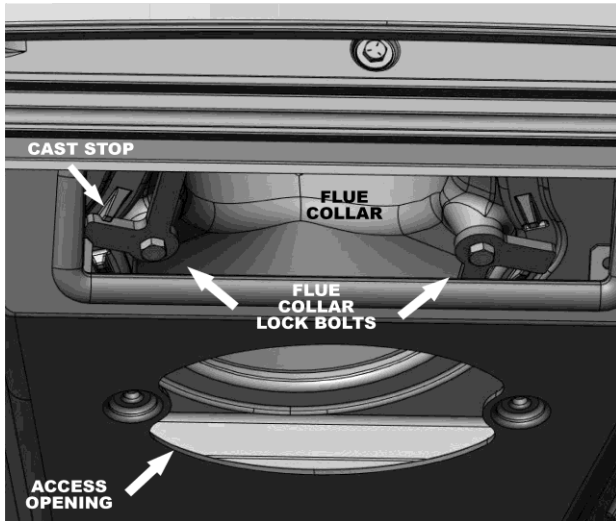


Figure 9 - View Through Bypass Door Opening

**Step Five:** Install the flue collar to the liner (using three screws) adjust position of flue collar and seal remaining chimney opening. The flue collar should be hanging in the fireplace close to the height it will be when reattached to the insert (see figure 10). The flue collar should also be positioned so the lock bolts are parallel to the back wall of the fireplace. This way, the flue collar will need a minimal amount of adjustment when the insert is pushed into its final position.

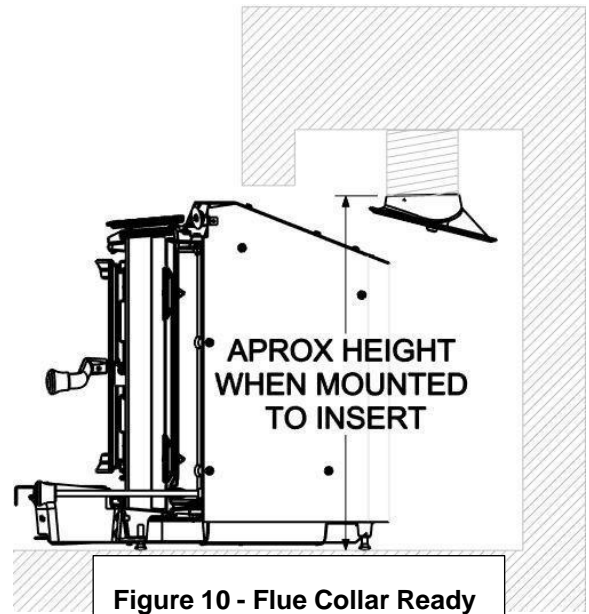


Figure 10 - Flue Collar Ready

**NOTE:** Before final installation, check the floor of the fireplace for uneven bricks or stones at the points the insert levelers will sit. Using a level, determine how much the front and rear leveling bolts need to be adjusted. It's best to have the insert installed level, or tilted slightly back so the door will not swing open on its own. The rear bolts can only be adjusted *before* the unit is installed.

If the hearth is very uneven, consider laying down a piece of sheet metal to aid in sliding and positioning the insert into place.



**Step Six:** Attach the surround mounting bracket (see kit 94-5991110 instructions).

**Note:** If the insert will be placed far enough into the fireplace so that the bracket will interfere with the re-installation of the facade and grill, now is a good time to reinstall them. **First**, check the position of the catalyst probe (see figure 12) and adjust if needed. Also, if the door and/or power cord are to be reversed (see page 20) *Optional Installation steps* for detail) do these **before** re-installing facade.

To mount the facade, pull the bypass rod out (with knob removed), and reverse the procedure in step 2 subsection 2.

As the facade is being mounted be sure to let the clips on the top rear corners fall into the cast pockets (see figure 12) so it will sit in the correct position. The crossbar on the facade will not fit into the groove under the door if the top of the facade is not down in the pockets correctly. If the facade and grill are enameled, the grill will have screws in the bottom corners to keep it slightly above the facade to prevent chipping. There should be no need to adjust these screws.

**Step Seven:** Move the insert into position. Check level and measure to be sure the insert is centered and parallel to the fireplace. Look through the bypass door opening to confirm collar is where expected.

**Step Eight:** Use the flue collar locks (see figure 9) to pull the collar into position, then swing each so the short arm becomes captured between the cast stops on either side of the opening. This will prevent the collar from pulling away as the bolts are tightened.

**NOTE:** Take care that while tightening the lock bolts that they are parallel to the stove and that the rib on the bottom of the collar is seated in the gasket groove on the top of the insert.

**Step Nine:** Reinstall the baffle (see figure 7 & 11) by reversing step 4 subpart 1.



Figure 11 - Baffle Notch Detail

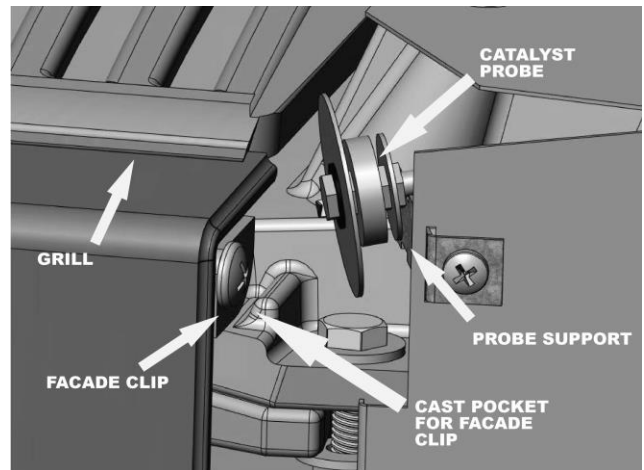


Figure 12 - Facade Mounting Clips

**Step Ten:** Reinstall the ash lip by reversing step 2 subpart 1 (see figure 6). The rear of the ash lip will fit against the gasket under the door. This is a seal to prevent ashes from falling into the blower area. Be careful with enamel parts. Ash lip may be tight fitting and require some downward force to get the front to drop in.

**Step Eleven – Install refractory stone.**

**Floor stones are in (ABC) BOX B**

**Side and back stones (EFD) are in BOX A**

Lay out the stones on a piece of cardboard to sort the different sizes (a tape measure is handy for this) into stacks so they can be selected when needed. Use figure 13 to identify and locate the stones correctly.

**Note:** To get the side stone under the stone retainer (see figure 7) install them far to the front of the firebox and slide them to the back.

Install the refractory stone in the following order:

1. Stone D (2 stones), Center rear wall stones (1-0000-103).
2. Stone E (2 stones), Side wall stones (1-0400-904).
3. Stone F (2 stones), Side wall stones (1-0400-905).
4. Stone A (2 stones), Front floor outer stones (1-0000-101).
5. Stone A (2 stones), Rear floor outer stones (1-0000-101) **do not push them to the back wall yet.**
6. Stone D (2 stones), Outer rear wall stones (1-0000-103) one at a time. Hold each of these up and push each Center floor Stone A under rear stone (see figure 13).
7. Stone C (1 stone), Front square floor stone (1-0400-902).
8. Stone A (1 stone), Front sideways floor stone (1-0000-101).
9. Stone B (1 stone), Rear floor center stone (1-0000-001).

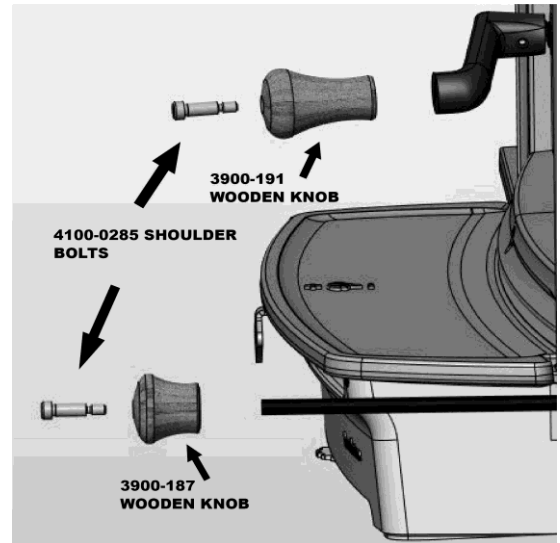


Figure 14: Door and Bypass Knobs

NAME	PART NUMBER	SIZE	QTY.
A	1-0000-101	9 X 4-1/2 X 1-1/4	5
B	1-0000-001	7-1/2 X 4-1/2 X 1-1/4	1
C	1-0400-902	4-1/2 X 4-1/2 X 1-1/4	1
D	1-0000-103	8-1/2 X 4-1/2 X 1-1/4	4
E	1-0400-904	SLOPED 9.9-10.9 X 5-1/2 X 1-1/4	2
F	1-0400-905	SLOPED 10.9-11.9 X 5-1/2 X 1-1/4	2

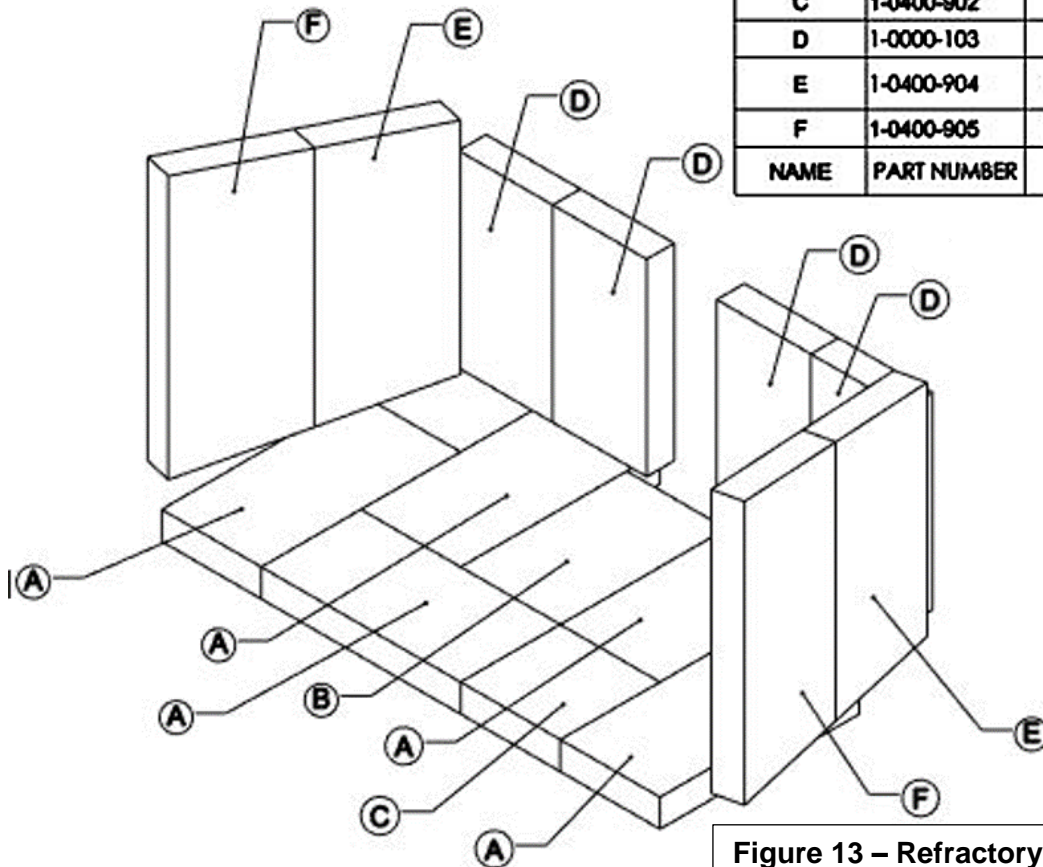
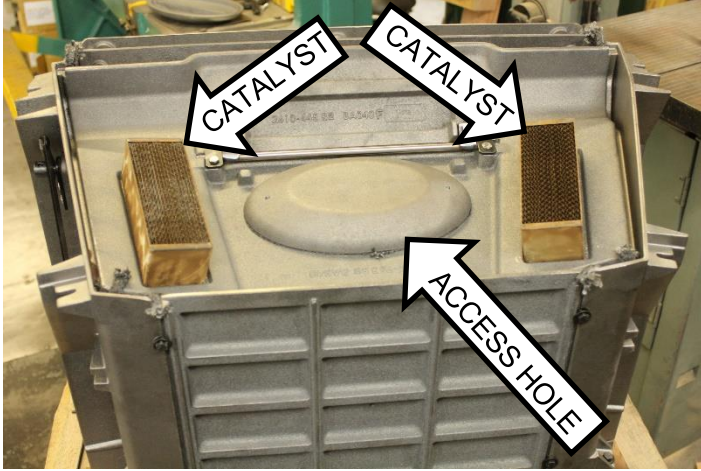


Figure 13 – Refractory Stone Layout

## ***Installing the Catalyst***

The two catalysts are shipped in a bag located in the firebox for shipment. Remove the catalysts from the bag and install them through the access hole after the chimney liner has been installed.

The catalyst sit in pockets to either side of the access opening. They do not require gasket.



Reinstall the access hole cover after the catalyst are installed.

## ***Installing the surround***

Remove the surround components from the large cardboard box that accompanied the Clydesdale Insert. Included are the surround panels, assembly hardware, and surround mounting bracket. Refer to the instructions included with the surround for complete assembly and installation.

**Read this Owner's Manual** for all other installation and operational requirements.

## ***Optional Installation Steps***

There are two options that can improve the convenience of installation and operation that are worth considering. They both involve the removal of the facade and should be done before final installation.

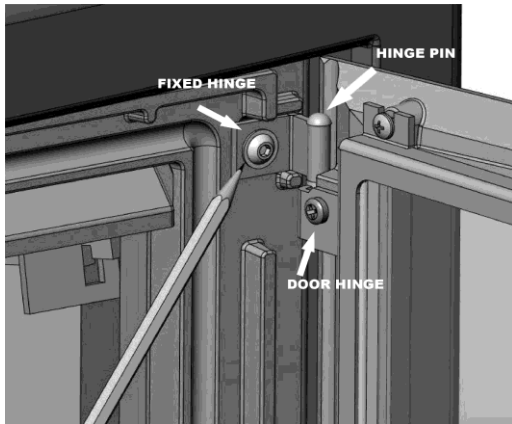
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## Reversing the Door

The door can be reversed to open from the right (hinges on left). The default is door opens from the left. To get the door to level and center may require several adjustments. Having the door level and centered is important for a good seal to the insert. If in doubt about this process have a professional installer do the reversal.

Although the door can be reversed while the facade is installed it's easier to do with the facade removed.

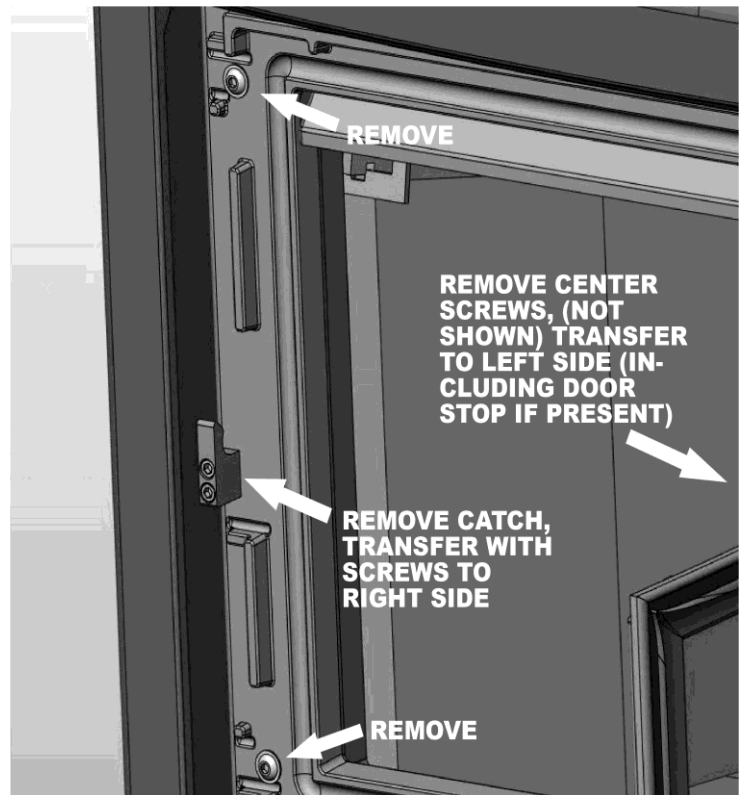
**Step 1:** Open door fully and note the position of the hinges where they attach to the insert. With a pencil draw a circle around the head of the screws (see figure 15) where they attach the fixed hinges. These circles will give a starting point when the hinges are moved to the other side of the insert.



**Figure 15: Mark Hinges**

**Step 2:** Using a 5/32 (4mm) hex wrench, remove top and bottom screws (see figure 16) from left side holes where hinges will be mounted. Remove latch catch. Save screws to plug holes when hinges and catch are moved.

**Note:** If the facade is installed, follow step 2 subpart 1 and 2 of "Unpacking And Installing The Insert" to remove it.



**Figure 16: Transfer Latch and Screws**

**Step 3:** Remove the screws securing the top hinge to the face of the insert. Lift the door off the bottom hinge. The lower pin will stay with the door when removed. Lift the top hinge and pin from the door.

**Step 4:** Remove the bottom hinge from the face of the insert. Reinstall the hinges to the opposing side of the stove in the tapped holes from step 2. (Figure 18)

**Step 5:** Rotate the door, end over end, align the hinges, install one hinge pin into the bottom hinge (Figure 19). Install the second hinge pin to the top hinge.

**Step 6:** Remove the door stop from the original installation side, reinstall the door stop where the latch catch was removed in step 2. The door stop will need to be adjusted to keep the door from contacting the surround.

**Step 7:** Reinstall the latch catch where the door stop was removed from. Use the screws removed in Step 2 to plug the tapped holes where the hinges were removed from (Figure 16).

**Step 8:** Test the function of the door. Adjust the hinges, door stop, and door latch as necessary to achieve proper sealing of the door gasket.

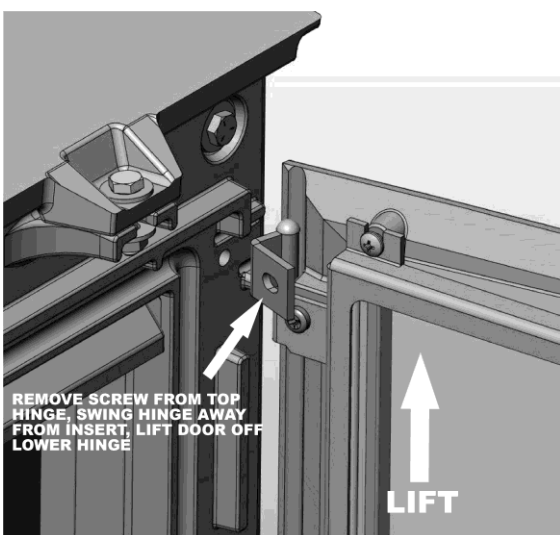


Figure 17: Remove Door

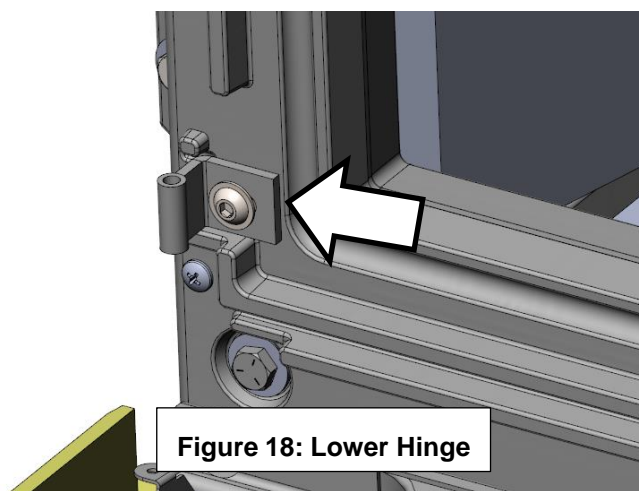


Figure 18: Lower Hinge

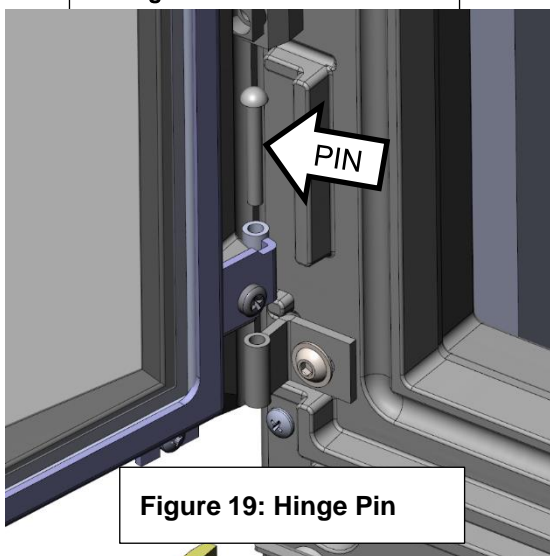


Figure 19: Hinge Pin

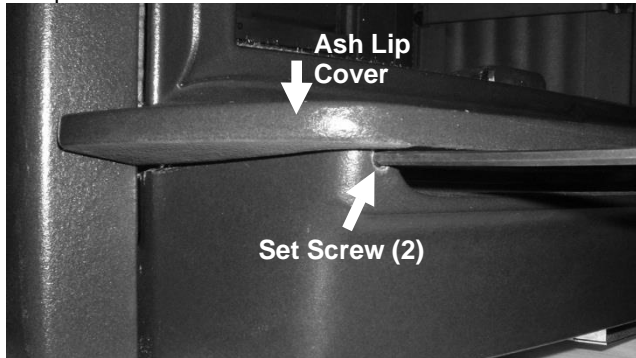


Figure 20: Door Stop Adjustment

## Removing the Ash Lip Cover & Façade

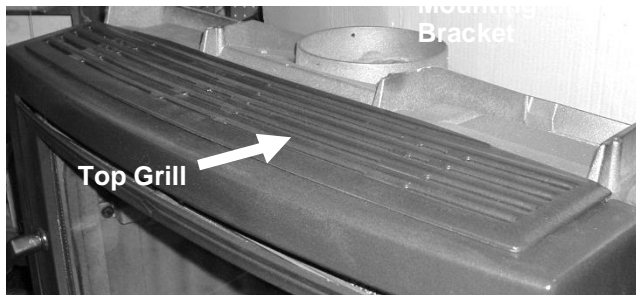
In some instances, it may become necessary to remove the Façade or Ash Lip Cover. To remove the Façade, you must first remove the Ash Lip Cover. To service the blower, you must also remove the Ash Lip Cover.

1. To remove the Ash Lip Cover, loosen the two hex socket head set screws securing the ash lip cover as shown in photo 21.

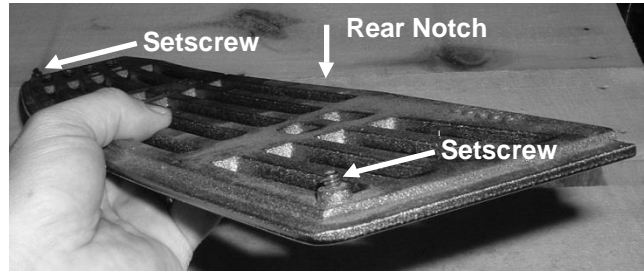


**Photo 21 – Ash Lip Cover Detail**

2. To remove the Façade, first remove the top grill (see photo 22). On brown enamel Clydesdales, carefully lift the grill straight up to avoid scratching or chipping the façade's finish.

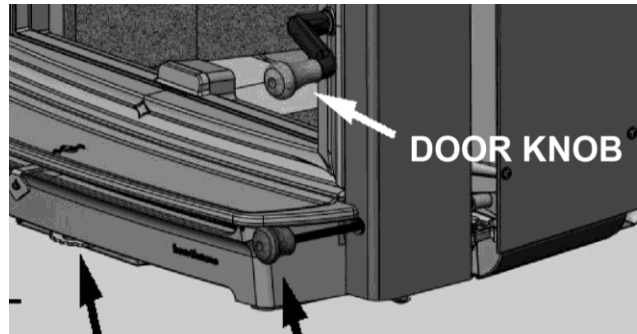


**Photo 22 – Top Grill**



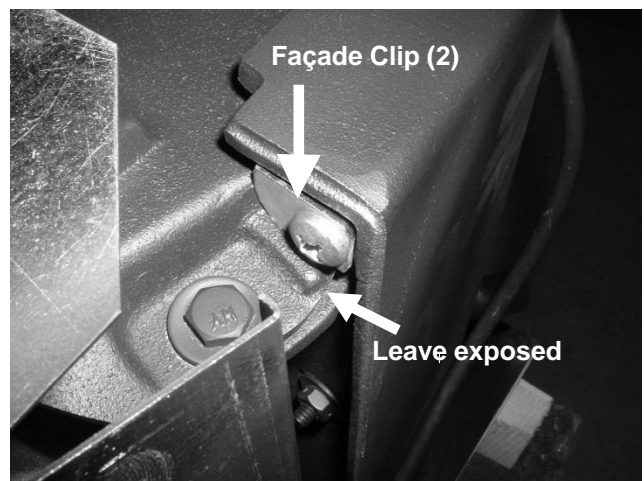
**Photo 23 – Top Grill Adjustment Point Detail**

3. The Top Grill on brown enamel finish Clydesdales uses three adjustment points to keep the grill from resting on the façade's enamel surface. The draft port plug, and two setscrews (see photo 23) are adjusted at the factory, but may need further adjustment after installation or maintenance.
4. Remove the bypass handle knob.



**FAN CONTROL      BYPASS KNOB**

5. Lift the Façade up slightly and tilt it towards you so the mounting clips clear the lip on the stove body (see photo 24). Carefully move the Façade away from the insert and set aside.



**Photo 24 – Façade Clip Detail (rear view)**

6. When ready, reinstall the Façade, Bypass Knob Top Grill, and AshLip Cover.

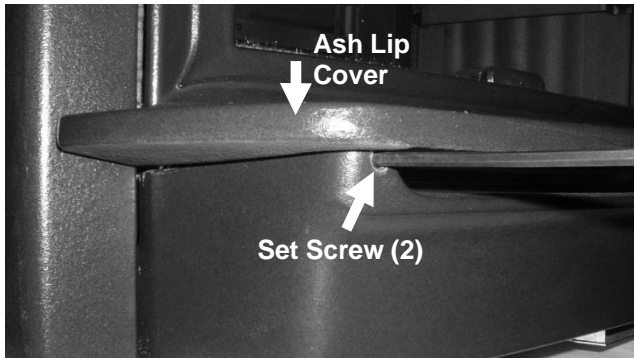
**Note:** The façade is correctly mounted when the clips are positioned as shown in photo 24.



## Blower Power Cord Routing

The Clydesdale 8492 ships from the factory with the blower system's power cord routed on the left side of the insert as you face it. If your installation requires the cord on the right side, you must remove the façade and disassemble the ash lip assembly to access the wire clips to change the position of the power cord.

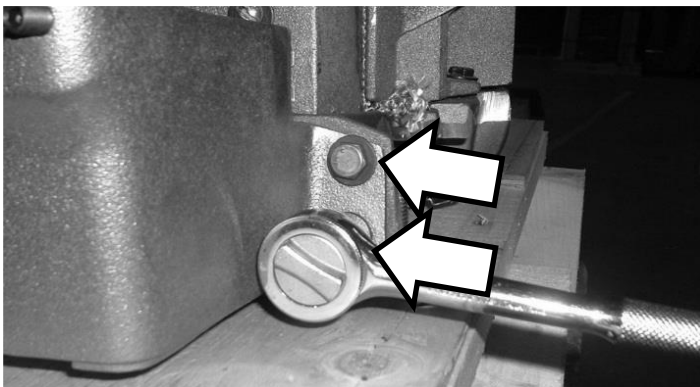
1. Loosen Set Screws and remove Ash Lip Cover.  
Remove the Façade as described on page 22.



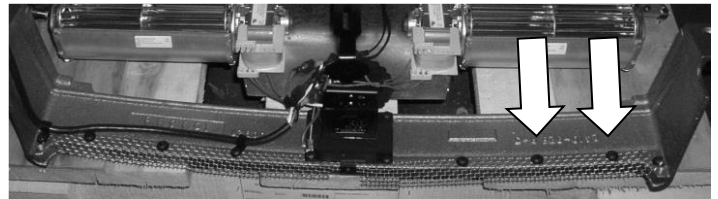
2. Remove the screw and step bushing securing the air control to the bracket. Remove the heat shield over the top of the rheostat located under the air control.



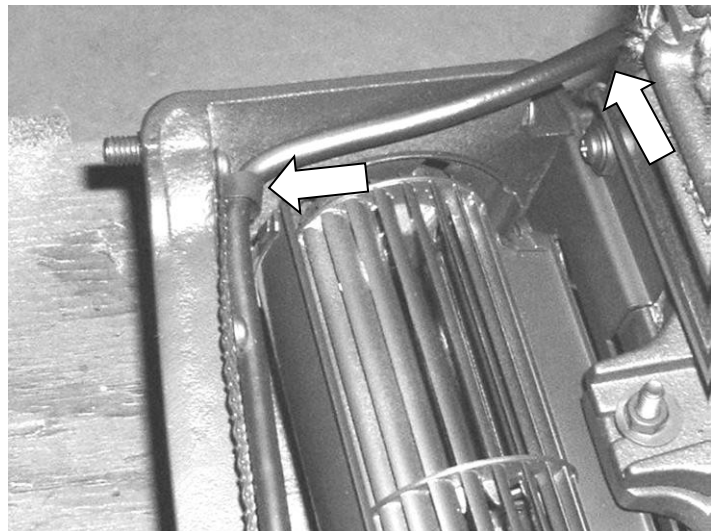
3. Remove the 4 screws securing the Ash Lip Assembly to the body of the insert. Disconnect the wires leading to the temperature snap disk.



4. Use a Phillips head screwdriver to remove the screws securing the wire loops on the left and transfer everything to the right side ensuring you place the loops in the equivalent locations (arrows). A wire loop must be placed on the screw closest to the corner to ensure the cord does not rub on the blower housing. Do not disconnect any wiring on the power cord— there is more than sufficient length to route the cord to the right over the top of the blower speed control.



5. Re-attach the ash lip assembly to the front of the insert. Ensure the cord is not touching the blower housing and is routed through the space above the mounting flange. Ensure the cord is not pinched in any way. Re-attach the screw and step bushing securing the air control to the bracket. Ensure the air control moves freely. Re-



install the façade and then the ash lip cover.

# Operation

- **WARNING: HOT WHILE IN OPERATION. KEEP CHILDREN, CLOTHING AND FURNITURE AWAY. CONTACT MAY CAUSE SKIN BURNS.**

Please read this entire chapter before lighting your first fire. It explains the controls and features of your wood Fireplace Insert, how to choose firewood, burn rates, and how to break-in your Fireplace Insert and use it on a daily basis.

## Controls & Features

- **WARNING: ONLY OPERATE WITH DOOR FULLY CLOSED. IF DOORS ARE LEFT PARTLY OPEN, GAS AND FLAME MAY BE DRAWN OUT OF THE OPENING, CREATING RISKS FROM BOTH FIRE AND SMOKE**
- **DO NOT FORCE THE DOOR OPEN PAST THE DOOR STOP OR YOU COULD DAMAGE THE ENAMEL FINISH AND DOOR FRAME (ENAMELED STOVES ONLY).**
- **DO NOT BURN ANYTHING BUT CLEAN, DRY FIREWOOD**

**FRONT DOOR & LATCH:** The front door allows you to load wood into your Fireplace Insert; a fixed handle allows you to operate the front door and allows you to latch the front door closed. The front door is reversible (hinges moved to the left) to open from the right side. To open the door, lift the handle to the 10 o'clock (or 2 o'clock for RH opening door) position, and pull out on the door. To latch the door, push the door closed tightly then lower the handle to the 8 o'clock (4 o'clock for RH opening door) position. Pull lightly on the door handle to ensure it is properly latched. **Do not force the door past the door stop; you could damage the door frame and finish.**

**PRIMARY AIR CONTROL:** The control handle is located on the front center of the ash lip under the ash lip cover (see Figure 26). The primary air control allows you to regulate the amount of air entering the firebox. Generally, the more air allowed into the firebox, the faster and hotter the rate of burn; conversely, less air creates a slower burn. To fully open the primary air intake, pull the handle as far out as it will go away from the firebox; push the handle in as far as it will go towards the firebox to close the primary air control. The control does not completely stop the flow of air.

## Operating the Blower

The blower is factory installed within the front ash lip. The blower will run only when the insert is hot. The blower control (notched wheel) is located in the bottom center of the ash lip (see Figure 26). Routing the power cord to the left or right of the insert is possible - follow the instructions provided in the installation section.

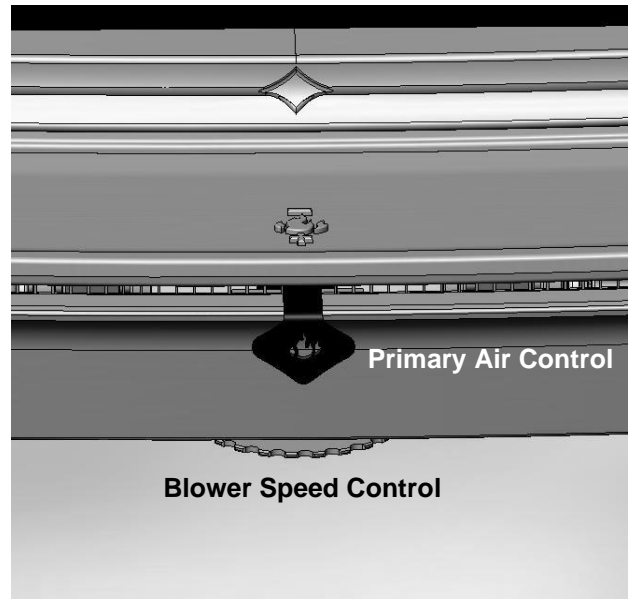


Figure 26 – Primary Air, & Blower Speed Controls

## CATALYTIC COMBUSTOR OPERATION

The Clydesdale uses a catalytic combustor to ensure highly clean and efficient burns. The catalytic combustor is made from a stainless-steel corrugation that is coated with a catalytic material. The catalytic combustor becomes active around 500 °F (260°C), helping to burn up smoke and any remaining particles that were not fully burned in the firebox. During the startup of a cold stove, a medium to high firing rate must be maintained for about 20 minutes. This ensures that the stove, catalysts, and fuel are all stabilized and at proper operating temperatures. Even though it is possible to have gas temperatures reach 500 °F (260°C) within 2 to 3 minutes after a fire is started, if the fire is allowed to die down immediately, it may go out or the combustor may stop working. Once the stove and catalytic combustor heat up, heat generated from burning smoke keeps the catalysts warm and active as long as fuel remains in the stove. You stove will burn the cleanest and most efficiently when the catalysts are in the active range. There should be little to no visible smoke from your chimney when the catalysts are in the active zone and fully functional.



### CATALYST THERMOMETER:

The catalyst thermometer monitors the downstream temperature of the catalysts, and indicates when the stove is in the active range for the catalysts. When the stove is in the “Catalyst Active” range, the bypass handle should be closed (pushed in, Figure 30). When the stove is in the “Inactive” range, the bypass handle should be opened (pulled out, Figure 28) until the stove heats up. If the thermometer is in the “Too Hot” range, keep the door closed, fully close the air control, and allow the stove to cool down until the thermometer falls into the “Active” Range. Once the catalyst thermometer has reached the active range, heat generated from burning smoke keeps the catalysts warm and active as long as fuel remains in the stove. The Clydesdale typically operates in the 800 °F to 1300 °F range. (see Figure 28 for thermometer location)

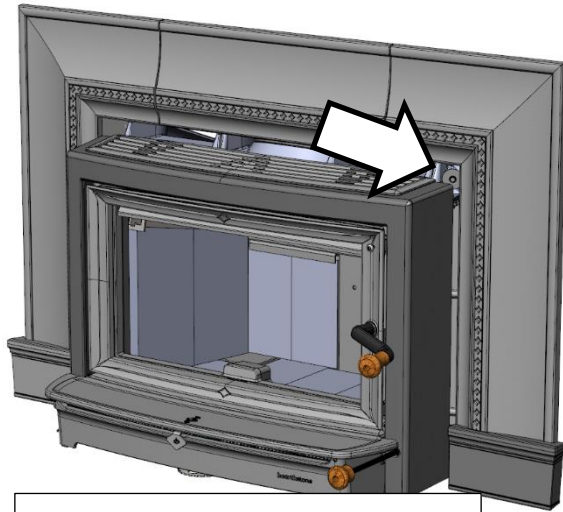


Figure 28: Thermometer Location

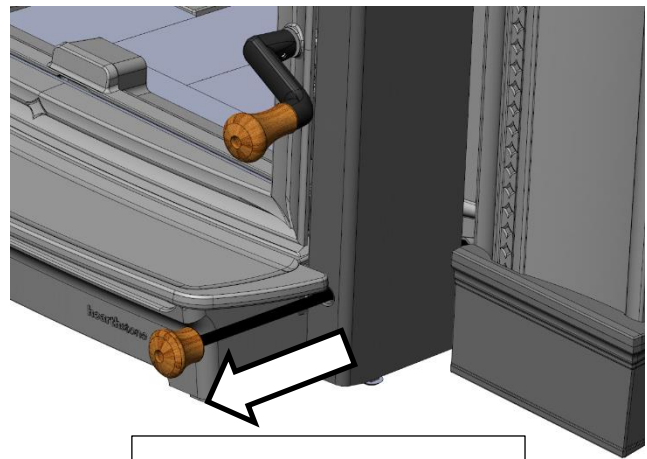


Figure 29: Bypass Opened

### Bypass Operation:

The Clydesdale is equipped with a catalyst bypass door. When the bypass handle is open, combustion products are directed around the catalytic combustor. The bypass handle should be open when first starting a fire until the catalytic combustor heats up to activation temperature, and whenever opening the front door to load the stove. When the bypass handle is closed, combustion products are directed through the catalytic combustor. The bypass handle should be closed once the catalytic combustor heats up to activation temperature, as indicated by the catalyst thermometer, and remain closed whenever the stove is burning and in the active temperature range. See Figure 29 & 30.

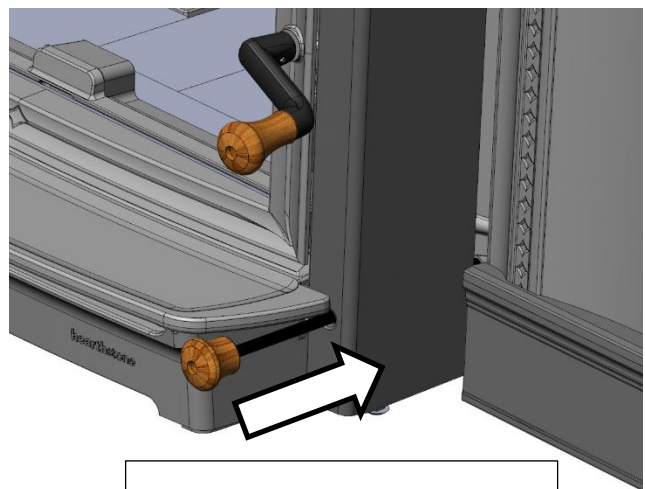


Figure 30: Bypass Closed

## Choosing Firewood

Your Clydesdale Wood Burning Insert is designed to only burn natural firewood - also known as cordwood.

- CAUTION: DO NOT USE CHEMICALS OR FLAMMABLE FLUIDS SUCH AS GASOLINE, NAPHTHA, KEROSENE, CHARCOAL LIGHTER FLUID OR ENGINE OIL TO START A FIRE. DO NOT USE CHARCOAL, PELLETS, COAL, ARTIFICIAL LOGS OR ANY OTHER MATERIALS AS FUEL; THEY ARE NOT SAFE. DO NOT BURN GARBAGE.**

The quality of your firewood affects heat output, duration of burn and performance of your Fireplace Insert. Softwoods generally burn hotter and faster, while hardwoods burn longer and produce more long lasting coals. Density and moisture content are two critical factors to consider when purchasing wood for your Fireplace Insert.

The following is a list of wood species and their relative BTU (British Thermal Unit) content. The higher the BTU content the longer the burn. Firewood with higher a BTU content is generally considered ideal for a wood stove.

### Wood Heat Value: Sorted by Btu Content

Common Name	Lb/ cord	MBTU/ cord
<b>High</b>		
Osage Orange (Hedge)	4,728	32.9
Hickory, Shagbark	4,327	27.7
Hop Hornbeam (Ironwood)	4,267	27.3
Beech, Blue (Ironwood)	3,890	26.8
Birch, Black	3,890	26.8
Locust, Black	3,890	26.8
Hickory, Bitternut	3,832	26.7
Locust, Honey	3,832	26.7
Apple	4,100	26.5
Mulberry	3,712	25.8
Oak, White	4,012	25.7
<b>Medium High</b>		
Beech, European	3,757	24
Maple, Sugar	3,757	24
Oak, Red	3,757	24
Ash, White	3,689	23.6
Birch, Yellow	3,689	23.6
<b>Medium</b>		
Juniper, Rocky Mtn	3,150	21.8
Elm, Red	3,112	21.6
Coffeetree, Kentucky	3,112	21.6
Hackberry	3,247	20.8
Tamarack	3,247	20.8
Birch, Gray	3,179	20.3
Birch, White (Paper)	3,179	20.3
Walnut, Black	3,192	20.2

Cherry	3,120	20
Ash, Green	2,880	19.9
Cherry, Black	2,880	19.9
Elm, American	3,052	19.5
Elm, White	3,052	19.5
Sycamore	2,808	19.5
Ash, Black	2,992	19.1
Maple, Red	2,924	18.7
Fir, Douglas	2,900	18.1
<b>Medium Low</b>		
Boxelder	2,797	17.9
Alder, Red	2,710	17.2
Pine, Jack	2,669	17.1
Pine, Norway (Red Pine)	2,669	17.1
Pine, Pitch	2,669	17.1
Catalpa	2,360	16.4
Hemlock	2,482	15.9
Spruce, Black	2,482	15.9
Pine, Ponderosa	2,380	15.2
<b>Low</b>		
Aspen, American	2,290	14.7
Butternut (Walnut, White)	2,100	14.5
Spruce	2,100	14.5
Willow	2,100	14.5
Fir, Balsam	2,236	14.3
Pine, White (Eastern, Western)	2,236	14.3
Fir, Concolor (White)	2,104	14.1
Basswood (Linden)	2,108	13.8
Buckeye, Ohio	1,984	13.8
Cottonwood	2,108	13.5
Cedar, White	1,913	12.2

Moisture content also plays a key role in the performance of your stove. Wood freshly cut from a living tree (green wood) contains a great deal of moisture. As you might expect, green wood has difficulty burning and should be seasoned before using it in your wood stove. To properly season green wood: split, stack and allow to air dry for a period of one year.

Stack the firewood on skids or blocking to keep it off the ground, cover only the top of the stack. Plastic or tarps that cover the sides of the stack of wood trap moisture and prevent the wood from drying. As for stacking, an old Vermonter said, "The spaces between the logs should be large enough for a mouse to get through, but not for the cat that's chasing it."

- Do not store Firewood within the Fireplace Insert's specified clearances to combustible materials.**

## Hearthstone's Thermo-Ceramic Baffle System

To enhance the combustion efficiency and reduce the particulate emissions of the fire in your stove, Hearthstone has developed an advanced THERMO-CERAMIC baffle system. This system uses a lightweight, durable ceramic material above the secondary air tube to maintain high temperatures in the secondary combustion area to promote low emissions and high efficiency combustion. This material will not corrode, rust, dissolve, or lose its strength, however it is vulnerable to puncture or breakage due to rough handling.

- **Please Exercise Care When Loading Wood or Cleaning Your Insert, To Not Damage the Thermo-Ceramic Baffle**

This white or gray sheet of baffle material will break if wood or cleaning brushes impact it. Use care when loading and cleaning your stove to avoid breaking this material. If the baffle fractures or a hole is punctured, the stove will function improperly. You must replace the board through a qualified Hearthstone dealer.

### Building a Fire

Once you understand the controls of your Clydesdale Fireplace Insert, and have chosen the appropriate firewood, you are ready to start a fire.

### Breaking in Your Wood Fireplace Insert

It is imperative that you "break in" the Fireplace Insert slowly. Cast iron must be "seasoned"; over-firing a new Fireplace Insert may cause castings to crack or may damage other Fireplace Insert parts. Slowly driving the moisture out of the soapstone bricks lining the firebox will minimize the "shock" to the stone at its first exposure to high firebox temperatures.

When you light your first fires, the Insert will emit some smoke and fumes. This is normal "off-gassing" of the paints and oils used when manufacturing the Fireplace Insert. If you find it necessary, open a few windows to vent your room. The smoke and fumes will usually subside after 10 to 20 minutes of operation. The odor and smoke will end once the Fireplace Insert is "cured".

The first fires may also produce other odors from "impurities" that exist in the area immediately surrounding the Fireplace Insert. Some of these impurities are residues of cleaning solvents, paint solvents, cigarettes, candle soot, pet hair, dust, adhesives, a new carpet, and new textiles. These odors will dissipate over time. You can alleviate these odors by opening a few windows or otherwise creating additional ventilation around your Fireplace Insert. If any odor persists, contact your dealer or an authorized service technician.

If you adhere to the break-in procedure, as well as all other operating procedures in this manual, the cast iron and soapstone firebox lining of your Fireplace Insert will

give you many years of trouble-free use.

Avoid the following conditions that can cause the soapstone or cast-iron pieces to break:

- Do not throw wood into the Fireplace Insert.
- Do not use the door as a lever to force wood into the Fireplace Insert.
- Do not load wood that is encrusted with ice into a burning, hot stove as the thermal shock can cause damage.
- Do not use a manufactured log grate. Burn the fire directly on the soapstone that lines the bottom of the firebox.

The bottom layer of soapstone in the firebox is intended to prevent thermal stress to the cast iron, and should remain in place at all times.

**Do not over-fire the Fireplace Insert.** (Refer to page 28).

### Building a Break in Fire

1. Open the Catalyst Bypass door by pulling the bypass handle out, away from the stove.
2. Open the front door and place five or six double sheets of tightly twisted newspaper in the center of the firebox. Arrange kindling in a crisscross pattern over the newspaper. Kindling should be approximately ten pieces, 1/2" (13 mm) in diameter and 10" to 18" (254 mm to 457 mm) long.
3. Fully open the primary air control by pulling the control handle fully out, away from the firebox.
4. Light the paper under the kindling. Leave the front door slightly ajar momentarily until the kindling has started to burn and draft begins to pull.
5. Close the door and allow the fire to burn. Keep the front door closed while the Fireplace Insert is in use.
6. Keep a watchful eye on your fireplace insert to maintain a steady, low-heat fire. Your first fire should make the Fireplace Insert warm, but **not hot to the touch**. At most, add only a few small chunks of wood to the fire to reach safe break-in temperatures.
7. Once the Fireplace Insert is warm but **not hot to the touch**, close the primary air control by pushing it in fully toward the firebox to allow the fire to die out completely.
8. Let the Fireplace Insert return to room temperature.

Your first fire and first fire each season thereafter should be built and maintained as outlined above. Your patience will be rewarded by a properly seasoned Fireplace Insert.

- **Note:** Because of the cool flue gas temperatures present during the break-in procedure, creosote may build up rapidly. Your door glass may also get dirty. A good hot fire will clean it. We recommend a visual inspection (and cleaning if necessary) of your stovepipe and chimney once the break-in procedure is completed.

## Operating Your Insert Efficiently

Hearthstone designed your Clydesdale insert to burn firewood cleanly and efficiently. The following operational tips explain how to obtain the most heat possible with minimal creosote build-up and emitted pollutants.

### **Burn Rate**

**This wood heater has a manufacturer-set minimum low burn rate that must not be altered. It is against federal regulations to alter this setting or otherwise operate this wood heater in a manner inconsistent with operating instructions in this manual**

There are four basic burn rates: high burn, medium burn, low burn, and overnight burn. Each has its own purpose.

**High Burn Rate:** We recommend a high burn rate once or twice a day to fully heat the stove and chimney; this also helps keep the amount of creosote in your stove and chimney to a minimum.

After the fire is established and both the stove and chimney are hot, create a high burn for maximum heat output. Pull the primary air control out so that it's fully open or almost fully open. Fully load the firebox with wood on a bed of hot coals or on an actively flaming fire.

After you have attained a high burn rate, monitor the stove temperatures frequently to ensure that the stove is not over-fired. The surface temperature on top front of the insert (firebox body under grill) should not routinely exceed 600° Fahrenheit (316° Celsius). Once you understand how your insert burns and heats in your particular setting, you can easily create a high burn rate without risk to the stove or chimney.

When your room's temperature is comfortable, maintain your fire by loading smaller quantities of wood. Burning smaller amounts of wood at a high burn rate creates the least amount of creosote in your chimney, emits the lowest amount of pollutants, but provides shorter burn times.

**Medium to Medium Low Burn Rate:** In general, you would usually create a medium to medium low burn rate, especially if your stove is left unattended periodically. Set the primary air control to a mid-range setting, appropriate to maintain a comfortable temperature in the heated area. This setting produces the most efficient overall burn.

**Low Burn Rate:** Close the primary air control for a low burn rate. This setting provides the longest burn time. However, set a low burn rate only periodically. Over extended periods, a low burn rate promotes the accumulation of creosote. If you consistently maintain low burn rates, inspect your venting system frequently.

**Overnight Burn Rate:** An overnight burn, as you might expect, allows you to keep an area heated while you sleep. To create an overnight burn, first ensure the stove and chimney is hot from an established fire. Next, pull the primary air control fully open, and then completely load the firebox with wood. Remember, larger pieces of wood burn longer. Allow the fire to burn intensely for 20 to 30 minutes.

Finally, push the primary air control *close to* its lowest setting; the fire will settle into a lower burn rate with a small flame and more secondary gas ignition. The fire will now burn slowly and steadily. The longevity and intensity of the fire depends on the type, size and quality of the wood, the strength of the chimney draft, and other variables that vary from installation to installation. High draft installations or situations may require using a low burn rate setting.

In the morning, you should find a bed of hot coals buried within the ashes. The insert should be warm to the touch but not hot. To restart the fire without relighting, simply stir and rake the ashes with a poker until the hot coals have come to the surface. Place a handful of kindling and a few small logs on the coals, close the door, and fully open the primary air control. The fire should re-ignite within 5 to 10 minutes. Once the fire is burning well, add a few larger logs, close the door, leave the primary air control fully open, and allow the fresh logs to ignite.

Running a high burn rate at least once a day burns off accumulated creosote from within the insert and venting system. Now, in the morning after an extended low burn rate, is a good time to create your daily high burn rate; run it for about 20 minutes or so. Not only does this hot fire promote a clean stove and chimney, it also helps keep the glass cleaner for easy viewing of the fire within.

Once the fire is burning briskly, regulate the primary air control to a medium setting for a medium, to medium low burn rate.

### **Intermittent Operation**

If your Fireplace Insert is not used continuously or has not been used in quite some time, follow the break-in procedure at least once to minimize the stress of a hot fire on a cold Fireplace Insert before proceeding with normal operation. We recommend one break-in fire at the start of each heating season.

## NORMAL OPERATION

### Building a Fire for Everyday Use

1. Open the front door and place five or six double sheets of tightly twisted newspaper in the center of the firebox. Arrange kindling in a crisscross pattern over the newspaper. Use about ten pieces of kindling approximately 1/2" (13 mm) in diameter and 10" to 18" (254 to 457 mm) long. You can place two or three small logs on top of the kindling if desired.
2. Fully open the primary air control by pulling the control handle fully out, away from the firebox.
3. Light the paper under the kindling. Leave the front door slightly ajar until the kindling starts to burn and draft begins to pull.
4. Close the door and allow the fire to burn.
5. If you did not add small logs in step 1, do so once the kindling is burning well. Open the front door and add small logs. Ensure you keep the logs away from the glass in front in order for the air-wash system to work properly. Otherwise, keep the door closed while the insert is in use.
6. Once the fire is burning well, add larger wood pieces to build the fire up. Use the primary air control to regulate the desired rate of burn. Pull the handle out to open the PRIMARY AIR CONTROL for a high rate of burn; push it in to reduce the primary air for a lower rate of burn.

**Note:** Always remember to open the bypass handle before opening the front door. When opening the front door to reload or re-arrange logs, it is advisable to open the door just a crack, pause for a moment then open the door completely. This procedure allows the firebox to clear of smoke before the door is open fully. In addition, reloading on a bed of hot, red coals reduces smoking time and brings fresh fuel up to a high temperature rapidly. During the refueling and rekindling of a cool fire, or a fire that has burned down to the charcoal phase, operate the stove at a medium to high firing rate for about 10 minutes to ensure that the catalysts reach approximately 600 °F. Once the catalysts reach operating temperature, the bypass handle can be closed. When reloading the stove, try to keep an open path behind the Lower Primary Air Opening (LPAO). It is helpful to leave a small valley in the coal bed behind the LPAO to insure faster re-lighting.

### Disposal of Ashes

You can leave a thin layer of ashes in the firebox if preferred. Allow fire to die down or go out completely. It is important to prevent ashes from building up around the front door opening or they will spill out, or they can pack into the gasket channel and prevent proper sealing. To remove ashes, use a fireplace shovel. Avoid removing large live coals by pushing them to the side and removing only the finer ash with a shovel.

Disposal of ashes - Ashes should be placed directly into

a metal container with a tight-fitting lid. Do not place any other items or trash into the metal container. Do not pour water into the container. Replace the container's lid and allow the ashes to cool. Never place the ash disposal container on a combustible surface or vinyl flooring, as the container could be hot!

Pending disposal, place the closed ash container on a noncombustible floor or on the ground outside, well away from all combustible materials, liquid fuels, or vehicles. Retain ashes in the closed container until all coals thoroughly cool.

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.

NEVER place ashes in wooden or plastic containers, in trashcans with other trash, or in paper or plastic bags, no matter how long the fire has been out. Coals within a bed of ashes can remain hot for several days once removed from the firebox.

### Over-Fire Caution

Over-firing means the Fireplace Insert is operating at temperatures above the recommended temperatures outlined above in the *BURN RATE* section. Carefully avoid over-firing since it will cause damage to the Fireplace Insert. Symptoms of over-firing include short burn times, a roaring sound in the Fireplace Insert or chimney, and discoloration of the finish.

Over-firing can be caused by excessive draft, inappropriate fuel, and operator error. Correct an over-fire situation as follows:

**EXCESSIVE DRAFT:** Contact your dealer to have a draft reading taken.

**INAPPROPRIATE FUEL:** Do not burn coal; kiln dried lumber, pellets, wax logs, plastics, trash or anything other than natural cordwood.

**OPERATOR ERROR:** Ensure all the gaskets are in good condition. Replace worn out or compressed gaskets. Do not burn the Fireplace Insert with the front door in a partially open position. The door must be fully closed or opened completely (e.g. when using viewing screen).

If you suspect that your Fireplace Insert is over-firing, contact your dealer immediately. **Damage done by over-firing is not covered by your warranty.** Results of over-firing can include: warped or burned out internal parts, cracked firebox soapstone, discolored or warped external parts, and damaged enamel.

- **NOTE: ANY SYMPTOMS OF OVER-FIRING WILL VOID YOUR WARRANTY!**
- **THE FRONT DOOR MUST REMAIN CLOSED WHEN IN OPERATION**

# MAINTENANCE

## CATALYTIC COMBUSTOR INSPECTION AND Baffle REPLACEMENT PROCEDURES

• **WARNING: THIS WOOD HEATER CONTAINS A CATALYTIC COMBUSTOR, WHICH NEEDS PERIODIC INSPECTION AND REPLACEMENT FOR PROPER OPERATION. IT IS AGAINST FEDERAL REGULATIONS TO OPERATE THIS WOOD HEATER IN A MANNER INCONSISTENT WITH OPERATING INSTRUCTIONS IN THIS MANUAL, OR IF THE CATALYTIC ELEMENT IS DEACTIVATED OR REMOVED**

It is important to periodically monitor the operation of the catalytic combustor to ensure that it is functioning properly and to determine when it needs to be replaced. A non-functioning combustor will result in a loss of heating efficiency, and an increase in creosote and emissions. Following is a list of items that should be checked on a periodic basis

Combustors should be visually inspected at least three times during the heating season to determine if physical degradation has occurred. Actual removal of the combustor is not recommended unless more detailed inspection is warranted because of decreased performance. If any of these conditions exists, refer to Catalyst Troubleshooting section of this owner's manual.

This catalytic (or hybrid) heater is equipped with a thermometer to monitor catalyst operation. Properly functioning combustors typically maintain temperatures in excess of 500 °F, and often reach temperatures in excess of 1,000 °F. If catalyst temperatures are not in excess of 500 °F, refer to the Catalyst Troubleshooting section of this owner's manual.

You can get an indication of whether the catalysts are working by comparing the amount of smoke leaving the chimney when the smoke is going through the combustor and catalysts light-off has been achieved, to the amount of smoke leaving the chimney when the smoke is not routed through the combustor (bypass mode).

1. Light stove in accordance with operator's instructions
2. With smoke routed through the catalysts, go outside and observe the emissions leaving the chimney.

**Engage the bypass mechanism and again observe the emissions leaving the chimney. Significantly more smoke will be seen when the exhaust is not routed through the combustor (bypass mode)**

### Inspecting the Catalyst and Removing/Replacing the Baffles:

To inspect the catalytic combustors, the baffle must be removed.

1. Remove the front baffle support from the side stone retainers.

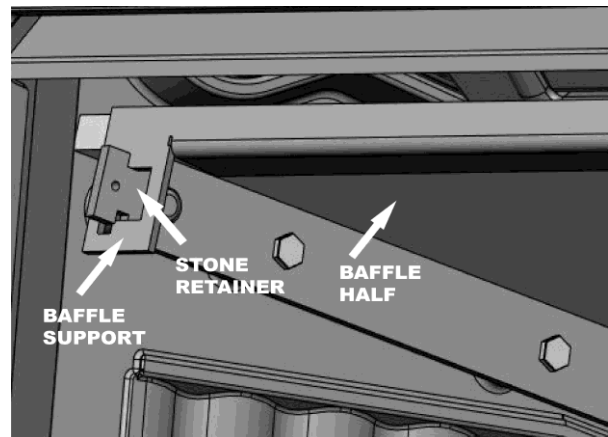


Figure 31 – Baffle Support and Baffle Half (left side)

2. Gently remove the baffle halves. These are fragile, ensure not to damage them upon removal.
3. When the baffle is removed, the face of the catalysts are exposed for inspection. See Figure 32.

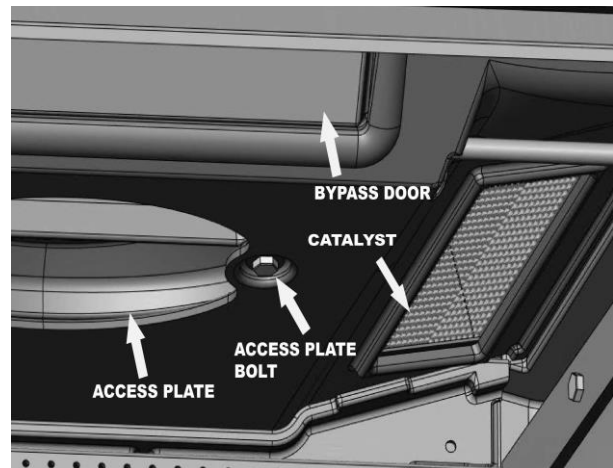


Figure 32– Access Plate and Catalyst Detail Half (left side shown)

4. Use a small vacuum nozzle or soft bristled brush to remove any accumulated ash or soot on the face of the catalyst.
5. Inspect the catalyst for any unusual warping, corrosion, or plugged openings.
6. If any unusual conditions are found, remove the catalyst blocks – See replacing the catalysts section below.
7. Replace the baffles and baffle protector. Installation is the opposite of removal.
8. Ensure that the baffle pieces are pushed together at the center joint.

## Removing or replacing the catalyts

Refer to the Catalytic combustor warranty on page 39 for catalyst replacement information. **DO NOT OPERATE UNIT WITHOUT CATALYSTS.** Only remove the catalyts if required. In general, the less you handle the catalyts, the better. If any unusual conditions are found, remove the catalyst blocks.

1. Allow the stove and ashes to fully cool.
2. Follow the baffle removal procedure found on the previous page.
3. Remove the two bolts retaining the Catalyst Access Plate. See Figure 33.

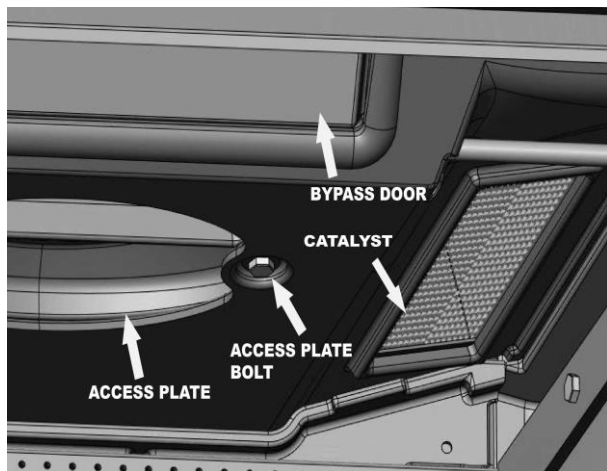
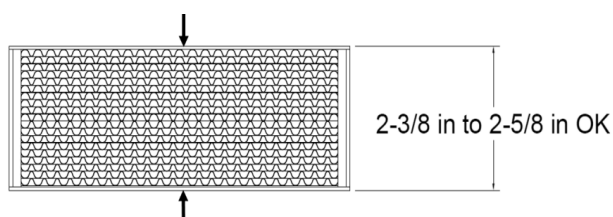


Figure 33— Access Plate and Catalyst Detail Half (left side shown)

4. Remove the access plate through the access hole.
5. Remove both catalyts through the access hole. Be careful not to contact the catalyst temperature probe over the right-side catalyst.
6. Inspect the catalyts for any fly ash or clogging, and remove with a soft bristled brush or vacuum crevice tool. If extra cleaning is needed, follow the guidelines below:
  - You may use compressed air under 35 psi, air only, no chemicals.
  - You may soak the catalyts in a hot water mix (not boiling), 4 parts water, 1 part vinegar. Rinse with cold water until vinegar smell is mostly gone.
  - No metal tools such as gun cleaners should be used.
  - No detergents or chemicals.
7. Some warping or bowing of the catalyts over time is acceptable. Measure the catalyts in the



8. To replace the catalyst, reverse the removal operation. Ensure the catalyts are sitting in their pocket correctly and the catalyst is not crooked, or riding up the side of the opening.
9. Reinstall the access plate. Be sure the gasket has not fallen out of the channel in the access plate. Reinstall  $\frac{1}{4}$ " rope gasket to the access plate if the gasket is damaged.
10. Reinstall the baffles by reversing the procedure on page 30.
11. Heat the stove slowly on the next fire to ensure the catalyts fully expand and seal.

## Replacing the refractory stone and secondary riser assembly

1. Allow the stove and ashes to fully cool.
2. Open the front door of the stove and fully clean any ash in the firebox.
3. Remove the baffle following the instructions in "Inspecting the Catalyts and Removing/Replacing the baffles"
4. Remove the bottom refractory stones. Lay the stones out in the same order and orientation as removed.
5. With the baffle removed, unscrew 1x  $\frac{1}{4}$ "-20 screw holding the secondary riser assembly in place. Once unscrewed, assembly can be lifted up and out of the stove.
6. Installation is the reverse of disassembly. Make sure that the secondary riser tube is seated in the pocket at the rear of the bottom casting.

### For replacing refractory stones:

Install the refractory stone in the following order, See figure 13 for stone identification:

1. Left and right vertical outer rear 1-0000-103).
2. Left and right vertical side back 1-0400-904).
3. Left and right-side vertical front (1-0400-905).
4. Left and right floor (1-0000-101).
5. Left and right inner floor (1-0000-101) **do not push them to the back wall yet.**
6. Left vertical rear inner (1-0000-103) one at a time. Hold each of these up and push each inner floor stone under rear stone (see figure 13).
7. Front square floor stone (1-0400-902).
8. Front sideways floor stone (1-0000-101).
9. Center floor stone (1-0000-001).



## Glass

Do not operate the Fireplace Insert with a broken door glass. Do not abuse the front door by striking or slamming.

When necessary, clean the glass with low alkaline content commercial stove glass cleaners, which are available from your local dealer. Never attempt to clean the glass while the fire is burning, or if the glass is hot. Most deposits are easily cleaned by following the instructions provided with the cleaner. To clean heavier deposits, remove the door from the Fireplace Insert (take care to save hinge pins and spacers for reuse). Lay the door face down on a workbench or table with the handle hanging over the edge. Apply the cleaner to the glass and allow it to sit for a few minutes. Placing the door flat, it will allow the cleaner to penetrate rather than running off the surface of the glass. Wipe the cleaner off with a soft cloth.

- **Important:** scratching or etching the glass will weaken the integrity of the glass. Do not use a razor blade, steel wool, or any other abrasive material to clean the glass. Use low alkaline content cleaners only.

The front door glass is a ceramic, shock-resistant glass, made specifically for use in woodstoves. Do not use any replacement glass other than the ceramic glass manufactured and supplied for use in this woodstove. Replacement glass is available through your local dealer. Replace the door glass immediately if broken. Contact your local dealer for a replacement

glass kit. The glass kit comes with instructions and everything needed for the repair. If you replace the glass yourself, wear work gloves and safety glasses.

**Door removal and glass and glass gasket replacement procedure is as follows:** Refer to *Figure 34*.

1. Cover the Ash Lip Cover with cardboard or an old towel to avoid scratching it.
  2. Remove the door by opening it about 45 degrees, support the door and remove the bottom hinge pin, then lift the top hinge pin until it clears the door hinge section. Move the door out and away from the insert.
  3. Place the door face down on a flat, smooth surface.
  4. Apply penetrating oil to the screws. Remove the screws to separate the glass retainer from the door.
  5. Carefully lift the damaged glass from the door casting and discard.
  6. Replace the screws.
  7. Install the door.
- **WARNING: DO NOT USE SUBSTITUTE MATERIALS WHEN REPLACING THE GLASS OR ANY DOOR COMPONENTS. USE ONLY AUTHORIZED HEARTHSTONE COMPONENTS.**

Glass specifications: 320mm x 583mm x 5mm (12-5/64" x 22-15/16" x 0.197") Neoceram.

Hearthstone replacement kit 94-58910

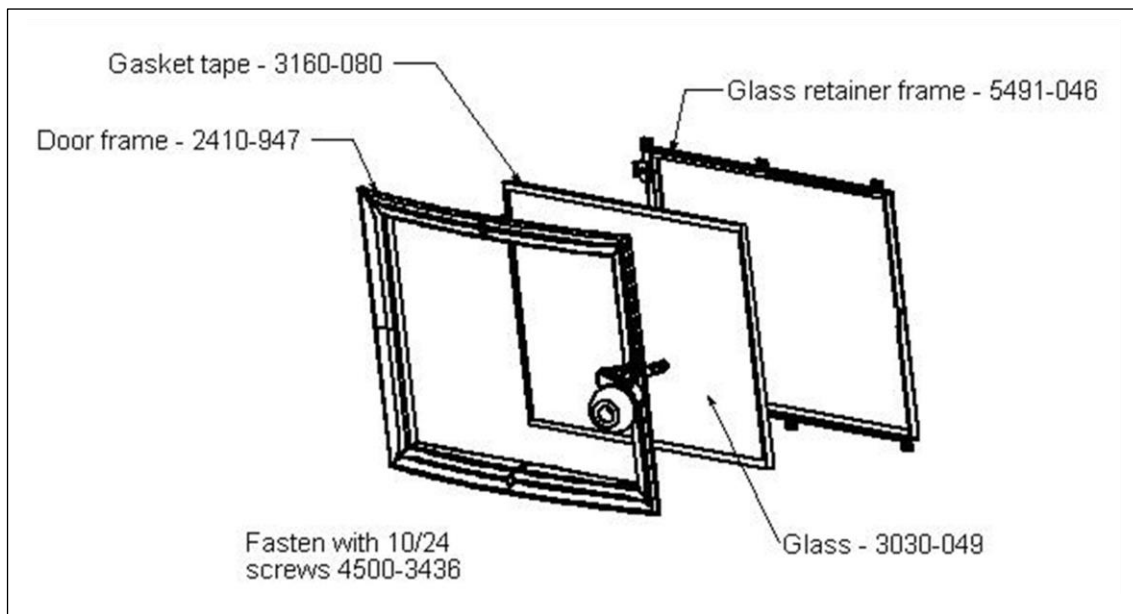


Figure 34 – Glass Replacement Components



## CREOSOTE FORMATION & REMOVAL

When wood burns slowly at low temperatures, it may produce tar and other organic vapors, which combine with expelled moisture to form creosote. These creosote vapors condense in the relatively cool chimney flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire, which may damage the chimney or even destroy the house. When burning wood, inspect the chimney connector and chimney at least once every two months during the heating season to determine if there is a creosote buildup. If a creosote build-up occurs, inspect the stovepipe connector and chimney more often, at least monthly during the heating season to monitor the accumulation. If a creosote residue greater than 1/4" (6 mm) accumulates, remove it to reduce the risk of a chimney fire.

### Prevention

Burn the stove with the primary air control fully open for 35 - 45 minutes daily to burn out creosote deposits from within the stove and the venting system.

After reloading with wood, burn the stove with the primary air control fully open for 15 to 20 minutes. This manner of operation ensures early engagement of the secondary combustion system that minimizes creosote buildup in the chimney.

If your glass always remains dirty, your operating temperatures are too low or your wood is wet; therefore, there is a higher risk of creosote buildup.

Inspect the venting system at the stove connection *and* at the chimney top. Cooler surfaces tend to build creosote deposits faster, so it is important to check the chimney at the top (where it is coolest) as well as from the bottom near the stove.

### Cleaning

Remove accumulated creosote with a cleaning brush specifically designed for the type of chimney in use. We recommend you use a certified chimney sweep to perform this service. Contact your dealer for the name of a certified chimney sweep in your area (your dealer may be a certified sweep!).

We recommend that before each heating season you have the entire system professionally inspected, cleaned and repaired, if necessary.

## GASKETS

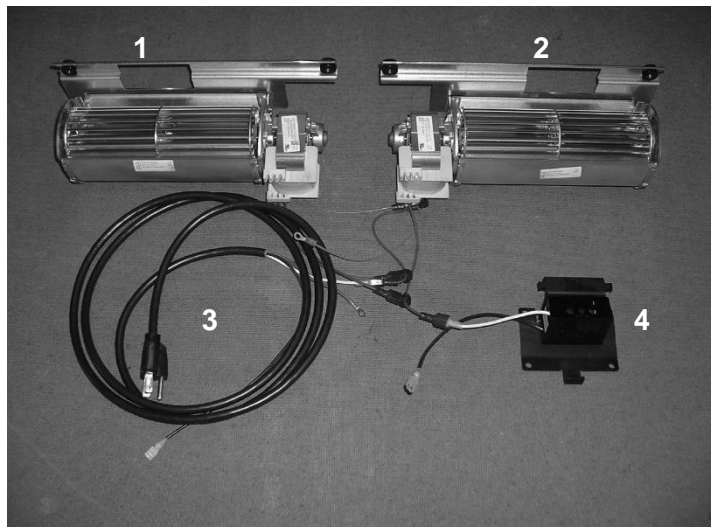
Replace door gasket material every two to three seasons, or whenever it becomes deteriorated or loose, depending on stove use. If the door seal leaks, a new gasket will ensure a tight seal and improve stove performance.

We recommend you only use Hearthstone replacement gaskets when you need to replace your door gasket. Contact your dealer for a gasket kit that includes instructions, and the gasket for your stove.

## Blower System

For maximum efficiency, the blower system will require periodic cleaning to remove dust that will accumulate during normal use. To access the blower system, you must remove the Ash Lip Cover as described in the installation section of this manual.

Remove the Ash Lip Cover and carefully vacuum components. Take care to avoid bending the fins on the blower fans. Inspect all wiring and mounting hardware for damage or deterioration.



1. Left Blower Fan Assembly
2. Right Blower Fan Assembly
3. Power Cord
4. Speed Control with Bracket

# TROUBLESHOOTING

## COMMON ISSUES

Virtually all woodstove operators experience basic common problems at one time or another. Most are correctable and generally require only a minor adjustment of the stove, installation, or operating technique. In cases where weather conditions dramatically affect stove performance, the problems are typically temporary and solve themselves once the weather changes.

If you question whether your stove is producing adequate heat, the best way to troubleshoot the problem is to monitor the temperature of the stack no more than 12 inches (30 cm) above the flue collar. A 400° F (200° C) stovepipe confirms the stove is supplying sufficient heat. Keep in mind that your house itself will regulate room/house temperatures. How well the walls, floors and ceilings are insulated, the number and size of windows, the tightness of outside doors, and the construction or style of your house (vaulted ceilings or other open spaces which collect large percentages of heat, ceiling fans, etc.) all are determining factors of room temperature.

Your stove's performance is also dependent on its installation. One common cause of poor performance is an oversized chimney flue. Oversized chimneyflues result in decreased draft, which prevents the smoke from rising out the chimney. Oversized flues are also more difficult to heat effectively, especially when burning a high efficiency stove. Cool flue temperatures inhibit the establishment of a strong draft (and encourage the accumulation of creosote). The lack of a strong draft will cause the fire to die down and may even force smoke to pour into the room.

If your chimney is the proper size and a strong draft is not easily established, there is the possibility that the chimney is too cold. Again, hot chimneys promote stronger drafts. Opening a window briefly in the room while lighting the stove may help.

Other draft guidelines are as follows:

An "**AIRTIGHT**" HOUSE: The air supply (infiltration) to the interior of the house may be inadequate if your home is super-insulated or especially well sealed. This phenomenon of air starvation within the

building is exacerbated if exhaust fans, such as clothes dryers, bathroom fans or cook stove exhaust fans, are in operation within the home. Outfitting your stove with the optional outside air adaptor connected to an air duct, which leads to the outside of the building, can correct this problem.

**Tall Trees or Buildings:** These obstructions, when located close to the top of the chimney can cause chronic or occasional downdrafts. When selecting a site for a new chimney, consider the placement of other objects near the proposed chimney location.

**Wind Velocity:** Generally, the stronger and steadier a wind, the stronger (better) the draft. However, "gusty" wind conditions can cause erratic downdrafts. For consistent problems, consider a high wind cap, such as the Vacu-Stack.

**Barometric Pressure:** Chimney drafts are typically sluggish on balmy, wet or muggy days (low barometric pressure). This is a weather-related phenomenon, which generally is self-correcting as the weather changes.

**Briskness of Fire:** The hotter the fire in your stove, the hotter your chimney and, therefore, the stronger the draft.

**Breaks in the Venting System:** An unsealed clean-out door at the bottom of the chimney, leaky stovepipe joints, a poor stovepipe-to-thimble connection, missing caps, or a leaky chimney all can cause inadequate draft.

**Seasonal Factors:** Early fall and late spring are generally difficult seasons in which to establish proper drafts. The colder the outside air is relative to room temperature, the stronger the draft.

## Operating the Stove

As outlined above, there are days when a good draft is just not easy to establish. The causes are usually seasonal factors or a cold chimney. Try starting the fire by using small kindling and fuel to obtain a quick, hot fire. Tend the fire frequently with small fuel until the chimney is hot and the draft is well established. Sometimes, partially opening a first-floor window briefly will help quickly get draft established.

## TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	SOLUTIONS
STOVE SMOKES	Operating Technique	Fully open the primary air control one minute before opening doors, and ensure the bypass is open before opening door.
	Cold Chimney or reverse draft	Preheat the chimney when first starting a fire. Briefly open a window in the room containing the stove.
	Blocked Chimney	Examine the chimney and stovepipe for blockage or creosote accumulations.
	Oversized Chimney	Reline the chimney to the appropriate diameter
	Undersized Chimney	Install a draft inducer or replace the chimney.
	Chimney Too Short	Lengthen the chimney.
	Air Infiltration Into The Chimney	Seal chimney connections and openings. Check clean-out doors.
	Bypass not closed	Ensure that the bypass door is closed when the catalysts are in the active range.
	Catalysts not functioning	Inspect catalysts for damage, ash build-up, or plugging. Brush catalysts with a soft-bristled brush, or vacuum lightly. Replace if required. Follow instructions to ensure catalyst light-off.
	Not burning proper fuel	Ensure cordwood is seasoned and dry.
More Than One Appliance Connected to the Flue	Disconnect all other appliances and seal openings.	
BACK-PUFFING OR GAS EXPLOSIONS	Operating Technique	Fully open the primary air control one minute before opening the door and keep it fully open for a few minutes after reloading. Ensure the bypass door is open before opening the door
	Extra Low Burn Rate	Burn the stove at a higher burn rate.
	Chimney Down-draft	Install a chimney cap.
	Excessive Ash Build-up	Empty the ash pan more frequently. Increase efficiency of burns, and avoid using poor quality or green wood.
UNCONTROLL-ED OR SHORT BURN	Unsealed or Open Door	Close the door tightly or replace the gaskets. Air leakage around glass gasket – replace gasket
	Excessive Draft	Check the installation. Operate at LOW BURN. Install stovepipe damper. Draft in excess of 0.1 wc should be corrected with a stovepipe damper(s)
	Extra Long Chimney	Shorten the chimney. Install stovepipe damper(s).
	Oversized Chimney	Reline the chimney to the proper diameter.
	High Winds or Hilltop Location:	Install a chimney cap.
INSUFFICIENT HEAT	Poor Quality, low Btu content, or Green Wood	Use only air-dried wood, preferably dried <u>at least</u> one year. Use a wood with a high Btu content if available.
	Low Burn Rate	Operate the stove at a higher burn rate.
	Cold Exterior Chimney	Reline or insulate the chimney.
	Leaky Stovepipe or Chimney	Check the installation. Replace with a pre-fabricated insulated chimney system or a properly sized masonry chimney.
	Too Much Heat Loss From House	Add insulation, use energy efficient windows, or caulk windows, and seal openings in home.
	Excessive Ash Build-up	Empty the ash pan more frequently. Increase efficiency of burns, and avoid using poor quality or green wood.
BLISTERING OF FINISH	Operating Technique	Do not over-fire the stove. Monitor stove temperatures. Use seasoned wood only.
	Excessive Draft	Check the DRAFT. A damper may be required. Operate the stove at a LOW BURN range.

## CATALYST TROUBLESHOOTING GUIDE

<b>PROBLEM</b>	<b>POSSIBLE CAUSE</b>	<b>SOLUTIONS</b>
FLY ASH BUILD UP ON CATALYSTS	Catalysts have not maintained light-off temperature	Brush cold combustor with soft-bristled brush or vacuum lightly. Follow instructions in the manual for a proper catalyst light-off
	Burning materials that cause a lot of char and fly-ash	Don't burn cardboard, gift wrap paper, or garbage. Burn only dry, seasoned wood, per the owner's manual.
	Bypass closed too soon	Follow instructions in the manual for a proper catalyst light-off
CATALYSTS PLUGGING OR MASKING (SOOT/CREOSOTE)	Burning wet, pitchy woods, or burning large loads of small diameter wood with the combustor in the operating position without catalyst light off occurring	Burn dry seasoned wood. Follow instructions in the manual for a proper catalyst light-off, and ensure catalyst light-off as occurred before closing bypass damper. It may be possible to burn the soot or creosote off by building a hot fire, and allowing the stove to run until the catalysts are well within the operating range before closing the bypass. Continue to run the stove at a high temperature for one hour, while ensuring the catalysts stay in the upper operating range, but not too hot.
WARPING OR BOWING OF THE CATALYSTS	Excessive catalyst temperatures for long periods of time.	Ensure that the catalysts remain in the operating zone, and does not get too hot. Reduce air control settings for a lower burn rate to ensure catalyst temperatures do not exceed the operating range.

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## REPLACEMENT PARTS & OPTIONAL ACCESSORIES

PART #	DESCRIPTION
	<b>REPLACEMENT PARTS</b>
3120-491	BAFFLE (2 NEEDED)
3050-010	CATALYST (2 NEEDED)
5492-075	SECONDARY AIR ASSEMBLY
3900-187	BYPASS WOODEN HANDLE
7200-520	CATALYST THERMOMETER
7200-601	BLOWER CONTROL
1-0400-905	SIDE WALL, FRONT STONE (2 REQUIRED)
1-0400-904	SIDE WALL, REAR STONE (2 REQUIRED)
1-0000-103	REAR WALL STONE (4 REQUIRED)
1-0000-101	FLOOR STONE, SIDES & FRONT (5 REQUIRED)
1-0000-001	FLOOR STONE, REAR CENTER
1-0400-902	FLOOR STONE, FRONT
	<b>REPLACEMENT KITS AND ACCESSORIES</b>
94-57910	BLOWER ASSEMBLY KIT
94-58910	GLASS KIT
94-58912	DOOR GASKET KIT
94-71910	HANDLE KIT, FRONT DOOR
94-73910	LATCH KIT, FRONT DOOR

Refer to the Illustrated Parts list for further detail about stove components, available online at [www.hearthstonetech.com](http://www.hearthstonetech.com).

# SAFETY LABEL

CONTACT YOUR LOCAL BUILDING OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA.

Listed Room Heater, Solid Fuel Type



Conforms to UL STD 1482-11  
 Certified to ULC STD S628-93

Manufactured by:  
**hearthstone**  
 317 Stafford Ave.  
 Morrisville, VT 05061

MODEL NAME: Clydesdale  
 MODEL NUMBER: 8492  
 SERIAL NUMBER:



**CAUTION:** HOT WHILE IN OPERATION. DO NOT TOUCH. KEEP CHILDREN, CLOTHING, AND FURNITURE AWAY. CONTACT MAY CAUSE SKIN BURNS. SEE NAMEPLATE AND INSTRUCTIONS. INSPECT AND CLEAN CHIMNEY AND CONNECTOR FREQUENTLY. UNDER CERTAIN CONDITIONS OF USE, CREOSOTE BUILDUP MAY OCCUR RAPIDLY.

## WARNINGS

Do not use grate or elevate fire. Build wood fire directly on hearth. Do not overfire. If the heater or chimney connector glows, you are overfiring. (See Operator's Manual)

OPERATE ONLY WITH DOORS CLOSED. DO NOT OBSTRUCT SPACE UNDER HEATER.

TYPE OF FUEL: CORD WOOD ONLY  
 BURNING FUELS OTHER THAN CORDWOOD MAY DAMAGE THE APPLIANCE AND CATALYTIC COMBUSTOR

### "PREVENT HOUSE FIRES"

Install and use only in accordance with manufacturer's installation instructions and your local building codes.

CAUTION: Special methods are required when passing chimney through a wall or ceiling, refer to local building codes. Do not connect this unit to a chimney flue serving another appliance.

NOTE: Replace glass only with 5mm ceramic glass.

This wood heater needs periodic inspection and repair for proper operation. Consult the owner's manual for further information. It is against federal regulations to operate this wood heater in a manner inconsistent with the operating instructions in the owner's manual.

THIS APPLIANCE USES A CATALYTIC COMBUSTOR (P/N WF-4150001076)

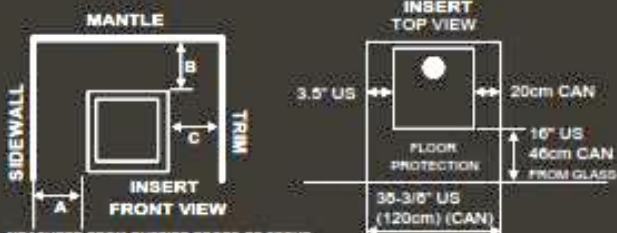
The performance of the catalytic device or its durability has not been evaluated as part of the certification.

CAUTION: Burning materials other than the specified fuels may make the catalyst inactive

CAUTION: Moving Parts May Cause Injury. Do Not Operate Unit With Ashlip or Blower Guard Removed.

CAUTION: Risk of Electric Shock. Disconnect power before servicing unit.

### Minimum Clearance to Combustible Materials\*



\*"TRIM" is defined as any combustible material protruding 1/2" or less from the wall.

When installed on a combustible floor, non-combustible floor protection is required to cover the area beneath the heater, and extend at least 10" (41cm) [18" (46cm) CAN] to the front and 8" (21cm) beyond each side of the fuel loading and ash removal openings [side of stove in CAN]. See Top View diagram.

VENT REQUIREMENTS: 8" diameter. Connect to a code approved masonry chimney or listed factory built fireplace chimney, to be fully lined with a liner meeting ULC-S635 or ULC-S640

\*Refer to the Installation Manual for additional clearance information, installation instructions, and operating instructions.  
 This unit is equipped with two convection blowers, wired in parallel, totaling 115VAC, 1.9A, 60Hz. Blowers are installed under the ash lip, behind the blower guard.

U.S. ENVIRONMENTAL PROTECTION AGENCY  
 Particulate Emissions: 1.16g/hr. Tested to: EPA Method 28R  
 Certified to comply with 2020 crib wood particulate emission standards.



DO NOT REMOVE OR COVER THIS LABEL

MADE IN USA

3300-718





## LIMITED WARRANTY

**These warranties give you specific legal rights. You may also have other rights, which vary from State to State.**

Hearthstone Quality Home Heating Products, Inc. (Hearthstone) warrants to the original retail purchaser only (the "Original Purchaser") the new appliance manufactured by Hearthstone, purchased by the Original Purchaser and installed by an authorized Hearthstone dealer or their designated representative against any of the occurrences listed in this document that result from defects in material or workmanship. This warranty is not transferrable. All obligations of Hearthstone under this document commence on the date of the Original Invoice (the "Purchase Date"). The term "Limited Lifetime" is defined as 10 years from the beginning of warranty coverage. Hearthstone appliances are designed to be operated only with the fuels listed in your owner's manual.

**Catalytic combustor LIMITED LIFETIME WARRANTY:** The catalytic combustors are covered directly by the combustor manufacturer, Applied Ceramics. Included with your stove you will find the LIMITED LIFETIME WARRANTY for the catalysts, as well as a warranty card.

Catalyst Model Number: ACI-6M2 Catalyst Manufacturer: APPLIED CERAMICS

APPLIED CERAMICS warrants to the consumer who purchases a FIRECAT STEEL COMBUSTOR as a component in an EPA certified solid fuel appliance, to replace at no charge to the consumer the FIRECAT STEEL COMBUSTOR that ceases to function with two (2) years from the date of purchase by the original consumer, provided that the following conditions are met:

- (1) A copy of the original bill of sale that includes place and date of purchase must be submitted with the warranty claim.
- (2) The original FIRECAT STEEL COMBUSTOR must be returned to APPLIED CERAMICS
- (3) The FIRECAT STEEL COMBUSTOR must not have been mechanically abused, nor must the wrong fuels have been used in the appliance.

If after two years the FIRECAT STEEL COMBUSTOR fails to function, the prorated warranty will allow replacement at the following special price schedule:

Year 3	\$130.00
Year 4	\$140.00
Year 5	\$150.00
Year 6	\$160.00
Year 7 and after	at current retail price

Conditions 1, 2, and 3 also apply to the Prorated portion of the warranty. Any EPA certified solid fuel appliance will receive one replacement catalyst for each defective catalyst returned during the three year period. The consumer will be responsible for any removal, any servicing, and return of any items required for filing the warranty claim. This warranty is APPLIED CERAMIC'S exclusive warranty, and APPLIED CERAMICS, disclaims any other express or implied warranty for the FIRECAT STEEL COMBUSTOR, including any warranty or merchantability fitness for a particular use.

Ensure the catalyst is well wrapped and padded for shipment in bubble wrap, or similar material. Ship the catalyst with padding inside of a cardboard box.

All warranty claims must include \$12.50 for postage and handling within the continental U.S. Alaska and Canada claims must include \$35.00.

Please allow 2-3 weeks for delivery. Order online @ [www.firecatcombustors.com](http://www.firecatcombustors.com)

Please read and understand the full warranty. Please return the completed warranty card promptly to Applied Ceramics. The warranty card, and any warranty claims can be shipped to:

**Applied Ceramics**  
**5555 Pleasantdale Road**  
**Doraville, GA, 30340**

**Stove components Limited Warranty**

Warranty Period	Wood	Gas	Pellet	Covered Components
Limited Lifetime	X	X	X	Stone
	X	X	X	Cast iron not listed elsewhere
	X			Clean burning air supply system*
5 Year	X	X	X	Door handles and latches
	X	X	X	Steel Components and Firebox
		X		Burner and logs
3 Year			X	Burn Pot and Baffles
2 Year	X	X	X	Appliance Electrical and Gas Components
	X	X		Refractory, Vermiculite Panels, Baffles
1 Year	X	X	X	Enamel finish against peeling or fading
	X	X	X	Accessories
	X	X	X	Glass
	X			Ash Grate
	X	X	X	All components not listed elsewhere

Any parts repaired or replaced during the limited warranty period will be warranted under the terms of the limited warranty for a period not to exceed the remaining term of the original limited warranty or one year, whichever is longer.

**Parts:** Hearthstone will replace through an authorized dealer, defective parts covered by the foregoing warranty at no charge.

**Labor:** Within the first (1<sup>st</sup>) year after the Purchase Date, Hearthstone will pay for warranty labor performed by an authorized Dealer at Hearthstone’s published labor rates in effect at the time the labor is performed only if the appliance is installed by an authorized dealer or their designated representative. Otherwise or thereafter, the Original Purchaser is responsible for the cost of labor.

**Shipping cost for parts:** Within the first ninety (90) days after the Purchase Date, Hearthstone will pay for the shipping of appliance parts covered by any of the foregoing warranties to and from Hearthstone or an authorized Dealer, as the case may be. Thereafter, the Original Purchaser is responsible for all shipping costs related to shipping appliance parts to and from Hearthstone or an authorized Dealer, as the case may be.

**Shipping cost for the appliance:** Within the first (1<sup>st</sup>) year after the Purchase Date, if the Original Purchaser is instructed to return the appliance to Hearthstone or an authorized Dealer for repair, Hearthstone will pay fifty percent (50%) and the Original Purchaser will pay fifty percent (50%) of the shipping costs related to shipping the appliance to and from Hearthstone or an authorized Dealer, as the case may be. Thereafter, the Original Purchaser is responsible for one hundred percent (100%) of all of the shipping costs related to shipping the appliance to and from Hearthstone or an authorized Dealer, as the case may be. Notwithstanding any other provision of this document, in no event will Hearthstone pay for any Dealer fees or other fees for pick up or delivery of the appliance returned for repair; the Original Purchaser shall be responsible for any such fees.

**EXCLUSIONS & CONDITIONS**

The warranties contained in this document do not cover, nor is Hearthstone responsible for:



1. Damages resulting from:
  - a. Failure to install, operate, or maintain the appliance in accordance with the owner's manual, operating instructions, installation instructions, or safety rating label provided with the appliance.
  - b. Over-firing the appliance. Over-firing can be identified by, but not limited to, warped cast iron or steel, rust colored cast iron, bubbling, cracking and discoloration of steel or enamel finishes.
  - c. Failure to install the appliance in accordance with all national or local building codes.
  - d. Shipping or improper handling.
  - e. Improper operation, abuse, misuse, continued operation with damaged, corroded, or failed components, accident, or improper/incorrect service or repairs.
  - f. Environmental conditions, inadequate ventilation, negative pressure, or improper drafting caused by tightly sealed constructions, insufficient make-up air supply, or air handling devices such as exhaust fans, forced air furnaces, or other such causes.
  - g. Damage caused by direct exposure to water.
  - h. Use of fuels other than those specified in the owner's manual.
  - i. Installation or use of components not supplied with the appliance, or any other components not expressly authorized and approved by Hearthstone.
  - J. Modifications of the appliance not expressly authorized and approved by Hearthstone in writing
  - K. Interruptions or fluctuations of electrical power supplied to the appliance.
2. All stones are warranted against cracking or breakage due to thermal stress, excluding surface and hairline cracks and scratches that do not affect the operation, or safety of the appliance.
3. Repair or replacement of wear parts. Such parts that are subject to normal wear and tear during the warranty period such as paint, gaskets, baffles, refractory materials, ash grates, and glass.
4. Damage resulting from installation, modification, alteration, repair or service of the appliance by any party other than an authorized Hearthstone dealer (a "Dealer") or their designated representative, or Hearthstone.
5. Damage due to water or condensation due to installation of the appliance in a high moisture area.
6. Damage due to installation of the appliance in an atmosphere contaminated by damaging chemicals, including but not limited to chlorine, fluorine or salts.
7. Scratches on glass, enameled surfaces or stones due to mechanical abrasion.
8. Noise caused by expansion or contraction caused by the heating and cooling of the appliance.
9. Odors caused by the heating of the appliance, or surrounding materials
10. Consequential damage caused by leaking of condensate during startup
11. A defect in any part of the appliance if the Original Purchaser fails to comply with Hearthstone's or a Dealer's request to ship the part or the appliance to Hearthstone or a Dealer, as the case may be.
12. Replacement stones and enameled parts are taken from current stock, and may not match originals in color, grain, or pattern. Hearthstone will supply replacement parts for discontinued parts in finishes or colors as available, or at their discretion.
13. Hearthstone's obligation under this warranty does not extend to the appliance's ability to heat the desired space. Information is provided to assist the customer and the dealer in selecting the appropriate appliance for the application. Consideration must be given to appliance location and configuration, environmental conditions, insulation and air tightness of the structure.

THE WARRANTIES CONTAINED IN THIS DOCUMENT ARE EXCLUSIVE AND ARE GIVEN BY HEARTHSTONE AND ACCEPTED BY THE ORIGINAL PURCHASER IN LIEU OF ALL OTHER EXPRESS WARRANTIES AND ANY OBLIGATIONS, LIABILITIES, RIGHTS, CLAIMS, OR REMEDIES IN CONTRACT OR TORT, WHETHER OR NOT ARISING FROM HEARTHSTONE'S NEGLIGENCE, ACTUAL OR IMPUTED. ALL IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE GIVEN ONLY TO THE EXTENT REQUIRED BY FEDERAL OR STATE LAW. EXCEPT AS OTHERWISE REQUIRED BY STATE LAW, UPON THE EXPIRATION OF THE EXPRESS LIMITED WARRANTIES CONTAINED HEREIN, NO IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, SHALL APPLY TO THE SUBJECT APPLIANCE. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

THE WARRANTIES CONTAINED IN THIS DOCUMENT EXTEND ONLY TO THE ORIGINAL PURCHASER OF THE APPLIANCE WARRANTED HEREUNDER. THEY ARE NOT TRANSFERRABLE AND DO NOT EXTEND TO ANY SUBSEQUENT OWNERS.

UNDER NO CIRCUMSTANCES SHALL HEARTHSTONE BE LIABLE TO THE ORIGINAL PURCHASER OR ANY OTHER PERSON FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO DAMAGE TO PROPERTY OR PERSONAL INJURIES, WHETHER ARISING OUT OF LOSS OF USE, BREACH OF WARRANTY, TORT, OR OTHERWISE, EVEN IF HEARTHSTONE HAS BEEN APPRAISED OF THE POSSIBILITY OF SUCH DAMAGES. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

## **QUALIFYING FOR WARRANTY COVERAGE**

To obtain performance of any obligation under this document, the Original Purchaser must, within the applicable warranty time period, contact their original Hearthstone dealer, or the current responsible local Hearthstone dealer, for instructions regarding the return of defective parts for repair, the return of the appliance for repair, or to schedule a Dealer service call. The Original Purchaser should refer to the Dealer Network search engine contained on Hearthstone's Web site ([www.hearthstonestoves.com](http://www.hearthstonestoves.com)) if the original dealer is not available, to find a Hearthstone dealer nearest to the Original Purchaser's location.

## **REMEDY**

The remedy for any breach of the foregoing warranties will consist of repair or replacement, at Hearthstone's option, of any covered defect in the appliance. When the Original Purchaser contacts a Hearthstone Dealer, the Dealer on behalf of Hearthstone, as the case may be, will instruct the Original Purchaser to either return the defective part, or the entire appliance (if requested), to the Dealer or Hearthstone or allow a Dealer to make a service call at the place where the appliance is located. Hearthstone may require that a digital picture be provided to support the claim. Notwithstanding any other provision of this document, the Original Purchaser shall pay for any fees and service charges related to a Dealer's service call or the shipping charges associated with the return.

## **WARRANTY REGISTRATION**

The Original Purchaser can complete their warranty registration on our website at [www.hearthstonestoves.com](http://www.hearthstonestoves.com), or send a completed and signed Warranty Registration Form, which is enclosed in the appliance document packet, to the following address:

Hearthstone Quality Home Heating Products, Inc.  
Warranty Department  
317 Stafford Avenue  
Morrisville, VT 05661

**NOTE: SENDING IN THE SIGNED WARRANTY REGISTRATION FORM IS *NOT REQUIRED* AS A CONDITION OF WARRANTY COVERAGE OR HEARTHSTONE'S PERFORMANCE.**