



## Clydesdale

(Model 8490)

Non-Catalytic Wood  
Fireplace Insert

### OWNER'S MANUAL INSTALLATION AND OPERATING INSTRUCTIONS

**PLEASE READ THIS ENTIRE OWNER'S MANUAL BEFORE YOU INSTALL AND USE YOUR NEW Clydesdale WOOD FIREPLACE INSERT. To reduce the risk of fire, follow the installation instructions. Failure to follow these instructions may result in property damage, bodily injury, or even death.**

**SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE!**

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



We recommend that our products be installed and serviced by professionals who are certified in the U.S. by NFI (National Fireplace Institute).

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

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# Introducing Your Clydesdale Wood Fireplace Insert

Congratulations! You have just invested in a most unique wood burning Fireplace Insert – the Clydesdale Wood Burning Fireplace Insert from HearthStone Quality Home Heating Products Inc®. The Clydesdale Model –8490 is a clean burning EPA certified, non-catalytic wood burning Fireplace Insert. You can be proud to join the HearthStone family with our *Premier* Cast Iron Wood Burning Fireplace Insert. The generous depth and width allows for loading of wood through the front door up to 22 inches long!

Your purchase insures years of clean, comfortable heat with minimal maintenance. You will receive the benefits of the most advanced technology in wood burning without the cost and maintenance requirements of a catalytic Fireplace Insert. The Clydesdale blends modern technology with the unique beauty and heating qualities of soapstone and cast iron, long 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 Fireplace Insert's safe installation, proper break-in, operation and maintenance. It contains information that will be useful to you now, and in years to come, so keep it handy and refer to it as needed.

Use these instructions as well as national, state, and local building codes to install your Fireplace Insert. Be sure to maintain the designated stovepipe and Fireplace 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.

Keep furniture, drapes, curtains, wood, paper, and other combustibles far away from the Fireplace Insert. Never install the Fireplace Insert in a location where gasoline, kerosene, charcoal lighter fluid or other flammable liquids are used or stored.

## **SAFETY NOTICE:**

**A HOUSE FIRE MAY RESULT IF THIS FIREPLACE INSERT IS NOT INSTALLED PROPERLY. FOR YOUR SAFETY, CAREFULLY FOLLOW THE INSTALLATION DIRECTIONS. CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA.**

The performance of your Fireplace Insert depends on many variables. Since all installations are unique, the general information and operating procedures presented here can only serve as useful guidelines rather than hard and fast rules. Should you have any questions, do not hesitate to contact your dealer for additional information.

Validate your warranty - return your warranty registration card to HearthStone within 30 days of purchase. Once your warranty has been validated by returning your warranty card, contact your dealer for any necessary warranty service.

This Fireplace Insert is manufactured and warranted by:

**HearthStone Quality Home Heating Products Inc®**  
317 Stafford Ave.  
Morrisville, VT. 05661

## CODES

When you install your Clydesdale wood Fireplace Insert, it is imperative that you adhere to all local codes, which can be obtained from either of the following two National sources:

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

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

## 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.

**When using your Fireplace Insert:**

- ❑ Warn children and others unfamiliar with woodstoves of the danger of touching hot, radiating surfaces of your Fireplace Insert. For your additional safety, obtain hearth and stove guards through your local dealer.
- ❑ Follow recommended break-in procedure as outlined in this manual.
- ❑ Burn natural wood only. Higher efficiencies and lower emissions result when burning air-dried, seasoned wood, as compared to green or freshly cut wood.
- ❑ Use caution when loading firewood into a hot stove.
- ❑ Inspect the stovepipe, chimney connector and chimney, as recommended.

**Follow these safety precautions:**

- ❑ **Never** modify this Fireplace Insert in any way, especially the primary air control system.
- ❑ **Never** burn kiln dried wood, painted or treated wood, solvents, trash, plywood, colored or glossy paper, artificial logs, cardboard, coal, garbage or driftwood. *Especially, do not burn coal in this Fireplace Insert.*
- ❑ **Never** use gasoline type fuel, kerosene, charcoal lighter fluid, or other liquid fuels or solid fire starters to start or invigorate the fire. These fuels can possibly generate carbon monoxide, which can sap the supply of oxygen. Keep all such materials away from the Fireplace Insert.
- ❑ **Never** use a wood grate or other device to elevate the fire.
- ❑ **Do Not** allow logs to rest against or otherwise come in contact with the glass when the door is closed.
- ❑ **Do Not** slam the door or use the door to force wood in to the Fireplace Insert.
- ❑ **Never** over-fire your Fireplace Insert
- ❑ **Never** put articles of clothing or candles on a hot Fireplace Insert.
- ❑ **Do Not** connect the Fireplace Insert to a flue that is serving another appliance.

**Other safety guidelines**

- ❑ Keep all combustible items such as furniture, drapes, clothing, and other items, at least 36" (0.92 m) from the Fireplace Insert
- ❑ Install a smoke detector, preferably in an area away from your wood Fireplace Insert.
- ❑ Keep a fire extinguisher handy. We recommend the type rated "A B C."
- ❑ Dispose of ashes properly.
- ❑ Keep children and pets away from the stove; they could be burned by touching a hot stove.
- ❑ Clean your chimney system as needed.

## 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 begins to fill up).

### At the Beginning of Every Other Month:

- A visual inspection of the chimney connector and chimney for creosote is recommended depending upon your use of the stove.
- Check door seals using the "dollar bill test." - When the fire is out and the stove is cool, shut the door on a dollar bill. If the bill pulls out without any resistance, then your stove's door isn't sealed properly. To tighten the seal, change the door gasket

### At the End of Every Season:

- Dismantle the chimney connector and clean it thoroughly. Replace any pieces that show signs of rust or deterioration.
- Inspect and, if necessary, clean your chimney.
- Thoroughly clean out the inside of the Fireplace Insert.
- Inspect all door gasket material and replace if worn, frayed, cracked or extremely hard.

## 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 two steps.
2. Close the primary air control.
3. Keep the Fireplace Insert 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 ASSOCIATED WITH SUCH FIRES CAN CAUSE INSTANTANEOUS STEAM AND SERIOUS BODILY HARM.

Once the chimney fire has expired, leave the primary air control closed and let the fire in the Fireplace Insert die out completely. The Fireplace Insert should not be fired again until the Fireplace Insert, stovepipe, and chimney are all thoroughly inspected for any sign of damage. You must correct any damage before using your Fireplace Insert again.

To remove the Clydesdale for inspection purposes, simply disconnect the venting from inside the firebox. Carefully remove the surround from the insert, and slide the insert away from the fireplace.

**SPECIFICATIONS**

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

**Size of Heated Area.** 1,800 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" (55.9 cm) - front door

**Height** 22.5" (57.2 cm)

**Width** 31.08" (78.9 cm)

**Depth** 17.56"(44.6 cm)

**Front Door Size** 22" wide x 11.5" high (55.9 x 29.2 cm)

**Stovepipe Size** 6" (152 mm) diameter

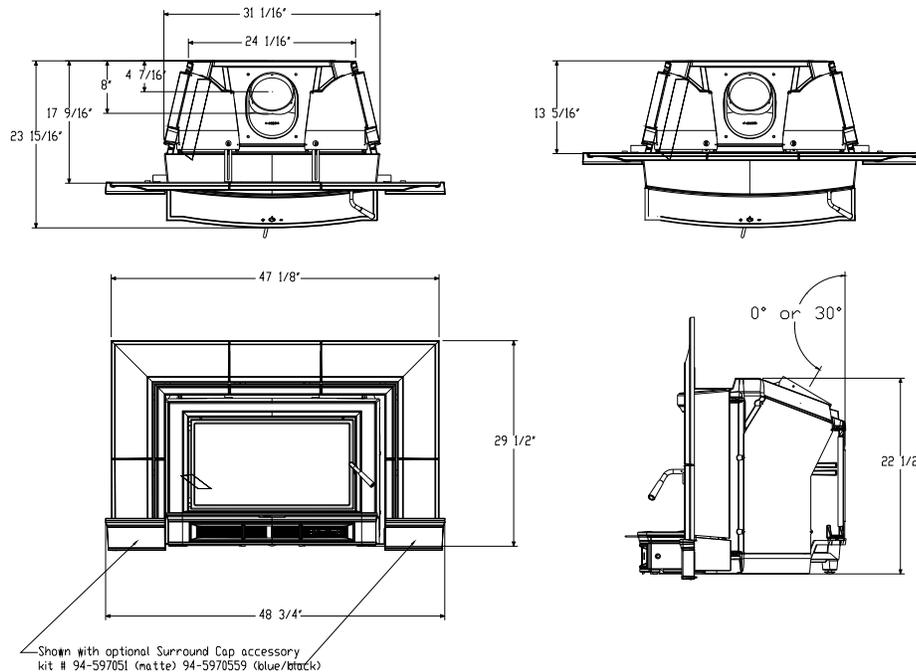
**Metal Chimney** 6" (152 mm) inside diameter

**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; and Porcelain Enamel (Blue/Black)



**Figure 1 Clydesdale Dimensions**

# Setting up Your Wood Fireplace Insert

## UNPACKING

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

## INSTALLING YOUR FIREPLACE INSERT

When Installing this unit in a fireplace, you must attach the metal label provided (3300-625) to the fireplace prior to installing the insert. To install the tag,

Make sure that the Fireplace Insert will have enough clearance to combustible materials that would surround the insert. These combustibles can include walls, floor, ceiling, fireplace, and chimney. 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.

National Fire Protection Agency  
 Batterymarch Park  
 Quincy, MA 02269  
 1-800-344-3555  
 1-617-770-3000

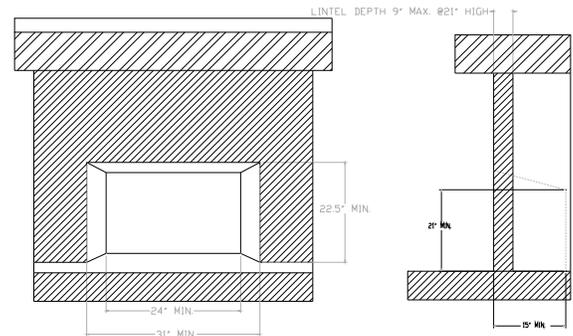


Figure 2 Minimum Fireplace Dimensions

## HEARTH REQUIREMENTS AND 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 and have a minimum "R-Value" of 1.0.

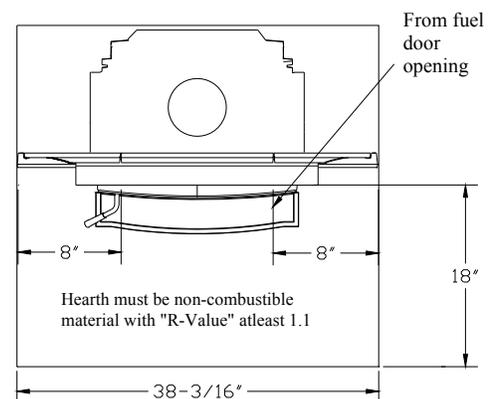


Figure 3 Hearth Requirements

\* Installations in Canada require 18" (45.72 cm) of floor protection in the front.

Floor protector's come with various types of specifications. To convert a floor protector's specification to an R-value, do one of the following:

- If the R-value is given, use that value—no conversion is needed.
- If a K-factor is given with a required thickness (T) in inches, use this formula:  $R\text{-value} = 1/K \times T$
- If a C-factor is given, use the formula:  $R\text{-value} = 1/C$

To determine the R-value of the proposed alternate floor protector:

- Use either the K-factor or the C-factor formula explained above to convert specifications not expressed as R-values.
- For multiple layers of floor protectors, simply add the R-values of each layer to determine the overall R-value of the layers.

If the overall R-value of your setup is greater than the R-value of the specified floor protector, then your setup is acceptable.

<i>Noncombustible Material</i>	<i>Thickness</i>	<i>R-value</i>
Gypsum or plaster board <sup>1</sup>	1/2"	0.45
Wallboard, Wonderboard, or Durock <sup>1</sup>	1/2"	0.20
Ceramic board (Fiberfrax or Micor) <sup>1</sup>	1/2"	1.10
Nominal solid clay brick <sup>1</sup>	1"	0.20
Ceramic wall or floor tile <sup>1</sup>	1/4"	0.01
Mineral wool insulation <sup>2</sup>	1"	3.12
Cement mortar <sup>2</sup>	1"	0.20
Horizontal still air <sup>2</sup> *	1/8"	0.92

### **HearthStone's Thermo-Ceramic Baffle System**

To enhance the combustion efficiency and reduce the emissions of the fire in your stove **HearthStone QHHP, Inc.** has developed an advanced **THERMO-CERAMIC** baffle system. This system uses a lightweight, durable ceramic material above the burner tubes to maintain the high temperatures in the secondary combustion area and maintain the low emission – high efficiency combustion you desire. This new technology will not corrode, rust dissolve or lose its strength, however it is vulnerable to puncture or cracking due to rough handling.

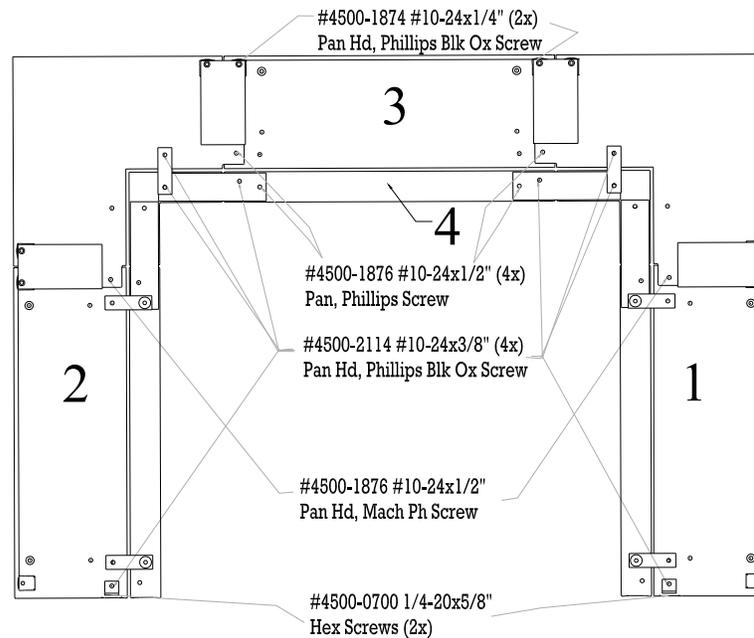
**PLEASE EXERCISE CARE WHEN LOADING WOOD OR CLEANING YOUR STOVE, NOT TO DAMAGE THE Thermo-Ceramic BAFFLE**

Located directly above the burner tubes in the firebox, this white sheet of material will break if wood or cleaning brushes impact it. Be careful when loading and cleaning your stove to not break this material. If this piece has been fractured or a hole is punctured, it will cause the stove to function improperly. You must replace the board through a qualified **HearthStone** dealer.

<sup>1</sup> According to Intertek Testing Services, Inc.

<sup>2</sup> According to ASHRAE Handbook of Fundamentals

## INSTALLING THE SURROUND



**Figure 4 Clydesdale Surround Assembly**

To complete the assembly, you will need a Phillips screwdriver and a 7/16" wrench. The Clydesdale surround assembly will come in four sections, with a hardware package. The four sections will be:

- 1- Right section
- 2- Left section
- 3- Center Top Outer section
- 4- Center Top Inner section

The hardware package will include:

- 2- 1/4-20x5/8" Hex Screws
- 4- 10-24x1/2" Pan, Phillips Screws
- 2- 10-24x3/8" Flat Phillips Black Oxide Screws
- 4- 10-24x3/8" Pan, Phillips Black Oxide Screws
- 2- Surround Leveling Brackets

### USE FIGURE 4 AS A REFERENCE, WHEN ASSEMBLING THE SURROUND

1. Install the left and right surround brackets.
2. Locate and place the *Right section* (1) face down on a soft surface.
3. Locate and place the *Center Top Inner* (4) and *Center Top Outer* (3) sections face down in position adjoining the *right section* (1).
1. Position the *Center Top Inner and Outer Sections* (3+4) of the surround into position as illustrated in Figure 4. Secure them to the top

panel using the fasteners provide in the zip lock bag – proper placement of the screws is called out in Figure 4

2. Repeat steps 1-4 with the *Left section* (2)
4. Lift the completely assembled surround close the front of the insert. Locate the four bushings on the back of the surround. These four bushings will slide into the receiving slots on the surround mounting brackets (located on the insert)
5. Lift the surround and place on the insert. Ensure that the surround has fully seated into the slots, as the bottom of the surround should be flush with the bottom of the insert.
6. Use the leveling brackets if needed to keep the bottom edges of the surround flush to the hearth. Install the leveling brackets by bolting them into the square cutout on the back bottom of the surround using the 10-24x3/8" bolts provided. Turn the 1/4-20 bolts down into the threaded holes on the bottom of the leveling brackets. These bolts can now be turned to raise the surround.

### 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. Please refer to NFPA

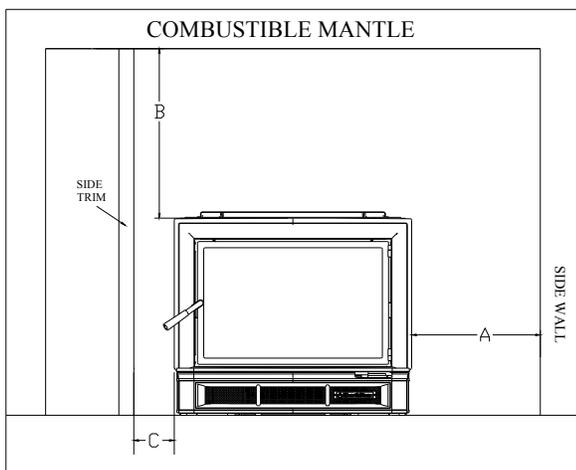
211 for specifications and complete details. You can obtain this information directly from NFPA.

Clearances to combustible surfaces can be reduced by using any 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

## CLEARANCE TO COMBUSTIBLES



**Figure 5 Clearance to Combustibles**

- |                                   |       |
|-----------------------------------|-------|
| A. side wall                      | = 12" |
| B. mantle and top trim            | = 24" |
| B. mantle/ with mantle shield kit | = 11" |
| C. trim                           | = 9"  |

## REMOVING THE BAFFLE (OPTIONAL)

- See page 26 and 30

## VENTING COMPONENTS AND CONFIGURATION

**It is very important to follow minimum clearances for chimney connectors to combustibles such as walls and ceilings when installing the stove near non-combustible surfaces**

- Single wall connector is 24 MSG or 25 MSG blued steel stovepipe.

## INSTALLING A VENTING SYSTEM

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

Secure all joints, including attaching the stovepipe 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. Leaving off the screws can cause joints to separate from the vibration that results from a creosote chimney fire.

*Long runs of stovepipe to increase heat dispersal are not recommended.* Using longer lengths of stovepipe or more connecting elbows than necessary increase the chances of draft resistance and the accumulation of creosote buildup.

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 install your Clydesdale to a prefabricated metal chimney or a masonry chimney. See figure 7 to aid in connections.

## CONNECTING TO A PREFABRICATED METAL CHIMNEY

THIS FIREPACE 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 CAN/ULC-S635 OR CAN/ULC- S640

You can install the Clydesdale in a masonry or zero clearance fireplace. 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 type HT requirements (2100° Fahrenheit) per UL 1777 (United States) or ULC S635 (Canada) 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 illustration to the below) 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 must be restored to its original condition for safe use without the insert.

NOTE: When installing this unit as an insert, this label must be installed on/in the fireplace.

3300-625

Remember, you must adhere to all previously described floor protection requirements when installing into a zero clearance fireplace.

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

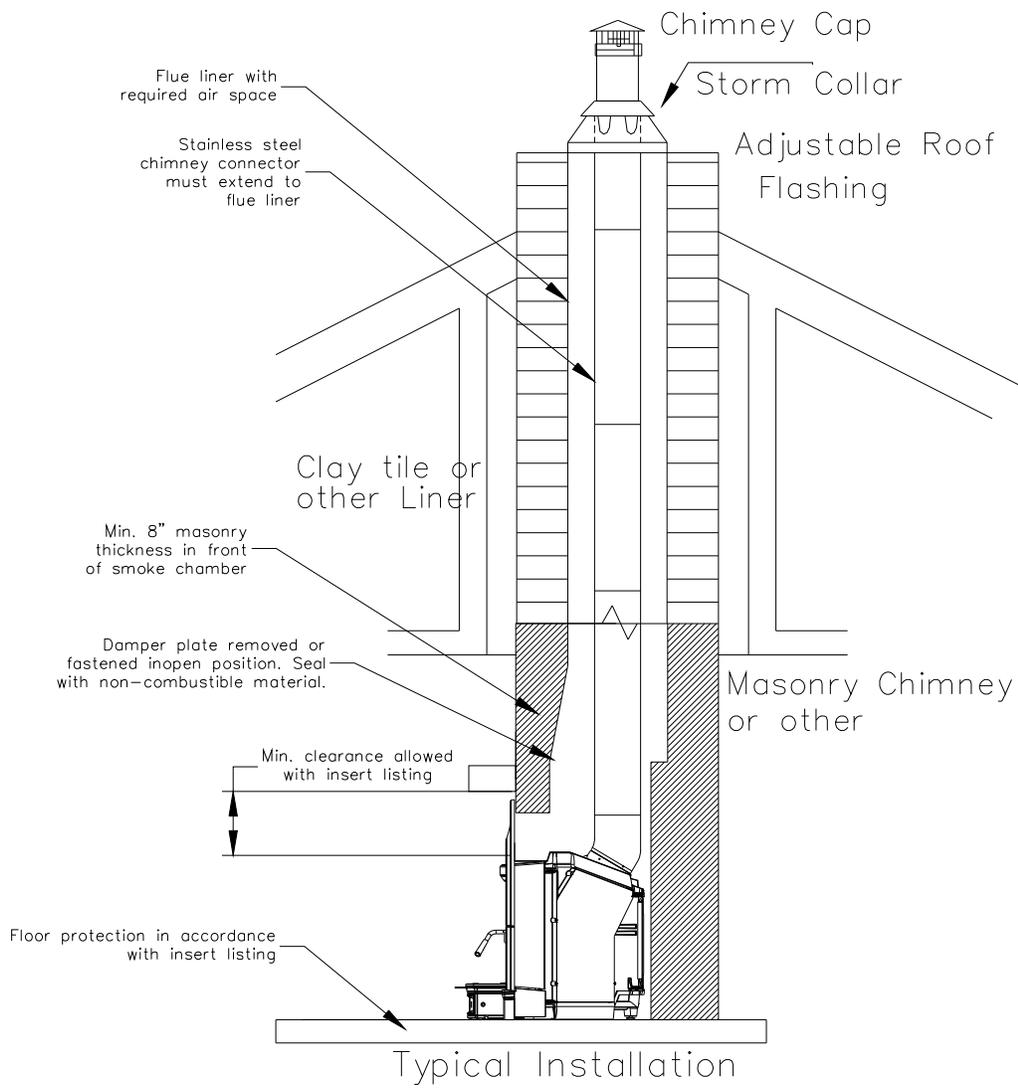
Make sure the size of the chimney's flue is appropriate for the Clydesdale. The Clydesdale requires a 6" (152 mm) inside diameter flue for new installations. A 6" diameter flue provides adequate draft and performance. You can use an 8" (203 mm) diameter existing flue with a reducer. An oversized flue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

There are two ways to install a prefabricated metal chimney:

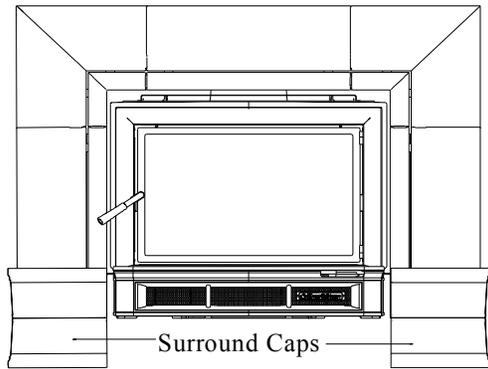
- An *interior* installation where the chimney passes inside the residence through the ceiling and roof.
- An *exterior* installation where the chimney passes through the wall behind the Fireplace Insert then up the outside of the residence.

Whenever possible, choose an interior chimney. An interior chimney heats up more quickly and retains its heat; thus promotes a better draft and discourages the formation of creosote. An exterior chimney does not benefit from the warmth of being surrounded by 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 DAMPER OR WIRE IT OPEN**



**Figure 6 Connecting to a chimney**



**Figure 7 Surround Cap Kit # 94-5970510 (matte) or 94-5970559 (blue/black) or 94-5970710 (matte double) or 94-5970759 (blue/black double)**

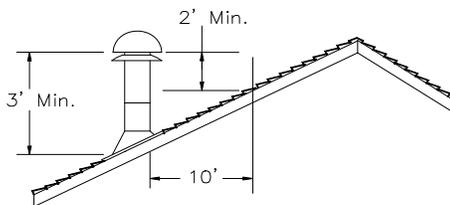
Most zero clearance installations will raise the Clydesdale approximately 6" off the hearth or floor. In order to finish the surrounds, HearthStone offers a surround cap kit. See the illustration in figure 8 to see the placement of the surround caps .

### CONNECTION TO A MASONRY CHIMNEY

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

Make sure the chimney's cleanout is complete and working properly. To avoid a loss of draft, the cleanout must close off completely. If allowed to cool, your Fireplace Insert will perform poorly and creosote will build up in the chimney.

Make sure the size of the chimney's flue is appropriate for this Fireplace Insert and that it is not too large. Use a masonry chimney with an 8" x 8" (203 mm x 203 mm) tile size for best results. An oversized flue will contribute to the accumulation of creosote.



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

Chimney wall construction:

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

Flue liner:

- Minimum thickness of 5/8" (16 mm).
- Installed with refractory mortar.
- At least 1" (25 mm) air space.
- An equivalent flue liner must be a listed chimney liner system meeting type HT requirements or other approved material.

Interior chimney requirements:

- At least 2" (51 mm) clearance to combustible structure
- Fire stops must be 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:

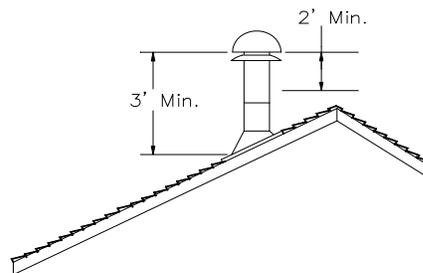
- At least 1" (25 mm) clearance to combustible structure.

Chimney height requirements: (See Illustration)

- 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 allowable chimney height is 30 feet (9m).

The surround must be sealed to the fireplace front or the damper area around the chimney liner must be sealed to prevent room air from entering the chimney cavity of the fireplace.

**WARNING Do not remove bricks or mortar from the existing fireplace** (Exception) Masonry or steel (including the damper plate) may be removed 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.



# Operating Your Clydesdale Wood Fireplace Insert

**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, and how to break-in your Fireplace Insert and use it on a daily basis.

## CONTROLS AND FEATURES

**WARNING:** ONLY OPERATE WITH DOOR FULLY OPEN OR CLOSED. IF DOORS ARE LEFT PARTLY OPEN, GAS AND FLAME MAY BE DRAWN OUT OF THE OPENING, CREATING RISKS FROM BOTH FIRE AND SMOKE

IF OPERATING WITH DOORS FULLY OPEN, YOU MUST USE THE ACCESSORY SCREEN AVAILABLE THROUGH YOUR HEARTHSTONE DEALER

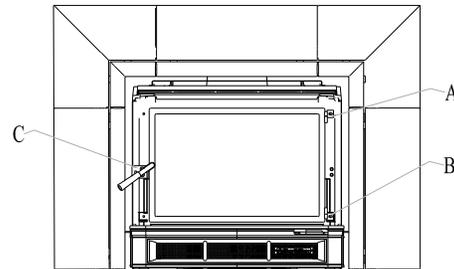
If operating with the door open, some fuels may create carbon monoxide, which can be hazardous or fatal to your health. Do not burn anything but clean dry firewood

**FRONT DOOR:** 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 can be reversed to open from either side. To open the door, lift the handle to the 2 o'clock (or 10 o'clock for RH mounted door) position and pull the door. To latch the doors, push the door closed tightly then lower the handle to the 4 o'clock (8 o'clock for RH mounted door) position. Pull on the door handle to make sure it is properly latched.

### Reversing the door (Refer to Figure 9)

To switch the door to open from the right, simply remove the ash lip assembly, and front facade. Remove the two Phillips head screws holding the door hinges on (A+B in Figure 9) (**use caution, once the last screw is removed the door will be loose in your hands**) Be careful not to lose the two hinge rivets. Using a Phillips head screwdriver remove the door catch (C in Figure 9) (There may be spacer washer behind the catch to provide an adequate seal. Remove the two screws where the hinges will go on the left side. Rotate the door 180 degrees, and

put the hinges in place. Reattach the door catch on the opposite side of the front, using the same screws and spacer washers if necessary.



**Figure 8 Reversing the Door**

**PRIMARY AIR CONTROL:** The handle is located on the front bottom center of the Fireplace Insert. 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, push the handle as far as it will go to the left toward the firebox; push the handle as far as it will go to the right, away from the firebox to close the primary air control.

## INSTALLING AND OPERATING THE BLOWER

When using the optional blower, follow the instructions that are packaged with the blower, to install and operate. The power cord can be routed to the left or right of the insert, assuming that you follow the instructions provided.

## CHOOSING FIREWOOD

Your Clydesdale Wood Heater is designed to only burn 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 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 the longer the burn. Firewood with higher BTUs is generally considered ideal for a wood stove.

*HIGH:* Apple, Black Birch, Hickory, Locust, White Oak, Black Beech, Mesquite

*MEDIUM HIGH:* White Ash, Beech, Yellow Birch, Sugar Maple, Red Oak

*MEDIUM LOW:* Black Ash, White Birch, Grey Birch, Elm, Norway Pine, Pitch Pine, Black Cherry, Soft Maple, Tamarack

*LOW:* White Pine, White Cedar, Balsam Fir, Spruce, Aspen, Basswood, Butternut, Hemlock

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, it should be split, stacked and allowed to air dry for a period of one year.

Stack the firewood on skids or blocks to keep it off the ground, cover only the top of the stack. Plastic or tarps that cover the sides of the woodpile 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."

Firewood should not be stored within the Fireplace Insert's specified clearances to combustible materials.

## **BUILDING A FIRE**

Once you understand the controls of your wood 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 your Fireplace Insert be "broken in" slowly. Cast iron must be "seasoned"; over-firing a new

Fireplace Insert may cause castings to crack or may damage other Fireplace Insert parts. Moisture in the soapstone must be driven out slowly to minimize the "shock" to the stone of its first exposure to high firebox temperatures.

When you light your first fires, the wood Fireplace Insert will emit some smoke and fumes. This is normal "off-gassing" of the paints and oils used when manufacturing the wood 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 produce other odors from impurities that exist in the area immediately surrounding the Fireplace Insert. Some of these impurities can be cleaning solvents, paint solvents, cigarettes, smoke, 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 following break-in procedure, as well as all other operating procedures in this manual, the cast iron and soapstone components of your Fireplace Insert will give you many years of trouble-free use. With use, the color of the soapstone may change and small fractures may appear on the surface of the stone. These changes will only add character and distinction to your Fireplace Insert.

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 leverage to force wood into the Fireplace Insert.
- Do not load wood that is encrusted with ice into a burning stove as the thermal shock can cause damage.
- Do not use a manufactured 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 and should remain in place in the firebox at all times.

## BUILDING A BREAK IN FIRE

- 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. Kindling should be approximately ten pieces, 1/2" (13 mm) in diameter and 10" to 18" (254 mm to 457 mm) long.
- 2) Fully open the primary air control by pushing the control handle fully to the left, away from the firebox.
- 3) 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.
- 4) Close the door and allow the fire to burn. Keep the front door closed while the Fireplace Insert is in use.
- 5) 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, a few small chunks of wood should be added to the fire to reach safe break-in temperatures.
- 6) Once the Fireplace Insert is warm but **not hot to the touch**, close the primary air control by pushing it fully to the right to allow the fire to die out completely.
- 7) 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 quickly. Your window may 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.

## NORMAL 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.

## 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. Kindling should be approximately ten pieces, 1/2" (13 mm) in diameter and 10" to 18" (254 to 457 mm) long.
- 2) Fully open the primary air control by pushing it completely to the right, away from the firebox.
- 3) 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.
- 4) Close the door and allow the fire to burn.
- 5) Once the kindling is burning, open the front door and add logs, small at first, to build the fire up. Make sure to 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 stove is in use.
- 6) Once the fire is burning well, use the primary air control to regulate the desired rate of burn. Pushing the handle to the left opens the PRIMARY AIR CONTROL for a high rate of burn or pushing it to the right for a low rate of burn.

Note: 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 will allow the firebox to clear of smoke before the door is opened fully. Also, reloading on a bed of hot, red coals reduces smoking time and will bring fresh fuel up to a high temperature rapidly.

## OVER-FIRE CAUTION

Over-firing means the Fireplace Insert is operating at temperatures above the recommended temperatures outlined above in the *BURN RATE* section. Over-firing should be carefully avoided 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 stovepipe, and discoloration of the stovepipe.

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, wax logs or anything other than natural cordwood.

**OPERATOR ERROR:** Make sure all the gaskets are in good condition. Replace worn out or compressed gaskets. Do not burn the Fireplace Insert with the front door in the open position.

Monitoring the temperature of the surfaces is the best way to determine if the Fireplace Insert is over-firing. 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 stones, discolored or warped external parts, and damaged enamel.

**NOTE: ANY SYMPTOMS OF OVER-FIRING WILL VOID YOUR WARRANTY!!**

#### **MAINTENANCE**

**Do not over-fire the Fireplace Insert.** (refer to page 15).

#### **CREOSOTE FORMATION AND NEED FOR REMOVAL**

When wood is burned slowly, it produces 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, the chimney connector and chimney should be inspected at least once every two months during the heating season to determine if a creosote buildup has occurred.

To prevent the buildup of creosote:

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

2. After reloading with wood, burn the Fireplace Insert with the primary air control fully open for 20 to 30 minutes. This manner of operation ensures early engagement of the secondary combustion system which,

when engaged, minimizes creosote buildup in the chimney.

The stovepipe connector and chimney should be inspected at least monthly during the heating season to determine if a creosote build-up has occurred. If a creosote residue greater than 1/4" (6 mm) has accumulated, it should be removed to reduce the risk of a chimney fire.

If your glass is remaining dirty, your operating temperatures are low; therefore, there is a higher risk of creosote buildup.

The venting system must be inspected at the Fireplace Insert connection *and* at the chimney top. Cooler surfaces tend to build creosote deposits quicker, so it is important to check the chimney at the top (where it is coolest) as well as from the bottom near the Fireplace Insert.

Accumulated creosote should be removed with a cleaning brush specifically designed for the type of chimney in use. A certified chimney sweep should be used 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!).

It is also recommended that before each heating season the entire system be professionally inspected, cleaned and repaired, if necessary.

#### **GASKETS**

Gasket material should normally be replaced every two to three seasons, depending on Fireplace Insert use. If the door seal is loose, a new gasket will assure a tight seal and improved Fireplace Insert performance. Contact your dealer for a gasket kit that includes instructions and gaskets for your Fireplace Insert.

The procedure for replacing gaskets on the glass is reviewed below under "Glass".

To replace door gaskets, first remove the old gaskets with a utility or putty knife. Clean all gasket channels with a wire brush. Apply gasket cement to the channels and push the new gasket into place without stretching the gasket material. The door should be shut immediately to fully press the gasket into place and assure a positive seal.

## GLASS

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

When necessary, the glass can be cleaned 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 the glass is hot. Most deposits can be cleaned by following the instructions provided with the cleaner. To clean heavier deposits, remove the top hinge and lift the door straight up and off the Fireplace Insert (take care to save hardware for reuse). Lay the door face down on a workbench or table. Apply the cleaner to the glass and allow it to set for a few minutes. By laying 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.

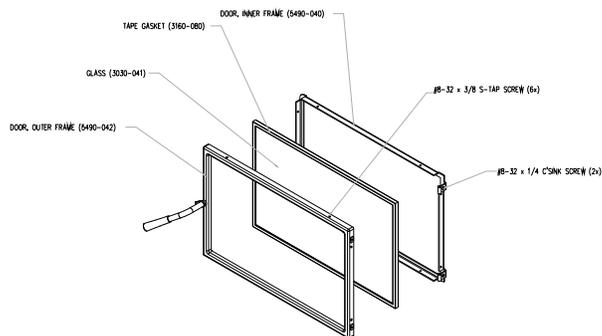
The door glass should be replaced immediately if broken. Contact your local dealer for replacement glass, which is accompanied with instructions and everything needed for the repair. If you replace the glass yourself, wear work gloves and safety glasses.

The procedure for glass and glass gasket replacement is as follows: Refer to Figure 9.

1. Remove the door by removing the top hinge screw and lifting the door straight up off the bottom hinge.
2. Place the door face down on a flat, smooth surface.
3. Apply penetrating oil to the screws. Remove the screws to separate the glass from the door.
4. Carefully lift the damaged glass from the door and discard.
5. Replace the screws.
6. Install the door.

**WARNING** Do not use substitute materials when replacing the glass or any door components. Only authorized HearthStone components should be used.

Glass specifications 12-5/16" x 22-7/8" x 5mm neoceram



**Figure 9 Glass Replacement**

## CAST IRON

Exterior cast iron parts are either painted with black, high-temperature stove paint or porcelainized with an enamel finish in various colors.

Use black, high-temperature stove paint (satin black by Stovebright) to touch up and maintain the original appearance of painted cast iron. Use a damp sponge to wipe clean. Dry the cast iron thoroughly to prevent rusting.

Enamel castings can be cleaned with a standard glass cleaner. With time and use, a very fine, subtle network of crazed lines may appear seemingly beneath the surface of the enamel. Crazing is a natural predictable process and does not represent a flaw.

## TROUBLESHOOTING

### Your Heating Needs

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.

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 glass 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 Fireplace Insert's performance is also dependant on its installation. One common cause of poor performance is an oversized chimney flue. Oversized chimney flues result in decreased pressure, which prevents the smoke from rising out the chimney. Oversized flues are also more difficult to heat effectively, especially when burning a high efficiency Fireplace Insert. 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 the 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 of the chimney being too cold. Again, hot chimneys promote a stronger draft.

Other draft guidelines are as follows:

**AN "AIRTIGHT" HOUSE:** If your home is super-insulated or especially well sealed, the (infiltration) air supply to the interior of the house may be inadequate. This phenomenon of air starvation within the building can be exacerbated if exhaust fans, such as clothes dryers, bathroom fans or cookstove exhaust fans, are in operation within the home.

**TALL TREES OR BUILDINGS:** These obstructions, when located in proximity to the top of the chimney can cause chronic or occasional downdrafts. When selecting a site for a new chimney, take care to 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 may cause erratic downdrafts.

**BAROMETRIC PRESSURE:** Chimney drafts are typically sluggish on balmy, wet or muggy days. This is a weather-related phenomenon, which generally is self-correcting as the weather changes.

**BRISKNESS OF FIRE:** The hotter the fire in your Fireplace Insert, the hotter your chimney and, therefore, the stronger the 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 temperatures) the stronger the draft.

### Operating the Fireplace Insert

There are days when a draft is not easily established. As outlined above, seasonal factors or a cold chimney may be the cause. 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.

### DISPOSAL OF ASHES

**Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a non-combustible floor or on the ground, well away from all combustible materials, pending final disposal. If 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.**

## TROUBLESHOOTING GUIDE

<b><u>PROBLEM</u></b>	<b><u>POSSIBLE CAUSE</u></b>	<b><u>SOLUTIONS</u></b>
STOVE SMOKES	Operating Technique	Fully open the primary air control one minute before opening doors.
	Cold Chimney	Preheat the chimney when first starting a fire.
	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 in clean-out doors.
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.
	Extra Low Burn Rate	Burn the Fireplace Insert at a higher burn rate.
	Chimney Down-draft	Install a chimney cap.
Excessive Ash Build-up	Empty ashes more frequently.	
UNCONTROLLED OR SHORT BURN	Unsealed or Open Door	Close the door tightly or replace the gaskets.
	Deteriorated Cement Seals	Reseal the Fireplace Insert with furnace cement.
	Extra Long Chimney	Shorten the chimney.
	Oversized Chimney	Reline the chimney to the proper diameter.
	High Winds or Hilltop Location:	Install a chimney cap.
INSUFFICIENT HEAT	Poor Quality or Green Wood	Use only air-dried wood, preferably dried <u>at least</u> one year.
	Low Burn Rate	Operate the Fireplace Insert at a higher burn rate.
	Air Insulated Chimney	Replace with a pre-fabricated insulated chimney system or a properly sized masonry chimney.
	Cold Exterior Chimney	Reline or insulate the chimney.
	Leaky Stovepipe or Chimney	Check the installation.
	Too Much Heat Loss From House	Caulk windows, seal openings in home.
BLISTERING OF ENAMEL CASTING	Operating Technique	Do not over-fire the Fireplace Insert. Monitor Fireplace Insert temperatures. Use seasoned wood only.
	Excessive Draft	Check the DRAFT. Operate the Fireplace Insert at a LOW BURN range.

## REPLACEMENT PARTS & OPTIONAL ACCESSORIES

<b>PART NUMBER:</b>	<b>DESCRIPTION:</b>	<b>PART NUMBER:</b>	<b>DESCRIPTION:</b>
<b>CASTINGS:</b>		<b>STEEL PARTS:</b>	
2410-900	BOTTOM	5470-034	SILL TOP BRACKET
2410-905	BACK	5470-045	HINGE
2410-910	LEFT SIDE	5490-010	AIR SHROUD, BOTTOM
2410-915	RIGHT SIDE	5940-012	PRIMARY AIR CONTROL
2410-920	ASH LIP/BLOWER HOUSING, LEFT SIDE	5940-013	PRIMARY AIR GATE
2410-925	ASH LIP/BLOWER HOUSING, RIGHT SIDE	5940-014	PRIMARY AIR GATE CAP
2410-930	ASH LIP/BLOWER HOUSING, FRONT	5490-015	SURROUND BRACKET, LEFT
2410-935	ASHLIP/BLOWER HOUSING, TOP	5490-017	SURROUND BRACKET, RIGHT
2410-940	PRIMARY AIR MANIFOLD	5490-020	SURROUND CLIP
2410-945	FRONT	5490-025	AIR SHROUD, SIDE
2410-950	FRONT FAÇADE	5490-030	BLOWER SHIELD, LEFT
2410-955	SECONDARY AIR PLENUM CONNECTOR	5490-032	BLOWER SHIELD, RIGHT
2410-960	SECONDARY AIR PLENUM, LEFT	5490-040	DOOR, INNER FRAME
2410-965	SECONDARY AIR PLENUM, RIGHT	5490-042	DOOR, OUTER FRAME
2410-970	TOP	5490-045	LATCH
2410-975	FLUE COLLAR	5490-050	STONE CLIP, REAR
2410-980	INNER SURROUND STRAIGHT	5490-055	STONE CLIP, SIDE
2410-985	INNER SURROUND CORNER	5490-060	SECONDARY AIR CAP, LEFT
2410-990	OUTER SURROUND STRAIGHT	5490-062	SECONDARY AIR CAP, RIGHT
2410-995	OUTER SURROUND CORNER	5490-071	SECONDARY AIR TUBE #1
<b>MISC:</b>		5490-072	SECONDARY AIR TUBE #2
3030-041	CLYDESDALE GLASS	5490-073	SECONDARY AIR TUBE #3
3120-490	BAFFLE FIBERBOARD, CLYDESDALE	5490-074	SECONDARY AIR TUBE #4
3400-101	HEARTHSTONE NAMETAG	5490-080	BAFFLE SUPPORT S.S.
3300-617	RATING LABEL	5490-085	AIR SHROUD, TOP LEFT
3300-618	EPA HANG TAG, CLYDESDALE	5490-087	AIR SHROUD, TOP RIGHT
		5490-090	SURROUND TOP BRACKET

### Clydesdale Accessories:

<b>94-57900</b>	<b>Blower Assembly</b>
<b>94-5970510</b>	<b>Matte Surround Caps</b>
<b>94-5970559</b>	<b>Blue/black Surround Caps</b>
<b>94-79700</b>	<b>Mantle Shield</b>
<b>94-69900</b>	<b>Screen Kit</b>
<b>94-5990010</b>	<b>Surround Extension</b>
<b>94-5970710</b>	<b>Matte Double Surround Caps</b>
<b>94-5970759</b>	<b>Blue/black Double Surround Caps</b>

## **SAFETY LABEL**

CONTACT YOUR LOCAL BUILDING  
AND INSTALLATION

OFFICIALS ABOUT RESTRICTIONS  
INSPECTION IN YOUR AREA

Listed Room Heater, Solid Fuel Type

Intertek Testing  
Services NA, inc.

Manufactured by:

WN 04380  
"PREVENT HOUSE FIRES"

317 Stafford Ave.  
Morrisville VT 05661

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

SERIAL #

MODEL NAME: CLYDESDALE 8490

TESTED TO: UL 1482, ULC S628, UL 737

TYPE OF FUEL: Solid Wood Only

Connect to a code-approved masonry chimney  
or listed factory-built fireplace chimney with a  
direct flue connector into the first chimney liner  
section.

**WARNINGS:**

Risk of smoke and flame spillage,  
operate only with doors fully open  
or fully closed.

**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.

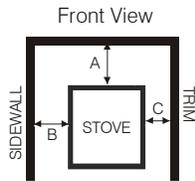
Do not obstruct space under heater.  
Do not use grate or elevate fire. Build  
wood fire directly on stone.

**NOTE:** Replace glass only with 5mm CERAMIC  
or NEOCERAM glass.

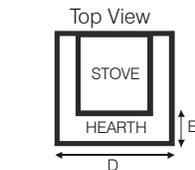
Do not overfire. If the heater or  
chimney connector glows, you are  
overfiring.

**Clearance to Combustible Materials\***

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



- A - 24" (61cm)
- A - 11" (28cm) with Mantle Shield
- B - 12" (31cm)
- C - 9" (23cm)
- D - 39" (97cm)
- E - 18" (46cm)



When installed on a combustible floor,  
non-combustible floor protection, with a  
R value of 1.0 or greater, is required to  
cover the area beneath the heater, 18" in  
front of, and 8" beyond both sides of the  
glass opening. (See "Top View" diagram

**OPTIONAL KITS:**

- |                                 |                  |
|---------------------------------|------------------|
| Mantle Shield Kit               | Kit # 94-79700   |
| Screen                          | Kit # 94-69900   |
| Blower                          | Kit # 94-57900   |
| Matte Surround Caps             | Kit # 94-5970510 |
| Blue/Black Surround Caps        | Kit # 94-5970559 |
| Matte Double Surround Caps      | Kit # 94-5970710 |
| Blue/Black Double Surround Caps | Kit # 94-5970759 |
| Surround Extension              | Kit # 94-5990010 |

\* Refer to the Installation Manual for  
additional clearance information.



**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.**

U.S. ENVIRONMENTAL PROTECTION AGENCY  
Certified to comply with July 1, 1990 particulate emissions standards



DO NOT REMOVE OR COVER THIS LABEL

MADE IN USA

3300-617

## **HEARTHSTONE WOODSTOVE LIMITED WARRANTIES**

**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 purchaser only** (the “Original Purchaser”) the new woodstove manufactured by HearthStone and purchased by the Original Purchaser (the “Woodstove”) against any of the occurrences listed in this document that result from defects in material or workmanship. All obligations of HearthStone under this document commence on the date the Original Purchaser purchases the Woodstove (the “Purchase Date”).

### **LIMITED LIFETIME WARRANTY**

HearthStone warrants the following parts of the Woodstove against the following occurrences that result from defects in material and workmanship:

- All cast iron parts – against breakage, cracking or burn-through.
- All stones – 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 Woodstove.
- Primary and secondary air supply systems, including riser tubes, air wash system, secondary air manifold and stainless steel secondary air supply tubes – against breakage, cracking or burn-through.
- Glass – against breakage due to thermal shock.

### **LIMITED FIVE-YEAR WARRANTY**

HearthStone warrants the following parts of the Woodstove against the following occurrences that result from defects in material and workmanship:

- Refractory brick – against breakage and deterioration ***not*** resulting from physical damage or over-loading of the Woodstove.
- Firebox baffle (the baffle above the secondary air tubes) – against breakage, cracking or burn-through.
- Door handles and latch mechanisms – against breakage.

**This warranty expires on the fifth (5<sup>th</sup>) anniversary of the Purchase Date.**

### **LIMITED ONE-YEAR WARRANTY**

HearthStone warrants the following parts of the Woodstove against the following occurrences that result from defects in material and workmanship:

- Enamel Finish – against peeling or fading, **excluding** chipping, mechanical abrasion, chemical abrasion or crazing.
- Stove cement and all gaskets – against breakage or deterioration.
- Accessories and electrical components such as blowers, switches and thermo discs, **excluding** venting components, hearth components, electrical components and other components or accessories used in conjunction with the installation of the Woodstove ***not*** manufactured or supplied by HearthStone – against breakage or malfunction.

**This warranty expires on the first (1<sup>st</sup>) anniversary of the Purchase Date.**

### **EXCLUSIONS**

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

1. Damage resulting from installation or operation of the Woodstove in a manner contrary to the owner’s manual.
2. Damage to the Woodstove or cracking of stones due to improper break-in firing procedures.
3. Damage or non-performance resulting from faulty or incomplete setup, installation and start-up or mishandling, abuse, or misuse of the Woodstove, including but not limited to over-firing.
4. Damage resulting from installation, modification, alteration, repair or service of the Woodstove by any

- party other than HearthStone or an authorized HearthStone dealer (a “Dealer”).
5. Damage resulting from the use as fuel of driftwood, treated wood, wax, artificial or manufactured logs, coal or other material other than natural wood.
  6. Damage due to water or due to installation of the Woodstove in a damp or high condensation area.
  7. Damage due to installation of the Woodstove in an atmosphere contaminated by damaging chemicals, including but not limited to chlorine, fluorine or salts.
  8. Scratches on glass, enameled surfaces or stones due to mechanical abrasion.
  9. Standard wear and tear of the Woodstove resulting from normal usage over time.
  10. Damage resulting from operational-related problems such as over-firing, downdrafts, smoke spillage, or use of corrosive driftwood.
  11. Damage or inadequate performance caused by site, installation or environmental conditions beyond HearthStone’s control, including but not limited to nearby trees, rooftops, buildings, wind, hills, mountains, inadequate or excessive venting, insufficient make up air, or negative air pressure whether or not caused by mechanical systems such as furnaces, exhaust fans, clothes dryers, etc.
  12. A defect in any part of the Woodstove if the Original Purchaser fails to comply with HearthStone’s or a Dealer’s request to ship the part or the Woodstove to HearthStone or a Dealer, as the case may be.

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 WOODSTOVE. **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 WOODSTOVE WARRANTED HEREUNDER. THEY 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 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 HearthStone, at the address listed in the Warranty Registration section below or a Dealer for instructions regarding the return of defective parts for repair, the return of the Woodstove for repair, or 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)), to find a Dealer nearest 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 Woodstove. When the Original Purchaser contacts HearthStone or a Dealer, HearthStone or the Dealer, as the case may be, will instruct the Original Purchaser to **either** return the defective part, or the entire Woodstove (if needed), with shipping prepaid, to HearthStone or a Dealer **or** allow a Dealer to make a service call at the place where the Woodstove is located. In the event the Original Purchaser refuses to allow a Dealer to make a service call, HearthStone or a Dealer, as the case may be, will request that the Original Owner return the defective part, or the entire Woodstove (if needed), with shipping prepaid, to HearthStone or a Dealer. **Notwithstanding any other provision of this document, the Original Purchaser shall pay for any travel fees and service charges related to a Dealer's service call.**

**Parts:** HearthStone will replace defective parts covered by the foregoing warranties at no charge.

**Labor:** Within the first (1<sup>st</sup>) year after the Purchase Date, HearthStone will pay for warranty labor performed by a Dealer at HearthStone's published labor rates in effect at the time the labor is performed. 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 Woodstove parts covered by any of the foregoing warranties to and from HearthStone or a Dealer, as the case may be. Thereafter, the Original Purchaser is responsible for all shipping costs related to shipping Woodstove parts to and from HearthStone or a Dealer, as the case may be.

**Shipping cost for the Woodstove:** Within the first (1<sup>st</sup>) year after the Purchase Date, if the Original Purchaser is instructed to return the Woodstove to HearthStone or a 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 Woodstove to and from HearthStone or a 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 Woodstove to and from HearthStone or a 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 Woodstove returned for repair; the Original Purchaser shall be responsible for any such fees.

#### **WARRANTY REGISTRATION**

The Original Purchaser may send a completed and signed Warranty Registration Form, which is enclosed in the Woodstove warranty 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* A CONDITION OF WARRANTY COVERAGE OR HEARTHSTONE'S PERFORMANCE.**

# Technical Data Sheet

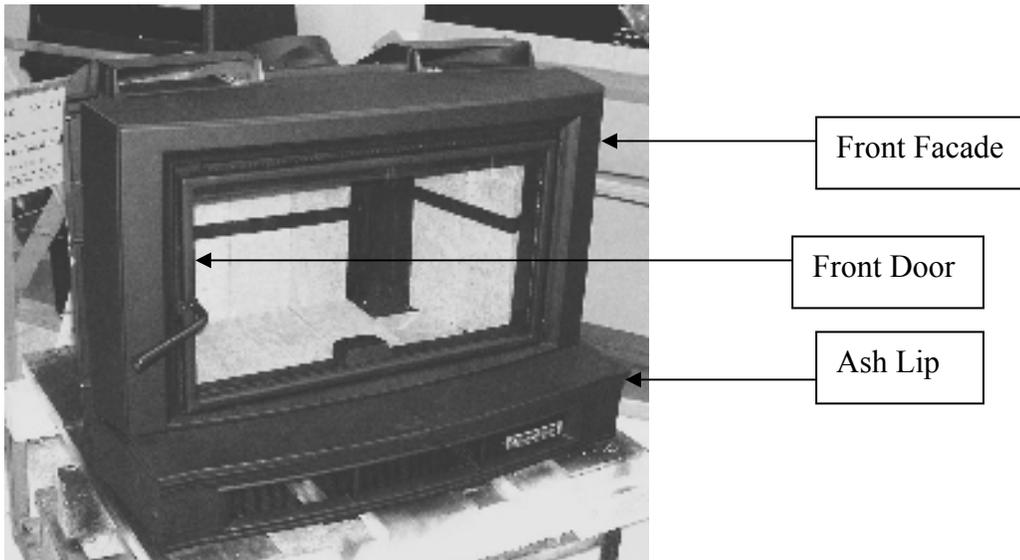
PREPARING THE CLYDESDALE INSERT FOR INSTALLATION

## Guide for Installing the Clydesdale Model 8490

(Refer to the Owner's Manual for the complete installation instructions.)

Date: 9/26/2008

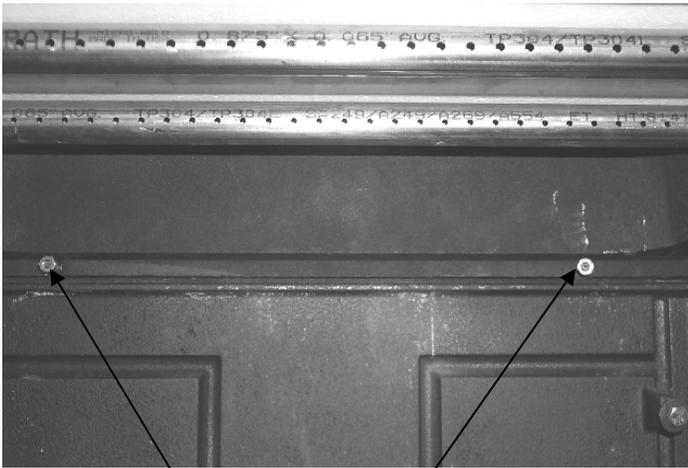
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**PHOTO #1 - THE CLYDESDALE ATTACHED TO THE SHIPPING PALLET**

**Step One:** Remove the contents of the firebox. This will include the owner's manual, 2 boxes of soapstone refractory bricks, and the handle.

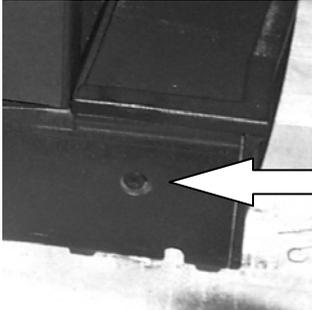
**NOTE:** In most cases it will not be necessary to remove the baffle / secondary air plenum (includes the secondary air pipes) from the firebox to complete the installation. However, in some installations where the clearances are tight, it may be necessary to remove the baffle / secondary air plenum. Removing the baffle will allow you to connect the flue liner to the flue collar in a confined space. To remove the baffle / secondary air plenum, first loosen the two socket head bolts that hold it in place with a 5/32" allen wrench (see Photo #2). Once these bolts are loosened, lift the baffle assembly off the bolts and maneuver it so it can be laid on the floor of the firebox.



Loosen these socket head screws to allow baffle to come out of the firebox

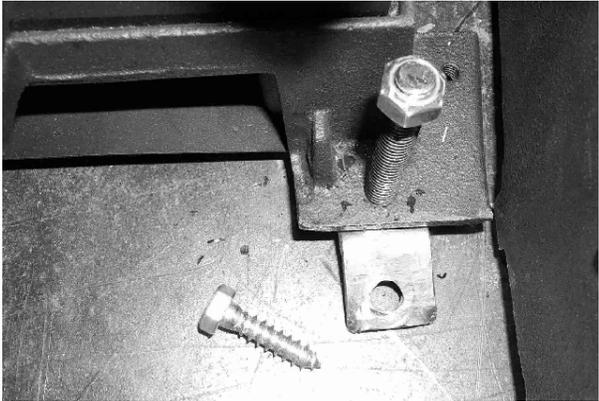
**PHOTO #2**  
 The removable baffle assembly inside the Clydesdale firebox. (Shown looking straight into the firebox through the front door.)  
**DO NOT REMOVE** from the firebox unless required (see note in step one).

**Step Two:** Remove the Clydesdale from the pallet. To do this you will have to remove the ash lip (see Photo #3).



**PHOTO #3**  
 Side view of the ash lip showing phillips screw that must be loosened to remove the ash lip

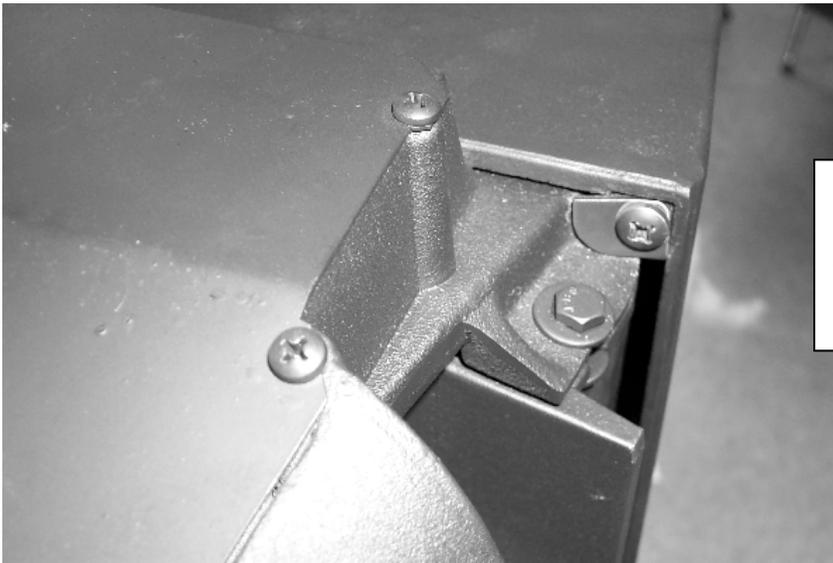
Now locate the three mounting clips (two exposed in the front by removing the ash lip and one in the back) that secure the appliance to the shipping pallet. Using a 7/16" wrench, remove the lags screws and mounting clips (see photo #2).



**Photo #4**  
 Lag screw and clip on front of stove is shown. There are two on the front and one in the back. Remove all three to take the unit off the pallet.

**Step Three:** Install the door handle onto the latch. The wooden handle, ¼” x 2-3/4” bolt, and ¼” lock washer are located in a plastic zip back removed from the firebox in step one. Place the washer onto the bolt and then push the bolt through the handle. Turn the threads of the bolt onto the latch and tighten with a screwdriver. Handle has been installed in photo #1.

**Reversing the door to open from the right hand side;** It is possible to reverse the door, *if desired*. It will be shipped from the factory opening on the left hand side. If you do not want to reverse the door, skip to the next step. To reverse the door, you will have to first remove the front façade. Locate the clips on the back of the façade – these are on the top right and left side of the façade (see photo #5). Loosen the retaining screws with a phillips screwdriver. This will allow you to lift the façade up and off the front of the firebox.



**PHOTO #5**  
One of the two retaining clips and screws on the back of the façade.

Façade Clips

To switch the door to open from the right hand side, remove the two phillips head screws holding the door hinges onto the stove (see photo 6). **NOTE:** Use caution when removing the last screw as the door will now be disconnected from the body and will be loose in your hand. Make sure to retain the two hinge rivets

for reuse. After removing the door, use the phillips screwdriver to remove the two screws that hold the door catch to the body of the stove (photo 7). **NOTE:** Save the spacer washers that are behind the door catch for reuse. Remove the two screws where the door hinges will be attached on the left side and rotate the door 180 degrees. Line the hinges up with these holes and attach the door by inserted the hinge screws and tighten them to the stove with the phillips screwdriver. Reattach the door catch on the opposite side of the stove by reusing the retaining screws and spacer washers.



**PHOTO #6**  
Reversible door catch

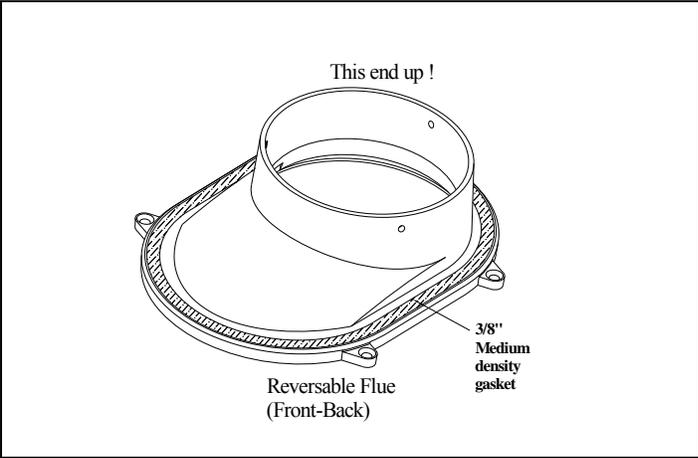
**PHOTO #7**  
Phillips screw in hinge



Place the façade back onto the unit and tighten the clips with the phillips screwdriver.

**Step Four:** Measure the opening of the fireplace. By measuring the fireplace cavity, you will need to determine the following:

1. Will the flue collar be installed in the forward or aft position? The depth of the firebox will determine the location of the flue collar. **NOTE:** the collar is installed at the factory in the aft position. To change it to the forward position, follow the instructions in step five. Proceed to the next step if the aft position is correct for your installation.



**FIGURE #1**  
The Flue Collar

2. Is there sufficient clearance above the unit to install the flue liner to the installed flue collar? If not, the baffle can be removed the flue collar can

be dropped into the firebox for attachment to the flue collar. If the baffle and flue do not need to be removed, you can skip to step 7.

**Step Five:** Change the position of the flue collar if necessary. Locate the four bolts in the back of the stove on the corners of the flue collar. To remove the flue collar, reach in through the flue collar and turn off the nuts with a 7/16" wrench. Turn the collar into the desired location fitting the four holes on the collar onto the four bolts left in the unit. Turn the nuts back onto the screws and tighten them with the 7/16" wrench. The insert can now be placed into the fireplace opening and the flue liner (meeting UL 1777) can be attached.



**PHOTO #8**  
Collar in Aft (30° Position)



**PHOTO #9**  
Collar in Forward (0° Position)

**Step Six:** Remove the baffle. **NOTE:** Before the baffle can be removed, the 3 stone retaining clips (one in the rear and one on each side) must be removed from the firebox. Remove the clips by removing the bolts that hold them to the firebox. To remove the baffle / secondary air plenum assembly, first loosen the two socket head bolts, located in the back of the firebox, that hold it in place with a 5/32" allen wrench (see Photo #1). Once these bolts are loosened, lift the baffle assembly off the bolts and maneuver it so it can be removed from the firebox.

**Note:** If access to the top of the firebox is restricted, you will want to install the bracket for the surround now. For installation details see step 10.

With the baffle out of the firebox, remove the flue collar as described in step five. Place the flue collar in the firebox and insert the Clydesdale unit into the fireplace opening. Drop the flue liner (meeting UL 1777) into the firebox through the flue collar opening. Attach the flue liner to the collar, push the collar and flue up to the top of the firebox, making sure the collar slips onto the four bolts, and secure it by turning the nuts back onto the bolts and tighten with a 7/16" wrench.

Place the baffle / secondary air assembly back into the firebox.

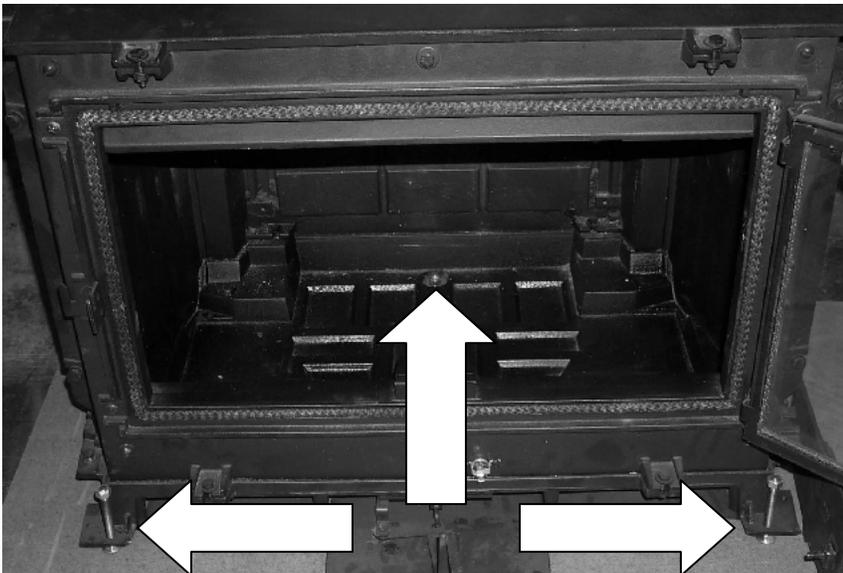
**Note: The baffle material is a high temperature ceramic. It will last for years under normal use, however it can be easily damaged by impact or force. BE CAREFUL IN HANDLING, TO APPLY PRESSURE TO THE TUBES AND CAST IRON ONLY!**

- a. Place the baffle inside the stove with the ceramic board facing up, and the stainless steel shelf tabs forward.
- b. Lift the baffle and slide the baffle sleeves, on the rear of the baffle, into the slots on the rear of the unit. The slots on the baffle will drop back onto the threaded rods in the back of the firebox
- c. Push in until the sleeves are completely in the slots.
- d. Gently lower the front of the baffle until the shelf tabs are resting on the sidewall.
- e. To verify that the baffle is in correct position, gently tug down on the front of the baffle. If it does not come down. It is in the place. Replace the nuts removed in step one / photo one.

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**Step Seven:** With the unit located in the desired position within the fireplace, level the unit with a 9/16" socket wrench on the three leveling bolts (see photo #10 on the next page).

**FIGURE #2**  
Baffle installed  
into the firebox

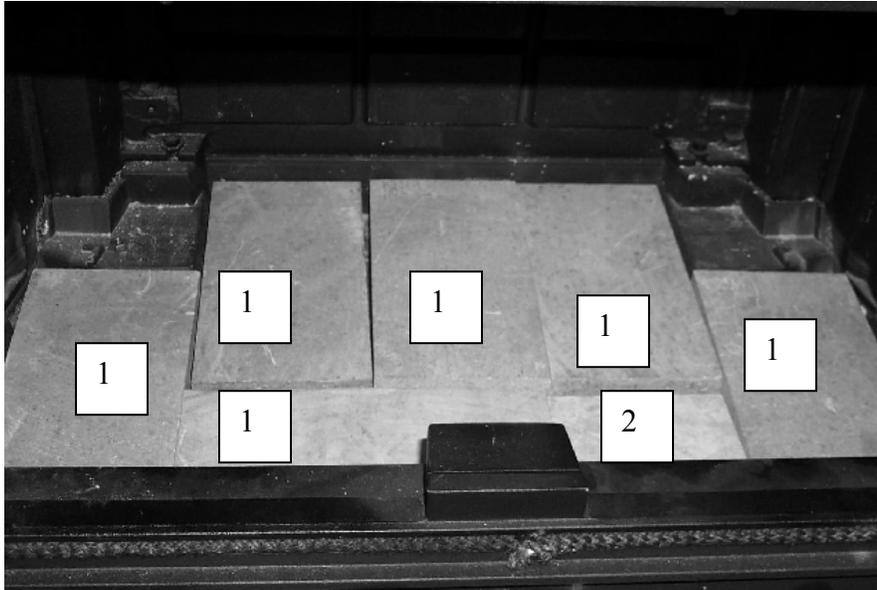


**PHOTO #10**  
Firebox Leveling Bolts

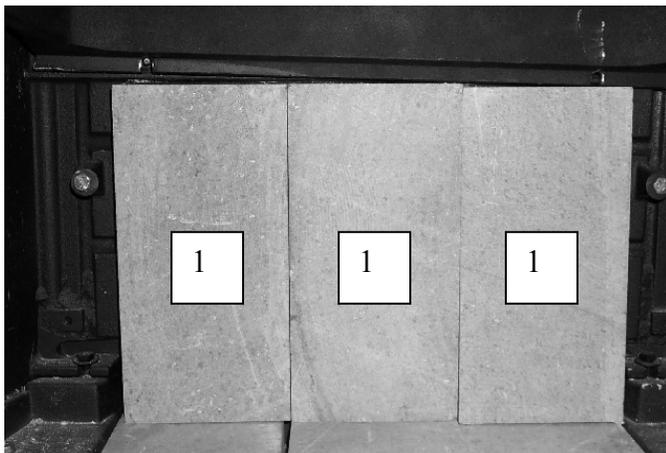
**Step Eight:** Install the soapstone refractor pieces in the firebox.

The Clydesdale refractory stone set includes the following stones:

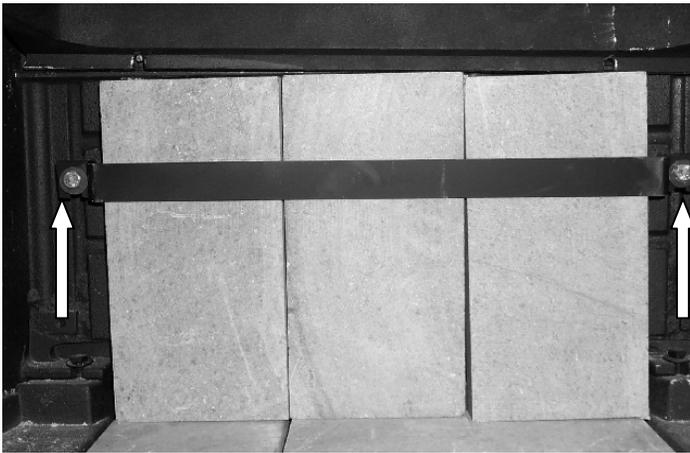
QUANTITY:	SIZE:	I.D. # IN ILLUSTRATION:
9	4-1/2" x 9"	1
1	4-1/2" X 4-1/2"	2
2	4-1/2" X 12" Angled Cut	3
2	4-1/2" x 11-1/4" Angled Cut	4



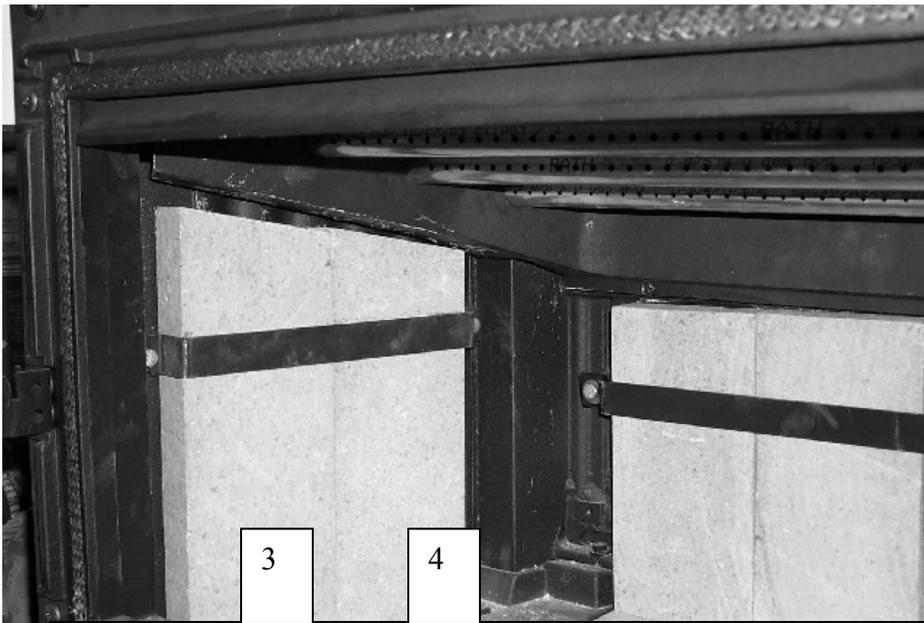
**PHOTO #11**  
Installation of the stones on the floor.



**PHOTO #12**  
Set three stones vertically against the back of the firebox

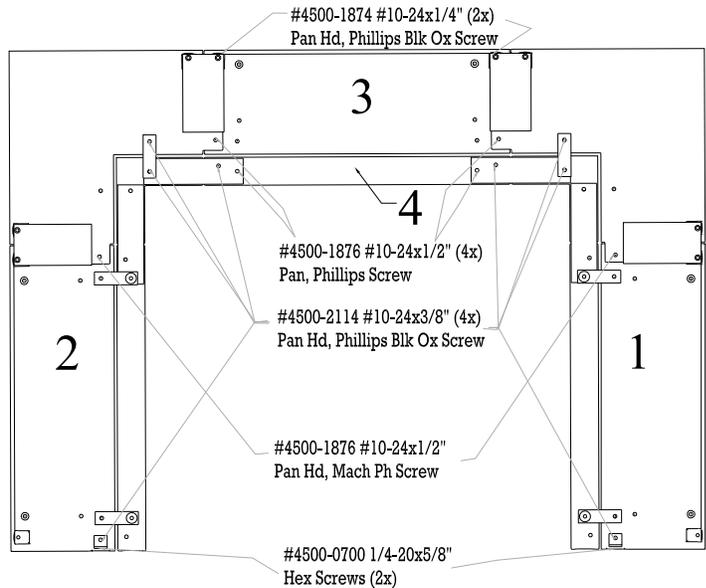


**PHOTO #13**  
Secure the rear stone with the rear stone-retaining clip. Slide retaining clip down onto bolt heads and tighten.



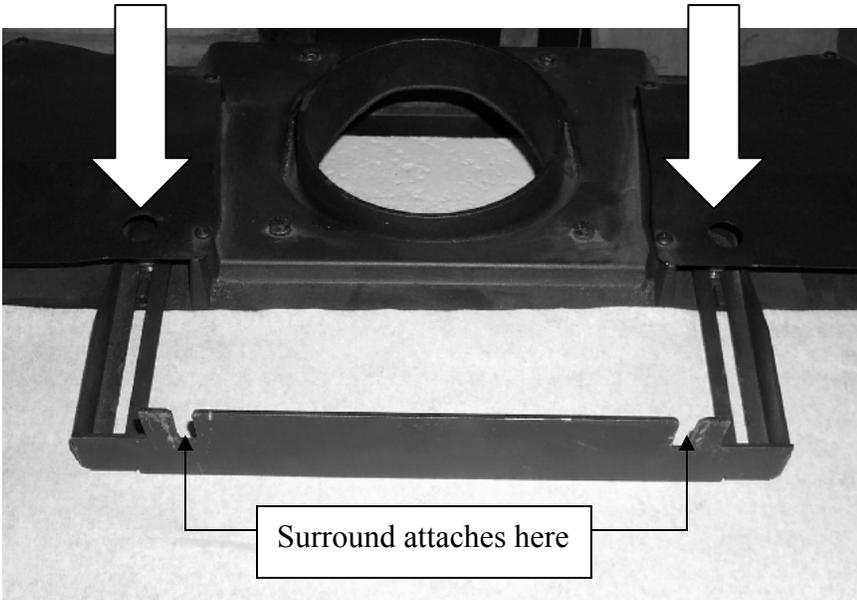
**PHOTO #14**  
Install the left and right side stones and secure with the shorter side stone retaining clips.

**Step Nine:** Remove the surround components from the large cardboard box that accompanied the Clydesdale. Included will be the surround panels and surround bracket. The surround is partially assembled. Complete the assembly as shown in the drawing below.



**Figure #2 – The Assembled Surround**

**Step Ten:** Attach the surround bracket to the firebox. Remove the two bolts on the top of the firebox indicated by the arrows below. Place the bracket onto the top of stove and secure it by finger-tightening the screws. Position the assembled surround so that the bushing will drop behind the slots in the bracket shown below. Position the surround as needed and then tighten the screws on the top of the unit.



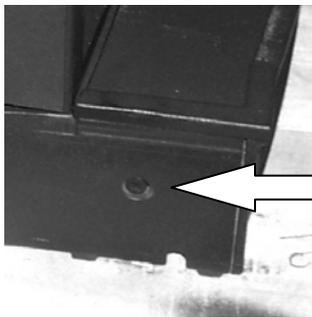
**PHOTO #15**  
 Surround bracket pulled fully out (white paper placed on stovetop for contrast). Large arrows indicate location of access to the retaining screws. Loosen / tighten with phillips screwdriver.



**PHOTO #16**  
Looking down on the firebox top, the surround bracket is fully pushed in toward the firebox.

Retaining bolts can be seen through access holes.

**Step Fourteen: Finish steps**



**PHOTO #17**  
Side view of the ash lip showing phillips screw that must be tightened when ash lip is placed back on the unit.

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