



Morgan

(Model 8470)
Wood-burning Fireplace Insert

OWNER'S MANUAL INSTALLATION & OPERATING INSTRUCTIONS

PLEASE READ THIS ENTIRE OWNER'S MANUAL BEFORE YOU INSTALL AND USE YOUR NEW Morgan 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!



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



Morgan: Model 8470
Manual: 6400-40445
Revised: 5/12/15

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Notes on Stove Operation and Efficiency

Rating:

You have purchased a Hearthstone Morgan 8470 tested to EPA Method 28, 28A and 5H, 40 CFR Part 60 where applicable. This stove is certified to comply with the U.S. Environmental Protection Agency 2015 particulate emissions standard and is not approved for sale after May 15, 2020. It is certified at 4.31 gr/hr emission rate and under specific test conditions has been shown to deliver heat at rates ranging from 10,491 to 29,301 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. All warranty claims are processed by our dealer network. Authorized Hearthstone dealers can be located at 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 salt water saturated materials, unseasoned wood, paper products, cardboard, plywood or particleboard.* This prohibition against burning these materials does not prohibit the use of fire starters made from paper, cardboard, saw dust, wax and similar substances for the purpose of starting a fire in an affected wood heater. Burning these materials may result in a release toxic fumes or render the heater ineffective and cause smoke.

Following the maintenance guidelines set forth in this manual will help insure 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 stove and potential over firing. Low draft can result in inefficient burns, low heat output, expulsion of smoke into the living area when stove doors are opened and an increased potential for build-up of flammable materials in the flue.

Efficiency:

Efficiency was captured using EPA Method 28-5H and weighted using 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).

To maximize the efficiency of your wood stove make sure it is sized properly for the space you plan to heat. An oversized stove will often be forced to burn at a lower and dirtier burn rate. Consult with your dealer for sizing and correctly placing the stove in your home. An incorrectly placed stove can greatly reduce efficiency. Maximizing the efficiency of your stove 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 near 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 Morgan 8470 has the following CO emission rates by burn level: Category 1 – 1.11%, Category 2 – 1.02%, Category 3 - 0.80% and Category 4 - 0.52%. 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.

Introduction

Congratulations! You have just invested in a most unique wood burning Fireplace Insert – the Morgan Wood Burning Fireplace Insert from Hearthstone Quality Home Heating Products Inc®. The Morgan Model –8470 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 18 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 Morgan 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 Morgan 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 Morgan 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. 40,000 BTU per hour of cordwood (based on independent laboratory test results).

Size of Heated Area. 1,000 to 1,200 square feet.

Firebox Capacity. 1.7 cubic feet or 36 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. 18" (46cm) - front door

Height 20.69" (52.5 cm)

Width 24.88" (63.2 cm)

Depth 14.25" (36 cm)

Front Door Size 18" wide x 11.25" high (45.7 x 28.5 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 349 pounds

Crate Dimensions H-38" (97cm) w-32" (81 cm) L-32" (81 cm)

Castings Finish Painted Matte; and Porcelain Enamel (Blue/Black)

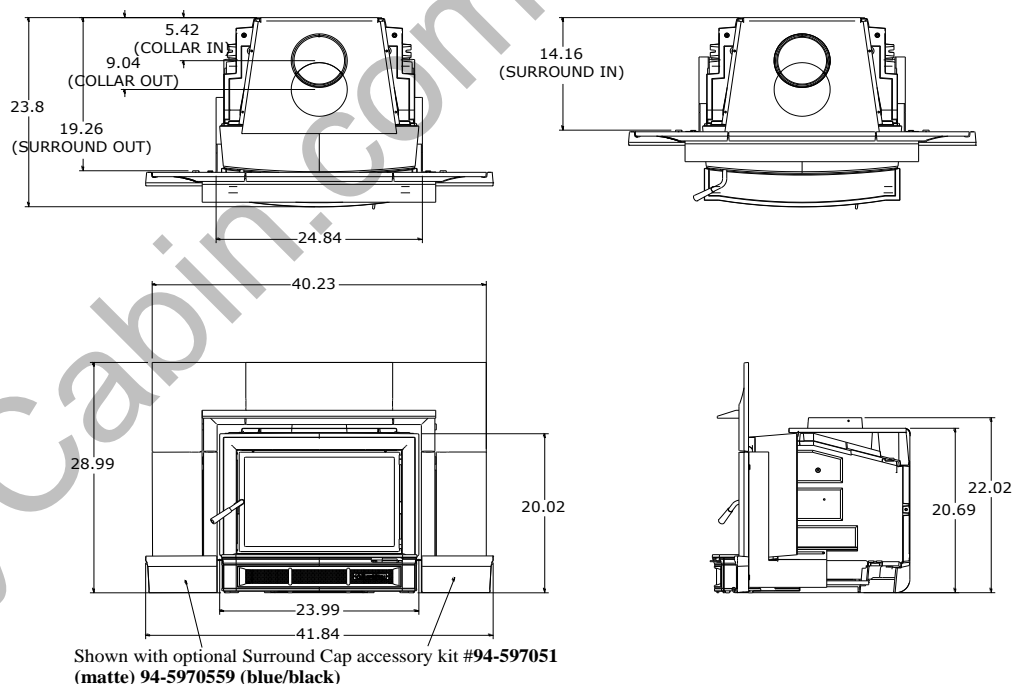


Figure 1 Morgan Dimensions

Setting up Your Morgan Wood Fireplace Insert

UNPACKING

Hearthstone Stoves packages your Morgan 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.

If you use a close clearance connector pipe, it must be tested to UL standards and listed. Check the listing of your pipe for actual clearances. The diagrams in this manual represent typical installations, but are specific to the Simpson Dura-Vent DVL brand. Clearances cannot be reduced without the use of close clearance connector pipe and/or by protecting the surfaces per NFPA 211 standards.

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

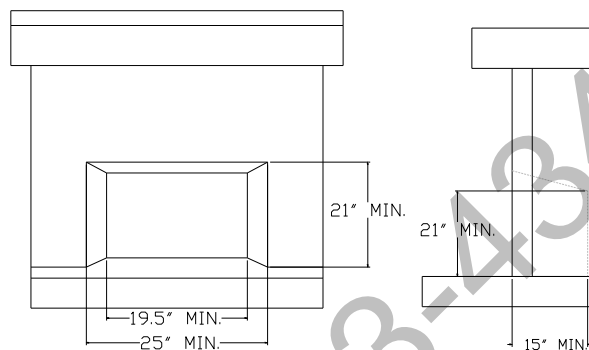


Figure 2 Minimum Fireplace Dimensions

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.

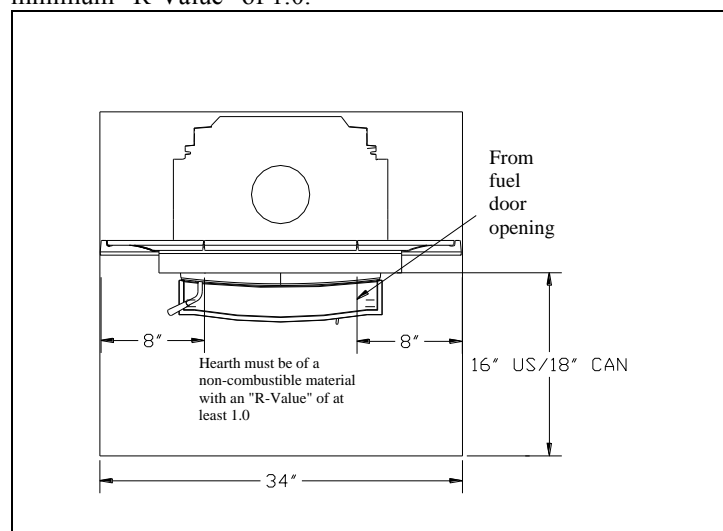


Figure 3 Hearth Requirements

* 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 ¹	1/2"	0.45
Wallboard, Wonderboard, or Durock ¹	1/2"	0.20
Ceramic board (Fiberfrax or Micon) ¹	1/2"	1.10
Nominal solid clay brick ¹	1"	0.20
Ceramic wall or floor tile ¹	1/4"	0.01
Mineral wool insulation ²	1"	3.12
Cement mortar ²	1"	0.20
Horizontal still air ² *	1/8"	0.92

¹ Check manufacturer's specifications.

² According to ASHRAE Handbook of Fundamentals

INSTALLING THE SURROUND

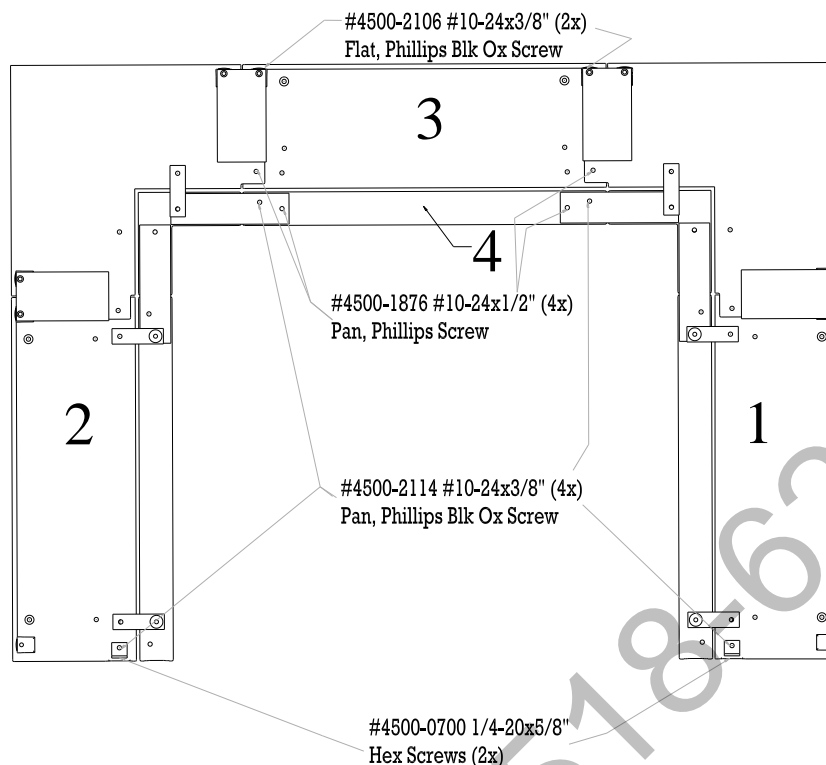


Figure 4 Morgan Surround Assembly

To complete the assembly, you will need a Phillips screwdriver and a 7/16" wrench. The Morgan 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

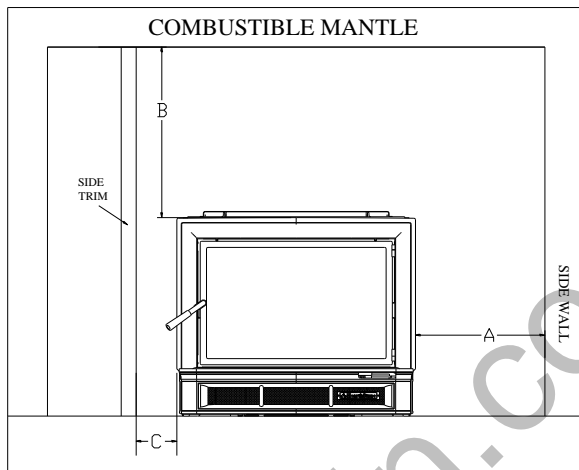


Figure 5 Clearance to Combustibles

A. side wall	= 13"
B. mantle and top trim	= 34"
B. mantle/ with mantle shield kit	= 22"
C. trim	= 3"

REMOVING THE BAFFLE

In order to connect the flue to the Morgan, you will need to remove and install the baffle. Use Figure 6 to refer to while removing and replacing the baffle.

BE CAREFUL WHEN HANDLING THE BAFFLE, NOT TO PUNCTURE THE CERAMIC BOARD

To remove the baffle:

1. Lift the front of the baffle. This relieves the weight from, and unlocks the shelf tabs.
2. Pull forward to free the baffle.
3. The baffle should now be free to drop down and pull out of the front door, or rest on the floor of the insert

Once the baffle is removed from the unit, you will have direct access to the flue collar, and all venting connections

To install the baffle, reverse the order of removing the baffle.

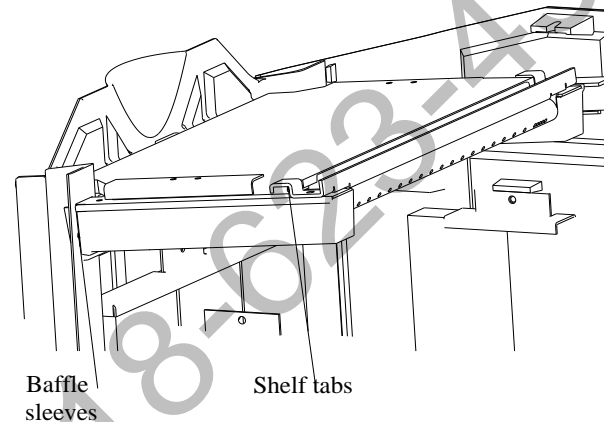


Figure 6 Baffle Placement

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.
- Double wall connector (close clearance pipe) which must be used with a listed factory-built "Type HT" chimney also may be used with a masonry chimney to reduce clearances, is available from several manufacturers, your dealer can help you choose. Some air insulated connector pipe models available are Simpson Dura Vent DVL and Metalbestos DS. Security, GSW and Ameritec also have acceptable close clearance connector pipe.
- Chimney connector shall not pass through floor or ceiling, nor any attic or roof space, closet or similar concealed space. Where passage through a wall or partition of combustible construction is desired, the installation shall conform to NFPA 211 or CAN/CSA - B365.

- 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. Typical chimney connector clearances are outlined below. The single wall clearances are generic; the Double wall clearances are for Simpson Dura Vent DVL, **CHECK THE SPECIFICATIONS FROM THE MANUFACTURER OF YOUR CONNECTOR.**

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 Morgan to a prefabricated metal chimney or a masonry chimney. See figure 7 to aid in connections.

CONNECTING TO A PREFABRICATED METAL CHIMNEY (A FULL FLUE LINER IS REQUIRED IN CANADA)

IT IS STRONGLY RECOMMENDED THAT THIS FIREPLACE INSERT IS 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 Morgan 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, or with a direct flue connector into the first chimney liner section
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 Morgan—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 it's 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 Morgan. The Morgan 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.)

When purchasing a prefabricated chimney to install with your Fireplace Insert, be sure to also purchase from the same manufacturer the wall pass-through (or ceiling support package), "T" section package, fire-stops (when

needed), insulation shield, roof flashing, chimney cap, and any other needed accessories. Follow the manufacturer's instructions when installing the chimney and accessories. In addition, be sure to maintain all manufacturers' recommendations for the proper clearances to the chimney.

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

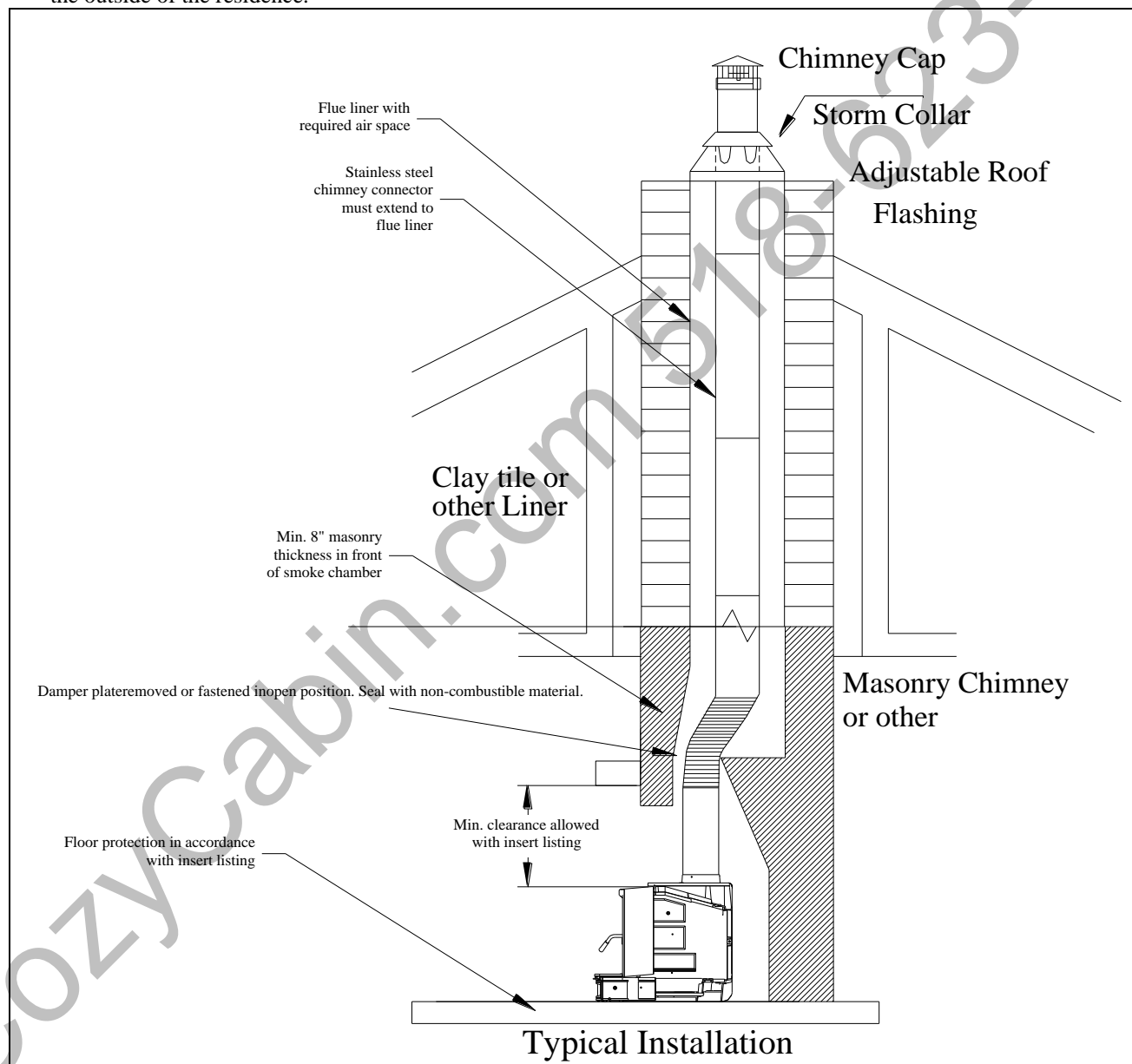


Figure 7 Connecting to a chimney

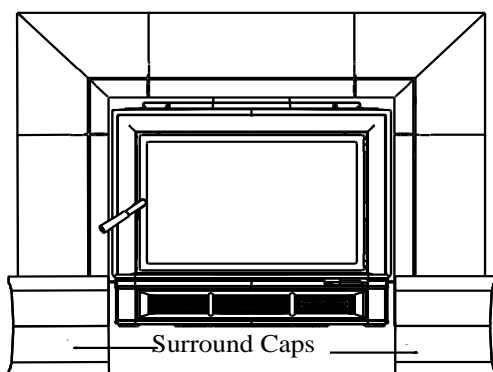


Figure 8 Surround Cap Kit # 94-5970510 (matte) or 94-5970559 (blue/black)

Most zero clearance installations will raise the Morgan 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

Consider two primary elements when connecting your Fireplace Insert to a masonry chimney: the chimney itself and the thimble where the stovepipe connects to the chimney. Use only Code approved masonry chimneys with a flue liner.

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:

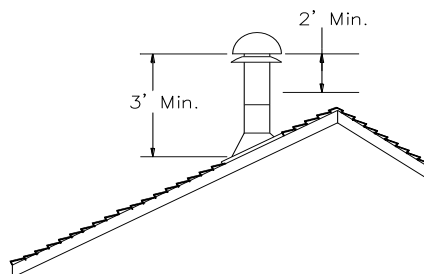
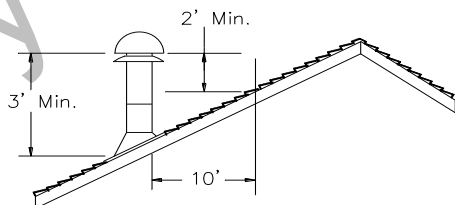
- ☐ At least 1" (25 mm) clearance to combustible structure.

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 Morgan 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.

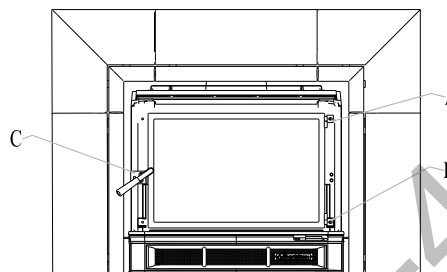


Figure 9 Reversing the Door

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

INSTALLING AND OPERATING THE OPTIONAL 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 Morgan 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. In addition, the asbestos-free furnace cement must be cured slowly to insure adequate sealing and bonding.

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 fire box 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 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. 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 left 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 right opens the PRIMARY AIR CONTROL for a high rate of burn or pushing it to the left 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. Any draft in excess of 0.1 wc requires a damper in the stovepipe. Some installations may require more than one damper.

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 18-1/2" x 12" x5mm neoceram

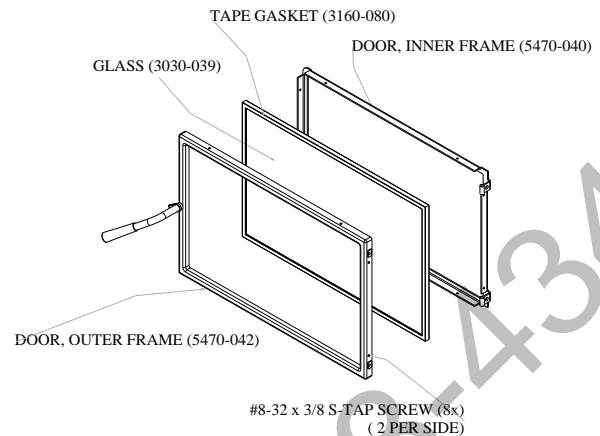


Figure 10 Glass Replacement

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.

If you question whether your Fireplace Insert is producing adequate heat, the best way to troubleshoot the problem is to monitor the temperature of the stack. A 400 degree F

(200 degree C) stovepipe confirms the Fireplace Insert 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 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.

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, or a leaky chimney may 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 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

PROBLEM	POSSIBLE CAUSE	SOLUTIONS
STOVE SMOKES	Operating Technique Cold Chimney Blocked Chimney Oversized Chimney Undersized Chimney Chimney Too Short Air Infiltration Into The Chimney More Than One Appliance Connected to the Flue	Fully open the primary air control one minute before opening doors. Preheat the chimney when first starting a fire. Examine the chimney and stovepipe for blockage or creosote accumulations. Reline the chimney to the appropriate diameter Install a draft inducer or replace the chimney. Lengthen the chimney. Seal chimney connections and openings in clean-out doors. Disconnect all other appliances and seal openings.
BACK-PUFFING OR GAS EXPLOSIONS	Operating Technique Extra Low Burn Rate Chimney Down-draft Excessive Ash Build-up	Fully open the primary air control one minute before opening the door and keep it fully open for a few minutes after reloading. Burn the Fireplace Insert at a higher burn rate. Install a chimney cap. Empty ashes more frequently.
UNCONTROLLED OR SHORT BURN	Unsealed or Open Door Excessive Draft Deteriorated Cement Seals Extra Long Chimney Oversized Chimney High Winds or Hilltop Location: Excessive Draft	Close the door tightly or replace the gaskets. Check the installation. Operate at LOW BURN. Install stovepipe damper. Reseal the Fireplace Insert with furnace cement. Shorten the chimney. Install stovepipe damper. Reline the chimney to the proper diameter. Install a chimney cap. Draft in excess of 0.1 wc should be corrected with a stovepipe damper
INSUFFICIENT HEAT	Poor Quality or Green Wood Low Burn Rate Air Insulated Chimney Cold Exterior Chimney Leaky Stovepipe or Chimney Too Much Heat Loss From House	Use only air-dried wood, preferably dried <u>at least</u> one year. Operate the Fireplace Insert at a higher burn rate. Replace with a pre-fabricated insulated chimney system or a properly sized masonry chimney. Reline or insulate the chimney. Check the installation. Caulk windows, seal openings in home.
BLISTERING OF ENAMEL CASTING	Operating Technique Excessive Draft	Do not over-fire the Fireplace Insert. Monitor Fireplace Insert temperatures. Use seasoned wood only. Check the DRAFT. A damper may be required. Operate the Fireplace Insert at a LOW BURN range.

REPLACEMENT PARTS & OPTIONAL ACCESSORIES

PART NUMBER:	DESCRIPTION:	PART NUMBER:	DESCRIPTION:
CASTINGS:		STEEL PARTS:	
2410-700	BOTTOM (REAR SECTION)	5470-005	LEVELING SKID
2410-705	BOTTOM (FRONT SECTION)	5470-010	LEVELING CHANNEL
2410-710	PRIMARY AIR SLIDER	5470-015	BOTTOM AIR SHROUD
2410-715	BACK	5470-020	PRIMARY AIR HANDLE
2410-720	LEFT SIDE	5470-025	LOWER SURR. BRACKET, LEFT
2410-725	RIGHT SIDE	5470-027	LOWER SURR. BRACKET, RT
2410-730	ASH LIP/BLOWER, LEFT	5470-028	FRONT ASH LIP BRKT, LEFT
2410-732	ASH LIP/BLOWER, RIGHT	5470-030	FRONT ASH LIP BRKT, RT
2410-735	ASH LIP/BLOWER, FRONT	5470-032	WINDOW SILL BRACKET
2410-740	ASH LIP/BLOWER, TOP	5470-034	ASH LIP SCREEN
2410-750	PRIMARY AIR MANIFOLD	5470-035	REAR AIR SHROUD
2410-760	FRONT	5470-040	DOOR INNER FRAME
2410-765	FRONT FAÇADE	5470-042	DOOR, OUTER FRAME
2410-770	SECONDARY AIR MANIFOLD	5470-045	HINGE
2410-780	TOP (REAR SECTION)	5470-049	SURR. CONNECTOR PLATE
2410-785	TOP (FRONT SECTION)	5470-050	DOOR CATCH
2410-790	FLUE COLLAR	5470-055	FIRE BRICK CLIP, REAR
SOAPSTONE:		5470-057	FIRE BRICK CLIP, SIDE
0000-101	SOAPSTONE 4-1/2" X 9"	5470-060	SECONDARY AIR SUPPORT, L
0400-700	SOAPSTONE 4" X 9"	5470-062	SECONDARY AIR SUPPORT, R
0400-701	SOAPSTONE 1-1/2" X 8-1/2"	5470-065	SECONDARY AIR COLLAR
MISC:		5470-070	SECONDARY AIR CAP, LEFT
5470-052	DOOR HANDLE	5470-072	SECONDARY AIR CAP, RIGHT
3900-177	WOODEN DOOR HANDLE	5470-081	SECONDARY AIR TUBE #1
3120-470	BAFFLE FIBERBOARD	5470-082	SECONDARY AIR TUBE #2
3030-039	FRONT DOOR GLASS	5470-083	SECONDARY AIR TUBE #3
2410-795	INNER SURR. STRAIGHT	5470-084	BAFFLE BRACKET
2410-797	INNER SURR. CORNER	5470-085	BAFFLE SUPPORT S.S.
2410-798	OUTER SURR. STRAIGHT	5470-095	TOP AIR SHROUD
2410-799	OUTER SURR. CORNER	5470-097	INNER SURR. CONN. PLATE
		5947-020	OUTER SURR. CONN. PLATE

Morgan Accessories:

94-57700	Blower Assembly
94-5970510	Matte Surround Caps
94-5970559	Blue/black Surround Caps
94-79700	Mantle Shield
94-69700	Screen Kit
94-5970010	Surround Extension
94-5970710	Matte Double Surround Caps
94-5970759	Blue/black Double Surround Caps

SAFETY LABEL

CONTACT YOUR LOCAL BUILDING
AND INSTALLATION

OFFICIALS ABOUT RESTRICTIONS
INSPECTION IN YOUR AREA

Warnock Hersey



WN 04380

"PREVENT HOUSE FIRES"

Listed Room Heater, Solid Fuel Type

Intertek Testing
Services NA, Inc.

Manufactured by:



317 Stafford Ave.
Morrisville VT 05661

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

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

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
or NEOCERAM glass.

SERIAL #

MODEL NAME: MORGAN 8470

TESTED TO: UL 1482, ULC S628, UL 737

TYPE OF FUEL: Solid Wood Only

WARNINGS:

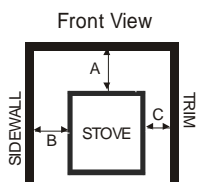
Risk of smoke and flame spillage,
operate only with doors fully open
or fully closed.

Do not obstruct space under heater.

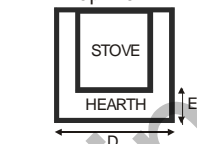
Do not use grate or elevate fire. Build
wood fire directly on stone.

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

Clearance to Combustible Materials*



Front View



Top View

A - 34" (87cm)

A - 22" (56cm) with Mantle Shield

B - 13" (33cm)

C - 3" (8cm)

D - 34" (87cm)

E - 16" (41cm)

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

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, 16" 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 # 94-69700
Blower	Kit # 94-57700
Surround Caps	Kit # 94-597051
Surround Extension	Kit # 94-5970010

* 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

3300-615



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.

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 (1st) 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 (1st) 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) 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, 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.

Preparing the Morgan Wood Insert for installation

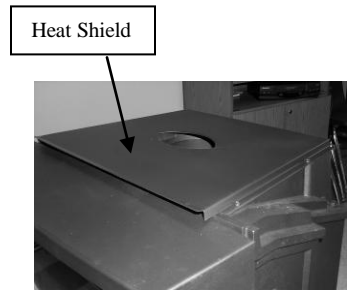
(Refer to Owner's Manual for the complete installation instructions)

1. Remove the contents within the firebox (owner's manual, baffle and soapstone refractory box)
Remove the hang tag on the front door and place in the owners manual)
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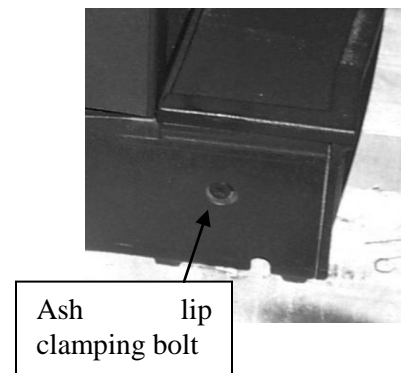
2. Using a ½" and 7/16" wrench, remove the left and right pallet mounting clips. (Keep the ¼-20 bolt with a 7/16" head, as it will be used to install the surround bracket) discard the pallet



3. Using a Phillips head screwdriver remove the four screws holding the top heat shield on. Pull the heat shield away from the unit and remove the flue collar.

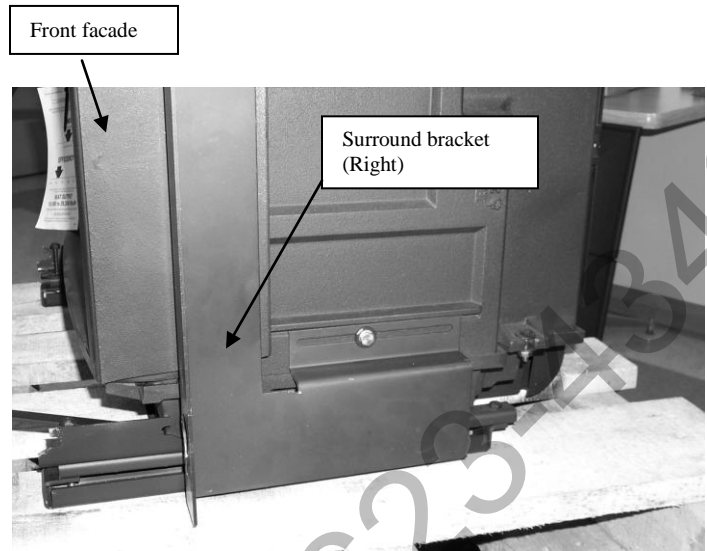


4. Remove the ash lip assembly by loosening (NOT REMOVING) the forward Phillips head screw on both sides of the assembly and pulling away from the unit

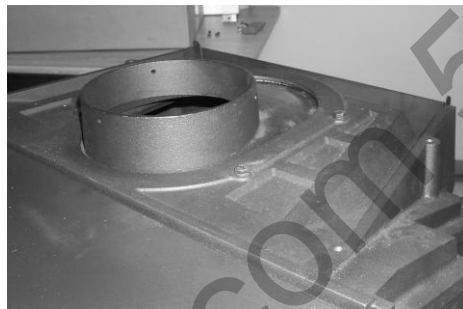


5. Remove the front façade by lifting and pulling away from the unit.

6. Open the large cardboard box containing the surround kit. Locate the left and right surround brackets. Start the 1/4-20 bolt through the slotted opening on the surround brackets, and attach to the sides of the unit. Set the surround brackets in the approximate position that the



7. Determine the forward/aft position of the flue collar and remove the circle on the top heat shield that will allow the flue collar to connect to the liner. (TIP Ensure that the connector you are using will fit through the opening in the top heat shield before installing the insert)



Forward position



Aft position

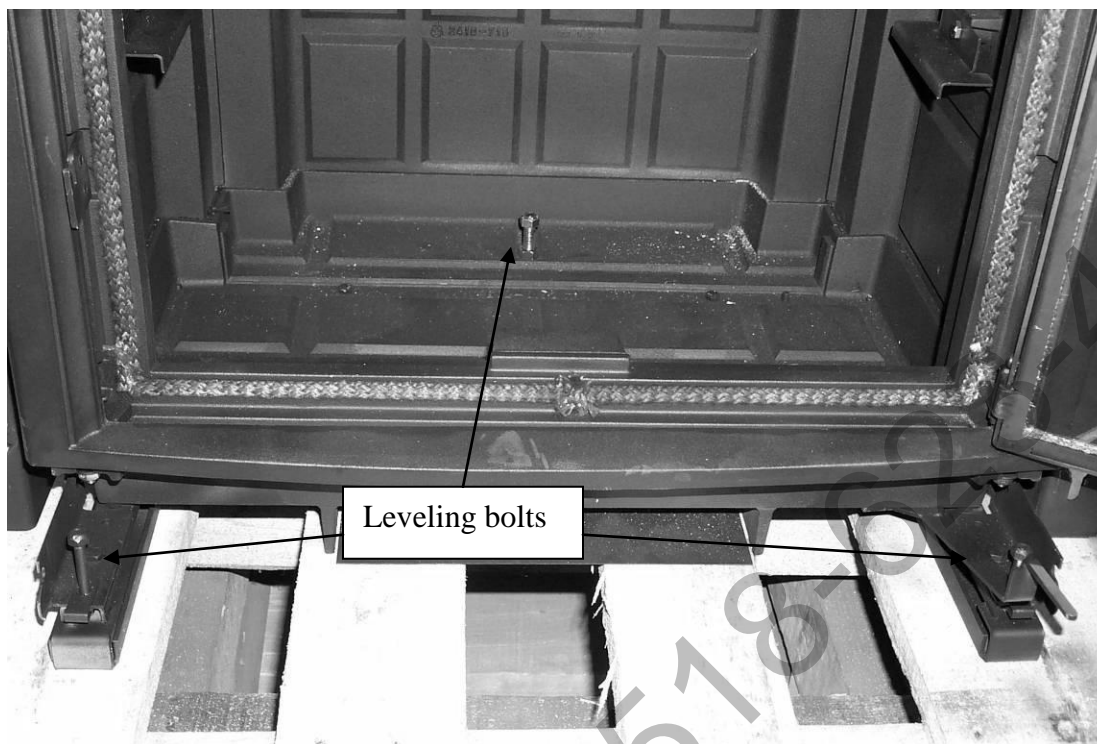
8. Reinstall the top heat shield



Flue collar shown in the aft position (you will install it later)

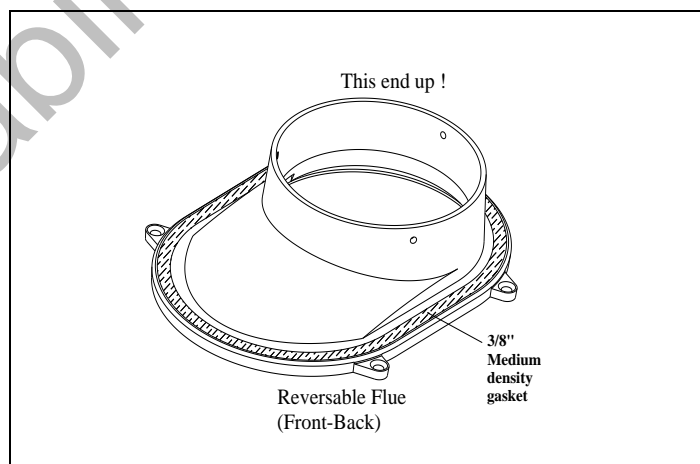
9. Place the unit in position, within the fireplace

10. Level the unit using a 9/16" and 7/16" wrench or ratchet on the three leveling bolts. (To level the rear bolt, you must first loosen the jam nut at the base of the bolt)

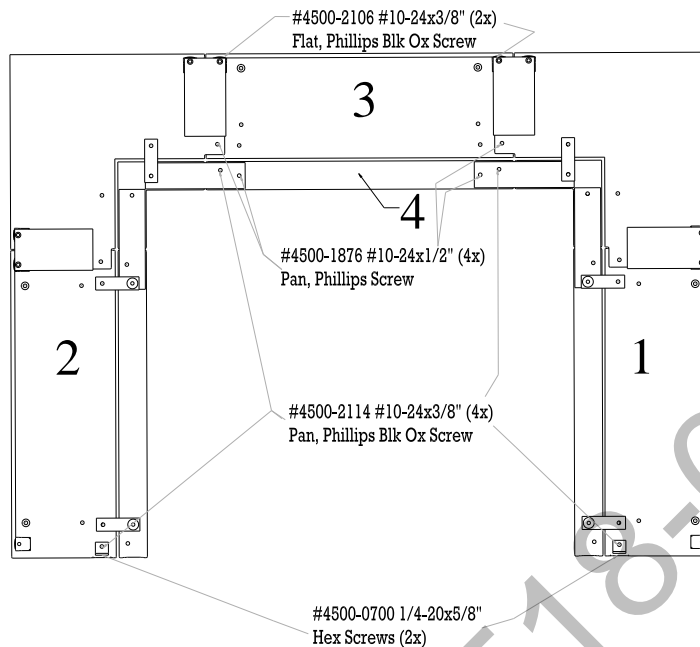


11. Attach the liner (See Owner's Manual for complete instructions)

- Pull the flue liner into the firebox through the flue opening on top of the insert and attach to the flue collar.
- Locate the hardware kit in the owner's manual envelope. Once attached to the liner, push the flue collar up and attach to the under side of the top castings. Mount the flue collar with the four 1/4-20 nuts and washers provided in the hardware kit.



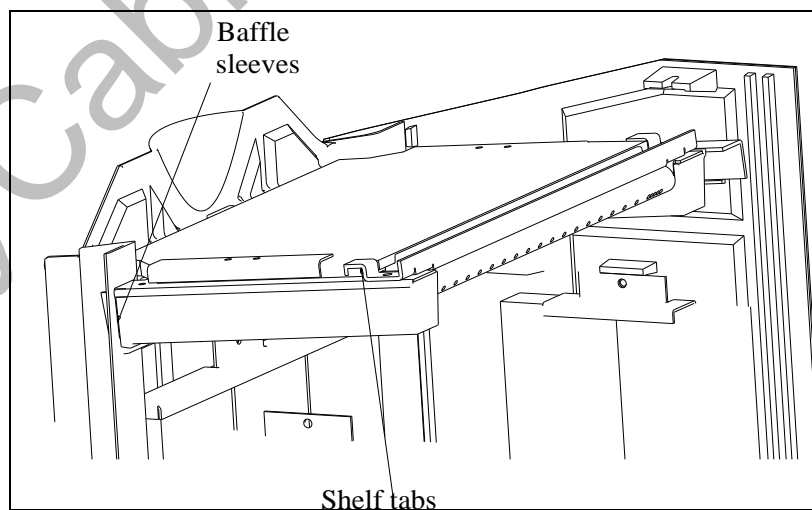
12. Attach the surround to the unit. (The Owner's Manual contains full instructions on how to install)



13. Mount the baffle in place

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!

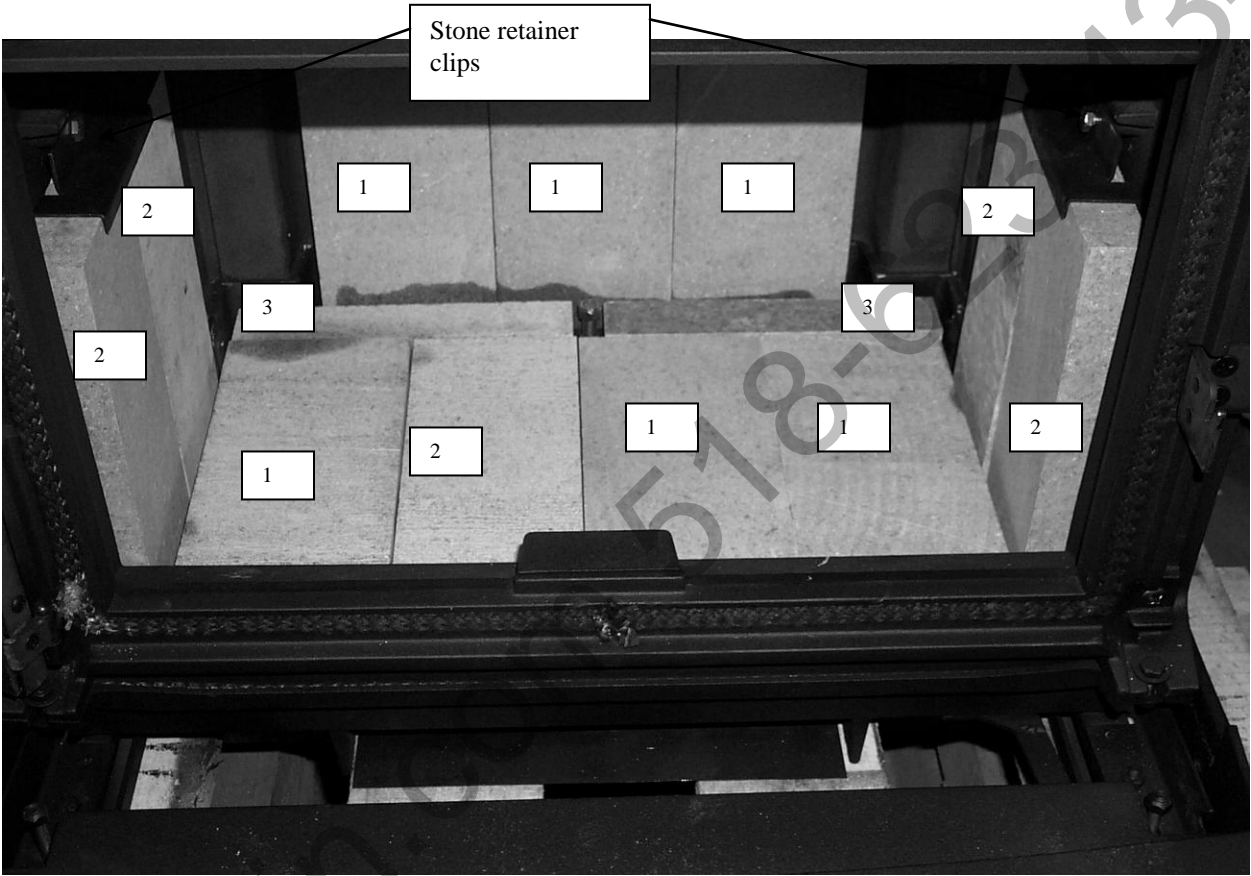
- Place the baffle inside the stove with the ceramic board facing up, and the stainless steel shelf tabs forward.
- Lift the baffle and slide the baffle sleeves, on the rear of the baffle, into the slots on the rear of the unit.
- Push in until the sleeves are completely in the slots.
- Gently lower the front of the baffle until the shelf tabs are resting on the side wall.
- 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.



14. Locate and mount the front door handle using the 3” bolt and lock washers provided.

15. Install the soapstone firebrick

- a. BEFORE INSTALLING ANY SOAPSTONE, USE A 7/16” WRENCH TO REMOVE THE THREE STONE RETAINER CLIPS. (The rear clip is not shown below)
- b. Put the four side stones in place and reattach the retainer clips.
- c. Put the three rear stones and reattach the long rear retainer clip.
- d. Place the remaining stones on the floor of the unit referring to the figure below.



Reference#	Qty	Size
1	6	9" x 4-1 /2"
2	5	9" x 4"
3	2	8-1/2" x 1-1/2"

NOTE: If you plan on installing a blower, now is the time to install it, prior to reassembling the unit.

16. The door to the Morgan is reversible. It can be opened from the left hand side, or the right. It will be shipped from Hearthstone opening on the left hand side. 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 **(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 (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 and mount. Reattach the door catch on the opposite side of the front, using the same screws and spacer washers if necessary.

17. Replace the front façade by simply lifting it over the opened door and ash lip and setting it back in place.

18. Replace the ash lip assembly (NOTE: Prior to replacing the ash lip assembly, you must first ensure that the air control handle. is centered in its motion.) Lift and slide the assembly back on to the ash lip clamping bolts. The ash lip is on when the back is tight to the front façade. Once on, tighten the ash lip clamping bolts.



Air control handle