

Encore[®]

Multi-Fuel Heater

Model 2547CE

Homeowner's
Installation and
Operating Manual



SAFETY NOTICE: IF THIS APPLIANCE IS NOT PROPERLY INSTALLED, OPERATED AND MAINTAINED, A HOUSE FIRE MAY RESULT. TO REDUCE THE RISK OF FIRE, FOLLOW THE INSTALLATION INSTRUCTIONS. FAILURE TO FOLLOW INSTRUCTIONS MAY RESULT IN PROPERTY DAMAGE, BODILY INJURY OR EVEN DEATH. CONTACT LOCAL BUILDING OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION REQUIREMENTS IN YOUR AREA.

Do Not Discard This Manual: Retain for Future Use

Welcome

Congratulations on your choice of a Vermont Castings Encore Multi-Fuel Heater. With this purchase you have made a commitment to make the hearth a place of warmth, beauty, and comfort in your home. At MHSC, we share that joy and appreciation for the hearth. You may be assured that your cast-iron Vermont Castings stove has been made with the utmost care and will provide you with many years of service.

At Vermont Castings, we are equally committed to your satisfaction as a customer. That is why we maintain an exclusive network of the finest dealers in the industry. Our dealers are chosen for their expertise and dedication to customer service. They are factory-trained and knowledgeable about every Vermont Castings product. Feel free to contact your Authorized Vermont Castings Dealer anytime you have a particular question about your stove or its performance.

This manual contains valuable instructions on the installation and operation of your Vermont Castings stove. It also contains useful information on maintenance and assembly of this product. We urge you to read the manual thoroughly and to keep it as a reference.

Sincerely,

All of us at MHSC

The Encore Multi-Fuel 2547CE is designed for burning wood and most smokeless solid fuels.

Consult a professional, solid fuel service person to install your stove, or to advise you on the installation should you wish to install it yourself.

Please read the entire manual before you install and use your new room heater. Failure to follow instructions may result in property damage, bodily injury, or death.

Table of Contents

Specifications	3
Installation	4
Assembly	11
Operation.....	12
Draft Management.....	17
Maintenance	19
Replacement Parts	23
Warranty	27

Specifications

Encore Multi-Fuel, Model 2547CE

	Wood	Smokeless Fuel ²
Nominal heat output	12.3 kW ¹ (42,000 BTU/hr)	7.7 kW ¹ (26,270 BTU/hr)
Minimum flue draught	12 Pa (0.048" WG)	12Pa (0.048" WG)
Mean flue gas temp	291°C (556°F)	267°C (513°F)
Efficiency (space heating)	71.6%	66.7%
Fuel size/type	up to 510 mm (20") Smokeless coal	
Flue mass gas flow	12.0 g/s	10.4 g/s
CO Emissions (@ 13% O ₂)	7900 ppm	3200 ppm
Area Heated	129 sq. m (1400 sq.ft.)	
Loading	Front or top	
Chimney connector:		
for 8" flue collar	203 mm (8") diameter	
for 6" flue collar	152 mm (6") diameter	
Chimney flue size:		
for 8" flue collar	203 mm (8") minimum	
for 6" flue collar	152 mm (6") minimum	
Flue exit position	Reversible, top or rear	
Primary air ...	Manually set, thermostatically maintained	
Ash handling system	Removable ash pan	
Glass panel	High-temperature ceramic	
Weight	159 kg (350 lbs.)	

Width (leg-to-leg)	685 mm (27")
Depth (leg-to-leg)	380 mm (15")
Height to top of flue collar, 152 or 203 mm (6" or 8")	
Top exit	640 mm (25¼")
Rear exit	675 mm (26½")

1. This value can vary depending on how the stove is operated, the type and moisture content of the fuel used, as well as the design, construction and climatic location of your home. Figures shown are based on nominal fuel consumption obtained under laboratory conditions and on average efficiencies.
2. This stove is approved for use with processed coal fuels generally known as smokeless. Ask your dealer which fuels are acceptable in your area.

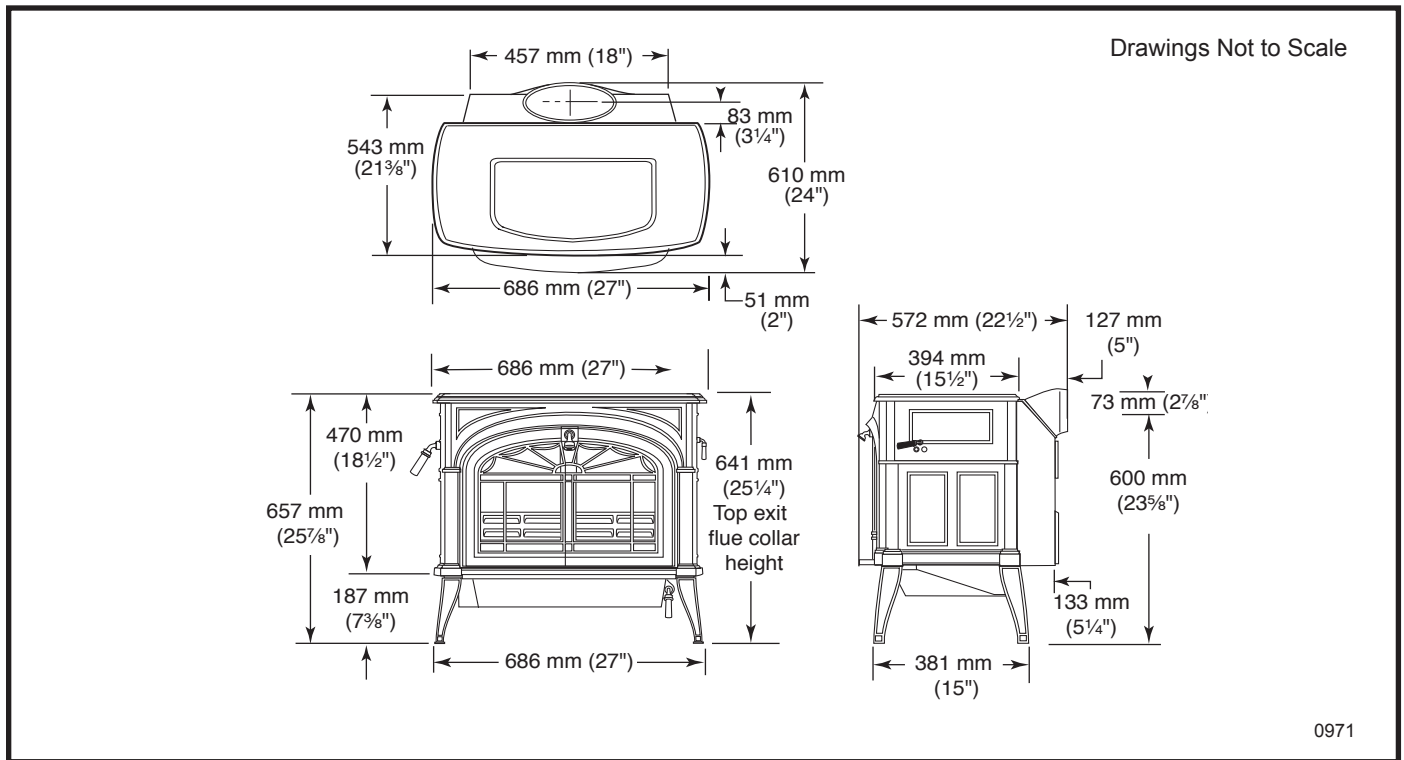


Fig. 1 Encore MF dimensions.

Installation

SAFETY NOTICE: IF YOUR ENCORE IS NOT PROPERLY INSTALLED, A HOUSE FIRE MAY RESULT. TO REDUCE THE RISK OF FIRE, FOLLOW THE INSTALLATION INSTRUCTIONS. CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION REQUIREMENTS IN YOUR AREA.

Before you begin an installation, be sure that:

- Your stove and chimney connector will be far enough from combustible material to meet all clearance requirements.
- The hearth is large enough and is constructed properly to meet all requirements.
- You have all necessary permits from local authorities.

Your local building official is the final authority for approving your installation as safe and determining that it meets local and state codes.

The metal label permanently attached to the back of every Vermont Castings stove indicates that the stove has been tested to current standards. The test standards are UL 1482 and UI 737 for the US and EN13240:2001 + A2:2004 for Europe. Clearance and installation information also is printed on the label. When the stove is installed according to the information both on the label and in this manual, local authorities in most cases will accept the label as evidence that the installation meets codes and can be approved.

However, codes vary in different countries. Before starting the installation, review your plans with the local building authority. Your local dealer can provide any additional information needed.

IMPORTANT: FAILURE TO FOLLOW THESE INSTALLATION INSTRUCTIONS MAY RESULT IN A DANGEROUS SITUATION, INCLUDING A CHIMNEY OR HOUSE FIRE. FOLLOW ALL INSTRUCTIONS EXACTLY, AND DO NOT ALLOW MAKESHIFT COMPROMISES TO ENDANGER PROPERTY AND PERSONAL SAFETY.

Outside Air

In some modern, super-insulated homes, there is inadequate air for combustion because of insufficient air infiltration into the building. Such air enters a home through unsealed cracks and openings. Exhaust fans for kitchen or bath can compete with the stove for available air and compound the problem.

When poor draft is caused by a low infiltration rate, opening a ground floor window on the windward side of the house and in the vicinity of the stove will usually alleviate the problem.

Another solution is to install a permanent outside air supply to the stove and/or room. In fact, bringing air for combustion from outside the home directly to the air inlet of the stove is required for new construction in some areas.

Pressure variations within the house do not affect a stove equipped with an outside air supply, and improved stove performance often results. An Outside Air Adapter Kit for the Encore Multi-Fuel is available from your local Vermont Castings dealer.

Chimney Height

Altitude affects chimney performance. When using a 152 mm (6") flue collar on the Encore Multi-Fuel, refer to Figure 2 for suggested chimney heights at various altitudes. Chimney height should be measured from the flue collar to the top of the chimney. The recommended minimum chimney height is 4.9 m (16').

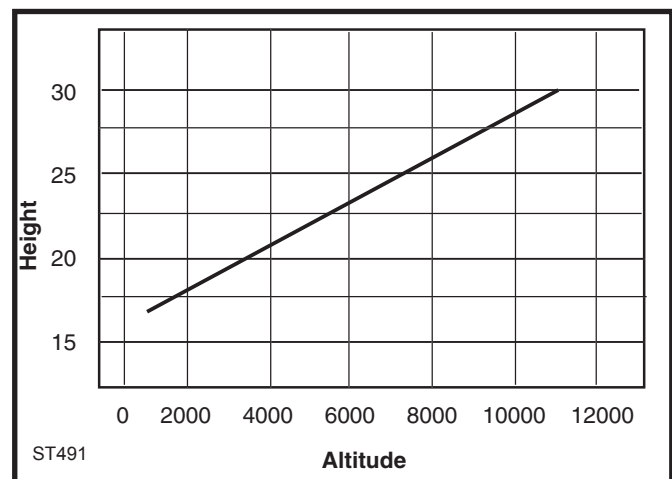


Fig. 2 Chimney height requirements for Encore MF when equipped with a 152 mm (6") chimney.

What Kind of Chimney to Use

You must connect the Encore Multi-Fuel to a code-approved masonry chimney with a flue liner, to a relined masonry chimney that meets local codes, or to a prefabricated metal chimney. (Fig. 3) The chimney and chimney connector must be in good condition and kept clean.

If you use an existing masonry chimney, it must be inspected to ensure it is in a safe condition before the stove is installed. Your local professional chimney sweep, building inspector, or fire department official will be able to inspect the chimney or provide a referral to someone who can.

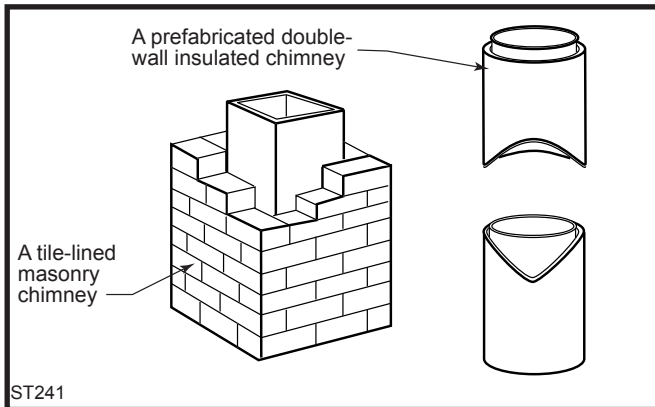


Fig. 3 Approved chimney types.

Masonry Chimneys

An inspection of the chimney must confirm that it has a lining. Do not use an unlined chimney. The chimney should have no cracks, loose mortar, other signs of deterioration, and blockage. Repair any defects before the chimney is used with your stove.

Unused openings in an existing masonry chimney must be sealed with masonry to the thickness of the chimney wall, and the chimney liner should be repaired. Openings sealed with pie plates or wallpaper are a hazard and should be sealed with mortar or refractory cement. In the event of a chimney fire, flames and smoke may be forced out of these unused thimbles.

The chimney should be thoroughly cleaned before use.

A newly-built masonry chimney must conform to the standards of your local building code or, in the absence of a local code, to a recognized national code. Masonry chimneys must be lined, either with code-approved masonry or pre-cast refractory tiles, stainless steel pipe, or a code-approved, "poured-in-place" liner. The chimney's clean-out door must seal tightly.

Prefabricated Chimneys

These should be an internal diameter of 150 mm (6") and be of the twin wall insulated construction that has been approved for solid fuel use (e.g. Rite Vent ICS of ICID Lite Chimney Systems). Diameters over 200 mm (8") are not recommended due to the large cross-section causing excessive cooling of the flue gases.

DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.

Chimney Size

An Encore Multi-Fuel with an 203 mm (8") flue collar is sized for venting into a masonry chimney with a nominal flue size of 8" x 8" (203 x 203 mm) or 8" x 12" (203 x 305 mm), and into a round flue with nominal flue size of 8" (203 mm). An Encore Multi-Fuel with a 6" (152 mm) flue collar is approved for venting into a masonry chimney with a nominal flue size of 8" x 8" (203 x 203 mm), and into a round flue with nominal flue of 6" (152 mm).

NOTE: When installed with a 6" flue collar, the Encore Multi-Fuel is not recommended for use with the front doors open.

Whatever the flue collar size, an Encore Multi-Fuel may be vented into larger chimneys as well. However, chimneys with liners larger than 203 x 305 mm (8" x 12") may experience rapid cooling of smoke and reduction in draft, especially if the chimneys are located outside the home. These large chimneys may need to be insulated or have their flues relined for proper stove performance.

Accessories to help make the connection between stainless steel chimney liners and your Encore Multi-Fuel are available through your local dealer.

Chimney Connector Guidelines

A chimney connector is the double-wall or single-wall pipe that connects the stove to the chimney. The chimney itself is the masonry or prefabricated structure that encloses the flue. Chimney connectors are used only to connect the stove to the chimney, as in Figure 6.

Connecting Flue Pipes

Connector pipes should meet the requirements of the building regulations. This can be achieved by the use connecting fluepipes included in the following categories:

- Vitreous enamelled steel pipe complying with BS 6999: 1989 (1996);
- Pipes made from stainless steel as described in BS EN 1008-1:1995 grades 1.4401, 1.4404, 1.4432 or 1.4436 with flue wall thickness of at least 1 mm;
- Mild steel fluepipes complying with BS 1449: Part 1: 1991, with a flue wall thickness of at least 3 mm;
- Cast iron fluepipes complying with BS 41: 1973 (1998).

Flue Pipes with a spigot and socket joint should be fitted with the socket facing upwards, to contain condensates and moisture within the flue. Joints should be made gas tight using proprietary jointing accessories, or, where appropriate, by packing joint with noncombustible rope and fire cement.

Double-wall connectors must be tested and listed for use with solid-fuel burning appliances. Single-wall connectors should be made of 24 gauge or heavier steel. Do not use galvanized connector; it cannot withstand the high temperatures that can be reached by smoke and exhaust gases, and may release toxic fumes under high heat. The connector may be 152 mm (6") or 203 mm (8") in diameter.

If possible, do not pass the chimney connector through a combustible wall or ceiling. If passage through a combustible wall is unavoidable, refer to the section on Wall Pass-Throughs. Do not pass the connector through an attic, a closet or similar concealed space. The whole connector should be exposed and accessible for inspection and cleaning.

The recommended maximum length of a horizontal stovepipe run is 152 mm (6").

In cathedral ceiling installations, extend the prefabricated chimney downward to within 2.4 m (8') of the stove.

Wear gloves and protective eyewear when drilling, cutting or joining sections of chimney connector.

Double-wall Chimney Connectors

Information on assembling and installing double-wall connectors is provided by the manufacturer of the double-wall pipe. Follow the manufacturer's instructions exactly as you assemble the connector and attach it to the stove and chimney. Using chimneys and connectors from the same manufacturer makes the assembly and installation straightforward.

NOTE: For installations using double-wall connectors, minimum clearances must conform to the listed clearances in the clearance chart on Page 13.

If the Encore Multi-Fuel is equipped with the 203 mm (8") flue collar, an oval-to-round adapter will be needed. Your local dealer can help you select the right connector.

Single-wall Chimney Connectors

- Begin assembly at the flue collar of the stove. Insert the first crimped end into the stove's flue collar. Keep each crimped end pointing toward the stove. (Fig. 5) Using the holes in the flue collar as guides, drill 3 mm (1/8") holes in the bottom of the first section of chimney connector and secure it to the flue collar with three #10 x 1/2" sheet metal screws.

- Secure each joint between sections of chimney connector, including telescoping joints, with at least three

sheet metal screws. The pre-drilled holes in the top of each section of chimney connector serve as guides when you drill 3 mm (1/8") holes in the bottom of the next section.

- Secure the chimney connector to the chimney. Instructions for various installations follow.

- Be sure the installed stove and chimney connector are correct distances from nearby combustible materials.

NOTE: Special slip pipes and thimble sleeves that form telescoping joints between sections of chimney connector are available to simplify installations. They often eliminate the need to cut individual connector sections. Consult your local dealer about these special pieces.

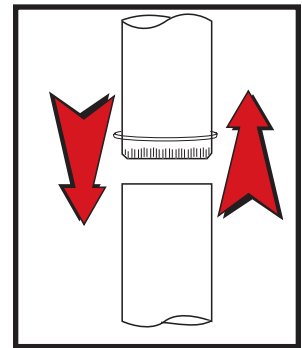


Fig. 4 the crimped end of the connector points toward stove.

Securing the Single-wall Connector to a Prefabricated Chimney

Follow the installation instructions of the chimney manufacturer exactly as you install the chimney. The manufacturer of the chimney will supply the accessories to support the chimney, either from the roof of the house, at the ceiling of the room where the stove is installed, or from an exterior wall.

Special adapters are available from your local dealer to make the connection between the prefabricated chimney and the chimney connector. The top of such adapters attaches directly to the chimney or to the chimney's ceiling support package, while the bottom of the adapter is screwed to the chimney connector.

These adapters are designed so the top end will fit outside the inner wall of the chimney, and the bottom end will fit inside the first section of chimney connector. When assembled in this way, any soot or creosote falling from the inner walls of the chimney will stay inside the chimney connector.

Securing the Single-wall Connector to a Masonry Chimney

Both freestanding masonry chimneys and fireplace masonry chimneys may be used for your installation.

Freestanding Installations

If the chimney connector must pass through a combustible wall to reach the chimney, follow the recommendations in the Wall Pass-Through section that follows.

The opening through the chimney wall to the flue (the "breach") must be lined with either a ceramic or metal cylinder, called the "thimble", which is cemented

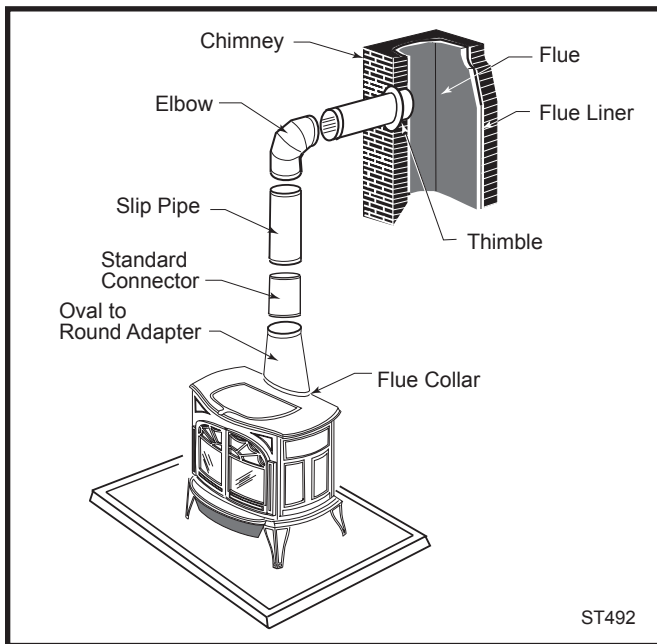


Fig. 5 An exploded view of the chimney connection in a free-standing masonry installation.

securely in place. Most chimney breeches incorporate thimbles, but the fit must be snug and the joint between the thimble and the chimney wall must be cemented firmly.

A special piece called the “thimble sleeve,” slightly smaller in diameter than standard connectors and most thimbles, will facilitate the removal of the chimney connector system for inspection and cleaning. Thimble sleeves should be available from your local dealer.

To install a thimble sleeve, slide it into the breech until it is flush with the inner flue wall. Do not extend it into the actual flue passage, as this could interfere with the draft.

The thimble sleeve should protrude 25-51 mm (1-2”) into the room. (Fig. 6) Use furnace cement and thin gasketing to seal the sleeve in place in the thimble. Secure the chimney connector to the outer end of the sleeve with sheet metal screws.

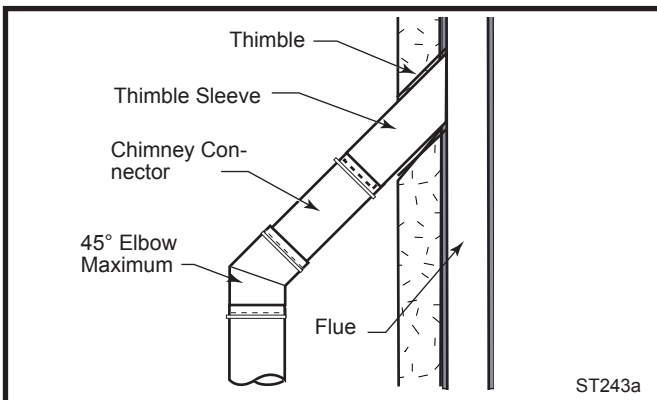


Fig. 6 The thimble, made of either ceramic or metal, must be cemented securely in place.

Without a thimble, a suitable length of chimney connector can be extended through the breach to the inner face of the flue liner, and cemented securely in place. Additional pieces of connector are then attached with sheet metal screws.

Fireplace Installations

The chimney connector may be connected to the chimney above the fireplace opening or through the fireplace.

Above the Fireplace

The Encore Multi-Fuel may be connected to a chimney above a fireplace opening. (Fig. 7) In such installations, the stove is positioned on the hearth in front of the fireplace and the chimney connector rises from the stove top and then angles ninety degrees back into the chimney. The chimney liner should extend to the point at which the chimney connector enters the chimney.

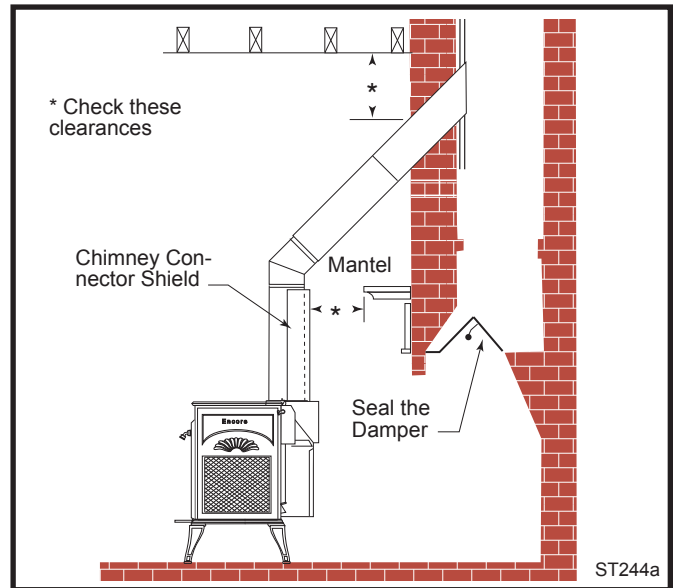


Fig. 7 Chimney connector enters chimney above the fireplace opening.

If the chimney connector from your installation enters the chimney above a fireplace, follow all the guidelines mentioned above for freestanding installations. In addition, give special consideration to the following points:

- Check the clearance between the stove and the chimney connector, and any combustible trim or the mantel. Use the necessary combination of mantel, trim, and connector heat shields to achieve the required clearances.
- Check the clearance between the chimney connector and the ceiling. If no heat shields are used, the clearance should be at least 24” (610 mm). To find out how much this clearance may be reduced with heat shields, see the clearance chart on Page 14.

- The fireplace damper must be sealed to prevent room air from escaping up the flue. However, it must be possible to reopen the damper to inspect or clean the chimney.

Through the Fireplace

If your fireplace opening height is at least 26½" (675mm), you may install an Encore Multi-Fuel through the opening using a "positive connection" kit, available from your local dealer. These positive connection kits ensure a tight fit between the stove flue collar and the chimney flue. (Fig. 8)

Fireplace installations, whether connected to the flue above or through the fireplace opening, have special clearance requirements to adjacent trim and the mantel.

Floor protection requirements also apply to fireplace installations. Refer to "Floor Protection" section.

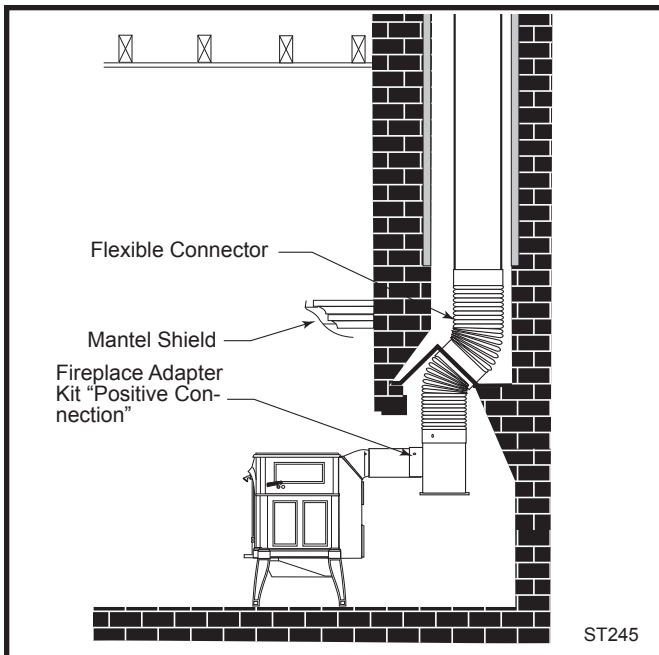


Fig. 8 In this installation, the chimney connector enters the fireplace opening and then connects to the chimney.

Wall Pass-Throughs

Whenever possible, design your installation so the connector does not pass through a combustible wall. If you are considering a wall pass-through in your installation, check with your building inspector before you begin. Also, check with the chimney connector manufacturer for any specific requirements. Some manufacturers make chimney components that may be used as wall pass-throughs. If using one of these, make sure it has been tested and listed for use as a wall pass-through.

Always adhere to local building codes when installing a wall pass-through. Figure 9 shows one recommended method.

All combustible material in the wall must be removed around the single-wall connector to provide clearance that is three times the pipe diameter. Any material used to enclose the opening must be noncombustible.

Figure 9 shows another method of passing a connector through a wall. All combustible material in the wall is cut away to provide the required clearance that is 3x the connector diameter. The resulting space must remain empty. A flush-mounted sheet metal cover may be used on one side only. If covers must be used on both sides, each cover must be mounted on noncombustible spacers at least 25 mm (1") clear of the wall.

DO NOT CONNECT AN ENCORE MULTI-FUEL TO ANY AIR DISTRIBUTION SYSTEM.

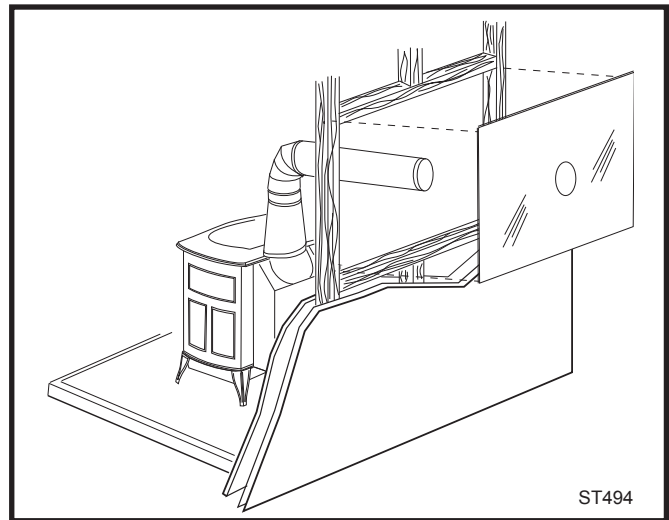


Fig. 9 A hollow wall pass-through method.

Hearths

This appliance must be installed on to hearth that meets the requirements of Part J of the Building Regulations 2000 (Combustion Appliances and Fuel Storage Systems). This can be achieved by ensuring that the hearth is constructed and sized in accordance with the guidelines included in section 2 of approved document 'J'. The size and clearances of the hearth are as follows:

The constructed hearth should be constructed in accordance with the recommendations in document J, and should be of minimum width 840 mm and minimum depth 840 mm (if a free standing hearth b) above) or a minimum projection of 150 mm from the jamb (if a recessed hearth a) above).

Unless the stove hearth is completely noncombustible, the bottom heat shield should be installed to provide radiant protection for framing which may be below the hearth. (Fig. 11)

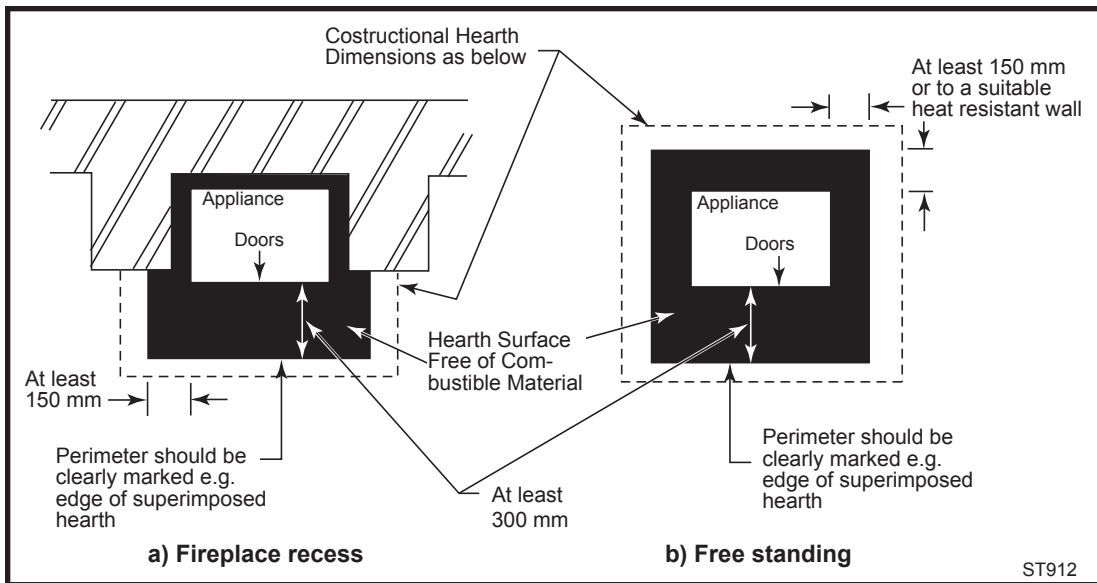


Fig. 10 Noncombustible hearth surface dimensions.

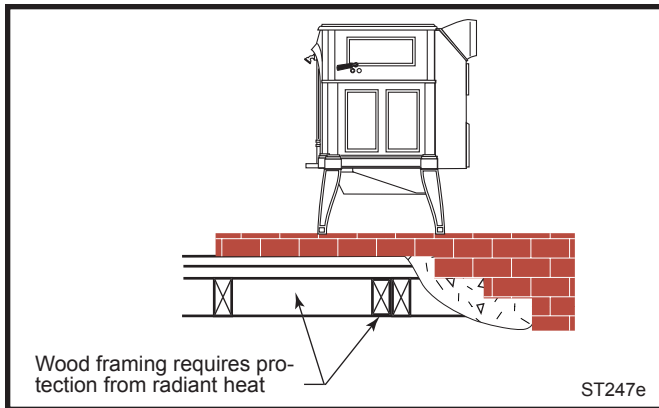


Fig. 11 Combustible supporting timbers may lie beneath fireplace hearths, requiring additional floor protection.

Floor Protection for Fireplace Installations

Do not assume that your fireplace hearth is completely noncombustible.

Many fireplace hearths do not meet the “completely noncombustible” requirement because the brick or concrete in front of the fireplace opening is supported by heavy wood framing. (Fig. 11) Because heat passes through brick or concrete readily, it can easily pass through to the wood. As a result, such fireplace hearths can be a fire hazard and are considered a combustible floor.

Keep in mind, also, that many raised hearths will extend less than the required clearance from the front of the heater when it is installed. In such cases, sufficient floor protection as described above must be added in front of the hearth to satisfy the minimum floor protector requirement from the front of the stove: 406 mm (16”) from the front.

Hearth rugs do not satisfy the requirements for floor protection.

Keep the Stove a Safe Distance from Surrounding Materials

Both a stove and its chimney connector radiate heat in all directions when operating, and dangerous overheating of nearby combustible materials can occur if they are too close to the heat. A safe installation requires that adequate clearance be maintained between the hot stove and its connector and nearby combustibles.

Clearance is the distance between either your stove (measured from the bottom edge of the stove’s top plate) or chimney connector, and nearby walls, floors, the ceiling, and any other fixed combustible surface. Your stove has special clearance requirements that have been established after careful research and testing to both US and European standards. These clearance requirements must be strictly observed.

In addition, furnishings and other combustible materials must be kept away from the stove as well. In general, a distance of 1219 mm (48”) must be maintained between the stove and moveable combustible items such as drying clothes, furniture, newspapers, firewood, etc. Keeping those clearance areas empty assures that nearby surfaces and objects will not overheat.

Safe Ways to Reduce Clearances

Clearances

As with any solid fuel heating stove, extremely high surface temperatures can occur, particularly in the event of uncontrolled operation, e.g. if the doors are inadvertently left open. It is crucial that sufficient clearances are allowed to any combustible surfaces, e.g. wooden mantels or lintels, and to timber framed (studded) walls even if they are faced with noncombustible board. Detailed information on fireplace and hearth construction is provided

in section 2 of Document J, all installations must comply with these requirements or with the relevant National or local building standards.

Clearances to timber framed (studded) walls are included below. There are no specific minimum clearances to solid noncombustible surfaces (e.g. the sides and rear of Inglenook fire openings constructed from solid masonry) other than to allow safe access to the controls of the stove. For this reason minimum side clearances of 125 mm, and a minimum rear clearance of 50 mm are recommended.

Summary of Clearances

Minimum recommended side clearances to non-combustible surfaces 125 mm (5").

Minimum recommended rear clearance to noncombustible surfaces 50 mm (2").

NOTE: The minimum thickness of solid noncombustible materials is specified in section 2 of Document 'J', in relation to the clearance of the appliance from the surface. As a general rule, the thickness of solid noncombustible material forming the recess of a fireplace is a minimum of 200 mm.

Minimum rear clearance from combustible walls (e.g. timber framed or studded walls) 840 mm (33") measured from the rear edge of the stove top. (Fig. 12, B)

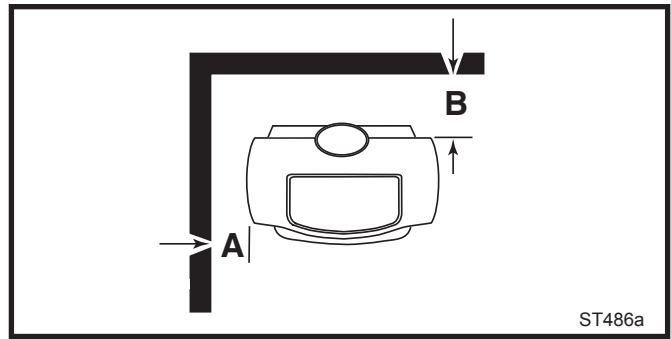


Fig. 12 Minimum clearances.

Minimum side clearance from combustible walls 610 mm (24") measured from the side edge of the stove top. (Fig. 12, A)

Minimum distance from stove to movable combustible materials (e.g. furniture, drying clothes, etc.) 1220 mm (48").

Connecting Flue Pipe - Clearances

Single wall connecting fluepipes can reach extremely high temperatures; therefore, clearances from the connecting fluepipe (chimney connector) must comply with the requirements of Part J of Building Regulations 2000 (Combustion Appliances and Fuel Storage Systems). This can be achieved by following the recommendations of Approved Document 'J'. These are as shown in Figure 13.

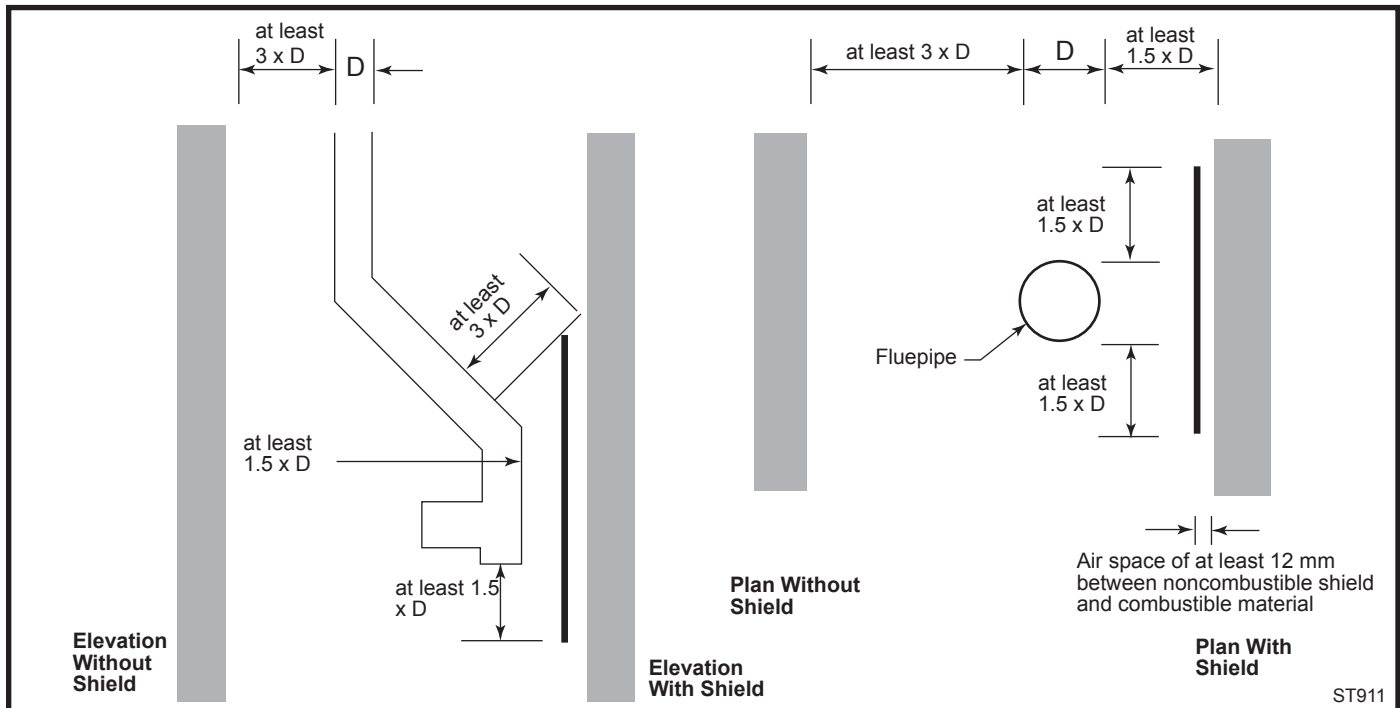


Fig. 13 Connecting fluepipe clearances.

Assembly

Set Up Your Stove

Cast iron stoves are heavy, and it will take two to four people to move your Encore MF into position.

Wash the protective coating of oil from the griddle with soap and water. Dry the griddle thoroughly and apply a light coating of vegetable oil to season the surface and help prevent rust.

Remove all packing materials from inside the stove.

Install the Optional Bottom Heat Shield

1. Remove the four 10-24 x 1/2" hex head bolts from the corners of the ash drop on the stove bottom.
2. Screw the four 32 mm (1 1/4") spacers into the holes from which you removed the bolts, finger-tight.
3. Align the bottom heat shield against the spacers with the stepped side toward the rear of the stove.
4. Secure the shield with the four hex head bolts previously removed from the stove bottom.
5. Tighten securely.

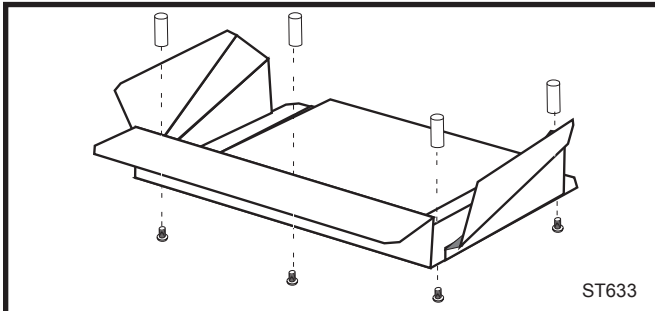


Fig. 14 Use four spacers to attach the bottom heat shield.

Adjust the Leg Levellers

Lift the stove slightly so there is no weight on the leg while making the adjustment.

Reverse the Flue Collar (If Necessary)

Reverse the flue collar by removing the two screws that attach it to the back of the stove. Be sure the gasket around the flue collar opening is in position when you screw the collar back onto the stove.

Install the Ash Door Heat Shield

1. Remove the two Phillips pan head screws from the ash door.
2. Insert the screws through the ash door heat shield (from the painted side), place the 8 mm (5/16") spacers over the screws, and carefully thread them back into the original holes. The curved lip should be upward, under the ashlip of the stove.
3. Tighten securely.

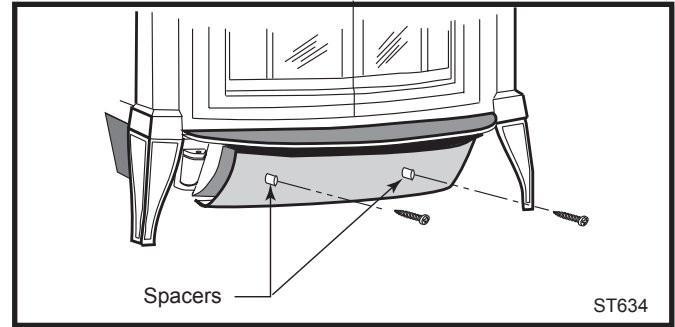


Fig. 15 Use spacers and screws to position the ashdoor heat shield.

Attach the Primary Air Thermostat Handle

The primary air thermostat handle is the smaller of the two black handles. Secure the handle to the stub on the right side of the stove with an 8-32 x 2" slot head machine screw.

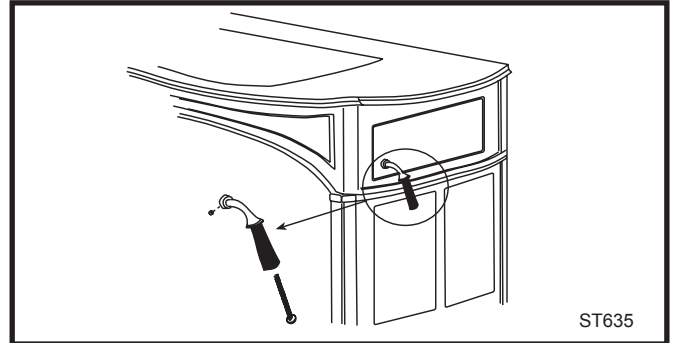


Fig. 16 Attach thermostat handle.

Attach the Damper Handle

Use the 1/4" -20 x 3" screw to attach the damper handle to the damper stub on the left side.

Assemble the Removable Insert Handle

The white removable insert handle opens and closes the front doors. Remove after each use so it won't get hot, and store it in the handle holder installed behind the right front leg. Assemble the handle by passing the 86 mm (3 3/8") screw through the ceramic shaft and into the bright metal nub. Tighten carefully until snug.

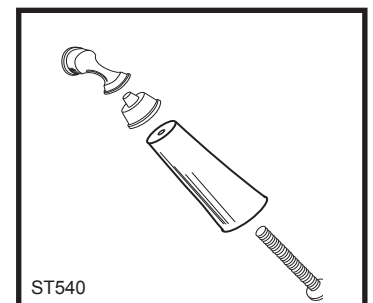


Fig. 17 Assemble the front door handle.

Operation

! WARNING



HOT GLASS WILL CAUSE BURNS.
DO NOT TOUCH GLASS UNTIL COOLED.
NEVER ALLOW CHILDREN TO TOUCH GLASS.

The Encore Multi-Fuel Controls

Two controls regulate the performance of the Encore: a **primary air control** supplies oxygen for the fire, and a **damper** directs air flow within the stove or directly up the vent.

Symbols cast into the stove are reminders of the correct directions for opening and closing the controls.

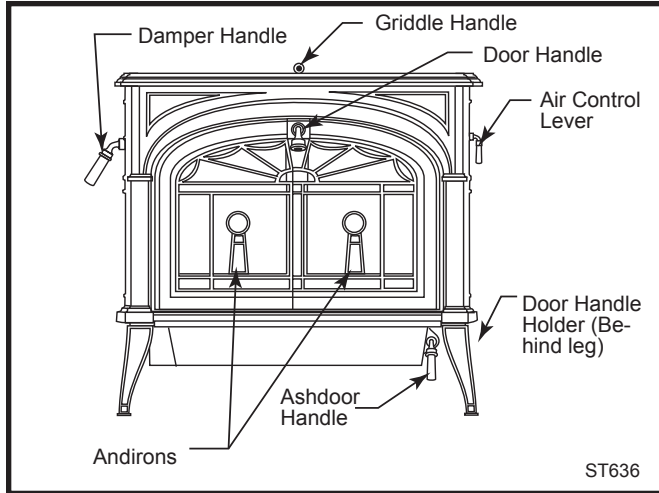


Fig. 18 The Encore controls are conveniently located and easy to operate.

A Single Air Control Regulates Heat Output and Burn Time

The **primary air control lever**, located on the right side of the stove, controls the amount of incoming air for starting, maintaining, and reviving a fire.

More air entering the stove makes the fire burn hotter and faster, while less air prolongs the burn at a lower heat level. High and low settings appear in Figure 19.

For the greatest air supply and maximum heat output (but the shortest burn time), move the lever toward the front of the stove. For a fire that will last longer with less heat, move the lever toward the rear of the stove.

A Damper Directs Air Flow Within the Stove

The **damper handle** on the left side of the stove opens and closes the damper to direct air flow within the stove.

The damper is **open** when the handle points to the back of the stove, enabling smoke to pass directly into the chimney. The damper must be open when starting or reviving a fire, and whenever the griddle or doors are opened.

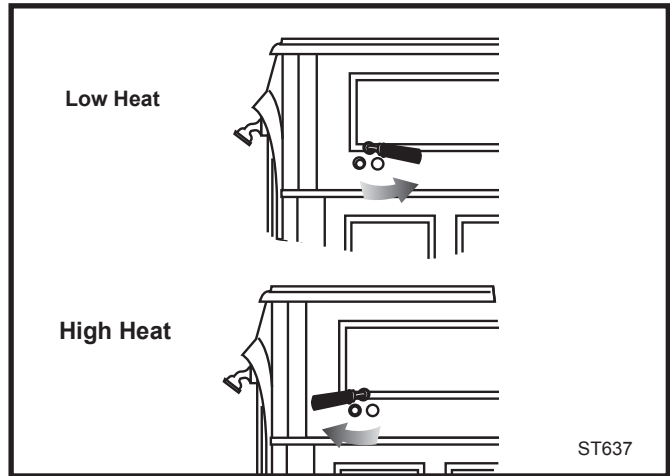


Fig. 19 The handle may be positioned anywhere between the two extremes for different heat levels.

The damper is **closed** when the handle points **forward**. Exhaust gases are directed around the rear baffle before passing up the chimney.

When closing the damper, be sure to pull firmly enough to snap it into the locked position.

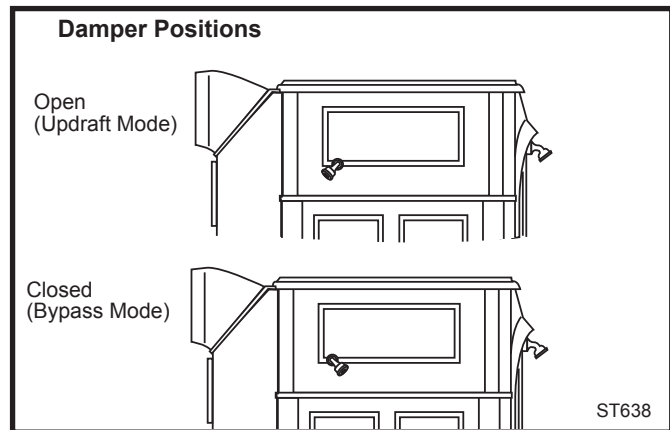


Fig. 20 The damper is either open or closed. There are no intermediate positions.

Two Ways to Add Fuel

The Encore's griddle lifts for convenient top-loading of fuel, and is the easiest way to regularly add fuel.

In addition, however, the front doors open for adding an occasional log to a fire. **The Encore is not approved in Europe for operation with the front doors open.**

To open the front doors, insert the handle into the door latch stub and turn it to the left and up. (Fig. 22)

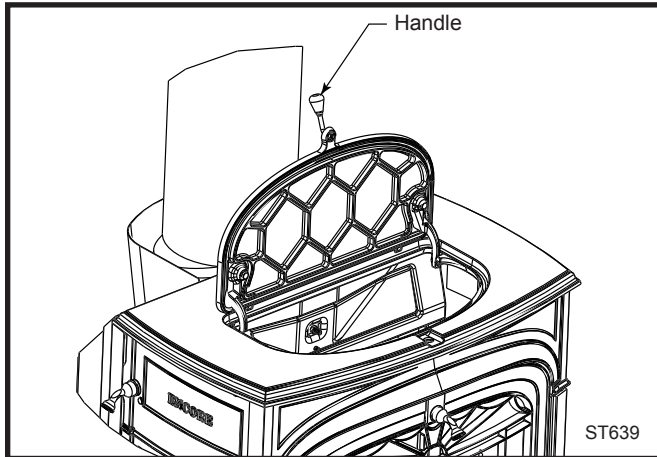


Fig. 21 The Encore's hinged griddle makes it easy to top-load wood.

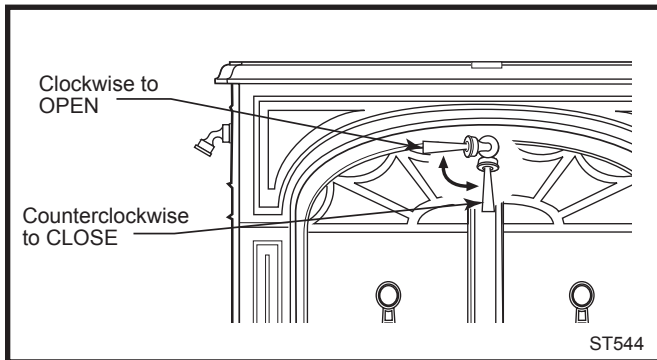


Fig. 22 To open the front doors, turn the handle clockwise.

To close them, always close the left door first. Turn the handle in the right door to the left and up (to the open position) and close it. Finally, push on the door as you turn the handle to the right and down. The doors will draw in slightly, and the handle should offer some resistance as you turn it to the closed position.

To reduce the risk of breaking the glass, avoid striking the glass or slamming the doors.

When not using the door handle, store it in the holder behind the right front leg of the stove.

This stove is designed to operate efficiently with the fire doors (front doors and griddle) closed. The firebox and ash doors should be kept closed at all times except when refuelling or removing ashes.

Infrared Reflective Glass Panels for Clear Fire Viewing

The inner surfaces of the **infrared reflective glass** panels are kept at a higher temperature than the outer surface. This design, along with a preheated 'airwash,' makes clear fire viewing possible at most levels of operation.

Burn Only High-Quality Fuel

The Encore is designed to burn natural wood and smokeless coal.

You'll enjoy the best results when burning wood that has been adequately air-dried. Avoid burning "green" wood that has not been properly seasoned, or cord-wood dried more than two years. **Do not burn construction materials;** they often contain chemicals and metals that can damage the iron over time. The wood should be 457-508 mm (18-20") in length.

The best hardwood fuels include oak, maple, beech, ash, and hickory that has been split, stacked, and air-dried outside under cover for at least one year.

If hardwood is not available, you can burn softwoods like include tamarack, yellow pine, white pine, Eastern red cedar, fir, and redwood. These too should be properly dried.

Store wood under cover to keep it dry. The longer it is stored, the better heating and fire viewing performance you will enjoy. Even for short-term storage, however, keep all fuels a safe distance from the heater and keep it out of the areas around the heater used for refueling and ash removal.

A Surface Thermometer is a Valuable Guide to Operation

An optional surface thermometer lets you know when to adjust the air control and when to refuel.

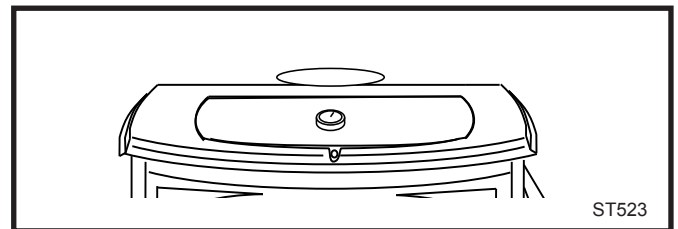


Fig. 23 Take temperature readings with the thermometer located in the middle of the griddle.

For example, when the thermometer registers at least 230° C (450° F) after start-up you know the stove is hot enough to begin catalytic combustion and it *may* be time to close the damper. Note that the stove will warm up much sooner than the chimney, though; a warm *chimney* is the key to easy, effective stove operation. Please review the draft management information

on Page 17 to see how the size, type, and location of your chimney will affect your stove operation. When thermometer readings drop below 175° C (350° F) it's time to adjust the air control for a higher burn rate or to reload the stove. A temperature reading over 385° C (750° F) is a sign to cut back on the air supply to slow the burn rate.

Use the following temperature ranges as a guide to operation:

- Readings in the 175°-260° C (350-500° F) range indicate low to medium heat output.
- 260°-315° C (500-600° F) readings indicate medium heat output.
- Readings of 315°-400° C (600-750° F) indicate high heat output. Operating your Encore continuously at griddle temperatures of 385° C (750° F) or higher may damage the cast iron or enamel finish.

Use the Air Control Settings that Work Best for You

No single air control setting will fit every situation. Each installation will differ depending on the quality of the fuel, the amount of heat desired, and how long you wish the fire to burn; outdoor air temperature and pressure also affect draft.

The control setting also depends on your particular installation's "draft," or the force that moves air from the stove up through the chimney. Draft is affected by such things as the length, type, and location of the chimney, local geography, nearby obstructions, and other factors. Refer to Page 23 for details on how the installation affects performance.

Too much draft may cause excessive temperatures in the Encore, and could even damage the combustor. On the other hand, too little draft can cause backpuffing into the room and/or the "plugging" of the chimney or combustor.

How do you know if your draft is excessively high or low? Symptoms of too much draft include an uncontrollable burn or a glowing-red stove part. A sign of inadequate draft is smoke leaking into the room through the stove or chimney connector joints, low heat, and dirty glass.

In some newer homes that are well-insulated and weather-tight, poor draft may result from insufficient air in the house. In such instances, an open window near the stove on the windward side of the house will provide the fresh air needed.

In some areas provisions for outside combustion air are required. Refer to section 2 of Document J which requires an outside air vent for appliances with power outputs over 5 kW. Always refer to national and local codes to determine your specific requirements.

Your Encore will accept a duct to deliver outside air for combustion.

When first using the stove, keep track of the air control settings. You will quickly find that a specific setting will give you a fixed amount of heat. It may take a week or two to determine the amount of heat and the length of burn you should expect from various settings.

Most installations do not require a large amount of combustion air, especially if adequate draft is available. **Do not for any reason attempt to increase the firing of your heater by altering the air control adjustment range outlined in these directions.**

Use the following air control settings as a starting point to help determine the best settings for your installation. Each is described as a fraction of the total distance the lever may be moved from right to left.

Encore Control Settings

Burn Rate	Primary Air Control
Low	From far right to 1/3 the distance to left
Medium	From 1/3 to 2/3 the distance to left
High	From 2/3 the distance to left to far left

Conditioning Your Stove

Cast iron is extremely strong, but it can be broken with a sharp blow from a hammer or from the thermal shock of rapid and extreme temperature change.

The cast plates expand and contract with changes in temperature. When you first begin using your Encore, minimize thermal stress by allowing the plates to adjust gradually during three or four initial break-in fires following Steps 1-3 below.

Starting and Maintaining a Fire

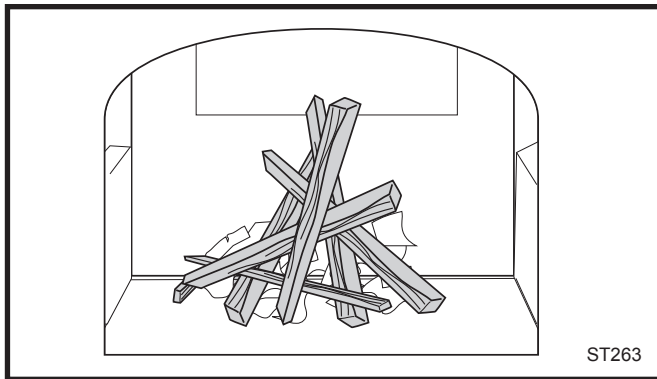
Burn wood or coal directly on the grate. Do not elevate the fuel.

The damper must be open when starting a fire or when refueling.

Do not use chemicals or fluids to start the fire. Do not burn garbage or flammable fluids such as gasoline, naphtha, or engine oil.

1. Open the stove damper, and open the primary air control fully.
2. Place several sheets of crumpled newspaper in the stove. Place on the paper six or eight pieces of dry kindling split to a finger-width size, and on the kindling lay two or three larger sticks of split dry wood approximately 25-51 mm (1-2") in diameter.

Never use gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or "freshen



ST263

Fig. 24 Start fire with newspaper and dry kindling.

up” a fire. Keep all such liquids well away from the Encore while it is in use.

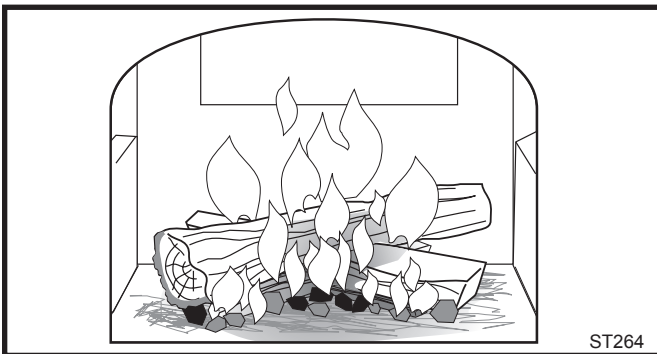
3. Light the newspaper and close the door. Gradually build up the fire by adding a few 76-127 mm (3-5”) diameter splits. If this is one of the first few “break-in” fires, let the fire burn brightly, and then let it die out.

During the break-in fires, don’t let the stove get hotter than 260° C (500° F) as measured on an optional stove-top thermometer. Adjust the air control lever as necessary to control the fire.

Some odor from the stove’s hot metal, the paint, and the cement is normal for the first few fires.

NOTE: Some chimneys need to be “primed,” or warmed up, before they will draw sufficiently to start a fire. To correct this situation, roll up a couple pieces of newspaper, place them on top of the kindling and toward the back of the stove, light them, and close the doors. This will encourage smoke to rise rapidly, encouraging a good draft.

Once the draft is established, open the front door and light the rest of the fuel from the bottom. Do not light the main bed of fuel until the chimney begins drawing, and repeat the procedure as often as necessary if the initial attempt is unsuccessful.



ST264

Fig. 25 Add larger pieces of wood as the fire begins to burn well.

4. If your Encore has been broken-in previously using Steps 1-3, continue to build the fire gradually. Add larger wood with a diameter of 76-102 mm (3-4”). If

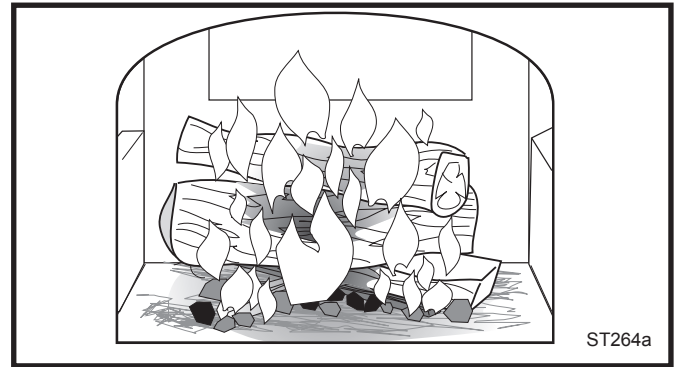
burning wood, continue adding split logs of this size to the briskly-burning fire until there is a glowing ember bed at least 76 mm (3”) deep. If burning coal, begin adding small amount directly on the kindling to establish a burning coal pile.

5. Close the damper when the griddle temperature reaches 230° C (450° F).
6. Adjust the air control for your desired heat output.

Refuel While the Embers Are Still Hot

Always wear stove gloves to protect your hands from hot surfaces while refueling. The following guidelines will help you achieve the best results.

De-ash the stove by stirring the fuel bed to allow ash to fall through the grate. It is important that plenty of air is able to circulate through the charcoal bed. Do not break, pound or compress the charcoal into very small pieces. Larger pieces of charcoal allow more air to circulate under the wood and result in the fire reviving more quickly.



ST264a

Fig. 26 Add full-size logs when the kindling has burned down to a bed of embers.

When burning coal it is important to de-ash the coalbed to maintain steady heat output. Use the slicer/poker supplied with the Encore to stir and break up the coal pile removing as much ash as possible.

Add fuel while the stove still has plenty of glowing embers to rekindle the fire. Include a few small pieces of wood in the new fuel load to help the stove quickly regain operating temperature.

Use this sequence as a guide to successful refueling:

1. Open the damper.

NOTE: Door handles can be hot. A glove has been included with your stove. We recommend using this glove whenever operating door or damper controls and especially when operating the top griddle.

2. De-ash the stove as described above. Open the front doors and check the level of ash in the ash pan. Empty the pan if necessary and replace it in the stove. Close the front doors.
3. Open the griddle, load the wood (smaller pieces first), and close the griddle. When burning coal, it is

recommended only to add briquettes to the level of the front grate.

4. Close the damper.
5. When the surface temperature reaches 230° C (450° F), adjust the air control for the amount of heat you desire.

NOTE: If the remaining coal bed is relatively thick and if wood fuel is well seasoned, it is possible to add fresh fuel (smaller pieces first), close the door and damper, and reset the primary air thermostat for the desired heat output.

CAUTION: The Encore Multi-Fuel will be hot while in operation. Keep children, clothing and furniture away. Contact may cause skin burns.

DO NOT OVERFIRE THIS HEATER. Overfiring may cause a house fire, or can result in permanent damage to the stove. If an exterior part of the Endore MF glows, you are overfiring.

Ash Disposal

You should remove ash before it reaches the top of the ash pan. Check the level at least once a day. Every few days, clear any ash from the outer edges of the firebox. Most of the ash will fall through the grate. Slice or stir the ash with a shovel or poker so that it falls through the grate slots.

IMPORTANT: Check the level of ash in the ash pan before reloading the stove. If the ash level is close to the top edge of the pan, empty the pan according to this procedure:

- Open the damper.
- Open the griddle or front doors, and use a shovel or poker to stir excess ash through the ash slots in the grate down into the ash pan.
- Close the griddle or doors, and unlatch the ash door. It will pivot, swinging the ash pan out of the stove.
- Slide the cover onto the pan, making sure it is securely closed. (Fig. 28)
- Remove the ash pan, making sure to keep it level.
- To keep the cover from sliding off and to keep ash from falling on the floor, do not tilt the ash pan forward.

If the stove is in operation, close the ash door while disposing of the ash.

- Properly dispose of the ash in a metal container with a tight-fitting lid. Store the container outdoors away from all combustible material.

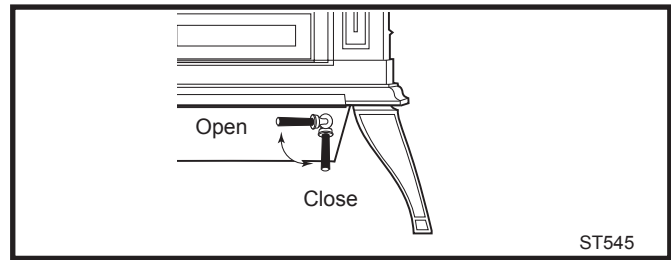


Fig. 27 Turn the handle to the ash pan compartment clockwise to open and counterclockwise to close.

- Return the ash pan to its original position in the stove, and close and latch the ash door.
- Do not operate the stove with the ash door open. This will result in over-firing, and could cause damage to the stove, void the warranty, or even lead to a house fire.

Empty the ash pan regularly, typically every one to three days. The frequency will vary depending on how you operate your Encore: ash will accumulate faster at higher heat outputs.

Remove ash frequently and place it outdoors in a metal container with a tight-fitting lid. Place the closed container of ash on a noncombustible floor or on the ground, well away from all combustible materials, pending final disposal. If the ash is disposed of by burial in soil or otherwise locally dispersed, it should be kept in the closed container until all cinders have thoroughly cooled.

You can use wood ash as a garden fertilizer.

CAUTION: Never use your household or shop vacuum cleaner to remove ash from the stove; always remove and dispose of the ash properly.

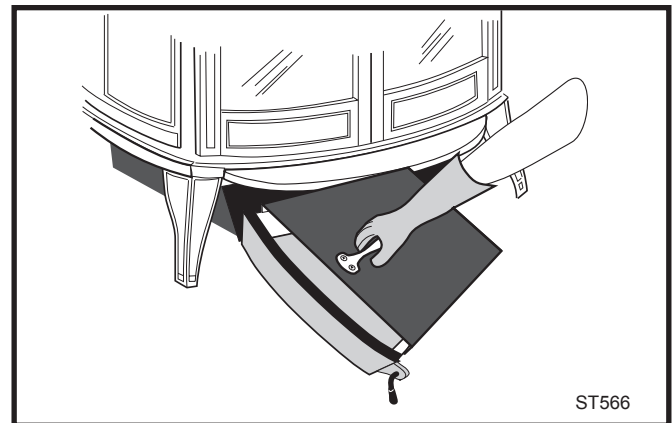


Fig. 28 Be sure the cover is securely attached before removing the ash pan.

Draft Management

A stove is part of a system, which includes the chimney, the operator, the fuel, and the home. The other parts of the system will affect how well the stove works. When there is a good match between all the parts, the system works well.

Wood stove or insert operation depends on natural (unforced) draft. Natural draft occurs when the smoke is hotter (and therefore lighter) than the outdoor air at the top of the chimney. The bigger the temperature difference, the stronger the draft. As the smoke rises from the chimney it provides suction or 'draw' that pulls air into the stove for combustion. A slow, lazy fire with the stove's air inlets fully open indicates a weak draft. A brisk fire, supported only by air entering the stove through the normal inlets, indicates a good draft. The stove's air inlets are passive; they regulate how much air can enter the stove, but they don't move air into it. Depending on the features of your installation - steel or masonry chimney, inside or outside the house, matched to the stove's outlet or oversized - your system may warm up quickly, or it may take a while to warm up and operate well. With an 'airtight' stove or insert, one which restricts the amount of air getting into the firebox, the chimney must keep the smoke warm all the way to the outdoors. Some chimneys do this better than others. Here's a list of features and their effects.

Masonry Chimney

Masonry is a traditional material for chimneys, but it can perform poorly when it serves an 'airtight' stove. Masonry is a very effective 'heat sink' - it absorbs a lot of heat. It can cool the smoke enough to diminish draft. The bigger the chimney, the longer it takes to warm up. It's often very difficult to warm up an outdoor masonry chimney, especially an oversized one, and keep it warm enough to maintain an adequate draft.

Steel Chimney

Most factory-made steel chimneys have a layer of insulation around the inner flue. This insulation keeps the smoke warm. The insulation is less dense than masonry, so a steel chimney warms up more quickly than a masonry chimney. Steel doesn't have the good looks of masonry, but it performs much better.

Indoor / Outdoor location

Because the chimney must keep the smoke warm, it's best to locate it inside the house. This uses the house as insulation for the flue and allows some heat release into the home. An indoor chimney won't lose its heat to the outdoors, so it takes less heat from the stove to heat it up and keep it warm.

Flue Sizing

The inside size of a chimney for an 'airtight' stove should match the size of the stove's flue outlet. When a chimney serves an airtight, more is not better; in fact, it can be a disadvantage. Hot gases lose heat through expansion; if we vent a stove with a 152 mm (6") flue collar {181 sq cm (28 sq. in.) area} into a 254 x 254 mm (10" x 10") flue, the gases expand to over three times their original size. This cools the gases, which weakens draft strength. If an oversized flue is also outside the house, the heat it absorbs gets transferred to the outdoor air and the flue usually stays cool.

It's common for a masonry flue, especially one serving a fireplace, to be oversized for the stove. It can take quite a while to warm up such a flue, and the results can be disappointing. The best solution to an oversized flue is an insulated steel chimney liner, the same diameter as the stove or insert's flue outlet; the liner keeps the smoke warm, and the result is a stronger draft. An uninsulated liner is a second choice - the liner keeps the smoke restricted to its original size, but the smoke still must warm up the air around the liner. This makes the warm-up process take longer.

Pipe & Chimney Layout

Every turn the smoke must take as it travels to the chimney top will slow it down. The ideal pipe and chimney layout is straight up from the stove, to a completely straight chimney. If you're starting from scratch, use this layout if possible. If the stovepipe must elbow to enter a chimney, locate the thimble about midway between the stove top and the ceiling. This achieves several goals: it lets the smoke speed up before it must turn, it leaves some pipe in the room for heat transfer, and it gives you long-term flexibility for installing a different stove without relocating the thimble.

There should be no more than 2.4 m (8') of single-wall stove pipe between the stove and a chimney; longer runs can cool the smoke enough to cause draft and creosote problems. Use double-wall stove pipe for long runs.

Single venting

Each 'airtight' stove requires its own flue. If an airtight stove is vented to a flue that also serves an open fireplace, or a leakier stove, it's easier for the chimney draft to pull air in through those channels than it is to pull air through the airtight, and performance suffers. Imagine a vacuum cleaner with a hole in the hose to see the effect here. In some cases the other appliance can even cause a negative draft through the airtight, and result in a dangerous draft reversal.

Creosote

Creosote is a by-product of slow wood-burning. It's an organic tar that can condense in the flue if it's dense in the smoke, and slow-moving, and cools off to less than 143° C (290° F). Condensed creosote is volatile, and can generate chimney fires if it gets hot enough. All the features that affect chimney draft also affect creosote condensation - so use whatever combination of installation features and operational steps will encourage good draft and minimize creosote production.

Because letting the smoke cool off and slow down is one of the keys to creosote production, it makes sense to line a chimney to match the stove's outlet size, for safety reasons as well as performance. Consult a qualified installer and check local and national codes for recommended chimney size.

Fuel

Even the best stove installation will not perform well with poor fuel. The best wood fuel is hardwood that has air-dried 12-18 months. Softwood burns, but not as long as hardwood. Fairly 'green' wood has a good amount of moisture in it; it will burn, but some of the heat potential is used to drive the remaining moisture off the wood. This reduces the amount that reaches your home and can contribute to a creosote problem. There are moisture meters available for firewood; you can also judge your wood by its appearance and weight. If you get it green, lift a piece and get a sense of its weight; it can lose a third or more of its weight as it dries. Also look at the ends of a log; as it dries it shrinks and often cracks. The more weathered and cracked a piece is, the drier it is.

Dry wood burns readily with a good chimney draft. But with modern stoves, especially catalytic ones, the wood can be too dry. While extra-dry wood has little creosote in it, the remainder can 'gas out' from the wood quickly and densely enough to overload the catalytic burner. If you hear a rumbling or roaring noise, like a propane torch, from the stove, that is a sign the catalyst is seriously overfiring. The catalyst is a platinum film on a ceramic base; the metal can get to higher temperatures than the ceramic can take, and overfiring the catalyst can break it. Dry wood can also burn out faster than you want. If your dry wood burns out too quickly or overloads the catalyst you can mix in greener wood to slow the fire down.

Back-puffing

Back-puffing results when the fire produces volatile gases faster than the chimney draft pulls them out of the firebox. The gases back up in the firebox till they're dense enough and hot enough to ignite. If your stove back-puffs, you should open the damper to let the smoke rise to the flue more quickly, let more air into the

firebox, and avoid big loads of firewood. You should always see lively, dancing flames in the firebox; a lazy, smoky fire is inefficient, can lead to back-puffing, and can contribute to creosote buildup in the chimney.

Draft Testing

An easy way to test your chimney draft is to close the stove's damper, wait a few minutes to let the airflow stabilize, then see whether you can vary the strength of the fire by swinging the air control open and closed. Results are not always instant; you may need to wait a few minutes for a change in the air control setting to have an effect on the fire. If there's no change, then the draft isn't strong enough yet to let you close the damper, and you'll need to open it for a while longer and manage the fire with the air inlet until the draft strengthens. If you keep track of your burning habits and relate them to their effects on the stove's operation, you'll be rewarded with good performance and a safe system.

In many cases, local or national codes require the installation of permanently open air vents, particularly with larger appliances (i.e. above 5 kW). Refer to these codes to determine specific requirements for your installation.

Negative Pressure

Good draft also depends on a supply of air to the stove; a chimney can't pull in more air than is available to it. Sluggish draft results when a house is tight enough to prevent the ready flow of air to the stove, or by competition between the stove and other equipment that sends indoor air outside - especially power-driven equipment like range hoods, clothes dryers, etc. If the chimney draws well with all other equipment turned off (or sealed, in the case of fireplaces and/or other stoves), then you simply need to be careful with timing the use of the other gear. If you need to crack a nearby window or door to enable the chimney to pull well, that's a sign that you should install an outside-air intake to bring combustion air directly to the stove. For most of our stoves we carry adapters to attach to the stove to connect an air duct for outdoor combustion air.

Conclusion

Wood-burning is an art rather than a science. Once the stove and chimney system are in place, you can only vary your technique, mostly your timing, to achieve good results. If you keep track of your burning habits and relate them to their effects on the stove's operation, you'll be rewarded with good performance and a safe system.

Maintenance

Below you will find important information on general care, inspection and maintenance of your Vermont Castings stove. Should it become necessary, use only replacement parts recommended by your authorized dealer

Keep Your Stove Looking New and Working Its Best

Let the fire in the stove go out and allow the stove to cool completely before beginning any maintenance procedure.

Care of the Cast Iron Surface

An occasional dusting with a dry rag will keep the painted cast iron of your Encore looking new.

The stove's paint can be touched up as needed. First, mask the areas, such as enamelled parts, glass, or handles, around the spot to be painted. Clean the spot with a wire brush. Remove the griddle and set it aside.

Then, touch up the stove with Vermont Castings' high temperature stove paint. Apply the paint sparingly; two light coats of paint are better than a single heavy one.

Care of the Porcelain Enamel Surface

Use a dry or slightly damp rag or soft brush to remove spills or stains. For difficult jobs that require a cleaning agent, use only a kitchen appliance cleaner or polish recommended for use on enamel surfaces.

Cleaning the Glass

Most of the carbon deposits on the glass will burn off during hot fires.

However, the ash residue that accumulates on the glass surface should be removed regularly to prevent etching. To clean the glass, follow this procedure:

- Be sure the glass is completely cool.
- Clean the glass with water or a cleaner made especially for this purpose. Do not use abrasive cleaners.
- Rinse the glass thoroughly.
- Dry the glass completely.

Replace Broken Glass Immediately

Do not operate your stove if the glass in the doors is damaged.

If you need to replace the glass, use only the high temperature ceramic glass supplied by Vermont Castings. Do not use substitutes. Be sure to specify left or right glass; the panels are not interchangeable.

Removing the Glass

The left door is slightly different from the right in that one of its retainer clips is located under the door manifold.

1. Remove the right and left door assemblies by raising the door until the lower hinge pin clears its drilling; then, angle the door bottom slightly outward and pull down to release the upper hinge pin. Place the doors face down on a padded work surface.
2. Remove the screws that hold the retainer clips in place, and remove the clips. On the right door, remove the Phillips head machine screw that secures the door manifold to the upper right of the door (as it faces you). Swing the door manifold out of your way and remove the clip beneath it as well.
3. Carefully lift the broken glass panel from the door.

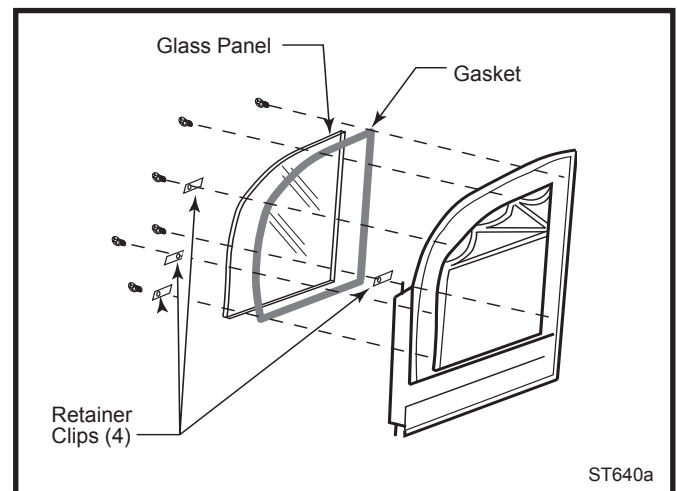


Fig. 29 An exploded view of the glass assembly for the left door.

Installing the Glass

Check the gasket around the window; it should be soft and resilient so the glass will seal properly against the door. Replace the gasket if it has hardened or if it is compressed.

1. Center the first pane of glass on the gasket. Be sure to place the glass so the infrared reflective coating is on the exterior side.
2. Secure the glass on both doors with the retainer clips except the one that belongs under the manifold of the right door, but leave the screws a little loose. Position the remaining clip under the right door manifold, and swing the manifold back into position on the door. Make sure the screw passing through the end of the manifold nearest the center of the door also passes through the retainer clip.

3. Replace the doors on the stove. Remove the griddle so you can reach in through the opening to position the manifold. Move the door manifold as high as possible without actually touching the upper air manifold, and as far toward the center of the stove as possible without hitting the door manifold on the other door. Tighten all screws.
4. Open and close the doors to check that the door manifold does not interfere with either of the other manifolds. Adjust as necessary.

Check the Operation of the Primary Air Shutter

The primary air shutter is located at the back of the ash drop and is visible from the back of the stove. (Fig. 30) The shutter must open and close freely when you move the thermostat lever. If it does not, remove any obstruction. If you need assistance, consult your local Vermont Castings Authorized Dealer.

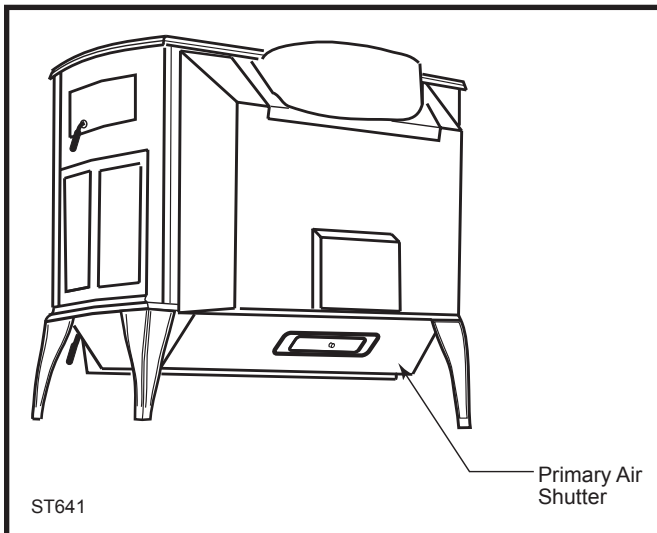


Fig. 30 The primary air shutter must move freely.

Do not change the adjustment of the cable in an attempt to gain increased firing. The air shutter controls how much air can enter the stove, but chimney draft is the force that pulls air into the stove. If changing the thermostat handle position does not lead to changes in the fire's intensity, it is probably due to weak chimney draft (in the case of a weak fire you can't increase) or an air leak in the stove (in the case of a fire you can't decrease).

Adjust the Damper as Needed

The tension on the Encore's damper is adjustable to compensate for compression of the gasket that seals the damper to the upper fireback. To adjust the damper:

1. Remove the griddle. Loosen the lock nut at the center of the damper.
2. Turn the pressure screw approximately one half turn clockwise.

3. Tighten the lock nut. Keep the pressure screw from turning as you tighten the nut. Re-test the damper.

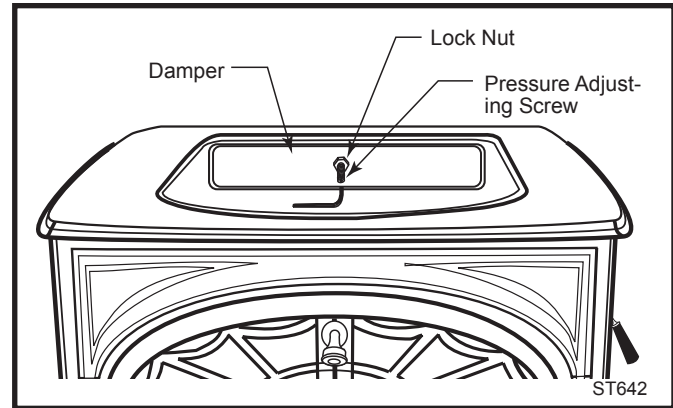


Fig. 31 Adjusting the damper.

Tighten the Damper Handle as Needed

A handle on the left side of the stove controls the damper. The handle attaches to the damper rod with a set screw. Periodically check the set screw and tighten as necessary.

How to Adjust the Door Latches

The Encore's front doors, as well as its ash pan door, should close securely to prevent accidental opening and to keep air from leaking into the stove. On adequately adjusted doors, the handles should resist slightly as they are turned to the closed position and the doors themselves should be drawn slightly toward the stove.

Over time, the gasket around the doors will compress and the latch may need adjustment.

To adjust the handle on the front doors, open the door on which the handle is mounted and rotate the handle one full turn counterclockwise. Since this handle is threaded into the front door, a complete revolution will adjust it enough so that the doors close securely.

To adjust the latch on the ash pan door, loosen the small lock nut, rotate the striker screw a half-turn, and re-tighten the small lock. Hold the striker screw to keep it from turning as you tighten the lock nut. Make repeated small adjustments until the setting is right.

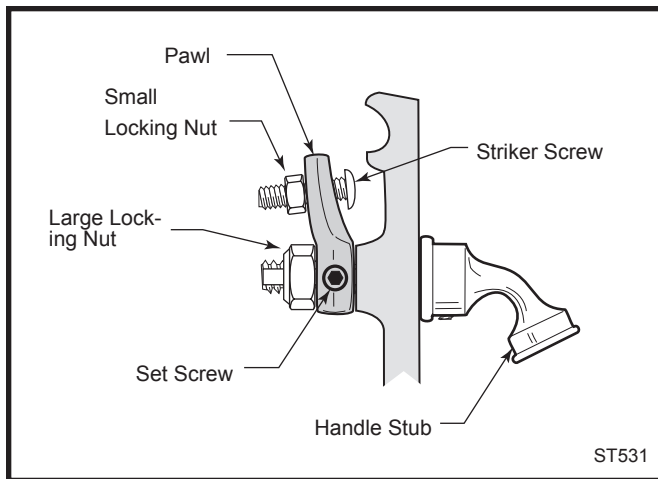


Fig. 32 Turn the door latch striker screw in or out to tighten or loosen the door latch.

Replace the Stove Gaskets as Needed

Your Encore uses rope-type fiberglass gaskets to make a tight seal between some parts. With use, particularly on those parts that move, gaskets can become brittle and compressed and can begin to lose their effectiveness. These will need periodic replacement.

All of the gaskets are made of fiberglass. The sizes of replaceable gasket are listed below, along with their applications.

Gasket Diameter	...And the Parts it Seals
5/16"	The griddle to the stove top (wire reinforced gasket)
3/8"	The ash door to the front of the ash drop
3/16"	The outer glass panes to the doors
5/16"	The damper to the upper fireback; the front doors to the stove front; and the doors to each other.

If you need to change a gasket, first obtain an appropriate replacement from your Vermont Castings' Authorized Dealer.

Wait until the fire is out and the stove has cooled. Be sure to follow the standard safety procedure for working with dusty materials: Wear safety goggles and a dust mask.

The procedure for replacing gaskets is the same regardless of the gasket location. Follow these steps:

1. Remove the existing gasket by grasping an end and pulling firmly.
2. Use a wire brush or the tip of a screwdriver to clean the channel of any remaining cement or bits of gasket. (Fig. 33) Remove stubborn deposits of cement with a cold chisel if necessary.

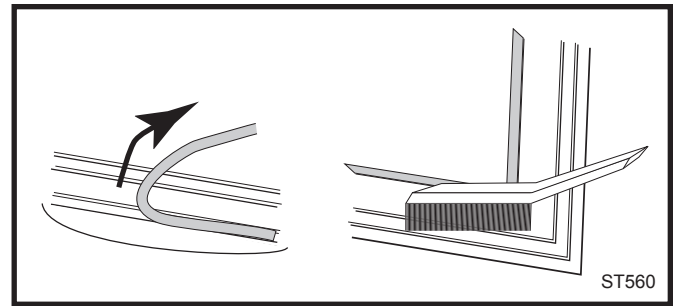


Fig. 33 Remove gasket then clean channel with wire brush.

3. Determine the correct length of the appropriate-sized gasket by laying it out in the channel. Allow an extra 25-51 mm (1-2"), and mark the spot to be cut. (Fig. 34)
4. Remove the gasket from the channel, place it on a wood cutting surface, and cut it at the marked spot with a utility knife. Twist the ends slightly to keep the gasket from unraveling.

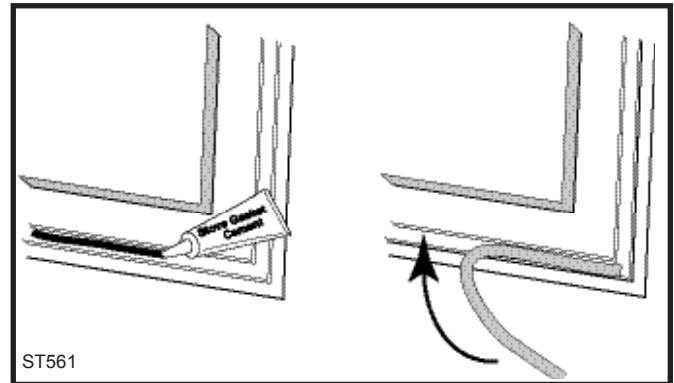


Fig. 34 Lay a bead of gasket cement then press gasket in place.

5. Lay an unbroken 3 mm (1/8") bead of gasket cement in the newly-cleaned channel.
6. Starting at one end, press the gasket into the channel. (Fig. 34) Ensure a good joint where the gasket meets before trimming any excess. Do not overlap the gasket ends or leave ends with ragged edges.
7. Press the gasketed part firmly against its normal mating surface to seat the gasket evenly in its channel. Close and latch the door to do this, or tap other parts with the rubber mallet (or hammer/block of wood).
8. Clean any excess cement from around the channel, then let the cement that holds the new gasket dry thoroughly.

Adjust the Door If Necessary

The stove's door(s) may need adjustment after you have regasketed it. Initially, it may require loosening to accommodate the new gasket; after a few weeks, it may need tightening to compensate for compression of the new gasket. The directions for adjusting the doors are on Page 20.

Permanent Encore Multi-Fuel Gaskets

Other gaskets form seals between non-moving parts, but these are not subject to the same wear and deterioration as gaskets on moving parts. It is unlikely that you will ever need to replace these gaskets unless the involved parts are disassembled and then put back together. If this is the case, the job should be done only by a qualified service technician.

5/16" diameter gasket seals the following parts:

- The flue collar to the stove back
- The lower fireback to the sides

The Chimney System

Creosote

Your Encore is designed to reduce creosote build-up significantly. However, regular chimney inspection and maintenance must still be performed. For safety, good stove performance, and to protect your chimney and chimney connector, inspect your chimney and chimney connector on a regular schedule. Clean the system if necessary. Failure to keep the chimney and connector system clean can result in a serious chimney fire.

When wood is burned slowly, it produces tar, organic vapors and moisture that combine to form creosote. The 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 within the flue system that can damage the chimney and overheat adjacent combustible material. If a significant layer of creosote has accumulated —3 mm (1/8") or more — it should be removed to reduce the risk of a chimney fire.

If you do experience a chimney fire, act promptly to:

- **Close the damper and thermostat lever.**
- **Get everyone out of the house.**
- **Call the Fire Department.**

You should inspect the system every two weeks during the heating season as part of a regular maintenance schedule. To inspect the chimney, let the stove cool completely. Then, using a strong light, sight up through the flue collar into the chimney flue. If it is not possible to inspect the flue system in this fashion, the stove must be disconnected to provide better viewing access.

Clean the chimney using a brush the same size and shape as the flue liner. Flexible fiberglass rods are used to run the brush up and down the liner, causing any deposits to fall to the bottom of the chimney where they can be removed through the clean-out door.

Clean the chimney connector by disconnecting the sections, taking them outside, and removing any deposits with a stiff wire brush. Reinstall the connector sections after cleaning, being sure to secure the joints between individual sections with sheet metal screws.

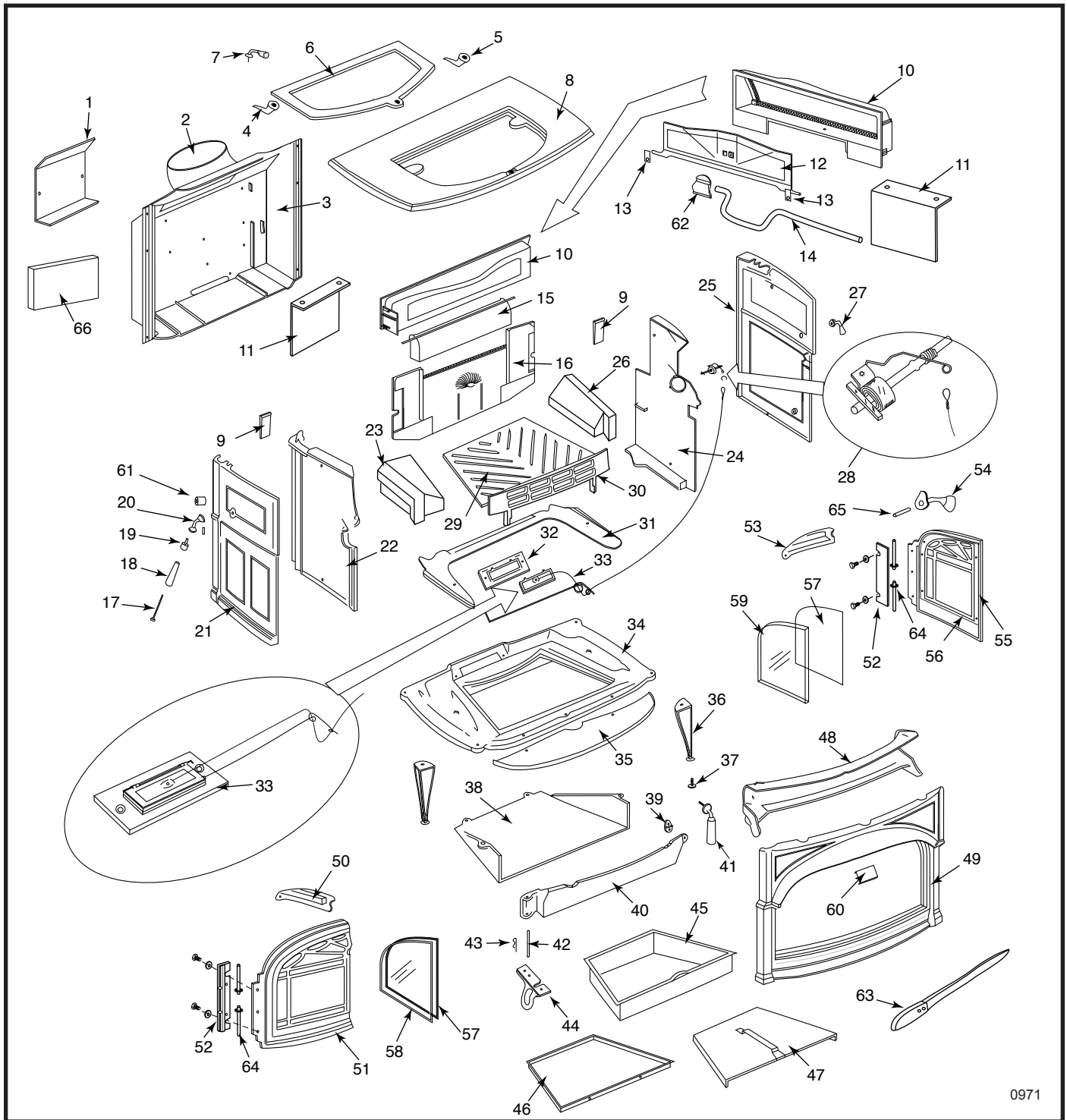
If you cannot inspect or clean the chimney yourself, contact your local Vermont Castings' Dealer or a professional chimney sweep.

Annual Maintenance

Every Spring, at the end of the heating season, perform a thorough cleaning, inspection and repair:

Thoroughly clean the chimney and chimney connector.

- Inspect the chimney for damage and deterioration. Replace weak sections of prefabricated chimney. Have a mason make repairs to a masonry chimney.
- Inspect the chimney connector and replace any damaged sections.
- Check gasketing for wear or compression, and replace if necessary.
- Inspect and clean the catalytic element, and vacuum out the ash at the bottom of the back plate after removing the lower fireback. Lightly clean the refractory assembly that houses the element but be careful not to damage the refractory material, which is very fragile.
- Check door and damper handles for tightness. Adjust if needed.
- Check heat shield screws. Tighten as necessary.
- Clean dust from the inner sides of bottom, rear and connector heat shields.
- Remove ashes from the ash pan and replace with moisture absorbing material (such as cat litter) to keep the stove interior dry.
- Touch up the paint on black stoves.



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MHSC reserves the right to make changes in design, materials, specifications, prices and discontinue colors and products at any time, without notice.

Encore Multi-Fuel Heater

Model 2547CE

Item Description	Part Number
1. Secondary Air Cover Plate	1601771
2. Flue Collar (8")	See Chart Pg. 28
3. Back	See Chart Pg. 28

Item Description	Part Number
4. Left Griddle Quad (Pre-2010)	1301807
4a. Left Griddle Quad	30005118

Encore Multi-Fuel Heater

Model 2547CE (continued)

Item Description	Part Number
5. Right Griddle Quad (Pre-2010)	1301832
5a. Right Griddle Quad	30005119
6. Griddle	1300797
7. Griddle Handle Assembly	30002775
8. Top	See Chart Pg. 28
9. Wedge (2)	1301810
10. Upper Fireback ¹	1308639
11. Flue Deflector	1409083
12. Damper ¹	1308631
13. Damper Tabs (2) ¹	1601488
14. Damper Rod	1600851
15. Combustion Throat Hood	1308625
16. Lower Fireback	1308646
17. Damper Handle Screw	1201294
18. Damper Handle	1600620
19. Handle Insert	30002714
20. Steel Handle Stub	30002720
21. Left Side	See Chart Pg. 28
22. Left Air Plate (Inner Side)	1308621
23. Left Firebrick	1601885
24. Right Air Plate (Inner Side)	1308622
25. Right Side	See Chart Pg. 28
26. Right Firebrick	1601884
27. Thermostat Handle Assembly	30002716
28. Thermostat Assembly	5005470
29. Bottom Grate	1307434
30. Front Grate	1308640
31. Primary Air Tube Cover Plate	1308609
32. Primary Air Frame	1307411
33. Primary Air Regulatory System	5000337
34. Bottom	1308638
35. Ashlip	See Chart Pg. 28
36. Leg	See Chart Pg. 28

Item Description	Part Number
37. Leg Leveler	1201745
38. Ashdrop	1308603
39. Pawl Assembly Short Adjustment	30002362
40. Ashdoor	1308607
41. Ashdoor Handle (wood)	1600663
42. Ashdoor Hinge Pin	1208608
43. Cotter Pin, Ashdoor	30001749
44. Ashdoor Hinge Support	1308605
45. Ashpan	1601025
46. Ashpan Bracket	1601039
47. Ashpan Cover	1601027
48. Airwash Manifold	1308615
49. Front	See Chart Pg. 28
50. Left Door Air Manifold	1307403
51. Left Door	See Chart Pg. 28
52. Door Hinge Strip	1308634
53. Right Door Air Manifold	1307404
54. Door Handle Assy w/Set Screw	30002721
55. Right Door	See Chart Pg. 28
56. Door Gasket	1203588
57. Gasket, Fiberglass 3/16"	1203556
58. Left Door Glass ²	1408630
59. Right Door Glass ²	1408629
60. Door Latch	1408628
61. Spacer	1201779
62. Damper Ramp ¹	1301811
63. Slicer/Poker	5005708
64. Long Hinge Pins (4)	1600457
65. SS, SOC 7/16-20 x 1, Cup Pt. Blk	1200334
66. Rear Insulation	30004064

1. Included in #5008649 upper fireback assembly.
2. Not interchangeable due to a heat-reflective coating on the room side of the panels.

Encore Multi-Fuel Heater

Model 2547CE (continued)

Shell Enamel Parts - Encore Multi-Fuel Model 2547CE						
Part Name	Classic	Green	Moonlight	Sand	Red	Blue
Top	1308618	2318618	2378618	1328618	2328618	1338618
Left Side	1308623	2318623	2378623	1328623	2328623	1338623
Right Side	1308619	2318619	2378619	1328619	2328619	1338619
Flue Collar	1304280	2314280	2374280	1324280	2324280	1334280
Front	1308635	2318635	2378635	1328635	2328635	1338635
Ashlip	1307406	2317406	2377406	1327406	2327406	1337406
Left Door Subassembly	5008648	30001150	30001345	30001146	30001144	30001148
Left Door Only	1308637	2318637	2378637	1328637	2328637	1338637
Right Door Subassembly	5008647	30001149	30001344	30001145	30001143	30001147
Right Door Only	1308636	2318636	2378636	1328636	2328636	1338636
Single Leg	1307427	2317427	2377427	1327427	2327427	1337427
Back	1308620	2318620	2378620	1328620	2328620	1338620

Warranty

Limited 3 Year Warranty

MHSC warrants that this woodburning stove will be free of defects in material and workmanship for a period of three years from the date you receive it, except that the catalyst, thermostat assembly, handles, glass door panels, cement, and gasketing shall be warranted as described below.

MHSC will repair or replace, at its option, any part found to be defective upon inspection by a MHSC Authorized Dealer. The customer must return the defective part or the stove, with shipping prepaid, to the Authorized Dealer or pay for any Authorized Dealer in-home travel fees or service charges for in-home repair work. It is the dealer's option whether the repair work will be done in the customer's home or in the dealer's shop. If, upon inspection, the damage is found to be the fault of the manufacturer, repairs will be authorized at no charge to the customer for parts and/or labor.

Any woodburning stove or part thereof that is 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 six (6) months, whichever is longer.

Limited 1 Year Warranty

The following parts of the woodburning stove are warranted to be free of defects in material and workmanship for a period of one year from the date you receive it: The thermostat assembly, handles, glass door panels, cement, and gasketing. Any of these items found to be defective will be repaired or replaced at no charge, upon the return of the part with postage prepaid to a MHSC Authorized Dealer.

Any part 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 six (6) months, whichever is longer.

Exclusions & Limitations

1. This product must be installed or serviced by a qualified installer, preferably NFI or WETT (Canada) certified, as prescribed by the local jurisdiction. It must be installed and operated at all times in accordance with the Installation and Operating instructions furnished with the product. Any alteration, willful abuse, accident, or misuse of the product shall nullify this warranty.

2. This warranty is transferable; however, proof of original retail purchase is required.

3. This warranty does not cover misuse of the this stove. Misuse includes overfiring which will result if the stove is used in such a manner as to cause one or more of the plates to glow red. Overfiring can be identified later by warped plates and areas where the paint pigment has burned off. Overfiring in enamel fireplaces is identified by bubbling, cracking, chipping and discoloration of the porcelain enamel finish. MHSC offers no warranty on chipping of enamel surfaces. Inspect your woodburning stove prior to accepting it for any damage to the enamel.

4. This warranty does not cover misuse of the stove as described in the Owner's Guide, nor does it cover any stove which has been modified unless authorized by a MHSC representative in writing. This warranty does not cover damage to the stove

caused by burning salt saturated wood, chemically treated wood, or any fuel not recommended in the Owner's Guide.

5. This warranty does not cover a stove repaired by someone other than a MHSC Authorized Dealer.

6. Damage to the unit while in transit is not covered by this warranty but is subject to a claim against the common carrier. Contact MHSC Authorized Dealer from whom you purchased your stove or MHSC if the purchase was direct. (Do not operate the stove as this may negate the ability to process the claim with the carrier.)

7. Claims are not valid where the installation does not conform to local building and fire codes or, in their absence, to the recommendations in our Owner's Guide.

8. The salt air environment of coastal areas, or a high-humidity environment, can be corrosive to the porcelain enamel finish. These conditions can cause rusting of the cast iron beneath the porcelain enamel finish, which will cause the porcelain enamel finish to flake off. This warranty does not cover damage caused by a salt air or high-humidity environment.

9. MHSC shall have no obligation to enhance or update any unit once manufactured.

IN NO EVENT SHALL MHSC BE LIABLE FOR INCIDENTAL AND CONSEQUENTIAL DAMAGES. ALL IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS, ARE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. THIS WARRANTY SUPERCEDES ALL OTHER ORAL OR WRITTEN WARRANTIES.

Some states do not allow the exclusion or limitations of incidental and consequential damages or limitations on how long an implied warranty lasts, so the above limitations may not apply to you. This warranty gives you specific rights and you may have other rights which vary from state to state.

How to Obtain Service

If a defect is noted within the warranty period, the customer should contact a MHSC Authorized Dealer or MHSC if the purchase was direct with the following information:

1. Name, address, and telephone number of the purchaser.
2. Date of purchase.
3. Serial number from the label on the back.
4. Nature of the defect or damage.
5. Any relevant information or circumstances, e.g., installation, mode of operation when defect was noted.

A warranty claim will then start in process. MHSC reserves the right to withhold final approval of a warranty claim pending a visual inspection of the defect by authorized representatives.

MHSC

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