

# JOTUL



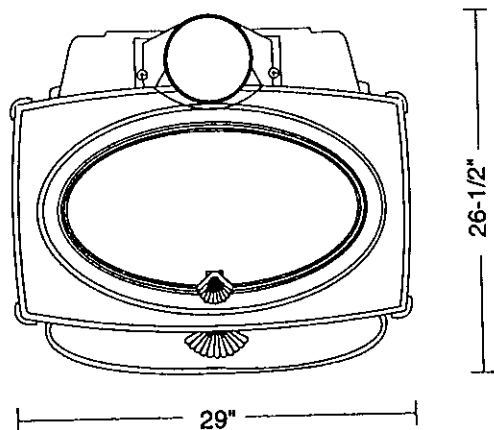
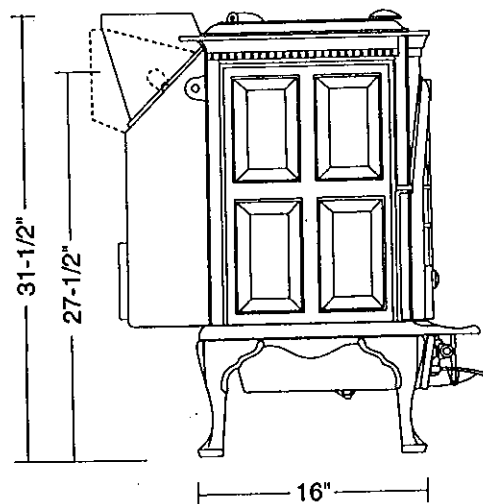
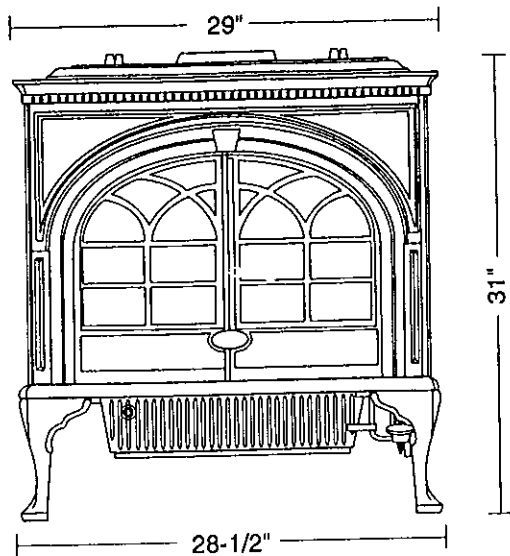
## FIRELIGHT

### Installation and Operation Instructions

PLEASE READ THIS ENTIRE MANUAL BEFORE YOU INSTALL AND USE YOUR NEW HEATER.  
Save these instructions for future references.

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

Tested and listed by Inchcape Testing Services-Warnock Hersey of Middleton, Wisconsin.  
Tested to UL 737, UL 1482, ULC S627. Report No. 13322-231.



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## 1. General information

Jøtul is the world's largest manufacturer of solid fuel burning appliances and has been making cast iron wood and coal stoves since 1853. Your new Jøtul stove has inherited the benefits learned from more than 140 years of producing stoves. With proper care and operation, your new Jøtul stove will last many, many years.

The Owner's Manual describes the installation and operation of the Jøtul Firelight Model 12 catalytic equipped wood heater. This heater meets the U.S. Environmental Protection Agency's emission limits for wood heaters sold after July 1, 1990. Under specific test conditions, this heater has shown heat output at rates ranging from 10,500 to 32,100 BTU's per hour.

This wood heater contains a catalytic combustor which needs periodic inspection and replacement for proper operation. See the Catalyst sections of this manual for more information. It is against the law to operate this woodstove in a manner which is inconsistent with the operating instructions in this owner's manual or if the catalytic element is deactivated or removed.

When installing, operating, and maintaining your Jøtul Firelight, follow the guidelines given in these instructions. Save these instructions, and make them available to anyone using the stove.

**A number of areas of the U.S. and Canada require a building permit to install a solid-fuel burning appliance. NFPA 211 (National Fire Protection Association, Standard for Chimneys, Fireplaces, Vents, and Solid Fuel Burning Appliances) or CAN/CSA B-365 (Installation Code for Solid-Fuel Burning Appliances and Equipment) may apply to the installation of solid fuel burning appliances in your area. Your Jøtul dealer has knowledge of your local codes and can provide assistance in making sure your installation is safe and legal. Also contact your insurance representative, building inspector, or fire officials to determine what regulations apply in your area.**

The Jøtul Firelight has been tested and listed to ANSI-UL 737, ANSI-UL 1482, and ULC S627 by InChcape Testing Services-Warnock Hersey of Middleton, Wisconsin.

In the U.S. the Jøtul Firelight is approved for use in mobile homes when installed in accordance with the requirements of Mobile Home Construction and Safety Standards published by the Department of Housing and Urban Development (UM 84 HUD) and with the installation instructions included with the Firelight Mobile Home Installation Kit. This stove is not approved for use in Mobile Homes in Canada.

## 2. Hazards Connected to the Use of the Jøtul Firelight Woodstove.

Any use of fire in the house represents a certain danger. With intense overfiring, temperatures on the surface of the Firelight can exceed 1000 degrees F. (536 degrees C).

Please comply with the following warnings. Hot while in operation. Keep children, clothing and furniture away. Contact may cause skin burns.

- Never overfire the stove. If any part of the stove or chimney glows, you are overfiring, and a house fire or serious damage to the stove or chimney could result. Immediately close down the air control if you notice this condition.
- Teach children that the stove is hot and should not be touched.
- Do not use chemicals or fluids to start the fire. They can ignite with explosive force, causing bodily injury or death. Keep all such liquids far away from the heater while it is in use. Some fuel will during combustion separate carbon monoxide and generate it in the burnchamber. Carbon monoxide is toxic, so please follow guidelines in this manual for reloading to avoid smoke «roll-out» from the burnchamber.
- Never use the stove if there are combustible gases in the house. The fumes from certain cleaning fluids, adhesives, and paints are a few examples of combustible gases. Remember, the operating woodstove is a source of "open flame"
- Avoid creating a low pressure condition in the room where the stove is operating. Operating an exhaust fan or a clothes dryer could create a low pressure area, causing poisonous gases to come out of the stove into the room. You can prevent a low pressure condition by providing adequate combustion air within 24" but not closer than 12" from the stove, or by installing the optional outside combustion air manifold system which allows the direct connection of air from outside the house to the stove.
- Never operate the Jøtul fireplace stove with cracked or broken glass. Replace damaged glass only with Jøtul infrared reflective coated ceramic glass panels, 4mm in thickness (available from your Jøtul dealer).
- Do not burn garbage or flammable fluids.
- Keep combustible materials far away from the stove.
- Never modify the stove in any way.
- Do not dry clothes over the stove, since they could fall and ignite.
- Use only seasoned wood in your stove. Never use fireplace coal or synthetic logs.
- Always wear protective gloves when adding fuel to the fire.
- Never operate this stove without the catalyst in place. It is a violation of federal law and could cause an overfiring condition.
- If you for some reason experience «smoke roll-out» from the fireplace, it might activate smoke detectors (if installed).

## 3. Installation

### Safety Notice

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

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

The room heater is not to be connected to any air distribution duct.

### Top Exit or Rear Exit

Your stove is delivered with the flue outlet in the firebox. In the plastic bag of accessories you will find a three-foot strip of 1/8<sup>th</sup> inch round, self-adhesive gasket. Remove the paper backing and apply to the groove in the stove back. Choose the position you wish to vent (rearward or upward) and attach the outlet with the two bolts provided.

### Plan Ahead

A safe stove installation involves several elements. These elements are: (A) the chimney connector, (B) the chimney itself, (C) the connection between the chimney connector and the chimney, and (D) protection of combustible materials in the vicinity of the stove. Each of these elements are equally important for any safe stove installation.

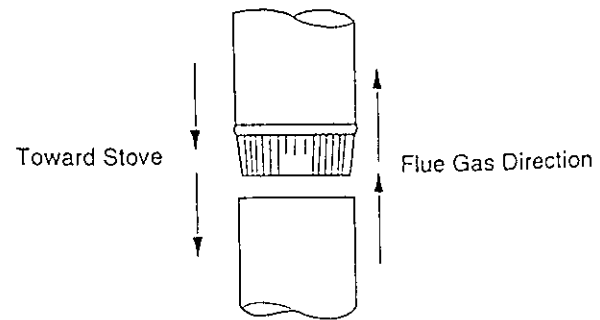
### A. Chimney Connector (Stove pipe)

Do not connect this unit to a chimney flue serving another appliance.

This is also known as stove pipe or flue pipe. It is used to connect the stove to the chimney. The chimney connector should be 6" diameter black steel, 24 gauge minimum.

Do not use aluminum or galvanized steel. They cannot properly withstand the extreme temperatures of a wood fire and can give off toxic fumes when heated. Do not use chimney connector pipe as a chimney.

Chimney connector sections must be attached to the stove and to each other with the crimped end toward the stove (**Figure 1**). This allows creosote to run into the stove and not onto the outside of the pipe. All joints should be secured with three sheet metal screws to ensure that the connector won't vibrate apart in the event of a creosote fire.



**Figure 1**

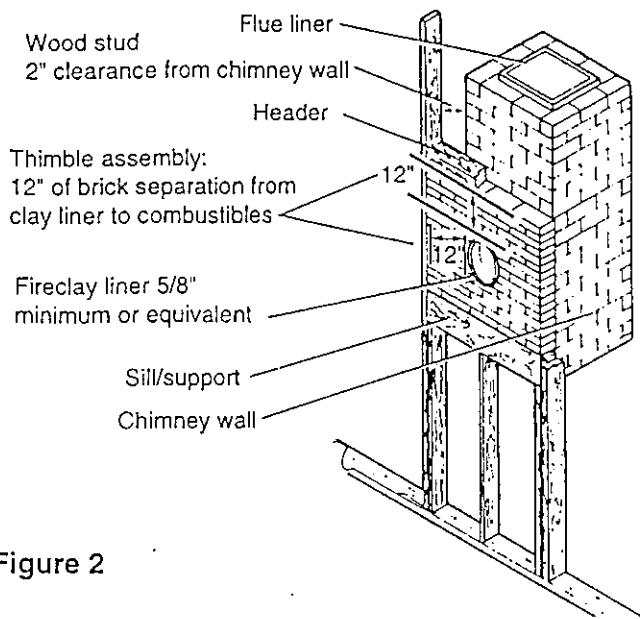
For proper operation the chimney connector should be as short as possible. Horizontal lengths of chimney connector should have an upward slope from the stove of 1/4" per foot. Avoid using more than two 90 degree elbows or total runs of pipe greater than 10'.

No part of the chimney connector may pass through an attic or roof space, closet or other concealed space or through a floor or ceiling. Whenever possible, avoid passing the chimney connector through a combustible wall.

### Wall Pass-Throughs

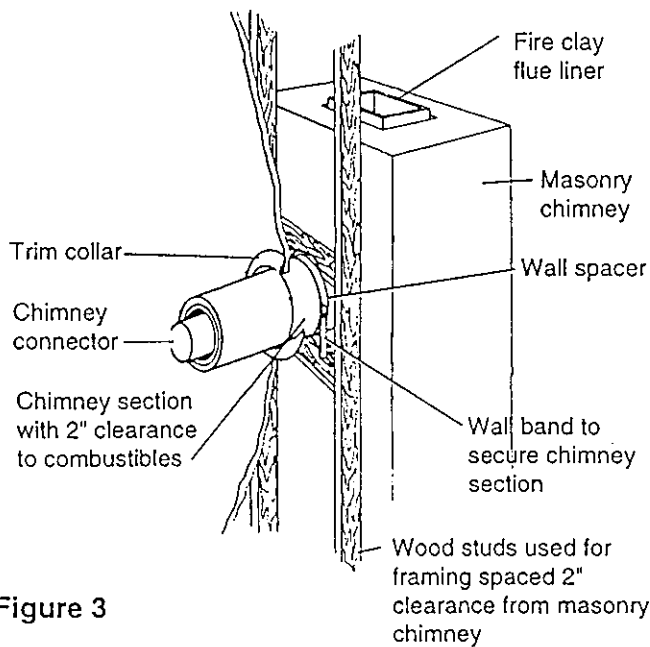
When your installation unavoidably requires that the chimney connector pass through a combustible wall to reach the chimney, extreme care must be taken. In the U.S., the National Fire Protection Association's publication NFPA 211, Standard for Chimneys, Fireplaces, Vents, and Solid Fuel Burning Appliances, permits four methods for passing through a combustible wall. In Canada refer to CAN/CGA B365. Before beginning the installation, contact local building officials to make sure the proposed pass-through method meets local building code requirements.

A commonly used method to pass through a wall directly to masonry chimney requires removal of all combustible material from at least 12" around the entire chimney connector. The space is then filled with at least 12" of brick around a fireclay liner. Be sure to locate it so that the top of the chimney connector will be at least 18" below the ceiling. To construct the brick pass-through, you will need an opening of 30" X 30" minimum. It will be necessary to cut wall studs and install headers and construct a sill frame to maintain proper dimensions and to hold the weight of the brick. Minimum 3 1/2" (4" nominal) thick solid bricks are to be used. The fireclay liner (ASTM C35 or equivalent), minimum 5/8" wall thickness, must not penetrate into the chimney beyond the inner surface of the chimney flue liner and must be firmly cemented in place. If it is necessary to cut a hole in the chimney liner, use extreme care to keep it from shattering. Refractory mortar must be used at the junction to the chimney liner. See Figure 2.



**Figure 2**

**Figure 3** shows an approved installation which uses a section of listed solid insulated factory-built chimney as a pass-through for the chimney connector. The chimney section must have an inside diameter which is 2" larger than the chimney connector, have a minimum length of 12" and must have at least 1" of insulation thickness. The chimney section is installed with at least 2" of air space between the outer chimney wall and adjacent combustible materials.



**Figure 3**

Sheet steel support plates are used on both ends of the chimney section to keep the connector centered. The opening around the chimney section is closed on both sides of the wall with sheet steel plates and the chimney section is securely fastened to the plates. Fasteners used to support the chimney

section should never penetrate the inner flue liner. See NFPA-211 for other approved wall pass-through methods.

### **Double Wall Connector**

Under certain conditions, listed double wall connector may also be used with your Firelight. In a parallel installation, at clearances of less than 18" from the rear wall to the connector, the optional Firelight rear heat shield is required. In a corner, at clearances of less than 20" from either wall to the connector, both the optional rear and bottom heat shields are required. See Figures 13D and 13E under Section 3D, "Clearance to Combustibles" for more information.

## **B. Chimneys**

There are two types of chimneys suitable for Jøtul woodburning stoves. These are either an approved masonry chimney or listed residential type building heating appliance chimney, complying with the requirement for Type HT (2100° F) chimneys per UL 103 or ULC S629, or a codeapproved masonry chimney with a flue-liner.

When selecting a chimney type and the location for the chimney in the house, keep this in mind: it is the chimney that makes the stove work, not the stove that makes the chimney work. This is very important to remember. If you were able to set your new stove out in the yard and build a fire in it, it would be very difficult to keep the fire going without a chimney drawing air through the stove.

This is because a chimney actually creates a suction, called draft, which pulls air through the stove. There are several factors which influence draft. Some of the major factors are: height of the chimney, cross section area, temperature of the chimney, and the location of surrounding trees or buildings. In general, a short masonry chimney on the exterior of a house will give the poorest performance, and masonry chimney inside the house will work the best.

The exterior chimney can be very difficult to warm up, and in extreme northern areas may not work at all. On the other hand, not only is an interior chimney easier to keep warm, but its heat loss is inside the house rather than outside.

This guideline gives the necessary chimney requirements based on the U.S. national code (NFPA 211). However, many local codes differ from the national code to take into account climate, altitude, or other factors. It is important that you check with your local building officials to find out what codes apply in your area before constructing a chimney.

## Masonry Chimneys

Following is a list of the more important minimum requirements for a properly constructed masonry chimney.

- The foundation must be large enough to support the intended chimney without settling.
- The masonry wall of the chimney, if brick or modular block, must be a minimum of 4" nominal thickness. A mountain or rubble stone wall must be at least 12" thick.
- The chimney must have a fireclay flue liner (or equivalent) with a minimum thickness of 5/8" and must be installed with refractory mortar. There must be at least 1/2" air space between the flue liner and chimney wall.
- The fireclay flue liner should measure at least 8" X 8" and not larger 8" X 12". 8" X 8" is preferred. If round fireclay liners are used, the inside diameter should be 6" and not larger than 8". If an existing chimney with larger tiles is used, it should be relined with an appropriate liner.
- No other appliance can be vented into the same flue.
- An airtight cleanout door should be located at the base of the chimney.
- A chimney inside the house must have at least 2" of clearance to the combustible structure. A chimney outside the house must have at least 1" clearance to the combustible structure. Fire stops must be installed at the spaces where the chimney passes through floors and/or ceilings (Figure 4).

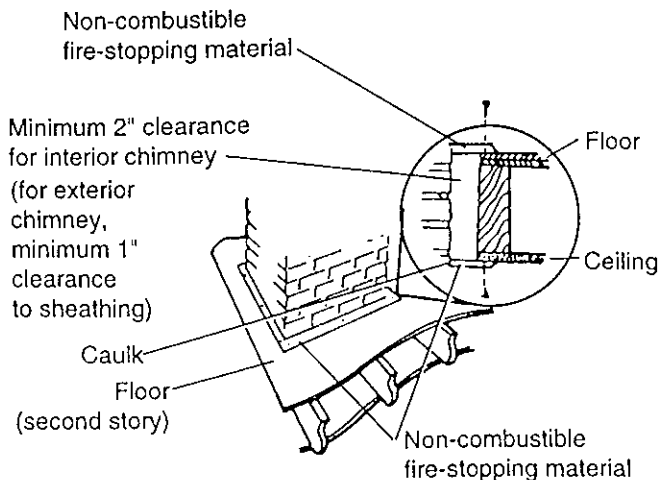


Figure 4

Remember that there must be air space around the chimney, and that insulation must be 2" or more from the chimney (Figure 5).

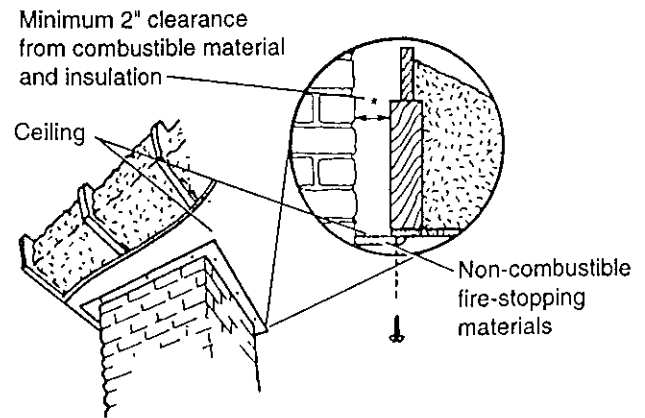


Figure 5

A chimney, either masonry or metal prefabricated, must be the required height above the roof or other obstruction for safety and for proper draft operation. The requirement is that the chimney must be at least 3' higher than the highest point where it passes through the roof and at least 2' higher than the highest part of the roof or structure that is within 10' of the chimney, measured horizontally (Figure 6).

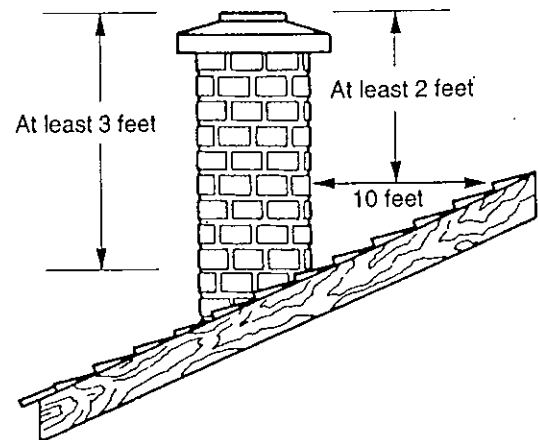


Figure 6

Chimneys shorter than 14' may not provide adequate draft. This could result in smoke spilling into the room from the door or joints in the stove or pipe. In addition, inadequate draft can cause back puffing or catalyst plugging. Too strong a draft, on the other hand, can cause excessive temperatures, damage the catalyst, and shorten burn times. Excessive drafts can be corrected by having your dealer install a barometric damper set at 0.1" of water column. If you suspect you have a draft problem, consult your dealer.

## Listed Metal Prefabricated Chimneys

When a metal prefabricated chimney is used, the manufacturer's installation instructions must be followed precisely. You must also purchase (from the same manufacturer) and install the ceiling support package, or wall pass trough "T" section package, firestops (when needed), insulation shield, roof flashing, chimney cap, etc. Maintain the proper clearance to the structure as recommended by the manufacturer. This clearance is usually a minimum of 2", although it may vary by manufacturer or for certain components.

There are basically two methods of metal chimney installation. One method is to install the chimney inside the residence through the ceiling and the roof (Figures 7,8).

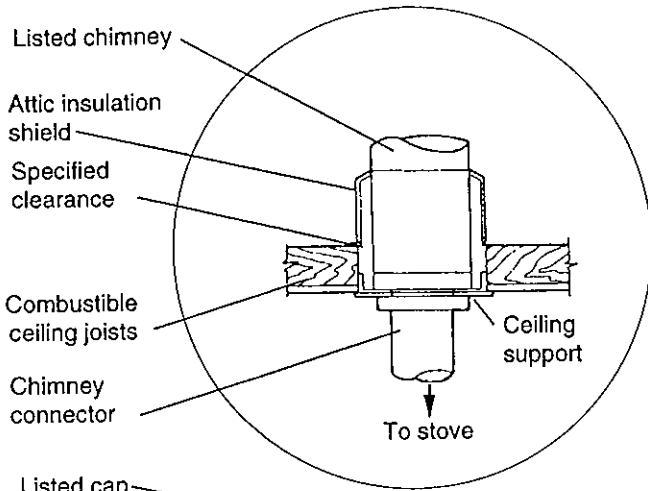


Figure 7

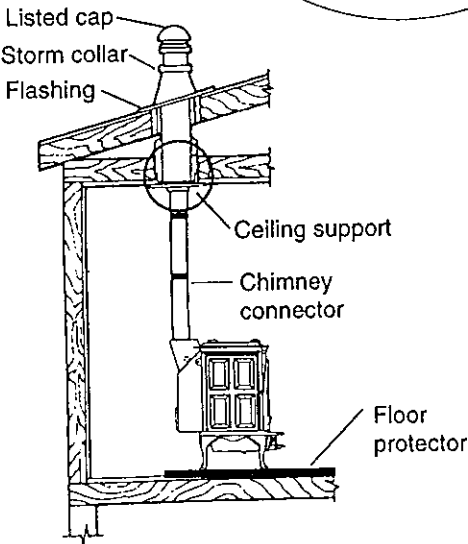


Figure 8

The other method is to install an exterior chimney that runs up the outside of the residence (Figures 9,10). The components illustrated may not look exactly like the system you purchase, but they demonstrate the basic components you will need for a proper and safe installation.

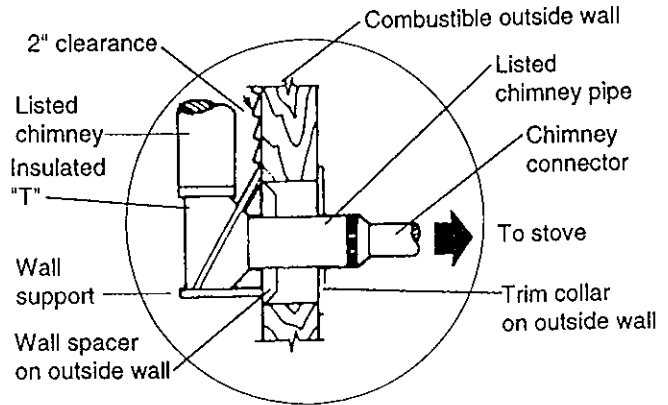


Figure 9

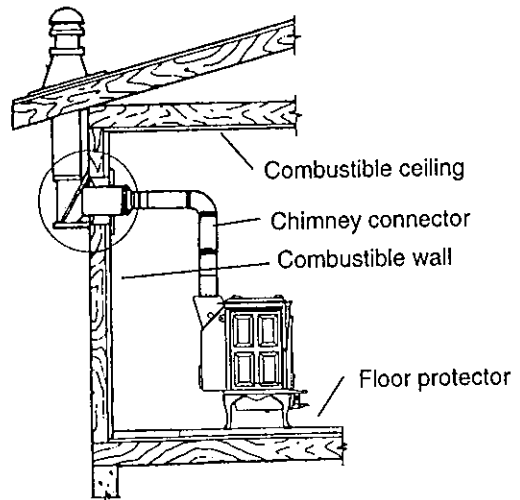


Figure 10

## C. Connection to the Chimney

### Masonry Chimneys

When connection to a masonry chimney, the chimney connector must slide completely inside the chimney thimble (or breach) to the inner surface of flue liner. Make sure the connector does not protrude past the inside of the flue liner as that will reduce the flow area available for the smoke and ultimately cause problems with your chimney system. The chimney connector should be sealed into the thimble with refractory cement and the connector should also be mechanically fastened to the chimney. See Figure 11.

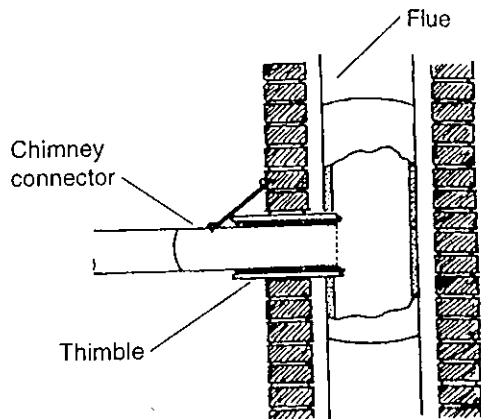


Figure 11

### Prefabricated Chimneys

Always follow the chimney manufacturer's instructions and use all the components required by the manufacturer. Do not take shortcuts or use make-shift methods for securing the chimney connector to the chimney.

## D. Clearances to Combustibles

Good planning for stove placement involves more than just ensuring you have adequately protected combustibles materials. It should also consider your comfort and convenience.

The radiant heat from your stove will warm its surroundings and, in turn, the air. Will the warm air from the stove freely rise and migrate to other areas of the house? Will the stove and hearth interrupt or disturb traffic patterns in the home? Is it convenient to bring wood to the stove? These are but a few of the questions you will want to ask when choosing a site for your stove.

A simple way for visualize the area required by the stove is to cut out a piece of newspaper approximately the same size as the stove (29" X 24").

Place the newspaper on the floor and select the appropriate dimensions from the following sections on floor and wall protection.

### Floor Protection

Your stove must be placed on a non-combustible surface which extends 8" beyond the sides and back of the stove and 16" in the front of the stove. This will result in an overall base which is 45" wide X 48" deep (Figure 12a). This is the minimum floor protector size. Floor protection must also be used under the stove pipe and extend 2" beyond either side of the pipe (Figure 12b).

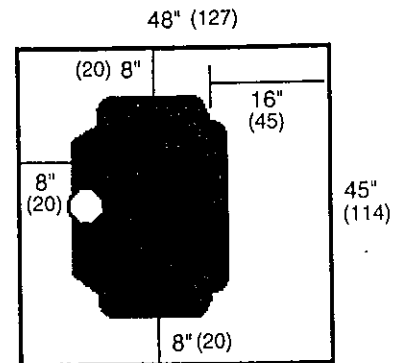


Figure 12a

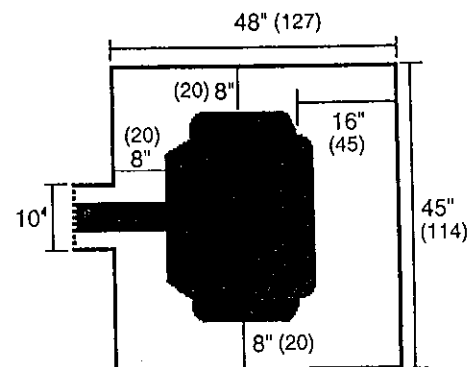


Figure 12b

The floor protector can be made from any non-combustible material. Be sure that there are no gaps where sparks or embers might fall through if you use brick or tile. A good method for making your floor protector is to place a decorative non-combustible millboard or non-combustible tile backer board such as Wonderboard® or Durock®.

A number of pre-manufactured floor protectors are also available. If you choose to use one of these, make sure that it has a safety listing mark on it. Never put any type of floor protection on top of carpeting.



**Clearances to Adjacent Combustible Materials**

The diagrams in Figures 13A-E give the required clearances you must maintain from unprotected combustible materials or objects.

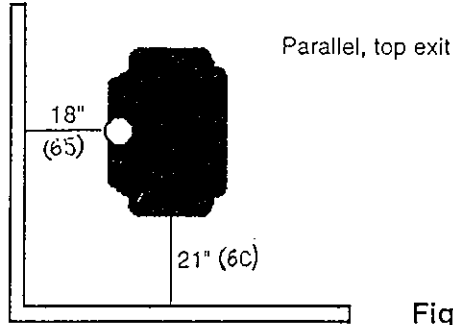


Figure 13a

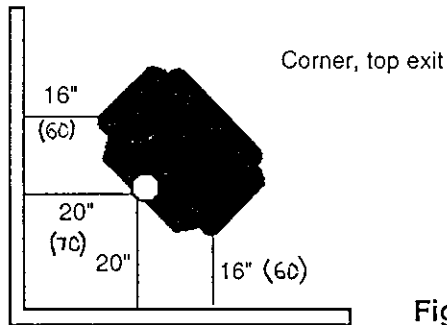


Figure 13b

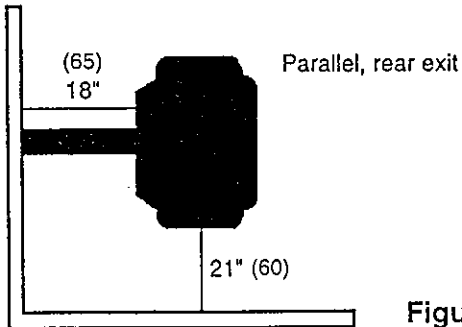


Figure 13c

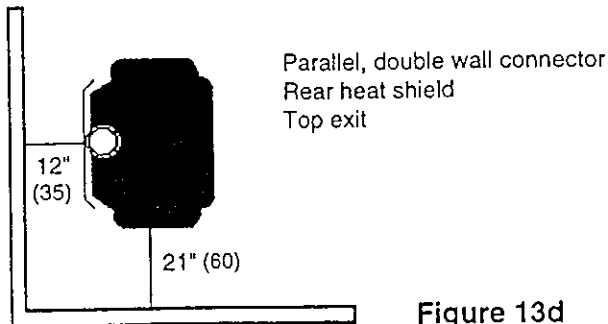


Figure 13d

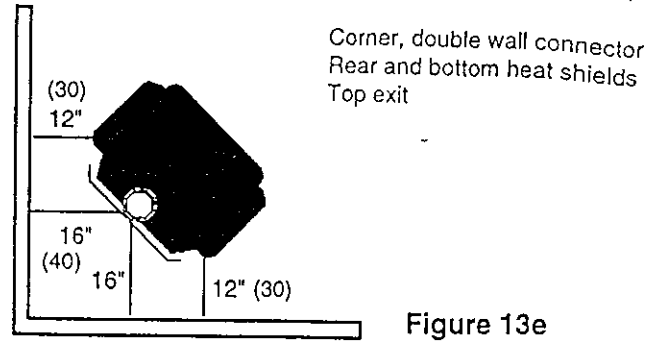


Figure 13e

A combustible is anything that can burn, and in the case of stove installations, these combustibles may not be visible. If you are not sure of the combustible nature of any material in the vicinity of your planned stove installation, you should check with your local fire officials. Remember that "fire resistant" materials are considered combustible; they are difficult to ignite, but they will burn.

**NOTE: THE CLEARANCES EXPRESSED IN INCHES ARE THOSE APPROVED FOR INSTALLATIONS IN THE UNITED STATES. THE CLEARANCES IN PARENTHESES THAT ARE EXPRESSED IN CENTIMETERS ARE THOSE APPROVED FOR INSTALLATIONS IN CANADA. DIFFERENT TEST STANDARDS FOR THE RESPECTIVE COUNTRIES MAY RESULT IN DIFFERENCES IN THE CLEARANCE REQUIREMENTS.**

If you have recently purchased a home which has a stove hearth in it that you plan to use, it is extremely important that the entire system is examined for safety. Many older homes have faulty chimneys or previous owners may have covered combustible walls or studs with brick veneers. Heat is easily conducted through brick and could ignite unseen combustibles behind it.

NOTE: Accessories for wood and coal stoves generally intended to reduce required clearances have been developed by several manufacturers. If you choose to use any of these accessories, make sure they have been tested by an independent laboratory and carry that laboratory's testing mark. Make sure the manufacturer's directions are followed.

The National Fire Protection Agency (N.F.P.A.) also publishes guidelines in their code, N.F.P.A. 211, for the construction of clearance reduction systems if you care to make your own floor and wall protectors. Your Jøtul dealer should be able to explain N.F.P.A. 211 to you.

Contact local building or fire officials about restrictions and installation requirements in your area.

In the U.S. order Rear Heat Shields #950079  
In Canada order Rear Heat Shield #950079 C

## 4. Operation

Before building a fire in your new stove, please read the following section carefully.

This stove 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:

- Coal
- Garbage
- Cardboard
- Solvents
- Treated or painted Wood
- Chemical Chimney Cleaners
- Colored paper
- Trash

Burning treated wood, garbage, solvents, colored paper, chemical chimney cleaners, or trash may result in release of toxic fumes and may poison or render ineffective the catalytic combustor.

Burning coal, cardboard, or loose paper can produce soot or large flakes of char or fly ash that can coat the combustor, causing smoke spillage into the room and rendering the combustor ineffective.

Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or "freshen up" a fire in this heater. Keep all such liquids far away from the heater while it is in use.

## Wood Storage

When storing wood outside, it should be covered and stored off the ground to protect it from the elements. Make certain that the woodpile has good air circulation through it in order to promote drying to aid in the seasoning process.

To obtain the most benefit from the wood you burn, use only seasoned wood which has been cut and split for at least one year. Burning unseasoned or wet wood causes rapid development of creosote, while reducing the heat value of the wood being burned.

## Creosote and Soot Formation and the Need for Removal

When wood is burned slowly, it produces tar and other organic vapors which combined with expelled moisture to form creosote. These creosote vapors condense in the relatively cool chimney flue of a slow burning fire. The creosote that accumulates in the flue is highly flammable and is the fuel of chimney fires. To prevent a chimney fire, the creosote needs to be removed by sweeping the chimney and flue connector. The frequency of sweeping will depend on how you operate your stove, but it is important to inspect the flue after every two weeks of use. An accumulation of 1/4" or more on the sides of the flue or connector is considered hazardous and should be removed.

In the event that creosote in your chimney or flue connector ignites, the resulting fire is often accompanied by a roaring noise and a crackling sound as flakes of burned creosote break loose. If you suspect you are having a chimney fire, immediately close the draft regulator and make sure the stove door is closed. Call the fire department and get everyone safely out of the house.

Trying to extinguish the fire in the stove will not help. In fact, it can make the matter worse by allowing oxygen through the door, which then supports the fire in the chimney. When the roaring and crackling have stopped, you should resist the temptation to open the door. After a chimney fire, do not use your stove until the chimney and the flue connector have been cleaned and inspected to ensure that no damage has been sustained.

## Breaking in Your Stove

A cast iron stove should be "broken in" the same way a new car with a cast iron engine is: gradually. It is mandatory that five consecutive small fires be built in the stove prior to operating the stove continuously. Each fire should be a little larger than the previous one, and the last fire should be a full-sized load. Allow the stove

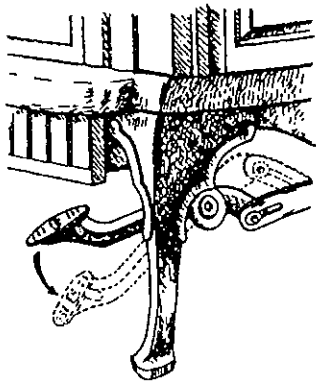
to cool completely between fires. Breaking in your stove this way works much like an athlete limbering up before competing.

Do not start your break-in fires until you have finished reading read this entire manual.

## Controls

### Foot Pedal

The Firelight is provided with a feature unlike any other stove on the market. A foot pedal at the lower right front corner of the Firelight (Figure 14) allows for hands-free operation of the stove's top load door.



The benefit of this feature will be more than apparent the first time you approach your stove with an arm load of wood. You will no longer have to bend over to set the wood down and pick it up once again after you have opened the top or front door for loading. You simply press the pedal down with your foot which will cause the top load door to open, and place your arm load of wood directly into the stove. As it is essential that the bypass damper be opened before either door is opened, it was logical to build that function into the foot pedal operation as well. The initial travel of the foot pedal will cause the stove's bypass damper to automatically open. It is a good idea to wait a few seconds after you have opened the damper before continuing to push the foot pedals to its downward position opening the top load door. This will allow a good draft to be established and help prevent smoke spillage from the opened door. Once the wood has been placed in the stove, the top load door can be closed by pulling it shut with your gloved hand.

### Bypass Damper

A separate handle socket located on the right rear side of the Firelight (Figure 15) is provided to operate the stove bypass damper should you choose not to use the foot pedal.

As previously mentioned, the bypass damper must be open before you open either the front doors or

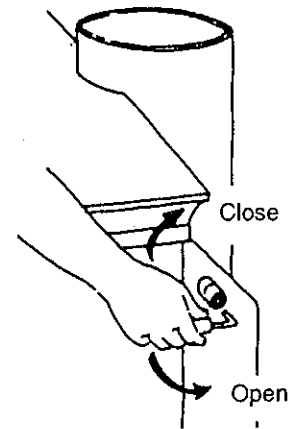


Figure 15

top load door. Insert the handle tool in the damper socket and rotate the damper handle downward (counter-clockwise) to open the damper. The initial motion of the handle will cause the damper to unlatch. Once the damper is unlatched, you will feel the weight of the damper causing the damper to move to the fully open position. To close the damper rotate the damper handle upward (clockwise). You will feel the damper latch engage when you have reached the fully closed and locked position. It is important to make sure that the damper latch is in the full upward position when the damper is closed. This will prevent the damper from falling open unexpectedly.

### Front door latch

It is essential that the bypass damper be opened before opening the front doors. Always check that that you have moved the bypass damper handle to the open position (pointing toward the floor) before you open the doors. The latch for the front doors is located in the lower center area of the doors. Insert the hexagonal end of your tool in the socket in the door latch. Rotate the tool counter-clockwise about 180 degrees to unlatch the front doors. Once unlatched, pulling the tool (still in the latch socket) toward you will cause the right door to open. The tool (removed from the latch socket) can be used to open the left door. When closing the doors, close the left door first, then the right. Insert the tool in the latch socket and rotate clockwise while applying some inward pressure. When you feel reasonable resistance on the tool, the doors are fully latched. See Figure 16.

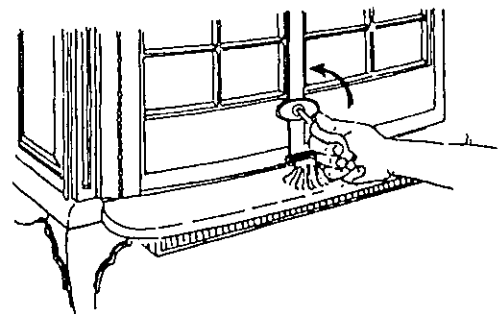
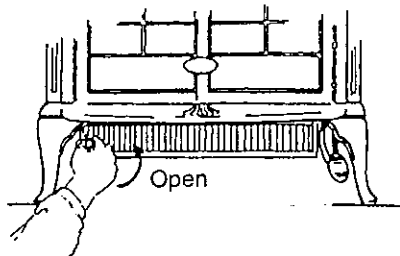


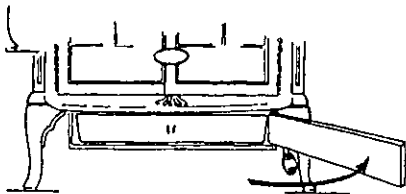
Figure 16

## Ash Door Latch

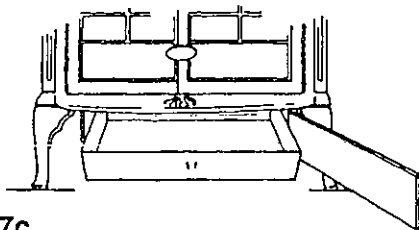
The Firelight is provided with a separate door to provide access to the ashpan. The door is located below the ashlip on the front of the stove. Insert the pin on the end of the tool in the hole on the ash door latch located on the right end of the ash door. Rotate the tool counter-clockwise to unlatch the door and pull the door open to reach the ashpan. Rotate the tool clockwise to latch the door. see **Figure 17A-C**



**Figure 17a**



**Figure 17b**



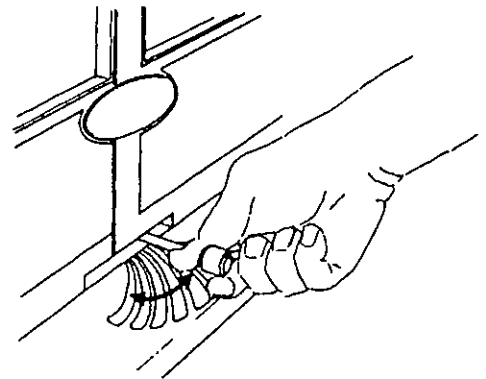
**Figure 17c**

Never operate the stove with the ash door open. Overfiring will result which could damage the stove, void the warranty or lead a house fire.

### Air Control

The air control handle (See Figure 18) is located on the front of the stove, just below the bottom of the front of the stove, just below the bottom of the front doors and just above the ashlip.

Moving the handle to the right increases the heat output of the stove. Moving it toward the left decreases the heat output. The handle should be set fully to the right when first starting a fire or when maximum heat is required. The handle would be set at the midpoint or left of the midpoint when less heat is needed and when longer burn times are desired. You will determine the best settings for



**Figure 18**

your particular needs as you gain experience with your Firelight.

You may wish to use your handle tool to move the air control lever to avoid contact with the hot stove.

Never leave the tool attached to the stove. Always remove after use.

## Building a Fire

Building a fire is actually a very good description of what you want to do. Anyone can make a fire, but when you really know what you are doing, you build a fire. Like anything else that's built, the quality of materials and the care exercised is reflected in the final product.

A good fire will efficiently utilize your fuel, keep the glass in the door clean, keep emissions and creosote to an absolute minimum, require less work, and be very predictable. Master fire builders get the same satisfaction from their stoves that cooks get from their favorite sharp knives.

## A Good Foundation

Make sure the bypass damper is open, the top load door and ash door are fully closed and the air control handle is pushed fully to the right. Open the front doors and cover the integral grate with tightly crumpled newspaper. Do not use andirons to elevate the fuel. Criss-cross a generous double handful of kindling on top of the paper. Don't skip on the kindling, its role is very important. Split pieces of scrap lumber work very well. If you don't have scrap lumber, split some of your best wood down to 1/2" thick and use that. Place several 1"-2" split pieces of dry wood on top followed by a few 2"-3" pieces.

Light the paper evenly across the front and close the left door fully but leave the right door open about 1/2". This will provide extra air to start the fire and help get a good draft established. Besides getting the draft established, there are a variety of jobs that the kindling

fire must accomplish. It needs to heat up the stove body and the glass, warm the catalyst, and form a bed of coals. The bed of coals is very important - use plenty of kindling so it won't disappear before your fire is well-established.

Depending on the strength of your chimney draft and condition of your kindling, you may need to leave the door cracked open for five to eight minutes. Remember, never leave the stove unattended while the doors are open. At the end of this time, your smaller pieces of kindling should be reduced to glowing coals, and all of the kindling should be blackened over.

You can now add three to four small- to -medium pieces of wood. Try to stack this wood so that there are even spaces between it. Allow it to burn like this for several minutes before closing and latching the front doors. You should be sure that the wood is well caught and has a chance to burn vigorously (5 to 10 minutes) before you close the bypass damper. Close and latch the bypass damper but leave the air control handle in the full open position. The main objective is to establish a good bed of charcoal as well as heating up the stove and chimney. If the fire dies out and the stove fills with smoke when you close the damper, you have not allowed the wood to catch on well enough. It could be that you didn't use enough kindling, used pieces that are too large or too green or simply rushed things. It is perfectly normal for the fire to slow down when you first close the door. What is not normal is for the stove to fill with so much smoke that it looks like water flowing over a dam. If this occurs, open the bypass damper and work back through the fire building procedure.

Once the charcoal bed is well established (2" - 3" deep), you may add a full load of fuel. This is best accomplished using the top load door rather than the front doors. Make sure the damper is open (using either the foot pedal or damper handle) for a few seconds before opening the top load door. Place one end of the fuel pieces into the door opening, direct the end toward one side of the stove and simply allow the piece to drop into the stove. Some care should be taken to make sure that fuel pieces do not end up in direct contact with the glass in the doors as this will cause the glass to be stained with smoke. Once the last piece is in, close the top load door. Allow the stove to operate for 5 to 15 minutes with the air control in the full open position before closing the bypass damper. Closing the bypass damper directs the flow of smoke through the catalyst. It will take 5 to 10 additional minutes for the catalyst to reach a good operating temperature before you set the air control handle for your desired heat output level.

## ***Adjusting the Heat Output***

Until now we've been operating the stove with the air control fully open. The more you move the control handle to the left the slower and cooler the stove will burn. If you want to reduce the heat output rate significantly, it is best to cut it back in a few increments rather than all at once. This allows the stove to adjust to the changes and will help to keep the glass clean. Although the Firelight has been specially designed to maintain clean glass over a wide range of heat outputs, at the low air control settings, the amount of air entering the stove will be so small that it may be difficult to keep the entire glass area clean. As long as there is a good bed of coals in the stove, it is possible to return to a hotter fire and stained glass will clean itself.

## ***Reloading***

The time required to tend your stove will be greatly reduced if you reload your stove while there is plenty of charcoal remaining to ignite the fresh fuel load. It is always a good idea to include some smaller pieces of wood at the base of the new load to help the stove recover to its operating temperature more quickly. Reloading will be most easily accomplished using the top load door rather than the front doors.

## ***Reloading Procedure***

- Always wear stove gloves when tending your stove.
- Push the air control handle to the full open position.
- Open the bypass damper (Manually or with foot pedal).
- Wait a few seconds and open the top load door (Manually or with foot pedal)
- Load fuel (Smaller pieces first)
- Close top load door.
- Wait 10 - 15 minutes and close bypass damper.
- Wait about 5 - 10 minute and adjust the air control to desired setting.

Note: If the charcoal bed present at reloading time is relatively deep (3" - 4") and your wood is well seasoned, it is possible to add the fresh fuel load, close the door and damper and reset the air control for the desired heat output rate within 5 minutes.

## ***Ash Removal***

Ash removal will be required every two or three days during normal operation. Although most of the ashes produced by your stove will automatically drop into the ashpan, it will be necessary, on occasion, to open the front doors or top load door and use a poker or shovel to stir any excess ashes (which may build up around the edges of the firebox) through the grate. Do not remove all of the ashes from the stove. The stove will

perform better if you maintain about a 1" layer of ashes in the bottom of the stove. Bypass catalyst prior to unloading ashes. **Failure to bypass catalyst while opening and closing ash door could result in external combustion of gases if the top load door is opened shortly afterwards.**

A good time to check or empty the ashpan is before reloading the stove. This helps insure that the ashes will be cooler and safer to handle.

Your stove was designed to provide access to the ashpan without the need for opening the front door. A separate ashdoor is located under the front ashlip of your stove. To operate the ashdoor latch, insert the pin on the end of your specially designed ash tool into the hole in the ashdoor latch (located on the right end of the ashdoor). Rotate the tool counter-clockwise to unlatch the door and clockwise to latch it. The ashdoor is hinged on the left end and will swing out of the way when opened. To remove the ashpan from the stove, insert the end of the tool (with the pin facing upward) into the receptacle on the ashpan. Lift up slightly and pull the ashpan out of the stove. If the stove is in operation, close and latch the ashdoor before taking the ashes outside for safe disposal. It is always a good idea to wear heavy protective gloves while removing and disposing of the ashes from your stove. After emptying the ashpan, return the ashpan to its original position in the stove, and close and latch the ashdoor.

Ashes should be placed in a metal container used exclusively for ashes, With a tight fitting lid. The closed container of ashes should be placed outdoors, well away from all combustible materials, pending final disposal. If the ashes are disposed of by burial in soil or otherwise dispersed, they should be retained in the closed container until all cinders have thoroughly cooled.

**OVERFIRING WILL RESULT IF THE STOVE IS OPERATED WITH THE ASHDOOR OPEN.** This could cause damage to the stove, void the warranty or lead to a house fire.

### Open Door Operation

The Firelight has been designed to allow operation as a fireplace with front doors open. This feature will allow you to use your stove when you want the ambience of an open fire. The bypass damper must be open at all times when burning with the doors open and the optional firelight firescreen must be in place as well. Burn the logs in a traditional three log configuration for the best appearance. Be aware that like any other open fireplace, you are giving up efficiency for ambience and will consume your logs at a much faster rate than when burning as a catalytic woodstove. please note that some

installations, specifically those with marginal chimney drafts, may not be suitable for open door operation.

**WARNING: OPERATE YOUR FIRELIGHT ONLY WITH THE FRONT DOORS FULLY OPEN AND THE OPTIONAL FIRESCREEN IN PLACE OR FULLY CLOSED. KEEP THE TOP LOAD DOOR AND ASHDOOR FULLY CLOSED EXCEPT WHEN LOADING FUEL OR REMOVING THE ASHPAN. PARTIALLY OPENED DOORS MAY RESULT IN OVERFIRING.**

### Catalyst

This wood stove contains a catalytic combustor, which needs periodic inspection and replacement for proper operation. It is against the law to operate this wood heater in a manner inconsistent with operating instructions in this manual or if the catalytic element is deactivated or removed.

The catalyst in your stove is a Corning Long Life catalytic combustor, which helps the stove achieve its high efficiency rating. A separate warranty and information card is supplied by Corning with this stove. Please be sure to read the card and submit the catalyst warranty information to Corning.

A catalyst is defined as a substance which promotes or initiates a reaction at a much lower energy level than would normally be required for that same reaction if the catalyst were not present. Furthermore the catalyst is not used up in the reaction. It is helpful when trying to understand catalytic reactions to think of the catalyst as a bridge. How much energy would it take to jump all the way across a river versus walking across a bridge? When you walk across the bridge, you use much less energy, and when you get to the other side, the bridge is still there. It hasn't been used up, and it continues to provide the same service.

Chances are, you have a catalyst in your home already, although you may not be aware of it. Self cleaning ovens have catalysts very similar to the one in your stove. On the self-cleaning cycle, your oven gets very hot to burn off the spilled food. Normally this would produce a lot of smoke, but, by putting the smoke through a catalyst, the smoke is also burned up. Usually this combustion is so complete you don't even realize that it has happened at all.

Located within a specially designed insulating refractory chamber in the rear of the stove is a ceramic honeycomb which is coated with a catalyst. This catalyst reduces the temperatures necessary to ignite the gases and smoke given off as the wood is burning. Normally, these gases require a temperature of 1,100 - 1,200 degrees F. to burn, but the catalyst allow these gases to burn at a much lower temperature of 500 - 700 degrees F.

The burning of gases in the honeycomb releases a lot of energy which would normally be lost up the chimney. Tars and resins in the smoke are also burned, which helps keep your chimney and the environment clean.

In general, catalytic combustion is pretty straightforward. Once the stove and gases have been warmed to the 500 - 700 degrees F. range, any gases reaching the catalyst will ignite. Following the start up procedures outlined in "Building a Fire" should ensure that the catalyst and stove are adequately warmed. Once the catalytic combustor starts working, heat generated in it by burning the smoke will keep it working, even when the temperatures on the stove fall below 500 degrees F. The most important thing then, is to get the stove and catalyst up to operating temperatures before reducing the heat output setting.

Several things could cause the catalyst to fall below its operating temperature, however. The most likely time for this to occur is during refueling. Twenty or more pounds of cold wood plus the room air entering the stove during refueling can dramatically lower the catalyst temperature. It is very important whenever reloading to allow the stove to burn hot for 10 to 15 minutes. This re-heats the stove as well as raises the catalyst temperature. Getting your new load of wood burning well also helps the glass in the doors clean.

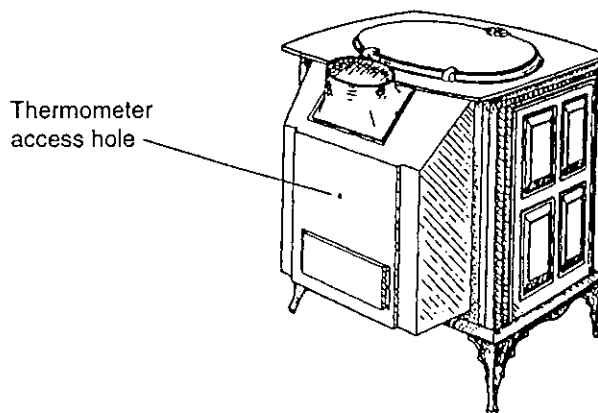
At the end of a burn cycle, when all of the wood has been reduced to charcoal, very little gas is being generated, and the catalyst can also fall below its operating temperature. Try to time your reloading so that there are enough coals left to get your new load burning well which will help to quickly relight the catalyst.

### **Catalyst Monitoring**

It is important to periodically monitor the operation of the catalytic combustor to ensure that it is functioning properly, and to determine if it needs to be replaced. A non-functioning combustor will result in a loss of heating efficiency and increase in creosote and emissions. To monitor the catalyst's performance you can obtain a catalyst thermometer from your dealer (you will need the type with a remote probe), or you can observe the amount of smoke coming from your chimney.

If you have followed up the start procedures correctly and have sufficiently warmed the stove and catalyst you should notice very little, if any, smoke coming from your chimney. Be sure not to confuse condensing steam from wet wood with smoke. Smoke gradually becomes thinner as it leaves the chimney whereas steam travels a few feet and then vanishes.

If you purchased a catalyst thermometer, it is inserted in the hole provided in the rear of the stove, as indicated in **Figure 19**.



**Figure 19**

Remove the plug from the monitor hole and gently spin a 1/4" drill bit by hand through the rear wall of the insulating refractory catalytic combustion chamber. Make sure the probe is inserted about 3 1/2" into the stove for proper positioning above the catalyst. With a catalyst thermometer you should be able to make the following observations: temperatures should be in excess of 500 degrees F. and will often exceed 1,000 degrees F. Temperatures will drop sharply when new fuel is added, but should return to normal once the wood is burning well.

Brief periods of high temperatures are not harmful to the catalyst, but you should avoid operating the catalyst above 1,800 degrees F. Temperatures of this magnitude can reduce the life of the catalyst and are the result of too much smoke reaching the catalyst. Finely split wood, pitchy pine, or tightly packed loads can overwork the catalyst. It is best to use wood that is 4"-7" in diameter and to load the stove frequently with medium-sized loads.

If temperatures are above 1,800 degrees F., they can be reduced by moving the air control to a higher setting. Here's how it works. A large load of wood burning slowly generates a lot of gas. Since the stove is relatively cool, these gases will not burn in the stove, but will go directly to the catalyst where they will burn vigorously. A higher air control setting allows some of these gases to burn in the firebox, thereby reducing the total amount of unburned gases reaching the catalyst. If a higher air control setting fails to lower the catalyst temperature, open bypass damper for a few minutes and reduce the air control setting to the mid-point or less. The smoke will go directly up the chimney rather than through the catalyst and the catalyst temperatures will rapidly decrease. Never leave the stove unattended in this condition. Try closing the bypass damper after 5 to 10 minutes. If the fuel load has burned down so that the remaining wood is very dry and only filling the firebox halfway or so, adding several pieces of fresh

wood can also cause a reduction in catalyst temperature as significant heat will be absorbed by the new wood. The bypass damper should be closed immediately after adding the new wood and the air control set at the mid-point.

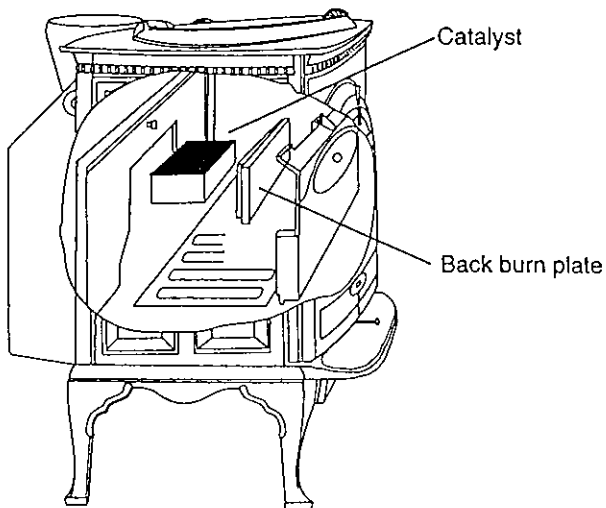
### **Catalyst Trouble Shooting**

A properly operating catalyst can improve woodstove performance in the following ways:

- Increase heat output by 50%
- Reduce creosote formation and emissions by 90%

For these reasons you will want to make sure your catalyst is working and know what to do if it is not.

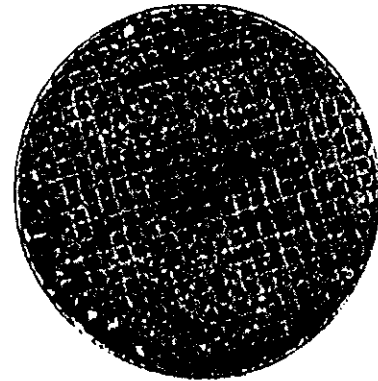
You should allow your stove to go out and visually inspect the catalyst at least three times a year. To inspect the catalyst, remove the rear burn plate. It is located on the rear wall of the firebox and is removed by pulling out on the bottom while lifting upward to disengage from retaining bolt and the top center. If the burn plate is stuck, you may have to tap it gently with a soft faced hammer or slightly loosen the retaining bolt. Once the burn plate is loose, remove it from the stove. Next remove the catalyst access panel from the front wall of the insulating refractory catalytic combustion chamber. Simply pull the panel gently toward the front of the stove. When it is removed, set it aside. Remove the catalytic element by grasping it between the thumb and forefinger of each hand and pulling toward the front of the stove. Be careful not to drop or otherwise roughly handle the element once it is removed. It is a good idea to do this while the stove is still new, so that you can learn what a clean and healthy catalyst looks like. After inspection, replace catalyst, the access plug and rear burn plate, simply reversing the procedure you used to remove them. See **Figure 20** to help you identify the components.



**Figure 20**

### **Combustor Problems**

- Plugging (Figure 21)** The catalyst cells can be plugged with char, fly ash, or creosote. Burning garbage, cardboard, or wrapping paper produces excessive amounts of char and ash. Creosote plugging occurs when burning wet or pitchy wood or large loads on very low draft settings without allowing the catalyst to properly warm up and initiate burning. In general, creosote will not form on hot surfaces. If the catalyst is plugged, it can also indicate that creosote has built up in your chimney and needs cleaning.



**Figure 21**



A plugged catalyst can be cleaned with a good hot fire, much in the same way that a hot fire cleans up creosote stains on the stove window. Under no circumstances should you attempt to burn out a plugged catalyst unless you are sure your chimney is clean.

•**Masking (Figure 22)** This is a build-up of a very fine fly ash which coats the surface of the catalyst and prevents it from coming into contact with the smoke. Fly ash can be brushed off with a soft bristled brush or vacuumed away.

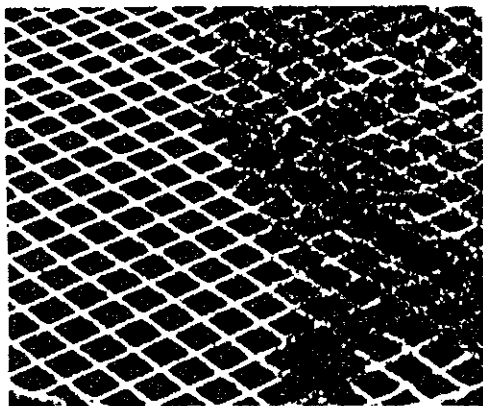


Figure 22

•**Cracking (Figure 23)** Cracks can develop from either thermal stress or mechanical stress. As long as large pieces do not fall out of the combustor, it can still function with a few cracks. Mechanical stress may indicate that some part of the surrounding housing has warped and needs to be replaced.

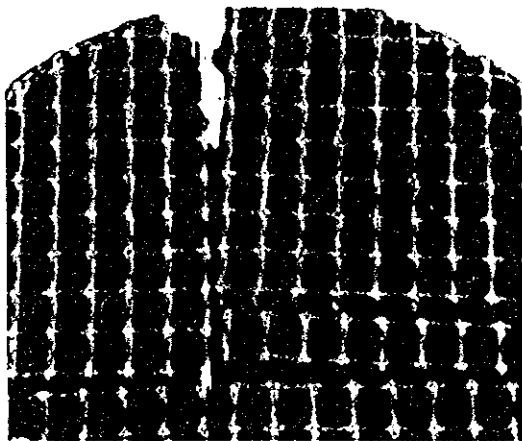


Figure 23

•**Peeling (Figure 24)** Temperatures above 1,800 degrees F. and prolonged flame impingement can cause the catalyst coating to peel off the ceramic substrate. If the peeling is severe, the catalyst should be replaced.

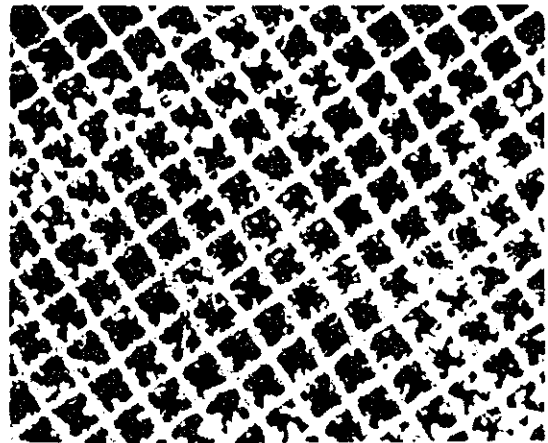


Figure 24

•**Deactivation or Poisoning** If the catalyst is intact and is clean, but fails to operate, it has probably become poisoned from chemicals in pressure treated wood or painted lumber or trash. Deactivated catalyst should be replaced.

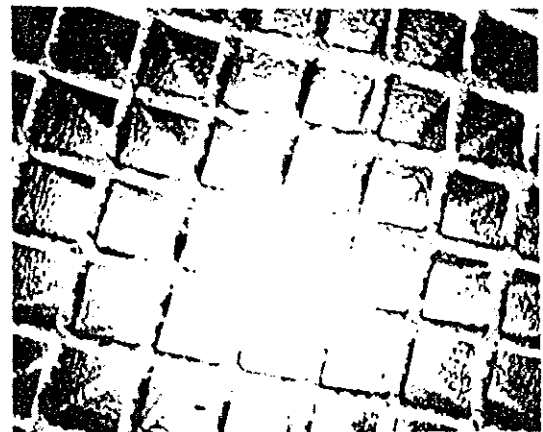


Figure 25

•**Healthy Catalyst (See Figure 25)**

### Catalyst Warranty

Your stove is equipped with a Corning® Long life Catalytic Combustor which has a free replacement warranty for a period of two years from the date of your stove purchase against any defects in workmanship or materials that prevent the combustor from functioning when properly installed and operated and for three years from the date of purchase for thermal crumbling or disintegration. See the Catalytic Combustor Warranty Card which was provided with your stove for specific information and requirements for obtaining warranty service. If you have additional questions or need assistance, contact your Jøtul dealer.

## 5. Maintenance

### General

At least once a year, you should perform a routine maintenance check. A good time to do this is when you are cleaning the chimney and the connector. Of course you should clean the chimney and connector whenever accumulations of soot and creosote reach 1/4" thick, which may be several times a year, depending on how the stove is operated.

1. Thoroughly clean the entire stove. Enameled surfaces can be wiped clean with soap and water. Brush all ash and soot out of the stove. It is better to brush out the ash and soot than to vacuum it out because soot particles are small enough to pass through most vacuum bags.

2. In a dark room, use a strong light to inspect the stove inside and out for cracks or leaks at corners and joints. Cracked parts should be replaced. Leaks at joints can be patched with stove furnace sement.

3. Check the door gaskets and window gaskets for tightness. To check the front door gaskets put a dollar bill half way into the stove, close and latch the door and try pulling the dollar out. If it can be easily removed, the seal is too loose. Check several spots around the door. Repeat for the ash door and top load door. Remember that the top load is held closed by gravity and, therefore, has no latch. To replace the gasket scrape out all old gasket material and gasket cement. Run a bead of stove cement into the bottom of the groove and press in new gasket.

The top load door requires 35" of 1/4" diameter braided fiberglass. The ash door requires 40" of the same material. The right front door requires 34 1/2" of the same material while the left door requires the same plus 16 1/2" diameter braided fiberglass for the area where the right door seals against the left. The gasket between the glass panels and the doors receive very little wear. The best indication that it needs to be replaced is streaks on the glass caused by air leaking around the gasket. See the section "Glass Replacement" for information on gasket replacement.

### Bypass Damper Gasket Replacement

The smoke bypass damper opening is gasketed and this gasket should be periodically checked. Figure 26 shows where the gasket is located in the damper frame.

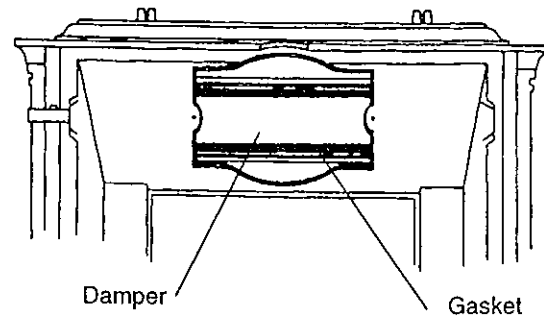


Figure 26

The integrity of the gasket should be checked visually using a mirror to make sure the gasket is intact around the entire damper opening perimeter. The seal between the damper and gasket can be tested using the dollar bill test as described for testing the door gaskets. This gasket should last through many seasons of use. Simple maintenance can be conducted with the damper assembly in place. If your inspection discovers a section of loose gasket, it is possible to place a small amount of stove cement behind the loose portion and simply reattach the gasket. The mirror will be helpful here as well. However, should the damper gasket need replacing, you must first gain access to the gasketed area.

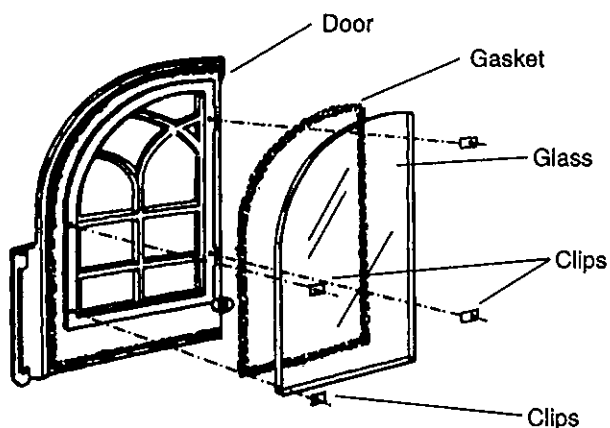
The easiest method requires removal of the flue outlet. Simply remove the chimney connector and unbolt the flue outlet from the rear of the stove. You may also wish to move your stove away from the wall to provide better access. With the flue outlet removed you have direct access through the rectangular opening in the back plate of the stove to the damper area. The damper plate itself can also be removed by removing the two fasteners and clips which secure it to the damper frame. Make sure you remove all the old gasket material and cement before installing the new gasket. Use the procedure described in the door gasket section. Re-install the damper plate and cover the face of the damper plate with plastic wrap or aluminium foil to prevent excess cement from adhering to the damper. Close and latch the damper while the cement dries overnight. Open the damper and remove the plastic or foil cover. Operate the damper a few times and check the seal before you complete the reassembly and reinstallation of the stove.

## Glass Replacements

To prevent cracking of the glass operate the doors gently. Do not shut the doors by striking or slamming.

If the stove's glass is cracked or broken, you must replace it before operating your stove. Carefully remove any broken pieces. Replace the panel(s) only with Jøtul replacements, do not use substitutes.

The glass can be replaced with the door still mounted to the stove or the door hinge can be removed and the door placed on a flat working surface. The steps are the same. Carefully remove all broken glass, gasket material, fasteners and clips. Clean of all cement and residual gasket material from the door using a wire brush. Apply a small bead of cement and the new gasket. Trim of any excess gasket length as it is important the ends meet closely but should not overlap. Center the replacement glass panel on the gasket and reinstall the glass clips and screws. The side of the glass with the infrared reflective coating is marked near the perimeter of the glass panel and should always be installed with the marking (and coating) facing outwards. It is extremely important that the retainer clips be tightened a small amount at a time and following a pattern similar to tightening the lug bolts on an automobile wheel. The clips should end up equally tightened and not over-tightened. Make sure that the glass panel stays centered in the opening and does not slip down. It may be necessary to retighten once again after the stove has been burned and the new gasket has been seated. See **Figure 27**.



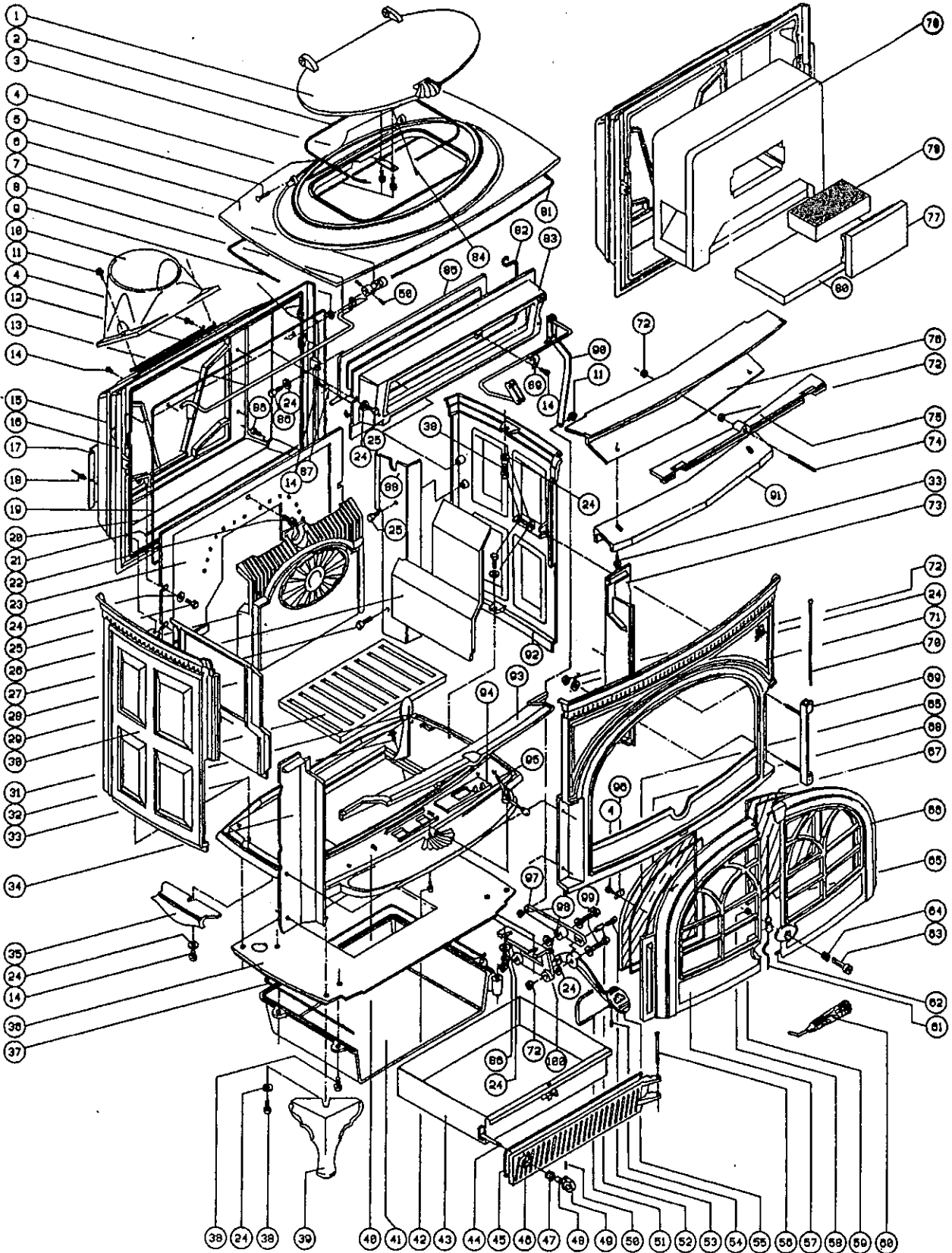
**Figure 27**

## Glass cleaning

From time to time, clean off the accumulated ash from the inside surfaces of the glass panels. If this fly ash is allowed to remain on the surface for extended periods, it could eventually cause the glass to become permanently etched and somewhat cloudy. Any creosote which might deposit on the glass will burn off during the next hot fire.

Never clean the glass while hot and never use any abrasive materials to clean the glass. Cool water and a soft cloth or paper towel are usually all that is required. Rinse thoroughly with clean water after washing and dry completely before burning your stove.

# Firelight



Rev. 4/94

# OLD WOODSTOVES

Item #	PART #	DESCRIPTION	SUGGESTED RETAIL
		<b>Firelight Catalytic Woodstove</b>	
<b>1</b>	103319	Topload Door, MB	94.55
	103411	Topload Door, BB	135.53
	103439	Topload Door, IV	135.53
	10331932	Topload Door, GR	135.53
	10331936	Topload Door, IB	135.53
<b>5</b>	127075	Hinge Pin, MB	2.09
	127075	Hinge Pin, BB	2.09
	125960	Hinge Pin, IV	2.09
	125960	Hinge Pin, GR	2.09
	125960	Hinge Pin, IB	2.09
<b>6</b>	103318	Top Plate, MB	168.10
	103410	Top Plate, BB	251.75
	103438	Top Plate, IV	251.75
	10331832	Top Plate, GR	251.75
	10331836	Top Plate, IB	251.75
<b>10</b>	103326	Smoke Outlet, MB	64.08
	103405	Smoke Outlet, BB	104.01
	103433	Smoke Outlet, IV	104.01
	10332632	Smoke Outlet, GR	104.01
	10332636	Smoke Outlet, IB	104.01
<b>15</b>	103472	Back, MB	168.10
	103474	Back, BB	283.06
	103476	Back, IV	283.06
	10347232	Back, GR	283.06
	10347236	Back, IB	283.06
<b>16</b>	103473	Backframe, MB	134.78
	103475	Backframe, BB	205.00
	103477	Backframe, IV	205.00
	10347332	Backframe, GR	205.00
	10347336	Backframe, IB	205.00
<b>30</b>	103315	Left Sideplate, MB	115.57
	103407	Left Sideplate, BB	182.40
	103435	Left Sideplate, IV	182.40
	10331532	Left Sideplate, GR	182.40
<b>35</b>	10334292	Decorative Skirt, MB	21.89
	103414	Decorative Skirt, BB	37.53
	103442	Decorative Skirt, IV	37.53
	10334232	Decorative Skirt, GR	37.53
	10334236	Decorative Skirt, IB	37.53
<b>39</b>	10333292	Leg, MB	29.18
	103413	Leg, BB	48.43
	103441	Leg, IV	48.43
	10333232	Leg, GR	48.43
	10333236	Leg, IB	48.43
<b>40</b>	103472	Base Plate, MB	168.10
	103409	Base Plate, BB	348.45
	103437	Base Plate, IV	348.45
	10331732	Base Plate, GR	348.45
	10379536	Base Plate, IB	348.45

# OLD WOODSTOVES

Item #	PART #	DESCRIPTION	SUGGESTED RETAIL
<b>41</b>	103323	Ash Housing, MB	104.01
	103323	Ash Housing, BB	104.01
	103446	Ash Housing, IV	154.50
	10332332	Ash Housing, GR	154.50
	10332336	Ash Housing, IB	154.50
<b>46</b>	103324	Ash Door, MB	54.13
	103417	Ash Door, BB	85.97
	103445	Ash Door, IV	85.97
	10332432	Ash Door, GR	85.97
	10332436	Ash Door, IB	85.97
<b>57</b>	10332192	Left Door, MB	131.33
	103416	Left Door, BB	222.65
	103444	Left Door, IV	222.65
	10332132	Left Door, GR	222.65
	10332136	Left Door, IB	222.65
<b>66</b>	10332092	Right Door, MB	131.33
	103415	Right Door, BB	222.65
	103443	Right Door, IV	222.65
	10332032	Right Door, GR	222.65
	10332036	Right Door, IB	222.65
<b>71</b>	103314	Front, MB	107.96
	103406	Front, BB	216.61
	103434	Front, IV	216.61
	10331432	Front, GR	TBA
	10331436	Front, IB	216.61
<b>92</b>	103316	Right Side Panel, MB	105.51
	103408	Right Side Panel, BB	183.61
	103436	Right Side Panel, IV	183.61
	10331632	Right Side Panel, GR	183.61
	10331636	Right Side Panel, IB	183.61
<b>105</b>	10356192	Top Mending Plate, MB	#N/A
	10356127	Top Mending Plate, BB	40.67
	10356129	Top Mending Plate, IV	40.67
	10356132	Top Mending Plate, GR	40.67
	10356136	Top Mending Plate, IB	40.67
<b>109</b>	10379692	Ashlip, MB	52.53
	10379627	Ashlip, BB	63.04
	10379632	Ashlip, GR	63.04
	10379636	Ashlip, IB	63.04
<b>2</b>	200024	Topload Door Gasket LD 1/4" x 4' per ft.	1.92
<b>3</b>	128402	Topload Door Retainer	5.08
<b>4</b>	9963	Panhead Screw m6x8	0.88
<b>5</b>	127075	Pin-Topload Door	2.09
<b>7</b>	128397	Damp Opener	53.01
<b>8</b>	117059	Pin	4.03
<b>9</b>	117751	Washer	0.88
<b>11</b>	117117	Screw-Collarhead M6 x 20	0.88
<b>12</b>	200028	Flue Outlet Gasket LD 3/16" x 3' per ft.	2.63
<b>13</b>	128396	Damper Rod	14.71
<b>14</b>	117147	Screw, Phillips M8 x 12	TBA

# OLD WOODSTOVES

Item #	PART #	DESCRIPTION	SUGGESTED RETAIL
17	153289	Plate Bracket	TBA
18	117519	Rivet	TBA
19	200024	Back Frame Gasket per ft.	1.92
20	200028	Back Gasket per ft.	2.63
21	128440	Back Plate Gasket per ft.	TBA
22	04-117815	Access Screw	1.75
23	103330	Innerback Plate	99.38
24	117452	Star Washer	0.88
25	9915	Screw-Collarhead M8 x 16	0.88
26	103327	Rear Burnplate	81.95
27	103337	Right Burnplate	54.37
28	9947	Screw-Collarhead M8 x 30	0.88
29	103336	Left Burnplate	53.70
31	103329	Firegrate	46.11
32	103343	Andiron	21.75
33	117130	Screw-Collarhead M6 x 12	1.01
34	103339	Left Airmanifold	48.70
36	103325	Outside Bottom	68.87
37	200028	Ash Housing Gasket LD 3/16" x 4' per ft.	2.63
38	99131	Screw-Collarhead M8 x 25	0.88
40	10379592	Base Plate, MB (Removable Ash Lip)	169.85
	10379527	Base Plate, BB	348.45
	10379532	Base Plate, GR	348.45
	10379536	Base Plate, IB	348.45
	103317	Base Plate, MB (Solid Ash Lip)	169.85
	103409	Base Plate, BB	348.45
	103437	Base Plate, IV	348.45
	10331732	Base Plate, GR	348.45
42	04-117812	Screw M6 x 30	0.88
43	04-12836292	Ashpan	TBA
44	128398	Ash Door Latch	35.40
45	200024	Ash Door Gasket LD 1/4" x 3' per ft.	1.92
47	125769	Spring	5.42
48	128399	Ash Door Sleeve	20.00
49	127213	Ash door handle	40.41
50	04-117720	Screw M6 x 10	2.09
51	128400	Stirrup	19.96
52	126109	Sleeve	5.42
53	04-117812	Screw M6 x 30	0.88
54	117706	Screw M6 x 6	0.88
55	128447	Pedal	47.11
56	128408	Ashdoor Pin	18.39
58	9933	Nut M10	0.88
59	128011	Door latch	4.02
60	153286	Stove Tool	44.12
61	200028	Door Center Gasket LD 3/16" x 2' SA per ft.	2.63
62	200024	Door Gasket LD 1/4" x 7' per ft.	1.92
63	128359	Latch Bolt	16.81
64	126164	Latch Bolt Spring	5.42
65	200028	Door Glass Gasket LD 3/16" x 3.5' per ft.	2.63

# OLD WOODSTOVES

Item #	PART #	DESCRIPTION	SUGGESTED RETAIL
67	128357	Right Glass	78.80
68	128419	Left Glass	78.80
69	117588	Washer, Door Hinge	0.88
70	125960	Hinge Bolt Pin	2.09
72	9931	Nut	0.88
73	103340	Right Airmanifold	49.58
74	117813	Thread Bar M8 x 70	0.88
75	103338	Air duct	33.49
76	103333	Top Airmanifold	54.08
77	04-128455	Catalyst Chamber Cover	51.12
78	126421	Catalyst	245.05
79	04-128454	Catalyst Chamber	200.16
80	04-128456	Catalyst Chamber Bottom	44.99
81	200024	Top Plate Gasket LD 1/4" x 7' per ft.	1.92
82	200025	Damperframe Gasket LD 1/4" x 4' per ft.	1.92
83	103328	Damper Frame	56.65
84	117822	Thread Pin M6 x 6	1.41
85	103331	Damper	46.01
86	117875	Screw-Collarhead M8 x 20	TBA
87	128401	Damper Tab	6.83
88	103341	Damper Mech. Cover	51.14
89	128403	Torsion Clip	8.58
90	153258	Pedal Mech. Link-Coupling	15.06
91	103334	Air Deflector	87.55
93	103335	Bottom Air Manifold	52.27
94	10334416	Air Valve	14.18
95	128363	Air Control Lever (chrome)	28.19
96	128361	Glass Clip	4.38
97	103346	Pedal Arm	22.47
98	9930	Nut M6	0.88
99	9915	Screw-Collarhead M8 x 40	0.88
100	103347	Pedal Bracket	27.78
101	103491	Inspection Cover	17.51
102	117773	Screw	TBA
103	200028	Inspection Cover Gasket LD 3/16" per ft.	2.63
104	99035	Screw, Selfwinding M6x16	0.88
106	9905	Screw M6 x 25	0.88
107	9930	Nut M6	0.88
108	103661	Damper Ramp	16.98
110	128529	Cover	TBA
111	103796	Gasket for Limk Coupling	17.22
112	9904	Screw M6 x 20	0.88