

5095-1 Steelhead Stove Manual

FLAME
INNOVATION



W/ Optional Water Tank

5095-1 Steelhead Stove Manual



C **US** UL 1482-2022 CAN/ULC-S627:2023
09/19/2022 Project # 22-795

French Manual Available at FlameInnovation.com bottom of front page.

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Proudly Made in the USA Rev. 1.1/ 1.2/1.3 07/2021. 04/2023.
05/2023

Disclaimer: All Wood stoves burn differently in how they are controlled, Type and BTU content of wood used, capacity of the fire box etc. Wood burning tests on this model using Birch firewood at load capacity with a moisture content of 15 to 22% produced consistent burn times of 4 to 6 hours from start to small coal bed.

CAUTION: This unit must be installed in accordance with these instructions and must comply with local building and fire codes. Failure to do so could result in a chimney or house fire. Keep children, furniture, fixtures, and all combustible materials away from any heating appliance. Refer to this owner's manual for all clearances to combustible materials.

This stove is not meant for a primary heat source. Non-EPA Compliant as a primary heat source. Emergency Use.

SAVE THESE INSTRUCTIONS

ANY AND ALL SAFETY PRECAUTIONS MUST BE TAKEN AT ALL TIMES DURING OPERATION AND MAINTENANCE OF YOUR STOVE. Read this entire manual before you

install and use your new room heater. If this heater is not properly installed, a structure 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.

CAUTION: Stove is heavy (100-180 lbs.) In addition, when handling any sheet metal products, be aware that there may be sharp edges or burrs. Although we make every effort to eliminate any sharp edges, please use caution when handling any metal parts. Remember to always allow the stove to completely cool down before performing any maintenance.

CAUTION: If you have any doubt concerning your ability to complete your installation in a professional-like manner after reading these instructions, you should obtain the services of an installer who is versed in all aspects as to the correct and safe installation. Do not use temporary, makeshift compromises during installation.

Precautionary Statements

509 Stoves highly recommends the use **of Smoke Detectors and Carbon Monoxide** detectors with any hearth product, including this unit. Follow all manufacturer's instructions when using smoke or Carbon Monoxide detectors. **DO NOT INSTALL THIS STOVE IN A SLEEPING ROOM**

CAUTION ONCE AGAIN PLEASE READ AND FOLLOW. If you have any doubt concerning your ability to complete your installation in a professional-like manner after reading these instructions, you should obtain the services of an installer who is versed in all aspects as to the correct and safe installation. Do not use temporary, makeshift compromises during installation.

WARNING: THINGS TO REMEMBER IN CASE OF A CHIMNEY FIRE: 1. CLOSE DRAFT CONTROL 2. CALL THE FIRE DEPARTMENT

BEFORE INSTALLATION OF YOUR APPLIANCE

HOT WHILE IN OPERATION. KEEP CHILDREN, CLOTHING AND FURNITURE AWAY. CONTACT MAY CAUSE SKIN BURNS. DO NOT BURN GARBAGE OR FLAMMABLE FLUIDS SUCH AS GASOLINE, NAPHTHA, OR ENGINE OIL.

1. Check with the building inspector's office for compliance with local codes; a permit may be required, even though this is a recreational stove.
 2. **A 6" diameter flue is required for proper performance.** Minimum Height of stack 8ft. (Will vary with the Elevation where the stove is installed, you may need more chimney)
 3. Always connect this unit to a chimney and NEVER vent to another room or inside a building.
 4. DO NOT connect to any duct work to which another appliance is connected, such as a furnace.
 5. DO NOT connect this unit to a chimney flue serving another appliance.
 6. **DO NOT USE CHEMICALS OR FLUIDS TO START THE FIRE.**
 7. The connector pipe and chimney should be inspected periodically and cleaned if necessary.
 8. Remember the clearance distances when you place furniture or other objects within the area.
- DO NOT** store wood, flammable liquids or other combustible materials too close to the unit.

9. Contact your local fire authority for information on how to handle a chimney fire. Have a clearly understood plan to handle a chimney fire. In the event of a chimney fire, turn air control to a closed position and CALL THE FIRE DEPARTMENT.
10. DO NOT tamper with the combustion air control beyond normal adjustment.
11. Once the required draw is obtained, operate only with door closed; open feed lid slowly when refueling.
12. Clean the stove glass before lighting the stove.
15. Visit our web site at 509Stoves.com or call us at 509-993-3767

ALWAYS PROVIDE A SOURCE OF FRESH AIR INTO THE ROOM WHERE THE UNIT IS INSTALLED. FAILURE TO DO SO MAY RESULT IN AIR STARVATION OF OTHER FUEL BURNING APPLIANCES AND THE POSSIBLE DEVELOPMENT OF HAZARDOUS CONDITIONS.

Note on Outside Air Hookup: We highly recommend fresh air for tiny spaces. This involves connecting an aluminum flex pipe (usually three inches (3") in diameter from the air inlet pipe located on the back of the stove and using an adapter through your floor or wall. The outside end of this pipe should be covered in some manner (i.e. with a screen) to keep it clear of foreign matter. Be sure to keep it above the snowdrift line and clear of leaves and other debris.

NOTE: INSTALL TAKING ALL PRECAUTIONS AND TEST YOUR CLEARANCE TO COMBUSTIBLES AFTER INSTALL TO MAKE SURE SURFACES AROUND THE STOVE DO NOT GET HOT!!!

FIRST FIRE/ VERY IMPORTANT

Remember to ventilate well. Allow the stove to cure with several small fires before burning for long periods of time at high temperatures. Flat spots on the painted surface are normal. Shiny spots on the painted surface (before burning) are normal. **SMALL FIRES OF 4 TO 5 INCHES IN DIAMETER.**

1. Do not use a grate or elevate the fire inside the firebox.
2. Use only Dry (Seasoned) Wood in 16" or smaller lengths and 6" wide at most.
3. When the stove is used for the first time, solvents in the paint will smoke off as the stove "cures."

STOVE LEGS

Stove legs are removable. **DO NOT INSTALL OR BURN STOVE WITHOUT LEGS ATTACHED.**

Nuts for attachment are ¼-20 KEPS Nuts

INSTALLATION

THIS ROOM HEATER MUST BE CONNECTED TO:

- 1.) A chimney complying with the requirements for Type-HT Chimneys in the Standard for Chimneys, Factory-Built, Residential Type and Building Heating Appliance, UL 103 or
- 2.) A code-approved masonry chimney with a flue liner.
- 3.) DO NOT INSTALL IN AN ALCOVE.
- 4.) DO NOT CONNECT TO OR USE IN CONJUNCTION WITH ANY AIR DISTRIBUTION DUCTWORK UNLESS SPECIFICALLY APPROVED FOR SUCH INSTALLATIONS.
- 5.) DO NOT INSTALL IN ANY FIREPLACE.

WARNING: DO NOT INSTALL IN A SLEEPING ROOM. IF INSTALLING IN A MOBILE HOME, THE STRUCTURAL INTEGRITY OF THE MOBILE HOME FLOOR, WALL AND ROOF / CEILING MUST BE CHECKED AND MAINTAINED AND A HEARTH PAD MUST BE INSTALLED TO DISTRIBUTE THE WEIGHT. FRESH AIR MUST BE SUPPLIED TO THE BACK OF THE UNIT.

Canada: A Chimney connector shall not pass through an attic or roof space, closet or similar concealed space, or a floor, or ceiling. Where passage through a wall or partition of combustible construction is desired. The installation shall conform to CAN/CSA-B365. Installation code for Solid-Fuel-Burning Appliances and equipment.

***IMPROPER INSTALLATION:** The manufacturer will not be held responsible for damage caused by the malfunction of a stove due to improper installation, CHIMNEY FIRES OR OVER-FIRING THE STOVE. It is very important to use only specified Components when installing Do not use makeshift methods or material which may compromise the installation. Improper Parts used can cause chimney fire and poor stove performance including exposure to carbon Monoxide. 509 STOVES will not be liable for consequential or indirect damage to property or persons resulting from the use of this product. consult a professional installer if you have any questions.

THIS ROOM HEATER MUST BE CONNECTED TO A CHIMNEY COMPLYING WITH THE REQUIREMENTS FOR TYPE-HT CHIMNEYS IN THE STANDARD FOR CHIMNEYS, FACTORY-BUILT, RESIDENTIAL TYPE AND BUILDING APPLIANCE, UL-103 OR A CODE-APPROVED MASONRY CHIMNEY WITH A FLUE LINER. OPTIONAL 2 FT SECTION OF SINGLE WALL PIPE CAN BE USED DIRECTLY OFF THE STOVE AS LONG AS THE WALL IS PROTECTED AND CORRECT CLEARANCES CAN BE MAINTAINED PER THE CODE FOR SINGLE WALL CHIMNEY IN YOUR AREA.

1. Remove all parts from inside the stove body including touch up paint, fire poker, etc. Loose fire bricks must be placed correctly before installation. (See Brick Install Section.) Baffle board must be placed correctly and slid to the back of the stove wall with no gaps.)
2. Select the proper location for the stove. These appliances must not be installed any closer than the minimum clearance to combustibles. (See State and county regulations)
3. The stove must be installed on a non-combustible surface w/ 16" in front of the door

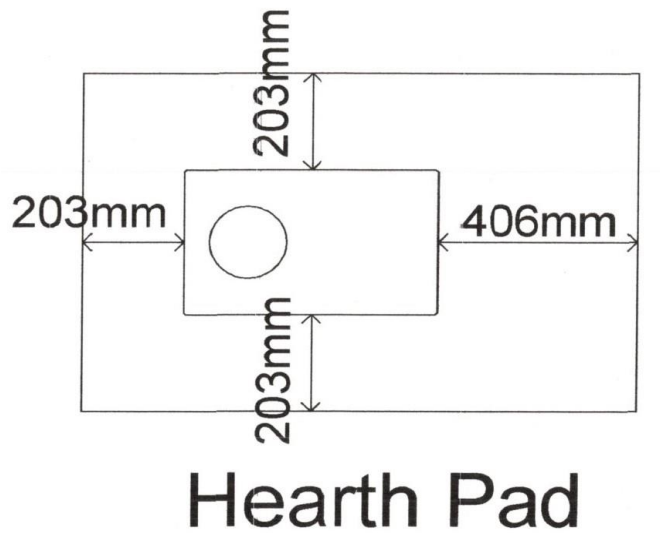
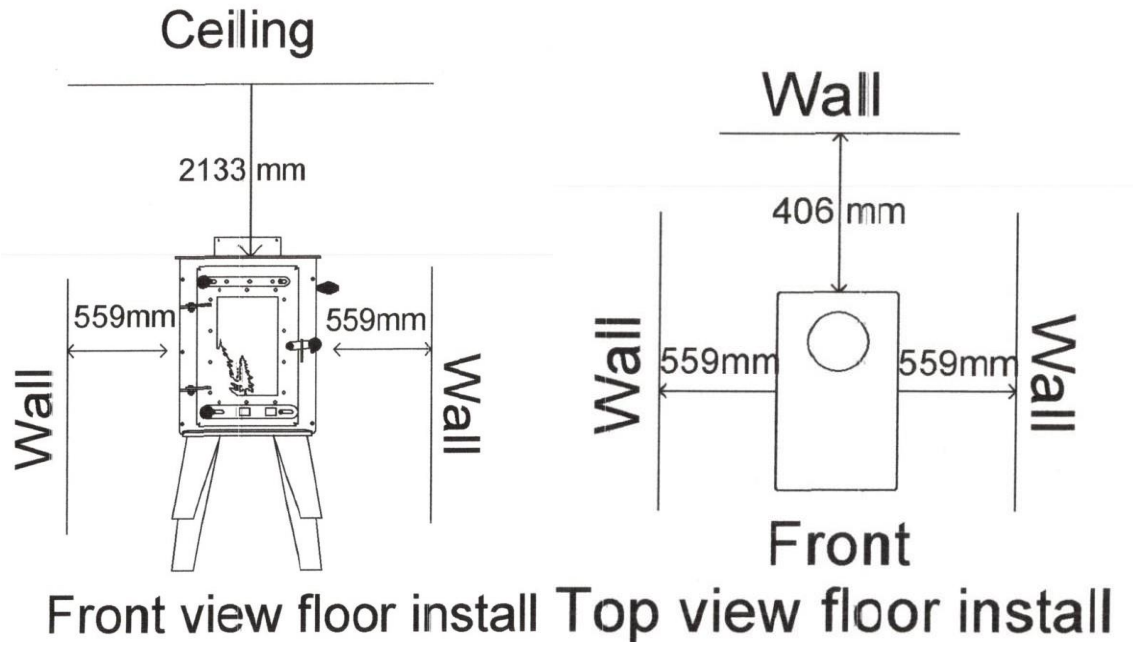
4. If non-combustible materials have been installed on the walls, obtain the minimum clearances from either the manufacturer of these materials or the local building inspector's office.
5. Install the stovepipe INSIDE the flue collar on the top of the stove, between the stove and the chimney, seal with high temp 2000-degree stove pipe sealant. Attach mounting screws in holes provided in flue collar.
6. **DO NOT use a grate to elevate the fire inside the firebox. Build Fire directly on hearth.**
7. A minimum clearance of 18 inches (18") between the single wall stove pipe and combustible materials is required. Check with authorities having jurisdiction in your area with any questions. Double and triple wall pipes vary for clearances. Read the labels on the pipe.
8. Unless noted on several stove pipe manufacturers stove pipe, all the pipe sections **MUST BE** connected with the male (crimped) end toward the stove.
9. Fasten the stove pipe to the flue collar using three sheet metal screws. Do the same at each additional joint to make the entire installation rigid. Seal Single wall Joints.
10. Maintain the required diameter flue for the entire installation according to local rules and regulations.
11. It is recommended that no more than two 90-degree bends be used in the stovepipe installation. More than two 90-degree bends may decrease the amount of draw, and possibly cause smoke spillage. **45-degree elbows are preferred.**
12. An inline damper is not required in this installation. Remove the damper plate in the chimney or secure it in the OPEN position. **FAILURE TO FOLLOW THE MINIMUM CLEARANCE REQUIREMENTS MAY RESULT IN AN UNSAFE INSTALLATION.**
13. Single wall flue pipe assemblies must not exceed 12 feet (12') in overall length.
14. **ALWAYS Check for Leaks**

FRESH OUTSIDE COMBUSTION AIR IS HIGHLY RECOMMENDED.

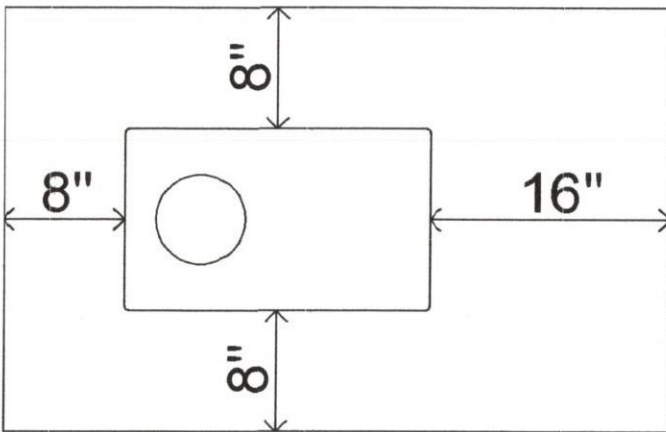
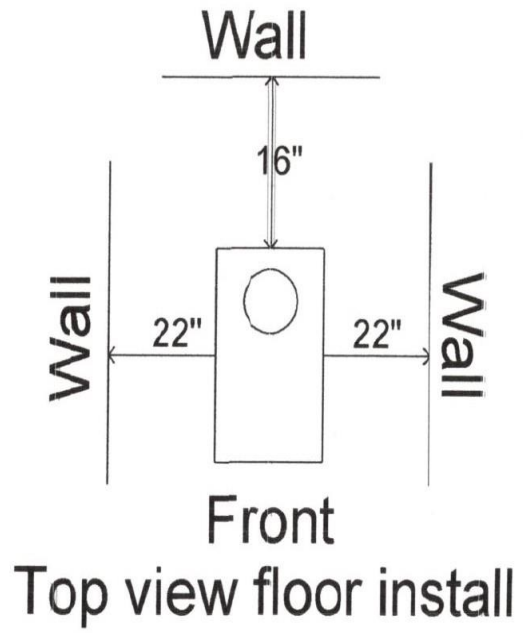
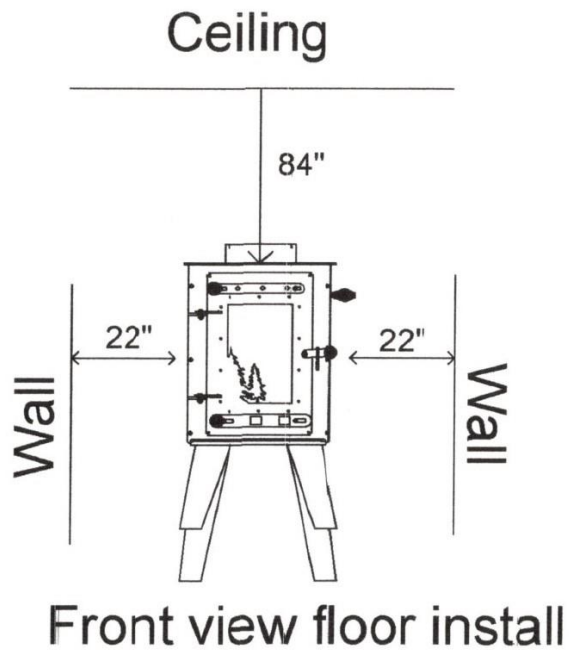
Disposal of Ashes

Ashes should be placed in a metal container with a tight-fitting lid. The closed container of ashes should be placed on a non-combustible floor or on the ground, well away from all combustible materials, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled. **OTHER WASTE SHALL NOT BE PLACED IN THE CONTAINER.**

Clearance To Combustibles Canada



Clearance To Combustibles USA



Hearth Pad

MASONRY CHIMNEY

Ensure that a masonry chimney meets the minimum standards of the National Fire Protection Association (NFPA) by having it inspected by a professional. Make sure there are no cracks, loose mortar or other signs of deterioration and blockage. Have the chimney cleaned before the stove is installed and operated. When connecting the stove through a combustible wall to a masonry chimney, special methods are needed. Refer to Combustible Wall Chimney Connector Pass-Throughs.

MASONRY FIREPLACE

There are listed kits available to connect a stove to a masonry fireplace. The kit is an adapter that is installed at the location of the fireplace damper. The existing damper may have to be removed to allow installation.

Canada: To comply with CSA B365, Installation Code for Solid-Fuel-Burning Appliances and Equipment, any combustible covering beneath the appliance and/or within the area extending horizontally at least 450 mm (18 in) beyond the appliance on any side equipped with a door, and at least 200 mm (8 in) beyond the appliance on other sides, shall be protected by a continuous, durable, non-combustible pad that will provide ember protection. The 450 mm (18 in) ember protection required on any side with a door shall extend for the full width of the appliance plus the 200 mm (8 in) required on each side of the appliance without a door. Where an appliance is installed less than 200 mm (8 in) from a wall, the ember pad needs only extend to the base of the wall. An ember pad shall not be placed on top of a carpet unless the pad is structurally supported to prevent displacement and distortion.

NOTE: Do not install the chimney directly at the outlet of the appliance. A chimney connector (flue pipe) is required unless the appliance is specifically approved for that type of installation.

- If the stove is installed in a transportable building, the chimney must be removed.
- Completely seal all penetrations of the chimney with high temp sealant and fresh air holes to maintain continuity of the air barrier system.
- Make Sure all Baffles and Bricks are located in the correct position before final placement or any more moving of the stove.
- DO NOT INSTALL IN A MOBILE HOME IN CANADA.

An R-2 Hearth Pad is Required for Free-Standing Installation w/ The 8” Leg Model. 13” Leg Model Hearth Not Required. ((It’s Always a Great Idea to Have A Hearth Pad Anyway))

Type 2 – Traditional Hearth Pads

Fully non-combustible, with an R-value of **2.24 or 1.592** (R-value information), it provides protection well above the minimum requirements for Type 2 hearth pads (minimum requirement of R-value=1.0).

Your hearth pad is the layer of material that sits between your stove or fireplace and the floor or subfloor under it. Often made of natural stone tile, ceramic tile, thin set cement board and other building materials, the hearth pad protects the subfloor from the heat of the fire above it. Its R-value, or thermal resistance, tells you how well it insulates the subfloor. To find the R-value, you need to know what materials the hearth pad is made of and their relative R-values, K-values or C-values. These other two values measure thermal conductivity.

Look at the edge of the hearth pad, so you can see a cross-section of all its materials. If you have already installed the hearth pad, you might have to remove a decorative tile bevel or some other sort of edging to see the cross-section.

Measure the height in inches of each material used in the hearth pad. For example, if the hearth pad has a layer of cement board on the bottom, a layer of thin set in the middle and a layer of ceramic or stone tile on top, measure the height of each layer.

Consult an R-value chart to determine the R-value of each layer. Hearth manufacturers, insulation manufacturers and utility companies may have these charts on their websites or in their stores or offices.

Add the R-values of all the layers in the hearth pad to find the hearth pad's total R-value.

Measure the thickness of any layers of the hearth pad for which you know the K-value. You don't need to measure the layers for which you know the C-value.

Divide 1 by the K-value of the layer. Multiply the result by the thickness of the layer. This gives you its R-value. For example, if you have a 1/2-inch layer of a material with a K-value of 0.3, divide 1 by 0.3 to get 3.333, then multiply that by 0.5 to get an R-value of 1.667.

Divide 1 by the C-value of a layer. This gives you the R-value. For example, if you have a layer with a C-value of 1.15, divide 1 by 1.15 to get an R-value of 0.87.

Repeat these calculations for any remaining layers. Add the R-values together to get the total R-value for the hearth pad.

METHOD A.

12" (304.8 mm) Clearance to Combustible Wall Member: Using a minimum thickness 3.5" (89 mm) brick and a 5/8" (15.9 mm) minimum wall thickness clay liner, construct a wall pass-through. The clay liner must conform to ASTM C315 (Standard Specification for Clay Fire Linings) or its equivalent. Keep a minimum of 12" (304.8 mm) of brick masonry between the clay liner and wall combustibles. The clay liner shall run from the brick masonry outer surface to the inner surface of the chimney flue liner but not past the inner surface. Firmly grout or cement the clay liner in place to the chimney flue liner.

METHOD B.

9" (228.6 mm) Clearance to Combustible Wall Member: Using a 6" (152.4 mm) inside diameter, listed, factory-built Solid-Pak chimney section with insulation of 1" (25.4 mm) or more, build a wall passthrough with a minimum 9" (228.6 mm) air space between the outer wall of the chimney length and wall combustibles. Use sheet metal supports fastened securely to wall surfaces on all sides, to maintain the 9" (228.6 mm) air space. When fastening supports to chimney length, do not penetrate the chimney liner (the inside wall of the Solid-Pak chimney). The inner end of the Solid-Pak chimney section shall be flush with the inside of the masonry chimney flue, and sealed with a non-water-soluble refractory cement. Use this cement to also seal to the brick masonry penetration.

METHOD C.

6" (152.4 mm) Clearance to Combustible Wall Member: Starting with a minimum 24 gage (.024" [.61 mm]) 6" (152.4 mm) metal chimney connector, and a minimum 24 gage ventilated wall thimble which has two air channels of 1" (25.4 mm) each, construct a wall pass-through. There shall be a minimum 6" (152.4) mm separation area containing fiberglass insulation, from the outer surface of the wall thimble to wall combustibles. Support the wall thimble, and cover its opening with a 24- gage minimum sheet metal support. Maintain the 6" (152.4 mm) space. There should also be a support sized to fit and hold the metal chimney connector. See that the supports are fastened securely to wall surfaces on all sides. Make sure fasteners used to secure the metal chimney connector do not penetrate chimney flue liner.

METHOD D.

2" (50.8 mm) Clearance to Combustible Wall Member: Start with a solid-pack listed factory-built chimney section at least 12" (304 mm) long, with insulation of 1" (25.4 mm) or more, and an inside diameter of 8" (2 inches [51 mm] larger than the 6" [152.4 mm] chimney connector). Use this as a pass-through for a minimum 24-gage single wall steel chimney connector. Keep solid-pack section concentric with and spaced 1" (25.4 mm) off the chimney connector by way of sheet

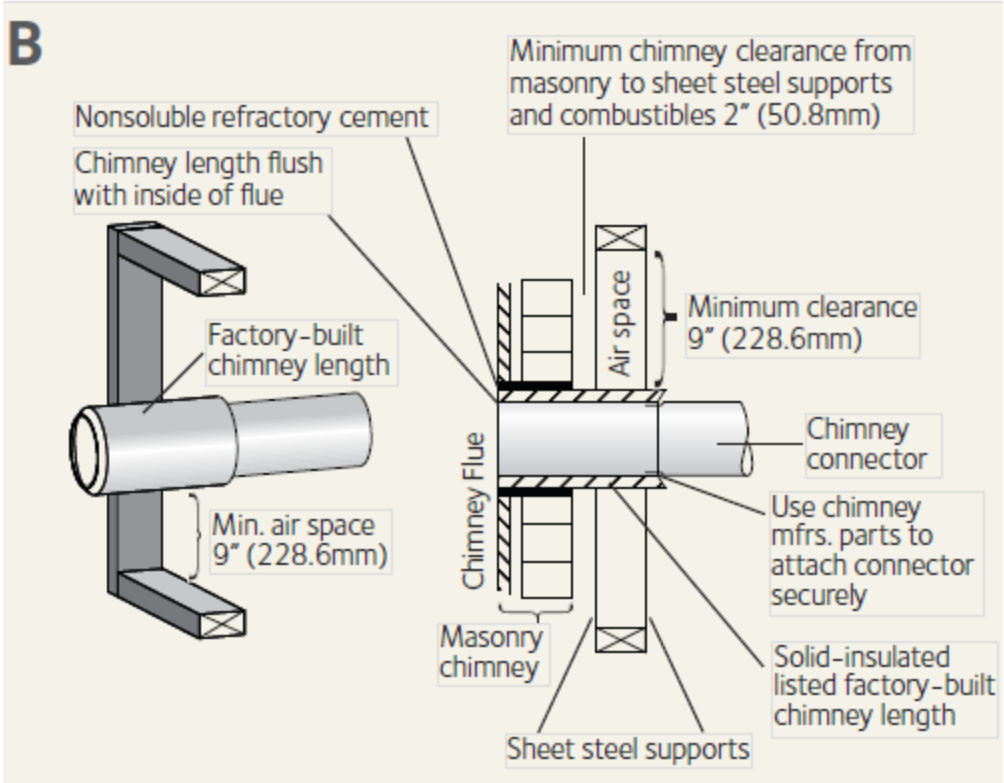
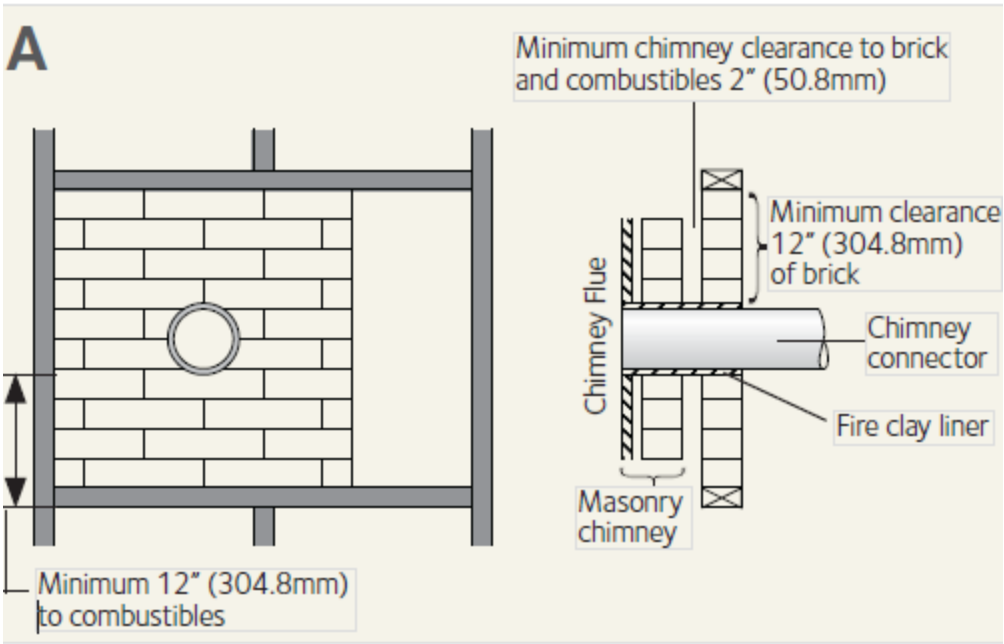
metal support plates at both ends of chimney section. Cover opening with and support chimney section on both sides with 24 ga minimum sheet metal supports. See that the supports are fastened securely to wall surfaces on all sides. Make sure fasteners used to secure chimney flue liner.

NOTES:

1. Connectors to a masonry chimney, excepting method B, shall extend in one continuous section through the wall pass-through system and the chimney wall, to but not past the inner flue liner face.

1. A chimney connector shall not pass through an attic or roof space, closet or similar concealed space, or a floor, or ceiling.

2. THE STEELHEAD DOES NOT HAVE A REAR EXHAUST OUTLET, THEREFOR DO NOT INSTALL IN OR UP A BUILT IN FIREPLACE / HEARTH FIREPLACE. DO NOT MOUNT THE STOVE IN FRONT OF A BUILT IN FIREPLACE AND RUN THE CHIMNEY UP THROUGH THE OPENING AT GROUND LEVEL. ONLY INSTALL AS DESCRIBED ABOVE BY A THROUGH WALL PENETRATION TO THE CHIMNEY LINER.



FLUE SYSTEM

CANADA

Chimney Must be Labeled CAN/ULC-S629 or Code Compliant Chimney or Single Wall Stainless Steel Chimney where Clearance to Combustibles is Met

The Steelhead Wood Stove is designed for use with a 6" Flue System either in single wall (Minimum 28 ga. Metal or Stainless Steel for 18" Clearance to combustibles) or Double Wall Chimney pipe or Class "A" 6" Pipe for 2" Clearance to combustibles around the pipe only, not the stove at any time. Read instructions on the labels of the non-single wall pipe. (The black or non-painted connector pipe should be at least 28 ga. steel and a minimum of eighteen inches (18.0") from a combustible wall and eighteen inches (18.0") from ceiling. It is permissible to use single wall pipe and Class A pipe both if you follow your counties rules and regulations with no single wall pipe penetrating any surface without 18" Clearance to combustibles around it. It is recommended in this situation to convert to Double Wall or Class A pipe at the ceiling box transition. 8 ft or more chimney is best. If you need more draft, add a section of chimney pipe.

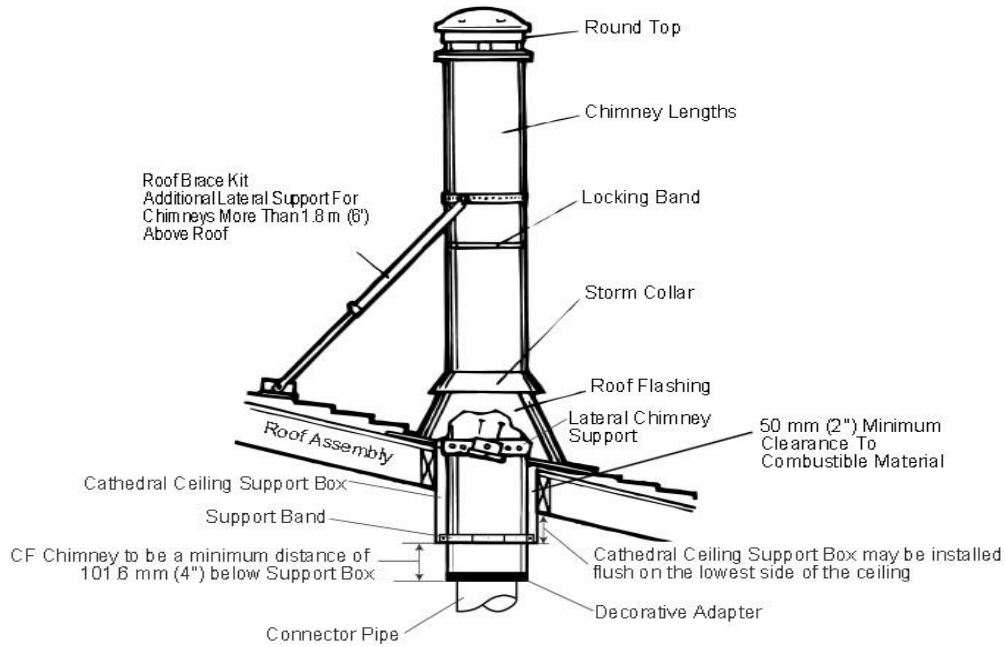
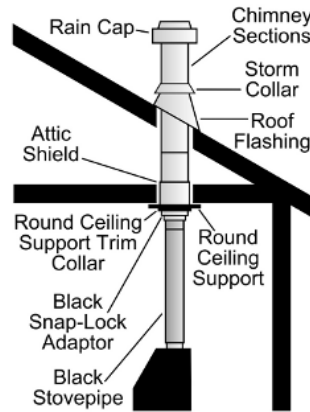
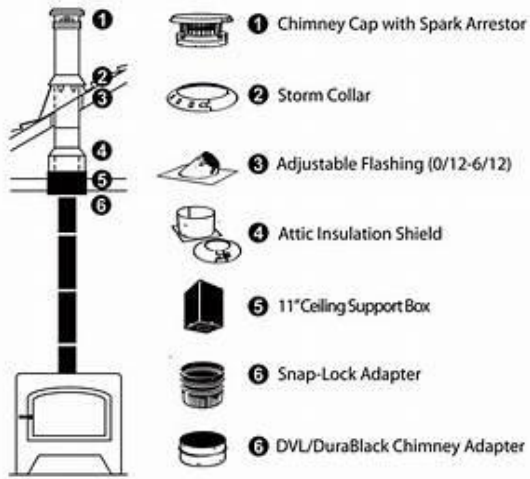
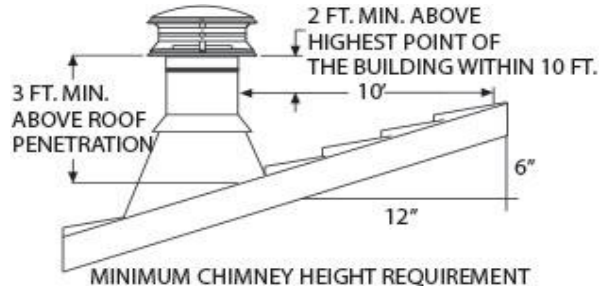
It is not permissible to connect this unit to a chimney that is servicing another unit.

Flue Size-The proper flue size is determined by measuring the inside diameter of the flue collar on the unit. This stove is equipped with a four-inch (6") TOP EXHAUST FLUE COLLAR. Therefore, the connector pipe should be six inches (6") and never less in diameter than the collar on the stove. Different manufacturers of stove pipe have different parts to adapt to stoves and their brand of stove pipe to accommodate 6" Pipe. This is necessary to accommodate pipe variation from different manufacturers and maintain a good seal. All Joints should be sealed and checked for leaks.

ALL CHIMNEY PIPES AFTER BURNING AND INSTALLING SHOULD BE CLEANED AND INSPECTED ON A REGULAR BASIS DEPENDING ON HOW MUCH YOU ARE BURNING.

It is the consumer's responsibility to ensure the chimney system is safe and in good operating condition. **The manufacturer will not be held responsible for an accident attributed to a unit connected to a faulty chimney system. This stove is considered a recreational stove and carries no warranty except for shipping damage, which must be reported with 5 days of receiving shipment to ensure replacement or repair from a warranty claim through the shipping company.**

***IMPROPER INSTALLATION:** The manufacturer will not be held responsible for damage caused by the malfunction of a stove due to improper installation, CHIMNEY FIRES OR OVER-FIRING THE STOVE. Do not use makeshift methods or material which may compromise the installation. 509 STOVES will not be liable for consequential or indirect damages to property or persons resulting from the use of this product. Consult a professional installer if you have any questions.



Examples of single wall 6" to Double Wall or Class A 6" Insulated Chimney at ceiling. **EVERY INSTALL IS DIFFERENT, THESE ARE SUGGESTIONS**

Note: You must Maintain 18" From Ceiling with single wall Pipe and minimum 13 to 18" From walls with 1" Air Gap behind Non-Flammable wall boards.

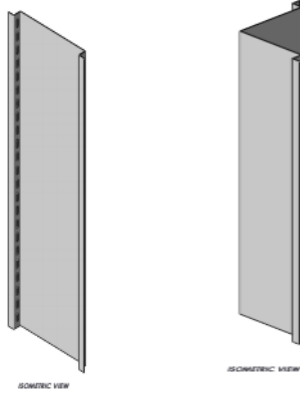
FLOOR AND WALL PROTECTION

1. You will not need any floor protection if your floor is constructed of a non-combustible material such as brick, metal, or concrete. If your floor is constructed with a combustible material such as hardwood, carpet, or linoleum, you must place protection between the stove and the combustible material. There are many floor and wall board manufacturers. The type of board you choose should be U.L. rated and listed Fiber Board or Masonite of some type. After examining the area you plan to place your stove and determining it requires a board, the next step is to select the proper size. The stove you choose will determine the size board that is required. The approved protector board should be large enough to provide a minimum of eight inches (8") behind the unit, eight inches (8") on either side and sixteen inches (16") in the front where the door is located. This stove requires a minimum of 42.0" D x 34" W for floor protection.
2. **Installation on a Concrete Floor** An appliance mounted on a concrete floor does not require floor protection. Carpeting and any other combustible material must not cover the Floor Protector. If a combustible surface is applied to the concrete floor, a clearance must be maintained equivalent to the area reserved for the floor protector. Floor Protection Foot-Print Minimum Size 42.0" x 34"

Installation on a Combustible Floor If the appliance is to be installed on a combustible floor or a combustible floor covering, it must be installed on a 1" thick non-combustible millboard floor protector or a durable equivalent, with a "R" factor of no less than "2." The pad must be installed beneath the unit, extending 16" (U.S.) on the side equipped with a door, and 8" on all other sides. The pad must cover any horizontal chimney connector runs and extend 2" beyond each side.

Wall Protection (Cont'd)

In some areas local codes may require thirty-six inches (36") from a combustible, therefore it is especially important that you check with local officials. If you need to place your unit closer to a combustible wall, some protection will be necessary. If an approved wall board is used this will reduce your clearance by two thirds (2/3); however, a one-inch (1") air space has to be between the board and the wall. If you have a ceiling flue hook-up, you will need protection from the floor to the ceiling if you do not meet the normal clearances. If you have a wall flue hook up, you will need wall protection at least twelve inches (12") above the wall thimble



Examples of wall protection with 1" Air gap

Outside Air Connection

The stove can accept a 3-inch aluminum flex tube for outside air. Make sure when connecting the fresh air tube to the outside that you cover the end with a screen of some sort, but not a screen that would restrict air in-flow. Utilize a screen with wider openings ONLY.

WE WILL REPEAT: THE FIRST FIRE IS VERY IMPORTANT

Remember to ventilate well. Allow the stove to cure with several small fires before burning for long periods of time at high temperatures. Flat spots on the painted surface are normal. Shiny spots on the painted surface (before burning) are normal. **SMALL FIRES OF 4 TO 5 INCHES IN DIAMETER.**

1. Do not use a grate or elevate the fire inside the firebox.
2. Use only Dry (Seasoned) Wood in 16" or smaller lengths and 6" wide at most.
3. When the stove is used for the first time, solvents in the paint will smoke off as the stove "cures."

NEVER USE LOGS THAT HAVE ADDITIVES IN THEM LIKE WAX, OILS, OR OTHER BINDING AGENTS. PURE SAWDUST LOGS ONLY. USE OF THESE TYPES OF LOGS CAN CAUSE A FIRE THAT IS OUT OF CONTROL VERY QUICKLY DUE TO THE ADDITIVES.

CLEAN AND INSPECT YOUR CHIMNEY REGULARLY AND WATCH OUTSIDE FREQUENTLY TO LOOK FOR SMOKE TO INSURE CORRECT DRAFT PLACEMENT FOR EFFECTIVE CLEAN EFFICIENT BURNING.

ALWAYS STORE YOUR LOGS/ WOOD IN A WELL-VENTILATED AREA AWAY FROM DIRECT MOISTURE.

WOOD/FUEL – Higher efficiency and lower emissions generally result when burning NATURAL SAWDUST LOGS. Cord wood must be dry and split. **DO NOT OVERFIRE THE STOVE**

Use only dry, seasoned wood. Green wood, besides burning at only 60 percent of the fuel value of dry wood, deposits creosote on the inside of the stove and along the chimney. This can cause extreme danger of chimney fire.

To be called "seasoned," wood must be dried for a year. Regardless of whether the wood is green or seasoned, it should be stored in a ventilated, sheltered area to allow proper drying during the year. Wood should be stored beyond recommended clearances from combustibles.

DO NOT BURN: Logs with Additives, Treated Wood, Garbage, Solvents, Trash, Cardboard, Colored Paper, or Coal. (Spiders are ok)

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 WELL AWAY FROM THE HEATER WHILE IT IS IN USE.

BUILDING A FIRE

Before building a fire, make sure your fire box is clean, the door glass is clean, and only a small amount of ash is left on the brick floor. Close the rear secondary burn control on the back of the stove by sliding the handle in. Open the draft on the bottom of the door half way and the air wash draft on top of the door to half open. To build your kindle fire, use smaller (3 to 4" diameter) pieces of wood on the bottom layer against the brick making sure you have space in between them. At your second layer and up, cross your pieces leaving air gaps in between. The smallest kindling is placed on top. Light the fire from the top small kindling and let it burn down to the bigger pieces, making sure you got a good flame to your original start. **DO NOT OVER FILL THE FIREBOX ON THE INITIAL LOAD SO YOU CAN BUILD A COAL BED**

Always make sure to close the door immediately after starting the fire. A couple of times lighting the stove, you will figure out what works best for you. Different lengths of chimney, and types of chimneys used for configuration, elevation, and temperature play roles in how the fire will burn. Find your best damper control locations as you test your stove and learn how it operate the stove.

DRAFT / AIR CONTROLS

The draft control on the door must be open to operate the stove. Use Gloves to adjust drafts when stove is hot. with the stove that cleans the glass with a built-in removable razor blade and hole on the side of the tool to slide the draft control on the door, especially when the stove is in operation, as the rod that controls the draft placement gets extremely hot. Move your air wash control rod with the tool provided as well. **WHEN STARTING A FIRE, CLOSE THE AIR WASH DRAFT SLIDE UNTIL THE STOVE REACHES TEMPERATURE OR APPROXIMATELY 20 MINUTES AFTER LIGHTING THE FIRE.**

NEVER COMPLETELY CLOSE THE DRAFT CONTROL ON THE DOOR.

REFER TO “BUILDING A FIRE” AS YOU ARE READING THIS SECTION

1. Do not use a grate or elevate the fire inside the firebox.
2. Build the wood fire directly on the bricks inside the stove. The brick lined firebox should not be altered or overfilled. 2 pieces of wood must be lined side by side inside the stove and not too tightly to burn correctly. Build your kindling with smaller sizes as you build up. Do not overfill the firebox on the initial fire of the day. Build your coal bed before filling your fire box with wood. It is best to use split wood, not round logs that are not split.

When the stove is used for the first time, solvents in the paint will smoke off as the stove “cures.”

WOOD/FUEL – This heater is designed to burn Cordwood. Natural SAWDUST LOGS without additives can be burned in the stove **ONLY ONE AT A TIME**. Higher efficiency and lower emissions generally result when burning NATURAL SAWDUST LOGS, but these logs burn at a much higher temperature **AND CAUTION MUST BE TAKEN**.

Use only dry, seasoned wood. Green wood, besides burning at only 60 percent of the fuel value of dry wood, deposits creosote on the inside of the stove and along the chimney. This can cause extreme danger of chimney fire.

To be called “seasoned,” wood must be dried for a year. Regardless of whether the wood is green or seasoned, it should be stored in a ventilated, sheltered area to allow proper drying during the year. **Wood should be stored beyond recommended clearances from combustibles around heaters and flame.**

DO NOT BURN: Treated Wood, Garbage, Solvents, Trash, Cardboard, Colored Paper or Coal.

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 WELL AWAY FROM THE HEATER WHILE IT IS IN USE.

NEVER USE LOGS THAT HAVE ADDITIVES IN THEM LIKE WAX, OILS, OR OTHER BINDING AGENTS. USE OF THESE TYPES OF LOGS CAN CAUSE A FIRE THAT IS OUT OF CONTROL VERY QUICKLY DUE TO THE ADDITIVES.

CLEAN AND INSPECT YOUR CHIMNEY REGULARLY AND WATCH OUTSIDE FREQUENTLY TO LOOK FOR SMOKE TO INSURE CORRECT DRAFT PLACEMENT FOR EFFECTIVE CLEAN EFFICIENT BURNING.

ALWAYS STORE YOUR WOOD IN A WELL-VENTILATED AREA AWAY FROM DIRECT MOISTURE.

GLASS CARE

The following use and safety tips should be observed:

1. Inspect the glass regularly for cracks or breaks. Surface scratches are acceptable and normal, but if this glass becomes cracked in any area, the unit should be shut down and the window replaced with high-temperature Neo-Ceram glass. (6.50" x 10.00")
2. Do not slam the door or otherwise impact the glass on the front of the stove trying to force wood into the stove. When closing doors, make sure that foreign objects do not protrude and impact the glass.
3. Do not clean the glass with materials which may scratch (or otherwise damage) the glass. Scratches on the glass can develop into cracks or breaks.
4. Never attempt to clean the glass while the unit is hot. If the deposit is not very heavy, normal glass cleaners are adequate with a plain, non-abrasive scouring pad. Heavier deposits may be removed with the use of a razor blade scraper.
5. NEVER put substances that can ignite explosively inside the unit, since even small explosions in confined areas can blow out the glass.
6. Inspect the glass seal periodically to ensure proper seal. If the gaskets become frayed or worn, replace them immediately. Contact your dealer or Customer Service at) 509-993-3767 for approved replacement parts.
7. Keeping your glass clean is essential to notice if you are burning the stove correctly. If the glass dirties and doesn't clean off during operations, it is a clear sign you are not burning correctly or a draft control is not open correctly, or you are burning too low.

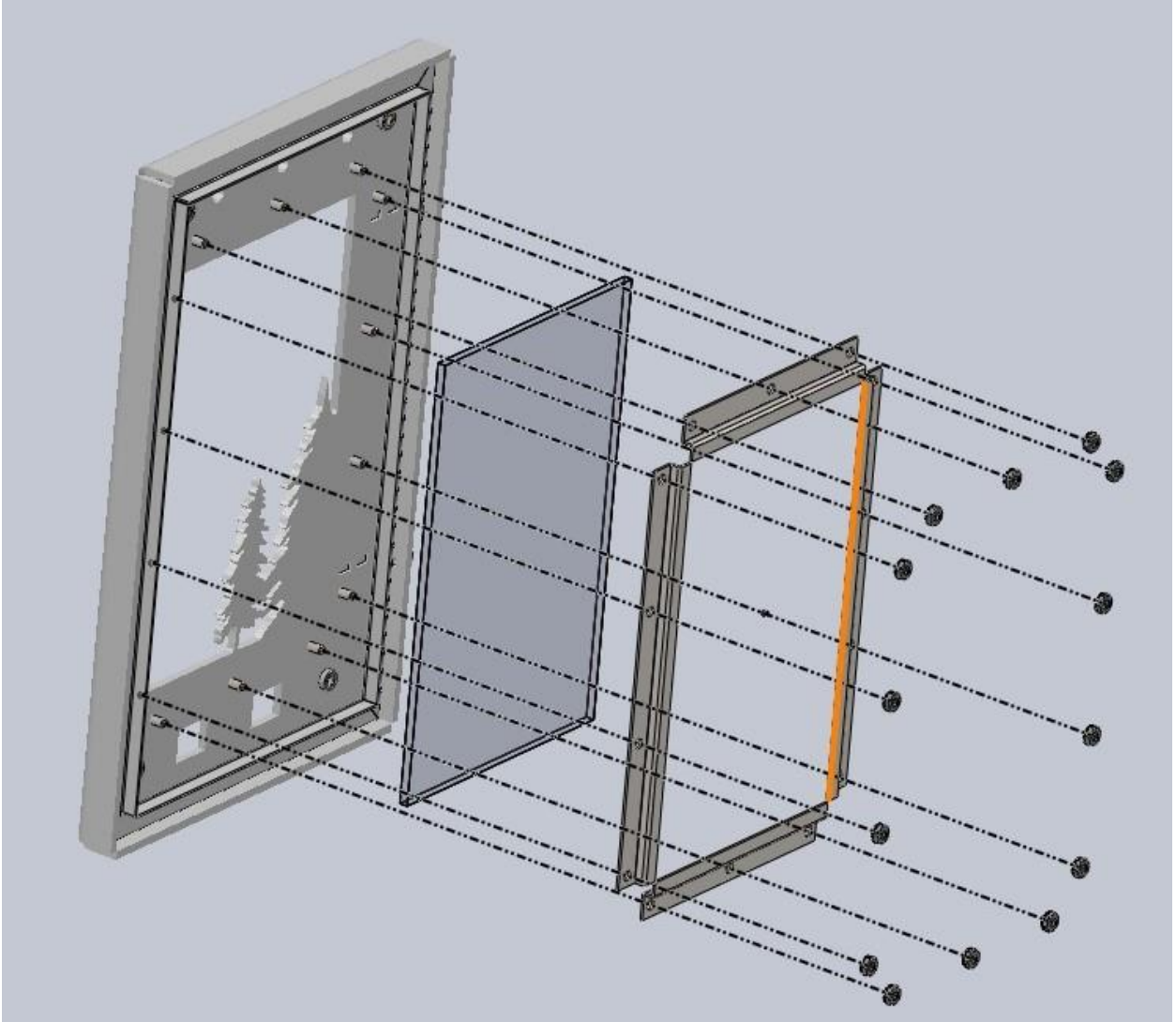
Glass / Door Gasket Replacement

After extensive use, the sealing material which provides glass and door seal may need to be replaced if it does not sustain its resilience. Inspect the glass and door seal periodically to ensure proper seal. If the gaskets become frayed or worn, replace it immediately.

The following steps should be followed for replacement of the glass or door gasket:

1. Ensure that the appliance is not in operation and is thoroughly cooled.
2. Remove the screws and glass clip Brackets.
3. Lift glass out from glass clips.
4. Remove the old gasket and clean the glass.
5. Replace the new gasket, starting at the bottom of the glass and working along the edges. Be sure to center the gasket channel on the glass.
6. Trim the gasket to length and butt the ends together.
7. Replace the glass in the front, being sure not to overtighten the nuts, this will break the glass.

REPLACE GLASS ONLY WITH HIGH-TEMPERATURE NEO-CERAM OF THE PROPER SIZE AND THICKNESS. 3/16" x 6.50" X 10.00" You may order parts and options on our web site: 509Stoves.com or by calling (509) 993-3767



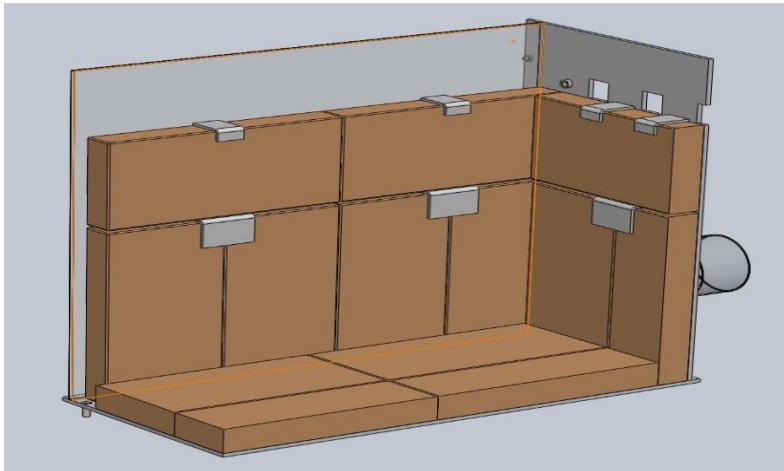
Door Gasket

The door gasket is $\frac{3}{4}$ " Rope Gasket. You will have to dig the gasket out of the channel and then clean all the old gasket cement out of the channel being careful not to bend the rope channels. Use only $\frac{3}{4}$ " Fire Rope to replace the door gasket. You can find it on our website as well. Use high Temp Stove Gasket Sealer on all 3 sides of the channels to secure rope in place. Place a weight, like a big book, over the gasket over-night and then re-install door. Note: A clean surface is crucial to your new gasket sealing properly. DO NOT Try and re-seal over old gasketing Cement.

BRICK CARE AND LAYOUT

Inspect your bricks each time you start a fire for correct placement, checking for broken or dislodged bricks. If broken or dislodged bricks are found, they need to be replaced in position or replaced entirely if damaged.

SIDE VIEW CUTOUT OF BRICKS



This view is the left side and door opening on left side of picture and it is a cutout view. The Bricks you see on the bottom on the right are cut in half in the picture. Certain models have brick retainer clips in different spots and are of different size than you see in this view or have less retainer clips in the firebox to hold the brick. They are held in place by the other bricks located in the stove. Looking from the opening of the door on the left in the picture, the bricks are placed with the back bricks going in first and the sides going in second, then the bottom 4 (four) Bricks. To take the metal baffle plate and the upper baffle board out of the stove for initial placement of those items when receiving the stove or a cleaning of the whole stove, they must come out first.

Brick order of placement or Replacement:

Back upper horizontal brick.

Left back vertical and right vertical brick under top brick.

Left and right first 2 back vertical bricks holding them just from the back corner.

Upper left and right horizontal bricks.

3rd horizontal left and right bricks holding them from the 2nd horizontal bricks to place the second vertical brick on each side, then slide the vertical bricks towards the back of the stove.

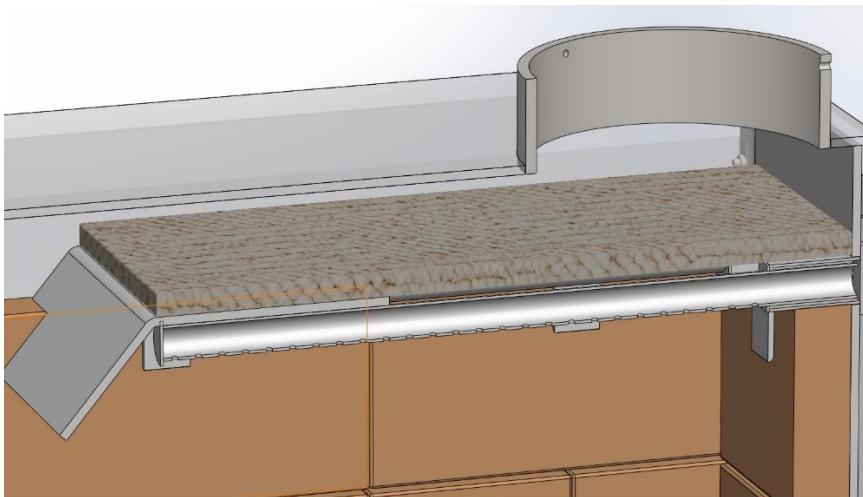
Slide in the upper Gray Baffle plates left and right up top to sit flat on top and all the way to the back of the stove so there are no air gaps behind or in the center.

Slide in metal baffle plate and rest it on your hand as you slide in the last horizontal brick on the left and right side.

Move the metal baffle plate slightly forward towards the door using the cutout on the sides of the baffle plate as a guide.

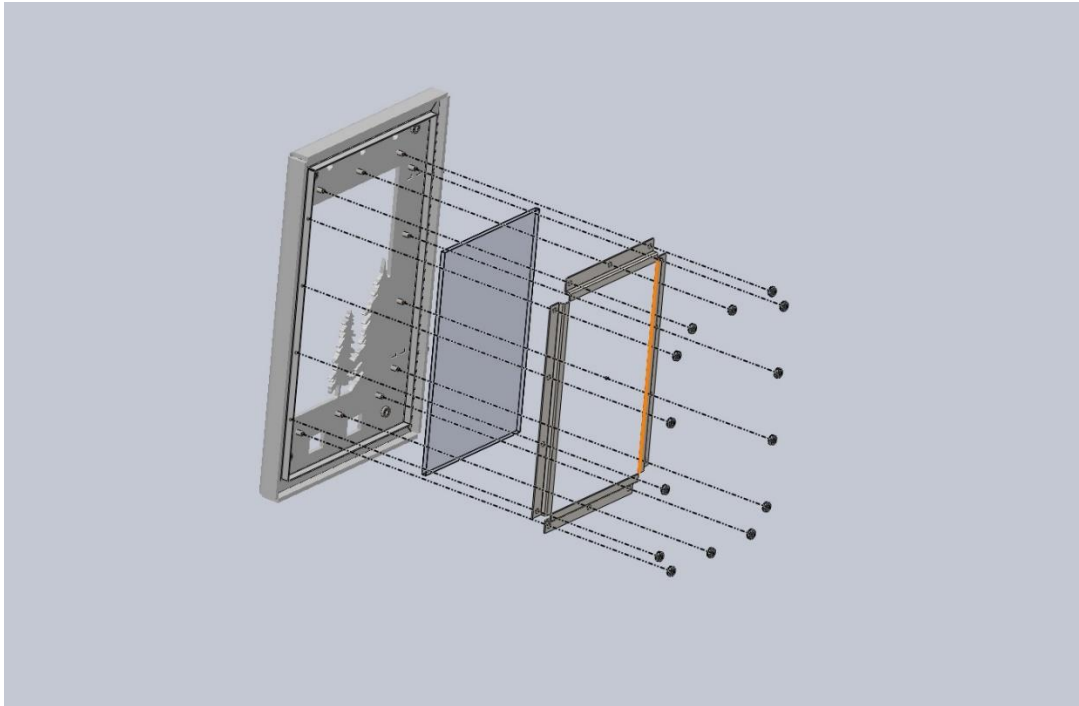
Slide the gray baffle boards together so they over-lap correctly and slide back until the gray baffle board is against the back side of the stove. (Computer rendering, metal baffle doesn't sit that tight on the side bricks as shown)

METAL BAFFLE AND GRAY BAFFLE BOARD PLACEMENT



Note: Metal Baffle does not sit this tight on the bricks at the edge. (Computer Rendering)

WINDOW GLASS REPLACEMENT



Breakdown of glass replacement if needed. 10-32 KEPS Nuts

CREOSOTE

When Sawdust Logs or wood is burned slowly, it produces tar and other organic vapors. These combine with moisture to form creosote. Creosote vapors condense in the relatively cool chimney flue of a slow-burning fire – as a result, creosote residue accumulates on the lining of the flue. If ignited, this creosote makes an extremely hot fire. The chimney should be inspected on a regular basis during the heating season, to determine if a creosote build-up has accumulated. If it has, the creosote should be removed to reduce the risk of chimney fire. **Always Inspect the chimney for creosote buildup a minimum of every 2 months during burning season.**

CANADA

Establish a routine for the fuel, wood burner, and firing technique. Check daily for creosote build-up until experience shows how often you need to clean the flue pipe to be safe. Be aware that the hotter the fire, the less creosote is deposited, and weekly cleaning may be necessary in mild weather even though monthly cleaning may be enough in the coldest months. Contact your local municipal or provincial fire authority for information on how to handle a chimney fire. Have a clearly understood plan to handle a chimney fire.

WAYS TO PREVENT AND KEEP UNIT FREE OF CREOSOTE

1. Burn with the air control fully open for several minutes at numerous intervals throughout each day during the heating season, being careful not to over-fire the unit. This should remove the slight film of creosote that accumulates during low burn periods.
2. Burn the stove with the draft control fully open for approximately 20 minutes every time you apply fresh wood. This allows fuel in the stove to achieve the charcoal stage faster and burns the vapors which might otherwise be deposited within the system. **Do not over fire the stove**
3. **IF YOU CHOOSE TO BURN DRY MANUFACTURED LOGS, BURN ONLY ONE AT A TIME.**
4. Avoid burning wet logs or green and wet wood. Seasoned wood is wood that has been dried for at least one year.
5. A small, hot fire is preferable to a large, smoldering fire that can deposit creosote within the system.
6. **Establish a routine for fuel, burning and firing technique. Check daily for creosote build-up until experience shows you how often you need to clean to be safe.** Keep in mind that the hotter the fire, the less creosote is deposited, and weekly cleanings may be necessary in milder weather, although monthly cleanings may be enough in the coldest months. Contact your local authority for information on how to handle a chimney fire and have a clearly understood plan to handle a chimney fire.

ASH BUILDUP Regularly inspect the ash build-up in your unit and remove as necessary. Ashes can be removed from the unit by shoveling out bottom of the stove bed. **BEING CAREFUL NOT TO DAMAGE THE FIREBRICKS.**

ALWAYS DISPOSE OF ASH, AS STATED, IN ASH REMOVAL SECTION

ASH VACUUM'S can be used for cleaning the stove. **Caution:** The ashes can be extremely hot!! Never remove red-hot ashes from the appliance; allow ashes to cool before cleaning. Ashes should be placed in a metal container with an airtight lid. The ashes should be placed outside on a noncombustible surface and completely away from any combustible materials. The ashes should remain in the airtight container until they have completely cooled.

WARNING: THINGS TO REMEMBER IN CASE OF A CHIMNEY FIRE: 1. CLOSE DRAFT CONTROL 2. CALL THE FIRE DEPARTMENT

What can cause a poor draft?

There are several common factors that can contribute to poor draft:

A. Atmospheric Pressure and Air Supply. Atmospheric pressure affecting the draft from a chimney can be outside the home, inside the home, or both. Outside the home, a high-

pressure (clear and cool) day generally creates a better draft in the chimney than a low-pressure (overcast and damp) day. Inside the home, household appliances, such as forced-air furnaces or clothes dryers, compete for air, often resulting in inadequate amounts of air available to fuel a fire and creating a condition known as negative pressure. Extreme conditions of negative pressure can cause the combustion by-products to be drawn from the chimney and into the house. This condition is commonly known as “down drafting.”

B. There are several factors that can affect the amount of air available in the home.

Increased amounts of insulation, vinyl windows, extra caulking in various places and door seals can all keep heat in but may also make a home too airtight. If you are in doubt as to whether there is sufficient air in your home for your stove, refrain from using those appliances known to consume air when possible or open a door or a window to allow some air to enter the home.

C. Environmental Conditions: High trees, a low-lying house location (such as in a valley), tall buildings or structures surrounding your house and even windy conditions can cause poor draft or down drafting.

D. Cold Chimney Temperature. Avoid cold chimney temperatures by burning a hot fire for the first fifteen to thirty minutes after building a fire, being careful not to over-fire. If any part of the chimney or parts of the stove start to glow, you are over-firing the stove. Where possible, install a temperature gauge on the chimney so temperature drops can be seen.

E. Chimney Installation and Maintenance. Avoid using too many elbows or long horizontal runs. If in doubt, contact a chimney expert and/or chimney manufacturer for help. Clean your chimney, rain cap(s) and especially the spark arrester regularly, to prevent creosote build-up – which can significantly reduce chimney draw and possibly create a chimney fire.

Should I close or open the air control fully when shutting down the stove?

When shutting down the stove with a very small amount of fuel left, fully open the air control. This will allow chimney temperatures to remain as high as possible for as long as possible. Remember, cold chimney temperatures create creosote.

IF THERE IS SIGNIFICANT FUEL LEFT IN THE STOVE, IT IS BEST TO LEAVE THE DRAFT SETTING AT A LOWER RATE IF THE FIRE IS BURNING CONSISTENTLY AND EFFICIENTLY (NOT SMOKING OUTSIDE)

OPERATIONAL / INSPECTION/ MAINTENANCE

IT IS VERY IMPORTANT TO KEEP ALL DOORS CLOSED DURING OPERATION UNLESS LOADING THE STOVE. The glass gasket and door gasket must be kept in good working order and seals inspected and maintained for a good seal.

Do not use substitute materials when changing gaskets, seals, or glass on the stove.

Do not slam the door closed or use the door as a pushing tool to shove fuel into the stove which would otherwise not fit.

Do not operate the stove with broken glass, or any broken seal, or dampers that do not function to close off the air supply to the stove.

Inspect bricks for wear or broken chunks when cleaning the stove. Replace if necessary.

NOTE: This section is intended as an aid and does not supersede any local, state or like requirements. Check with officials or authorities having jurisdiction in your area.

SEE ACCESSORIES LIST. IT IS HIGHLY RECOMMENDED TO TAKE OFF CHIMNEY CAP AND INSTALL A PLUG BEFORE BEING MOBILE IN YOUR STRUCTURE TO AVOID ASH BLOWING INSIDE THE STRUCTURE

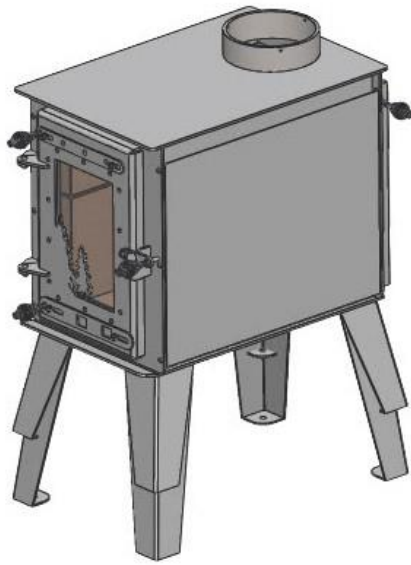
Links to videos about this stove will be posted on our website.

NOTE:

Parts and accessories are also available on our web site: www.509Stoves.com

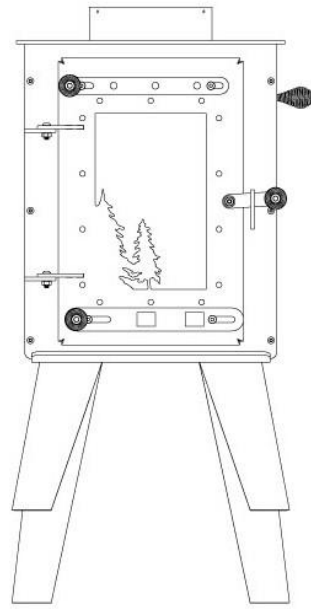
If you have any questions or problems, contact the Manufacturer or Dealer.

BURN AT OWNERS RISK. NOT RESPONSIBLE FOR ANY STOVE INSTALLATION

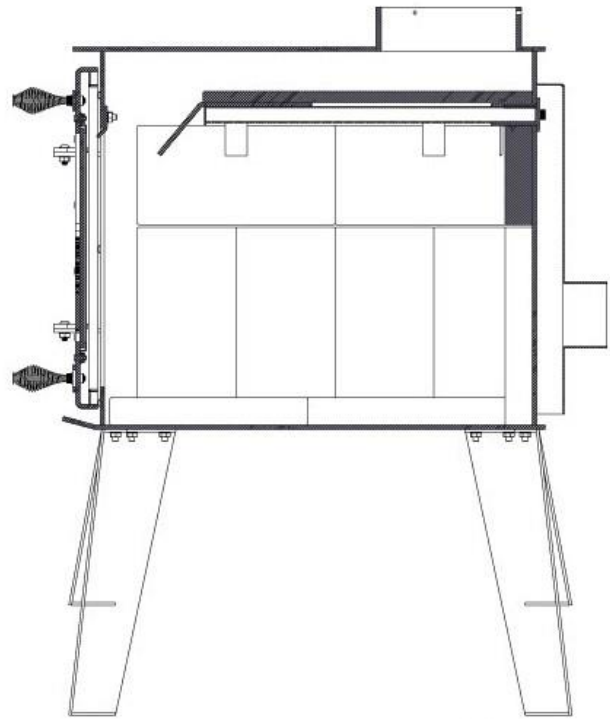
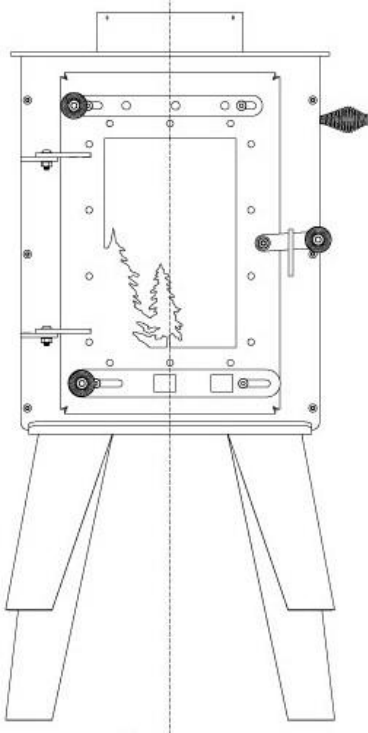


8" & 13" Models

EXPLODED VIEW
SCALE 1:6



8" & 13 Models



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