



MANUAL IN PROGRESS. PLEASE CALL WITH
QUESTIONS IN THE MEANTIME OF FINISHED MANUAL PUBLISHING

5095-1 Steelhead Camp Stove Manual

Manufactured by 509 Stoves


509 Fabrications, Inc.

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***This stove is sold for recreational use only. Non-Residential. Non-EPA/UL Tested
BURN AT YOUR OWN RISK. NOT RESPONSIBLE FOR ANY STOVE INSTALLATION***

Proudly Made in the USA 

Rev. 1.1

12/2021

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.

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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**

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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.

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: THIS UNIT IS NOT UL TESTED OR RATED. INSTALL TAKING ALL PRECAUTIONS AND TEST YOUR CLEARANCE TO COMBUSTIBLES AFTER INSTALL TO MAKE SURE SURFACES AROUND THE STOVE DO NOT GET HOT!!!

INSTALLATION

1. Remove all parts from inside the stove body including touch up paint, fire poker, etc. Loose fire bricks must be placed correctly before install (See Brick Install Section. Baffle board must be place 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.
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.
8. 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.

FLUE SYSTEM

This Mini 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" to 6" 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.

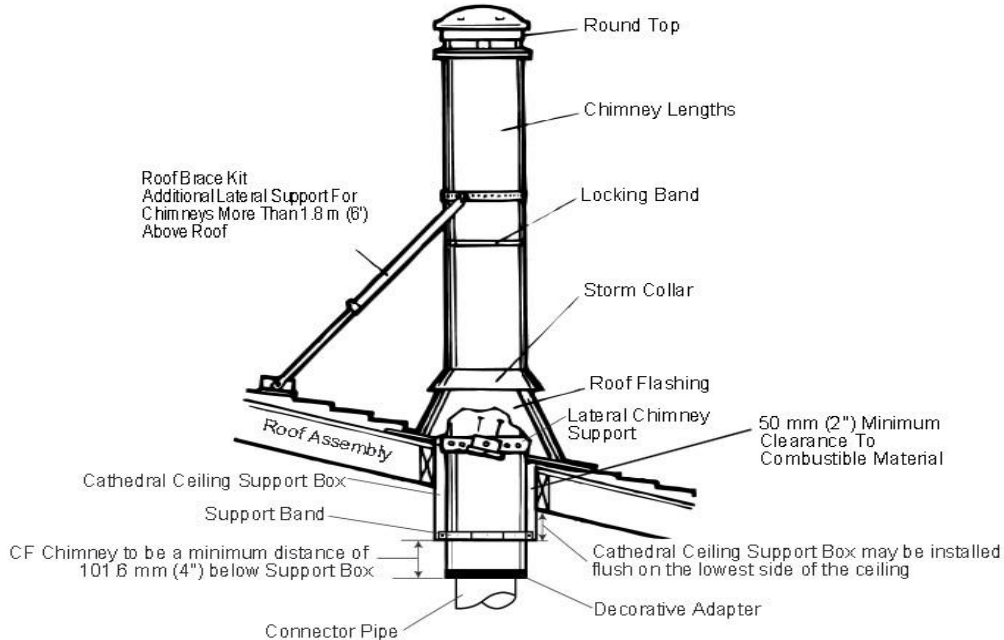
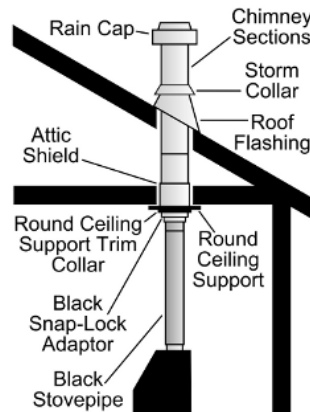
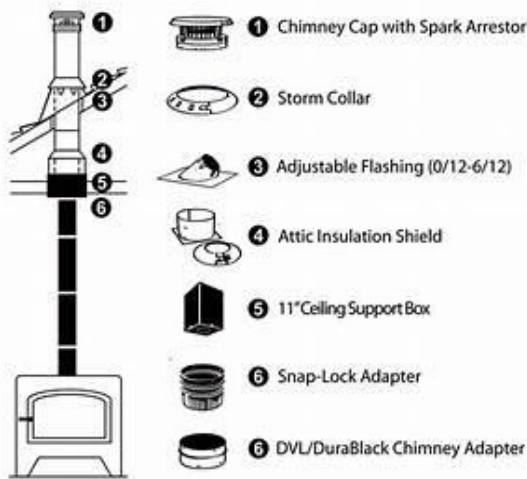
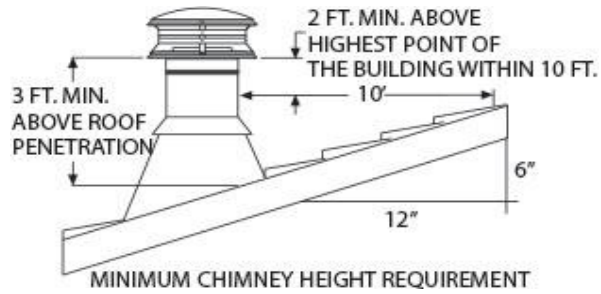
It is not permissible to connect this unit to a chimney that is servicing another unit.

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.

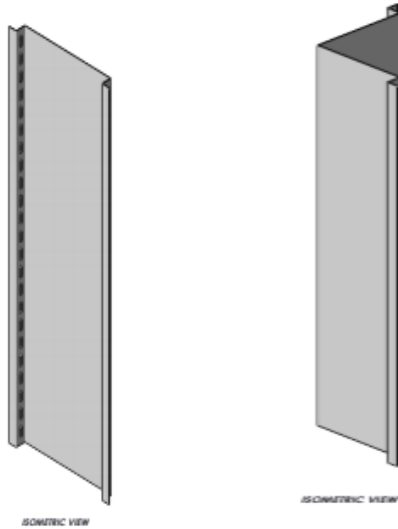
FLOOR AND WALL PROTECTION

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.

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."

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)

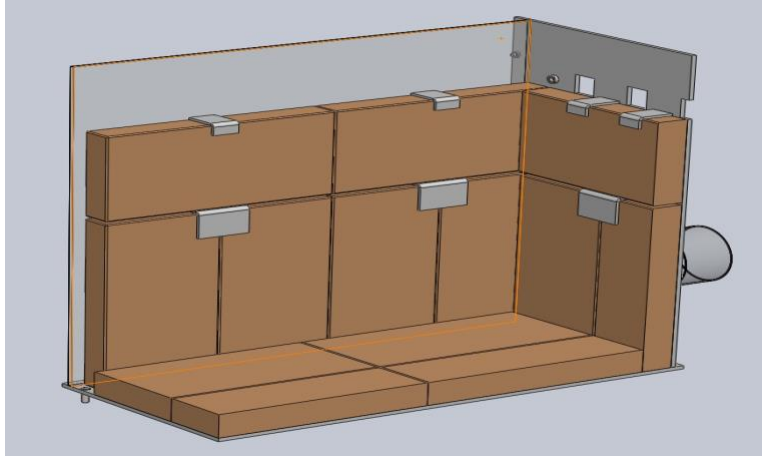
NEVER USE GASOLINE, GASOLINE-TYPE LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID, OR SIMILAR LIQUIDS TO START OR 'FRESHEN UP' A FIRE IN THIS HEATER. KEEP ALL SUCH LIQUIDS WELL AWAY FROM THE HEATER WHILE IT IS IN USE.

BUILDING A FIRE

FIRST 3 FIRES NEED TO BE VERY SMALL TO SEASON THE BAFFLE BOARD AND BRICKS AND PAINT

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 fully 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 you 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. 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 chimney 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.

FIRE BRICK & BAFFLE BOARD INSTALL

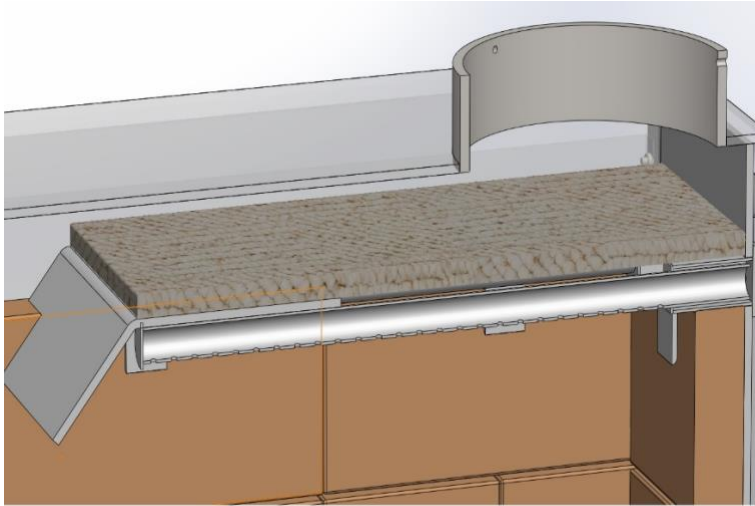


- Remove all Bricks and Baffle Boards from the Packaging.
- The Gray Baffle Plates are fragile and should be handled with care and seasoned in the stove with small amounts of heat to start after installing them. Build very small fires for the first 2 or 3 fires. (Small amount of kindling on top of 3 small pieces of 2"x2" wood to just heat up the stove. Let the stove cool down and then repeat. This procedure will lengthen the life of the baffle board. **Burning too hot at first will ruin the structure and integrity of the baffle board**)
- Left side of drawing is the door opening and it is a cutout view. The Bricks you see on the bottom are cut in half in the picture. Certain models have the 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. In order 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:

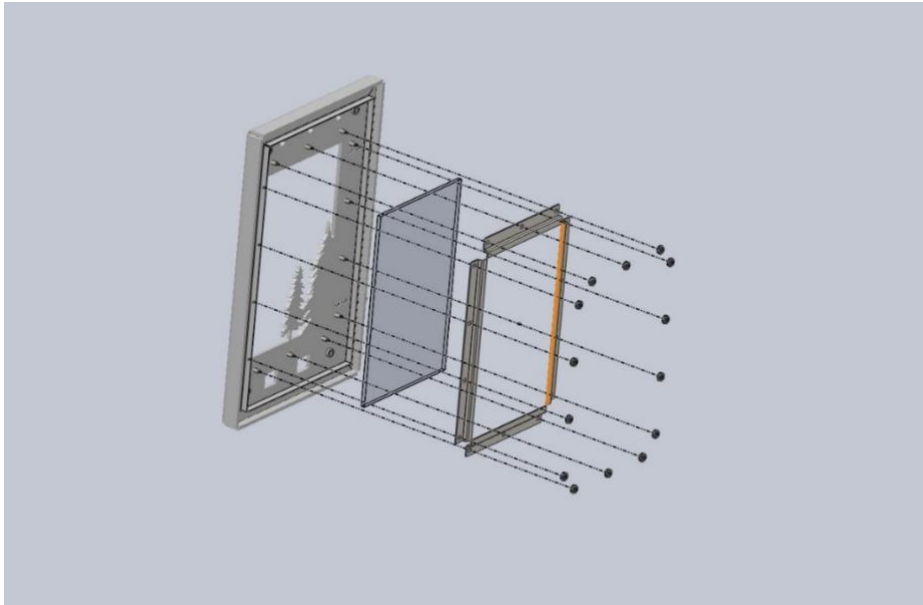
1. Back upper horizontal brick put in place and hold while installing step 2.
2. Left back vertical and right vertical brick under the top brick
3. Left and right first 2 back vertical bricks holding them just from the back corner to help balance the horizontal brick in step 4.
4. Upper left and right 1st horizontal bricks sliding them all the way to the back wall
5. 2nd and 3rd and 4th Vertical left and right bricks, then slide all vertical bricks towards the back of the stove.
6. Slide in the upper Gray Baffle plates one at a time so shiplap cuts will be facing each other for left and right pieces to overlap. Slide boards up between the top center tube and move to each side to sit flat. **Slide both baffle plates to touch back wall**

7. Slide in metal baffle plate through door with slots cut on plate pointing down. Slide metal plate under gray baffle boards and rest it on the horizontal top bricks and push it back some.
8. Place the last horizontal brick on the left and right side going under the metal baffle.
9. Slide the metal baffle plate slightly forward towards the door using the cutout on the sides of the baffle plate as a guide so that the cutout rests on the side bricks as shown in picture below.
10. Make sure to check the gray baffle boards placement again. Correctly overlapped in the center, **with no gaps and pushed all the way to the back of the stove.**
11. Place the 4 bottom bricks in the stove.



Cutout Picture of correct gray baffle and metal baffle placement inside stove.

WINDOW GLASS REPLACEMENT



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

1. Remove all nuts from around the glass.
2. Gently remove all brackets
3. Pull out glass
4. Install new fire-glass channel tape (Meeco 300B 3/4") starting in the center of the shorter edge of the glass and wrap around both sides of the glass evenly placing the center adhesive strip against the glass edge side. Cut the end of the tape evenly so it
5. Set glass in opening making sure it is straight and evenly set over the opening.
6. Place brackets on blot studs around 4 sides
7. Place a nut on each stud
8. Gently tighten all nuts evenly going around the glass brackets several times.

DO NOT OVER TIGHTEN THE NUTS. GLASS WILL BREAK

BURN AT OWNERS RISK. NOT RESPONSIBLE FOR ANY STOVE INSTALLATION