

SERAPH INDUSTRIES, LLC

GENESIS SERIES 106

BIOMASS CORN/WOOD/GRASS PELLET STOVE

OWNER'S MANUAL

Installation - Operation - Maintenance Instructions



LISTED C & US

MEETS US & CANADIAN STANDARDS DESIGNATES LISTED PRODUCTS "WITH HOSE STREAM" *Tested per ASTM E 1509, UL 1482, ULC S627.

Please read and **SAVE** this entire manual before installation and use of this biomass corn/wood/grass pellet burning stove. **FAILURE** to follow these instructions may result in property damage, bodily injury or even death. **SERAPH INDUSTRIES, LLC. GRANTS NO WARRANTY, IMPLIED OR STATED, FOR THE INSTALLATION OR MAINTENANCE OF THE STOVE AND ASSUMES NO RESPONSIBILITY FOR ANY CONSEQUENTIAL DAMAGES**

Notice * Always contact your local dealer / installer with questions before contacting the factory.

When you call have your serial number, purchase date, who installed the unit and your list of questions.

This appliance must be installed by a qualified / trained installer to assure proper operation & warranty.

- When installing your **GENESIS SERIES** Biomass Corn/Pellet stove, particular attention needs to be made in regards to fire protection. If the unit is not properly installed, a house fire may result. **For your safety, follow the installation and operation instructions provided. Contact local building or fire officials about restrictions and installation / permit requirements in your area. "Save these instructions"**
 - Read the operations and fuel section of this manual before plugging in your unit.
 - Always unplug the unit before attempting any service work.
 - Do not connect the unit to a chimney flue already serving another appliance.
 - When installing the chimney pipe to the unit, it is important to remember that the unit operates on a negative pressure and the chimney on a positive pressure. All chimney connections, elbows and fittings must be airtight.
 - **(Proper venting practices must be followed. Consult with a venting professional.)**
 - Ashes must be disposed of in a metal container with a tight fitting lid.
 - All minimum clearances to combustibles must be followed.
 - The **GENESIS SERIES** Biomass Corn/Pellet Stove is tested for operation with 15 % or less moisture corn or with wood pellets with an ash content of no more than 3%. **It is recommended that Corn with 15 % moisture or wood pellets with an ash content of 1% or less be used for efficient operation of this unit. Corn over 15 % moisture has a lower BTU value and will be hard to burn on the lower settings.**
 - It is important to use fuel that is clean, dry and consistent. Make sure that your supplier is giving you the same fuel each time that you purchase. It is recommended that you purchase your entire heating season supply of fuel at one time so that the fuel will be the same.
 - **A voltage surge protector or ground fault outlet is required for this unit. The electrical warranty will be voided if surge protection is not installed before operating this unit.**
 - **A grounded outlet must be provided with proper polarity. A constant 115 volt, 60 hz cycles must be provided for proper operation or the warranty of this appliance will be forfeited.**
 - **DISCLAIMER NOTICE:** No guarantee is made regarding the heating capacity of this product. The actual area that this unit will heat depends on factors such as building conditions, heat loss, type of construction, amount and type of insulation, type of air movement and heat distribution and the location of the product.
 - **IMPORTANT:** Your home must be checked to verify that there is no negative pressure that will effect the operation of this appliance.

Seraph Industries, LLC 1175 Krupke Rd Caledonia, IL. 61011

email @ info@seraph-industries.com

www.seraph-industries.com

815-218-4987 / 815-222-9686

INTRODUCTION:

Greetings ,

We would like to thank you very much for choosing SERAPH GENESIS SERIES 106 Biomass Corn,Wood,Grass pellet appliance.

The world and all its volatility has driven costs up in just about every facet of our lives. The ability to keep our homes warm is an uphill battle, with gas companies, electric utilities bills becoming much more painful to our checkbooks. We believe in becoming increasingly more independent and interdependent through our associations and friends like yourself. Together we can become just a little more independent each day, we will work hard to give you products that are superior American made products and also work hard through dealership networks to keep our customers in fuel and warm and cozy ALL winter long ! We thank you again,

*Sincerely,
Vance Hirst Jr*

SPECIFICATIONS

SERAPH INDUSTRIES, LLC manufacturer of the **GENESIS SERIES 106** Biomass Corn/Wood Pellet Appliances, reserves the right to alter its products, their specifications and /or price without notice.

G106 Seies Stand Alone Unit

Heat Range*	8,000 to 28,000 BTU/HR	
Fuel Storage Capacity	APPROX 120 # .	
Width	22-1/2"	
Height	38-1/2"	
Depth	26"	

G106 Series Stand Alone Unit

Level	Approx Feed Rate lbs/hr	Approx Hours/ Full Load
Heat Level 1	1.5 lbs	70
Heat Level 2	2.3 lbs	52
Heat Level 3	3.0 lbs	40
Heat Level 4	3.5 lbs	34
Aux Level (Thermostat)	varies	varies

Fuel: Multi- fuel System: Dry shelled corn, The use of "cracked corn" is not recommended due to feed and burn issues. Wood Pellets (recommended maximum size approximately 1/4" diameter x 1-1/4" long), and Grass Pellets also viable fuel.

Other Bio-fuels , keep in contact with your dealer to learn if there is any new fuels.

Heating Area: Varies upon floor plan, heat loss, geographic location, altitude, heater venting configuration, moisture content of fuel and climate.

Installation: Install in accordance with all "Seraph" instructions, Vent manufacturer instructions and local building codes.

Electrical: 120 VAC, 60 Hz, 15 amp service required, surge protector & dedicated line is recommended.

Fuel Hopper Capacity: Approximately 120 lbs "corn"

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FRESH AIR AND YOUR STOVE

Fresh air and the performance of your new **GENESIS SERIES** Corn stove. Your stove unit runs on a negative pressure, the draft inducer blower in the exhaust of your unit blows exhaust out of the venting. IF there is negative pressure situation in your home it can have adverse reactions within the stove unit. The venting may not properly "push" the exhaust fumes and or soot out of the venting. Thus the negative pressure in your home may actually be sucking in soot and or fumes. The draft blower may need to be adjusted accordingly on the computer control and the fresh air hookup should be considered.

If the (fuel) corn is not burning correctly you need to address a few things. Is the corn wet or dirty? Make sure that your corn is cleaned and below 15% moisture. But the lower the better!

The most common cause of corn not burning properly is contaminated air or negative pressure in the home. If you have done any remodeling or if this is a newer home, it is a very real possibility that this is happening. Most basements have negative pressure even if you feel that your home is drafty. This is called the tack or chimney effect.

If there is a black coating of soot coming into the home it is caused by the reversal of the exhaust that would normally exit the stove outside being drawn into the home by negative pressure or improperly installed venting. Depending on your venting configuration this could be aggravated by back drafts, high wind and cold chimneys.

Sometimes this also occurs if there is an intake for fresh air too close to the exhaust on the outside of the home or other conditions causing the exhaust to be pulled back into the home.

The first indications of negative pressure affecting the stove occurs and you notice that the venting fills up with soot rapidly. After a few days, the exhaust can no longer adequately pull out all of the fly ash so it reverses and is pulled into the home. This might happen through the venting if it is not sealed properly or it might come out when you open the door for maintenance and also backwards through the air wash system. This negative suction issue can be corrected by adding the fresh air for the home and also for the appliance.

It is imperative that you would have your dealer or installer check the unit out for proper operation to make sure that there is nothing mechanical wrong with the appliance and then determine your need for proper fresh air. Your dealer can contact the factory with any questions that he might have.

ALSO :
MAKE SURE the venting is installed per the **VENTING MANUFACTURERS SPECIFICATIONS**. For example the direction of the exhaust venting does matter, and also the high temp caulk should be used in all joints, and also the venting should be screwed together (3) screws as per installation instructions.

BURNING SOLID FUELS

SHELLED CORN AND WOOD/ GRASS PELLETS

Unlike petroleum and natural gas products, solid fuels such as corn and wood pellets create ash as the fuel is burned. Even with the highly efficient flame your **GENESIS SERIES** Stove will produce, the solid fuels used will produce ash. This ash will have to be cleaned out of the stove from time to time. The cleaning procedure will be discussed later in this manual. You can minimize the amount of cleaning required and maximize the efficiency of your stove by maintaining the correct draft settings.

The draft setting on your stove may have to be changed from time to time to accommodate your specific burning conditions. Proper draft setting will be discussed later in this manual. The point we wish to make here is that your **GENESIS SERIES** stove, due to the nature of solid fuels, will require brief periodic attention. Please do not expect to light your stove and walk away from it until you want to shut it off in the spring. A few moments of adjustment and cleaning from time to time are an important part of burning solid fuels.

The **GENESIS SERIES** stoves has been designed to burn shelled corn or wood pellets that meet the Association of Pellet Fuel Industries standards. Since both of these fuels vary greatly in quality and consistency, Seraph Industries cannot be responsible for damage done to your stove due to fuel problems. The following are guidelines to using and selecting proper fuels for your stove.

SHELLED CORN (15 % OR LESS MOISTURE RECOMMENDED)

- Store your corn supply in a dry place and keep the bags or container sealed to prevent your corn from absorbing excess moisture. Test the moisture content periodically to maintain the proper dryness.
- **Check your corn for foreign objects. Your stove warranty will not cover damage done to your stove due to foreign objects in the fuel supply.**
- **Do not carry your corn supply over into the next heating season if possible unless properly stored.**
- **DO NOT BURN "TREATED" SEED CORN IN YOUR STOVE.** Seed corn is treated with chemical pesticides that are harmful or fatal if swallowed; therefore, seed corn is dangerous to have in the house, especially where children can reach it. Burning treated seed corn in your stove will void the warranty and will destroy the exhaust system on the unit.
- **Corn must be 15% or less moisture content.** Wet corn will cause rapid plugging and deterioration of the stove and exhaust system, lower the heat output and will void the warranty.
- Corn must be cleaned and free from debris. Corn right from the field will often have stalks, sticks, bolts, and cob debris, which can plug the auger and/or cause damage to the auger and motor. Damage caused by dirty corn and other foreign objects are not covered by the product warranty. Ask for clean corn when you purchase it from your local corn supplier. Clean corn "food grade" can be purchased in bulk or bagged from most elevators, feed stores or even your local farmer.

corn continued,

It is also important to vacuum out your hopper once a month to assure trouble free auguring of the corn or any other fuel you use

There are many varieties of corn grown around the world. Each variety has unique characteristics including the shape and size of the kernel. Your stove will burn more consistently with a small to midsize kernel corn. If the kernel size of the corn varies greatly or if you switch sources frequently, you will get a less consistent burn, which will require more attention to the draft setting on your stove. Therefore, purchasing corn from the same source will help achieve a more consistent burn. DO NOT USE CORN WITH A HIGH WAX CONTENT!

WOOD PELLETS

- As with corn, be consistent in your pellet supplier. Pellets will vary in content and burn characteristics from supplier to supplier. A consistent supply of pellets will require fewer adjustments to the draft of the stove.
- Check your pellets for foreign objects. Your stove warranty will not cover damage done to your stove due to foreign objects in the fuel supply. Vacuum the hopper to get rid of (fines) sawdust.
- Store your pellets in a dry place to prevent them from absorbing excess moisture.
- Vacuum the hopper out after every 6-7 bags to eliminate buildup of (fines)sawdust. More often if the pellets are poor quality. If (fines) sawdust is a problem you will have to screen each bag of fuel for a consistent feed.
- Wood pellets vary from supplier to supplier in ash content from less than 1% to 3% or more. Low ash content pellets will allow you to burn the stove longer between cleanings. Only wood pellets manufactured to the Association of Pellet Fuel Industries (A.P.F.I.) Standard for residential pellet fuels are recommended. Look for A.P.F.I. Registration number on the back of pellets. Consult your local **GENESIS SERIES** dealer for more information on approved wood pellet fuel.

GRASS PELLETS

Another fine alternative, when corn and wood pellet prices get high. Talk to Seraph Industries, LLC about bulk grass pellets. You should think about buying early in the year take care of your heat while prices are most competitive.

BTU output will vary, depending on the brand of fuel, size of fuel, quality of fuel and moisture content. Consult your authorized GENESIS SERIES dealer for information on the best fuel to use to get the best results. Fuel feed rates can vary as much as 50% depending on fuel quality, size, brand and moisture content.

UNPACKING YOUR GENESIS SERIES CORN/PELLET STOVE

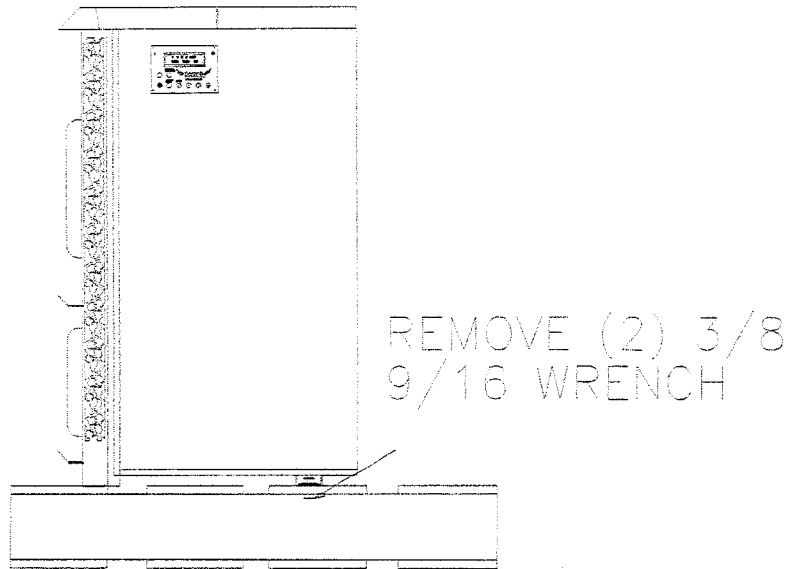
When you receive your **GENESIS SERIES** Corn/Pellet Stove, be careful to inspect all parts and components to make sure that nothing was damaged or lost in shipment. If there was shipping damage, be sure to report it to your **GENESIS SERIES** reseller, or the shipping company that delivered your unit.

Freight damage claims must be made to the Freight Company immediately. If parts are missing contact your local **GENESIS SERIES** dealer or contact the factory right away. **Your satisfaction is our top priority.**

To uncrate your GENESIS SERIES Grass pellet/ Corn/Wood Pellet Stove:

Cut the banding straps, and or loosen the Lag bolts from the pallet. The unit is bolted to the wood pallet so it will be necessary to pull the plastic wrap loose from the pallet. Remove the crating box carefully lifting up over the top of the unit. Be careful not to scratch the unit with the staples.

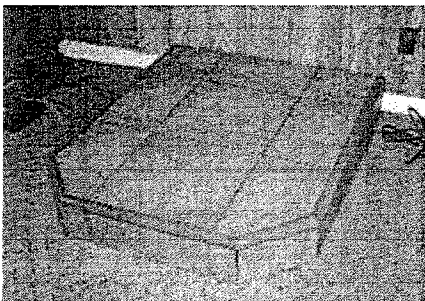
Be extremely careful moving, the unit is heavy duty, and two or more may be needed to get it into position. Take care not to scratch stove of the floor, or masonry hearth.



FLOOR PROTECTION

The **GENESIS SERIES Freestanding Stove** may be installed on a combustible floor, with proper floor protection, or on a masonry hearth. The hearth or noncombustible floor protector must extend of (6) six inches in front of and (6) six inches from each side.

NOTE: If installing the stove into a build-in application where there is not an existing fireplace, you will have to install a noncombustible floor underneath and 6 inches out in front of the unit. This would require a 2-3 inch thick masonry floor (the thickness of one brick) or 3/4 inch thick rock board.



SAFETY STEPS

IMPORTANT: Proper installation of this stove is crucial for proper and safe operation. Installing this product improperly may result in a house fire and personal injury. All applicable building codes for your location must be followed. In areas where building codes require additional steps to the installation of this product not included in this manual, the building codes will take precedent and must be followed. Contact your local building inspector to obtain any necessary permits or inspection guidelines before installing the product. **(This appliance must be installed by a trained professional installer to assure proper installation and warranty of this product) Warranty Labor and shipping will not be covered if the unit is not installed by a trained installer.**

- **DISCONNECT THE POWER CORD BEFORE SERVICING THIS STOVE!** A power surge protector is required. The unit must be plugged into a grounded 110-volt power source.
- Always route the power cord away from the unit. Do not route cord in foot traffic areas. Do not pinch cord under furniture. Do not add any additional length to the power cord.
- This product requires simple periodic maintenance for proper operation and long life of the stove. Read and follow the maintenance schedule closely.
- **The GENESIS SERIES stove is designed, approved and tested to grass pellets, burn shelled corn, or wood pellets.** The burning of other solid fuels such as cord wood in this stove is not permitted. If you are burning fuels not approved for this appliance it will void the warranty and no service/warranty will be allowed. The Genesis Series will burn high ash content fuels but will require additional maintenance/cleaning.
- A working smoke detector must be installed in the same room as this product.
- Flammable or explosive liquids such as gasoline, naphtha or engine oil must NEVER be used in or around this stove. These liquids must be stored well away from this stove as the open flame in the burner chamber could ignite the fumes of such liquids. **Do not burn garbage in this unit.**
- According to HUD requirements, when installed in a mobile home, this stove must be grounded directly to the steel chassis of the mobile home and bolted to the floor.
- The moving parts of this stove are propelled by high torque electric motors. The auger and Fuel Stirrer can cause severe injury to body parts that may get near them. Keep all body parts away from the auger and Fuel Stirrer while the stove is plugged into an electrical outlet. These moving parts may begin moving at any time while the stove is plugged in.
- This unit must be installed on a noncombustible surface. Make sure that the unit is level.
- Do not attempt internal service to the unit when it is burning and or plugged into power.
- It is a good idea to burn the unit outside for a couple hours before installation to burn off any paint or oil fumes. (most resellers pre-burn the unit before you receive them, do not worry if your unit looks like it has been burnt) We will check randomly by initial burning the stoves as they come out of manufacturing processes.

MINIMUM CLEARANCES TO COMBUSTIBLES

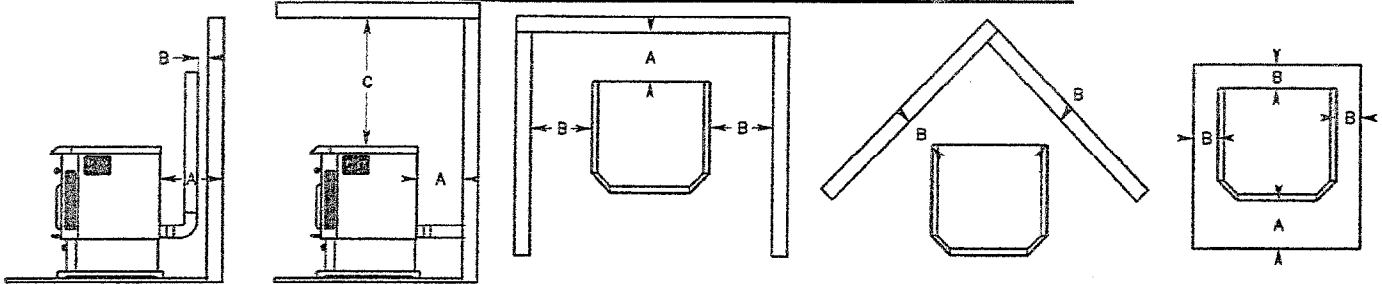
The stove must be installed with the following minimum clearances from the unit to combustible construction materials at the rear, sides, and top.

NOTE: These are minimum clearances to combustible walls established by the testing lab. The amount of room needed on the right side of the unit to access the computer control panel is at least (10) six inches.

Minimum Clearance to Combustibles

	A	B	C
Vertical w/3" Vent	6"	3"	14"
Horizontal w/3" or 4"	6"	3"	14"

"Combustibles" or combustible materials include (but are not limited to) framing lumber, drywall, plaster, plywood, paneling, and other building materials.



FLOOR PROTECTOR

FREE STANDING AND ALCOVE (REAR ONLY) INSTALLATION CLEARANCES

INSTALLATION PRECAUTIONS

CAUTION: Do not install this appliance in any manner other than described in this manual. If you have any questions about properly venting or installing your GENESIS SERIES stove please contact your dealer or Seraph Industries, LLC for information.

Note: This stove must be burn tested outside in a well ventilated area for (4) hours. This will cure the paint and season the stove metal. Smoking and an burning odor is normal during the curing process, and may continue the first few times the stove is used.

The ONLY authorized exhaust vent pipe for this appliance is 3 or 4 inch listed TYPL PL pellet vent pipe, designed for use with corn, pellet stoves.

As you plan your installation, consider the following:

- The stove should be placed as central in the home as possible. Consider safety, convenience, traffic flow and that the stove will need a venting system and fresh air to the outside of the home.
- Before drilling or cutting holes, select the location of the appliance. Determine where the ceiling rafters, wall studs, or floor joists are located before making any large holes as the appliance may have to be moved.
- Care must be taken to maintain minimum clearances to combustibles as per local building codes, fire codes, and the safety listing tag on the inside hopper lid.
- An outside air source must be connected to the stove and can be brought in through the side wall or vented crawl space. Flexible or rigid pipe should be used and will be connected to the back of the stove. (See the Combustion Air Inlet Options in the Design Guidelines of this manual.)
- Place the stove where you will enjoy watching the fire along with getting the best heat distribution possible. Locating the stove in a closed room will not allow the stove to heat the home properly. Installing the stove in an uninsulated area will also not allow the stove to heat the home properly.
- If the home was not designed for proper heat circulation, the stove will not heat the home properly. Make sure the installer looks at the entire home as a unit when installing your GENESIS SERIES appliance. Make sure there is adequate cold air returns to pull the heat to adjoining rooms.

**DO NOT CONNECT THIS STOVE TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.
DO NOT USE A SINGLE WALL PIPE FOR ANY INSTALLATION.
DO NOT INSTALL A FLUE DAMPER IN THE EXHAUST VENTING SYSTEM OF THIS UNIT.
THE EXHAUST SYSTEM IS PRESSURIZED.**

Electrical power is 115 volt-60 Hz. The stove is provided with 8 ft of grounded electrical cord, and should be connected to a standard 3 prong 115volt-60Hz electrical outlet. Make sure you use a surge protector. Do not route the cord in front of or under the stove.

NOTE: A MAJOR CAUSE OF VENT RELATED FIRES IS FAILURE TO MAINTAIN REQUIRED CLEARANCES (AIR SPACES) TO COMBUSTIBLE MATERIAL. PLEASE FOLLOW THE VENT PIPE MANUFACTURER'S INSTRUCTIONS AND LOCAL BUILDING CODES FOR THE PROPER CLEARANCES TO COMBUSTIBLES REQUIRED FOR THE INSTALLATION OF THE VENT PIPE BEING USED.

GUIDELINES FOR EXHAUST VENTING SYSTEMS DESIGN

It is recommended that only an authorized GENESIS SERIES installer install your pellet/corn stove. The following installation guidelines must be followed to ensure conformity with both the safety listing of this stove and to local building codes.

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

WARNING: DO NOT INSTALL A FLUE DAMPER IN THIS APPLIANCE.*

WARNING: DO NOT INSTALL IN A SLEEPING ROOM.

- A listed 3" or 4" type "PL" pellet vent exhaust system must be used for FREESTANDING installation and attached to the pipe connector provided on the back of the stove. Use a 3" to 4" adapter for 4" pipe. A cap must be used at the termination of type "L" vent chimneys. When in doubt about what size to use, use 4" venting.
- Do not terminate vent in any enclosed or semi-enclosed area, such as; carports, garage, attic, crawl space, under a sundeck or porch, narrow walkway or closed area, or any location that can build up a concentration of fumes such as a stairwell covered breezeway, etc.
- Vent surfaces can get hot enough to cause burns if touched by children. Noncombustible shielding or guards may be required.
- Termination must exhaust at least 2 feet above air inlet elevation. It is recommended that at least 5 ft. Of vertical pipe be installed when the appliance is vented directly through a wall or in a basement. This will create some natural draft to prevent the possibility of smoke or odor during appliance shutdown and to keep exhaust from causing a nuisance or hazard from exposing people or shrubs to high temperatures. In any case, the safest and preferred venting method is to extend the vent through the roof. Do not connect this unit to a chimney flue serving another appliance.
- Distance from doors and windows, gravity or ventilation air inlet into building:
Not less than 4 ft. / 1.2 m below, 4 ft. / 1.2 m horizontally from, 1 ft. / 305 mm above (This does not apply if the Windows are non-opening or have been fixed so they cannot open.)
- Distance from bottom of termination and grade - 1 ft. / 305 mm minimum. This is conditional upon the plants and nature of grade surface. We recommend at least 2 ft./610mm
The exhaust gases are not hot enough to ignite grass, plants or shrubs located in the vicinity of the termination. The grade surface must not be a lawn. Distance from bottom of termination and public walkway is 7ft./2.1 minimum.
- Distance to combustible materials - 2 ft. / 610 mm. This includes adjacent building, fences, protruding parts of the structure, roof overhang plants and shrubs, etc.
- It is recommended that a single or double clean-out "tee", for cleaning the vent in both directions, be installed at every 90 degree junction to enable collection of fly ash and to permit periodic cleaning of the exhaust system. 90 degree elbows accumulate flyash and soot thereby reducing exhaust flow and performance of the stove.
- Total length of horizontal vent must not exceed (10 ft.) / 3m. Extra cleaning will have to be done over 4 feet. All joints in the vent system must be fastened by at least 3 screws, and all joints must be sealed with RTV silicone sealer to be airtight.
- We do not endorse venting into an existing masonry or factory built chimney,
- The "PL" vent or single wall stainless exhaust system must be installed so as to be GAS TIGHT! The vent manufacturer's installation procedures must be followed. In addition, pipe connections, joints and all pipe seams within the home should be sealed with high temperature RTV silicone sealer.

GUIDELINES FOR EXHAUST VENTING SYSTEMS DESIGN, CONT.....

To determine whether a 3” or 4” exhaust system should be used, follow the guidelines below:

1. Determine the “equivalent pipe length” for each component used according to the comparison chart below. Add the “equivalent pipe length” of all components to get the “total equivalent pipe length”.
2. Determine the altitude at which you are installing the stove.
3. Cross-reference the “total equivalent pipe length” and the altitude using the graph below.

NOTE: The “total equivalent length” should not exceed 25 feet.

Type of pipe	Qty		Factor (ft)	Total
90 deg elbow		x	5 (1.5m)	
45 deg elbow		x	3 (0.9m)	
Horizontal pipe		x	2 (0.6m)	
Vertical pipe		x	0.5 (0.15m)	
Altitude (in thousands of feet)		x	2.5 (0.8m)	
			Total	

Example:

Type of pipe	Qty		Factor (ft)	Total
90 deg elbow	1	x	5 (1.5m)	5
45 deg elbow	2	x	3 (0.9m)	6
Horizontal pipe	2	x	2 (0.6m)	4
Vertical pipe	6	x	0.5 (0.15m)	3
Altitude (in thousands of feet)	1	x	2.5 (0.8m)	2.5
			Total	20.5

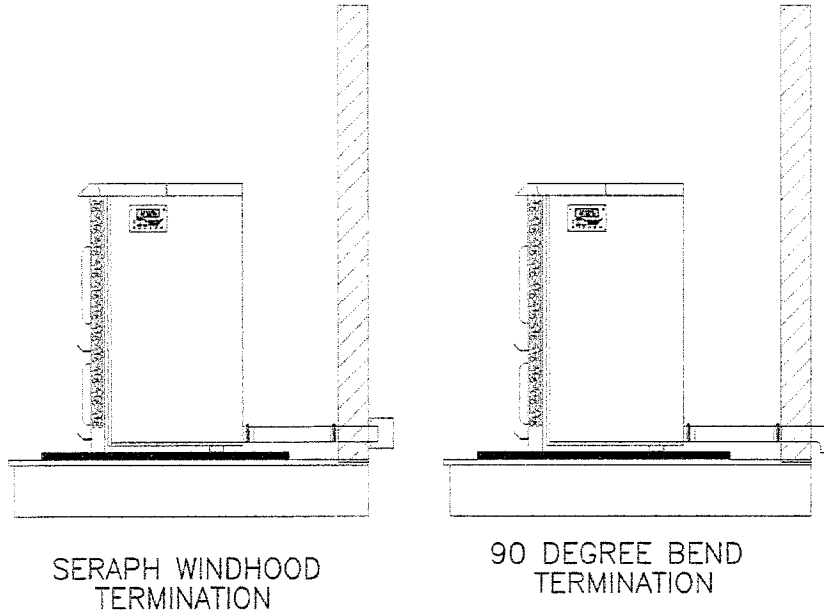
NOTE: Horizontal runs, should be minimized (48 in (1.2m) maximum per section) to prevent the accumulation of ash. If possible replace horizontal offsets (two 90 degree elbows) with 45 degree offsets (two 45 degree elbows) to go around building structures.

NOTE: These are guidelines only. Proper venting is accomplished by design and common sense. In most installations 3 inch diameter venting is adequate. If it does not vent properly you will have to change it to 4”. When in doubt about what size to use, then use 4 inch.

DESIGN GUIDELINES FOR OUTSIDE COMBUSTION AIR CONNECTION

106AIRINLET.V06

COMBUSTION AIR INLET OPTIONS



OUTSIDE MAKE-UP AIR FOR COMBUSTION IS REQUIRED ON ALL INSTALLATIONS

- 1) For FREESTANDING installations with horizontal through-the-wall exhaust, it is **REQUIRED** that the stove combustion air intake be connected to a fresh air intake outside. If the home is newer or has been tightly insulated it is imperative to the operation of the unit to install outside combustion air. If you do not, then an additional 6 inch intake into the furnace room in the basement is required.
- 2) For FREESTANDING installations with a vertical exhaust, outside air connection is required.
- 3) Connection to outside the house is **REQUIRED for mobile home installations**.
- 4) Only non-combustible pipe 3 inches in diameter is approved to use for outside air connections (straight or flexible). PVC pipe is **NOT** approved and should **NEVER** be used.
- 5) If the air inlet is connected to the outside, it **MUST** be terminated with a vertical 90-degree bend (down) or with a wind hood that you can buy from Seraph Industries dealers.
- 6) It is important not to terminate the inlet of the fresh air intake too close to the venting outlet for the smoke. It is recommended that the inlet for the fresh air is a minimum of 3 feet away from the venting outlet and at least 2 feet below.
- 7) Blockage, excessive length, or bends in the air intake pipe will starve the stove of combustion air. A 90-degree bend is equivalent in restriction to approximately 30 inches of straight inlet pipe.

VENT TERMINATION GENERAL INSTALLATION INSTRUCTIONS & MAINTENANCE

NOTE: The following are general instruction for installing this appliance.

THE VENT PIPE MANUFACTURER'S INSTRUCTIONS SHOULD BE FOLLOWED FOR THE VENT PIPE BEING USED. USE ONLY 3 OR 4 INCH LISTED TYPE PL PELLET/CORN STOVE VENT PIPE

*** INSTALL VENT AT CLEARANCES SPECIFIED BY THE VENT MANUFACTURER.**

WARNING: Shut off all electrical power to the wall or room where the appliance is going to be installed before cutting any holes. Be careful not to drill or cut into any water lines or electrical wiring as water damage or electrical fire may result.

Upon determining the best location for your new appliance, maintain at least the minimum allowable clearances. Line up a plumb bob to the flue collar on the stove with the location for the hole in the wall or ceiling before drilling or cutting any holes. (See rear exhaust and air inlet locations under the CLEARANCE section of this manual) **Be sure to allow for any stove pad that you will be placing underneath the unit.**

Prepare the vent pipe for painting (if you are painting the venting) by wiping down with straight vinegar. Rinse vinegar off with clean water and allow the pipe to dry. Use high temperature paint as directed by the manufacturer (the standard paint is Stove Bright Metallic Black). Let the paint dry for a couple hours before assembling. Touch up as needed after assembly, **BUT** block overspray.

Drill and enlarge the hole as required for installation of the wall thimble, vent pipe and components **PER THE VENT MANUFACTURER'S instructions.**

Connect the pipe and lock the joints as directed by the VENT MANUFACTURER, and secure the vent pipe to the flue collar on the back of the stove. Add a small bead of RTV high temperature silicone around the outside edge of the flue collar prior to securing the vent pipe. Drill and attach the vent pipe to the flue collar with at least three sheet metal screws. **Alternate (preferred) method:** Attach the approved PL pipe adaptor on the back of the exhaust pipe located on the rear of the appliance, secure with a 3" hose clamp and then attach all venting to the pipe adaptor.

Do not terminate the vent in any enclosed or semi-enclosed area, such as a carport, garage, attic, crawl space, under a sun deck or porch, in a narrow walkway or closely fenced area, stairway, covered breezeway, or any other location which can build up a concentration of flue gases. Vent surfaces can become hot enough to cause burns if touched. Non-combustible shielding or guards may be required.

Note: Make sure that you leave adequate clearance between the back of the unit and the wall to allow for proper cleaning, service and also so that when you open the hopper lid that it does not hit the wall. It is recommended that you leave 12 inches of clearance between the appliance and the back wall of the home.

VENT MAINTENANCE:

**** It is essential to have your venting and vent cap cleaned every year (each SPRING) to remove soot buildup. Use plastic, wood, or flexible steel brush. Do not use a stiff brush that will scratch the stainless liner of your system.**

**** During the heating season, the venting should be inspected monthly.**

**** Venting systems must be installed so that access is provided for inspection and cleaning.**

**** If you have doubts about your ability to clean it, contact a professional chimney sweep**

**** Chemical cleaners must be used with great caution. Use only those which are guaranteed NOT to corrode or have any other harmful effects.**

**** In case of fire, shut off appliance and call your Fire Department. Do not use the appliance or vent until it has been inspected for possible damage.**

**** Due to the nature of solid fuel burning and their production of ash, SERAPH INDUSTRIES, LLC is not responsible for flue by – products that might discolor roofs or walls.**

"Soot and Fly ash: Formation and Need for Removal - The products of combustion will contain small particles of fly ash. The fly ash will collect in the exhaust venting system and restrict the flow of the flue gases. Incomplete combustion, such as occurs during startup, shutdown, or incorrect operation of the room heater will lead to some soot formation which will collect in the exhaust venting system. The exhaust venting system should be inspected at least once every year to determine if cleaning is necessary".

INSTALLATION CONFIGURATIONS:

MOBILE HOME INSTALLATION REQUIREMENTS

IN ADDITION TO THE STANDARD INSTALLATION INSTRUCTION, THE FOLLOWING REQUIREMENTS ARE MANDATORY FOR INSTALLATION IN A MANUFACTURED HOME & SHOULD BE IN ACCORDANCE WITH SAFETY STANDARD (HUD), CFR 3280 PART 24

- 1) Stove must be permanently bolted to the floor.(Using LAG bolts)
- 2) Stove must have permanent outside air source.
- 3) Stove must be permanently electrically ground to the steel chassis of the mobile home.
- 4) All vertical chimney vent must have wall supports every (5) five feet.
- 5) All exhaust systems must have a spark arrestor.

WARNING

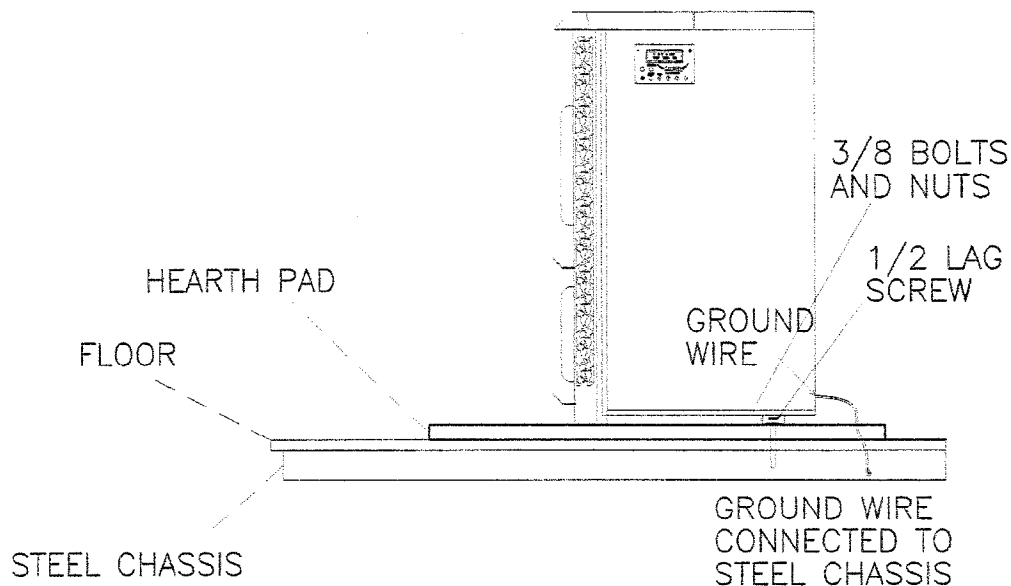
DO NOT INSTALL IN SLEEPING ROOM

CAUTION

THE STRUCTURAL INTEGRITY OF THE MOBILE HOME, FLOOR, WALL AND CEILING /ROOF MUST BE MAINTAINED.

NOTE: THE VENT PIPE SHOULD BE INSPECTED FREQUENTLY TO VERIFY THE INTEGRITY OF THE VENTING SYSTEM AND TO INSURE THAT NO OBSTRUCTIONS OR BUILD-UP EXIST WITHIN THE VENT PIPE. FAILURE TO INSPECT THE VENT PIPE CAN CAUSE A MALFUNCTION OR HAZARDOUS OPERATION OF THE STOVE.

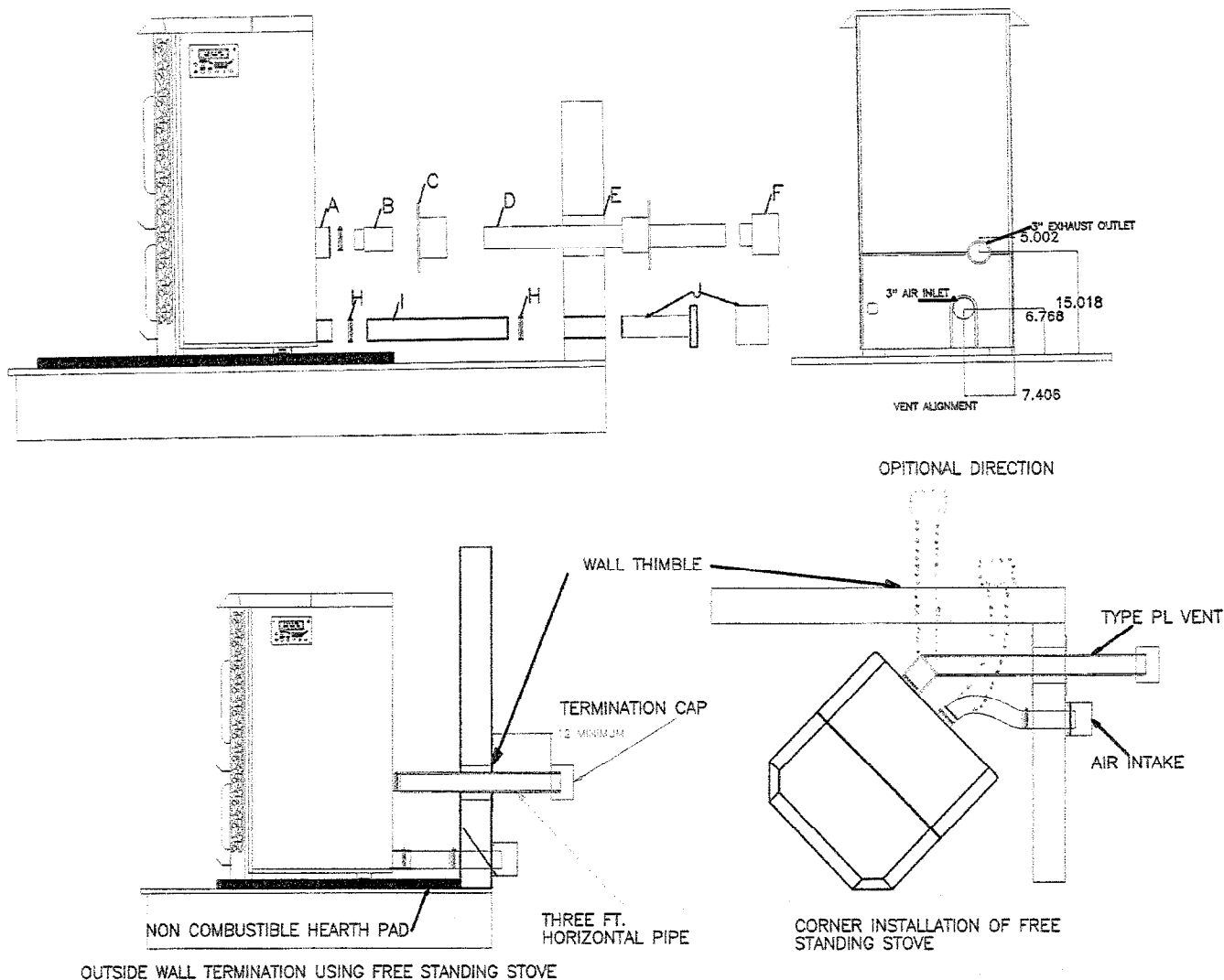
MOBILE HOME INSTALLATION REQUIREMENTS



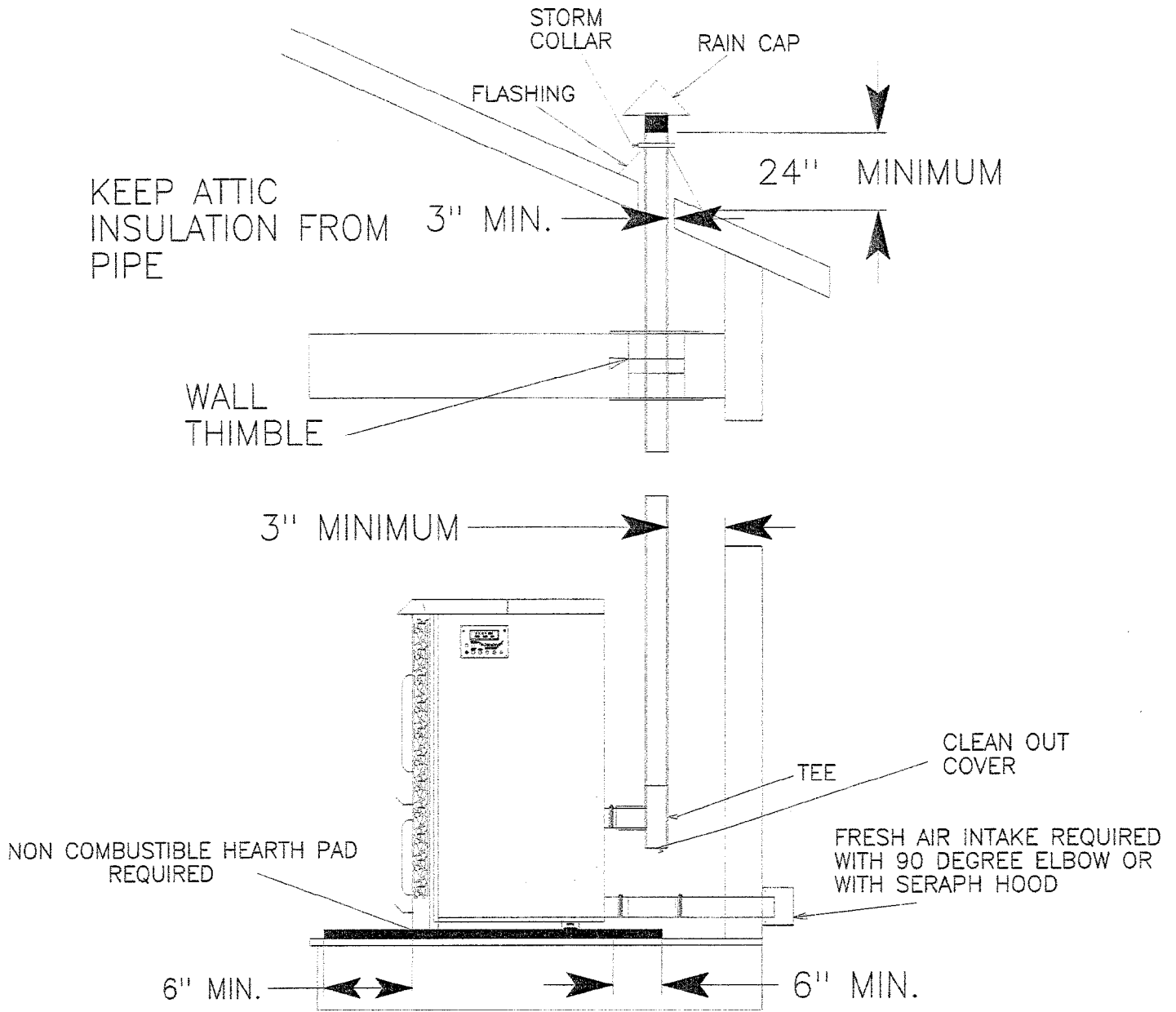
FREESTANDING STOVE INSTALLATION REQUIREMENTS

Horizontal Exhaust Termination:

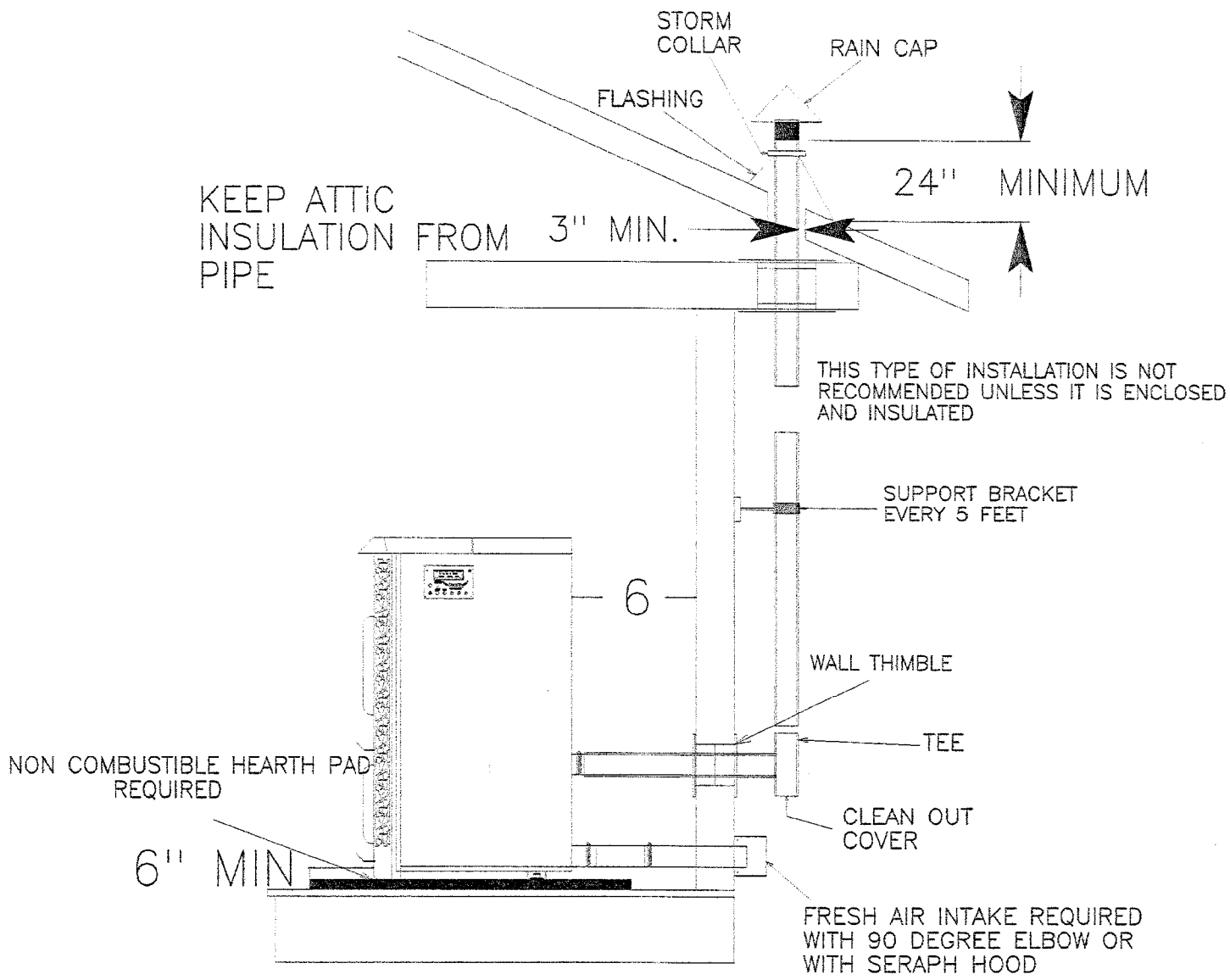
- 1) Locate proper position for the type "PL" wall thimble (C).
 - 2) Use a saber saw or key-hole saw to cut a 7 ¼-inch diameter hole through the wall (E) for a 3-inch pipe. For a 4-inch pipe, cut an 8 ¼-inch hole. Install the wall thimble in the hole. The size of hole opening will vary with brand of wall thimble.
 - 3) Position stove approximately 12" from the wall on the noncombustible floor pad. Push the type "PL" pipe (D) through the wall thimble (C). Squeeze a bead of high temperature RTV silicone sealer (A) around the outside of the 3" diameter exhaust pipe approximately ½ " from the stove back panel (B). Firmly push and lock on a section of type "PL" pipe (D) on pipe ADAPTER (B) and press onto exhaust blower tube until the inner pipe liner pushes up against the bead of RTV sealer. Don't seal the entire 3" diameter pipe as you will not be able to disassemble the pipe at a later date. The bead of silicone will act as a gasket right on the end of the 3" pipe (D). Alternate Method: An approved type "PL" connector back clamp may be used to allow easy disconnect for maintenance. (The RTV sealant must be used in mobile home installation)
 - 4) Push stove with pipe attached towards wall. Pipe (D) will go through the wall thimble (C). Be careful not to dislodge the thimble. Position stove not closer than 6" to the wall.
 - 5) NOTE: Make sure that you leave enough clearance between the wall and the back of the unit so that when you open the hopper lid it will not hit pictures on the back wall. It is recommended that you leave 6-12" between the wall and the back for the unit for easy access.
 - 6) Install type "PL" termination cap (F) with rodent screen cap (optional) on outside end of pipe. Note: The end of the exhaust pipe must extend a minimum of 12 inches from the outside of the building. Rodent screen cannot be less than 3/8" opening mesh.
 - 7) If installing with combustion air from outside, cut a separate hole through the wall for the fresh air tube (J). This tube must be 3" minimum diameter steel only. Connect outside air pipe inlet on stove (G). This tube must be terminated with a 90 degree elbow or hood.
- NOTE** Always check dimensions on unit before cutting hole in wall.



OUTSIDE WALL TERMINATION USING FREE STANDING STOVE

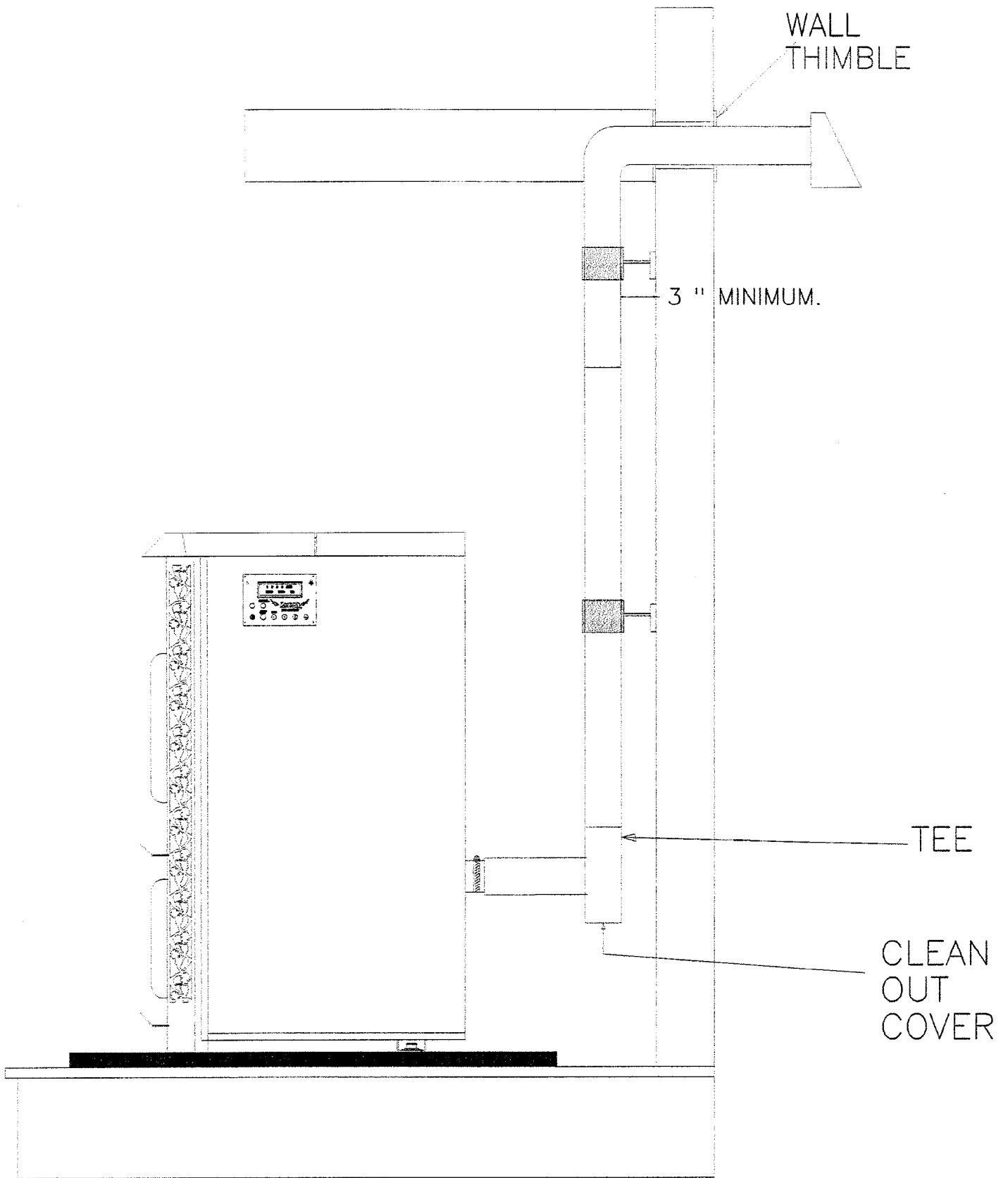


INSIDE VERTICAL PIPE WITH ROOF TERMINATION



THROUGH THE WALL, VERTICAL PIPE INSTALLATION WITH TERMINATION THROUGH THE ROOF

WARNING: UNLESS THE VENTING IS ENCLOSED AND INSULATED THIS INSTALLATION WILL CAUSE POOR VENTING AND SERIOUS CRESOTE BUILDUP.



INTERIOR SHORT RISE

106SHORTRISE.V06

Glass, maintenance, removal, and replacement

Your **SERAPH GENESIS SERIES** Stove comes to you with the Borofloat type ceramic glass door installed in place, ready for use. The glass is surrounded on all edges with a gasket sealed and installed onto the special cast door in between the cast mounts. The Glass is held in place by four stainless brackets, the two long brackets, (1) on top and (1) on the bottom, and (2) brackets smaller for the sides per drawing below.

To **REMOVE** the broken or damaged glass:

Open the cast door and lift off the hinges, if the door is tight, bump up with hand while holding the door firmly with the other. Lay the door down on something like a magazine or newspaper with the stainless brackets facing you. Using an Hex allen wrench loosen the screws and take each of the four brackets. Remove the broken glass and discard into trash can, you can get another glass from the authorized **SERAPH GENESIS** dealer or from the factory with the gasket all ready to go. All you need to do is carefully place the gasket/ glass back in place and assemble with the four brackets, reverse the above procedure. When installing the glass, it must be flat on the cast door if there is an obstruction the glass when tightened will crack or break.

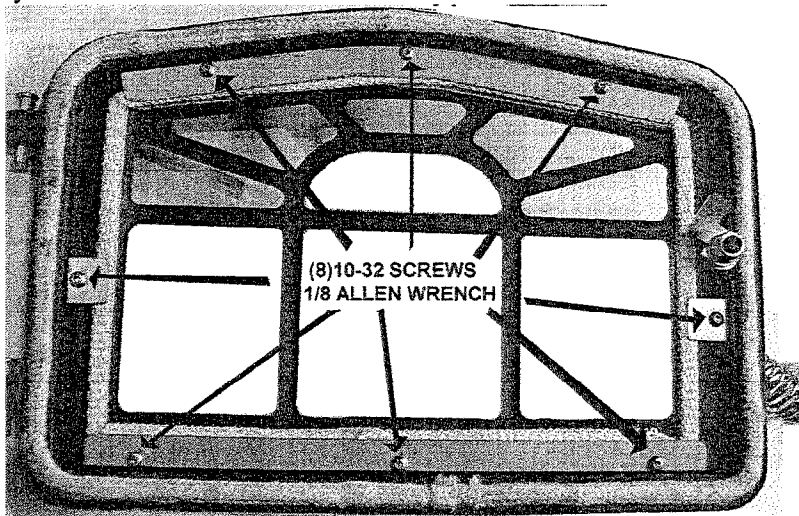
WARNING :

USE ONLY FACTORY GLASS AND DO NOT SUBSTITUTE WITH ANOTHER OR RUN UNIT WITH BROKEN OR DAMAGED GLASS. DO NOT SLAM DOOR SHUT. DO NOT STRIKE GLASS. DO NOT USE ABRASIVE CLEANERS. DO NOT CLEAN WHEN GLASS IS HOT!

CLEANING THE GLASS:

During the start up procedure, the smoke may accumulate on the glass surface. Before the glass is hot you can wipe clean with a damp rag.

You can get from us : FIREBRAND Dry Clean Glass Cleaner from FIREBRAND INDUSTRIES,INC for all pellet stove, corn, gas, wood stoves, highly concentrated.



MAINTENANCE INSTRUCTIONS:

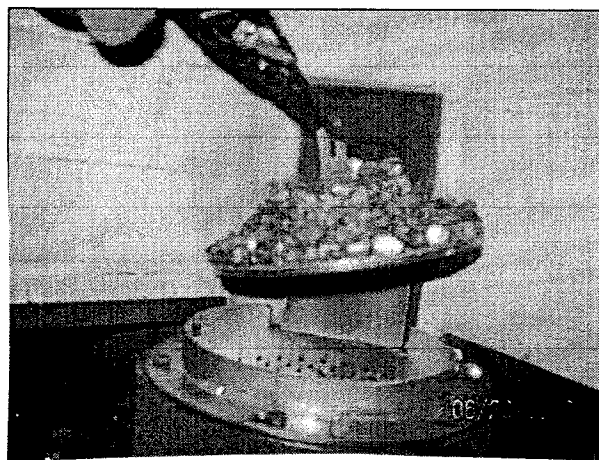
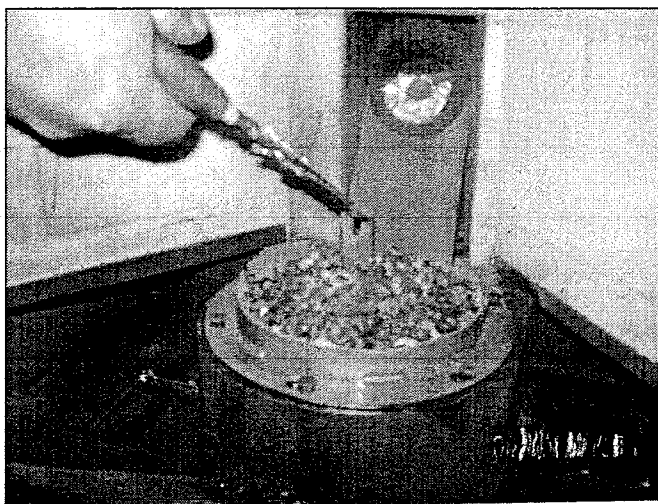
- *Daily maintenance of Clinker Plate and Descriptive photos.
- *Daily Ash removal in the firebox and ash pans as in photos below and following.
- *Daily / every other day, cleaning of the heat exchanger tubes as in photos following.
- * Instructions of ash slides and photo diagrams.

Clinker Plate Maintenance :

Using a scraper or other tool you can break or pry out the clinker out, most times its already in a 2-3 piece chunk when burning corn, depending on the moisture of the corn and how much you are burning through it, this is a once to twice per day procedure..The photo shows how to take the cooled off clinker plate out of the fire pot using regular pair of needle nose pliers.

Cluster Buster Maintenance:

For pellets and fuels that do not require the clinker plate you can use the Cluster Buster and leave the clinker plate out, this will let the buster actually stir the materials to be burned while burning. It also helps clean the firepot by removing small ash particles. Certain grass pellets also produce a clinker and it may very depending on the composition of the pellet. Wood pellets are the most care free, as it produces no clinker and very little ash.



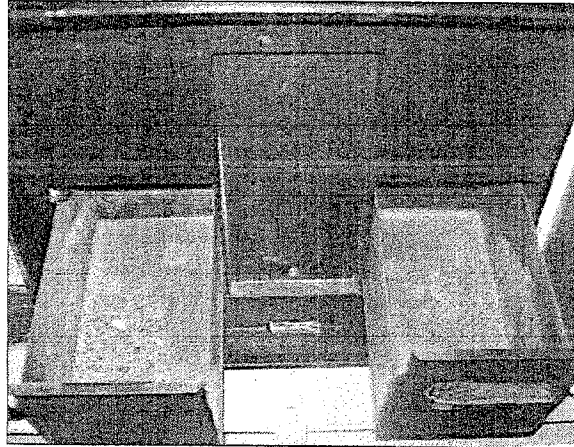
ASH REMOVAL IN THE FIRE BOX AND ASH PANS:

* **Daily maintenance:** Use ASH VAC or sweep ash down the "ash slides" located over the Ash Pans and slide outwards on the right and left hand of the machine as per the photo. ***MAKE SURE** the ash slides are both slid back in place after complete cleaning the fire box and ash pan areas. The machine will not run correct if the slides are left open, loss of burn efficiency and burn quality may result.

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 noncombustible 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."

Below photo of Ash Pans

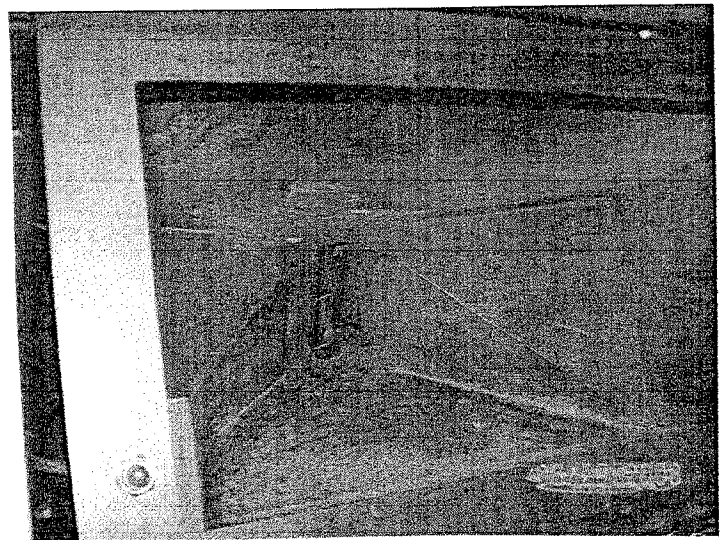
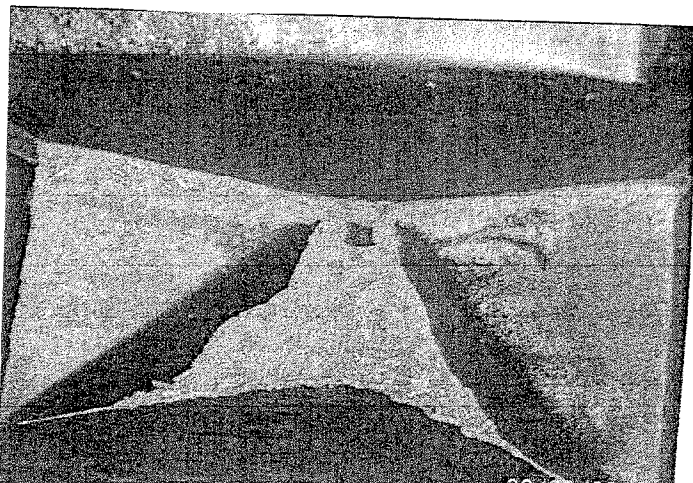
(when the bottom ash door is ajar the feed will stop because the vacuum sensor is tripped).



* **Fuel hopper** should be cleaned/ vacuumed every 6-7 bags of fuel you use.

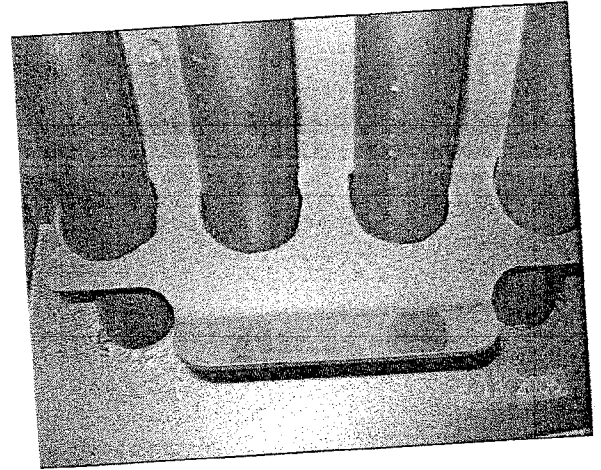
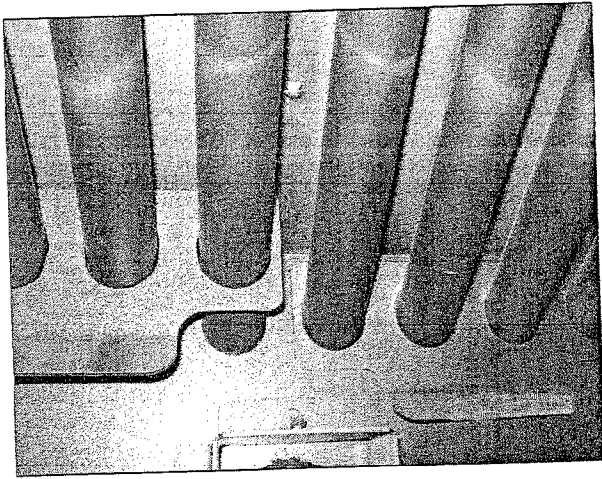
All **BIOMASS** fuel sources have (fines) corn, wood, and grass pellets, ALL have fines that will end up in the hopper of your unit and will build up and cause malfunctions in auger feed timing. Also very important to vacuum the auger and keep it clean. **IMPORTANT:** All pieces of stalks, cobs, and all foreign materials must be screened before entering into the hopper with the fuel.

BELOW Photos of a hopper that needs to be cleaned out, certain higher fines biofuels & biomass pellets have more fines than others, you will need to inspect every week to verify that the fines are not becoming an issue with the feed process:



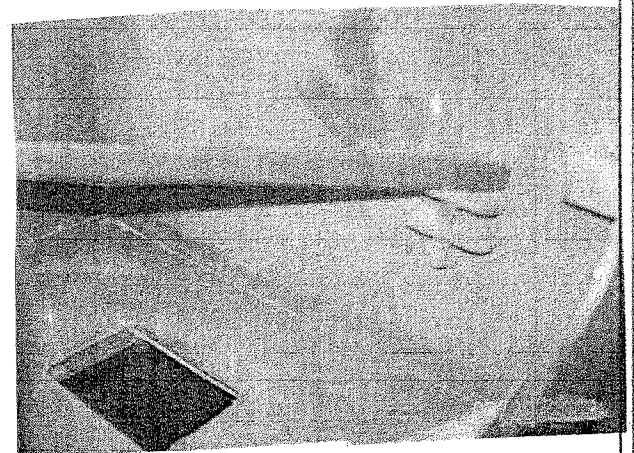
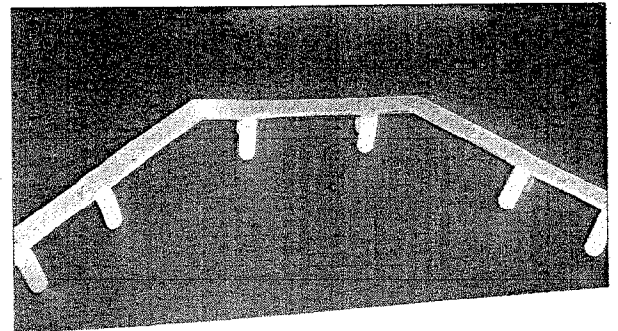
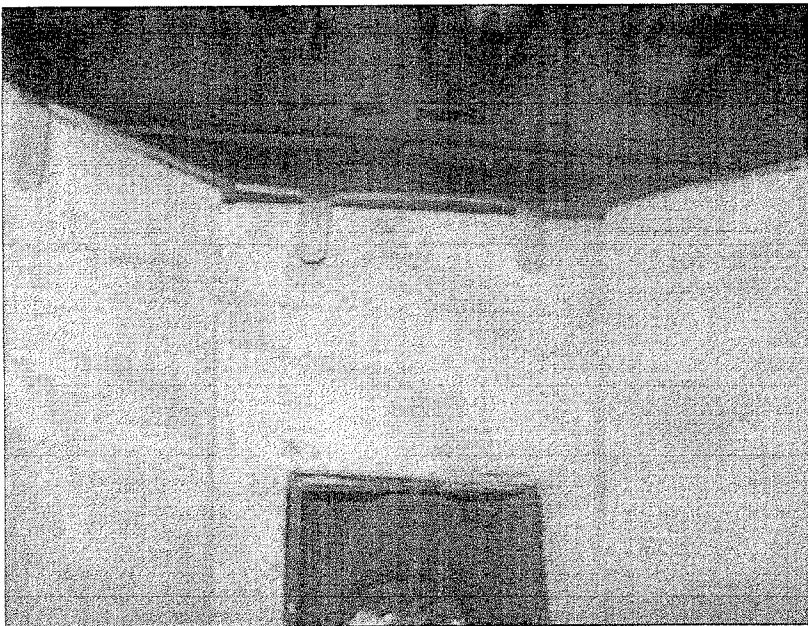
Maintenance Cont'd

Heat exchanger cleaning: Much can be done with an ash vac, we recommend for best efficiency cleaning once a week or more depending on the type of biomass, more for corn & grass pellets less for wood pellets or lower ash content fuels..



HIGH TEMP CERAMIC BACKINGS:

3 pcs "Back" "Left & Right" No need in taking out every day , we recomend monthly when you do a thorough cleaning of the fire box and venting and behind the ceramic backing. There are (2) angle brackets the Left side and Right side sit in and then are clipped on the top by a stainless bracket as per the photos below..



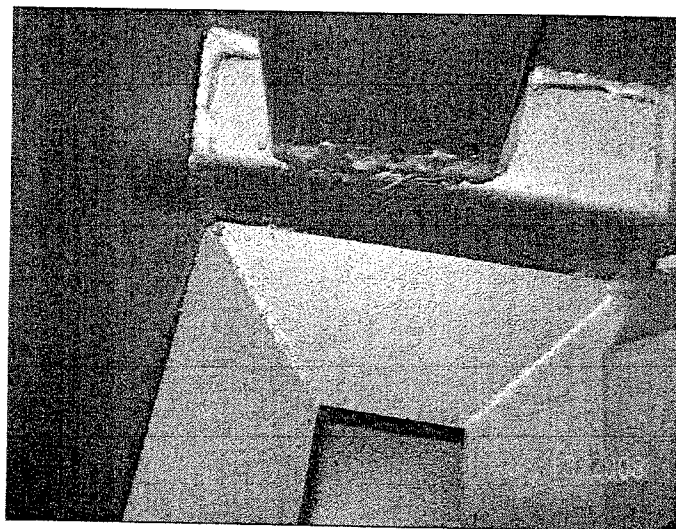
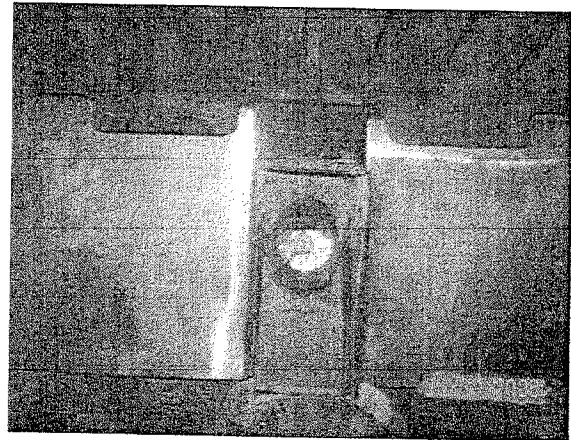
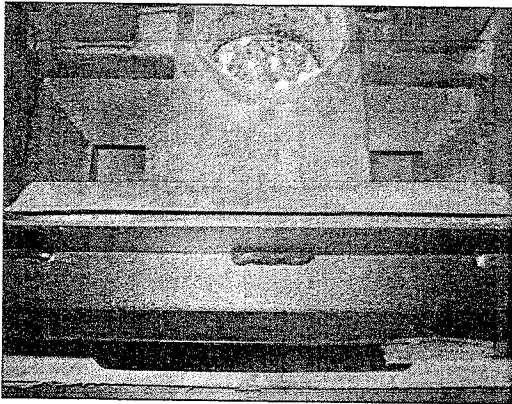
Maintenance Con't

Fire box: Cleanout location and directions for monthly access and vacuum cleaning.

There clean out plates on the left & right side inside the fire box. The plates fasten by securely pushing down to lock.

If you have an Ash Vac the end of it goes right in and cleans effectively. It is also a good time to check outside venting because the soot / fly ash will continue to build up. It will become problematic when the burn rate is **HIGH** and the flames look **SLOW**. All of this can be avoided by routine monthly maintenance.

Location of the Air Wash Slide Gate adjustment:



End of the year, spring cleaning:

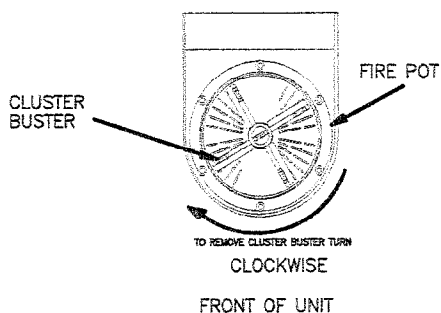
To be ready the next year you need the GENESIS SERIES Stove there are some final steps to ensure the machine will not be corroding over the next months awaiting the winter. 1st) It is good to burn out the rest of the fuel in the hopper, if left there could be some insects ready to hatch & escape the hopper coming from the fuel. Corn moths etc.. Then 2nd) a thorough cleaning and vacuuming of the fire box, ash pan areas, door, fuel hopper, venting etc. Then **FINALLY** coat the insides of the "Fire Box Chamber" with a preservative. This will effectively slow the corrosion of the metal giving you more life out of your stove. Then you will be ready for next time...

FIRE POT MAINTENANCE INSTRUCTIONS

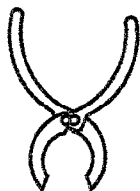
REMOVAL AND REASSEMBLY OF CLUSTER BUSTER

BEFORE REMOVING CLUSTER BUSTER MAKE SURE FIRE IS OUT AND THERE ARE NO BURNING EMBERS AND THE UNIT IS COOLED DOWN. VACUUM FIRE POT OUT COMPLETELY BEFORE REMOVING CLUSTER BUSTER. (only use ash vacs)

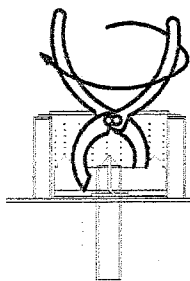
TOP VIEW LOOKING INTO FIRE POT



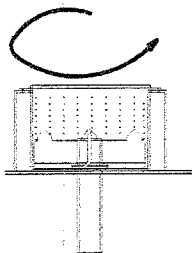
TO REMOVE CLUSTER BUSTER TURN
CLOCKWISE



STANDARD SLIP-JOINT PLIERS



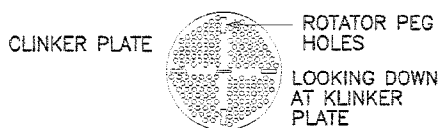
SECTION SIDE VIEW OF FIRE POT AND CLUSTER BUSTER, SOMETIMES A SMALL RAP WITH HAMMER AND PUNCH ON THE TOP PORTION OF THE BUSTER LOOSENS IT. IF IT SEEMS TOO SNUG. ALSO SQUEEZE A BIT IF ANTI-SEIZE ONTO THE THREADS AND REASSEMBLE



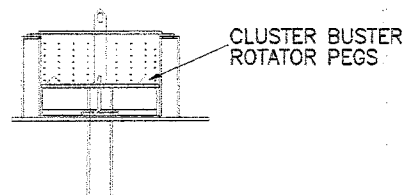
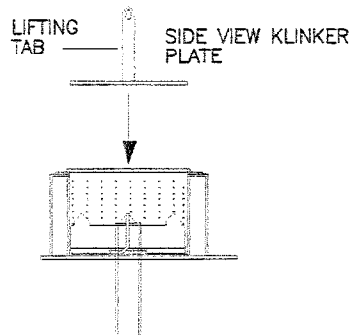
TO REASSEMBLE, TURN COUNTER CLOCKWISE UNTIL FINGER TIGHT

INSTALLATION OF CLINKER PLATE

CLINKER PLATE IS USED WITH FUELS THAT CLINKER LIKE CORN OR CERTAIN BIO FUELS, OR CERTAIN GRASS PELLETS



KLINKER PLATE BEFORE USE

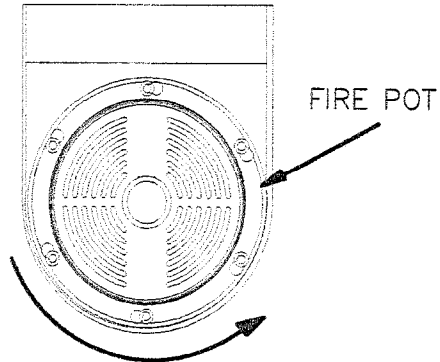


CLINKER PLATE MUST BE FLAT AND IN THE CLUSTER BUSTER ROTATOR PEGS

REMOVAL OF FIRE POT

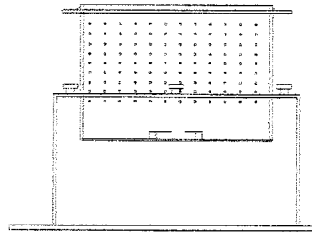
BEFORE REMOVING CLUSTER BUSTER MAKE SURE FIRE IS OUT AND THERE ARE NO BURNING EMBERS, AND THE UNIT IS COOLED DOWN. THEN VACUUM FIRE POT OUT COMPLETELY BEFORE REMOVING CLUSTER BUSTER.

TOP VIEW LOOKING INTO FIRE POT



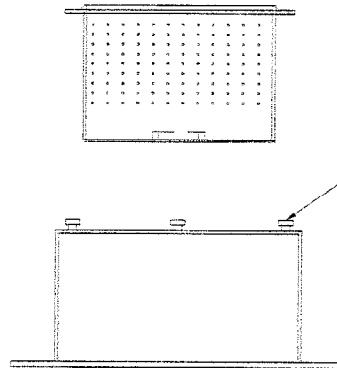
TO REMOVE FIRE POT TURN BY HAND
COUNTER CLOCKWISE
TO UNLOCK FIRE POT

FRONT OF UNIT



UNLOCK AND LIFT
FIRE POT

SECTION SIDE VIEW OF FIRE POT AND
CLUSTER BUSTER



FIRE POT
LOCKING
LUGS

SECTION SIDE VIEW OF FIRE POT AND
CLUSTER BUSTER

TO REASSEMBLE TURN CLOCKWISE UNTIL INTO LOCKING POSITION.

FIRE POT SHOULD BE REMOVED ONCE A MONTH FOR CLEANING
INSIDE AIR CHAMBER AND INSPECTION



MULTI-CONTROLLER

INTRODUCTION: SERAPH MULTI CONTROL

YOUR STOVE HAS THE SERAPH MULTI CONTROLLER DESIGNED BY SERAPH INDUSTRIES, LLC

OUR GOAL WAS TO DESIGN A CONTROLLER THAT WE HAD POWER & VERSATILITY FOR NOW AND IN THE FUTURE.

It is capable to run in multiple types of machines 100 Series;200 Series; 300 Series, It is solid state and shows the ETMP which is the temperature of the "Exhaust" by the power vent blower, and the FTMP which is the temperature in the "Fire" box below the heat exchanger. These are for reference only, the controller has pre-programmed parameters that react to the temperatures at the appropriate time.

MULTI-CONTROLLER THE SETTINGS ARE AUTOMATIC YOU SIMPLY SELECT THE HEAT LEVEL AND YOUR CONTROLLER CHANGES THE REST. YOU WILL BE ABLE TO TWEAK ADJUSTMENT OF BLOWER SETTINGS.

ADAPTABILITY:

WHEN WE DESIGNED OUR CONTROLLER, WE WANTED YOU TO HAVE A CONTROLLER THAT COULD ADAPT TO NEW FUELS. WE CAN CHANGE THE THE SETTINGS AT THE CONTROLLER TO BURN ANY NEW FUEL THAT CAN BE BURNED IN A CORN/WOOD/GRASS PELLET STOVE. SO WE CAN OBTAIN THE BEST BURN CONDITIONS FOR ANY OF THOSE FUELS.

WHY? CORN PRICES GOING UP? BURN WOOD PELLETS, WOOD PELLETS GOING UP TOO ? WHY NOT BURN SWITCHGRASS PELLETS?, PAPER PELLETS?, BIO FUEL PELLETS?, CHERRY PITS AND ANY OTHER NEW TYPE OF PELLET THAT WILL BE AVAILABLE IN THE NEAR FUTURE. YOUR DEALER SERVICE MAN WILL BE ABLE TO PUT IN TESTED SETTINGS THAT WILL GIVE YOU THE MOST EFFICIENT BURN FOR THE NEW BIOMASS FUEL

SAFETY:

SAFETY WAS ANOTHER MAIN ISSUE, OUR CONTROLLER WILL MONITOR THE STOVE AND WARN YOU ON PROBLEMS THAT COME UP. NOT JUST BY BLINKING AT YOU BUT TO TELL YOU WHAT THE ISSUE IS, AND IF THE ISSUE IS NOT RESOLVED DUE TO YOUR ABSENCE THE STOVE WILL AUTOMATICLLY SHUT DOWN IF IT NEEDS TO, AND THE ALARM WILL BE DISPLAYED TO TELL YOU WHY.

CONTROL LOCK OUT:

WE ALSO HAVE A LOCKOUT FEATURE ON ALL UNITS, SO IF YOU HAVE LITTLE HELPERS AROUND YOU CAN LOCK THE CONTROLLER, SO THE LITTLE BUTTON PUSHERS CANNOT CHANGE THE SETTINGS.

MAINTENANCE:

YOUR CONTROLLER WILL REMIND YOU TO EMPTY THE ASHPANS AND ALSO TO CHECK ON OTHER ITEMS THAT ARE REQUIRED TO BE INSPECTED AT FACTORY REQUIRED INTERVALS

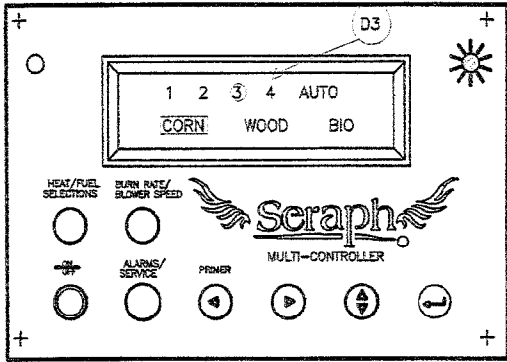
EASY TO OPERATE:

OUR GOAL WAS TO MAKE OUR CONTROLLER USER FRIENDLY, WE BELIEVE YOU WILL LEARN IT WITH EASE AND IF ANY HELP IS NEEDED WE WILL HAVE A QUESTION AND ANSWERS

ONLINE AT WWW.SERAPH-INDUSTRIES.COM OR YOU CAN CALL YOUR DEALER.

OR CONTACT US AT INFO@SERAPH-INDUSTRIES.COM

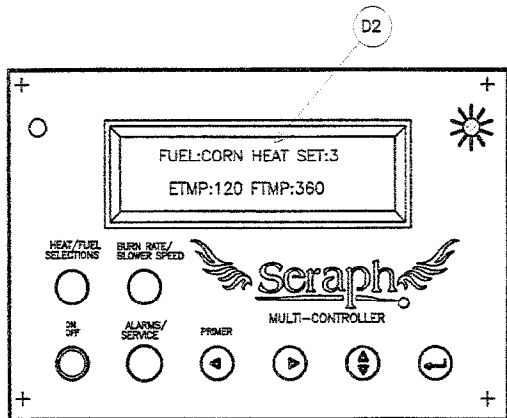
SERAPH GENESIS SERIES 108 / 106 BIOMASS STOVES COMPUTER CONTROL FUNCTIONS



CHANGING FUEL TYPES CORN/WOODPELLETS/BIO

TO CHANGE FUEL HIT BUTTON AND THEN TO ARROW DOWN TO FUEL CHOICES AND USE ARROWS TO SELECT THE FUEL YOU ARE USING AND HIT TO ACCEPT SELECTION.

SCREEN D2 SHOULD REFLECT YOUR NEW SETTINGS

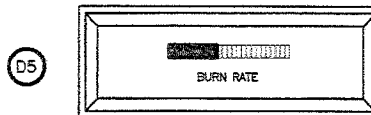


BURN RATES & BLOWER SPEED

THE SERAPH MULTI CONTROLLER AUTOMATICALLY CHANGES THE COMBUSTION AIR TO MATCH THE AMOUNT OF FUEL THAT YOU BURN ON THE FOUR DIFFERENT HEAT LEVELS (1,2,3,4) AND FOR THE DIFFERENT TYPES OF FUEL (CORN, WOODPELLETS, BIO GRASS)

TO FINE TUNE COMBUSTION RATE PUSH BUTTON

DISPLAY D4 WILL COME UP HIT ENTER BUTTON TO ADJUST BURN RATE D5 SCREEN WILL APPEAR



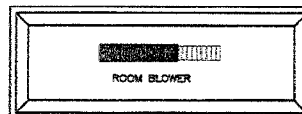
HIT BUTTON AGAIN AND THE SCREEN WILL BLINK THEN USE BUTTONS AND TO MOVE BAR TO THE RIGHT OR LEFT, TO THE RIGHT INCREASES COMBUSTION AIR TO THE LEFT DECREASES IT.

YOU HAVE ONLY A SMALL PERCENTAGE TO ADJUST THE MULTI CONTROLLER AUTOMATICALLY ADJUST THE REST.

MOVE TO THE BURN RATE YOU WANT AND HIT TO CONFIRM AND BLOWER WILL ADJUST TO YOUR SELECTION. BY WATCHING THE FLAME YOU WILL LEARN WHATS BEST. Reference troubleshooting for flame conditions.

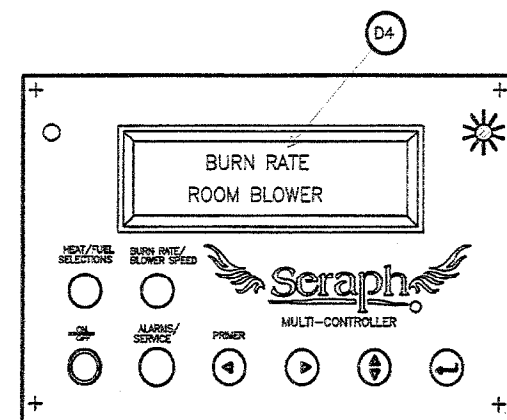
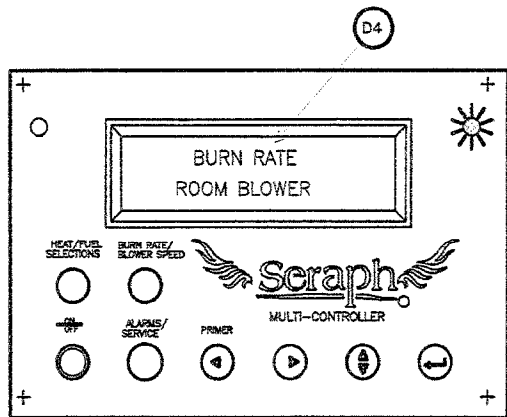
TO CHANGE ROOM BLOWER SPEED PUSH BUTTON

DISPLAY D4 WILL COME UP PUSH BUTTON TO ROOM BLOWER AND HIT

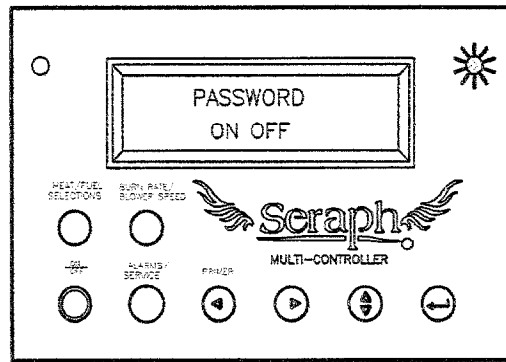


HIT BUTTON AGAIN AND THE SCREEN WILL BLINK THEN USE BUTTONS AND TO ADJUST BAR TO THE RIGHT OR LEFT, TO THE RIGHT INCREASES ROOM AIR TO THE LEFT DECREASES IT.

YOU HAVE ONLY A SMALL PERCENTAGE TO ADJUST THE MULTI CONTROLLER AUTOMATICALLY ADJUST THE REST.








SERAPH GENESIS SERIES 108 / 106 BIOMASS STOVES COMPUTER CONTROL FUNCTIONS:

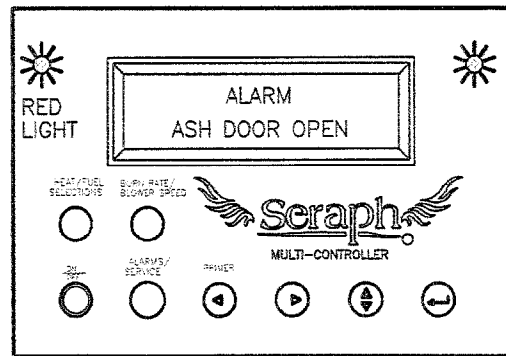


CONTROL LOCKOUT

CONTROL LOCKOUT: IS TO KEEP ARE LITTLE HELPERS FROM CHANGING THE SETTINGS.

TO TURN ON PASSWORD PROTECTION, HOLD IN   UNTIL THE PASSWORD SCREEN APPEARS
USE ARROW KEY TO TURN ON
OR OFF THEN HIT  TO CONFIRM.

TO CHANGE SETTINGS YOU MUST TURN OFF PASSWORD PUSH   UNTIL PASSWORD SCREEN APPEARS AND TURN OFF CHANGE YOUR SETTINGS AND TURN ON AGAIN



ALARMS

THE SERAPH MULTI-CONTROLLER HAS MANY SAFETY FEATURES TO PROTECT YOU OR TO INFORM YOU ON IMPORTANT MAINTENANCE ITEMS.

WHEN THE DOORS ARE OPENED ASH CLEANOUT OR HOPPER DOOR OR THE CAST DOOR THE UNIT WILL KNOW THEY HAVE BEEN OPENED AND A RED LIGHT WILL COME ON AND THE ALARM SCREEN WILL COME UP AND TELL YOU WHAT IS SENDING THE ALARM. WHEN DOOR IS CLOSED LITE WILL GO OUT. IF DOOR IS LEFT OPEN THERE WILL BE A SET TIME IF ALARM IS NOT CLEARED AN ALARM BUZZER WILL GO OFF AND TO TELL YOU THERE IS AN ISSUE IF ALARM IS NOT CLEARED UNIT WILL ACTIVATE THE SHUTDOWN MODE. UNIT WILL NEED TO BE RESTARTED WHEN ALARM IS CLEARED.

ALARMS	POSSIBLE ISSUES	TO RESET
ASH DOOR OPEN	LOWER ASH DOORS NOT CLOSED	CLOSE DOOR
DOOR(S) AJAR	1)HOPPER 2)VIEW DOOR AJAR/SEALS / HOPPER or VACUUM SWITCH	CLOSE DOOR
LOW HEAT	COMBUSTION LEVEL IS TO LOW	ADD FUEL AND LITE
HIGH HEAT	EXHAUST TEMPERATURE TO HIGH	UNIT WILL SHUT DOWN AND RESET
EMPTY ASH PANS	EMPTY ASH PANS	OPEN ASH DOOR EMPTY AND CLOSE
FLUE INSPECTION	PULL OUTSIDE CAP OFF AND VISUALLY CHECK FOR BLOCKAGE	

SERAPH GENESIS SERIES 108 BIOMASS CORN WOOD/GRASS PELLET STOVE: LIGHTING INSTRUCTIONS:

Computer Control Functions / Startup:

When the unit is plugged in the computer control of your SERAPH INDUSTRIES, LLC, corn wood grass pellet stove the computer screen will read SERAPH INDUSTRIES GENESIS 108 v1.1

Open Hopper door and add approved corn wood / grass pellets in the hopper.

First you need to place 2 cups of wood pellets is placed along with the gelled fire starter into the fire pot * See below for cautions during manual lighting, push the **ON Button**.

Second: The computer control will go back to the type and heat level you were using. To CHANGE the TYPE of fuel press (HEAT/FUEL) selection button then you will be able to choose the level of heat you desire to burn at. 1-Low; 2-Med Low; 3 Med High; 4 is HIGH. Aux for Thermostat hookup heat control. **NOTE:** Optional thermostat control DOES NOT START THE UNIT, NOR DOES IT SHUT IT DOWN. When the thermostat is not calling for heat unit will run on heat level ONE. When it is it will call for level 4. AND NOW in order to choose the TYPE of FUEL, press (HEAT/FUEL) selection AGAIN and use the "arrowed" UP/DOWN button. When you choose the down button then you use the LEFT / RIGHT Arrow buttons to choose TYPE OF FUEL. With your choice of heat level and type of fuel, the computer control's screen will say ("warm up")

Third: drop a lit match in to the fire pot and close the front door firmly locking it in place for the duration of the burn. Notice on the computer control, is states "WARM UP" It will also tell you what FUEL you are set up for. IF it is going to start in a fuel that you do not want to use please refer to the "Second" step. THE WARMUP seven-nine minute warm up cycle.(Depending on what BIOMASS Fuel you are using) This "WARMUP" is essential because corn and other biomass material will not combust correctly until extremely hot!! The wood pellets should be sufficiently hot within the FIVE minutes, if not you may need to add more pellets/ and re-start the time of the warm up.

NOTE: If the auger is free or empty of corn you may, while during the seven minute warm up cycle use the button on the computer control, "PRIMER". This button is a live feed button for the auger to be "primed" with Fuel. So that when the cycle for burning starts there will be Fuel to drop. If not this unit will not support enough quality combustion to keep the fire lit and will go out. Then all must be retried.

NOTE: The "PRIMER" button **ONLY** works when the unit is in the FIVE-NINE minute warm up cycle and IF AND ONLY IF THE FUEL HOPPER IS CLOSED.

If for any reason you need to shut down the "Stir" cycle of the "Cluster Buster" you may open either of the from Ash removal Cover doors and there is safety switches in them that will shut down the Stirrer when opened. Sometimes when first lit after the warm up cycle has ended and you believe the FUEL could use a bit more time burning (getting Hot) you may do this operation. Also if for any reason you need to stop the corn feed while in operation you may open hopper fuel door to stop the auger feed. Another safety switch will disengage the auger from feeding the corn.

PLEASE NOTE If either of these operations happens for too long the unit will be starved of corn and or won't feed properly, it will shut down. You will need to watch the flames to make certain the exhaust damper is the proper speed. REMEMBER too fast the fuel is gone too quickly, to lazy or slow of a flame the fire will be starved for air and will go out. It needs to be just right "slightly busy". If the unit shuts down or goes out, after it has cooled off, check the fire pot and "Cluster Buster" to make sure there are none of the clinker formations on them, they will hamper the burn and running quality of the stove. With a little practice you will minimize the frequency of this happening.

Fourth, once the unit is up to temperature (usually 40 minutes or so), you can make changes to any of the settings on the computer control. The LOWER the settings of your SERAPH INDUSTRIES, LLC corn wood pellet stove the more EFFICIENT the burn. We LOVE fire but we want every dollar of heat this stove will produce to last as long as possible keeping your family warm.

SHUT DOWN MODE: Press the Arrow button on the bottom left of the computer control terminal and depress the settings until it shows OFF. The unit will not feed anymore Fuel & will go into shutoff mode, the exhaust blower, room blower and stirrer will keep running until the unit has burned out and cooled off, sometimes up to an hour until its shuts completely down.

NOTE: The room blower, exhaust blower and the stirrer will run in Shut Down Mode until the unit has sufficiently cooled down.

NOTE: FRONT DOOR : Must be kept securely closed while the room heater is running. Always allow the room heater to cool before cleaning.

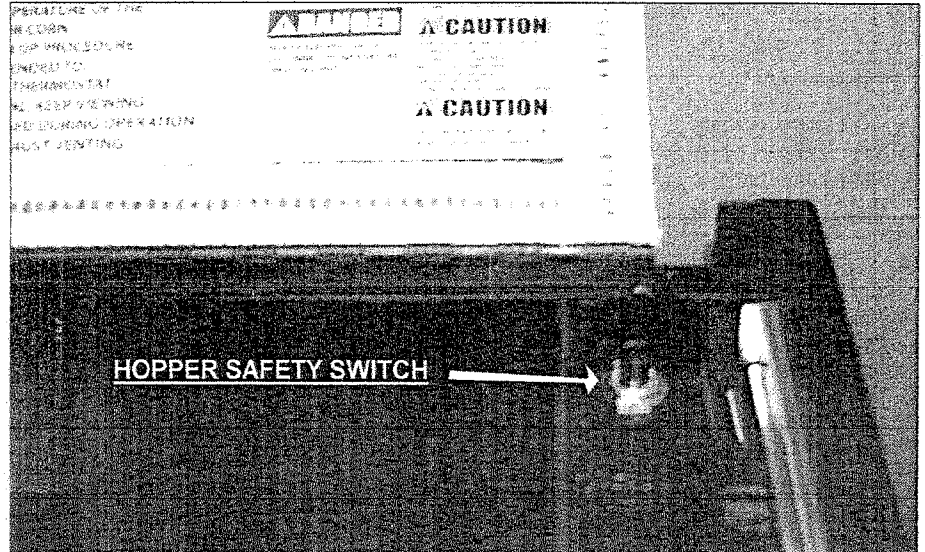
CAUTION: Never use highly - volatile fuels such as gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar substances in the SERAPH INDUSTRIES, LLC room heater. Keep all such liquids well away of the Seraph Genesis stove when its in use. Use of such fuels could cause over firing and will void the unit's warrantee. Wood pellet starter gel should not be used after start up.

HOPPER AUGER SAFETY SWITCH LOCATION:

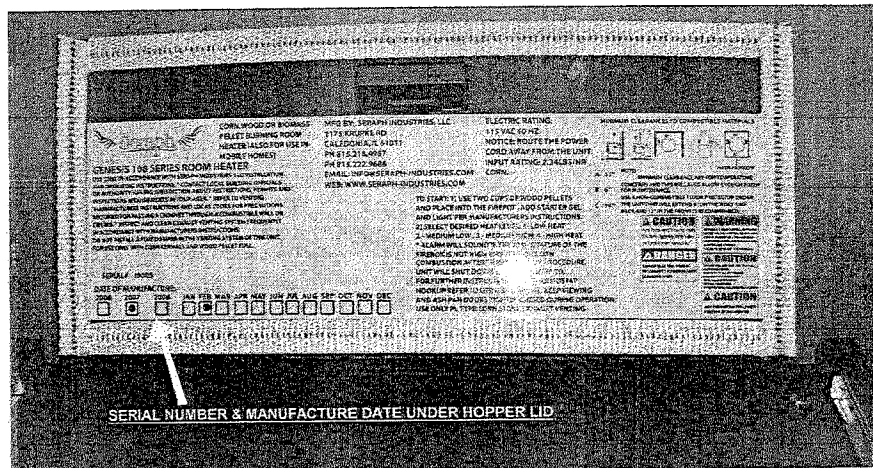
The Hopper Auger Safety Switch is mounted towards the back, control side of the unit. The assembly is enclosed to keep the fuel from entering the switch location.

When the lid is opened it cuts power to the auger motor. Power is resumed when the lid is closed. If the lid is left open for a couple minutes the fire will go out. If the fuel is collecting in the fire pot and you want to "stop" the fuel as to let the fire "catch up" then you can close the lid and resume. If the lid is open for more than a minute or so the buzzer will go off to remind you that your hopper door is open. Always have the fuel ready to load into the hopper before opening..

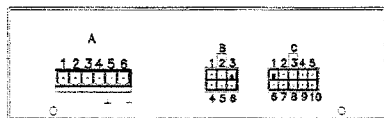
Auger Safety Switch Location Photo:



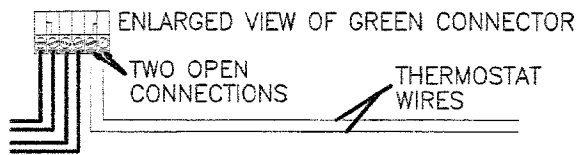
Serial Number Label Identification:



THERMOSTAT INSTALLATION

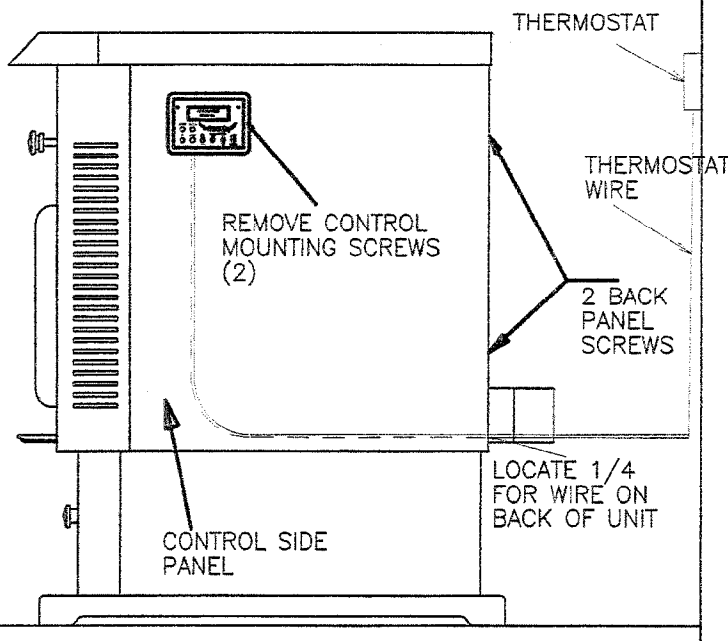


ENLARGED BOTTOM VIEW OF CONTROLLER



ENLARGED VIEW OF GREEN CONNECTOR

TWO OPEN CONNECTIONS
THERMOSTAT WIRES



INSTALLING THERMOSTAT

UNPLUG UNIT

REMOVE CONTROL MOUNTING SCREWS (2)

PULL CONTROLLER OUT CAREFULLY, AND HANG IT UPSIDE DOWN.

REMOVE ALL THREE CONNECTORS AND REMOVE CONTROLLER.

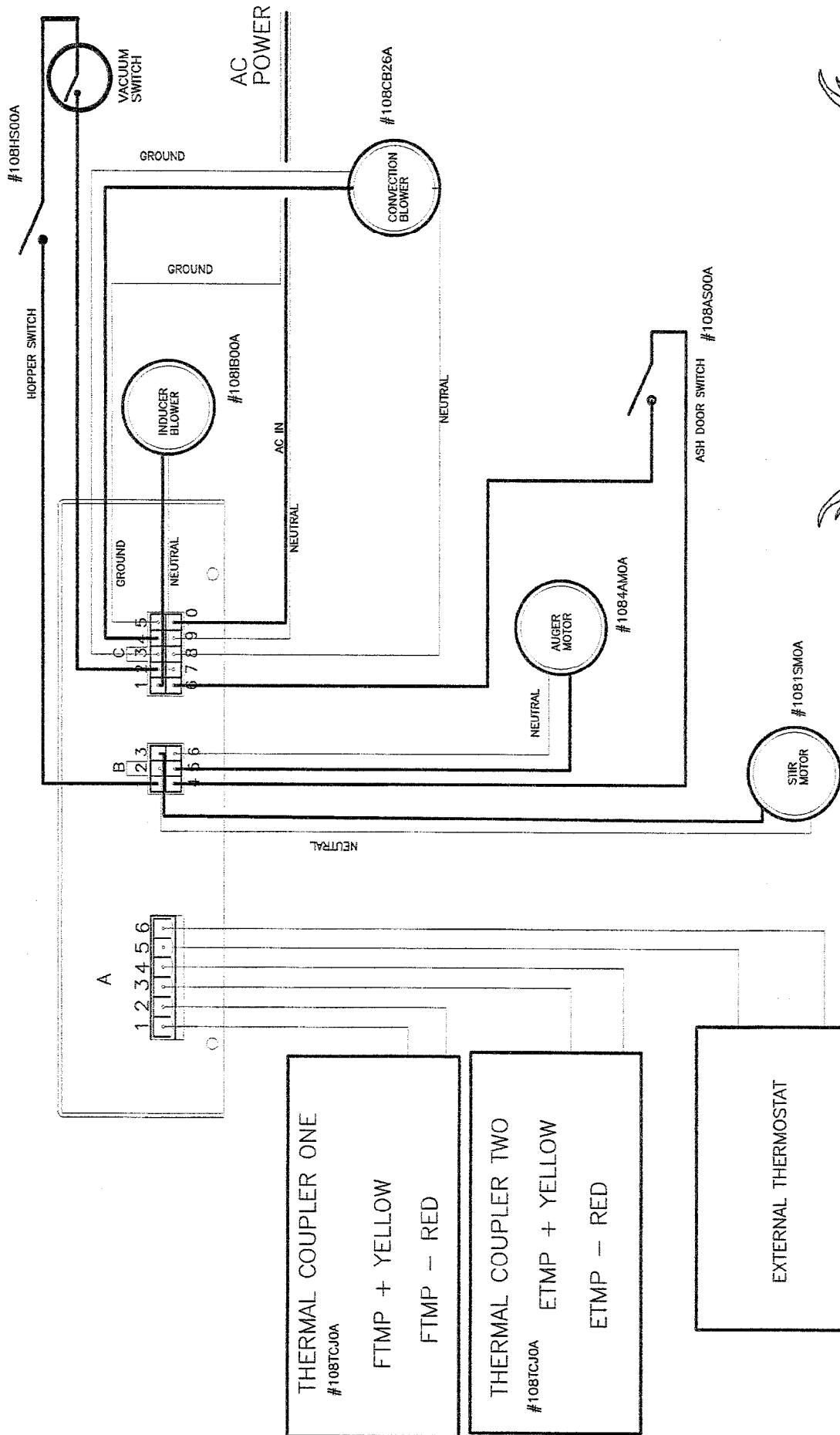
REMOVE CONTROL SIDE PANEL BY REMOVING TWO SCREWS IN BACK CORNER OF PANEL, AND SLIDE TOP LID FORWARD AND LIFT AND SLIDE TO REMOVE PANEL.

PLACE WIRES THROUGH 1/4 IN BACK PANEL AND CONNECT THE TWO ENDS TO THE GREEN CONNECTOR THERE WILL BE TWO OPEN TERMINALS FOR THE CONNECTION. TIGHTEN SCREWS AND MAKE SURE YOU ENOUGH WIRE TO CONNECT AND REINSTALL CONTROLLER AFTER PANEL IS ON.

REPLACE PANEL AND PULL CONNECTORS OUT OF PANEL AND RECONNECT THE THREE CONNECTORS TO THE CONTROLLER AND PLACE BACK INTO SIDE PANEL AND INSERT THE TWO SCREWS TO HOLD CONTROLLER IN.

PLUG UNIT BACK IN AND YOU ARE COMPLETED.

SERAPH GENESIS 108 & 106 UNIT



THERMAL COUPLER ONE
#108TCJ0A
FTMP + YELLOW
FTMP - RED

THERMAL COUPLER TWO
#108TCJ0A
ETMP + YELLOW
ETMP - RED

EXTERNAL THERMOSTAT



TROUBLE SHOOTING:

PROBLEMS:	CAUSES:	SOLUTIONS:
Build up of soot on glass, venting and on heat exchanger tubes	Wet / Dirty Fuel (Corn above 15% moisture) Inadequate Air Supply Negative pressure in home. Air wash may be plugged or out of adjustment. Venting may need cleaning.	Make sure you have clean fuel. Corn that is 15 % moisture content or less. Adjust the damper slightly to make sure corn is not burning too fast. Make sure Ash Incinerator cone and top screen are clean and in place. Make sure the air wash bracket and area is clean and not plugged.
Room Blower will not operate.	No power to stove. No power to computer control board. Blower has overheated due to dirt on blades or motor. Unit not sufficiently up to temperature. Blower is defective. Thermocouple faulty or worn out not sending the blower the go ahead to run when the stove unit is up to temperature when during start up cycle.	Check to see that stove unit is plugged into the wall outlet. Check to see if your circuit breaker is "tripped". Clean blades and motor, replace if needed. Replace thermocouple if needed. Check to see if thermocouple wires are snug on the control (green thermocoupler connector)
Soot or fly ash in the house.	Cleaning the window during operation. Leakage in the "PL" venting joints, exhaust blower. The room blower may suck the leaks into the room. Negative pressure in the home sucking ash soot into the home from venting and unit. *Using a conventional vacuum for cleaning. The dust will bypass its way through the filter and into the room.	Clean the glass when stove unit is not running. Seal any leaks in the exhaust system with RTV high temperature silicone sealer. Use a ash vacuum. Correct negative pressure in the home.
Cluster Buster in Fire Pot keeps jamming	Buildup in the fire pot , dirty wet fuel poor quality fuel. Negative pressure in home. Stove unit not shut down properly. Fuel not HOT enough, make sure the fire pot is hot before letting stir start again, usully a couple minutes.	Use clean, dry approved fuel. Correct negative pressure situation. Adjust the damper clinkers can happen when the temp of the fire in the firepot cools and the corns starches stick together. Make sure the fire is not too "slow". Shut the stove unit down properly.

CAUTION: When performing any internal electrical maintenance.

Moving parts inside of the cabinet may cause injury. Do not operate unit panels removed or open. Hot PARTS. * Do not operate the unit with panel open. * Risk of electric shock.

*Disconnect power before servicing unit.

In the event of component failure, replace with original factory equipment.

IMPORTANT: *Electrical work must be performed by an authorized technician.*

TROUBLE SHOOTING : CONTINUED

Problems:	Causes:	Solutions:
Fire goes out or stove shuts down automatically & alarm sounds	Hopper is empty. Fuel is not feeding. Combustion air too fast / fuel rate is too slow. Hopper door open and the fuel will not feed.	Refill hopper. Close hopper door. Slow the damper speed on the exhaust venting. Have your SERAPH INDUSTRIES, LLC reseller adjust the fuel control.
Fuel will not feed.	Hopper is empty. Auger or computer control is tripped. Foreign object is stuck in the auger. Fuel is dirty or wet. Auger failure.	Check the contents of the hopper. Check all operation fuse on the control board. Clean the auger system. Call your SERAPH INDUSTRIES, LLC dealer to diagnose the problem and replace the parts.
Stove runs for 20 minutes and then the alarm sounds.	Temperature in fire chamber not up to temperature. Thermocouple may not be operating correctly or may be defective. Wire harness may be loose or disconnected.	Relight the stove please make sure to use at least 2 cups of wood pellets to make sure the unit is up to temperature in seven minutes. Have your SERAPH INDUSTRIES, LLC dealer diagnose the issue.
Room Blower has not shut down	Thermocouple is defective and not working properly. The unit has not cooled down yet.	Have your SERAPH INDUSTRIES, LLC dealer replace the thermocouple or service the unit. It can take an hour or so to cool down enough for the blower to shut completely off.
Fire burns with a lazy, orange flame and the fuel builds up in the firepot.	The damper control is too low. Feed rate too high. Insufficient combustion air. Too much moisture in the burning fuels, 15 % or less. Exhaust blower is going out, or is too plugged. House may need more make up air because of negative pressure. Ash slides in fire chamber are open.	The burnrate control may need to be increased a little. Clean out firepot/cluster buster area to ensure the fuel is being stirred properly. Check the venting and clean out if necessary. Check air inlet for obstructions. Check combustion exhaust blower impeller. Replace the combustion blower if necessary. All hookups should have outside air to completely rid the unit of any negative air pressure issues.

CAUTION: When performing any internal electrical maintenance.

Moving parts inside of the cabinet may cause injury. Do not operate unit panels removed or open. Hot PARTS. * Do not operate the unit with panel open.

* Risk of electric shock.

*Disconnect power before servicing unit.

In the event of component failure, replace with original factory equipment.

IMPORTANT: *Electrical work must be performed by an authorized technician*

TROUBLE SHOOTING: CONTINUED...

PROBLEMS:	CAUSES:	SOLUTIONS:
TOO MUCH ASH ?	Dirty fuel/ wet fuel Lack of clean combustion air. Dirty venting or poorly exhausted. Combustion motor going bad.	Adequately screen the corn. Make sure it is the right moisture content. Check computer control and combustion air coming in for obstructions. Check all venting for obstructions, refer to the cleaning part of this manual.
Object stuck in Auger and it is jammed	Accidental object in the fuel.	If the unit is still running, shut it down and let it cool. UNPLUG the unit once it is cool and the fire is out. It would be necessary to empty the fuel hopper. If you are facing the auger motor from the back side with the panel off, you can turn the small fan to the counter clockwise position to take the tension of the turn out of the auger. Then take out the screws and gently slide the auger back towards you to clean out the obstruction. Remember if you did not clean the hopper of its corn it will empty as soon as you back out the motor. Prying on the auger may damage the gear box.
Fuel burns too quickly, having difficulty keeping a consistent fire lit.	Clean out slides fire chamber must be closed during operation. Door must be closed tightly. Exhaust setting too high, burning the fuel too fast.	Make sure the slides are shut. Make sure door is closed tightly. Turn down the exhaust slightly to find a happy medium burn rate.

CAUTION: When performing any internal electrical maintenance.

Moving parts inside of the cabinet may cause injury. Do not operate unit panels removed or open. Hot PARTS. * Do not operate the unit with panel open. * Risk of electric shock.

*Disconnect power before servicing unit.

In the event of component failure, replace with original factory equipment.

IMPORTANT: *Electrical work must be performed by an authorized technician*

Automatic Safety Features:

Power outage: The Multi control is able to withstand 20 seconds due to a power failure, it will sense for heat if the heat is too low, it will shut down safely. If it senses enough heat it will pick up and return to the program. The stove will not automatically re-light when the power goes out. See "Lighting Instructions" pg 27.

Auger Cut off: When the hopper lid is opened the fuel auger stops. It will resume operation when the lid is closed. The hopper lid must be kept closed for proper operation. If the lid is left opened the fire will go out. Also always make sure the sealing surface of the hopper is clear of fuel before closing the lid.

Vacuum pressure switch: will cut off fuel supply also when the Viewing door or Ash pan doors are opened, make sure they are tightly sealed.

Overheating:

A high heat alarm will automatically shut the unit down if the stove overheats. The stove will need to be manually re-lit.

Low Heat alarm: When the stove signals low heat, the unit will shut down automatically. The stove will need to be manually re-lit.

AUTOMATIC HIGH DRAFT feature:

When you open the Fuel hopper, open the Viewing door, Ash pan door, the stove senses this and the draft inducer blower goes FULL SPEED to keep as much of the smoke from the home as possible.

Room Blower Stall button:

When you do normal quick maintenance with the stove operating normal, you can touch the "Prime" button, this will stall the Room blower for 60 seconds, this will prevent smoke and heat from blowing against your face.

Ash pan safety switches: When you pull outer ash pan doors there is a safety interlock switch that stops the Stirrer from stirring. It is handy when you want the fire to "catch up" with itself / get hotter. But the Ash pan doors must be closed for proper operation.

Empty Ash pan alarms (depends on fuel used) Certain intervals can go off as a blinking light / buzzer.

Flue Maintenance: Every 30 days blinking alarm light/ buzzer to remind owner to inspect chimney flue.

Child Lockout feature: See Computer Control Functions pg 25-26

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5 YEAR LIMITED WARRANTY

This warranty is issued by Seraph Industries, LLC. (Manufacturer) and extends only to the original purchaser of this product. This limited warranty will not become effective unless you have returned the attached warranty card, or register online @ www.seraph-industries.com within 30 days of your purchase. If you fail to do so, you may make no claim under this warranty. Seraph Industries, LLC. excludes and disclaims all implied warranties including, but not limited to, the implied warranty of merchantability.

For a period of (five) 5 years from the original purchase, Manufacturer will warrant to the original consumer-purchaser, that all steel components are free from defects in materials and workmanship (except the firepot & cluster buster rotator, which is covered by a (one) 1 year warranty and glass which carries a lifetime warranty against heat breakage.) There is expressly no warranty on the fiberglass rope gasketing, pyroboard insulation (brick backing), paint, plating of handles and handles themselves. The original manufacturer covers all electrical components, for a period of (one) 1 year from the original purchase date. There is no warranty coverage for variances in fuel feed rates. BTU heat ratings will vary with different fuel conditions and is not considered a defect if the unit does not feed a constant amount of fuel.

This warranty covers defects in materials and workmanship in covered components, provided the product has been installed and operated strictly in accordance with manufacturers printed instructions. This warranty does not cover damage or breakage due or caused by mishandling, freight damage or misuse or unauthorized modification of the structure or the electrical system.

This warranty will become null and void if unauthorized fuel is used. Seed corn and Wax corn is prohibited.

This warranty will become null and void if outside air is not connected to the appliance.

This warranty will become null and void if the appliance is not installed according to the guidelines and requirements of this manual along with proper venting, service, maintenance and operation of the appliance.

Before exercising this warranty, a local representative must inspect the unit to determine if the unit is defective. If the inspection reveals that the failure is due to defective material or workmanship and the part is covered by the condition of this warranty, the Manufacturer will, at its option, repair or replace the defective part. The sole duty of the Manufacturer and liability under this warranty is limited to the repair or replacement of the covered defective part. The purchaser shall assume all costs related to shipping the replacement parts or return of the unit to the factory for replacement. If it is determined that the defect was caused by the Manufacturer, the Manufacturer will cover the costs of shipping the repaired unit or replacement parts to the original purchaser.

REMOVAL OR REINSTALLATION COSTS ARE NOT COVERED BY THIS WARRANTY.

Neither the Manufacturer, nor the Reseller to the purchaser, accepts responsibility, legal or otherwise, for incidental or consequential damage to property of persons resulting from the use of this product. Any warranty implied by law, including but not limited to implied warranties of merchantability or fitness, shall be limited to one year from the date of the original purchase. Whether a claim is made against the Manufacturer based on breach of this warranty or any other type of warranty, expressed or implied by law, Manufacturer shall in no event be liable for any special, indirect, consequential or other damages of any nature whatsoever in excess of the original purchase price of this product. All warranties by Manufacturer are set forth herein and no claim shall be made against Manufacturer on any oral warranty or representation.

THE MANUFACTURER WILL NOT BE LIABLE FOR ANY DAMAGE RESULTING FROM THIS APPLIANCE BEING INSTALLED BY A NON-CERTIFIED / FACTORY TRAINED INSTALLER.

Some states do not allow the exclusion or limitation of consequential damages, or limitations of implied warranties, so the limitations or exclusions set forth in this warranty may not apply to you. This warranty gives you specific legal rights and you may also have other rights, which vary, from state to state.

Warranty/ replacement parts must be handled through the dealer that sold you your appliance.

ALL CLAIMS NOT HANDLED THROUGH YOUR LOCAL DEALER UNDER THIS WARRANTY MUST BE MADE IN WRITING TO THE MANUFACTURER AT: SERAPH INDUSTRIES, LLC. 1175 Krupke Rd Caledonia, IL 61080; Technical Support telephone number 815-222-9686 or 815-218-4987

Included with the claim needs to be the following:

Name, address and telephone number of the local reseller or representative, installer of this product, original purchaser. Date of purchase along with the model and serial number of the unit. Nature of defect and procedures of what has been done to correct the problem. (unit must be checked out by the dealer that sold you the unit before submitting warranty replacement parts.)

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