

Grain Comfort Stove

Version: 2012

Certified to Burn - Corn Wheat and Rye



Grain Stoves Inc.

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Patent

1991-2009

U.S. 5,105,797 – CDN. 2,051,804

Dear Customer:

Congratulations!

You have just purchased the Grain Comfort Stove. Each part of your unit is of the highest quality of material and workmanship. We believe that once you begin using your heating unit, you will know that you have made a very wise decision in choosing the Grain Comfort Stove.

The purpose of this manual is to help you get maximum enjoyment and heating efficiency from your unit. By following these instructions and suggestions, you can be assured years of safe and economical heating for yourself and your family.

Thank you for buying your Grain Comfort Stove.

Grain Stoves Inc.

***** SAFTEY NOTICE *****

If this stove is not properly installed, there is a risk of fire. For your safety, follow the directions given in this manual. Contact your local building or fire officials about restrictions and installation requirements specific to your area. The manufacturer assumes no responsibility for equipment installed in violation of either this manual or local codes or ordinances.

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INTRODUCTION

Your Grain Comfort heating system is designed, engineered and built to provide you with a safe, efficient heating unit.

The Grain Comfort Stove is designed and engineered to burn Shelled Corn, Wheat and Rye.

The Grain Comfort heating system has successfully undergone various safety and performance tests and is certified to the standards of UL, ULC, in Canada and United States.

To realize all of the reliable service advantages that have been engineered into your Grain Stove and avoid voiding your warranty, you must follow all of the instructions contained in this manual.

Before attempting to install or operate your Stove, you should familiarize yourself with the components and operating controls of the unit. (PAGE 13)

READ ALL INSTRUCTIONS BEFORE INSTALLING OR USING THE APPLIANCE.



Throughout this handbook, you will see international caution signs beside a number of areas. They relate to safety, or some other important aspect you need to know. Please make special note of these areas. Read these instructions completely and carefully before installing your Grain Comfort unit and keep them for future reference.

HEATING SAFETY and SOLID FUEL

Certain safety hazards are inherent in any solid fuel unit installation. You should be aware of these, so that a safe and proper installation can be made.

- 1- Prior to building your first fire, the manufacturer recommends that your Grain Comfort installation be inspected by the local governing authority having the jurisdiction to assure that all code requirements have been complied with.
- 2- If such inspections are not possible, the owner should acquaint themselves with the following: National Fire Protection Association, Standard 211 1985 or the latest edition. Address of the NFPA is: Battery March Park, Quincy, MA 02269 or the National Building Code. 1986 edition of the Uniform Mechanical Code, Section 915. ULC 5627/CSA-B366-2M/APF 1 (on Aug. 2003)
- 3- Faulty Chimney: An older masonry chimney should be thoroughly checked to be sure there are no holes or weak spots which could allow sparks or hot gases to escape.

HEATING SAFETY and SOLID FUEL: con't

- 4- Heat Conduction: Placing combustible materials too close to the unit or chimney can be a fire hazard.
- 5- Chimney Installation: Use a spark arrester and a rain shield on your exhaust pipe.
- 6- Your shelled corn, rye and/or wheat should be clean and screened.
- 7- Use smoke detectors around the unit as well as in sleeping areas, halls etc.
- 8- Always keep a fire extinguisher rated for class 'A' fires near the unit.
- 9- Check with your insurance company to be sure that your policy covers the use of a solid fuel stove such as a "Corn Stove".
- 10- The chimney connector, rain cap, spark arrester and chimney should be inspected at least twice monthly during the heating season to determine and remove if a creosol buildup has occurred.
- 11- Locate furniture and any other combustibles at least 36" away from unit.
- 12- Store fuel at a safe distance from the unit, in a dry, well-ventilated location.
- 13- Ash removed from the stove should be placed in a non-combustible metal container with a tight fitting lid.
- 14- If burying ashes, be sure they are thoroughly cooled first.



If this stove/appliance is not properly installed in a house, there is a risk of fire. For your safety, follow the installation directions. Contact local building or fire officials about restrictions and installation inspection requirements specific to your area.

UNPACKING

*** Installations should use two people, as the unit is heavy.**

- 1- Remove the protective plastic wrapping from the unit.
- 2- Inspect the unit for any obvious physical damage.
- 3- Remove the 2 Screws holding down the unit to the pallet (if mounted to a pallet)
- 4- Or remove the Steel Tabs bolted to the bottom of the stove. (If mounted to a pallet)
- 5- Open Hopper, release the Hold Down Latch, and remove the Hopper Lid.
- 6- Remove and inspect the contents of the hopper (use checklist below).
- 7- Attach the Cast Iron Legs using the bolts provided.
- 8- Open the stove door and ensure that the Firebox is present and is centered on the Removable Washer.
- 9- Close and lock the stove door making sure the latch is tight and locks with a reasonable amount of force.

CHECKLIST

IN THE HOPPER:

Qty 1 - set of 4 Cast Iron Legs
Qty 1 – Stainless Steel Poker
Qty 1 – Copy of Grain Stove Manual

VENTING KIT:

Qty 1 - Stainless Steel Vent / Wall Flange
Qty 1 - Length of 36” Exhaust Pipe
Qty 1 - 5” to 6” Galvanized Adapter

***Should there be any items missing, first check with your Dealer that you purchased the unit from. Or call us at Grain Stoves Inc.**

VENT KIT



VENTING KIT:

SUPPLIED WITH THE UNIT

Stainless Steel 6” through the Wall Flange
5” to 6” Galvanized Adapter
Length of Exhaust Pipe

FLOOR PROTECTOR

It is recommended the unit be placed on a non-combustible pad if the floor of the house is of combustible material. The pad should meet the following minimum specifications:

A listed floor protector or a floor protector made of a non-combustible inorganic material equal or 3/8" thick millboard having a thermal conductivity of $K = 0.21$ BTU/ft. degree F such as Ceraform 126

INSTALLATION OVERVIEW

Venting and Exhaust Installation can be done either **through the wall** with a supplied vent kit from Grain Stoves Inc. (See figure 2 and/or 3) **or into an existing factory built UL 103 or masonry chimney.**

This Grain Stove must be installed in accordance with this manual and local code. In the absence of any local codes, follow the current edition of the NFPA-211 (in the USA) and the CSA-B365 (in Canada). Special methods are required when passing through a wall or ceiling. See instruction and building codes.

- **Installations should have two people, as the unit is heavy.**



BEFORE MAKING ANY ALTERATIONS - Observe the location of electrical outlets so that you do not cut into any live wires. **DO NOT CUT** through a wall stud. If it is determined that wires or a wall stud is in the way, re-measure and reposition the unit.



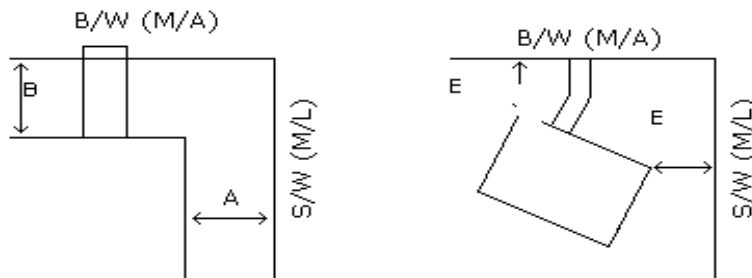
If this stove/appliance is not properly installed in a house, there is a risk of fire. For your safety, follow the installation directions. Contact local building or fire officials about restrictions and installation inspection requirements specific to your area.

INSTALLATION CLEARANCES

Your new Grain Comfort should be installed in a location that takes full advantage of its heating capabilities. A location that will give the best airflow from the front of the unit to the remainder of the house is ideal.

Minimum Clearances:

Figure 1



Side (A) – 1.0” Back (B) – 3.0” Vent – 0” Corner (E) – 3” Floor – 0”

FREE STANDING INSTALLATIONS

Your Grain Comfort is designed for connection to the 3” diameter exhaust pipe, Stainless Steel inlet box and Stainless Steel Wall Flange which is intended to exit straight out the back of the unit and through an outside wall. Variations to a “Straight Out” installation can be made. A Corner installation can be accomplished by incorporating 45 degree 6” pipe and a 45 degree 3” exhaust bend. Variations on the installations are list here in this manual.

THROUGH WALL VENT INSTALLATION

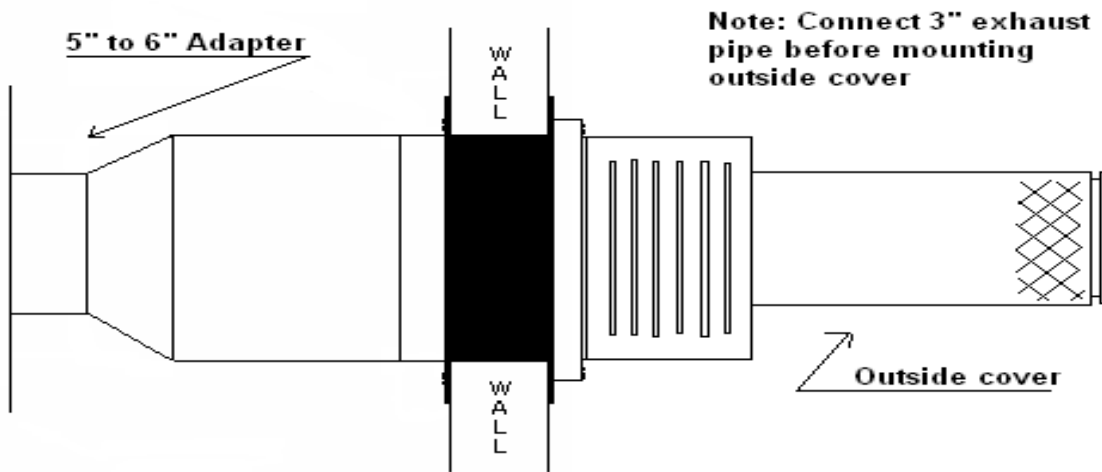
EXHAUST and VENT MEASUREMENTS

MEASURE: (looking at the front of the stove)

- 13.5” from floor to hole (with legs on)
- 16.5” from the right hand side to the center of the hole

- 1- Cut a slightly oversized hole for the 6” Stainless Steel Wall Flange.

- 2- Test Fit the Flange Unit noting that it will slide apart to accommodate different wall thicknesses. Check to make sure the assembly fits snugly.
- 3- Attach the 5" to 6" Galvanized Adapter to the 5" pipe protruding from the back of the stove.
- 4- Visualize or test the placement of the stove. If acceptable, apply a bead of High Temperature Silicone to the inside face of the Wall Flange and secure with wood screws.



**Use 1 3/4 Screws to mount wall thimble.
 Tapcon - Concrete Stainless Steel if
 Siding over wood or other material**

- 5- Push the 3" Exhaust Pipe through the Wall Flange from the outside.
- 6- Apply a bead of High Temperature Silicone to the inside face of the 3" Exhaust Pipe and securely fit to the 3" pipe of the stove.
- 7- Move the Grain Comfort into position connecting the adapter to the Wall Flange.

This completes the inside installation

- 8- From the outside, apply a bead of silicone to the inner face of the Wall Flange and screw the Flange to the outside wall using appropriate fasteners as indicated in the drawing.
- 9- You may wish to caulk around the pipe, inside and outside the home, with RTV Silicone.
- 10- Tighten exhaust clamp located inside the outside Flange housing using screwdriver.

This completes the outside installation

CORNER INSTALLATION

Follow the THROUGH WALL INSTALATION procedure for directions on how to install the “wall flange “as described above.

- 1- Install the 5” to 6” galvanized adapter onto the Stoves 5” pipe that exits the stove.
- 2- Install either a 3 “ - 45 degree or 90 degree (whatever allows for the best configuration) 3” exhaust pipe.
- 3- Slide adjustable elbow pipe over the exhaust pipe and onto the 6” end of the galvanized adapter.
- 4- Move stove to final position. In the final position, the stoves 5 inch pipe connector should be slipped under Wall Thimble’s 6 inch pipe at least 1 inch.

BASEMENT INSTALLATION

Note: Extra piping will be needed for installing. Make sure 3” Diameter exhaust pipe is used for exhausting. For bringing in Fresh air stove pipe (“A” type venting) may be used.

- 1- Follow the THROUGH WALL INSTALATION procedure for directions on how to install the wall flange.
- 2- Take into account the height of the stove with the legs attached when calculating the overall length of the piping assembly.
- 3- It is suggested to dry fit all items before cutting out the exit hole.
- 4- A 90 degree 3” exhaust pipe with a cleanout plug is required to facilitate the cleaning of the fines and ash that build up (see cleaning procedure). This is attached to the exhaust port coming out of the stove.
- 5- Slip on a 6” tee 90 degree over the 3” exhaust pipe, allowing for access to the cleanout plug on the 90 degree 3” exhaust pipe.
- 6- Alternately assemble the 6” vent pipe and the 3” exhaust pipe to a level where the next 90 degree is to be made.
- 7- After the Flange assembly has been installed, slip a length of exhaust through the Flange and mount the Muffler.
- 8- Slip a 90 degree 6” pipe over the 90 degree exhaust pipe and connect to the Flange Assembly.
- 9- After making all adjustments, secure the outside exhaust pipe by screwing tight the clamp in the Outer flange piece.

CHIMNEY VENT INSTALATION

If an existing chimney is used, these conditions must be met:

- 1- It must be inspected prior to use by your local building inspector.
- 2- A 3" (inch) diameter rigid exhaust pipe must be installed to the top of the chimney or to a minimum of 10' (feet).
- 3- A 6" rigid or flexible pipe must be installed from stove to chimney opening to allow for fresh air intake.
- 4- The chimney must have a vent cap.
- 5- All connections should be sealed to prevent leakage.
- 6- This unit can not be connected into a chimney flue or pipe serving another appliance.

FIREPLACE INSTALLATION



If this method is used the unit must be sealed air tight against the fireplace opening to prevent combustion air from being drawn from within the house.

***Before installing the Grain Comfort**, measure to be sure the stove will cover the opening of the fireplace. If the stove does not cover the opening, installation cannot be done.

*If the Grain Comfort is used as fireplace insert, it must be installed in a fireplace, which satisfies the requirements of the National Fireplace Protection Association (NFPA 211) in the United States or the CSA B365 in Canada.

Following are suggested methods of installing the Grain Comfort into a masonry fireplace. The method you use depends on what type of fireplace hearth is in your home.

- 1- If the fireplace hearth is equipped with an ash dump, the door over the ash dump hole should be removed and the plate or cover on the outside removed. Thoroughly clean the dump of all ashes and debris. Fabricate a screen of 3/8", or less, expanded metal or screen and cover outside hole to prevent rodents, birds, etc. from entering. Back inside the home—measure the location of the ash dump opening in relation to the stove bottom.
- 2- If it is determined that the stove will block the trap door, then the unit must be raised approximately 1/2 inch to allow fresh combustion air to enter the fireplace area and to be drawn into the unit. Any suitable non-combustible shim such as 1/2" angle iron may be used to raise the unit. If the ash dump opening is far enough to the rear of the hearth so that it will not be covered by the stove bottom, then it is not necessary to raise the unit off the hearth.

- 3- Before inserting the unit, attach a 3-inch diameter elbow to the unit's 3-inch exhaust pipe. Increase the pipes diameter to 6 inches by using a 3 to 6 inch pipe increaser. Measure and cut a section of 6-inch smooth or steel stovepipe long enough to carry the exhaust above the smoke shelf (damper area) of the chimney. The pipes connections should be secured with screws to prevent it from coming loose during installation. Guide the pipe up the chimney and slide the stove into the fireplace.
- 4- The method of inserting a unit into a fireplace without an ash dump is simpler but may require inspection and maintenance on a more frequent basis. Follow the instructions given for method #1, with the difference being that there is no ash dump door allowing outside air into the unit. Instead, the unit will pull combustion air from within the fireplace cavity and may possibly pick up debris and fly ash, therefore requiring more frequent cleaning and maintenance of the air flow system. Seal the unit accordingly.

FIREPLACE INSPECTION

- 1- Examine the masonry fireplace and chimney to determine that it is free from cracks, loose mortar, creosote deposits or other blockages and other signs of deterioration. Correct any situations that warrant repair before proceeding with the installation.
- 2- Verify that there is a hearth extension, extending at least 18 inches in front of the fireplace opening, and at least 8 inches to the sides of the fireplace opening. A fireplace that has more that 6 sq ft. should have a hearth that extends 20 inches in front of the opening and at least 12 inches to either sides of the opening.
- 3- If your fireplace has wooden trim above it, or a wooden mantle, it must be located so there are at least 12 inches between the top of the Grain Comfort and any part of the trim of the mantle, including supports.

FIREPLACE PREPARATION

- 1- Locate furniture and other materials a minimum of 36 inches from the front of the fireplace to allow access and cover the hearth and adjacent areas with a drop cloth to protect from soiling or marring the surface.
- 2- Thoroughly clean the fireplace and chimney of ashes and soot.
- 3- Remove the existing fireplace damper plate.

MINIMUM FIREPLACE CLEARANCES

Required Fireplace Dimensions: The minimum dimensions required are:

Height	24 inches
Width	26-38 inches
Depth	18 inches

SEALING THE GRAIN COMFORT STOVE

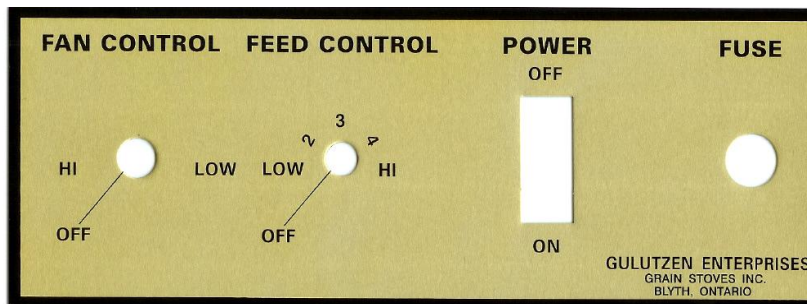
- 1- Place a fire resistant flexible insulation strip (1" wide 1/2" thick, backed with adhesive) on the back of the panel, across the top and down both sides. Insulation is required to give a positive seal.
- 2- Center the Grain Comfort relative to the fireplace opening
- 3- Slide the unit into position in the fireplace making sure the insulation is depressed against the masonry and sealing all edges of the Stove.
- 4- This step is important not only to prevent loss of warm room air but also to restrict Back Draft.

ALTERNATIVE INSTALLATIONS

- 1- There are variations to most of the referenced installations mentioned in this manual.
- 2- Should you have any questions your installer or dealer will most likely know the best approach for your situation.
- 3- Also feel free to call Grain Stoves Inc. if you are unsure about the procedures listed.

COMPONENT REFERENCE

CONTROL PANEL: Located on top right hand side of the Grain Comfort



FEED CONTROL: This Control is like the Thermostat in your home. The Higher the Setting, the more Grain is fed into the Firepot and the more heat is generated. Over a period of time, you will learn the best and most efficient settings for your particular installation.

POWER SWITCH: This red switch controls the power to the unit. As long as the Unit is ON, the Combustion Fan will run. The Switch is illuminated to show its condition.

HI / LOW FAN CONTROL: Controls the amount of warm air entering the room. This control regulates the airflow into the room. This does not affect combustion efficiency. Time has shown that most users leave this control on high.

FUSE HOLDER: Contains a standard 5 amp fuse.

POWER FAILURE: If a power failure should occur, your Grain Comfort will immediately shut down and the fire will go out. When the power returns you may need to relight your Grain Comfort to restore it to normal operation.

BATTERY BACK-UP: Battery Backup units are available from Grain Stoves Inc. and are used to supply power to the stove for operation during short power outages. Please consult your Dealer or Grain Stoves Inc., for details on Battery Back-up Systems.

FIREBOX:



PICTURE OF FIREBOX (LID OPEN)

NOTE: Your Grain Comfort is painted with a specially formulated high temperature paint that cures during the first few hours of operation. You may notice smoking or an odor during the first few hours of operation. This is normal and is no cause for alarm (though these fumes can activate a smoke alarm). Opening a window near the unit will allow fumes to escape.

STARTING PROCEDURE – page 1



1



2



3

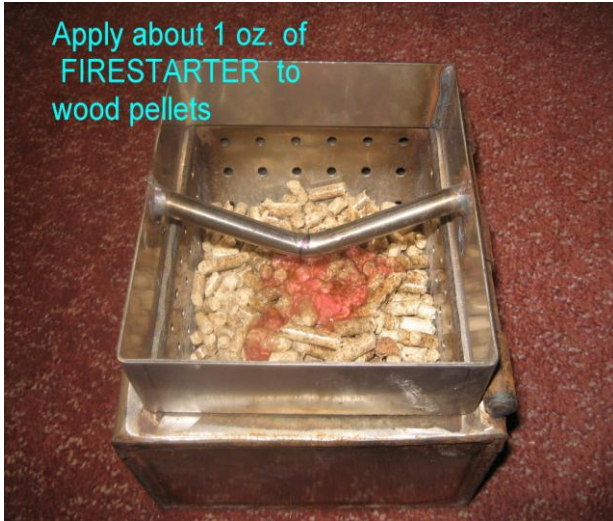


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gcsp1

Grain Comfort Starting
Procedure p-1

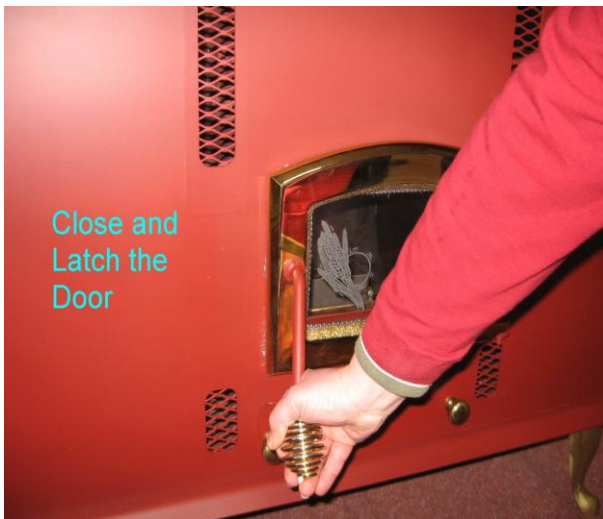
STARTING PROCEDURE – page 2



5



6



7



8

gcsp2

Grain Comfort Starting
Procedure p-2

SPECIAL NOTE

NOTE: Your **STOVE WILL NOT FEED FUEL UNTIL** the Internal Temperature reaches **120 degrees**. This normally takes **10– 15 minutes**.

After the Thermal Switch reaches 120 degrees, the Auger will start to feed Fuel at the Rate you have set the Feed Control. The Circulation Fan will also start (assuming the Fan Control Switch is turned on) and blow at the speed you have set the Fan Control.

NOTE: If auger is not full of Fuel, it may be necessary to hand feed the fire with a small amount of fuel until the auger begins to deliver fuel to the burner. Care should be taken when hand feeding. Open the door slowly and add a small amount of fuel to the burner and continue the process of hand feeding until you see the fuel drop into burner. This may be necessary on the first lighting because the Auger is not “primed”. This action will be necessary if the Hopper runs dry.

IT IS ADVISABLE TO TURN OFF THE POWER SWITCH WHEN YOU INTEND TO OPEN THE FRONT DOOR. This turns off the Circulation fan and minimizes ash and smoke escaping. ALWAYS BE CAREFUL WHEN THE FRONT DOOR IS OPEN

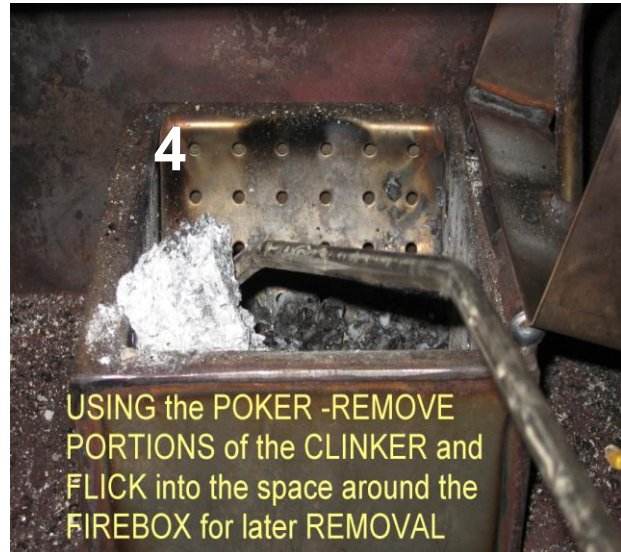
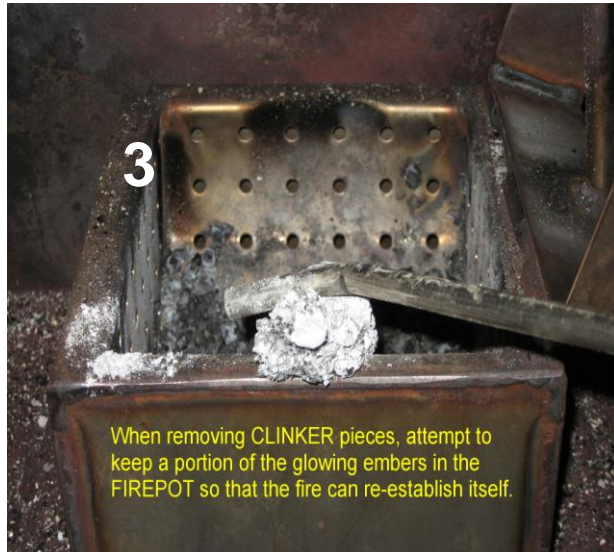
Daily Maintenance

The BURN from each day "CLINKER" should be removed each day. Be sure to turn the Stove off to avoid smoke or sparks. Open the door and using the Poker, flick portions of the Clinker out of the Firepot and allow them to occupy the area around the Firepot.

Clinkers can remain in the Firebox area, and can be cleaned or vacuumed up at a later date.



DAILY MAINTENANCE – GRAIN – cont



TIP: A quantity of Clinkers can “pile up “in the Firebox area and be cleaned out on a weekly basis. For best results, we recommend removing the clinker every 12-18 hours. This can be accomplished while a fire is burning, but needs to be done quickly (approximately 30 seconds) to restore fuel and air to firebox. Clinkers are a function of burning Grains.

BI- WEEKLY MAINTENANCE

In some cases the fuel you burn may contain a lot of red-dog, in the case of Corn, or fines which will settle on top of the heat exchangers and hinder the performance of the stove.

With the stove OFF and completely cooled down and with the aid of the Poker, tap the Heat Exchangers to shake loose any buildup. Insert the Poker between the Heat Exchanger Tubes to loosen any fines that may have collected.

Keeping the Heat Exchanger area clean will assure that the efficiency of the stove will be maintained.

STEP 1



REMOVE THE PLUG ON THE FRONT OF THE STOVE

STEP 2

NOTE: Insert the hose from your Vacuum ON BLOW, Turn on the Stove to start the Combustion Fan. Be careful to seal up the Blower Hose to avoid blowing dust out the front. Having the Vacuum on blow will move the loose ash and deposits out of the upper section of the stove and out the exhaust pipe to the outside. (Be sure to BLOW for a period of at least 1-2 minutes)



WITH A SHOP-VAC ON “BLOW”, BLOW OUT THE HEAT EXCHANGER PLATE FOR APPROXIMATELY 1-2 MINUTES

STEP 3



VACUUM THE FIREBOX AREA

CAUTION: Take care not to vacuum up the Firebox Washer or apply too much vacuum to the opening that the washer fits into. Failure to do this might result in drawing a piece of corn up the pressure tube in the hopper thus plugging it. This could result into excessive smoke in the hopper.

Replace the plug in the Grain Comfort Stove then tighten finger tight.

Note: It may be advantageous to disassemble the exhaust system and take outside to clean to avoid a potential mess. Reassemble everything back together, and you are ready to heat again.

Note: Routinely check to see if the Muffler Screen is blocked, this will cause exhaust flow problems

ANNUAL MAINTENANCE

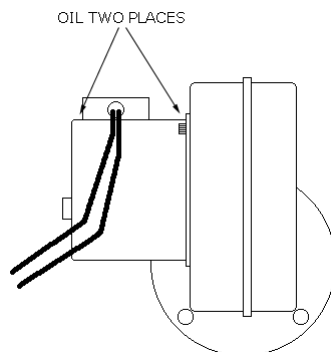
FREE STANDING INSTALLATION:

The Venting System should be thoroughly checked and cleaned. Piping should be replaced if suspect and any leaks in the Flanging arrangement should be repaired.

The Outside portion of the Venting System should be covered during the summer months with a plastic bag in order to prevent foreign matter from entering the stove.

Any Fuel should be removed from the Hopper if the Stove is not going to be operated for a while

The blowers must be lubricated according to manufacturer's instructions as given on the motor housing. Two oil points are clearly marked on each blower. Use a good quality light machine oil. Be sure to unplug the power supply cord before lubricating.



NOTE: Both fans have oiling points placed at the bearing ends of the motor.

FIREPLACE MOUNT:

Your Grain Comfort should be pulled from the masonry fireplace and cleaned from behind and around it. This should be done prior to the heating season in conjunction with the chimney maintenance.

The seal between the fireplace masonry and the unit, as well as the seals on the unit itself, should be checked and resealed if there is evidence of leakage. Check gaskets around the door. Reseal with new gasket if needed.

Lubricate the Blower Fans. (See page 22).

CLEANING:

The unit should not be cleaned with any type of harsh detergent especially on the door and glass.

Use soft cloth with gentle soapy water.

GLASS: The Grain Comfort has a unique glass cleaning feature, however when burning Wheat, Rye, or Corn and on occasion wood pellets, the glass may cloud up. After the fire is out and glass has cooled, the glass may be cleaned with a soft cloth and a water based glass cleaner. Check the gasket around the glass for air leaks. Replace immediately, if leaks are found. Heat from the fire will not break the glass. The glass door should be handled as any other breakable glass, as rough handling, etc. may cause damage.

If repainting or touch-up is required the unit should be lightly sanded with fine sand paper or steel wool, then repainted or touched up with high temperature flat black paint or the colour of the stove. (Available from your Dealer or Grain Stoves Inc.)

If the unit is located in a damp location, check thoroughly for signs of condensation when the unit is not in use. Leave the Door Open if you are not going to use the Stove for a while. This will prevent condensation from building up.

When the heating season is over, the unit can be cleaned out completely with a wire brush or fine steel wool to remove ash stuck to walls. The unit should be vacuumed out.

CLEANING THE FIREBOX:

When the unit is cold and unplugged from its power source, open the firebox floor, slide the Firepot forward and lift out. Dump ashes/clinker out into a metal container. When cleaned, reinstall in reverse, ensuring that the Firepot is pushed back tight against the rear of the Firebox wall and on top of air control opening.

SHUTDOWN

SHUTDOWN PROCEDURE:

- 1- Turn “Feed Control” to off (0).
- 2- Do not open the Door until the fire has gone out.
- 3- Once fire has extinguished itself (approximately 15 minutes), turn off “Power switch”.
- 4- It is recommended that you put a tight fitting bag over the outside vent and leave door slightly ajar during summer months to prevent condensation.

How to really clean the stove:

We have heard from some customers that they have had problems with the stove overheating.

This is generally a result of the Stove not being cleaned well enough. There are occasions where a blockage is present with in the exhaust passages.

This is evident by the fact that the TOP OF THE STOVE which is NORMALLY WARM TO THE TOUCH becomes VERY HOT.

This is because the exhaust gasses cannot escape easily and heat builds up possibly setting off the thermal protection devices which will shut off the Auger starving the fire of fuel and the fire will go out.

If this happens and the TOP OF THE STOVE IS HOT you need to unblock the stove.

To accomplish this we have found that the best way is take you shop vac in the suction mode and push the hose up the exhaust pipe from the outside as far as you can towards the stove. Next use another shop vac on blow or a compressor and force as much air from the front through the hole with the plug in it.

Also have the stove on when doing this as the combustion fan will provide some additional flow.

What you are attempting to do is flush the stove out with high volumes of air. Let the Vacuum and the air flow do it's work for about 5 minutes.

PROBLEM	CAUSE	REMEDY
Auger Not Feeding	Not up to Temperature 120	Check fire Condition, add wood pellets if needed
	Auger Switch not ON	Turn ON FEED SWITCH
	Auger Jammed	Check for obstruction - jumper test
	Auger Jammed	Check Bearing for Jam - jumper test
	Loose Wire	Inspect wiring
	120 Degree defective	Replace if necessary
	Timer Defective	Test and replace if necessary
	Overheated	200 Degree Tripped / Clean Stove
Auger and Circulating Fan OFF	Not up to Temperature 120	Check fire Condition, add wood pellets if needed
	Fuse Blown	Check Fuse
	ON /OFF Switch	Check Switch
Auger Runs Continuously	Wire off Timer	Check Wiring
	Wire off Potentiometer	Check Wiring
	Timer Defective	Check / Replace if necessary
	Potentiometer Defective	Check / Replace if necessary
Auger Stops Suddenly	Fuse Blown	Check Fuse
	ON /OFF Switch	Check Switch
	Timer Defective	Check / Replace if necessary
	Overheated	200 Degree Tripped / Clean Stove
Flame Catching Chute on fire	Auger Position	Move Auger back by adjusting bearing mounting
	Too much Corn Feeding	Adjust Timer (consult Grain Stoves or Dealer)
	Dirty Fuel	To many Fines - use clean fuel
	Exhaust plugged	Clean Stove - Follow Cleaning Procedure
	Running too Hot	Turn Down Feed Rate
Burning Smokey and Black	Plugged in Exhaust	Clean Stove - Follow Cleaning Procedure
	Plugged in Intake	Clean Stove - Follow Cleaning Procedure
	Plugged Muffler Screen	Clean Out Muffler
Smoking when door opened	Plugged in Exhaust	Clean Stove - Follow Cleaning Procedure
	Plugged Muffler Screen	Clean Out Muffler
Condensation in Hopper	Plugged in Hopper Tube	Check for air flow from tube
	Plugged in Exhaust	Clean Stove - Follow Cleaning Procedure
	Hopper Lid Tie-down	Check presence of Lid and Tie down
	Plugged Muffler Screen	Clean Out Muffler
Clinker is hard to get out	Running too Hot	Turn Down Feed Rate
	Too much Corn Feeding	Adjust Timer (consult Grain Stoves or Dealer)

WARRANTY

Limited Warranty Read Carefully

PRODUCTS NOT COVERED:

This warranty does not cover the following: Standard door, glass, gasket material and will not cover any damage and / or failure caused by abuse, improper use or improper installation of the product covered.

(A) For the period of the first one (1) year from the date of purchase, we will replace or repair, at our option, any part that is defective in materials or workmanship affecting the operation of the heating system. The cost of parts only is included. The customer pays any labor and transportation charges.

(B) For the period of three (3) years from the date of purchase, we will replace or repair, at our option, any portion of the firebox, which has been damaged due to heat thereby affecting the heating system operation. The cost of parts are only included. The customer pays any labor and transportation charges.

(C) The manufacturer is not liable for indirect, incidental, or consequential damages in connection with the use of the product including any costs or expense or providing substitute equipment or service during the periods of malfunction or non-use. Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion or limitation may not apply to you.

(D) This warranty applies only to parts or components which are defective and does not cover repairs necessary due to normal wear, misuse, accident or lack of proper maintenance.

GrainStoves Inc.



Grain Stoves Inc.
Whole Grain Heating Systems
 39278 Westfield Rd. RR#3 Blyth, ON N0M 1H0
 (519)523-9897 Fax (519)523-9222 www.grainstovesinc.com

GRAIN COMFORT CUSTOMER SURVEY

About Us!

Where did you hear about Grain Stoves Inc.? _____
 What made you choose Grain Stoves Inc.? _____
 Have you ever contacted the company or your dealer?.....**Yes / No**
 Would you recommend Grain Stove Products to your family & friends?.....**Yes / No**
 How would you rate your over-all satisfaction with your stove?.....**1 2 3 4 5**
 How would you rate your over-all satisfaction with the service?.....**1 2 3 4 5**

Product Quality

Have you had any problems with your stove?**Yes/ No**
 If yes, what was the problem? _____
 Was the problem resolved to your satisfaction?.....**Yes / No**
 What would change about the stove? _____
 How would you rate the manual?.....**1 2 3 4 5**
 How often & why do you refer to the manual? _____
 What would you like to see in the Manual? _____

Cleaning

How often do you
 Remove 1 ¼" plug at front and blow out your stove?.....**(Dly/ Wkly/ Bi wkly/ Mthly/ Semi-A)**
 Vacuum 3" exhaust from outside?..... **(Wkly/ Bi wkly/ Mthly/ Semi-A/Yrly)**
 Vacuum around firebox and heat exchangers?.....**(Dly/ Wkly/ Bi wkly/ Mthly/ Semi A)**

About You !

What size is the area you heat ? _____ sq. ft.
 How did you heat prior to your grain stove/furnace? _____
 How much wheat/rye/corn did you use last year? _____
 How do you store the wheat/rye/corn for your stove? _____
 Could you estimate your savings since owning your grain stove/furnace? % _____ or \$ _____

Comments: _____
Your Name: _____ **Your Address** _____
 _____ **City** _____ **Prov.** _____ **Postal** _____
Code: _____ **Your Phone Number :** _____

GRAIN COMFORT WIRING SCHEMATIC

