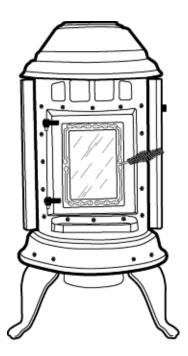


## **GNOME PELLET STOVE**

# **Owner's Manual**





Leave this manual with the owner. Please read this entire manual before installation and use of the pellet fuel-burning stove. Failure to follow these instructions could result in property damage, bodily injury or even death.

TH-REF-SLS-232 Rev. A

# Table of Contents

Introduction	
Safety Information	3
Laboratory Listing Label	6
WARNINGS	6
General Information	7
Vent Information	9
Termination	9
Distance to openings	9
Installation	
Unpacking and Inspecting your Stove	
HORIZONTAL INSTALLATION WITH VERTICAL RISE	13
VERTICAL INSTALLATION	16
Proper Venting	
Combustion air adjustment	22
Operation	25
Control Functions	29
High Temperature / Flue, Trim, and Battery Indicators	
Maintenance	
Troubleshooting Guide	
Parts List	
FIGURE 15 - Replacement Parts List	40
Diagrams	
Circuit Board Diagram	41
Figure 18 - Electrical Schematic/Wiring Diagram	41
Figure 19 - Igniter Location	41
Warranty	46

## Introduction

Congratulations on your purchase of Thelin Hearth Products Gnome pellet stove! In this manual you will find information on stove specifications, installation instructions, operating guide, how to perform scheduled maintenance, a troubleshooting guide, a detailed parts list and associated diagrams. Also included is your warranty information. Please take the time to read this manual and become familiar with your pellet stove.

If you have any questions or comments, please contact your local Thelin authorized dealer. Thelin dealers are qualified industry professionals who are able to address any questions or comments you might have regarding Thelin product. Thank you for choosing Thelin.

## Safety Information FIRE RISK

Do not operate appliance before reading and understanding operating instructions. Failure to operate appliance properly may result in a house fire.

Inspect appliance and components for damage. Damaged parts may impair safe operation. DO NOT install damaged components.

DO NOT install incomplete components. DO NOT install substitute components. Report damaged parts to dealer.

DO NOT connect this unit into a chimney flue servicing another appliance. DO NOT connect to any air distribution or duct system.

## WARNING

THELIN HEARTH PRODUCTS DISCLAIMS ANY RESPONSIBILITY FOR, AND THE WARRANTY WILL BE VOIDED BY THE FOLLOWING ACTIONS:

- MODIFICATION OF APPLIANCE
- INSTALLATION OTHER THAN AS INSTRUCTED IN THIS MANUAL BY THELIN HEARTH PRODUCTS.
- INSTALLATION AND/OR USE OF ANY COMPONENT PART NOT APPROVED BY THELIN HEARTH PRODUCTS.
- OPERATING APPLIANCE WITHOUT FULLY ASSEMBLING ALL COMPONENTS CORRECTLY.

DO NOT overfire. If any external part starts to glow, you are over firing. Reduce feed rate.

Overfiring or any such action that may cause a fire hazard including failure to perform regular maintenance as outlined in these instructions will void warranty.

DO NOT store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

## CAUTION

TESTED AND APPROVED FOR PREMIUM WOOD PELLETS OF HIGHEST BTU OUTPUT AND LOWEST % OF ASH CONTENT ONLY. BURNING ANY OTHER TYPE OF FUEL WILL VOID YOUR WARRANTY.

## Fire Safety

Maintain the designated clearances to combustibles as diagrammed in this manual. Insulation must not touch the chimney or venting system. You must maintain the designated airspace clearance around the chimney. This space around the chimney is necessary to allow heat to flow away from the chimney area. Insulation in this area will cause heat buildup, which could ignite wood framing.

The following should be considered when installing any solid fuel appliance:

1. Install at least one smoke detector on each floor of your home to ensure safety. They should be located away from the heating appliance and near the sleeping area.

- 2. Conveniently locate a Class A fire extinguisher near the appliance.
- 3. Write down and practice an evacuation plan with two escape routes.

Check with your local building code department before you begin your installation. Obtain a building permit in order to meet local building code requirements.

Contact your local dealer if assistance is required before, during and after installation.

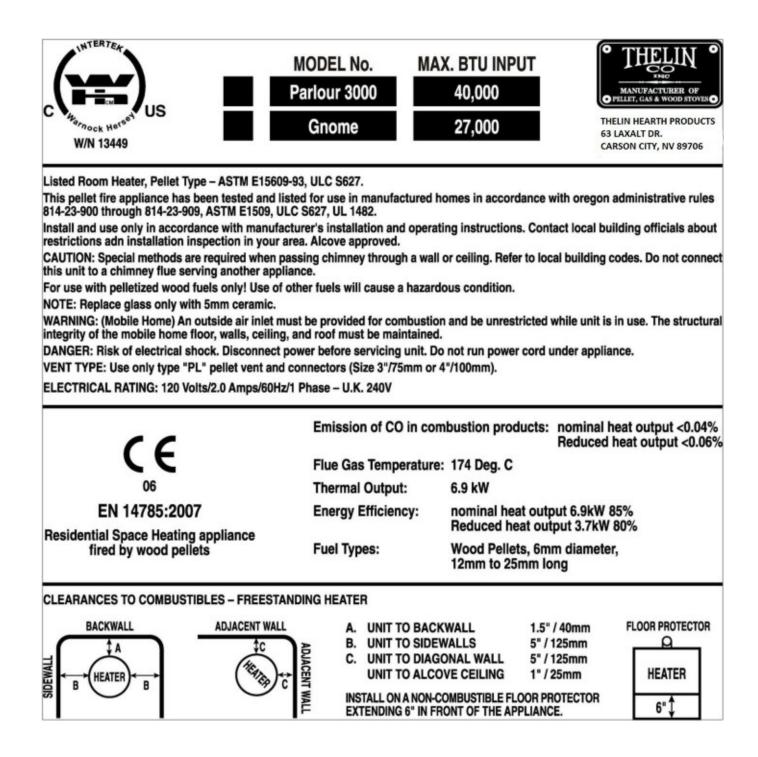
## **Before Start-Up Check List**

- 1. All Safety Warnings have been read and followed.
- 2. The Owner's Manual has been read.
- 3. Floor protection requirements have been adhered to.
- 4. All venting has been properly installed.
- 5. The proper clearances from the stove and chimney to combustible materials have been followed.

6. The masonry chimney has been inspected by a professional and is clean, or the factory built (metal) fireplace is installed according to the manufacturer's instructions.

7. A grounded power outlet with a surge protector is available nearby without having to use an extension cord.

## Laboratory Listing Label



# HOT SURFACES! HOT GLASS WILL CAUSE BURNS. SURFACES AND GLASS ARE HOT DURING OPERATION AND DURING COOL-DOWN PERIOD.

DO NOT TOUCH GLASS UNTIL IT IS COOLED.

NEVER ALLOW CHILDREN TO TOUCH GLASS. ALERT CHILDREN TO HAZARDS OF HIGH TEMPERATURES.

HIGH TEMPERATURES MAY IGNITE CLOTHING OR OTHER FLAMMABLE MATERIALS. KEEP CLOTHING, FURNITURE, DRAPERIES AND OTHER FLAMMABLE MATERIALS AWAY FROM STOVE.

## **General Information**

Installation and repair should be done by a qualified service professional. The stove should be inspected before use and at least annually by a service professional. More frequent cleaning may be required due to fuel quality, excessive lint from carpeting, bedding material, etc. It is imperative that control compartments, burn pot and pot holder, and circulating air passageways of the stove be kept clean and free of ash buildup, lint, and dust.

The Gnome pellet stove has been designed and approved for burning **PREMIUM WOOD PELLETS OF HIGHEST BTU OUTPUT AND LOWEST % OF ASH CONTENT ONLY.** 

Burning bio mass fuels in other forms or poor quality pellet fuel is not permitted and will void your warranty and/or could cause a burn back or house fire. FOR BEST RESULTS THE WOOD PELLET FUEL SHOULD BE ¼" DIAMETER AND APPROXIMATELY 1" LONG.

Store fuel in a covered, dry area. Pellet bags can absorb moisture and must be kept dry. Never place bags of fuel next to the heater. Keep fuel away from combustible materials and moisture. **NEVER** use gasoline, gasoline type lantern fuels, kerosene, charcoal lighter fluid, or similar liquids to start or "freshen up" a fire. Keep all such liquids well away from the stove while it is in use.

Pellet ashes should be placed in a metal container with a tight-fitting lid. The closed container of ashes should be placed on a non-combustible floor or the ground, well away from all combustible materials, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally disbursed, they should be retained in the closed container until all cinders have been thoroughly extinguished.

**NOTE**: During the first few burns (up to 2 - 4 hours) the high-temperature paint and sealant used in the manufacture will emit some odor and smoke. Open doors and windows to the outside for proper ventilation during the first burn cycle and the curing of the paint. **SEE INITIAL FIRING PROCESS PAMPHLET WITH STOVE.** 

This stove must be electrically grounded according to local codes or, in the absence of local codes, with the National Electrical Code, **ANSI/NFPA 70-1987**.

Provide adequate clearances around air openings into the combustion chamber and provide adequate accessibility clearance for servicing and proper operation. Never obstruct the front opening of the stove.

#### Gnome Pellet Stove

The stove may be installed as a free-standing unit mounted on a non-combustible protective floor pad or hearth. Non-combustible floor protection is required and must be used when placing the stove on any combustible material.

**CAUTION**: Do not connect this unit to a chimney flue serving another appliance. Do not install flue damper in the exhaust venting system of the unit.

## **Vent Information**

Install vent clearances as specified in this Owner's Manual.

## USE TYPE L 3" OR 4" PELLET VENT PIPE DEPENDING ON YOUR INSTALLATION.

Secure pipe adapter to rear flange with 500 degree HIGH-TEMP RTV silicone and using at least three sheet metal screws. Subsequent sections must be attached with three screws also. Each pipe section should be sealed with hi-temp silicone and/or follow vent manufacturer's instructions **Use only Type L 3" or 4" venting systems depending on your installation requirements.** 

## DO NOT INSTALL A FLUE DAMPER IN THE EXHAUST VENTING SYSTEM OF THIS UNIT.

## Termination

DO NOT terminate vent in any enclosed or semi-enclosed area such as carport, garage, attic, crawl space, under a sun deck or porch, narrow walkway or closely fenced area or any location where fumes can build up and concentrate such as stairwell, covered breezeway, etc.

## **Distance to openings**

- 1. 3 feet minimum above any forced air inlet located within 10 feet.
- 2. 4 ft. minimum below, or 4 ft. horizontally from, or 1 foot minimum above any door, window, or gravity air inlet into any building.
- 3. Permanently closed windows not less than 1 foot below, horizontally from, or above the permanently closed window.
- 4. 2 feet minimum to an adjacent building and 7 feet minimum above grade when located adjacent to public walkways
- 5. Distance to bottom of termination cap and grade should be 12".
- 6. Grade surface must be non-combustible material such as rock, dirt, gravel. Beware of plants, lawn, bushes, and shrubs, which are considered combustible material.
- 7. Consult local building, fire or other official codes. Local codes may be different and require other clearances than described here.

8.

Mobile home installation should be in accordance with the manufactured home and safety standard (HUD), CFR 3280, PART 24.

- Outside combustion air is mandatory in mobile or modular home installations. An outside air inlet MUST be provided for combustion and ventilation air. The air inlet must remain unrestricted while unit is in use. Outside air connection is made at the air intake located on the rear of the stove (see FIGURE 2 and 3). The kit contains 2" flex tubing (part #43000-270). Outside air kit includes flex tube, hose clamp, and rodent screen/cap.
- 2. Unit must be electrically grounded to steel frame of mobile home.
- 3. The stove must be grounded with #8 solid copper grounding wire or equivalent, terminated at each end with an NEC-approved grounding device.
- 4. A grounded power outlet with a surge protector is recommended.
- 5. Clearance to combustibles and floor protection is exactly the same for mobile homes as residential installs.

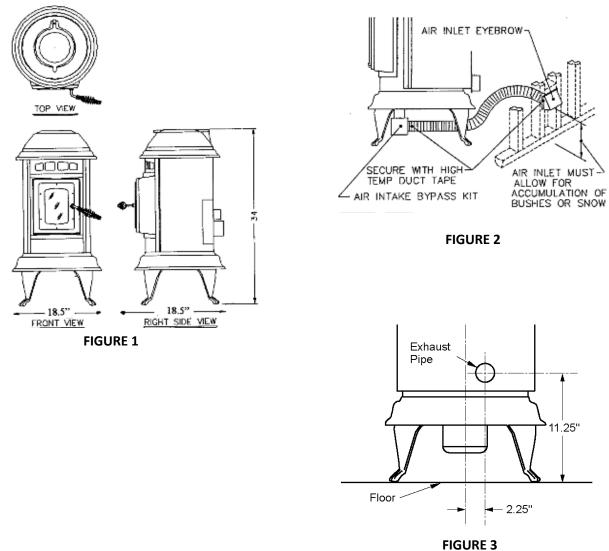
WARNING: THE STRUCTURAL INTEGRITY OF THE MOBILE HOME FLOORS, WALL, CEILING, AND ROOF MUST BE MAINTAINED. DO NOT INSTALL IN SLEEPING ROOM.

## Installation

## **Unpacking and Inspecting your Stove**

Thelin Hearth Products packages your stove to ensure safe delivery. Each stove is surrounded by impact absorbent material as well as load shift indicators. However, damage can still occur while the stove is in transit. It is imperative that you carefully inspect your stove immediately after you receive it. If you notice any damage or missing parts, contact your Thelin dealer immediately.

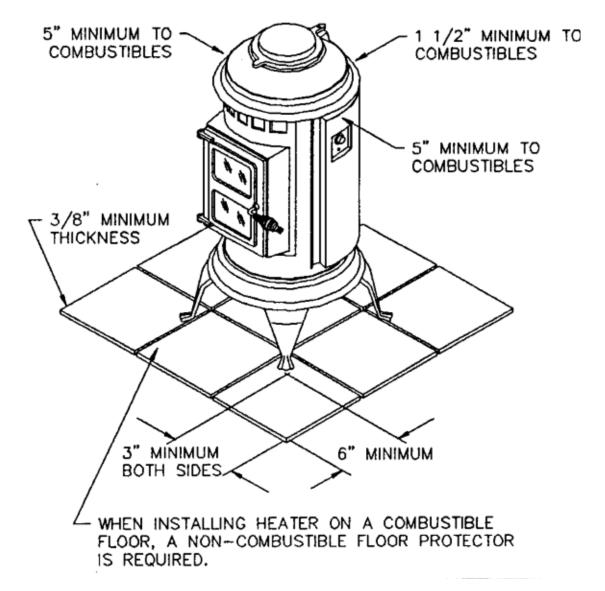
- 1. When deciding on the location of your stove and vent pipe, try to minimize the alteration and reframing of structural components of the building. Vent pipe must be installed so that access is provided for inspection and cleaning.
- 2. Failure to follow these installation instructions may affect warranty.
- 3. Avoid installing stove in high-traffic areas. Keep children well away from the stove when in operation or cool down period. Never allow children to touch glass. Alert children to hazards of high temperature.
- 4. Venting clearance of 3" clearance to combustibles must be maintained for horizontal and vertical venting. When passing through ceilings or walls use a listed wall thimble. Ensure all combustible materials and insulation products are a minimum of 3" away from the pellet vent pipe.
- 5. A 5-inch clearance to combustibles must be maintained between unit and sidewall. A 2- inch clearance to combustibles must be maintained between unit and back wall. If installed in a corner, clearance must be 5" to combustibles. See **FIGURE 4**.
- 6. A non-combustible hearth pad must be used if installed on a carpet, wood floor, or other combustible material (see **FIGURE 4**). Maintain 6" (152mm) beyond the front and beyond each side of the fuel loading and ash removal opening.
- 7. Keep front door of appliance thirty-six (36) inches from combustibles (drapery, furniture).
- 8. When installing the exhaust vent into an existing chimney, the chimney should be relined with a 4" stainless steel liner or a 4" TYPE L pipe. A clean out tee must be installed behind the heater before going up into the chimney. This is necessary in order to remove the fly ash accumulation.
- 9. All installations have a maximum of two 90 degree elbows including the tee. NOTE two 45 degree elbows = one 90 degree elbow.
- 10. The pellet stove must be operated with a power source and will not operate using natural draft. If there is a power failure the stove will shut down. If the 12-volt back-up system is installed, the stove will automatically switch to the 12-volt power.
- 11. Route the power supply cord so it does not touch any of the exterior components of the stove.



#### CHECK WITH LOCAL BUILDING CODE OFFICIALS FOR SPECIFIC REQUIREMENTS.

## **Clearance to Combustibles**

Unit to Sidewall 5		(125 mm)
Unit to Back wall 1	.5"	(40 mm)
Unit to Diagonal Wall5		(125 mm)
Unit to Alcove Ceiling1	"	(25 mm)



## HORIZONTAL INSTALLATION WITH VERTICAL RISE

1. Hook up the pipe adapter to the rear exhaust flange of the stove, and silicone with 500 degree HIGH-TEMP RTV silicone. Screw together with at least three sheet metal screws.

2. When exiting through the wall an approved wall thimble MUST be used. A MAXIMUM HORIZONTAL RUN of two feet is allowed.

3. Connect a pellet vent tee with clean out cap and extend the vent pipe a MINIMUM OF 5 FT VERTICALLY maintaining a MINIMUM 3" clearance to combustibles with a square horizontal cap as shown in **FIGURE 5**.

4. When the vertical pipe run in any installation is 5 feet or more, the use of 4-inch Type L vent pipe is required on the entire run from back of stove to vent termination.

5. On vertical runs on an exterior wall, a wall band is required every 4 feet.

6. All vent pipe connections including exit at the rear of the stove should be secured and sealed with 500 degree HIGH-TEMP silicone and at least three sheet metal screws. If this is not done, there is a possibility that the room fan will pick up any leakage and blow it into the room. This requirement is waived if Dura Vent Pellet Pro pipe is used. However, rear connection of the stove still requires 500 degree HIGH-TEMP RTV silicone. Screw together with at least three sheet metal screws.

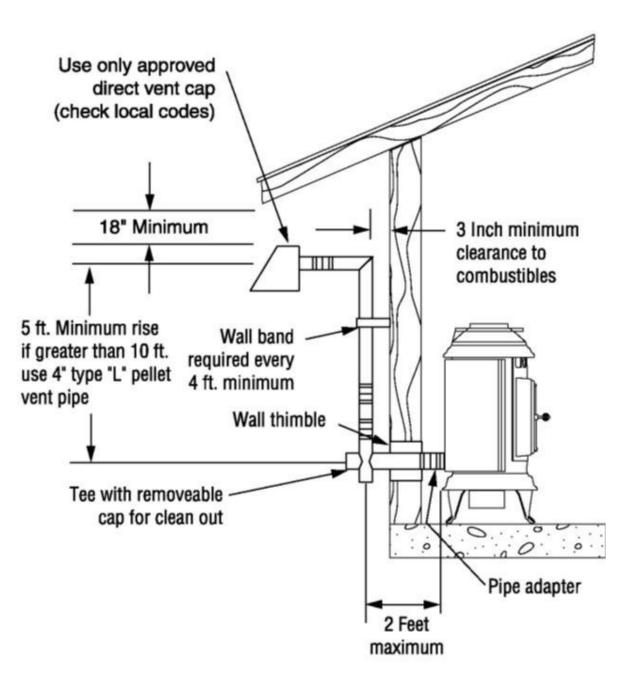
7. Installation per **FIGURE 6** requires 4" Type L pipe with a minimum 5 foot vertical rise with a square horizontal cap.

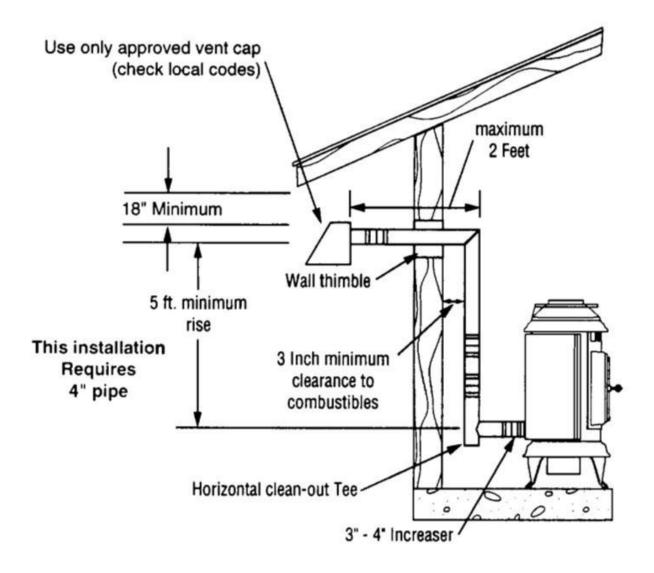
8. Connect a 3" to 4" appliance adapter/increaser on the rear exhaust flange and sealed with 500 degree HIGH-TEMP silicone screwed together with 3 sheet metal screws.

9. Connect a vent tee with clean out cap and extend the vent pipe a MINIMUM OF 5 FT VERTICALLY maintaining a MINIMUM 3" clearance to combustibles.

10. A MAXIMUM HORIZONTAL RUN of two feet is allowed.

11. An approved wall thimble must be used.





**FIGURE 6** 

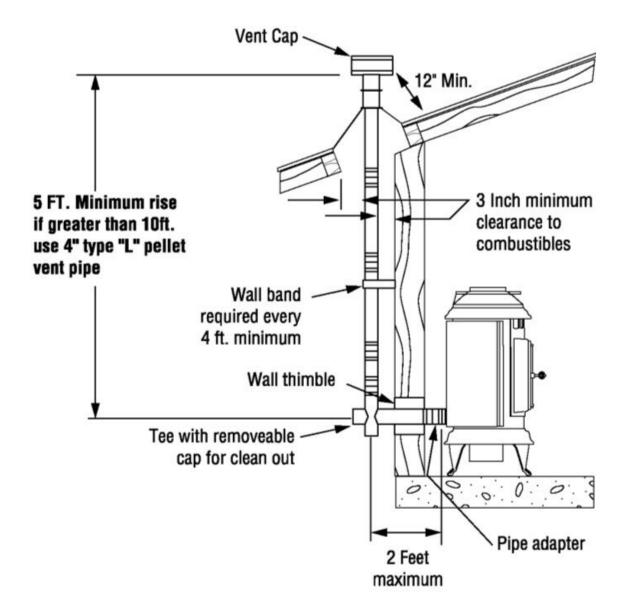
## a. ALL VERTICAL RUNS REQUIRE 4" TYPE L PIPE (FIGURE 7 and 8).

- b. Connect a vent tee with clean out cap and maintain a Minimum 3" clearance to combustibles.
- c. When exiting through the roof, a minimum of at least 12" clearance is required, depending on roof pitch. Always adhere to local building codes.

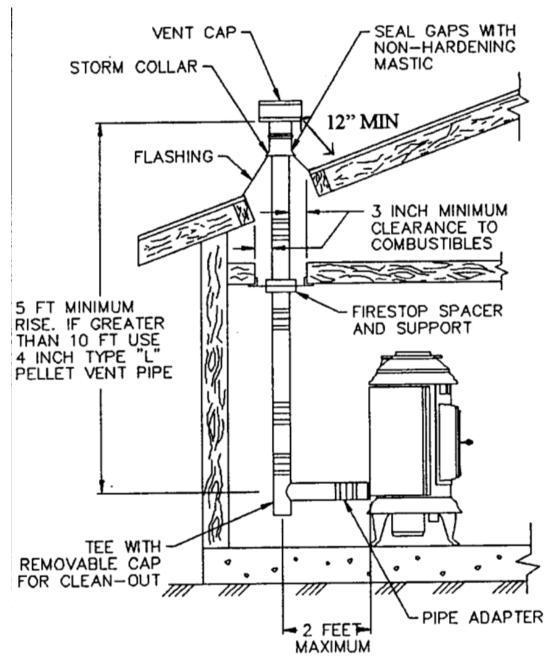
A high wind cap is recommended on all vertical installations.

#### VERTICAL INSTALLATION INTO AN EXISTING CHIMNEY

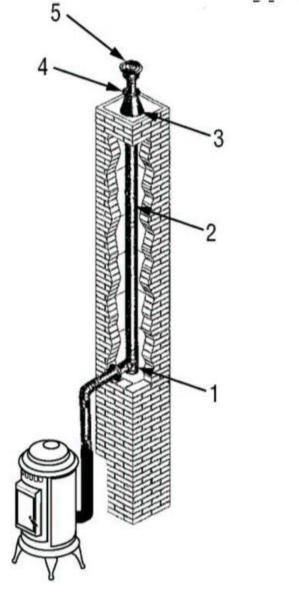
- 1. We recommend a chimney be relined with a 4" stainless steel flex liner with an approved chimney adapter.
- 2. All vent pipe connections including exit at the rear of the stove should be secured and sealed with 500 degree HIGH-TEMP RTV silicone and at least three sheet metal screws. If this is not done, there is a possibility that the room fan will pick up any leakage and blow it into the room. This requirement is waived if Dura Vent Pellet Pro pipe is used. However, rear connection of the stove still requires 500 degree HIGH-TEMP RTV silicone. Screw together with at least three sheet metal screws.
- <u>Outside Air Hook-up</u>: An aluminum flex pipe can be used to bring combustion air into the stove. See 2 ¼" round pipe with air shutter located on the rear of the stove. Use a stainless hose clamp to attach flex pipe to the stove air intake flange.
- 4. Thelin Hearth Products recommends using a Dura Vent Wall Thimble Kit part # 60-0070-0003. Call your authorized Thelin Hearth Products dealer for this item.



**FIGURE 7** 



**FIGURE 8** 



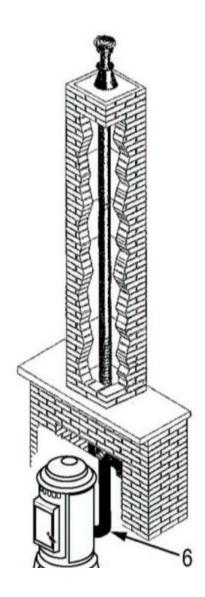
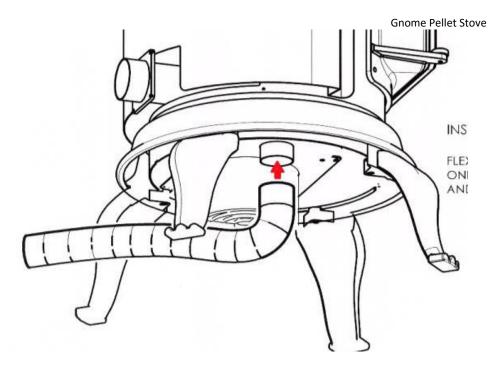
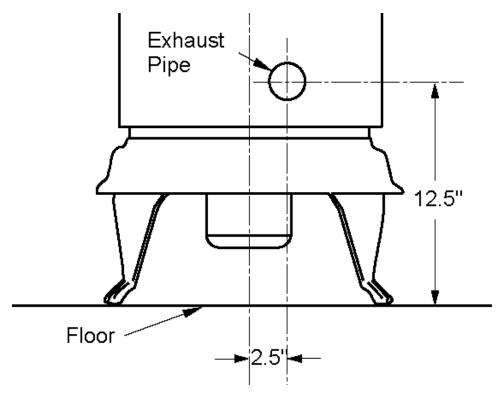


FIGURE 9







## **Proper Venting**

Occasionally, the vent configuration can create a noisy, harmonic condition. This sound can be eliminated by

closing the air damper located on the air intake tube on the rear of the stove.

The Gnome pellet stove is equipped with a blocked flue/high temp safety sensor that will shut the stove off if there is a down draft, blocked flue, or high temperature condition.

If you install the stove on the side of the house that is hit by prevailing winds (usually 30 to 40 mph or greater) there is a chance that the sensor will be activated and the stove will shut off. Should this occur is, run the pipe up vertically through the eave and use a high wind cap on the vertical termination (see diagram).

Please contact your Dealer if you have any questions about this potential problem.

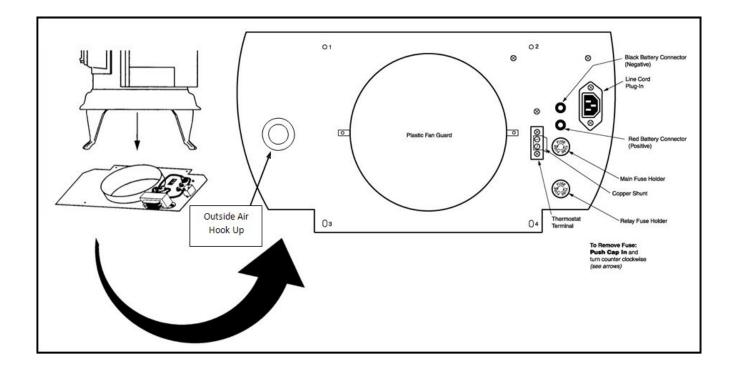
## **Combustion air adjustment**

Combustion air can be adjusted by rotating the air shutter to close / open the air duct. Air adjustment is

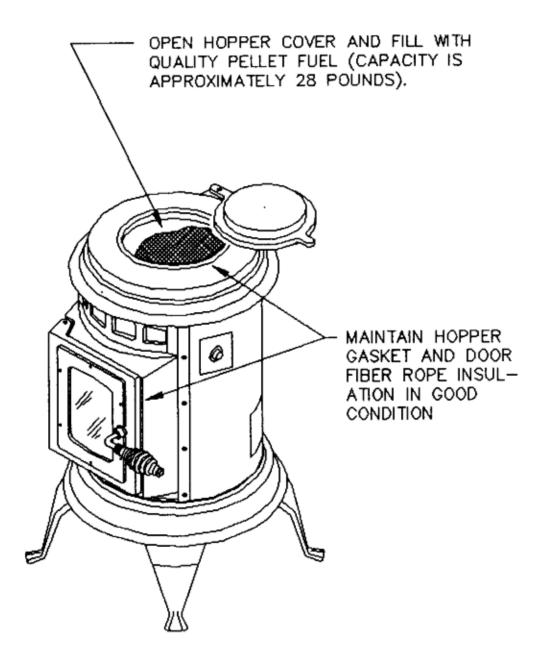
Thelin Hearth Products, Inc. critical for proper combustion and stove efficiency.

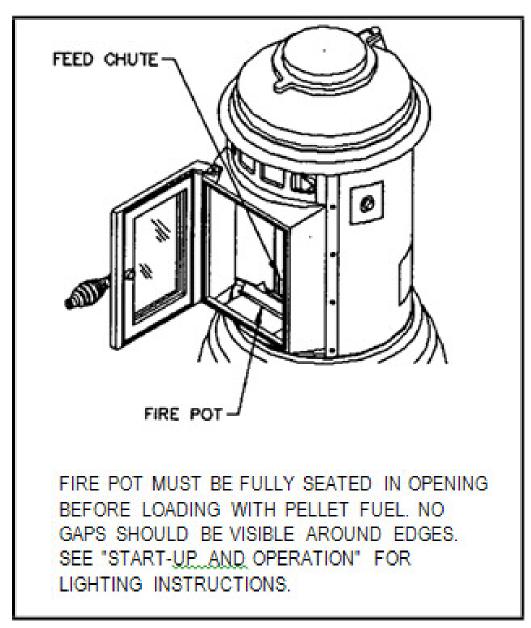
Adjust the shutter so the flame is bright yellow in appearance and is actively moving (not lazy). Dark flames, smoke or black tips on the flame is an indication of too little air.

If the flue configuration is tall, over 15 feet, the shutter should be closed more than a shorter vent since the higher flue will naturally draft the stove and increase the intake air velocity and volume. This can cause the pellets to be blown out of the fire pot and the efficiency of the stove will decrease due to the heat going up the flue instead of through the heat exchanger.



## FIGURE 12





## Operation

## Start-Up and Operation – CONTROL PANEL

Open hopper lid and REMOVE all manuals and materials shipped with stove. Open front door and remove

Thelin Hearth Products, Inc.

#### Gnome Pellet Stove

contents. Fill hopper with pellets. The Gnome pellet stove will hold approximately 28 pounds of pellets. The hopper lid must be closed before operating the unit. The feed motor will not work if the hopper lid is open. Open front door and remove contents. Make certain fire pot is seated flush and must sit even in the fire pot holder. Air leakage around the fire pot will create a poor burn.

Make sure power cord is connected both into the rear of the stove and is connected into a surge protector or a grounded power outlet.

<u>Pellet quality</u> is crucial for proper burn, efficiency, and overall performance. The Gnome pellet stove is tested and approved for premium wood pellets of **HIGHEST BTU OUTPUT AND LOWEST % OF ASH CONTENT** only. Good pellets will give you a bright yellow, vibrant flame. Poorer quality pellets will burn rich (orange flame) and dirty, black soot and ash will accumulate quickly. Expect premium pellets to provide a clean and efficient burn.

**Cleaning and Polishing Plated Parts**: Gold is a soft metal and, therefore, a fragile surface. It will not discolor from heat, but it can easily be scratched. Prior to the first burn it is important to use Kel Kem Spray Gold Cleaner or Flitz Faucet & Fixture Wax or a similar product and a soft clean cloth to wipe any fingerprints off all gold and nickel surfaces or the heat will cause the oil in the fingerprint to remain in the surface permanently. <u>Always clean the gold surface when the heater is cool.</u>

## Lighting Instructions

Located on the right side, is the push button Control Panel. Push the Medium, or High button and the stove will go into the start-up mode feeding pellets into the fire pot The fan and feed will start in Low mode and the light next to the button selected will start blinking.

Shortly thereafter, the automatic igniter will light the pellets in the fire pot Initially, the Startup mode will take up to 10 – 20 minutes. The unit will then automatically go into your selected Medium or High selection.

After Start-up mode the light next to the Medium or High will be solid and the stove will be in run mode. At this time, you now have the three distinct fan speeds: Low, Medium, and High to choose from.

We recommend that you run the stove on Medium for about 30 minutes to get the heat exchanger hot before turning it to Low. You will have to burn the Gnome pellet stove for a few hours in order to determine the best setting for your particular needs.

When you wish to turn off your Gnome pellet stove, simply push the OFF button and the feed will immediately cease. The fan will continue to run until the stove cools down and then it will shut off automatically. This might take up to 30 minutes depending upon ambient room temperature.

## START UP AND OPERATION - HANDHELD REMOTE AND THERMOSTAT

A wall thermostat or remote thermostat can be used to automatically control the Gnome pellet stove. The thermostat or handheld remote provides the option of turning the stove on and off.

Here is the step-by-step procedure for setting up the thermostat or handheld remote option:

1. Unplug stove from power supply (both AC and DC).

2. Locate thermostat terminal at the bottom of the stove (see FIGURE 9).

3. Remove metal shunt or known as "jumper", and save for future use. Hook up thermostat wires to the two terminals. For handheld remote thermostat, hook up the two receiver wires to the terminals.

4. Locate wall thermostat approximately 10 to 12 feet from the stove using 18-2 gauge thermostat wire.

5. Make sure all the wiring is complete and batteries are installed into remote receiver and handheld remote before plugging the stove into the wall outlet.

6. Open hopper lid and REMOVE all manuals and materials shipped with stove. Open front door and remove contents. Fill hopper with pellets. The Gnome pellet hopper will hold approximately 40 pounds of pellets. The hopper lid must be closed before operating the unit. The feed motor will not work if the hopper lid is open. Open front door and remove contents. Make certain fire pot is seated flush and must sit even in the fire pot holder. Air leakage around the fire pot will create a poor burn (See **FIGURE 9**).

<u>Pellet guality</u> is crucial for proper burn, efficiency, and overall performance. The Gnome pellet stove is tested and approved for premium wood pellets of **HIGHEST BTU OUTPUT AND LOWEST % OF ASH CONTENT** only. Good pellets will give you a bright yellow, vibrant flame. Poorer quality pellets will burn rich (orange flame) and dirty, black soot and ash will accumulate quickly. Expect premium pellets to provide a clean and efficient burn.

1. Make sure power cord is connected both into the rear of the stove and into a surge protector or a grounded power outlet.

2. Put hand-held remote into "ON" or the wall thermostat into "HEAT" position. For the Skytech handheld remote, you will hear a "beep" when "ON" button is pushed.

3. Push the Medium, or High button and the stove will go into the start-up mode feeding pellets into the fire pot The fan and feed will start in Low mode and the light next to the button selected will start blinking.

Shortly thereafter, the automatic igniter will light the pellets in the fire pot Initially, the Startup mode will take up to 10 - 20 minutes. The unit will then automatically go into your selected Medium or High selection.

After Start-up mode the light next to the Medium or High will be solid and the stove will be in run mode. At this time, you now have the three distinct fan speeds: Low, Medium, and High to choose from.

Thelin Hearth Products, Inc.

#### Gnome Pellet Stove

We recommend that you run the stove on Medium for about 30 minutes to get the heat exchanger hot before turning it to Low. You will have to burn the Gnome pellet stove for a few hours in order to determine the best setting for your particular needs.

4. When you wish to turn off your Gnome pellet stove simply push the OFF button on the handheld remote or the wall thermostat and the feed will immediately cease. The fan will continue to run until the stove cools down and then it will shut off automatically. Sometimes this might take 25 to 30 minutes depending upon ambient temperature.

NOTE: Whenever power is unplugged from the stove, the hand held remote or wall thermostat must be reprogrammed. This will involve following Steps 7 through 10 to activate once again.

BATTERY REPLACEMENT: Thelin Hearth Products recommends consideration be given to replacing all batteries at a minimum of every 6 months. There are batteries both in the handheld remote, and the black receiver located in the rear of the stove.

## **Control Functions**

The push-button control settings on the Gnome pellet stove are as follows: OFF, FAN, LOW, MED, HIGH, and CLEAN (see **FIGURE 12**).



FIGURE 12

Thelin Hearth Products, Inc.

#### Gnome Pellet Stove

1. In the LOW position, the Gnome pellet stove will feed approximately 1 to 1.5 pounds of pellets per hour. Feed rate will depend upon size of the pellets, quality of pellets and the feed trim setting.

2. In the MED position, the Gnome pellet stove will feed approximately 3.0 pounds of pellets per hour. Feed rate will depend upon size and quality of pellets and the feed trim setting.

3. In the HIGH position, the Gnome pellet stove will feed approximately 5 pounds of pellets per hour. In each setting the fan speed will increase along with the feed rate. Feed rate will depend upon size and quality of pellets and the feed trim setting

4. The CLEAN position is to be used only when the stove is not burning and has cooled down for maintenance and cleaning. See "Clean Out" section under maintenance for explanation of this function.

5. The FAN position is used for manual start during power outages when the electronic ignition cannot function. If the fire pot should overfill it is usually because it is clogged. Using the FAN position will enable you to burn these pellets before cleaning the fire pot and allowing the startup procedure to take place once again.

6. When you wish to turn off your Gnome pellet stove, simply push the OFF button and the feed will immediately cease. The fan will continue to run until the stove cools down and then it will shut off automatically. This may take up to 30 minutes depending upon ambient room temperature.

## High Temperature / Flue, Trim, and Battery Indicators

## **HIGH TEMP/FLUE INDICATOR**

There is a small red light to the top left of the FAN button on the Control Panel.

This indicator light will **<u>blink red</u>** if there is a blocked flue due to ash buildup or high wind conditions creating back draft.

The indicator light will come on **<u>steady red</u>** if there is a Hi-Temp condition such as lint and dust build-up on the fan blade, hindering air flow through the stove.

If any of these conditions exist, the stove will shut down and the red light will remain on until the OFF button is pushed. Maintenance and cleaning should be performed before the stove is used again.

## TRIM ADJUSTMENT

The TRIM control dial will allow you to adjust the feed rate of the pellets on Low, Medium and High settings. Clockwise will increase the feed rate, counter clockwise will reduce feed rate. This button is designed to allow the user to adjust the feed to a particular brand of pellet. Find the best feed rate for your pellet brand preference and the room's heating needs. If you utilize the Thelin Hearth Products battery backup option, and the battery is plugged into the stove:

The indicator light will come on **blinking yellow** when the battery is charging.

The indicator light will come on **<u>steady yellow</u>** when the battery is fully charged.

## **External Battery Backup Operation**

The Gnome pellet stove is equipped with a 12V battery option. To set up the battery and engage the 12V backup system, follow these steps in order:

- 1. Unplug the stove from the wall outlet.
- 2. Place the external battery at least 4 ft away from unit.
- 2. Connect the positive (+) red battery cable to the positive terminal on the battery.
- 3. Connect the negative (-) black battery cable to the negative side of the battery.
- 4. Plug the power cord to the grounded wall outlet.
- 5. Plug the 2 banana plugs (red and black) into the corresponding (red and black) receptacles on the bottom of the stove (See **FIGURE 12)**.

## NOTE: It is not recommended to leave stove unplugged, as the battery will lose its' charge.

#### WARNING

Make sure the red cable goes to the red terminal and the black cable goes to the black terminal. If you hook these up correctly the BATT light will glow green. If you hook them up backward the BATT light will glow red and the backup will not work. DO NOT let the battery terminals touch the metal stove. Failure to install correctly could cause physical harm and short out circuit board and will void the warranty on the stove.

When the battery is properly connected, the following will happen automatically:

- 1. If the stove is running and there is a power failure, it will instantaneously switch to battery backup power.
- 2. When power is restored, the stove will switch back to AC power automatically and tricklecharge the battery. As long as the stove is plugged into the wall outlet it will keep the battery charged. If you unplug the stove during the summer and leave the battery attached, it will run down the battery and shorten its life (NOT RECOMMENDED).
- 3. Run time on the battery will depend upon the amperage of the battery. See your local battery store for details.

#### Gnome Pellet Stove

- 4. If you wish to place the battery beyond 4 ft from the stove you will need to increase the wire size of the cable. Check with your local electrical professional to make sure you have used the proper gauge wire/cable.
- 5. The electronic ignition feature will not work on battery mode. If the stove is off and the power fails, you will have to light the stove manually with an approved fire starter.

## Maintenance

The Gnome pellet stove requires routine maintenance for maximum performance and prolonged life of parts and components. Maintenance is mandatory for warranty to remain in effect.

# ALWAYS DISCONNECT POWER CORD BEFORE SERVICING. RISK OF ELECTRICAL SHOCK IF NOT DISCONNECTED.

Always turn your stove off and let it cool before servicing or cleaning the stove.

The following procedures should be performed regularly and may require more frequent attention if a lowquality pellet is used. <u>We recommend the purchase of an ash vacuum for maintenance work.</u>

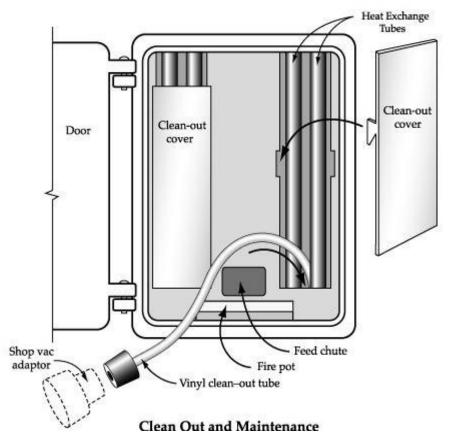
## **Daily Maintenance**

Fire pot -

- 1. Soot and ash build up in the fire pot or surrounding area will affect the quality of burn and can cause ignition issues.
- 2. Scrape the fire pot with a wire brush every 1-2 days to be certain the holes are clear. This will allow airflow to freely circulate to achieve a bright yellow flame.
- 3. It is recommended the fire pot be cleaned before each startup, and more frequent cleaning may be necessary if low-quality pellets are used.

## **Glass cleaning -**

1. Clean glass every 3 to 4 days with stove glass cleaner. A more frequent quick wipe with a paper towel is recommended during the daily fire pot maintenance.



The following is a step-by-step procedure to clean out and maintain your pellet stove.

## 1. Stove must be shut off and completely cold before performing this maintenance.

- 2. Open door; remove fire pot and clean-out covers.
- 3. Vacuum entire inside area, including heat exchanger tubes, using a pellet vac or shop vac.

## CAUTION: Do not use a household vacuum cleaner.

- 4. Connect vinyl clean-out tube to pellet vac or shop vac. (An adapter must be used to connect to a shop vac. These can be purchased at hardware stores or home centers.) Insert the clean-out tube down between the heat exchange tubes (approx. 4" to 6") as shown in the picture, and vacuum up the debris. Re-position the tube several times to get as much debris as possible. Repeat the procedure on the other set of tubes. Remove vinyl clean-out tube.
- 5. Turn control knob to "clean" position for about 45 seconds.
  - 6. Replace clean-out covers and fire pot. The stove is now ready to use.

#### Ash removal

1. Vacuum firebox and inside of door frame of ash build up and soot weekly or more often as needed.

2. Remove the two rear left and right clean out covers and clean with a wire brush. See **Figure 13**.

3. Remove fire pot from holder and clear all holes using vacuum or steel brush.

4. While clean out covers are removed, vacuum and wire brush heat exchanges. Connect the supplied vinyl clean out tube to ash vacuum or Shop Vac (an adapter may be needed, which can be purchased at a home center) for a more thorough clean up of the heat exchangers and inside the tight spots around the fire pot & area around the igniter.

5. Vacuum the entire inside bottom around the fire pot holder and the side walls.

6. Vacuum the plastic fan guard located on the bottom of stove of all lint and dust.

7. With the door open, push the CLEAN button and allow the fan to run at least 45 seconds to blow excess ash out of firebox and into the flue.

8. Replace parts previously removed.

#### **Polishing Of Exterior Parts**

1. All Gold or Nickel plating can be cleaned with a soft cloth and a non-abrasive cleaner.

## **Monthly Maintenance**

#### Hopper

1. Vacuum hopper to remove excess sawdust. Excessive sawdust can cause feeding issues.

#### Pellet feed chute

1. With a putty knife, scrape and remove soot build-up. Build-up on the feed chute will prevent pellets from falling freely into the fire pot

2. Remove clean out cap from exhaust tee and clean out excess soot and ash.

Yearly Maintenance

NOTE: THE FOLLOWING SHOULD ONLY BE PERFORMED BY SERVICE AND MAINTENANCE PERSONNEL FAMILIAR WITH BOTH PELLET STOVES AND IN PARTICULAR THELIN'S PRODUCT-LINE. WE RECOMMEND YOU CONSULT A THELIN HEARTH PRODUCT'S DEALER FOR A PROFESSIONAL SERVICE TECHNICIAN.

Soot and Fly Ash – 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 flue gasses. The exhaust venting system should be inspected at least once every year.

## Combustion blower fan

1. Make certain stove is unplugged from power outlet.

2. Stove will need to be disconnected from the Exhaust Vent and Outside Air Intake to remove fan assembly underneath stove.

3. Remove the cast iron fire pot and the 2 clean out covers.

4. With the door latched closed, lay the stove down on the opposite side of the door handle on a soft blanket or cardboard to keep it from being damaged.

5. Remove 4 screws holding the plate bottom and set panel aside. **Note: Do not disconnect any** wires from this panel.

6. Unplug the electrical connections to the motor.

7. Remove 3 flange nuts, and remove entire fan assembly from the combustion housing. The fan assembly is installed with high temperature silicone sealant and will need to be gently worked loose from the fan housing.

8. Using a soft vacuum brush attachment, remove any dust and ash buildup on the motor, the exhaust blade, and entire housing. Ensure all ash is removed evenly from exhaust blade since uneven removal can cause a blade balancing issue and possible noise. Note: Extreme care should be taken to avoid bending fan exhaust blade.

9. Reinstall fan motor assembly back in place and tighten the 3 flange nuts on combustion housing.

Apply high temperature silicone sealant around the flange housing. Flange must be fully sealed with silicone having a temperature rating of at least 500 degrees F.

10. Reattach electrical connections to the motor.

11. Vacuum surrounding stove areas around cabinet and ducts to remove any accumulated dust, ash, and pet hair.

12. Reinstall previously removed bottom plate making certain the air intake is aligned and tighten the 4 screws.

13. Reinstall stove to Exhaust Vent and Outside Air Intake making certain to fully seal Exhaust Vent with HIGH TEMPERATURE SILICONE having a temperature rating of at least 500 degrees F. with at least 3 sheet metal screws.

#### HANDHELD REMOTE (if applicable)

**BATTERY REPLACEMENT:** THP recommends consideration be given to replacing all batteries at a minimum of every 6 months. There are batteries both in the handheld remote, and the black receiver located at the rear of the stove.

#### Venting system – We recommend a certified chimney sweep to clean entire vent system.

- 1. Vent system should be cleaned using chimney sweep brushes.
- 2. Check vent cap for any blockages.
- 3. Remove the exhaust vent tee clean-out cover Brush the vertical flue pipe to remove ash and buildup.
- 4. Reinstall vent tee clean-out cover.

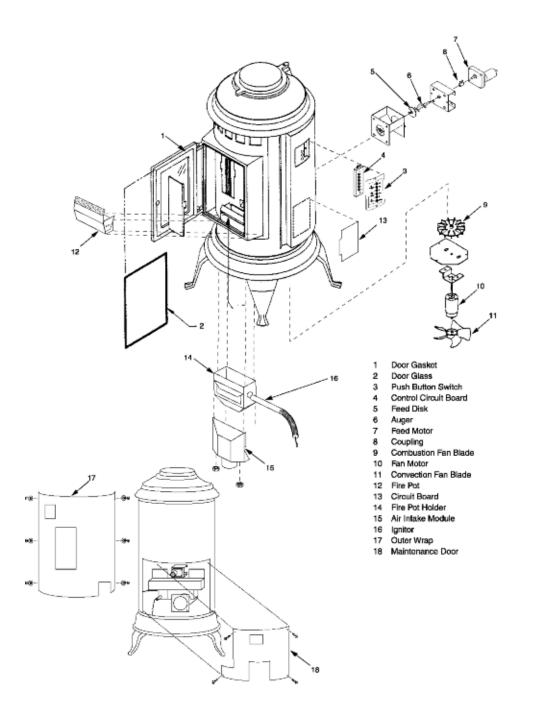
# Troubleshooting Guide

## Pellet Stove Troubleshooting Guide

Problem	Possible Cause	Solution
Pellets feed but do not ignite	Damp pellet	Replace with dry pellets
-	Igniter fuse blown	Replace igniter fuse
	Bad igniter	Replace igniter
Pellets stop feeding.	Hopper out of pellets	Add pellets to hopper
	Obstruction in auger	*TURN POWER OFF* *DISCONNECT POWER*. Clean out any remaining pellets from hopper. Could be foreign object or excessive sawdust.
		penets from hopper. Could be foreign object of excessive sawdust.
	Hopper Switch bad	Replace Hopper Switch
	Feed motor not spinning	Replace Feed Motor
Pellets are overfeeding.	Holes are blocked in firepot	Clean out entire firepot and keep holes clear
5.5	Firepot not seated properly	Reseat firepot in firepot holder
	Gasket on Door is worn	Replace Door gasket
	Air intake not adjusted	Adjust butterfly valve on intake air
	Vent pipe obstructed	Cleanout vent pipe
	Pellets or ash stuck behind Ash Drawer	Cleanout behind or below Ash Drawer
Soot is forming on the door glass.	Air intake fully closed	Open air intake and adjust for bright vibrant yellow flame
	Poor pellet quality	Recommend low ash/high btu pellets
	Firepot dirty	Clean out Firepot and clear holes
Stove continues to run after button is	Stove is cooling down	This is normal. The Fan will remain on for 25-30 minutes to allow stove to
pushed to "Off"		cool
	T2 Sensor is bad	Replace T2 Sensor
Fan Motor speed surges or slows down	Brushes in Fan Motor are bad	Replace Fan Motor brushes in motor
Stove shuts off on low	Feed rate is too low	Adjust feed trim button, turning clockwise, to allow more feed
Fan motor speed surges or slows	Brushes in Fan Motor are failing	Replace brushes in Fan Motor
Hi Temp/Flue light comes on and	Restriction in exhaust or blockage.	Clean out vent pipe or any obstruction.
stove stops working. (Blinking =		
blockage. Solid = overheating).		
	Down draft or windy condition.	Change Vent cap. High wind for vertical/shielded horizontal cap
	Restriction in Fan Guard	Over heat condition, block in vent pipe. Clean Fan Guard of lint or dust
No power to stove when any button	Main Fuse blown	Replace Main Fuse
is pushed		
	No voltage to Fan Motor	Replace Fan Motor Assembly
Pellets overfeeding	Restriction in Fan Guard	Clean Fan Guard of lint or dust

## Parts List





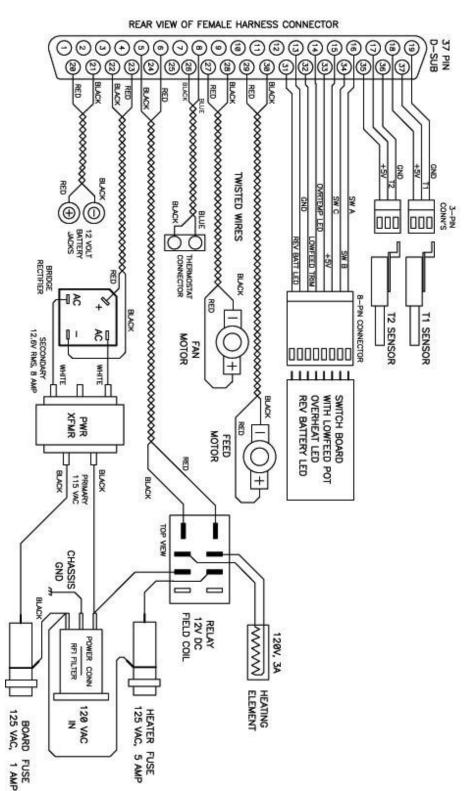
## Diagrams

**Circuit Board Diagram** 

## Figure 18 - Electrical Schematic/Wiring Diagram

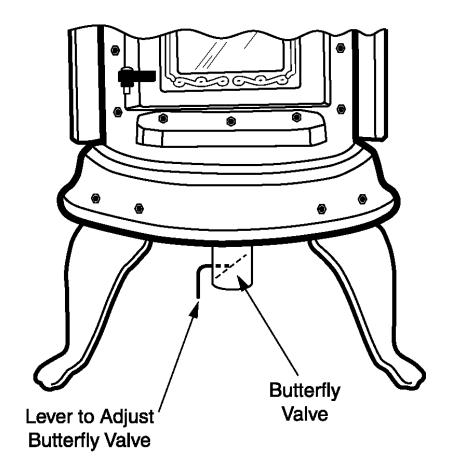
Figure 19 - Igniter Location

**FIGURE 15** 



#### **ELECTRICAL SCHEMATIC/WIRING DIAGRAM**

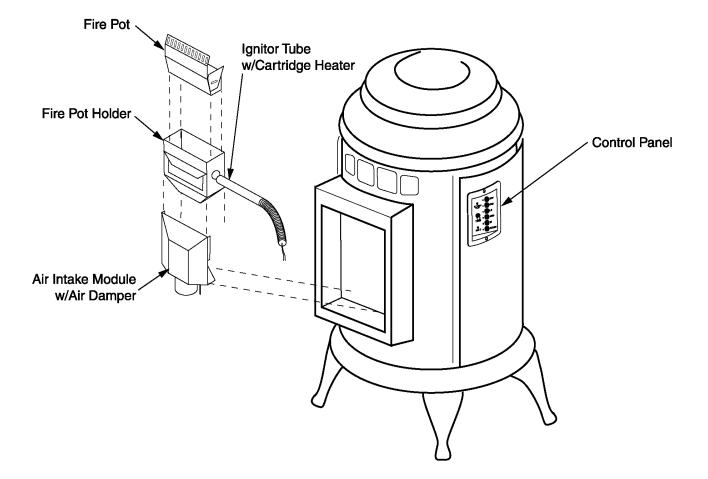
**FIGURE 16** 



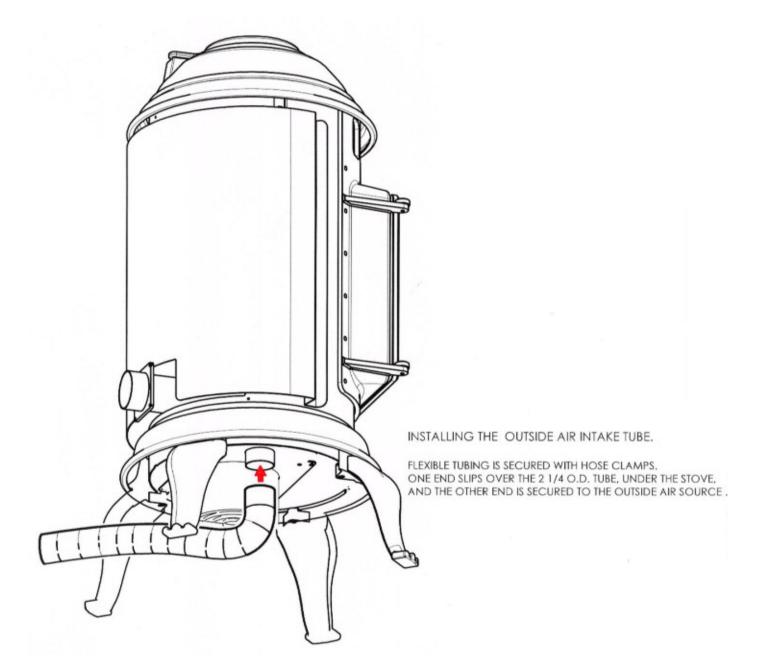
#### Air Damper (Butterfly Valve)

Occasionally, the vent configuration can create a noisy, harmonic condition. This sound can be eliminated by closing the air damper located on the bottom front of the stove under the bottom ring.

This Pellet Stove is equipped with a blocked flue/high temp safety sensor that will shut the stove off if there is a down draft, blocked flue, or high temperature condition.



E.I. Fire pot Assembly



## THELIN LIMITED FIVE, THREE, ONE, YEAR LIMITED WARRANTY

Thelin Hearth Products (THP), warrants to the original consumer this stove will be free of defective materials and workmanship for the following periods: *Five Years-Outer structure excluding gold or nickel plating*, *Three Years-Interior metal construction*, *One Year- Electrical, gold or nickel plated rings & items*, from the date of purchase. This warranty does not extend to any parts worn or damaged through normal ware, abuse, accident, or neglect or warpage due to over-firing; nor does it apply if the stove has been repaired or modified unless by THP written authorization. If the stove proves to be defective in material or workmanship within the warranty period, THP will, at no charge, repair or replace (at its option) any defective parts, if the purchaser ships the parts or the stove, freight prepaid, to THP Factory Center. THP may require the consumer to supply reasonable proof of the stoves purchase date.

This warranty is in lieu of any other express warranty. Any implied warranties, including but not limited to any implied warranty of merchantability or fitness for a particular purpose shall not extend beyond one year from the date of purchase.

The purchaser's sale and exclusive remedy shall be for the repair or replacement of defective parts, as provided for in this warranty. No other remedy (including but not limited to incidental or consequential damages for lost profits, lost sales, injury to person or property, or other incidental or consequential loss) shall be available to the purchaser.

Some states do not allow limitations on how long an implied warranty lasts and some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

THP's warranty obligation and the purchaser's rights under it can be altered only by a subsequent written agreement between THP and the purchaser.

The remedies provided in this warranty are void unless the attached warranty registration card is received by THP within 30 days from the date of purchase.

If you have a warranty claim or questions about the performance of your stove, you are requested to contact your dealer. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Please fill out and return the bottom half of the page to: <b>r</b> THELIN HEARTH PRODUCTS 63 Laxalt Ave. Carson City NV 89706	Fill out & eturn within 30 days.	THELIN HEARTH PRODUCTS
Thelin Hearth   Warranty Card   Date Purchased//	THELIN HEARTH PRODUCTS	Model # Serial #
Name	Dealer Name	
Address	City/State	Zip
City/StateZip I have read and understand the above warranty agreen Owner's Signature	nent.	Thelin Hearth Products 63 Laxalt Ave. Carson City, NV 89706 Attn: Customer Service



THELIN HEARTH PRODUCTS 63 Laxalt Dr. Carson City, NV 89706

www.thelinco.com