

INSTALLATION OPERATION INSTRUCTIONS

CLASSIC

**MODELS I600PS/CLASSIC II
PELLET STOVE**

SAFETY NOTICE: If this stove is not properly installed, a house fire may result. For your safety, follow the installation directions. Contact local building or fire officials about restrictions and installation inspection requirements in your area.

Bucks Stone Palace

771-3374

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INTRODUCTION

CONGRATULATIONS on becoming a new owner of a **TRAILBLAZER CLASSIC 1600PS CLASSIC II** pellet stove. In purchasing a **TRAILBLAZER** pellet stove you have joined the growing ranks of concerned individuals whose selection of an energy system reflects a concern for environment and saving energy. The **TRAILBLAZER CLASSIC 1600PS CLASSIC II** pellet stove is one of the finest pellet fired home heaters on the market today. This manual illustrates and detail the variety of uses and applications for the **TRAILBLAZER CLASSIC 1600PS CLASSIC II** pellet stove. Please familiarize yourself with Owner's Manual before installing your pellet burning appliance and save the manual for future reference. This manual covers in detail the necessary steps required to install your appliance to meet all safety codes. Included are helpful hints and suggestions which will make the installation and operation of your new pellet fired appliance an easier and more pleasurable experience.

Sincerely,

Heating Energy Systems, Inc.

IMPORTANT INFORMATION

RECORD IMPORTANT PRODUCT DATA HERE

The serial number on your **TRAILBLAZER CLASSIC 1600PS/CLASSIC II** pellet stove is on the underside of the hopper lid (located on top side of unit).

The serial number will be necessary in the event you require service of any type.

MODEL NO. CLASSIC 1600PS/CLASSIC II

SERIAL NUMBER _____

PURCHASE DATE _____

PURCHASED FROM _____

Mail your Warranty Card Today, and Save Your Bill of Sale.

To receive full warranty coverage, you will need to show evidence of the date you purchased your appliance. Do not mail your Bill of Sale to us.

We suggest that you attach your Bill of Sale to this page so that you will have all the information you need in one place should the need for service or information occur.

Note: If you are having operating or installation problems with your stove, do not return it to the store. **CALL THIS PHONE NUMBER FOR CUSTOMER SERVICE ASSISTANCE (503)786-4004.**

SAFETY NOTICE AND PRECAUTIONS

CAUTION: IF THIS APPLIANCE IS NOT PROPERLY INSTALLED, OPERATED AND MAINTAINED, A HOUSE FIRE MAY RESULT. FOR YOUR SAFETY, FOLLOW THE INSTALLATION DIRECTIONS. CONTACT LOCAL BUILDING OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION REQUIREMENTS IN YOUR AREA.

To assure proper operation, thoroughly read these instructions before attempting to install the Classic 1600PS/Classic II. Improper installation may result in a house fire or void product warranty.

Installation of this freestanding heater must comply with local codes. A building or installation permit may be required. Check with your local Building or Fire Department before installing.

- ▶ THIS APPLIANCE IS DESIGNED TO OPERATE ONLY WITH THE HOPPER LID AND FIREVIEW DOOR IN THE CLOSED AND LATCHED POSITION. DO NOT ATTEMPT TO RUN WITH SIDE PANELS REMOVED.
- ▶ THIS UNIT'S EXHAUST SYSTEM WORKS WITH A POSITIVE COMBUSTION CHAMBER PRESSURE AND A LOW POSITIVE CHIMNEY PRESSURE. IT IS VERY IMPORTANT THAT THE EXHAUST SYSTEM BE COMPLETELY AIRTIGHT AND PROPERLY INSTALLED. THE CHIMNEY JOINTS SHOULD BE SEALED WITH RTV 500 DEGREES FAHRENHEIT (500 F) (260 C) SILICONE SEALANT. IMPROPERLY INSTALLED STOVES ARE THE MAJOR CAUSE OF HOME FIRES.
- ▶ NEVER BLOCK FREE AIRFLOW THROUGH THE OPEN VENTS OF THE UNIT.
- ▶ WAIT UNTIL APPLIANCE HAS COOLED BEFORE CARRYING OUT MAINTENANCE PROCEDURES.
- ▶ DO NOT ALLOW CHILDREN TO PLAY AROUND THE HEATER WITHOUT SUPERVISION. DO NOT TOUCH THE HEATER WHILE IT IS IN OPERATION, AS CONTACT MAY CAUSE SERIOUS BURNS. DO NOT ALLOW ANYONE TO OPERATE THE HEATER WHO IS NOT FAMILIAR WITH THE OPERATING INSTRUCTIONS.
- ▶ KEEP FUEL AND OTHER COMBUSTIBLE MATERIALS (FURNITURE, CLOTHING, CURTAINS, ETC.) AWAY FROM HEATER. COMBUSTIBLE MATERIALS MUST NOT BE STORED OR PLACED WITHIN THE CLEARANCE TO COMBUSTIBLES ILLUSTRATED IN THE INSTALLATION INSTRUCTIONS.
- ▶ KEEP FOREIGN OBJECTS OUT OF THE HOPPER.
- ▶ THE CLASSIC 1600PS PELLET APPLIANCE IS DESIGNED AND APPROVED FOR BURNING OF PELLETIZED WOOD FUEL ONLY. THE BURNING OF ANY TYPE FUEL OTHER THAN THAT LISTED WILL VOID ALL WARRANTIES AND SAFETY LISTING OF THE UNIT. DO NOT ATTEMPT TO BURN ANY OTHER FUEL OTHER THAN SPECIFIED IN THIS MANUAL.
- ▶ THE APPLIANCE'S EXHAUST AND CHIMNEY SYSTEM SHOULD BE CHECKED A MINIMUM OF TWICE A YEAR FOR ANY BUILD-UP OF SOOT OR CREOSOTE.
- ▶ GASOLINE OR OTHER FLAMMABLE LIQUIDS WITH THE EXCEPTION OF APPROVED FIRE STARTERS MUST NEVER BE USED TO START THE FIRE OR "FRESHEN UP" FIRE. DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS APPLIANCE.
- ▶ DO NOT INSTALL IN BEDROOM OF A MANUFACTURED HOME.
- ▶ THIS UNIT MUST BE CONNECTED TO A GROUNDED STANDARD 110 VOLT, 60 HZ ELECTRICAL OUTLET OR A SEALED BATTERY BACKUP SYSTEM. NEVER ROUTE THE POWER CORD UNDER OR IN FRONT OF THE UNIT.
- ▶ DO NOT, UNDER ANY CIRCUMSTANCES, CUT OR REMOVE THE GROUNDING PRONG FROM THE POWER CORD.
- ▶ DO NOT USE AN ADAPTOR PLUG.
- ▶ BEFORE REMOVING PANELS DISCONNECT POWER CORD FROM ELECTRICAL SOURCE. NOTE: TURNING THE CONTROL OFF DOES NOT DISCONNECT THE POWER TO ALL ELECTRICAL COMPONENTS.
- ▶ WHEN INSTALLED IN A MOBILE HOME, THE UNIT MUST BE GROUNDED TO THE STEEL CHASSIS OF THE MOBILE HOME AND BOLTED TO THE FLOOR IN COMPLIANCE WITH AND ACCORDING TO H.U.D. REQUIREMENTS.
- ▶ THE APPLIANCE WILL NOT OPERATE WITHOUT A POWER SOURCE OF 110V, 60HZ OR A 12V DC SEALED BATTERY.

SAFETY TESTING AND SPECIFICATIONS

THIS PELLET FIRED APPLIANCE HAS BEEN TESTED AND CERTIFIED TO NATIONAL SAFETY STANDARDS BY ENERGY AND ENVIRONMENTAL SYSTEMS PERFORMANCE CORPORATION, AND IS LISTED TO UL 482 AND ASTM 1624 STANDARDS REPORT NO. 92-045. THE I.C.B.O. NO. IS TL-53

THIS MODEL IS DESIGNED AND APPROVED FOR FREESTANDING RESIDENTIAL, ALCOVE AND MOBILE/MANUFACTURED HOME INSTALLATIONS. SAVE THESE INSTRUCTIONS FOR YOUR FUTURE REFERENCE

HEATING CAPACITY SQ/FT	600 TO 600 MAXIMUM
BURN RATE lbs/HR9 TO 4.7
EMISSIONS GRAMS/PER HOUR29
MAXIMUM BURNING TIME (HOURS) ...	UP TO 65
FLUE OPENING DIAMETER	3.0"
OVERALL HEIGHT	31.0 (1600PS 24" CLASSIC)
OVERALL WIDTH	23.5"
OVERALL DEPTH	25.25"
HOPPER CAPACITY (lbs)	65 LBS.
UNIT WEIGHT (lbs) (PACKAGED)	20 (1600PS 24" CLASSIC)
ELECTRICAL RATING	115 VOLT AC 15 AMPS
DC RATING	12 VOLT DC 2.5 AMPS
WATTS.....	24

FUEL: The heater is designed to operate using 1/4 inch diameter pellets. Only pellets manufactured to the Association of Pellet Fuel Industries (A.F.P.I.) standards are recommended. They are available in two grades: "standard" and "premium". The primary difference between the two is the ash content. Premium fuel has 1% or less ash content, while standard may have up to 3% ash content.

CLINKERS: Silica (or sand and dirt) in the fuel, along with other impurities, can cause clinkers. This fused fuel will affect the performance of the stove by blocking off the air passages in the burn pot.

ASH: The frequency of removal of the ash (and clinkers) and maintenance performed on the heater is directly related to the ash content of the fuel. A stove burning pellet fuel with 0.25% ash content may only need to be cleaned out weekly, where as 1% ash fuels may require cleaning every day or two.

NOTE:

*STORE PELLETS IN A CLEAN DRY PLACE.

* BTU output and fuel storage capacity will vary depending on pellet size, density, moisture content and pellet type. Heating capacity is subject to variations due to pellet type, relative moisture content, floor plan and degree of home insulation. Consult with your Trailblazer dealer for best results.

PREPARATION FOR INSTALLATION

PREPARATION

1. Remove all packaging.
2. Inspect the unit to determine that no parts have become loose and the appliance has not been damaged during shipment.
3. Remove the starter pack from the appliance. This can be found inside the hopper.
4. **READ THE OWNERS MANUAL AND WATCH THE PELLET VIDEO PROVIDED WITH UNIT BEFORE PROCEEDING.**
 - The stove location should be such that no doors, drapes, furniture or other combustibles can be placed close or swing closer than the minimum stated clearances.
 - The appliance must be installed in level, secure position.

REQUIRED FLOOR PROTECTION

A Hearth Extension or pad is required for all Free-Standing installations of Pellet Stove Heaters. The Hearth Extension, must be a minimum of 3/8" thick masonry or equivalent non-combustible material, and is mounted under your stove to protect the floor. Minimum size 30" W x 32" D, floor protection must extend beyond the appliance, as follows: (Refer to Figure 1)

Front	6"
Sides	4"
Back	0"

SELECT A CHIMNEY SYSTEM

The selection of your chimney system will determine the final location and materials required to install the Classic I600PS/Classic II. Consult your dealer for assistance on the selection of all proper installation materials that are required. (See Figures 1 through 21 for approved installations)

- The I600PS/Classic II pellet fired appliance exhaust vent accepts 3" diameter listed pellet vent pipe. Some of the brands available for use with the I600PS/Classic II are:
 1. Duravent, Model PL-Vent, Simpson Duravent, P.O. Box 1510, Vacaville, CA 95688 (707)446-1786 or (800)835-4429
 2. James A. Ryder MFG, Model PL-Vent, Ryder MFG., Inc., 241 Arvin Avenue, Stoney Creek, Ontario Canada (905)662-1701
 3. MetalFab, Model Pellet Vent, P.O. Box 1138, Wichita, KS 67201 (316)943-2351
 4. Selkirk Metalbestos, P.O. Box 372, Nampa, ID 83653 (208)467-7411
 5. Ameri-Tec Products Co., PSV Pellet Stove Vent, P.O. Box 22050, Los Angeles CA, 90040 (213)726-1941
 6. GSW Heating Products, 281 Birch Ave, Hamilton, Ontario, Canada L8L7X6 (800) 724-5911
- See pellet vent manufacture's installation instructions for precautions required for passing vent through a combustible wall or ceiling. The minimum clearance (air space) from pipe to combustibles is 3".

CHIMNEY LENGTH

Vertical chimney installations exceeding 14 feet, a 4 inch diameter exhaust vent system is recommended. Installation requiring multiple 45 degree or 90 degree elbows will reduce exhaust flow and may require 4 inch diameter exhaust vent system for good performance.

Do not connect this appliance to a vent serving another appliance. All sections of pellet vent must be fastened to each other with sheet metal screws and silicone sealed with type 500 degrees Fahrenheit RTV (high heat) silicone sealer, to ensure that the joints are airtight. It is not necessary to use RTV at direct connection to stove.

FLOOR PROTECTION AND CLEARANCE TO COMBUSTIBLES

FLOOR PROTECTION:

Figure 1

Front - 6"

Sides - 4"

Back - 0"

MINIMUM CLEARANCES TO COMBUSTIBLES

INTERIOR VERTICAL FLUE INSTALLATION:

Figure 1

Left side wall to unit: 3"

Right side wall to unit: 3"

Corner to unit: 3"

Flue vent chimney: 3"

HORIZONTAL THROUGH THE WALL INSTALLATION, OR EXTERIOR INSTALLATION:

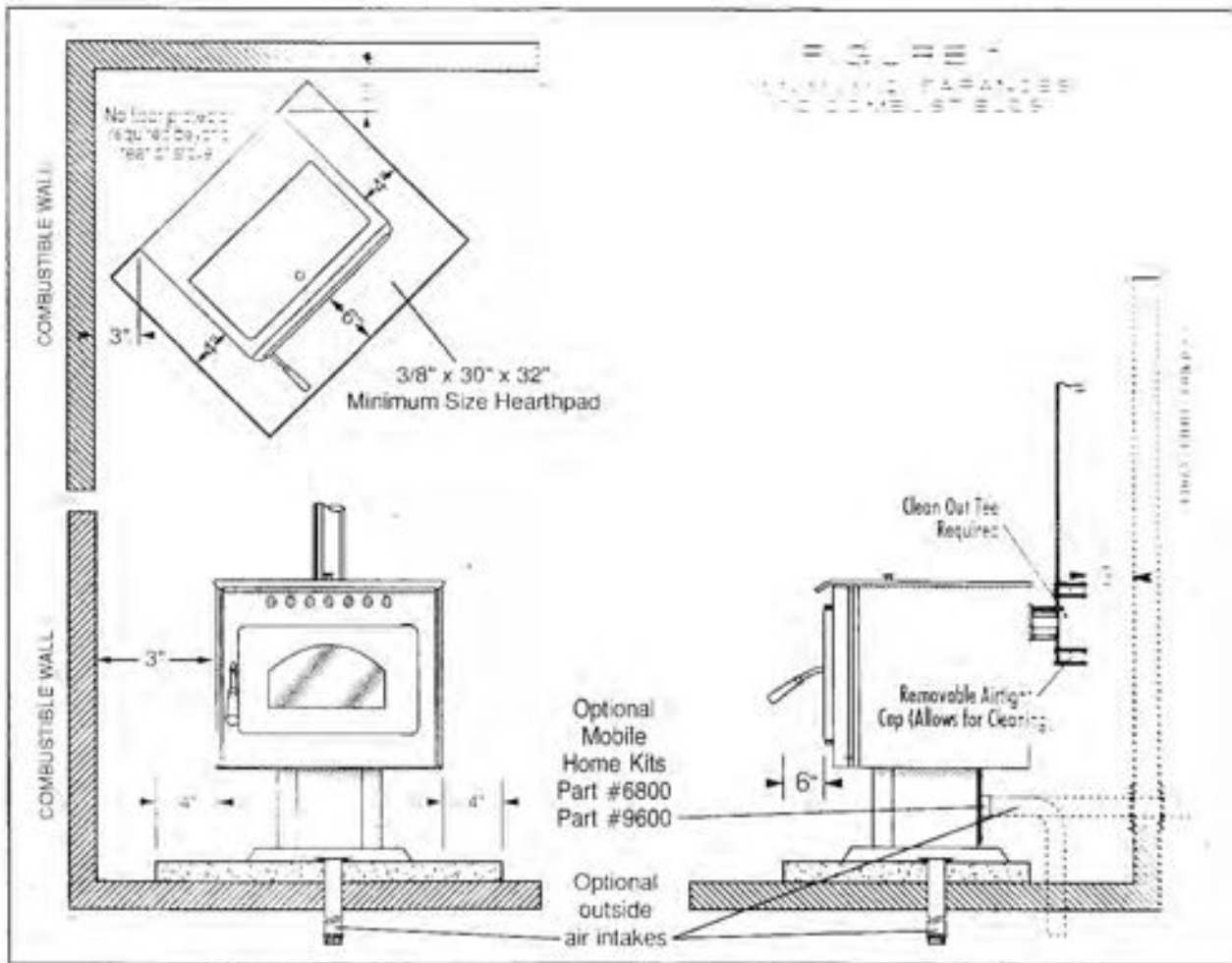
Figure 1

Left side wall to unit: 3"

Right side wall to unit: 3"

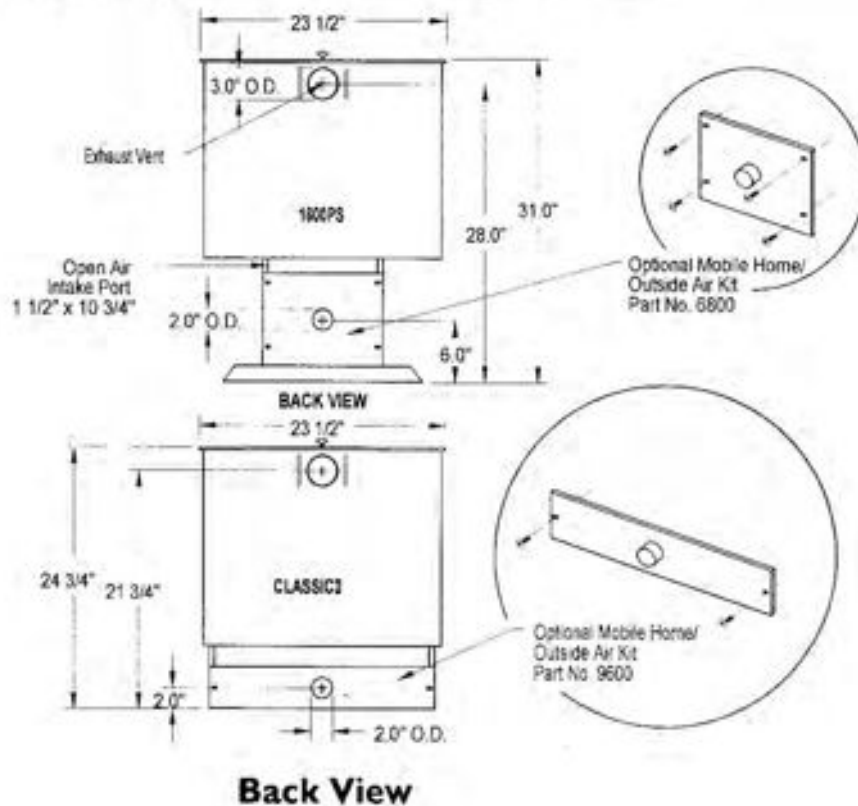
Corner to unit: 3"

Flue vent chimney: 3"



OUTSIDE AIR SUPPLY

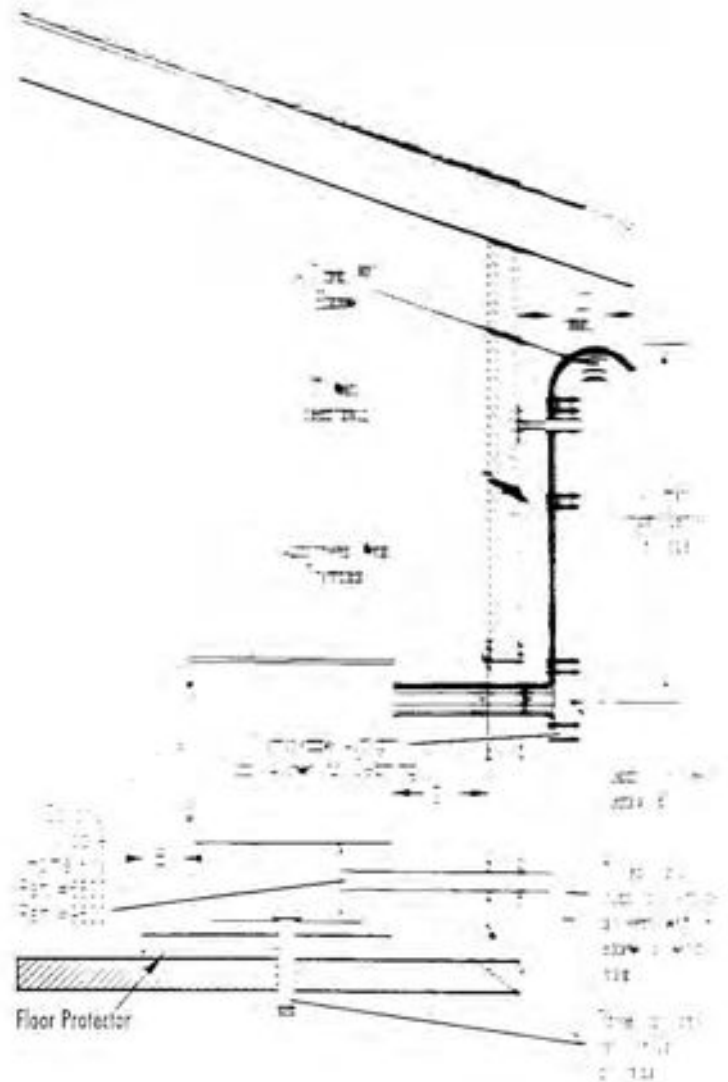
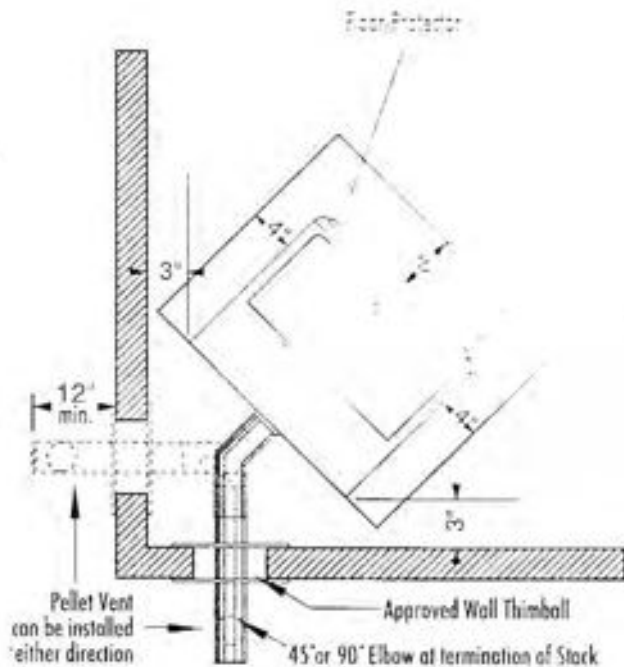
Location of Exhaust Vent and Outside Air Intake



Outside air is required for all Mobile Home installations. **NOTE: Use only HES Part No. 6800 or 9600 when connecting outside air supply to your stove.**

- Do not obtain combustion air from attic, garage, unventilated crawl space or any other closed space.
- The Outside Air Intake (combustion air intake) must be connected to a 2" I.D. or larger metal or aluminum duct with rodent screen fixed to the termination. Do not use P.V.C. plastic pipe for duct.
- If the Outside Air Inlet is connected to the outside, it must be terminated with a vertical 90 degree bend (downward) or with a wind hood.

HORIZONTAL CORNER INSTALLATION

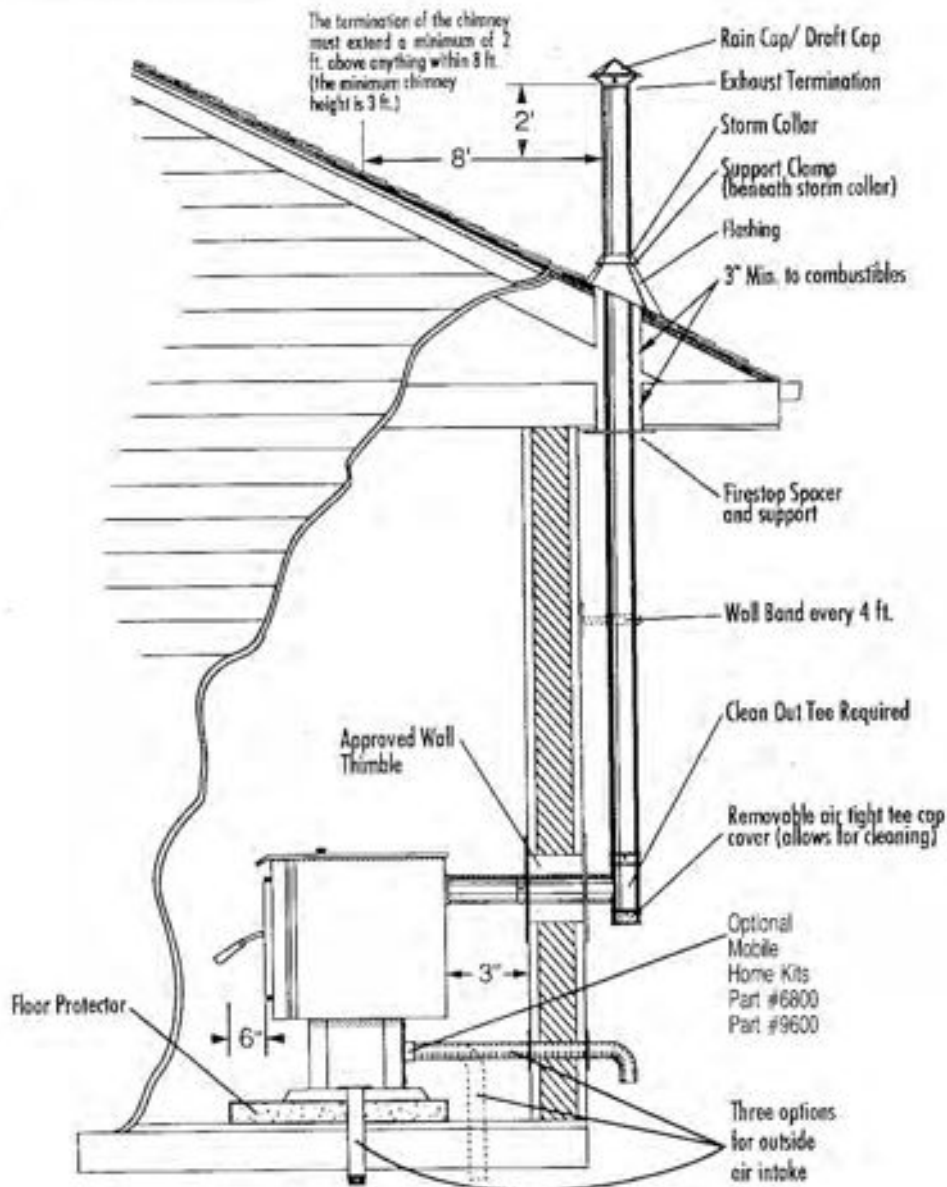


The exhaust vent termination on either (short) vertical or horizontal installations shall be located as follows:

- A minimum of four (4) feet below or beside and a minimum of one (1) foot above any door or window that opens, or any opening into a building.
- A minimum of two (2) feet from any adjacent building or overhang.
- A minimum of seven (7) feet above grade, when located adjacent to public walkways.
- A minimum of two (2) feet above grass, plants, fences or other combustible surfaces.
- Do not terminate the exhaust vent in any enclosed or semi-enclosed area, such as a crawlspace, stairway, covered breezeway/porch or any other location which may build up a concentration of flue gases.
- Horizontal chimney installations should not exceed six (6) feet in length.
- Exhaust system must be installed so as to be gas tight! The pellet vent manufacturer's installation procedure must be followed. In addition, pipe connections, joints and all pipe seams with the home should be sealed with room temperature vulcanizing, high temperature silicone sealer (RTV).
- Ninety-degree elbows accumulate fly ash and soot thereby reducing exhaust flow and performance of the heater. The installation of clean-out tee will permit periodic cleaning of the exhaust pipe.

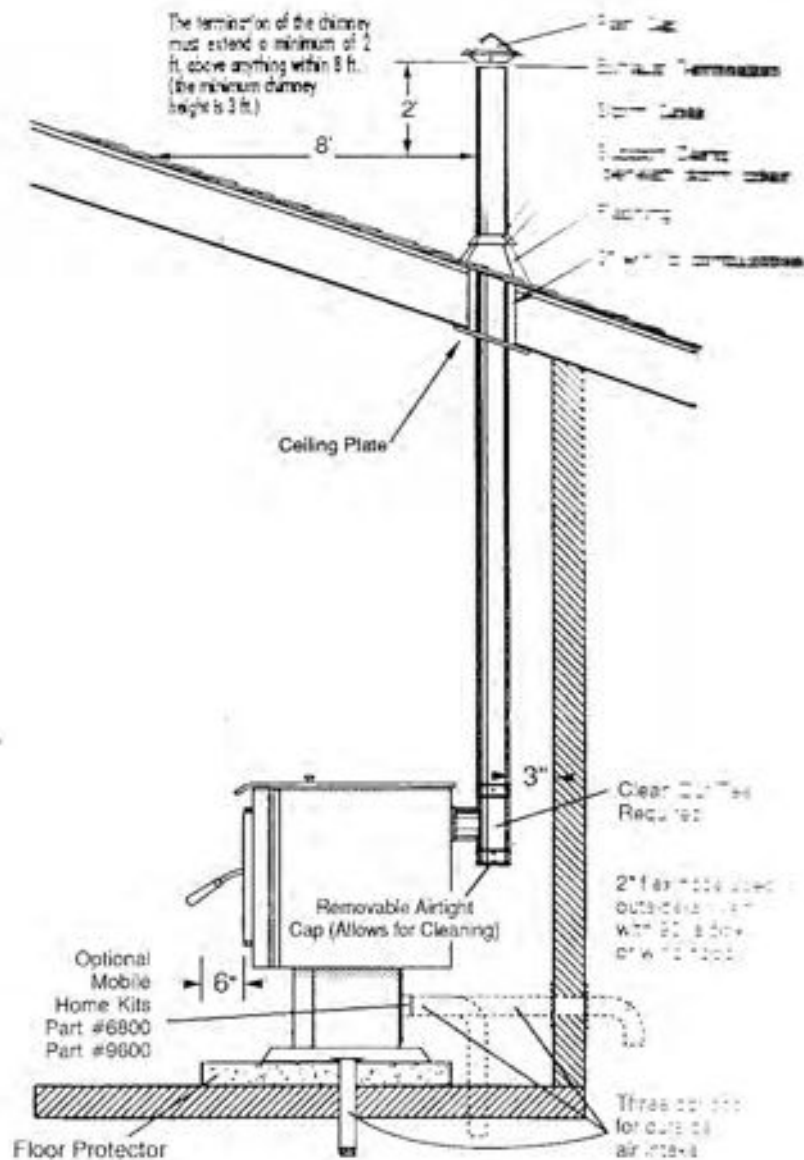
VERTICAL EXTERIOR FLUE SYSTEM

Figure 4



- A listed 3 inch pellet vent exhaust system must be used for freestanding installations and attached to the pipe connector provided on the back of the stove. If you have an installation where you must use more than 14 feet of vertical pipe, it is recommended that you convert to a listed 4 inch diameter exhaust system.
- Install the pellet vent pipe up through the roof as shown in Figure 4, following the chimney manufacture's installation instructions. Maintain 3" minimum clearance as illustrated.
- When venting into an existing chimney (masonry or factory built) the chimney must be cleaned, with all creosote removed. 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 room temperature vulcanizing, high temperature silicone sealer (RTV). It is not necessary to seal pipe at stove connection.
- Ninety-degree elbows accumulate fly ash and soot thereby reducing exhaust flow and performance of the heater. The installation of a clean-out tee will permit periodic cleaning of the exhaust pipe.

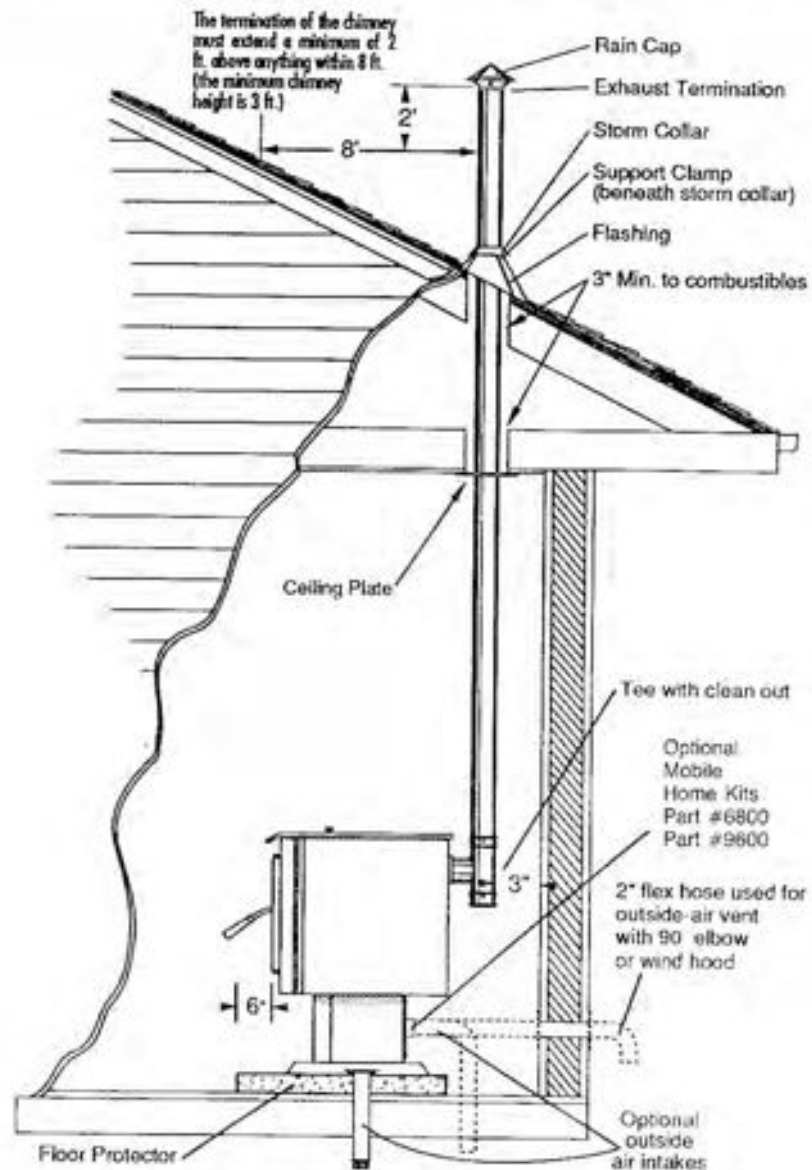
Figure 5



- A listed 3 inch pellet vent exhaust system must be used for freestanding installations and attached to the pipe connector provided on the back of the stove. If you have an installation where you must use more than 4 feet of vertical pipe, it is recommended that you convert to a listed 4 inch diameter exhaust system.
- Install the pellet vent pipe up through the roof as shown in Figure 5, following the chimney manufacturer's installation instructions. Maintain 3" minimum clearance as illustrated.
- When venting into an existing chimney (masonry or factory built) the chimney must be cleaned with all creosote removed. 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 room temperature vulcanizing, high temperature silicone sealer RTV. It is not necessary to seal pipe at stove connection.
- Ninety-degree elbows accumulate fly ash and soot thereby reducing exhaust flow and performance of the heater. The installation of a clean-out tee will permit periodic cleaning of the exhaust pipe.

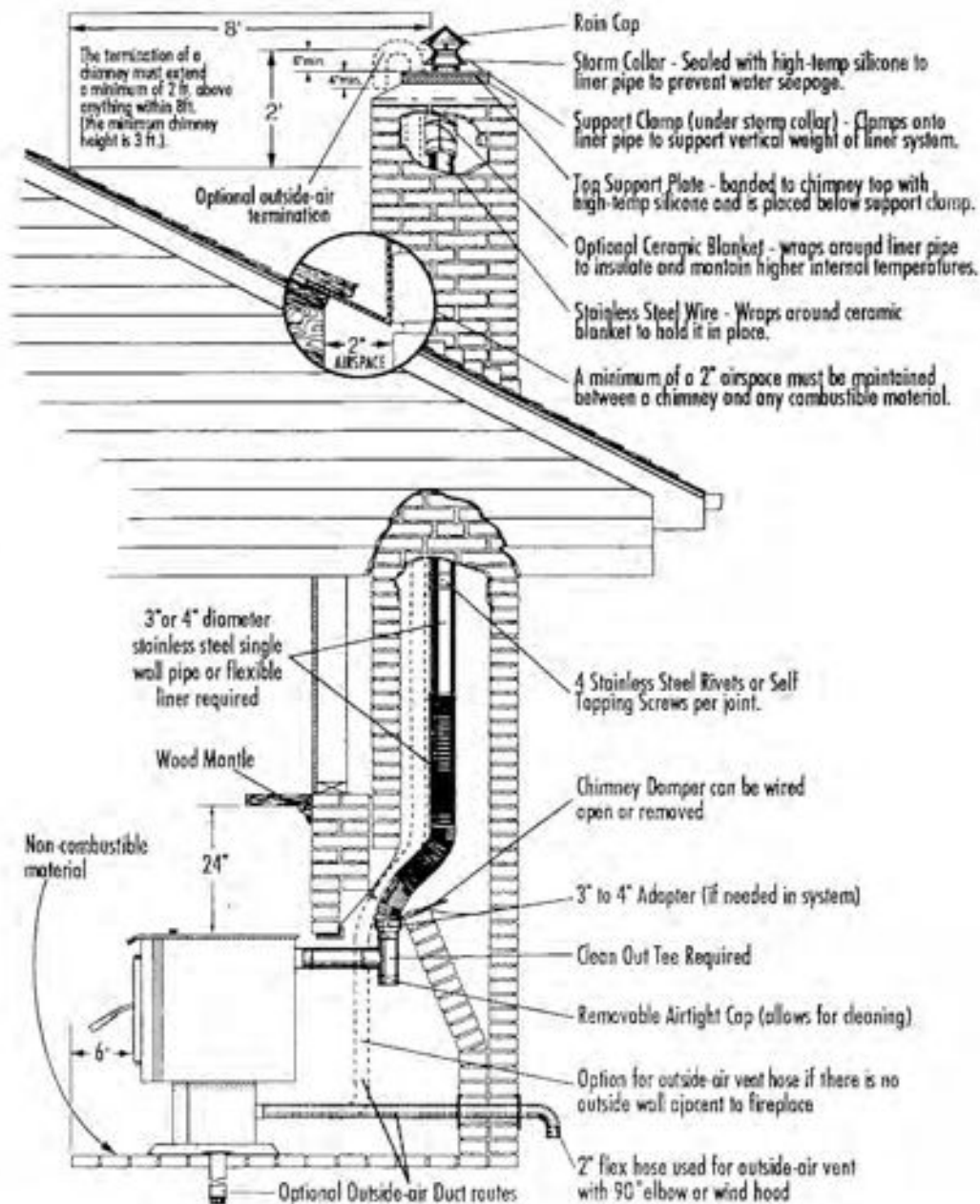
INSIDE VERTICAL THROUGH ATTIC INSTALLATION

Figure 6



- A listed 3 inch pellet vent exhaust system must be used for freestanding installations and attached to the pipe connector provided on the back of the stove. If you have an installation where you must use more than 14 feet of vertical pipe, it is recommended that you convert to a listed 4 inch diameter exhaust system.
- Install the pellet vent pipe up through the roof as shown in Figure 6, following the chimney manufacturer's installation instructions. Maintain 3" minimum clearance as illustrated.
- When venting into an existing chimney (masonry or factory built) the chimney must be cleaned, with all creosote removed. 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 room temperature vulcanizing, high temperature silicone sealer (RTV). It is not necessary to seal pipe at stove connection.
- Ninety-degree elbows accumulate fly ash and soot thereby reducing exhaust flow and performance of the heater. The installation of a clean-out tee will permit periodic cleaning of the exhaust pipe.

INSTALLED INTO EXISTING MASONRY FIREPLACE WITH FULL LINER



- 3 inch stainless steel single wall pipe or flexible liner is required. If you have an installation where you must use more than 14 feet of vertical pipe, it is recommended that you convert to a 4 inch diameter exhaust system.
- The installation of a tee with removable cap to allow for inspection and cleaning is required.
- When venting into an existing chimney (masonry or factory built) the chimney must be cleaned, with all creosote removed. 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 room temperature vulcanizing, high temperature silicone sealer (RTV). It is not necessary to seal pipe at stove connection.

VERTICAL INSTALLATION INTO EXISTING FACTORY BUILT FIREPLACE

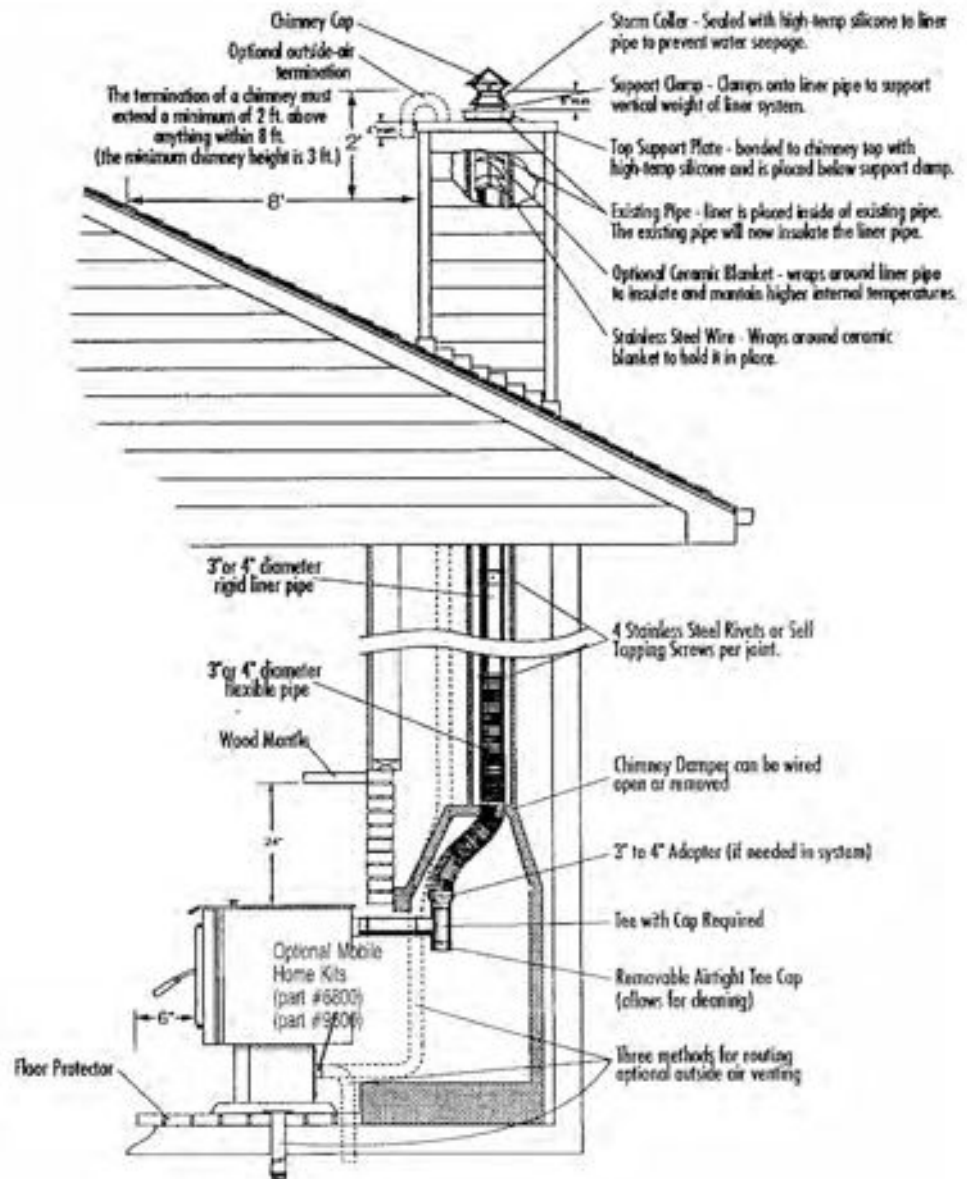


Figure 8

- **3 inch stainless steel single wall pipe or flexible liner is required. If you have an installation where you must use more than 14 feet of vertical pipe, it is recommended that you convert to a 4 inch diameter exhaust system.**
- **The installation of a tee with removable cap to allow for inspection and cleaning is required.**
- **When venting into an existing chimney (masonry or factory built) the chimney must be cleaned, with all creosote removed. 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 room temperature vulcanizing, high temperature silicone sealer (RTV). It is not necessary to seal pipe at stove connection.**

MANUFACTURED/MOBILE HOME INSTALLATION

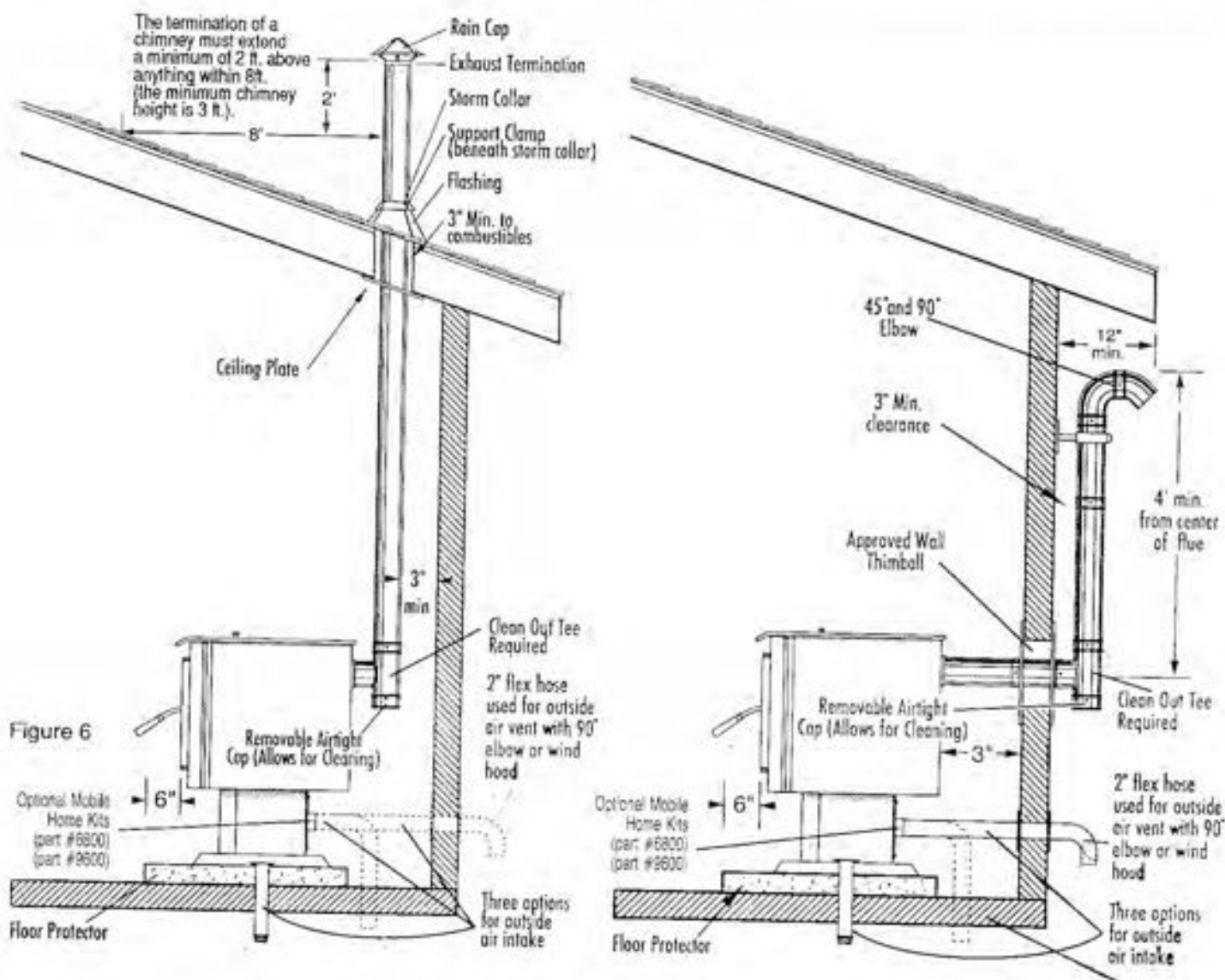


Figure 6

In addition to the standard residential installation instructions, the following requirements are mandatory for installation into a Manufactured/Mobile Home:

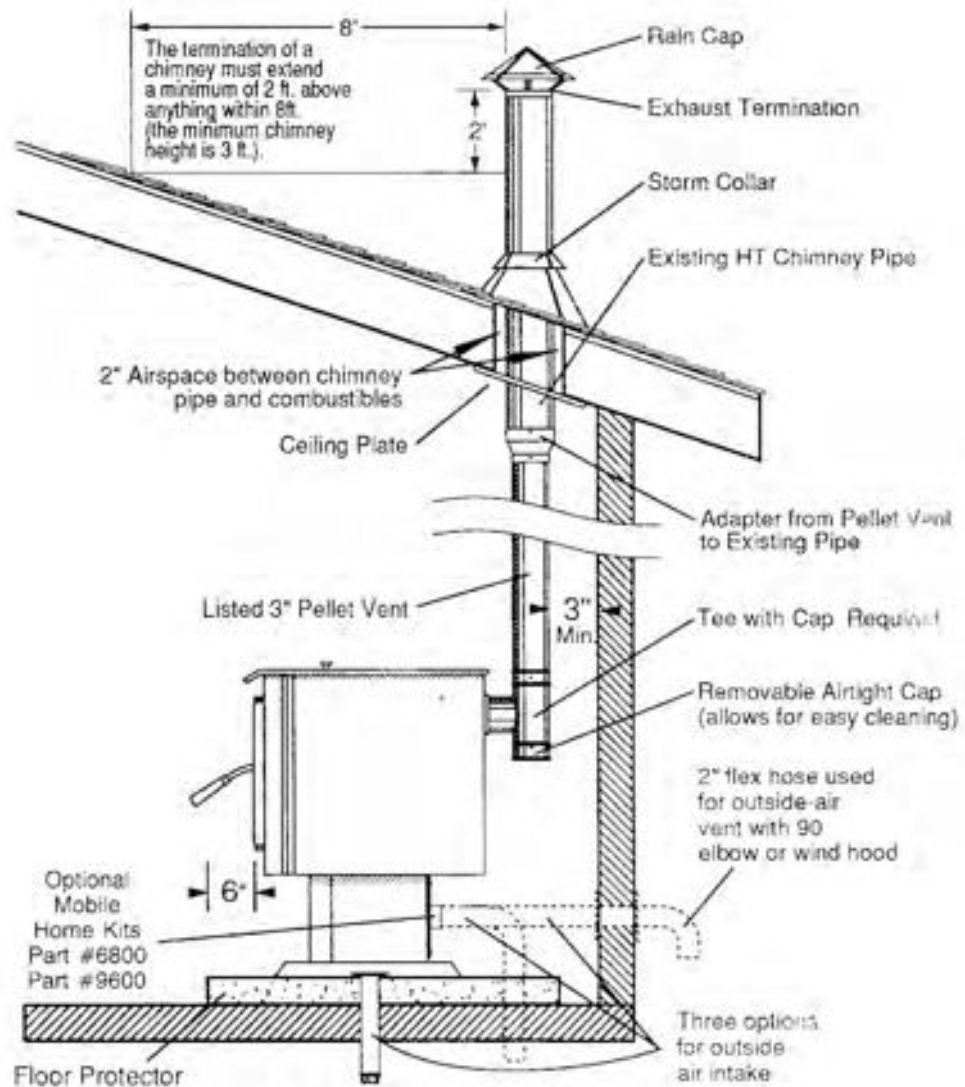
1. The stove must be secured to the floor of the Manufactured/Mobile Home. Use 1/4" lag screws through mounting holes located at rear of stove pedestal.
2. The stove must be electrically grounded with a ground wire (#8 minimum size) to the steel chassis or mainframe of the Manufactured/Mobile Home.
3. The stove must have an outside air source. Refer to page 7. Outside air supply: HES Part No. 6800/9600 Outside Air Supply Kits.

WARNING: DO NOT INSTALL IN A SLEEPING ROOM OF A MANUFACTURED HOME.

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

MANUFACTURED/MOBILE HOME INSTALLATIONS (cont)

Figure 11



- A listed 3 inch pellet vent exhaust system must be used for freestanding installations and attached to the pipe connector provided on the back of the stove. If you have an installation where you must use more than 14 feet of vertical pipe, it is recommended that you convert to a listed 4 inch diameter exhaust system.
- When venting into an existing chimney (masonry or factory built) the chimney must be cleaned, with all creosote removed. 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 room temperature vulcanizing, high temperature silicone sealer (RTV). It is not necessary to seal pipe at stove connection.
- Ninety-degree elbows accumulate fly ash and soot thereby reducing exhaust flow and performance of the heater. The installation of a clean-out tee will permit periodic cleaning of the exhaust pipe.

INSTALLATION INTO A NON-COMBUSTIBLE MASONRY ALCOVE

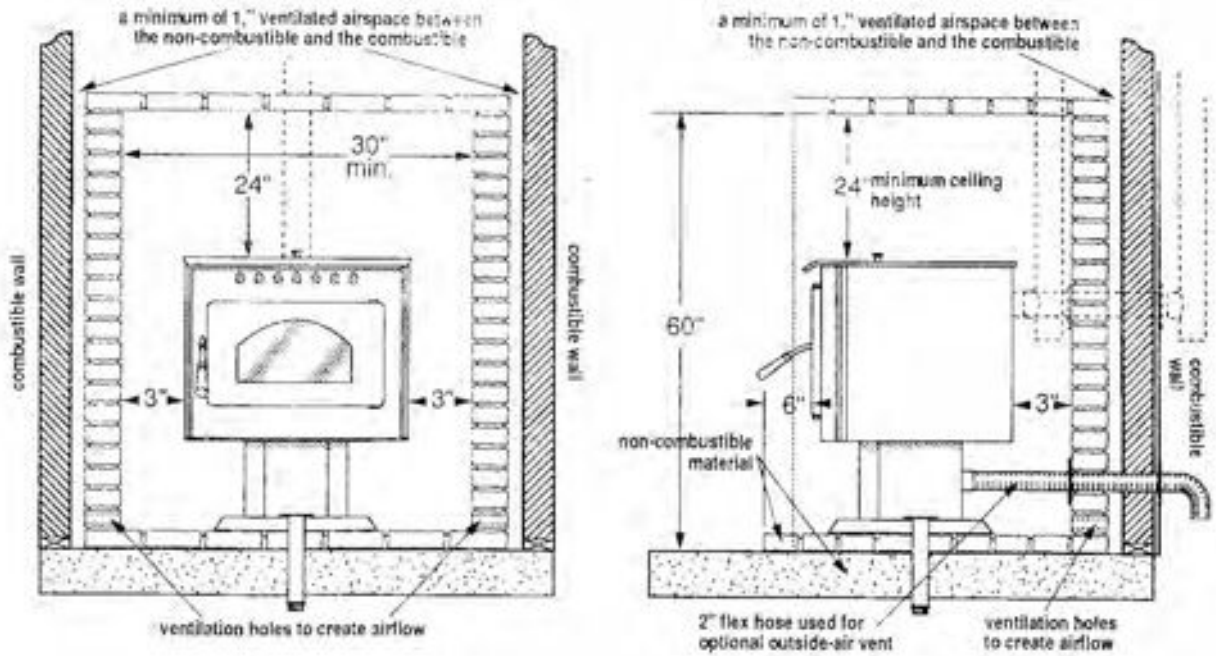
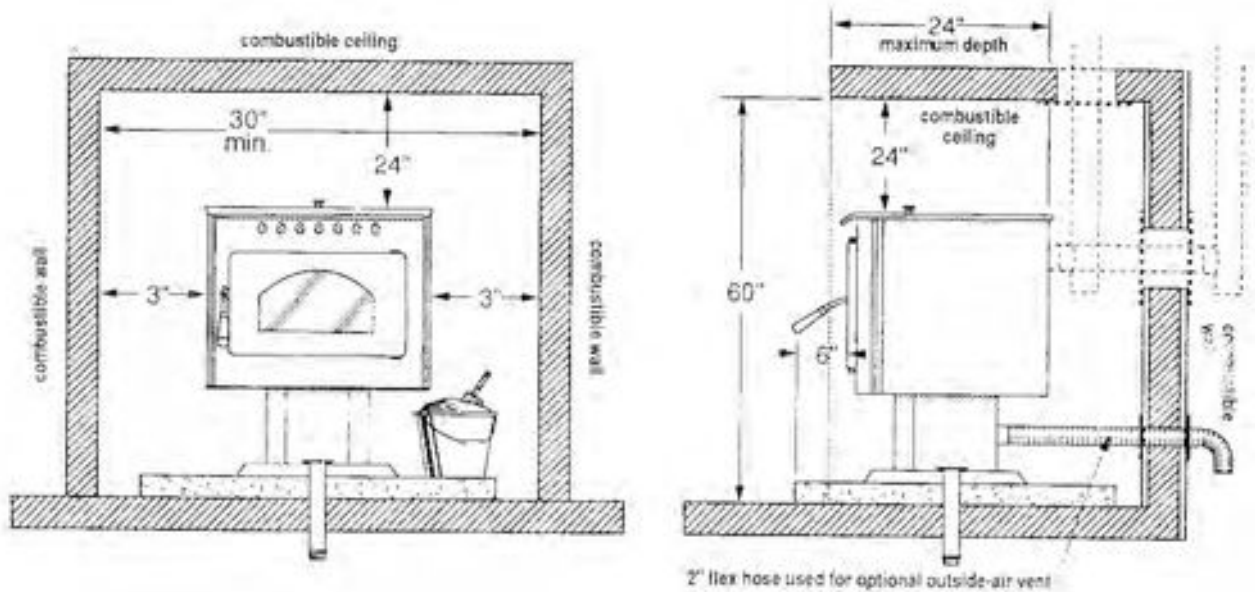


Figure 12

INSTALLATION INTO A COMBUSTIBLE ALCOVE



OPTIONAL 12 VOLT SYSTEM INSTALLATION

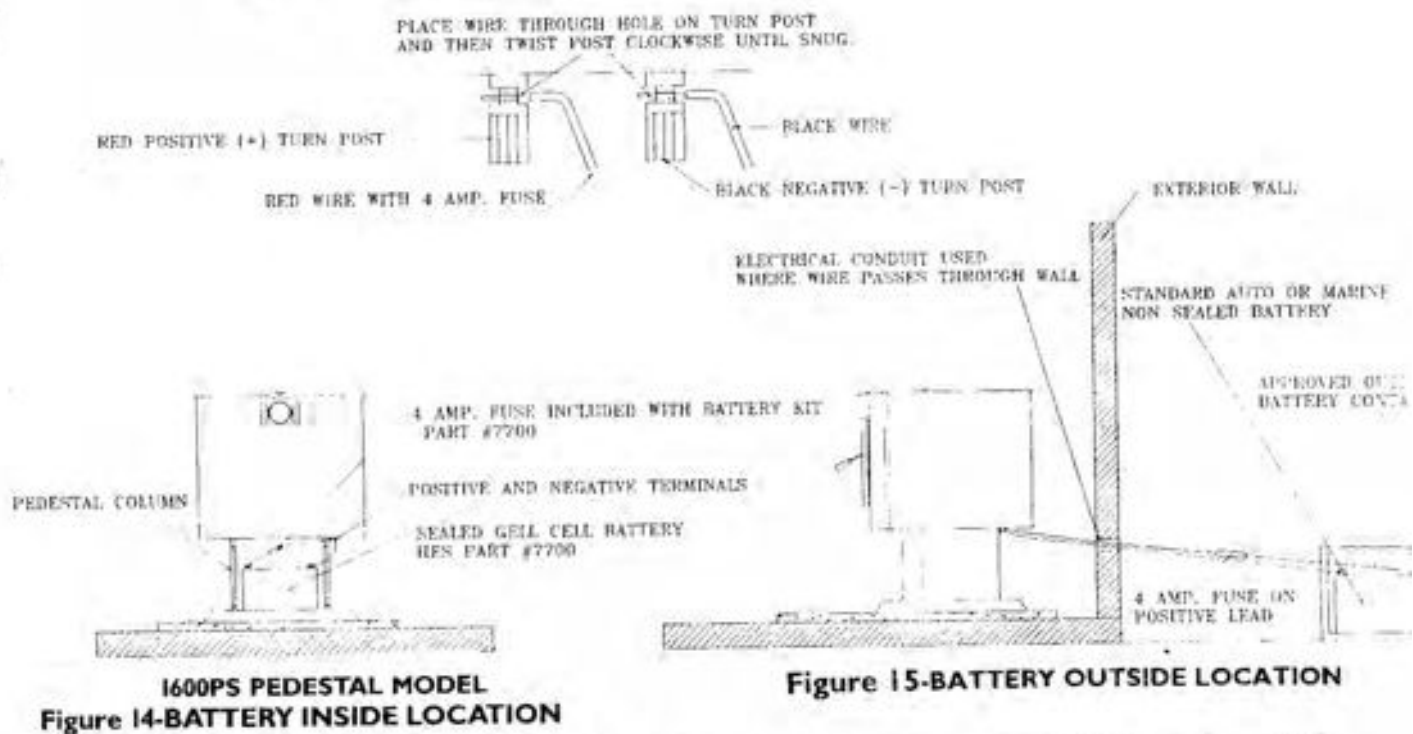
Unlike most standard pellet stoves the Classic 1600PS/Classic II is designed to operate using an optional 12 volt DC battery back-up. In the event of a power outage, the control circuitry will automatically switch over to the battery for continuous operation and will convert back to the house current when the power is restored. The system includes a trickle charger to maintain optional battery performance.

Note: Gel-cell type batteries are the only batteries approved for indoor use. This type battery has no liquid and is contained in a fully sealed case eliminating spills, hydrogen gassing and the need for maintenance. HES Part No. 7700 Indoor Gel-Cell Battery Pack can be installed inside the Model 1600PS pedestal and will provide up to 14 hours of continuous operation in the event of a power failure. See Figure 14. **Note:** The model Classic II lower profile pedestal design does not provide clearance for installation of the battery inside the pedestal as illustrated in Figure 14.

A heavy duty sealed automotive or marine battery may be used if located outside the house or structure being heated and placed in approved battery container. This type of battery can provide increased operation times. To determine the life cycle of an individual battery, simply divide rated amp hours of battery by 2.5. See Figure 15

INSTALLATION INSTRUCTIONS

1. Before connecting back-up battery, disconnect 110 volt power source supplying pellet stove.
2. Use 18 gauge or larger stranded wire for connecting the stove to the back-up battery. A 4 amp in-line fast-blow fuse should be used on the positive connecting lead to protect the battery from electrical power surges.
3. Connect wire from the negative (-) battery terminal to black negative (-) turn post located on bottom rear of the left hand side of the stove. (See Figure 14)
4. Connect wire from the positive (+) battery terminal to red positive (+) turn post.
5. Reconnect 110 volt power source. Your stove is now ready to operate on 12 volt back-up if a power outage occurs.



Note: The control system of the 1600PS/Classic II Pellet Stove is equipped with a 12 volt, continuous 120 milliamp Trickle Charge that automatically maintains the battery at full capacity or recharges the battery to full capacity after usage. The charger circuitry will operate as long as AC power is available, your stove does not have to be in use for charger to operate.

OPTIONAL THERMOSTAT INSTALLATION

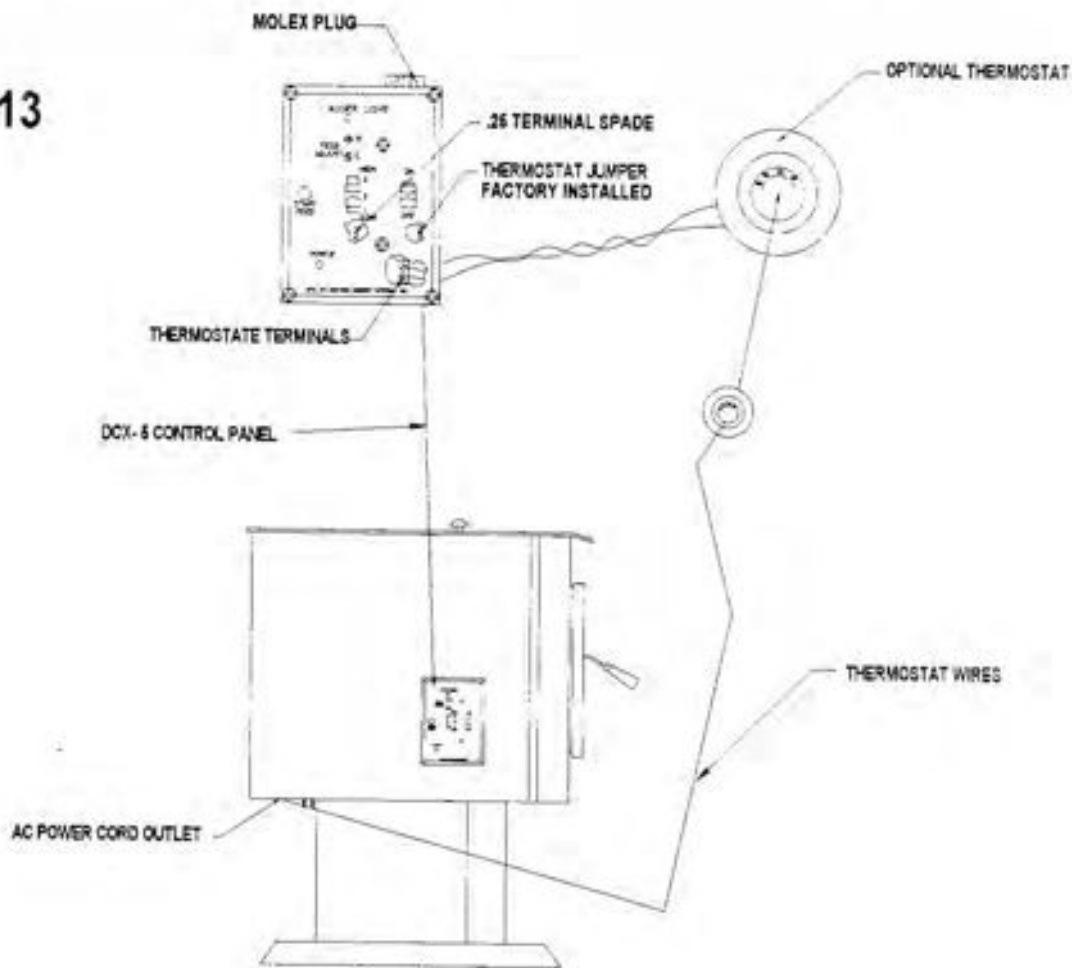
WARNING: DISCONNECT POWER SUPPLY BEFORE ATTEMPTING ELECTRICAL HOOK-UP!

1. Position the Thermostat on a wall ten to twenty feet away from the stove.
2. Route the connected Thermostat wires into the stove where the AC power cord enters.
3. Remove four (4) #6 Phillips screws from control panel. Carefully remove control panel, do not pull on the wire harness inside the stove.
4. Pull the Thermostat wires through power cord outlet to reach the control panel.
5. Remove the factory installed jumper on the on the circuit board pins.
6. Connect the Thermostat wires to the two terminals.
7. Place the Control Panel into the side panel cut-out. Secure with the four (4) #6 x 1/4 Phillips screws. Do not over tighten.
8. Reconnect power supply. Your stove is now ready for Thermostat operation.

NOTE: When the optional Thermostat is installed, your stove will cycle between HIGH and LOW if slide control knob is set on #3 HIGH position. If your slide control is set on the #2 MEDIUM position, the unit will cycle between MEDIUM and LOW.

WARNING: Do not connect stove to existing furnace thermostat system, use separate wall thermostat only for pellet stove.

FIGURE 13



OPERATING YOUR PELLET STOVE

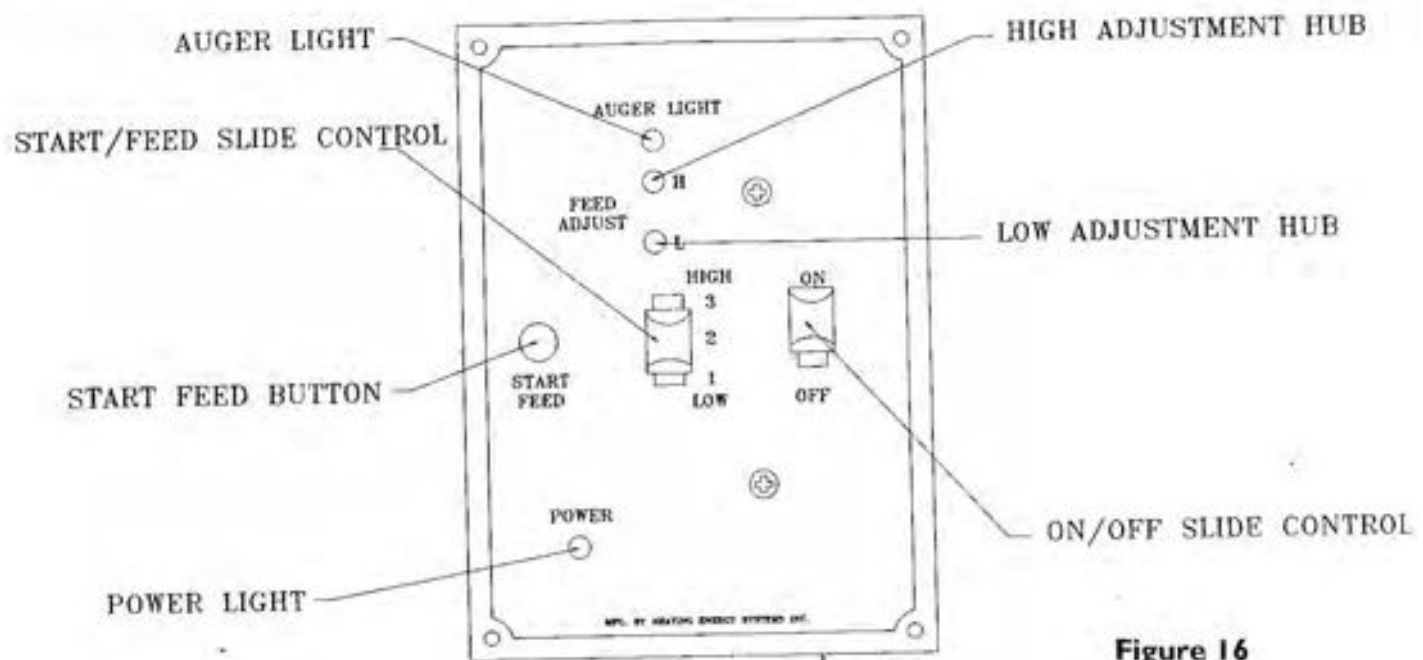


Figure 16

CONTROL PANEL

CONTROL PANEL FUNCTIONS

■ POWER LIGHT

When lit, this indicates that power is getting to the unit. The ON-OFF slide control knob must be in the "on" position for this light to be on.

■ SLIDE CONTROL KNOB

This three position switch controls both fan speed and pellet feed rates. The (3) "HIGH" position is the maximum setting. This can be adjusted up or down using the high adjustment hub marked "H". The (2) "MEDIUM" position is the medium feed setting. This can not be adjusted. The (1) "LOW" position is the minimum feed setting. This can be adjusted up or down using the low adjustment hub marked "L". The "ON-OFF" control knob is used to turn the unit on & off. This stove is equipped with automatic cool down circuitry, when the stove is turned off it will allow the fan to continue running until the correct "cool down" temperature is achieved.

■ MANUAL FEED CONTROL

This switch starts the automatic auger feed cycle. By holding the button in, the auger will run in continuous cycle mode. This feature is used when priming the auger is necessary. This button must be pushed for the auger to receive the command to run.

■ AUGER LIGHT

This light is on when auger is cycling. It is used to time the feed rates of your unit. See Adjustments section of this manual.

■ HIGH ADJUSTMENT HUB

This rotating dial adjusts the (3) "HIGH" feed rate. To increase the pellet feed rate, the hub should be turned clockwise. To decrease the pellet feed rate, the hub should be turned counter clockwise. See adjustment section of this manual for factory settings.

■ LOW ADJUSTMENT HUB

This rotating dial adjusts the (1) "LOW" feed rate. To increase the pellet feed rate, the hub should be turned clockwise. To decrease the pellet feed rate, the hub should be turned counter clockwise. See Adjustments section of this manual for factory settings.

OPERATING YOUR PELLET STOVE (cont)

PRIMING THE AUGER:

Priming the auger is required only when the unit is new or when the hopper has completely run out of fuel (pellets).

1. Make sure that the unit is connected to a 12 volt DC power source or a 115 volt AC power source. There is a green light located on the lower left section of the control panel, this light will stay on continuously after unit has been switched "ON" to indicate that power is getting to the unit. (See Figure 16)
2. Make sure there is no foreign objects inside hopper compartment.
3. Fully load hopper compartment with recommended pellet fuel.
4. Turn the ON-OFF Control knob to "ON" position.
5. Slide the control knob to any of the (1) "LOW" through (3) "HIGH" positions (you will hear the convection fan start to run).
6. Press and hold the start manual feed button (this will rotate the auger drive), keep the button pressed until the burn pot is approximately half full of fuel, this will insure the auger is fully primed. (See Figure 16) Empty burn pot back into hopper.
7. Slide the ON-OFF control knob to the "OFF" position. You are now ready to start a fire.

STARTING AND RUNNING YOUR APPLIANCE:

WARNING: When using gel type fire starter, do not use hand held lighter. Wooden matches are recommended.

NOTE: Each time the appliance is started, the burn pot should be checked for debris and the air holes cleared.

Recommended steps using wax covered wood chips as fire starter:

1. Open the fireview door and place small amount of fire starter in bottom of burn pot. Sprinkle small amount of pellet fuel on top of fire starter. Add another small amount of fire starter on top of pellet fuel and light firestarter. Once fire starter is burning, close the door.
2. After the pellets are burning freely, slide the ON-OFF control knob to the "ON" position and the feed control knob to the (1) Low position. Let the fire continue to build for approximately one minute, then press and hold the "START FEED" button for a few seconds (this starts automatic auger feed cycle) and slide the feed control knob the (3) "HIGH" position for at least 15 minutes. This allows burn chamber to reach operating temperature.
3. After following the starting instructions, set the desired burn rate by sliding the control knob slowly to the (1) "LOW", (2) MEDIUM, (3) "HIGH" position.

NOTE: The operating temperatures of this unit may vary with different types or grades of fuel used.

NOTE: FUEL - This heater is designed to operate using 1/4 inch/6 mm diameter pelletized wood fuels that comply with the Association of Pellet Fuel Industries standards.

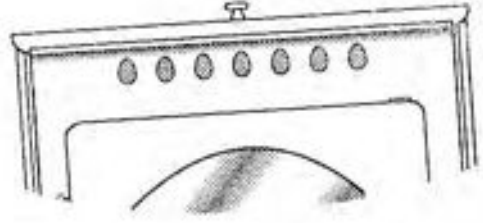
TURNING YOUR APPLIANCE OFF:

1. Slide the control knob to the (0) "OFF" position. The fan will automatically shut off after your appliance reaches the correct cool down temperature.

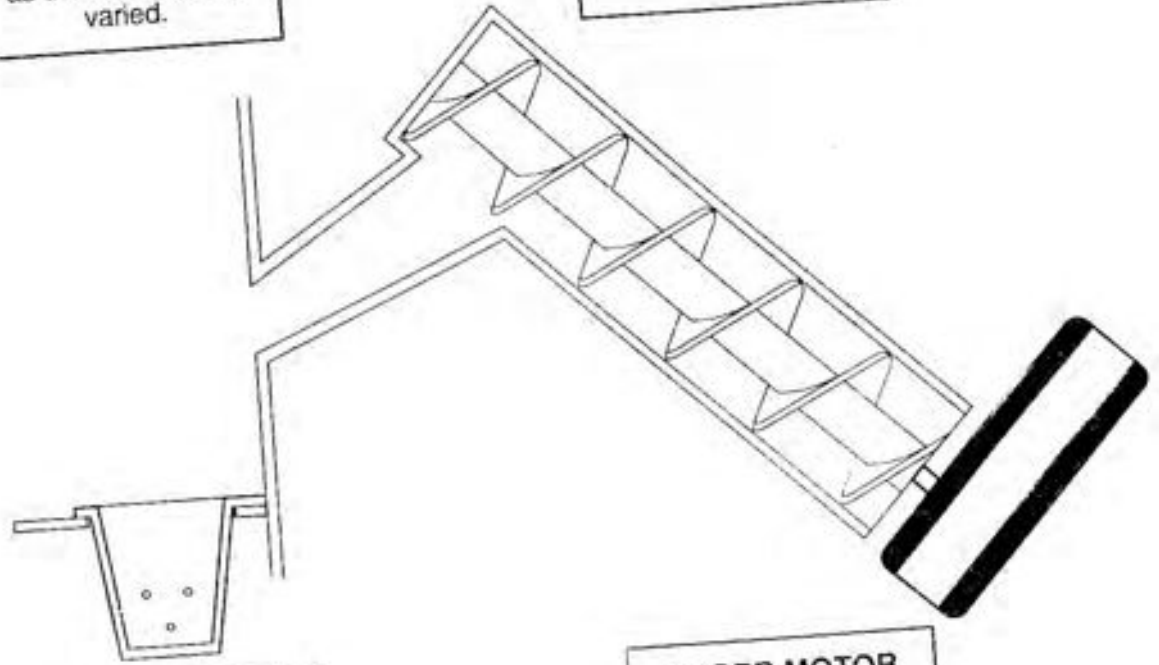
NORMAL OPERATING SOUNDS



BLOWER
The modern high efficiency fan may have a hum or pulsating sound, particularly on the high setting. this sound may change as the fan speed is varied.



HEAT EXCHANGE TUBES
You will hear air being forced through the heat exchange tubes by the convection fan.



BURN POT
As pellets feed to the burn pot, a light clinking sound may be heard.

AUGER MOTOR
When the auger feeds pellets you may hear the intermittant buzz of this motor running.

MAINTENANCE SCHEDULE PERFORMED WEEKLY

Prior to carrying out routine maintenance, the stove must be shut off and cooled enough to safely handle the parts before maintenance is performed.

HEAT EXCHANGER AND BAFFLE PLATE CLEAN-OUT

To maintain optimum performance and heat output from your stove the heat exchanger/baffle plate area located in the upper firebox must be cleaned weekly to remove accumulated deposits of fly ash. Failure to remove the fly ash will restrict exhaust flow and may activate the draft flow pressure switch (blocked exhaust) or the overheat sensor (restricted exhaust produces lazy, oversized flame pattern) shutting down your stove.

To clean the baffle area, insert the removable handle (3/8" Dia steel rod with wooden handle) into baffle guide (this is the steel pipe with 3/8" Dia hole, located inside the upper firebox, directly below the heat tubes and is attached to the sliding baffle plate). Slide the baffle guide forward in a series of back and forth movements until fly ash stops falling, approximately 10-15 times. Note: The handle guide and baffle plate should travel approximately 1/2". If you have lost the removable handle you may substitute a screw-driver, or just use your hands (see Figure 17). Use shop vacuum to remove fly ash from bottom of burn chamber. Use a dry paint brush (do not use any chemicals that remove creosote) and brush off the air exchanger tubes for optimum heat output.

BURN POT

To inspect and clean the burn pot, remove the burn pot and remove any build up of ash using a brush. If clinkers are present, scrape and clean to free the air passages. Vacuum the cavity under the burn pot and bottom of burn chamber.

NOTE: The amount of fly ash build-up in the stove is directly related to ash content of the fuel you are using. See Videotape

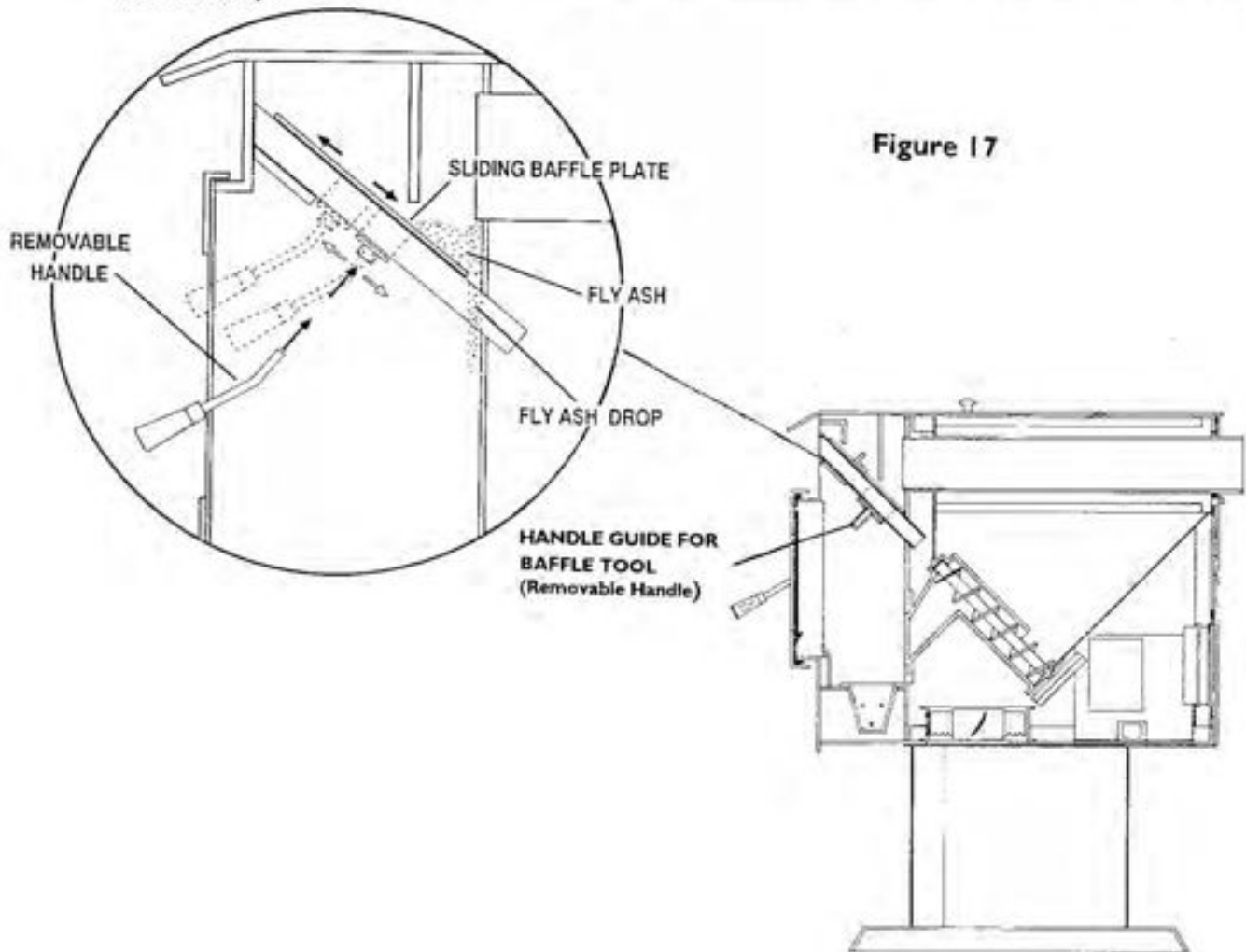


Figure 17

MAINTENANCE SCHEDULE PERFORMED WEEKLY (cont)

FAN SCREEN

Inspect for lint build-up, clean fan screen using a vacuum. Failure to do this could result in an over-feeding problem.

CHIMNEY/WIND CAP

Inspect chimney/wind cap for blockage. The fine mesh spark arrestor screen used in some caps tend to hold condensation on the screen and will collect fly ash, causing back pressure and poor stove performance.

GLASS MAINTENANCE

Should soot or creosote deposits occur on the glass during operation, clean when the stove is cold with a non-abrasive cleaner. If the glass should break, wait until the stove and glass is cool before removing. Do not leave the fire unattended during this cool down period as sparks could escape through broken glass. Do not operate the appliance with broken glass!

To replace the glass, remove the six retaining nuts, using a 3/8" socket wrench, or nut driver. Remove the holding frame and door glass. Use only HES Part No. 9200 Ceramic Door Glass when replacing the glass!

Position door glass and gasket against the inner door surface between the (6) studs. Replace holding frame and retaining nuts (do not tighten nuts). Center the glass inside the holding frame and tighten each nut, beginning with the top nut and working around the perimeter of the window. CAUTION - Do not over-tighten the nuts - snug with slight pressure only! After first fire, recheck nuts to ensure they are snug.

NOTE: Inspect the gaskets on the door and glass. If they show signs of deterioration, replace them. See your dealer for the proper type and size of the gaskets.

MAINTENANCE SCHEDULE - MONTHLY OR AFTER 1000 lbs OF FUEL USED

Make sure the appliance has cooled down sufficiently to handle the parts with safety.

PREPARATION FOR 1000 LB (1/2 TON) MAINTENANCE:

1. Repeat the weekly maintenance schedule.

CHIMNEY/EXHAUST SYSTEM

1. Check the chimney system for soot and creosote. Remove cap from clean-out tee to determine build-up of soot and fly ash. Lightly tap outside of tee and chimney pipe to dislodge any accumulated fly ash. **NOTE:** The use of 90 degree elbows without provisions for a clean-out tee is not recommended.

MAINTENANCE SCHEDULE - ONCE PER HEATING SEASON or AFTER 6000 lbs OF FUEL USED

Make sure the appliance has cooled down sufficiently to handle the parts with safety.

PREPARATION FOR ANNUAL OR 6000 LB (3 TONS) MAINTENANCE:

1. Unplug the unit and disconnect the exhaust and inlet connections at the rear of the appliance, using shop vacuum remove all soot and fly ash from horizontal exhaust pipe and remove clean out tee cap and clean.
2. Remove all of the pellets from the hopper (it will be easier if you let your unit run out). Using a shop vacuum, clean the hopper and auger tube opening of all sawdust and fines.
3. Repeat the weekly maintenance schedule.
4. Repeat the monthly - 1000 lb maintenance schedule.

CHIMNEY SYSTEM

Check the chimney system for soot and creosote build-up, and have it cleaned by a certified chimney sweep if necessary.

**MAINTENANCE SCHEDULE - ONCE PER HEATING SEASON
or AFTER 6000 lbs OF FUEL USED (cont)**

DOOR SEAL REPLACEMENT

After extensive use, the ceramic rope door seal material may require replacement. In this event, the following procedure is advised:

1. Remove the door from the stove, simply lift it upwards, off its hinge pins, while in open position. Remove the old gasket material from the door and scrape any glue residue from the surface. The surface must be clean and free of scale, dirt or glue to assure proper application.
2. Apply a thin bead of stove cement (about 1/8" thick) around the gasket surface of the door, in a zig-zag pattern (see Figure 18). The bead must remain at least this thick to permit it to absorb into the rope seal. Do not spread the bead of glue out.
3. Apply the rope seal material to the gasket surface, beginning at the upper corner where the door hinges, and work the seal around the door. To form a narrower gasket width, simply stretch the rope as you apply it. By compressing the rope, a wider gasket can be produced. The gasket should be formed as wide as possible for best airtight sealing and to assure small misalignments between the door jamb and gasket material are compensated for. As the rope seal is applied around each corner, push the material into the corner to achieve a full seal (see Figure 19). Each corner should be completely filled so that no gaps exist which will permit air leakage. Once you reach the beginning point, cut and remove the remaining rope. The end of the rope should be flush against the starting piece (see Figure 19). Do not overlap the ends or air leakage will result.
4. Close the door and secure tightly against the door jamb on the stove (close the latch). Re-open the door and inspect the position of the impression left by the door jamb in the rope seal. Ideally, it should be centered in the middle of the rope seal around the door. The jamb must be contacting the rope seal entirely around the door for a good airtight seal. If the jamb is not contacting the rope seal in one or more areas, reposition the rope to assure contact. Once the seal is properly lined up to the jamb, close and latch the door.
5. Allow the stove cement to harden for 24 hours with the door closed and latched. Recheck the seal again after your first fire.

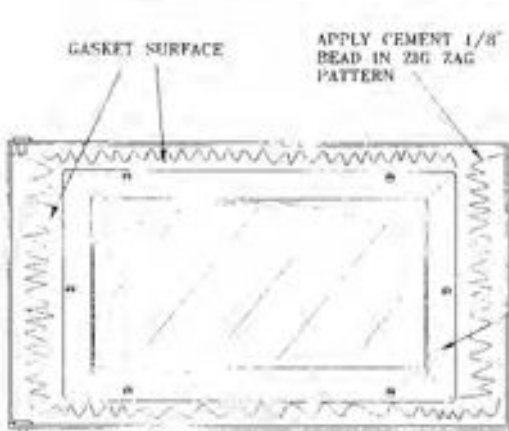


Figure 18

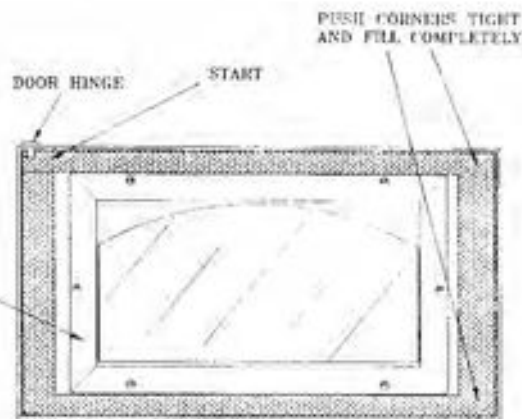


Figure 19

ADJUSTING YOUR PELLET STOVE

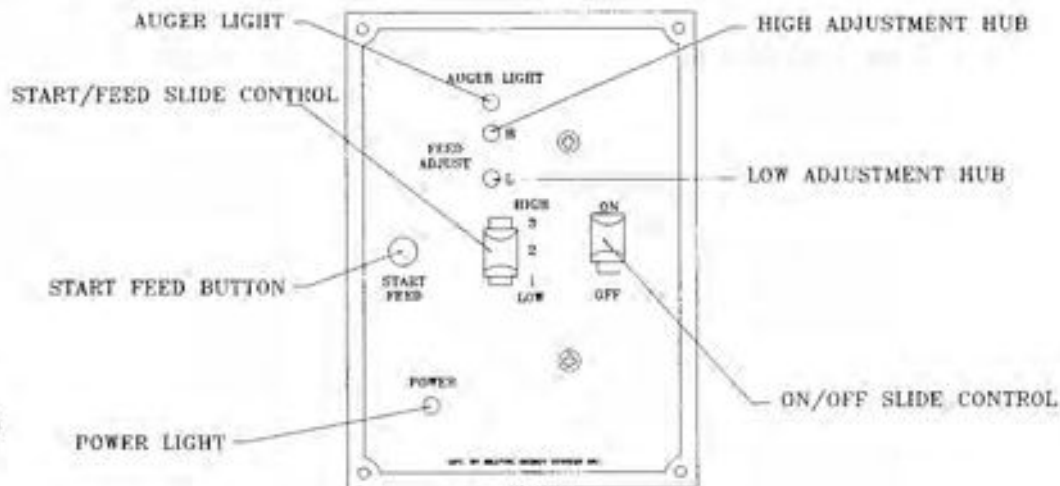


Figure 20

Each CLASSIC 1600PS/CLASSIC II unit is pre-tested and tuned for proper operation at the factory and adjustments should not be necessary. However, should any adjustments be necessary, follow the procedures outlined in this manual.

FEED RATE ADJUSTMENTS

RECOMMENDED TOOLS - Stop watch, miniature screwdriver.

NOTE: The fan must be connected for the stove to operate. If fan wires are crossed or disconnected, no power will be delivered to the auger motor.

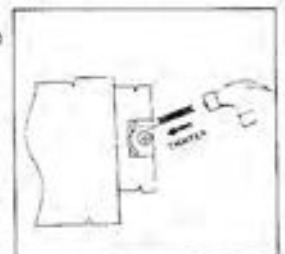
1. Connect unit to the 115 volt AC power source (or 12v DC power supply).
2. Slide the "ON-OFF" control knob to the "on" position, slide the Feed control to the #1 low position. Press and hold the "Start Feed" button for a few seconds, then release the button (this starts the feed cycle). When the auger motor is cycling (feeding pellets) the green LED auger light at the top of the control panel will be lit.
3. Using a stop watch, check the amount of time the light stays off with the switch still on the #1 position. The time should be 11.4 seconds off. If the timing is off by ± 0.2 seconds, reset the timing to the 11.4 setting by turning the "FEED ADJUSTMENT" hub through the hole on the control panel labeled "L" (clockwise rotation will increase timing and counter clockwise will decrease timing). See Figure 20
4. Slide the control knob to the #2 "MEDIUM" position and check the timing. This should run between 7.0 and 7.4 seconds. **NOTE:** The "MEDIUM" will self adjust between "LOW" and "HIGH". See Figure 20
5. Slide the control knob to the #3 "HIGH" position and check the timing. The timing should be set at 5.2 seconds (± 0.2 seconds). If the timing is off by ± 0.2 seconds, reset to the 5.2 setting by turning the "FEED ADJUSTMENT" hub through the hole on the control panel labeled "H" (clockwise rotation will increase timing and counter clockwise will decrease timing). See Figure 20

DOOR ADJUSTMENT

The door on your stove is designed to close snugly against the special ceramic rope seal to permit airtight operation. If you discover that your door is not closing securely, the ceramic seal may be worn out or damaged, or the door catch may simply require adjustment.

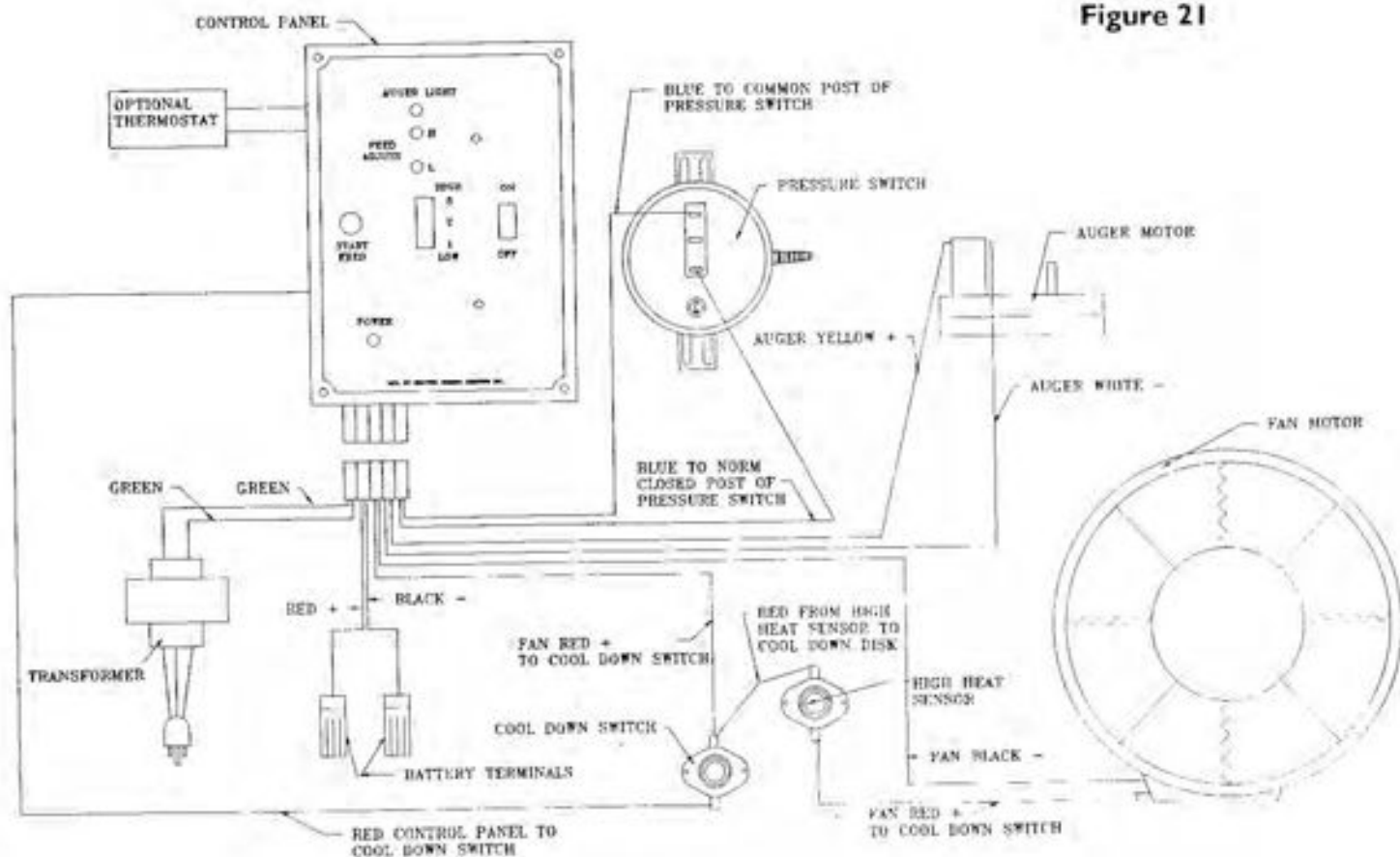
A poor seal will cause loss of combustion air and reduce stove performance. The fire will burn with a lazy orange flame. A good seal is evident if an impression is made in the ceramic material from the door jamb, without any gaps, around the entire perimeter of the door. If you discover gaps or your door appears loose, the possibility of unwanted air leakage is present.

A tighter seal can be achieved by bending the door catch inward or towards the stove body. Using a small hammer and flat punch, lightly tap door catch to bend toward stove body. Close door and inspect for tighter seal. Repeat this step if necessary, until a tight seal is achieved.



WIRING DIAGRAM

Figure 21



6. AUTOMATIC SAFETY FEATURES:

A. POWER OUTAGES

During a power outage the unit will shut itself down safely. If you have the Battery Back-up System, the unit will automatically convert to that system.

B. OVERHEATING

This unit is equipped with an overheat sensor. If the unit becomes overheated it will shut itself down safely. The appliance will not restart until it has cooled to a safe level. It will be necessary to restart the unit if this occurs. If this happens frequently, turn the unit off and consult with your dealer to determine the problem.

C. BLOCKED FLUE OR DOWN DRAFT PROTECTION

This unit is equipped with a draft flow pressure switch. If a draft restriction or down draft occurs, the auger feed system will automatically shut off. You will need to locate the source of the restriction and correct it in order for the pressure switch to allow the auger feed system to operate.

D. AUTOMATIC COOL DOWN SENSOR

This unit is equipped with an automatic cool down sensor. When the stove is turned to the (0) "OFF" position, this sensor will allow the unit's fan to continue to run until the correct cool down temperature is achieved.

TROUBLESHOOTING

SAVE TIME AND MONEY - CHECK THIS LIST BEFORE YOU CALL FOR SERVICE

To eliminate unnecessary service calls, first read all the instructions in this manual carefully. The following checklist provides possible solutions to common occurrences that are not the result of defective workmanship or materials in the appliances. Always make sure unit is plugged in and that circuit breaker has not tripped.

If you do have a problem that you cannot fix yourself, call the factory Customer Service Dept at (503) 755-4004 for assistance. When calling, have this manual handy with the model, serial number and purchase date of your appliance.

PROBLEM	POSSIBLE CAUSE - SUGGESTED SOLUTION
<p>Burn pot overfills on start-up</p> <p>or</p> <p>Loud rumbling sound that does not stop</p>	<ol style="list-style-type: none"> 1) Burn pot full of fly ash build up. Clean burn pot, making sure that air holes are unplugged. 2) Control switched to "high" before pellets are burning freely. Make sure fuel is burning before switching controls to "high". 3) Door ajar. Make sure door is sealed securely. See Door Adjustment section of this manual. 4) Fan screen blocked. inspect fan screen to ensure that accumulative lint or debris has not blocked the screen. See Maintenance Schedule section of this manual. 5) Pellet Feed rates set too high. See adjustments section of this manual. 6) Maintenance not performed. See Maintenance section of this manual (pages 22-24). 7) Stove not installed per Manufacturers Instructions. Follow the instructions outlined in this manual. 8) Wet pellets. Check pellets before purchasing them. Make sure the dealer stores them inside.
<p>Fire smolders</p> <p>Fire goes out after hours of use</p>	<ol style="list-style-type: none"> 1) Burn pot overfilled. Refer to previous check items. 2) Restriction in combustion intake air supply. Check for blockage on fan screen and outside air supply (if used). 3) Pellets are wet, or pellets contain high ash content. Change to higher quality premium grade pellet and keep in a dry storage area. 4) Restricted exhaust system. Check for partial blockage in heat exchanger/baffle, exhaust pipe or clean out tee. See maintenance section of this manual (pages 22-24).
<p>Smoke or paint odor in house</p> <p>Soot or fly ash in the house</p>	<ol style="list-style-type: none"> 1) As the stove heats for the first time, the paint will produce an odor as the paint cures. This is normal, and will disappear after a few hours. 2) Check for leaks in chimney system, seal any leaks with room temperature vulcanizing silicone sealer (RTV). 3) The window is being cleaned when stove is operating. Turn off stove before cleaning to prevent dispersion of ash and soot into the room.

TROUBLESHOOTING (cont)

PROBLEM	POSSIBLE CAUSE - SUGGESTED SOLUTION
Fire burns with lazy orange flame	<ol style="list-style-type: none"> 1) Check burn pot for build up of fly ash or clinkers blocking combustion air holes. 2) Restriction in exhaust flow. Remove fly ash from upper baffle per weekly maintenance schedule (page 22). 3) Check for partial blockage in exhaust pipe or clean out tee (page 24). Clean fan screen. 4) Check chimney/wind cap for blockage. 5) Check gasket seal around door using a thin strip of paper one inch wide. Open the door and close it on the paper strip. A moderate amount of friction should be felt as the strip is pulled. Repeat this at various locations around door gasket. A small adjustment may be required to ensure a good seal. Replace door gasket if necessary. 6) Check glass seal. When stove is cool, place a hand on each side of glass and check for movement.
Auger feed system or fan system will not operate	<ol style="list-style-type: none"> 1) Intermittent power failure has shut unit off. If connected to back-up battery, check battery connections and 4 amp fuse. Be sure battery is charged. 2) There is no power to stove. Check that the stove is plugged in to outlet. Check to see if circuit breaker has tripped. 3) Automatic safety pressure switch has shut off auger feed system. Check for restricted exhaust flow. Inspect upper baffle, exhaust pipe, or clean out tee for build up of fly ash. See Maintenance section of this manual (pages 22-24). 4) Automatic safety overheat sensor has tripped and shut auger feed and fan system down. Check pellet feed rate for correct setting. See Pellet Feed Rate Adjustment section of this manual. Perform routing maintenance.
Pellets not feeding	<ol style="list-style-type: none"> 1) Auger not primed. Prime auger. 2) Hopper empty. Refill hopper. 3) Hopper running out of fuel. Check to be sure enough fuel is in hopper. Note: Some brands of pellets will cause a coning effect inside hopper (pellets stick to hopper sides instead of falling to auger pick up). 4) Restricted exhaust system. Check for partial blockage in exhaust pipe or clean out tee. See Maintenance section of this manual (pages 22-24). 5) Manual feed button has not been pressed. Press and hold Manual feed button until pellets are feeding into burn pot. 6) There is no power to the stove. Check that the stove is plugged into outlet. Check to see if your circuit breaker has been tripped.

REPLACEMENT PARTS LIST

All parts listed may be ordered from your TRAILBLAZER dealer. For replacement parts, always give the following information:

1. PART NUMBER
2. PART DESCRIPTION
3. SERIAL NUMBER
4. DATE OF PURCHASE

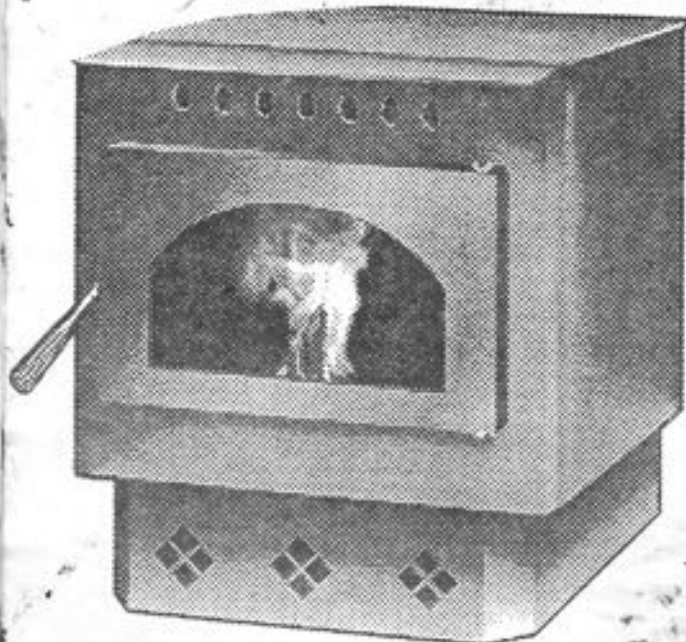
<u>PART NUMBER</u>	<u>PARTS DESCRIPTION</u>
200010	SLIDE CONTROL KNOB
200011	MANUAL FEED CONTROL BUTTON CAP
201053	TEK SCREW 10-16 X 1/2 PHILLIPS
301011	TRI DELTA PRESSURE SWITCH
302001	PRESSURE SWITCH TUBE SET
305048	DCX-5 CONTROL PANEL
305046	TRANSFORMER ASSY W/ WIRES
305029	FAN BLOWER 260 CFM
305047	AUGER MOTOR
305042	COMPLETE STEEL AUGER ASSEMBLY
311000	AUGER SHAFT
204000	BRONZE BUSHING UPPER AUGER
204001	DELREN BUSHING LOWER AUGER
202056	HITCH PIN
9200	DOOR GLASS NEOCERAM W SEAL
914017	BURN POT
305044	215F N.C. SNAP DISC
305038	110F N.O. SNAP DISC
9000	DOOR SEAL - CERAMIC ROPE
5400	DOOR ASSY - FIREVIEW
5700	DOOR ASSY - FIREVIEW (GOLD



TRAILBLAZER

Solid Fuel Stoves

set # 05245



CLASSIC II



1600PS

After reading this manual, if you have any questions concerning the operation of your stove, please write or call:



HEATING ENERGY SYSTEMS, INC.
P.O. BOX 593 • CLACKAMAS, OREGON 97015

503-786-4004

Version 2.05