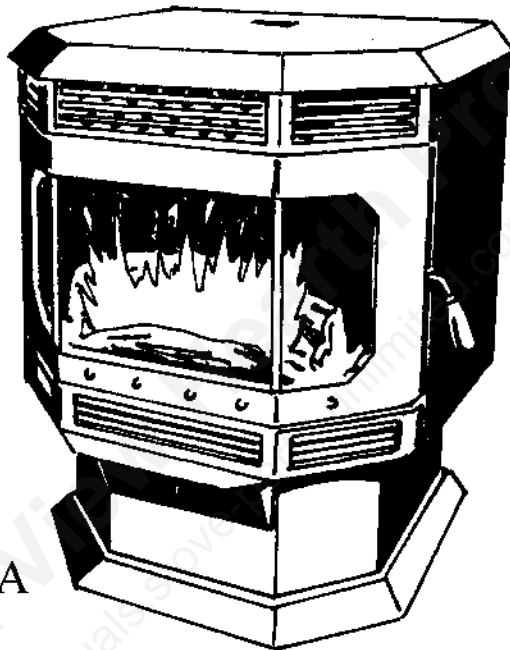




# BRECKWELL

## *Hearth Products*



P2700FSA

# OWNER'S MANUAL

**WARNING:** If your appliance 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.

**FACTORY RECOMMENDS PROFESSIONAL INSTALLATION**

ALL UNITS TESTED AND LISTED BY

**Warnock Hervey**



Manufactured by  
Breckwell Hearth Products  
P.O. Box 24910  
Eugene, Oregon 97402

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C-L-1001 250 8/99

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**Thank you for purchasing the Breckwell Pellet Burning Stove.** You are now prepared to burn wood in the most efficient, convenient way possible. To achieve the safest, most efficient and most enjoyable performance from your stove, you must do three things: 1) Install it properly; 2) Operate it correctly; and 3) Maintain it regularly. The purpose

of this manual is to help you do all three. **PLEASE read this entire manual before installation and use of this pellet fuel-burning room heater. Failure to follow these instructions could result in property damage, bodily injury or even death.**

**Keep this manual handy for future reference.**

## 1.0 INTRODUCTION

This stove has been independently tested and approved in accordance with the relevant portions of UL 1482-1988 "Standard for Room Heaters," ASTM E1509-93, Oregon new rules for mobile homes (814-23-900 through 814-23-909) and installation as a stove heater.

This pellet stove, when installed, must be electrically grounded in accordance with local codes, or in the absence of local codes, with the *National Electrical Code, ANSI/NFPA 70.*

This appliance is designed specifically for use only with pelletized wood. It is designed for residential installation according to current national and local building codes as a freestanding room heater. It is also approved as a mobile home heater which is designed for connection to an outside combustion air source.

The stove will not operate using natural draft or without

a power source for the blower systems and fuel feeding systems and must not be burned with any type of coal (see section 3.1).

This stove is designed to provide the optimum proportions of fuel and air to the fire in order to burn free of smoke and soot. Any blockage of the air supply to or from the stove will seriously degrade the performance and will be evidenced by a smoking exhaust and a sooting window. For the best operation the ash content of the pellet fuel should be less than 1% and the calorific value approximately 8200 BTU/LB. Avoid high ash content fuels because this will rapidly fill up the burn pot and eventually cut off the combustion air supply.

Commercial and industrial installations of Breckwell Pellet Stoves should not be used since operational control is often not well managed in these settings.

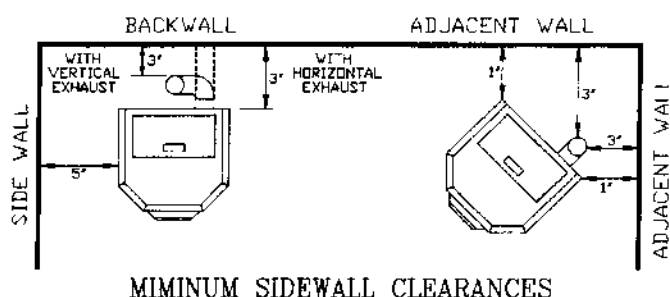
## 2.0 INSTALLATION

### 2.1 PREPARATION

Factory packaging must be removed, and some minor assembly work is required prior to installation. Access to the rear of the stove is necessary.

Foam protective blocks must be removed from all blowers and gear motor. **This is a safety precaution.**

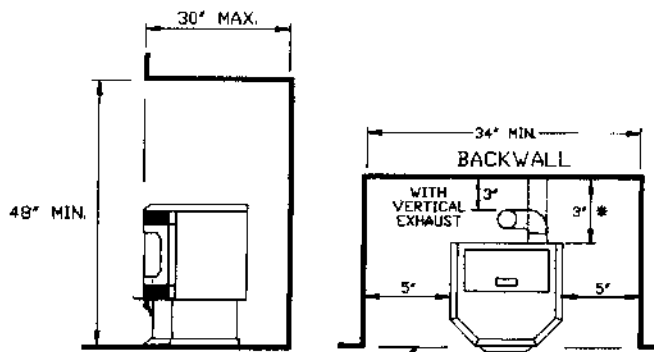
**NOTE:** Normally, your dealer will perform these functions.



### 2.2 CLEARANCES

The Breckwell P2700FSA has been tested and listed for installation in residential, mobile home and alcove applications.

**FLOOR PROTECTION (P2700FSA)** minimum 24" wide by 29" deep. The stove must be placed on a continuous

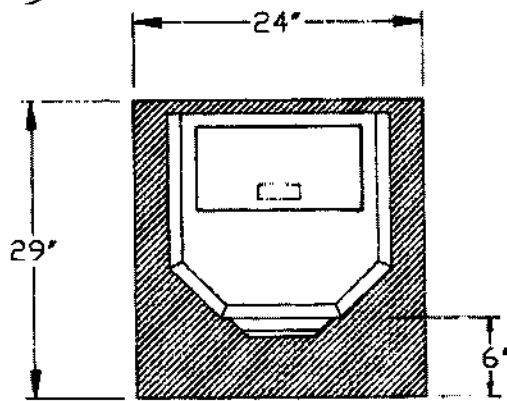


STOVE DOOR FACE MUST BE EQUAL TO OR PROTRUDE OUT FROM FACE OF ALCOVE.

**ALCOVE CLEARANCES**  
\* WITH HORIZONTAL EXHAUST

(grouted joints) noncombustible material such as ceramic tile, cement board, brick, 3/8" millboard or equivalent, or other approved or listed material suited for floor protection. Check local codes for approved alternatives.

Clearances are measured from the sides, back and face (door opening) of stove body (see Figure 1).



**FLOOR PROTECTION**  
(MINIMUM 24" WIDE X 29" DEEP)

**Figure 1**

**DO NOT USE MAKESHIFT MATERIALS OR COMPROMISES IN THE INSTALLATION OF THIS UNIT. INSTALL VENT AT CLEARANCES SPECIFIED BY THE VENT MANUFACTURER.**

**2.3 COMBUSTION AIR SUPPLY**

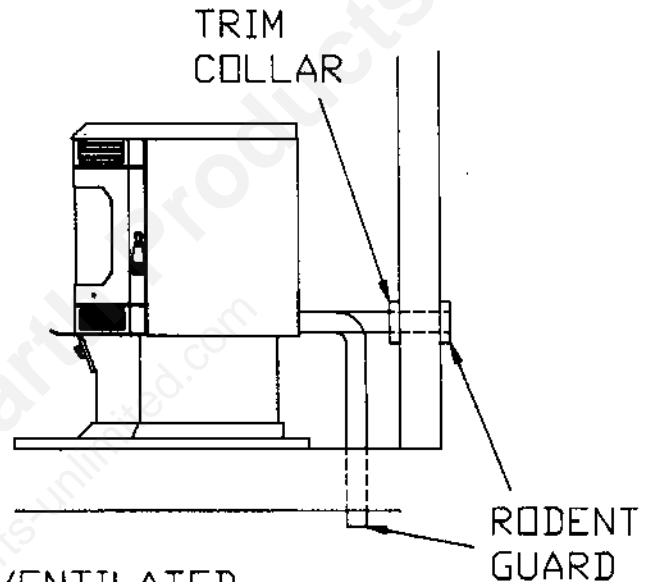
For a mobile home installation the stove must be connected to an outside source of combustion air. A 1 3/4" inside diameter metallic pipe, either flexible or rigid, may be attached to the inlet at the stove's rear (see figure 2). A rodent guard (minimum 1/4" wire mesh)/wind hood must

be used at the terminus (see figure 2a). All connections must be secured and air tight by either using the appropriately sized hose clamp and/or UL-181-AP foil tape.

For mobile home installations only: 1 1/4" inside diameter pipe may be used for the first 5 feet of combustion air supply run. From 5 to 10 feet use 2 1/4" inside diameter pipe. No combustion air supply run may exceed 10 feet.

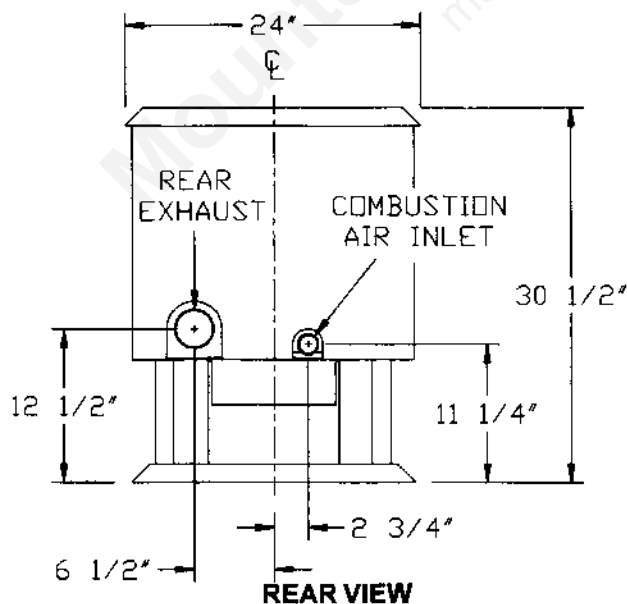
**Sources of Outside Combustion Air**

1. A hole in floor near stove rear terminating only in a ventilated crawl space.
2. A hole in the wall behind the stove.



**VENTILATED CRAWL SPACE**

**Figure 2a**



**REAR VIEW**  
**Figure 2**

**2.31 WHEN OUTSIDE AIR IS NOT USED**

If a metallic pipe is not used for outside air on non-mobile home installations, then refer to your local or state code for proper application of a closeable outside air register.

**2.4 VENTING**

The Breckwell P2700FSA is certified for use with listed TYPE L-Vent, 3" or 4" diameter in size. The stove was tested with Simpson Duravent brand. Class "A" chimney is not required. Refer to the instructions provided by the vent manufacturer, especially when passing through a wall, ceiling or roof.

All vent connector joints must be secured with a minimum of 3 screws. All horizontal connector joints must be sealed with UL-181-AP foil tape.

**DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.**

Do not install a flue damper in the exhaust vent of this unit.

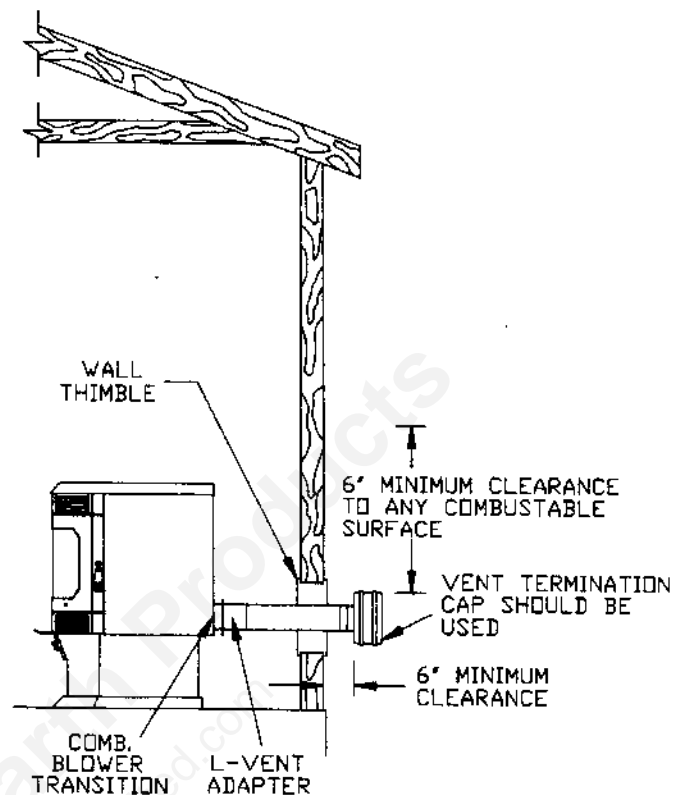
This is a pressurized exhaust system. The pipe joints should be sealed to ensure consistent performance and avoid smoke spillage.

### Equivalent Vent Length (EVL)

The longer the run of pipe in your installation (both with inserts and freestandings), the more restriction there is in the system. Therefore, larger diameter pipe should be used.

- Use 4" pipe if you have more than **15 feet** of equivalent vent length.
- Horizontal runs shall not exceed 10' of EVL.
- Recommended vertical runs to be minimum of 8'.
- To calculate EVL, use the following conversions:
  - 90° elbow or "T" = 5 equivalent feet
  - 45° elbow = 3 equivalent feet
  - Horizontal Pipe Run = 1 equivalent foot per actual foot
  - Vertical Pipe Run = 0.5 equivalent foot per actual foot

**NOTE:** At altitudes above 3,000 feet, we suggest the use of 4" diameter vent at an EVL of 7 feet or more.



**Figure 3**

## 2.41 P2700FSA INSTALLATIONS

### A. HORIZONTALLY THROUGH WALL (See Figure 3)

**NOTE:** Follow L-Vent chimney manufacturer's instructions.

1. Position stove, adhering to clearances shown in section 2.2.
2. Locate position of hole in wall, directly behind stove's exhaust vent (see Figure 2).
3. Install L-Vent wall thimble per L-Vent manufacturer's instructions.
4. Attach enough pipe to penetrate and extend at least 6" beyond exterior walls. An 8-foot vertical pipe run is suggested where possible to reduce the possibility of smoke leakage in the event of a power failure.
5. Attach cap and seal outside wall thimbles with non-hardening waterproof mastic.
6. Termination should not be located so that hot exhaust gases can ignite trees, shrubs, or grasses or be a hazard to children. Exhaust gases can reach temperatures of 500°F and cause serious burns if touched. Locate terminations: a) not less than 3 feet above any forced air inlet located within 10 feet; b) not less than 4 feet below or horizontally from, or one foot above, any door, window or gravity air inlet into any building; c) not less than two feet from an adjacent building and not less than 7 feet above grade when located adjacent to a public walkway. Mobile home installations must use a spark arrester.

### B. VERTICALLY WITH NEW CHIMNEY SYSTEM

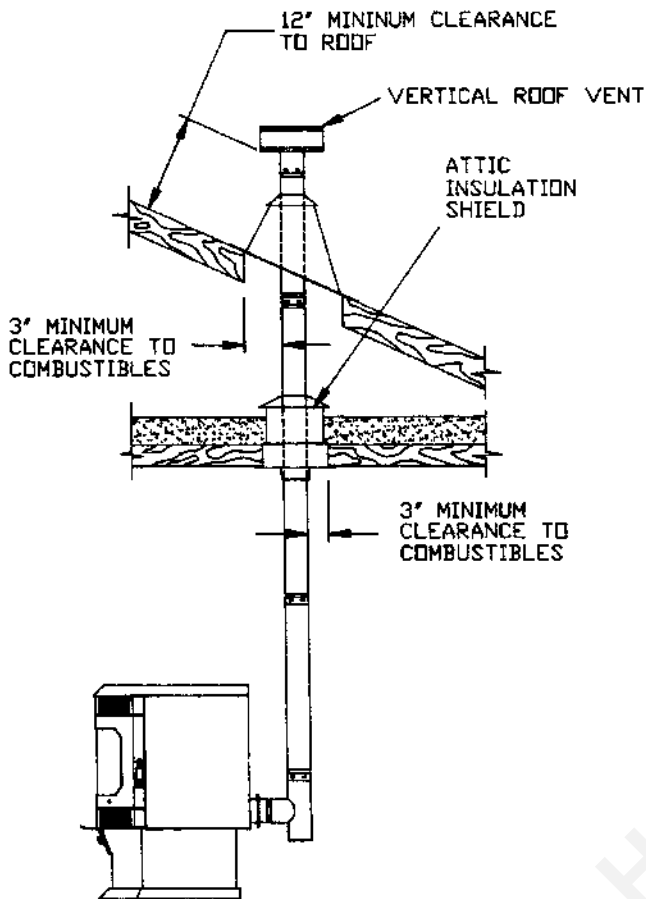
(See Figure 4)

**NOTE:** Follow L-Vent chimney manufacturer's instructions.

**OPTION:** To achieve a center vertical installation two 45° elbows can be used to offset the pipe from the exhaust outlet to the rear center of the stove.

**OPTION:** Install L-Vent elbow in place of clean-out tee. Locate stove. Drop plumb bob to center of tee outlet, mark point on ceiling. Install ceiling support and L-Vent pipe per L-Vent manufacturer's instructions.

1. Always maintain 3" clearance from combustible materials. When passing through additional floors or ceilings, always install firestop spacer.
2. After lining up for hole in roof, cut either round or square hole in roof, always 3" larger all the way around pipe. Install upper edge and sides of flashing under roofing materials, nail to the roof along upper edge. Do not nail lower edge. Seal nail heads with non-hardening waterproof mastic.
3. Apply non-hardening, waterproof mastic where the storm collar will meet the vent and flashing. Slide storm collar down until it sits on the flashing. Seal and install cap. Mobile home installations must use a spark arrester.



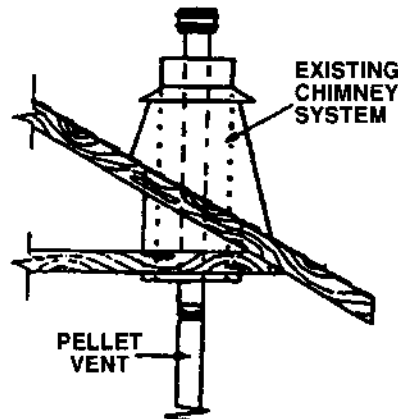
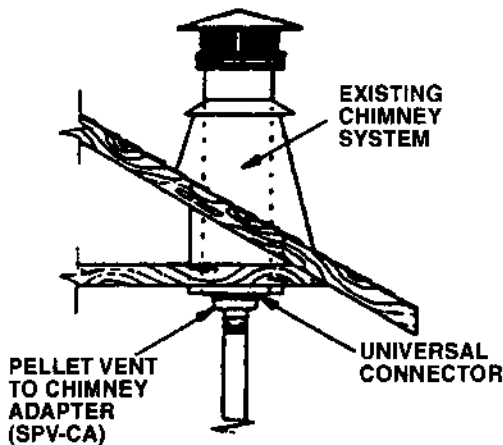
**VERTICALLY WITH NEW CHIMNEY**

**Figure 4**

**C. VERTICALLY INTO EXISTING CHIMNEY SYSTEM**

(See Figure 5)

Adapters are available to adapt from 3" L-Vent to 6" or 8" Class-A chimney. As an alternative, 3" or 4" L-Vent can be run inside existing chimney to termination. This is the preferred method. Follow guidelines for equivalent vent length.



**Figure 5**

**D. VERTICALLY INTO EXISTING MASONRY FIREPLACE**

**NOTE:** Follow L-Vent chimney manufacturer's instructions.

1. Have the masonry chimney inspected by a qualified chimney sweep or installer, to determine its structural condition.
2. You will need a pipe length equal to the chimney height from the hearth. If outside combustion air is to be used, you will need a pipe length equal to the chimney height plus 18 inches.

Install a blanking plate and the chimney pipe, and if used the outside air pipe, as shown in figure 6.

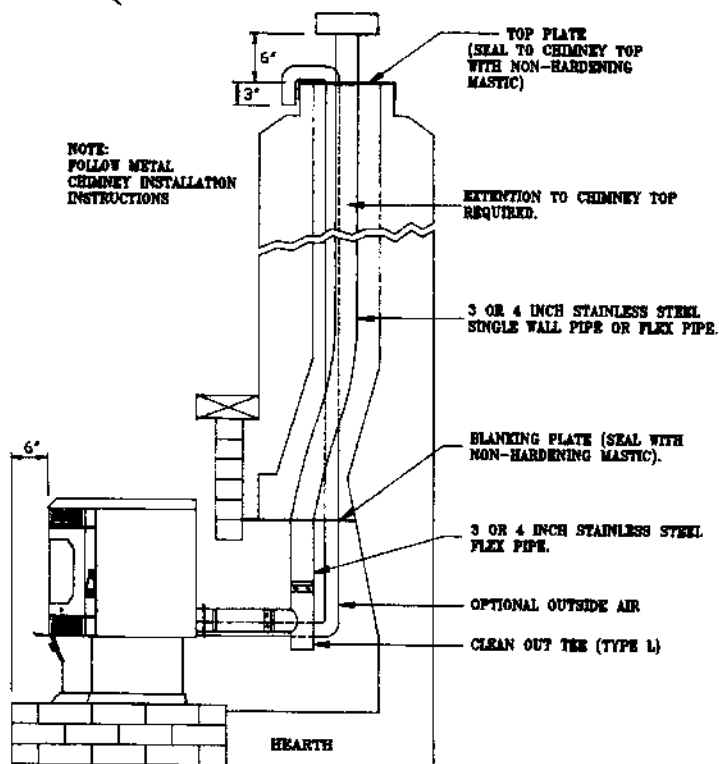
Attach the DuraVent adapter, a section of pipe and clean out tee, making sure the clean out tee is center in the chimney flue area. Use RTV, metallic tape, and a minimum of three self tapping screws at all joint connections to ensure a tight seal.

3. Position the stove, adhering to the clearances in section 2.2.
4. Measure and build chimney top plate. Cut out holes for chimney pipe, and if used the outside air pipe. Install and seal with non-hardening mastic to prevent water leakage. Install vent cap.

**E. INSTALLATION THROUGH SIDE OF MASONRY CHIMNEY**

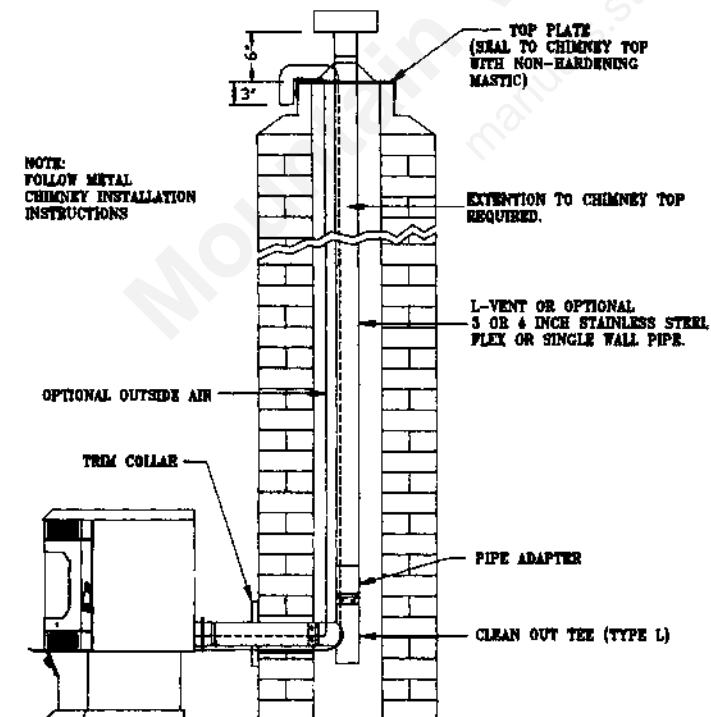
**NOTE:** Follow L-Vent chimney manufacturer's instructions.

1. Position the stove, adhering to the clearances in section 2.2. Mark the center of the hole where the pipe is to pierce the masonry chimney.
2. It will be necessary to break out the masonry around the location of the pipe center mark. Use a 4 inch diameter hole for 3 inch pipe and 5 inch diameter hole for 4 inch pipe.



**Figure 6**

3. Measure and build chimney top plate. Cut out holes for chimney pipe, and if used the outside air pipe.
4. Install the tee on the bottom of the vertical pipe system and lower it down the chimney until the center branch of the tee is level with the center of the hole in the masonry, as shown in figure 7.



**Figure 7**

5. Install and seal the top plate from step 3 with a non-hardening mastic. Slip the storm collar over the pipe, and while holding the pipe at the proper elevation, affix the collar to the pipe with a minimum of three 1/4" stainless steel sheet metal screws. Seal all joints and seams around the collar.
6. Connect the horizontal pipe by pushing it through the hole in the masonry and lining it up with the branch in the tee. Push the pipe into the tee while twisting it to lock it to the tee.
7. If desired, once the horizontal pipe is in place, the space between the pipe and masonry may be filed with high temperature grout.
8. Install the trim collar. An adjustable pipe length and adapter may be needed to finish the connection to the stove.

## 2.5 ELECTRICAL INSTALLATION

This stove is provided with an 8-foot grounded electrical cord extending from the rear of the stove. This should be connected to a standard three-prong, 120V, 60hz electrical outlet. Voltage variations can lead to serious performance problems. An outlet mounted surge protector is recommended where voltage variations are a problem. The Breckwell electrical system is designed for 120V AC with no more than 5% variation. National Steelcrafters of Oregon, Inc. cannot accept responsibility for poor performance or damage due to inadequate voltage. If connected to an older, two-prong outlet, a separate ground wire should be run to a proper ground (refer this to a qualified technician). Always route the electrical cord so that it will not come in contact with any hot part of stove.

## 2.6 SPECIAL MOBILE HOME REQUIREMENTS

**WARNING: DO NOT INSTALL IN A SLEEPING ROOM.**

For installation in a mobile home, an outside source of combustion air must be used (see section 2.3 Combustion Air Supply).

The P2700FSA must be grounded to the steel chassis of the home with 8 Ga. copper wire using a serrated or star washer to penetrate paint or protective coating to ensure grounding.

The P2700FSA must be securely fastened to the floor of the mobile home using the mounting bolt holes located in the pedestal of the P2700FSA. Use only the holes provided.

Refer to section 2.4 Venting for proper exhaust configurations.

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

## 3.0 OPERATION

### 3.1 PROPER FUEL

**THIS STOVE IS APPROVED FOR BURNING PELLETIZED WOOD FUEL ONLY!** Factory-approved pellets are those 1/4" or 5/16" in diameter and not over 1" long. Longer or thicker pellets sometimes bridge the auger flights which prevents proper pellet feed. Burning wood in forms other than pellets is not permitted. It will violate the building codes for which the stove has been approved and will void all warranties. The design incorporates automatic feed of the pellet fuel into the fire at a carefully prescribed rate. Any additional fuel introduced by hand will not increase heat output but may seriously impair the stove's performance by generating considerable smoke. Do not burn wet pellets. The stove's performance depends heavily on the quality of your pellet fuel. Avoid pellet brands which display these characteristics:

- Excess fines** - "Fines" is a term describing crushed pellets or loose material that looks like sawdust or sand. Pellets can be screened before being placed in hopper to remove most fines.
- Binders** - Some pellets are produced with materials to hold them together, or "bind" them.
- High ash content** - Poor quality pellets will often create smoke and dirty glass. They will create a need for more frequent maintenance. You will have to empty the burn pot plus vacuum the entire system more often. Poor quality pellets could damage the auger. National Steelcrafters of Oregon, Inc. cannot accept responsibility for damage due to poor quality pellets. Your dealer can recommend a good quality pellet in your area.

### 3.2 PRE-START-UP CHECK

Remove optional imitation log set if in use. Remove burn pot, making sure it is clean and none of the air holes are plugged. Clean fire box, then reinstall burn pot. Clean door glass if necessary. (A dry cloth or paper towel is usually sufficient.) Never use abrasive cleaners on the glass or door. Check fuel in hopper, and refill if necessary.

**NOTE:** Hopper capacity is approximately 50 pounds in the P2700FSA.

### 3.3 BUILDING A FIRE

Never use a grate or other means of supporting the fuel. Use only the Breckwell approved burnpot.

**NOTE:** During the first few fires, your stove will emit an odor as the high temperature paint cures or becomes seasoned to the metal. Maintaining smaller fires will minimize this. Avoid placing items on stove top during this period because paint could be affected.

### 3.31 START-UP PROCEDURE

Your P2700FSA is equipped with the Breckwell Hot Rod™ Automatic Firestarter. No other firestarter is necessary. Follow this procedure to start your stove.

- Fill hopper and clean burn pot.
- Push on/off switch to "ON" position.
- Prime auger by pressing manual feed switch until pellets start to drop in burn pot.
- Set fuel control knob to "D" setting.
- Open damper 1/4 inch and press "auger" button.
- Fire should start within five minutes.
- Set fuel control knob to "low" setting.
- When fire is well established pull out damper to 1/2".
- Wait 15 minutes. Set fuel control and damper to desired setting.

**NOTE:** In the event of power failure, shut stove "OFF", wait 15 seconds, and repeat start-up procedure.

### 3.4 PANEL CONTROLS (See Figure 8)

The blowers and automatic fuel supply (auger on the P2700FSA) are controlled from a panel on the left side of the stove. A hinged door covers the panel during normal operation. The on/off switch turns the blowers on. The "auger" button activates the automatic feed system. When the green light is on, there is power to the auger circuit. In case of a power outage lasting more than three to six seconds, this button must be pushed to re-engage the auger. There are six fuel-feed settings. On "LOW" the feed rate is **approximately** 0.75 to 1.5 lb. per hour. On "MAX," the feed rate is **approximately** 4.25 to 4.75 pounds per hour.

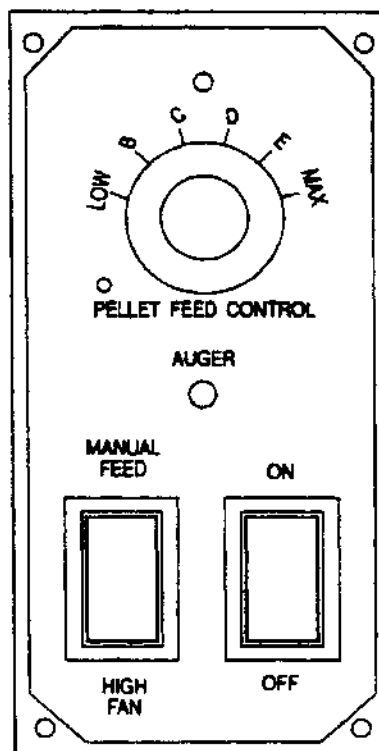


Figure 8

**CAUTION:** The "MAX" setting is designed for temporary use only. If used for extended periods, it can

shorten the life expectancy of the unit's components. Avoid use at this setting for more than one or two hours at a time.

The convection blower speed varies directly with feed rate. The "High Fan" switch overrides this variable speed function. It will set the convection blower speed to high at any feed rate setting.

The "Manual Feed" switch allows you to add fuel to the burn pot automatically. **CAUTION: Do not use this control during normal operation because it could smother the fire and lead to a dangerous condition** (see section 3.92a). During normal operation, this switch should be in its center position, neither on "HIGH FAN" nor "MANUAL FEED".

### 3.5. OPTIONAL THERMOSTAT

A remote thermostat may help you maintain a constant house temperature automatically. A millivolt thermostat is required. When engaged, the stove will automatically switch between two settings. When warm enough, it will switch to "LOW", which also slows the convection blower. If the house then cools below your thermostat setting, it will switch to the feed rate of your knob setting with a maximum rate of "D". The thermostat should be installed by a qualified service person.

**NOTE:** When using the thermostat, it is important to set your damper control rod at approximately halfway between a "LOW" burn setting and your higher burn setting.

### 3.6. DAMPER CONTROL

The damper control rod on the stove's lower left side adjusts the combustion air. This control is necessary due to the varied burn characteristics of individual installations, different pellet brands and pellet feed rates. It allows you to improve the efficiency of your stove. Providing correct combustion air will reduce the frequency of cleaning your glass door and prevent the rapid build-up of creosote inside your stove and chimney.

You should adjust the damper based on the fire's appearance. A low, reddish, dirty fire can be improved by pulling the damper out slightly. A "blow torch" fire can be improved by pushing the damper in a bit.

As a general rule, on lower feed rate settings, the damper should be in farther. On higher feed rates, the damper should be more open. Through trial and error, you will find the best settings. Consult your dealer if you need help.

**NOTE:** On "LOW", damper should be out approximately 1/8" to 1/4". If damper is out too far, it can cause the fire to go out.

### 3.7. REFUELING

We recommend that you not let the hopper drop below 1/4 full.

**KEEP HOPPER LID CLOSED AT ALL TIMES EXCEPT WHEN REFILLING. DO NOT OVERFILL HOPPER.**

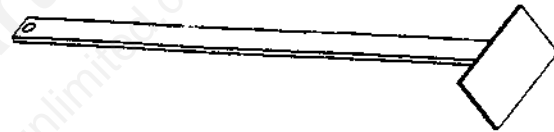
### 3.8. BRECKWELL MAINTENANCE TOOL

A tool has been provided to help with the following functions:

- Stirring pellets in hopper**-Unlike liquids in a tank, pellets do not drain evenly into the auger. Bridging across the opening can occur. Pellets can hang up on the sides of the hopper. Occasionally "stirring" the hopper can help.

**NOTE:** To help prevent bridging of pellets, common wax paper can be rubbed on the sidewalls and bottom of the hopper.

- Scraping ashes from burn pot.**



### 3.9. SHUTDOWN PROCEDURE

Turning your Breckwell stove off is a matter of pressing the on/off control panel switch to "OFF". The blowers will continue to operate until internal firebox temperatures have fallen to a preset level.

### 3.91. SAFETY FEATURES

- If there is a power outage longer than a few seconds, the auger will not operate once power is restored. This prevents pellets from being fed to a non-burning burn pot. Pressing the auger button on the panel control will reactivate the auger circuit. The blowers will come on when power is restored to evacuate the combustion chamber of gases and stay on until the "OFF" switch is pushed.
- In case of a malfunctioning convection blower, a high-temperature thermodisk will automatically shut down the auger, preventing the stove from overheating.
- If the combustion blower fails, an air pressure switch will automatically shut down the auger.

**NOTE:** Opening the stove door or pedestal ash door during operation will cause enough pressure change to activate the air switch, shutting the fuel feed off. Closing the door and depressing the "auger" button will restart the system.

### 3.92 OPERATING SAFETY PRECAUTIONS

- a. **If you notice a smoldering fire** (burn pot full but no visible flame) **AND a heavy smoke build-up in firebox, immediately unplug the stove. Do not open the door, change the damper setting or tamper with any controls on stove.** Wait 15 minutes or until firebox clears, open door, plug unit back in and restart fire as instructed in sections 3.2 and 3.3.
- b. **DO NOT STORE OR USE FLAMMABLE LIQUIDS, ESPECIALLY GASOLINE, IN THE VICINITY OF YOUR BRECKWELL STOVE. NEVER USE A GAS OR PROPANE TORCH, GASOLINE, GASOLINE-TYPE LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID OR SIMILAR FLUIDS TO START OR "FRESHEN UP" A FIRE IN THIS HEATER.**
- c. **WARNING: DO NOT OVERFIRE THIS STOVE.** This may cause serious damage to your stove and void your warranty. It also may create a fire hazard in your home. **IF ANY EXTERNAL PART OF THE UNIT BEGINS TO GLOW, YOU ARE OVERFIRING.** Immediately press the "OFF" switch on control panel.
- d. **KEEP ALL HOUSEHOLD COMBUSTIBLES, SUCH AS FURNITURE, DRAPES, TOYS, ETC. AT LEAST THREE FEET FROM THE OPERATING STOVE.**
- e. Maintain proper ventilation. It is important that adequate oxygen be supplied to the fire for the combustion process. Modern houses are often so well insulated that it may become necessary to open a window slightly or install an outside air vent to provide sufficient combustion air.
- f. Since heating with a solid fuel fire is potentially hazardous, even with a well made and thoroughly tested stove, it would be wise to install strategically placed smoke detectors and have a fire extinguisher in a convenient location, near an exit.
- g. Do not open stove door or pedestal ash door when operating unless necessary. This will create a dirty, inefficient burn and could allow smoke spillage or sparks to escape.
- h. Do not permit operation by young children or those unfamiliar with stove's operation.
- i. Do not service or clean this appliance without disconnecting power cord.
- j. If applicable, use only approved pellet stove firestarters. These include gelled alcohol types and solid types with **wax** as an additive. **Do not use** solid types with paraffin or liquids like barbecue lighter fluid, gasoline or rubbing alcohol. **Do not use a gas or propane torch** to light your stove. Your Breckwell dealer can advise you of proper firestarters.
- k. Do not abuse the door glass by striking, slamming or similar trauma. Do not operate stove with the glass removed, cracked or broken.

## 4.0 MAINTENANCE

**FAILURE TO CLEAN AND MAINTAIN THIS UNIT AS INDICATED CAN RESULT IN POOR PERFORMANCE AND SAFETY HAZARDS. NEVER CLEAN WHEN HOT.**

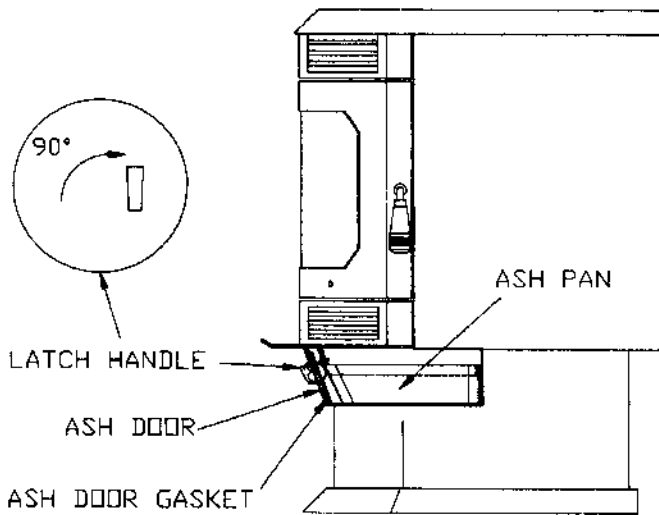
**NOTE:** Inspect burn pot periodically to see that holes have not become plugged. If so, clean thoroughly.

### 4.1 DISPOSAL OF ASHES

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

**The P2700FSA has a large ash pan located in the pedestal column.**

- a. Make sure fire is out and firebox is cool.
- b. Clean heat exchanger tubes (see section 4.2 and Figure 10).
- c. Remove imitation log set if in use. Remove burn pot by grasping and pulling straight out.
- d. Empty ashes from burn pot into pedestal ash pan, through hole in bottom of firebox. Scrape burn pot with cleaning tool. Make sure holes are not plugged.
- e. Scrape remaining ash in firebox into pedestal ash pan, or vacuum. (**WARNING: Make sure ashes are cool to the touch before using a vacuum.**) See section 4.11 VACUUM USE below.
- f. Remove ash pan by lifting latch handles and turning counter clockwise 90 degrees (see Figure 9). Ash door will now lift off. Lift ash pan and pull out. (Be careful of ash door gasket.) Dispose of ashes (see section 4.0).
- g. Replace ash pan, making sure it is centered and that it is pushed back as far as possible. Before replacing ash pan door, make sure the latch is pointed to your left. Replace ash pan door, turn latch handle 90 degrees clockwise, and then push down on the handle. Make sure the door has a good seal. A poor seal can cause performance problems (see section 5.1 #5 and 5.3 #2).
- h. Replace burn pot, making sure it is level and pushed all the way on.



**Figure 9**

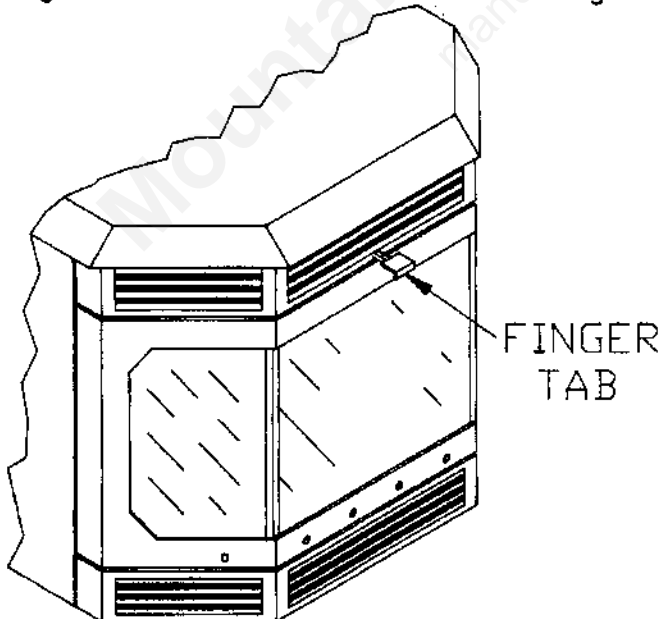
**4.11 VACUUM USE**

If a vacuum is used to clean your unit, we suggest using a vacuum designed for ashes (We recommend Love-Less Ash Vac, 1-800-568-3949 Ext. #27).

Some regular vacuums and shop vacs leak ash into the room. Your vacuum or shop vac may have a special filter or bag available to eliminate this leakage.

**4.2 CLEANING**

a. **Heat Exchange Tubes**-Your Breckwell stove is designed with a built-in heat exchange tube cleaner. This should be used every two or three days to remove accumulated ash on the tubes, which reduces heat transfer on the P2700FSA. The P2700FSA has a finger tab on the end of the tube cleaner actuating rod.



**Figure 10**

The cleaner rod is located in the grill above the stove door. Move the cleaner rod back and forth several times to clean the heat exchanger tubes. Leave tube cleaner at the rear of stove. **CAUTION:** This finger tab may be hot if used while stove is in operation.

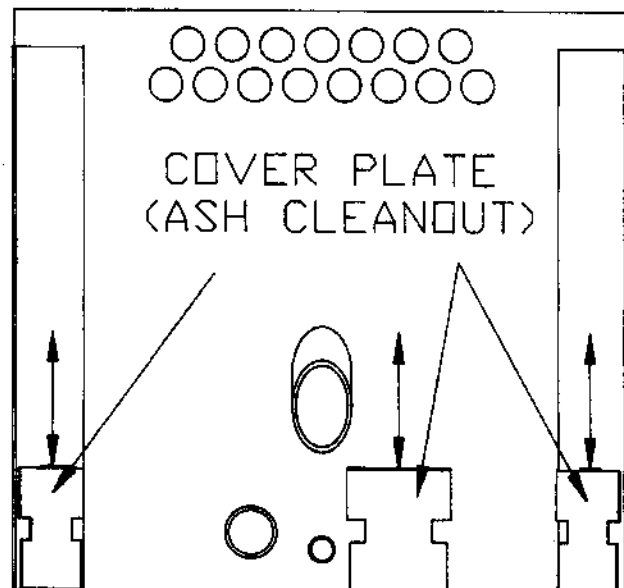
b. **Interior Chambers**-Three ash doors in the firebox in the P2700FSA can be removed for periodic cleaning (see Figure 11). These doors allow access to the chamber surrounding the firebox.

Periodically, you must vacuum ashes from this chamber. In some cases you will need to remove creosote, which can accumulate rapidly under certain conditions. A small wire brush can be used. It is important to remove this creosote because it is highly combustible. **INSPECT BEHIND THESE CLEANING PLATES AT LEAST ONCE PER TON OF PELLETS BURNED UNTIL YOU ARE FAMILIAR WITH HOW ASHES AND CREOSOTE ACCUMULATE WITH YOUR OPERATING PRACTICES.** Use the small wire brush to also clean the inside of the chamber walls, above the access doors.

**4.3 BLOWERS**

**DANGER: RISK OF ELECTRIC SHOCK. DISCONNECT POWER BEFORE SERVICING UNIT.**

a. **Cleaning** - Over a period of time, ashes or dust may collect on the blades of both the combustion blower and convection blower. Periodically the blowers should be vacuumed clean as these ashes can impede performance. Creosote can also accumulate in the combustion blower. This needs to be brushed clean. On the P2700FSA the combustion blower is accessed by removing the right side panel. Remove the blower with a ratchet and socket. if desired, the blower can



**Figure 11**

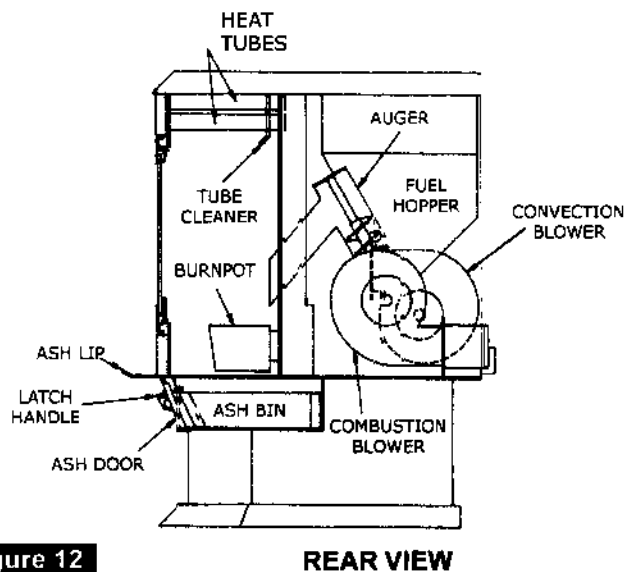
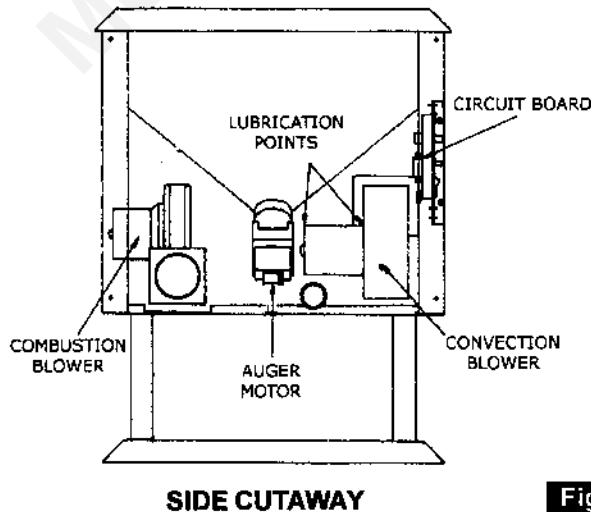
be disassembled for cleaning. The convection blower is accessed by removing the left side panel.

**NOTE:** When cleaning, be careful not to dislodge balancing clip on convection blower or to bend fan blades. Some stove owners lightly spray an anti-creosote chemical on the fire to help reduce creosote formation within the stove.

#### 4.4 CHIMNEY CLEANING

- a. **Creosote Formation**-When any wood is burned slowly, it produces tar and other organic vapors which combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool chimney flue of a newly started fire or from a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire which may damage the chimney or even destroy the house. Despite their high efficiency, pellet stoves can accumulate creosote under certain conditions.
- b. **Fly Ash**-This accumulates in the horizontal portion of an exhaust run. Though noncombustible, it may impede the normal exhaust flow. It should therefore be periodically removed.
- c. **Inspection and Removal**-The chimney connector and chimney should be inspected monthly during the heating season to determine if a creosote or fly ash build-up has occurred.

If creosote has accumulated, it should be removed to reduce the risk of a chimney fire. Inspect the system at the stove connection and at the chimney top. Cooler surfaces tend to build creosote deposits quicker, so it is important to check the chimney from the top as well as from the bottom.



**Figure 12**

The creosote should be removed with a brush specifically designed for the type of chimney in use. A qualified chimney sweep can perform this service. It is also recommended that before each heating season the entire system be professionally inspected, cleaned and, if necessary, repaired.

To clean the chimney, detach the vent at the combustion blower transition where it is attached to the blower.

#### 4.5 RECOMMENDED MAINTENANCE SCHEDULE

Use this as a guide under average-use conditions

	Daily	Twice Weekly	Monthly or per ton	Annually
Burn Pot	<i>stirred</i>	<i>emptied</i>		
Glass	<i>wiped</i>			
Combustion Chamber		<i>brushed</i>		
Ashes			<i>emptied</i>	
Exhaust Passage			<i>vacuumed</i>	
Heat Exchange Tubes		<i>two passes</i>		
Combustion Blower Blades			<i>vacuumed brushed</i>	
Convection Blower Impeller			<i>vacuumed brushed</i>	
Vent System				<i>cleaned</i>
Gaskets				<i>inspected</i>

Gasket around door, door glass and pedestal ash door should be inspected and repaired or replaced when necessary (see section 6.0).

#### 4.6 REMOVAL AND REPLACEMENT OF BROKEN DOOR GLASS

While wearing leather gloves (or any other gloves suitable for handling broken glass), carefully remove any loose pieces of glass from the door frame. Dispose of all broken glass properly. Return the damaged door to your Breckwell Dealer for repair or replacement.

**Neither the appliance owner nor any other unauthorized person(s) should replace the door glass. All repairs involving door glass must be done by an authorized Breckwell Dealer.**

## 5.0 TROUBLESHOOTING GUIDE

When your stove acts out of the ordinary, the first reaction is to call for help. This guide may save time and money by enabling you to solve simple problems yourself. Problems can be due to only five factors: 1) poor fuel; 2) poor operation or maintenance; 3) poor installation; 4) component failure; 5) factory defect. You can usually solve those problems related to 1 and 2. Your dealer can solve problems relating to 3, 4 and 5. Refer to figures 12 and 13 to help locate indicated parts.

#### 5.1 FUEL WILL NOT FEED

1. Check for fuel in hopper (see section 3.8a). If stove runs out of fuel, pellets will not feed once hopper is reloaded until auger fills with pellets. This takes several full turns of the auger. Hold manual feed switch on for 30-40 seconds.
2. Push "auger" button. Green light should come on.
3. Check for auger jam. Push the manual feed switch. If you can hear the auger motor trying to run, but no pellets fall into burn pot, you may have a jammed auger or set screw in coupling is loose. Contact your dealer.
4. If auger motor is not working, and there is power to the system (green light is on), the auger thermodisk may be stuck in "open" position. Check the thermodisk with continuity tester. Auger thermodisk closes with heat rise. If problem persists, call dealer.
5. If vacuum in the stove is lost, an air switch shuts off the auger. Inspect for source of lost vacuum. Stove door ajar may cause this. This may also occur if ash pan door has a poor seal.
6. If a stove set at "MAX" is suddenly switched to "LOW", a temporary overheat condition may occur. This condition may stop the auger and cause the green light to go off. Press the "OFF" switch and the "HIGH FAN" switch. Allow stove to cool down, and restart as instructed in sections 3.2 and 3.3.

#### 5.2 FIRE GOES OUT

**(assuming the auger is feeding and that there is ample fuel in hopper and burn pot)**

1. Check for blockage in combustion air inlet, burn pot and exhaust.

2. Restart fire, adjust feed rate to higher setting. Large pellets feed more slowly. A fire sometimes CANNOT be maintained on low. If this problem reoccurs, either change to another brand of pellet fuel, do not set feed rate below "B" or have dealer adjust circuit board.
3. Check to see if combustion blower is operating.

#### 5.3 SMOKY FIRE (see section 3.6 first)

**(reddish flame, soot deposits on door glass)**

1. Check door and door glass gasket. Doors should be tightly sealed. Replace gaskets if necessary.
2. Poor seal on pedestal ash door.
3. Check that burn pot is installed properly and holes are not plugged.
4. Check for blockage in combustion air inlet and exhaust (see section 5.2, number 1).
5. Check quality of fuel (see section 3.1).
6. Adjust slide damper (see section 3.6).

#### 5.4 NO POWER

1. Check power supply to stove.

#### 5.5 BLOWERS WILL NOT OPERATE PROPERLY

1. Check power supply.
2. Check blower thermodisk with continuity tester. Blower thermodisk closes with heat rise.
3. Check combustion blower for creosote or ash buildup.

#### 5.6 NOISY OPERATION

1. Identify source of noise (i.e., which motor).
2. Check for dirty or unbalanced impeller wheel on blowers if clanging noise.
3. Readjust convection blower speed (pellet feed control knob), if harmonic vibration.

# P2700FSA ELECTRICAL DIAGRAM

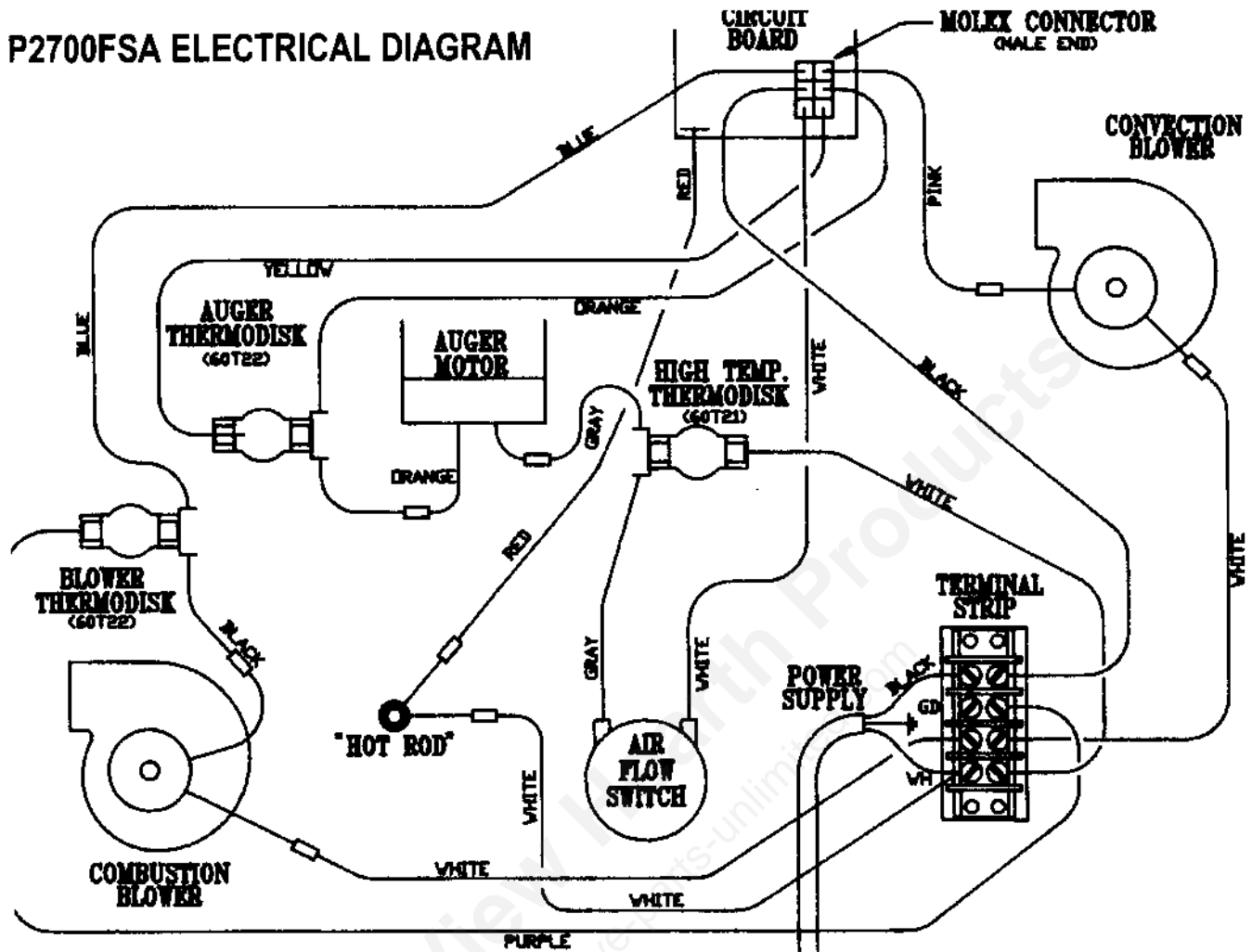


Figure 13

## 6.0 REPLACEMENT PARTS

Contact an Authorized Breckwell Pellet Stove Dealer to obtain any of these parts. Never use substitute materials. Use of non-approved parts can result in poor performance and safety hazards.

Item	Part Number	Item	Part Number	Item	Part Number
Air Switch	C-E-200	Convection Blower	C-E-033	Thermodisk, High Temp (T21)	C-E-090-21
Air Switch Hose	C-M-340-T	Door Gasket (6'-7")	C-G-050	Wood Door Handle	C-S-851
Ash Door gasket (4'-6")	C-G-033	Door Glass (Center)	C-D-2700-A	Wood Damper Handle	C-S-852
Ash Door Latch Handle	C-F-260-DLA	Door Glass (Side)	C-D-2700-B	Window Clips:	
Auger Motor	C-E-010	Exhaust Adapter 3"	C-M-050	Bottom/Airwash	A-S-1028
Breckwell Maintenance Tool	A-TOOL-96	Exhaust Adapter 4"	A-4-VA	Side	C-S-804
Burn Pot	A-S-070-I	Hot Rod™	A-HR-N	Top	C-S-1027
Circuit Board/Control Panel	C-E-950	Imitation Firelog Set (Optional)	C-M-LOG	Window Gasket (6'-1")	C-G-033
Combustion Blower	C-E-027	Thermodisk, Auger/Blower (T22)	C-E-090-22		