INSTALLATION & OPERATION MANUAL FOR PELLET UNITS

MODEL NUMBER: TRI-STAR 25-5670

Thank you for purchasing this product from a fine line of heating equipment. Each of our units are constructed from the highest quality material and built by craftsmen who truly take pride in their workmanship. Please read this manual before attempting to move or install your unit. The unit you have purchased is a new generation pellet heating appliance, so proper installation is of utmost importance. We wish you many years of safe heating pleasure with your new heating appliance.

CAUTION:

These units must be installed in accordance with these instructions and must comply with your local building and fire codes. Failure to do so could result in a chimney fire, house fire or smoke damage. Keep children, furniture, fixtures and all combustibles away from any heating appliance.

READ THESE INSTRUCTIONS CAREFULLY BEFORE INSTALLING.
NOTE: SAVE THESE INSTRUCTIONS.

The freestanding pellet units are approved for mobile home installation with outside combustion air hook-up. Your mobile home unit must have the combustion air intake extended to the exterior of the home, with the use of a 2" ABS pipe coupling and the 2" ABS-DBW pipe to extend through the floor or wall. See Section I in this manual for flue hook-up. **Note: The pellet insert is NOT mobile home approved.**

SAFETY NOTICE:

IF THIS UNIT IS NOT PROPERLY INSTALLED, A HOUSE FIRE MAY RESULT. FOR YOUR SAFETY AND PROTECTION, FOLLOW ALL OF THE INSTALLATION INSTRUCTIONS. CONTACT YOUR LOCAL BUILDING OR FIRE OFFICIALS FOR RESTRICTIONS AND INSTALLATION INSPECTIONS REQUIRED IN YOUR AREA.

Note: If the unit is an insert, refer to the rear of this manual for the operation and installation instructions.

Warnock Hersey

SECTION I: UNIT PREPARATION

Most dealers will prepare your unit for operation and even dry run the unit for at least thirty minutes before delivery. In the event this has not been done, follow these steps to prepare your unit for operation. Model number, serial number and manufacture date are located on the left side of the stove towards the rear.

1. Open the hopper lid and remove the following contents:
   a.) Two hopper lid latches
   b.) AC-SH Spring handle for door

2. Attach the AC-SH to the door handle by turning it counter-clockwise.

3. Attach the hopper lid latch handles to the hopper. (See diagram in the rear of this manual)

4. Test the 110 outlet for current, then plug the stove in. **(We highly recommend the use of a surge protector for our pellet stoves)**

5. It is important to note that these stoves are equipped with two augers. The top auger is located inside the hopper and it drops fuel to the lower auger. The lower auger transfers the fuel to the burn pot. The top auger operates intermittently and the bottom auger constantly. You should test this before putting fuel in the unit. Press the green ON button located on the control panel on the right side of the hopper. A green light on the button will illuminate. Turn the top black knob on the control panel to the highest setting. Open the hopper lid and observe the auger in the bottom of the hopper. The auger should turn for approximately ten seconds and stop for approximately six seconds. Turn the top knob on the control panel to the lowest setting and again observe the auger in the hopper. The auger should come on for approximately 1.5 seconds and stay off for approximately 14.5 seconds.

6. Open the door on the firebox and observe the end of the auger in the burn pot. This auger should turn continuously.

7. When you push the green ON button, notice that the combustion blower begins to run. It will operate constantly in both the Start-Up and Shut-Down modes.

8. The lower knob operates the convection (room air) blower. This blower will not operate until the unit has been fired and the temperature in the heat chamber reaches 135 degrees F. (See Start-Up Procedures)

SECTION II: FLUE SYSTEM

These stoves are equipped with a negative draft system which pulls combustion air through the burn pot causing the pellets to burn. It also pumps the exhaust out the exit side, through the pellet vent pipe and out of the structure in which the stove is located.

This unit will not function properly if the flue system is not properly installed. Read these instructions carefully and refer to the diagram in the rear of this manual before installing the unit. Use only U.L. approved pellet vent pipe. Do not use "B" vent gas pipe or galvanized pipe.

The manufacturer will not be held responsible for damage caused by the malfunction of a stove due to improper installation.

A. Pellet Vent Pipe

U.L. approved pellet vent pipe is a twist lock system with gasket material at each joint. It is not necessary to cement or use sheet metal screws to secure the joints. As you are installing the pipe, make sure that you lock each joint. The pellet vent pipe is designed to disassemble for cleaning purposes. The flue system should be cleaned at least once a year. Pellet vent pipe is not furnished with the unit and must be purchased separately. **NOTE: INSTALL VENT AT CLEARANCES SPECIFIED BY VENT MANUFACTURER.**

The adapter on the exhaust motor of the stove is 3" round and will adapt to any 3" pellet vent pipe. There are several manufacturers supplying pellet vent pipe and the sizes may vary. Many manufacturers have a pipe adapter which will clamp to the adapter on the exhaust motor. We recommend that you use a pipe adapter. If one is not available, we recommend using high temperature silicone along with two sheet metal screws on this connection. A hose clamp or aluminum backed tape can also be used. **NOTE: DO NOT INSTALL A FLUE DAMPER IN THE EXHAUST VENTING SYSTEM OF THIS UNIT AND DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.**

B. Through the ceiling:

Once you have connected the pipe adapter to the exhaust motor adapter, the next step is to connect a clean-out tee to the starter joint. Run 3" pellet vent pipe up and through the ceiling. When installing it through the ceiling, you must use the proper ceiling support flanges, which are supplied by the pipe manufacturer. Next, run the pipe through the roof flashing around the pipe and secure it to the roof to prevent leakage. Then attach the storm collar around the pipe and place the pellet vent cap on the pellet vent pipe. Be sure to follow the pipe manufacturers instructions and refer to the drawing in the rear of this manual. It is important to note that if the pipe is more than 15 feet long, you must increase the pipe size to 4". Do not run more than four feet of horizontal pipe and try to use the least amount of elbows in your flue system as possible. The straighter the pipe, the better. If you must use an offset, use a 45 degree elbow rather than a 90 degree.

C. Through the wall:

To vent the stove through the wall, connect the pipe adapter to the exhaust motor adapter. If the exhaust adapter is at least 18" above ground level, use a straight section of the pellet vent pipe and extend the pipe through the wall. Your dealer should be able to provide you with a kit. The kit will include a wall thimble which is installed in the wall and allows the pipe to pass through. The length of pipe will vary depending on the thickness of the wall. Once outside the structure, you should maintain a 3" clearance to the wall. Place a clean-out tee on the pipe you have extended through the wall. If the outside wall is constructed of a non-combustible matter such as brick or stone, place a 3 foot section of 3" pellet vent pipe on the top side of the clean-out tee and twist to lock in place. Place a 3", 90 degree elbow on the top side of the 3 foot section of the pellet vent pipe and turn away from the structure. Install a 12" section of 3" pellet vent pipe to the open end of the 3" elbow and place a down-cap on the end of the 12" section. Place a wall strap just below the 90 degree elbow for support. If you live in an area that gets heavy snowfalls, you may need to install it higher than 3 feet so the exhaust is above the snow drift line.

You may want to install the stove below ground level, such as in a basement, and the flue will need to rise up before it extends out. You will need to place a clean-out tee

on the pipe adapter directly behind the unit, then extend the flue up to the point of exit by using a 90 degree elbow and turn it so it will go through the wall. Follow the same procedure mentioned in paragraph 1 of Section C, which was to go through the wall and to terminate the flue outside of the structure.

The "through the wall" procedure is the simplest, most common and the least expensive method of installing your freestanding unit. If your flue system will be located on the side of the house where the wind is constantly blowing, it could cause back pressure on the flue which will cause the unit to burn improperly. You may consider running the flue pipe up above the roof line. Never terminate the vent under a window or between two windows. If you have any questions about this, please contact your local dealer or call the customer service department at the factory at 1-800-245-6489.

D. Existing Flue System

You may be replacing a wood stove with your pellet stove and want to connect the unit to the existing flue system. You need to have the flue system cleaned before installing the new stove. The flue system must be either masonry or U.L. approved class "A" flue system. The flue thimble will either be 6" or 8" in diameter. You can purchase either a 3" to 6" increaser or a 3" to 8" increaser from your local dealer. Install the increaser into your existing thimble and seal with a high temperature sealant such as stove cement. Connect a 3" tee to the pipe adapter on the exhaust motor, then extend the 3" pellet vent pipe to to the increaser that you placed in the existing thimble. If the thimble is in the ceiling, your pipe will be straight up. If the thimble is in the wall, it will be necessary to turn a 90 degree elbow to connect to the flue thimble.

E. Outside Combustion Air

Outside combustion air is not directly part of the flue system but if used, it does require pipe to be installed. If air coming into the unit is not adequate, the flue system will not function properly. If you are installing the stove into a mobile home, EPA requires you to bring in outside combustion air.

If your home is as air-tight as many of the newer homes are today, you may want to consider outside combustion air. To install into the stove, locate a 2" steel pipe under the hopper. Place a 2", 90 degree elbow on the 2" steel pipe. Run a length of 2" PVC pipe from under the hopper through the wall to the outside. Terminate the PVC pipe with a 90 degree elbow with the open end pointing down.

If the unit is below ground level, you will need to run the PVC pipe up and out. Use the same procedure as with the pellet vent flue pipe. Although outside combustion air is not required, we recommend that you bring outside air to the unit whenever possible (See the drawing at the rear of this manual).

SECTION III: FLOOR AND WALL PROTECTION

A. Floor Protection

If your floor is constructed of a non-combustible material such as brick or concrete, there is no floor protection required or needed. If your floor is constructed of a combustible material such as hardwood, carpet or linoleum, you must place protection between the unit and the combustible material. There are many stove floor and wall boards on the market. One must be very cautious in choosing the proper protection. The board must be U.L. listed. After examining the area in which you plan to locate your unit and you determine it requires a board, the next step is to select the proper size needed. The unit you have chosen will determine the board size. The approved protector board should be large enough to provide a minimum of 3" behind and on either side with 6" in the front on the side the door is located.

Our freestanding pellet stoves require a minimum of 36" x 36" floor protection.

B. Wall Protection

This stove can be placed within 1" of a combustible wall, such as paneling, wall paper or sheet-rock, from the rear and sides of the hopper and 6" from the sides of the firebox. With such a close clearance to combustibles, additional wall protection is usually not necessary.

SECTION IV: ACCESSORY ITEMS

There are several accessory items available for your stove. It is suggested that you install any accessory items before proceeding to the next section, however, our accessories are designed to be "add-on" items at any time. If you purchase accessories after you have purchased your unit, simply let the unit cool down and add your accessories as follows:

AC-101-PU Brass Trim

There are two pieces of J-Channel trim in this kit that snap on the edges of the stove (the top front edge and the ash apron front edge). To remove the protective plastic film, start at one end and peel off. The pieces are precut to fit. Match the piece up with the proper edge, center the channel on the edge and with the short side of the J-Channel down, force the under side over the edge of the metal. If the J-Channel is too tight, lightly tap into place with the wooden end of a hammer. If the J-Channel is too loose and will not stay in place, lay the long side down on a flat surface and bend (crimp) the short side in on both ends and in the center slightly.

AC-02 Brass Rail

This accessory is mounted on a metal base and simply sits on top of the stove.

AC-106-P Brass Window Trim

With the door closed, take the spring clip, which has a tee on one end, and twist into the groove on the back side, allowing the plain end of the spring to fall into the groove. You can place the spring clip on any side of the AC-106-P, however, the side that will be placed toward the bottom of the door is the best. Hold the spring clip in place and slide the bottom edge on to the bottom ledge of the window opening. Now with both hands, press down and in, pushing the trim in place. Press on all four corners firmly to ensure they are in the window opening as far as they will go. We suggest you place furnace cement in each corner on the back side of the trim. This will ensure the trim stays in place when the door is being opened and closed.

SECTION V: OPERATING INSTRUCTIONS

General:

This stove has an induced draft system and will not operate on natural draft. It is designed for continuous operation. Frequent shut-down is not normally required. The control board permits the stove to be operated by a time relay-delay system which allows the top auger motor to run for a desired number of

seconds and shut-down for a desired number of seconds. The bottom auger operates continuously. The time relay-delay system controls the heat output of the unit. Remember, this stove is using solid fuel which, unlike gas or oil, doesn't have a pilot light and makes it necessary to maintain a fire at all times or the unit will shut-down automatically and will not re-start automatically.

Horizontal Feed System

The stove has a double auger system which consists of two augers (a top and a bottom auger). The top auger is driven by a 1 rpm motor which transfers pellets from the hopper to the bottom auger. There is a 4 inch air space between the top and bottom augers. The bottom auger is also driven by a 1 rpm motor and operates continuously. The bottom auger transfers the fuel to the burn pot. Any material in the fuel which does not burn, is pushed up and out. This enables you to burn any wood pellet fuel available on the market. The bottom auger operates continuously which ensures there is no build-up of fuel in the bottom auger tube. The fuel being dropped down from the top auger is quickly transferred to the burn pot where the combustion air is forced across the fuel.

ON Button:

This is the green button located at the bottom right side of the control panel. When this button is pressed, the system is energized, which is indicated by the green light illuminated on the button. (See Start-Up)

OFF Button:

This is the red button located at the bottom right side of the control panel. When this button is pressed, the unit will go into the shut-down mode. (See Shut-Down)

Heat Control Knob (Top Knob)

The heat control knob allows you to operate the stove at a wide range of heat settings. The range of control is from low, which will allow the unit to burn approximately 1 to 1 1/2 pounds per hour, to high, which will burn approximately 6 to 7 pounds per hour. The BTU output will vary, depending on the brand of fuel you are using and the heat range selected (from 8,000 to 56,000 BTU).

Blower Speed Knob (Bottom Knob)

The blower speed knob controls the CFM output rate of the convection blower. By using this control knob, you can adjust the speed rate from the OFF position up to 140 CFM. The convection blower will not operate when the unit is cold. **The heat chamber has to reach 135 degrees F before the convection blower will activate.**

Start-Up Procedures:

1. Make sure the fuel hopper is clean and free of foreign matter.

2. Plug your power cord into a 110 outlet, after checking current and installing a surge protector.

3. Press the ON switch (the green light will come on) and the combustion blower will begin operating.

4. Set the heat control knob on the highest setting and check to be sure the top auger in the hopper is turning. Check the bottom auger coming into the firebox to be sure it is turning and listen for the combustion blower. Both auger motors and the combustion blower should be operating. If this does not occur, unplug the unit from the power source, wait for about a minute, plug the unit back in and press the green button again. If the unit still does not restart, do not proceed. Contact your local dealer or call the customer service department at the factory.

5. Put about one pound of pellet fuel into the hopper and allow the unit to run about ten minutes to be sure the fuel is moving through the feed system properly.

6. Place a hand full of pellets in the burn pot, spread a small amount of fire starter material over the top of the pellets and ignite. Wait a minute to ensure the pellets have ignited and slowly close the stove door, wait a minute longer and push the start button.

Recommended fire starting materials are: Wax impregnated wood chips, cardboard cube or liquid fire starter designed for pellet stove use. Never use kerosene, gasoline, diesel fuel or any other flammable liquid to light the stove.

7. Check to make sure the flame is sustaining itself and is increasing in intensity as it involves the fuel bed. In the unlikely event the fire goes out, check the combustion blower and the auger motors to determine if they are operating properly. Repeat step number six.

First Fire: Adjust the heat range control knob to the medium position. Allow the unit to operate in this mode for approximately three hours. This will allow the unit to "cure out" and, as the temperature in the heat chamber rises, the convection blower will activate.

Cold Start: Run on medium heat range until the room air blower starts to operate, then choose your desired setting.

CAUTION: When firing your new unit for the first time, it is very important to burn the unit on a medium setting for at least three hours. The unit will go through a "cooking out" process which will cause some odor and smoking around the unit. This will stop after the first two to three hours.

Shut-Down Procedures:

Never shut the unit down by unplugging it from the power source. Never open the hopper lid or the firebox door without turning the power switch to the OFF position.

Press the OFF button; the unit will go into the shut-down mode and the red light will illuminate. The instant you press the red OFF button, only the top auger will stop operating. The bottom auger, the combustion blower and the convection blower will continue to operate until the temperature in the firebox begins to drop. As the temperature drops to 95 degrees F, the convection blower will shut-down. When

the temperature drops to 90 degrees F, the combustion blower and the bottom auger will shut-down and the red light will go out.

Note: If the room temperature stays above 70 degrees F, the unit will remain in the shut-down mode for 54 minutes, then the unit will shut-down, regardless of the temperature at the sensor. If the unit continues to operate for longer than 54 minutes and you are sure the fire is out, unplug the power cord from the power source for about 10 seconds. Plug cord back into the wall socket. This should reset the stove.

Daily Operation:

Refueling:

Always press the OFF button before refueling. This stove has a 70 pound hopper and when the fuel level gets down near the auger (within three to four inches) refill the hopper. **Caution:** The hopper lid may be warm so you should always wear insulated gloves for hand protection. Never stick your hand near the auger while the unit is in operation.

Power Outage:

If power to the unit is interrupted for less than eighteen minutes, when the power is restored, the unit will start-up and operate normally. If the power is interrupted for more than eighteen minutes, when the power is restored and the heat chamber temperature is above 90 degrees F, the combustion blower and the bottom auger will activate and operate unit the heat chamber cools down to below 90 degrees F. If the heat chamber is less than 90 degrees F, when the power is restored, the unit will stay off. It is very important for the unit to be vented properly. If a power outage occurs, the natural draft of the vent pipe is needed to draft the smoke in the firebox out of the unit.

Fire Outage:

If the fire in the burn pot should go out, the heat chamber temperature will begin to fall. Anytime the temperature in the heat chamber falls below 90 degrees F, the unit will shut-down.

Fuel Outage:

If the unit should run out of fuel or the pellet fuel should bridge in the hopper, the heat chamber temperature will begin to fall and when it reaches below 90 degrees F, the unit will shut-down.

ASH REMOVAL AND DISPOSAL:

Daily Ash Maintenance:

Every time you load fuel into the hopper, push the red OFF button and allow the unit to burn in the shut-down mode for two minutes and then open the firebox door. Use a long screwdriver or putty knife to scrape the crust build-up in the front of the burn pot over into the firebox. Close the door and press the green ON button to restart the unit.

Weekly Ash Removal:

Shut the unit down by pressing the red OFF button and allow the unit to cool completely. Ashes should be placed in a metal container with a tight fitting lid. This closed container should be placed on a non-combustible floor or on the ground, away from all combustible materials, pending final disposal. The ashes should be retained in the closed container until all cinders have thoroughly cooled.

Once you are sure the unit is completely shut-down, you can use a shop vac with double filters to vacuum the ash out of the unit. There are also ash vacuums available and designed for pellet use.

The burn pot should be vacuumed out as needed, depending on the grade of pellets used. Remember to inspect and clean the burn pot by removing the burn plate and scraping away any crust build-up and cleaning out the air hole. These holes are to allow air to flow up under the pellet fuel. Use a 1/8 drill bit to clean the holes. Clean the area out under the burn plate and replace. If the burn pot ever needs to be replaced, remove the hopper, the combustion blower and the auger motors. Unbolt the burn pot flange from the back of the firebox, and slide it out through the rear of the unit and install the new burn pot assembly.

Monthly Ash Removal:

Every three to four weeks, it will be necessary to clean the interior of the stove. There are two baffle plates in the rear of these stoves that will have to be removed for this procedure. The large plate (13" x 13") sets on the rear of the burn pot and can be removed by lifting it up from the bottom. Pull this plate out. The second plate (3" x 4") is located in the lower left corner and can be removed by lifting up on the small handle. The area to the right and left of the burn pot should be vacuumed out every three to four weeks. At this time, we recommend vacuuming behind the baffle plates as well as scraping off any ash build-up on the room air pipes and firewalls. The room air pipes are located in the top of the stove and can be cleaned with any stiff bristled brush. When replacing the baffle plates, reverse the procedure making sure the large plate is setting flush on the rear of the burn pot.

MAINTENANCE:

CAUTION: To avoid electrical shock, unplug unit before proceeding.

Any time you are performing maintenance on the stove, shut the unit down, let it cool and unplug from the power source. Any maintenance performed under the hopper will require the removal of the rear cover plate held in place by four screws at the rear of the hopper. We recommend you use a service technician to perform service on any electrical components. Your dealer should have a trained service technician available. If not, please call the customer service department at the factory at 1-800-245-6489.

Auger Bearings:

The auger bearings are a sealed unit and do not require lubrication. To replace the top auger bearing, remove all fuel from the hopper. Remove the auger motor then remove the four nuts from the bearing housing. Slide the bearing and auger out of the burn pot. Loosen the two set screws with a 9/64 allen wrench then slide bearing off of the auger shaft and install the new bearing assembly. The four bearing housing bolts should be tightened in a diagonal manner to seat and align the bearing properly. To replace the bottom auger bearing, use the same procedure as above except there is no need to remove the fuel from the hopper.

Auger and Shaft:

To replace either the top or bottom auger, follow the same procedure as used in replacing the auger bearing. Be sure to tighten the set screws on the bearing block.

ELECTRICAL MOTORS:

CAUTION: To avoid electrical shock, unplug unit before proceeding.

Convection Blower:

The 140 CFM convection blower is located directly under the firebox. To remove the blower, unplug the power leads from the control panel, remove the screws holding the blower in place and slide the blower toward the rear of the stove. To install a new convection blower, slide the new blower in place and replace the screws.

Combustion Blower (Exhaust Blower):

To clean the combustion blower, disconnect the power leads from the motor, remove the 3 inch pellet vent pipe, remove the 5/16 hex head bolts from the flange and remove the motor. Clean out the impeller using a wire brush and vacuum out all of the ash. Vacuum out the 3 inch by 4 inch exhaust tube. Replace the combustion motor in the reverse order in which you removed it. If it becomes necessary to replace the blower, use the same procedure used to replace the motor. Whether you are cleaning or replacing the combustion blower, be sure to install a new gasket between the motor flange and the mounting flange on the stove.

Auger Motor:

To replace either the top or bottom auger motor, disconnect the power leads on the motor to be replaced, loosen the set bolt on the locking collar, slide the motor straight back out of the 3/4 inch auger shaft. The shaft on the auger motor has a flat side; this shaft slides into the 3/4 inch auger shaft. Make sure the shaft on the auger motor is turned so the locking bolt will tighten against the flat side of the auger motor shaft.

The above electrical motors have bearings that do not require oiling.

CONTROL BOARD ADJUSTMENT AND REPLACEMENT:

CAUTION: To avoid electrical shock, unplug unit before proceeding.

The control board is the brain of the pellet unit. It controls the burn rate, the combustion blower and the convection blower. The control board and the sensor are preset and calibrated at the factory. The control board is very reliable but if you experience a power surge, the control board may need to be reset. If the green ON button is pressed and the light does not come on, unplug the unit, wait for about 60 seconds and plug it back in. Press the green ON button again and the green light should illuminate. If the light still does not come on, unplug the unit. Remove the back cover on the hopper and locate the back of the control board. You will see a 6A-125V fuse at the bottom left side of the control board. Remove the fuse

and inspect to see if the element is still intact. If the element is blown, you will need to replace the fuse. If, upon replacing the fuse, the unit still will not operate, contact your local dealer or call the customer service department at the factory.

The system can be recalibrated if the convection blower does not energize properly. There are settings on the back of the control board that can be adjusted in the field. The micro-processor on the back of the board may need to be replaced if the unit begins to operate erratically and the field adjustments do not correct the problem. (See trouble shooting section or consult the customer service department at the factory.)

If the control board needs replacing, unplug the stove from the power source and remove the cover from the back of the hopper as well as the back of the control board. Start at the top of the back of the control board and unplug the first ten wires on the panel. Unplug the sensor and remove the two sheet metal screws holding the control board bracket in place. Now remove the bracket with the power cord still attached. The replacement control board will be installed on a new bracket with a power cord attached. Mount the replacement board to the hopper using the same screws and reconnect the ten wires and the sensor to the back of the control board. Then re-install the cover plate on the control board and the hopper. Refer to the diagram at the rear of this manual.

Gaskets:

Each unit comes with a gasket around the door. This gasket should be replaced every two years. To replace, pull the old gasket off and, using a flat-head screwdriver, scrape remaining gasket and cement from the channel frame. Place the new gasket in the frame and allow the adhesive to "set up" for 24 hours before building a fire. If you have glass in your door, it may be necessary to replace the window gasket. This gasket, however, will only need to be replaced if you remove the glass. To replace, remove glass from door, pull old gasket off and scrape off old adhesive. The glass gasket has adhesive on one side. Peel off the paper on adhesive side a little at a time and form a "U" with the adhesive side on the edge of the glass. Start at one corner and go all the way around the outer perimeter of the glass forming the "U" as you go. Cut off excess gasket and place the glass back in the door. The replacement door gasket kit for your stove is the AC-DGKC and the replacement window gasket kit is the AC-GGK. Both can be purchased through your local dealer or ordered direct from the factory.

Finish:

Your stove has been painted with 1200 degree F, Metallic Charcoal Paint which will retain its original look for several years. If your unit should get wet however, rust spots may appear. Use steel wool to remove the rust and repaint the area with our part number AC-MCSP. When you repaint, be sure to use only our paint because others may not adhere to the existing finish. You can purchase the paint from your local dealer or direct from the factory.

EXTERNAL THERMOSTAT:

Use a Honeywell Model #T87F3855 or a White-Rodgers Model 1E30-910 Wall Thermostat.

You can use an external thermostat with any of our pellet units. Make sure you unplug the unit from its power source. On the back of the board (bottom, right) is a black wire connector with a jumper wire

connecting the two terminals. (See the wiring diagram in the rear of this manual.) Loosen the two screws and remove the jumper wire. Wire a standard wall thermostat by hooking the two lead wires to the thermostat and attaching the opposite end of the wires to the black connector. Make sure the screws are tightened.

Once you have installed the external thermostat, the system will operate differently. The combustion blower and the auger motors will only operate in the low mode when the thermostat is not calling for heat. When the thermostat is calling for heat, the combustion blower and the auger motors will operate at the setting that the heat range knob is adjusted to. For example, if the heat range knob is set on medium when the external thermostat calls for heat, the unit will go from low to medium and operate at medium until the thermostat is no longer calling for heat and then the unit will go back to the low mode.

The convection blower will not operate at all until the thermostat calls for heat, then it will operate at the blower speed setting and the fuel feed rate as positioned on the control board. When the external thermostat calls for heat, the convection blower will not activate until the heat chamber temperature reaches 135 degrees F. The use of an external thermostat is a good way to conserve fuel and ensure steady, even heat throughout the heating area.

When starting a pellet unit using an external thermostat, it is a good idea to set the thermostat to its highest setting which will enable the unit to be operated in a higher mode setting. This will get fuel to the burn pot and get the unit hot, faster. After the unit has heated up, reset the thermostat to the desired setting. We recommend setting the control board at medium as a minimum.

Annual Firebox Cleaning:

Shut the unit down and allow to completely cool, then unplug from the power source. Follow the steps listed in monthly ash removal. The complete exhaust system should also be cleaned at this time.

LIMITED 5 YEAR WARRANTY FROM THE DATE OF PURCHASE TO THE ORIGINAL OWNER:

The manufacturer extends the following warranties:

1. Carbon steel and welded seams in the firebox are warranted for 5 years against extreme warpage and welded seams from splitting.

2. Cast iron door (or doors), and door hinges are warranted for 5 years against extreme warpage and cracking.

3. Component parts such as the hopper, auger burn pot, baffle plates, auger screws, auger bearings and fasteners are warranted for 3 years against extreme warpage, cracking, breakage and welded seams separating.

4. Electrical components, accessory items, glass and the painted surface of the unit are warranted for 1 year from the date of purchase. This warranty does not apply if damage occurs because of accident, improper handling, improper operation, shipping damage, abuse, or unauthorized repair made or attempted to be made. Purchaser must give notice of claim of defect within the warranty period and pay transportation expense to and from a service center designated by the factory for service. Only units and component parts that prove to be defective will be repaired or replaced. Warranty service will be

performed, at our option, by the dealer from whom the stove was purchased or at the factory. All liability for any consequential damages for breach of any written or implied warranty is disclaimed and excluded therefrom. Some states do not allow the exclusion or limitations of incidental or consequential damages, so the above may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

This warranty is null and void if you do not return the attached warranty card within 10 days from the date of purchase.

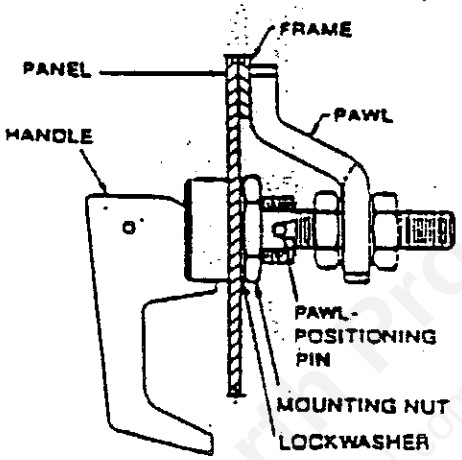
REPLACEMENT PARTS LIST FOR PELLET UNITS:

AC-GGK	Glass Gasket Kit
AC-DGKC	Door Gasket Kit
AC-106-P	Brass Window Trim
AC-112	Brass Louvers (for Deluxe freestanding unit only)
AC-113	Brass Louvers (for Pellet Insert unit only)
AC-G9	9" x 9" Glass (with gasket)
AC-SH	Spring Handle (large)
AC-MCSP	High Temperature Metallic Charcoal Paint
PU-047040	1 rpm Auger Motor (top and bottom augers)
PU-BP96	Burn Pot
PU-076002	Combustion Blower Motor
PU-4C442	140 CFM Convection Blower
PU-AF6T	Top Auger Shaft
PU-AF13B	Bottom Auger Shaft
PU-HPR92	Hopper Assembly (Freestanding units only)
PU-103-50	Hopper Lid Latch (Freestanding units only)
PU-UCF204-12	Auger Bearing
PU-2X570	3/4 ID Locking Collar
PU-CB93	Control Board with Bracket and Control Knobs

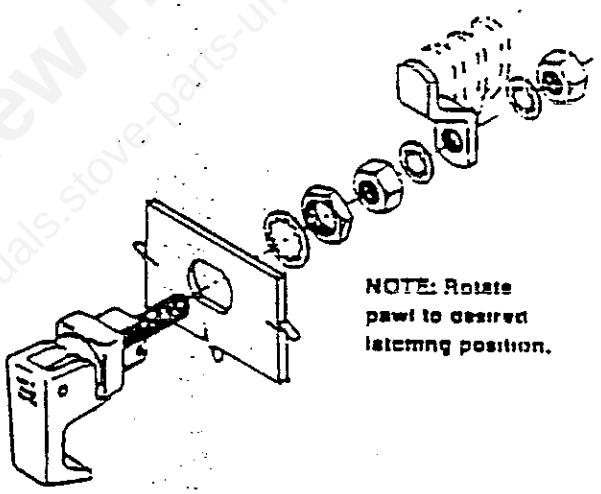
Parts listed above are used on both the freestanding and insert models unless otherwise indicated.
All replacement parts can be ordered from your local dealer or from the factory at 1-800-245-6489
If you have any questions or problems contact the Customer Service Department.

Customer Service Department
P.O. Box 250
Monroe, Va. 24574 **(804-929-0120)** **(Fax: 804-929-4810)**

HOPPER LATCH ASSEMBLY

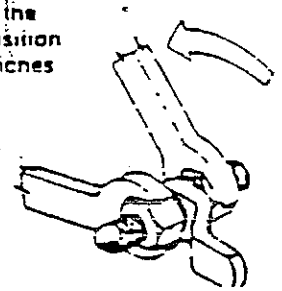


Assemble as shown.

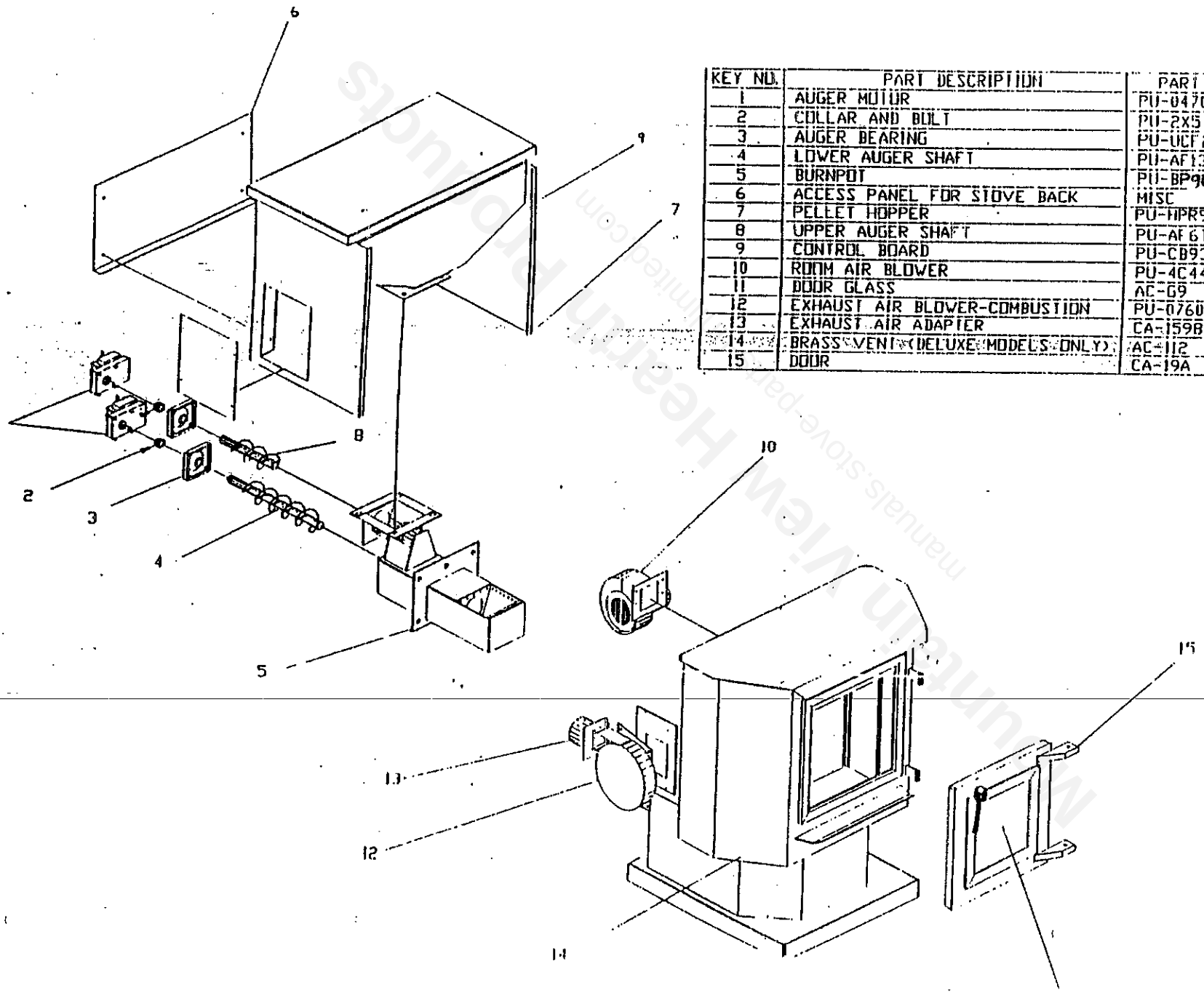


NOTE: Rotate pawl to desired latching position.

Pawl should be adjusted to GRIP measurement with the door open and the handle in the LATCHED position Use two wrenches to tighten



FREESTANDING PELLET UNIT PARTS DIAGRAM

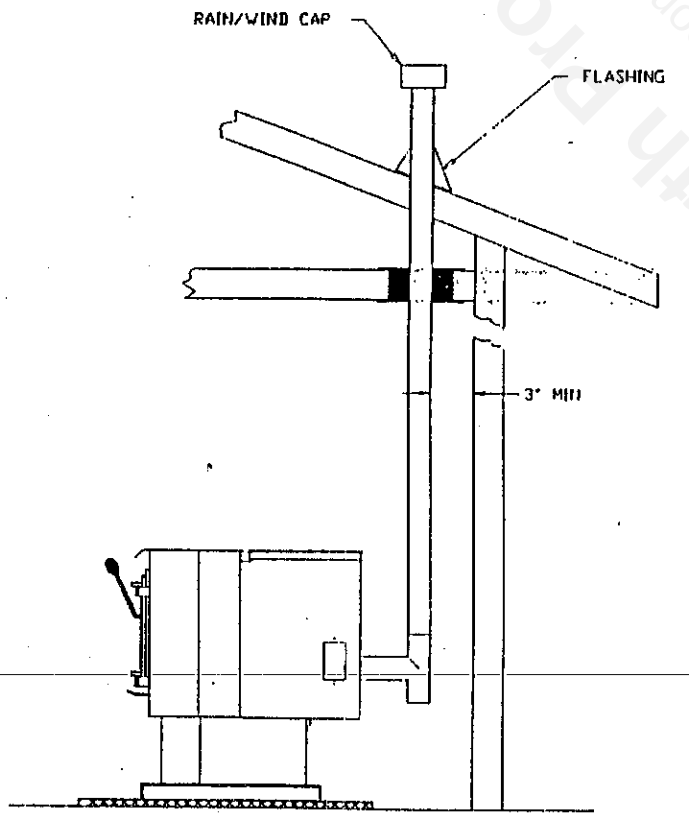


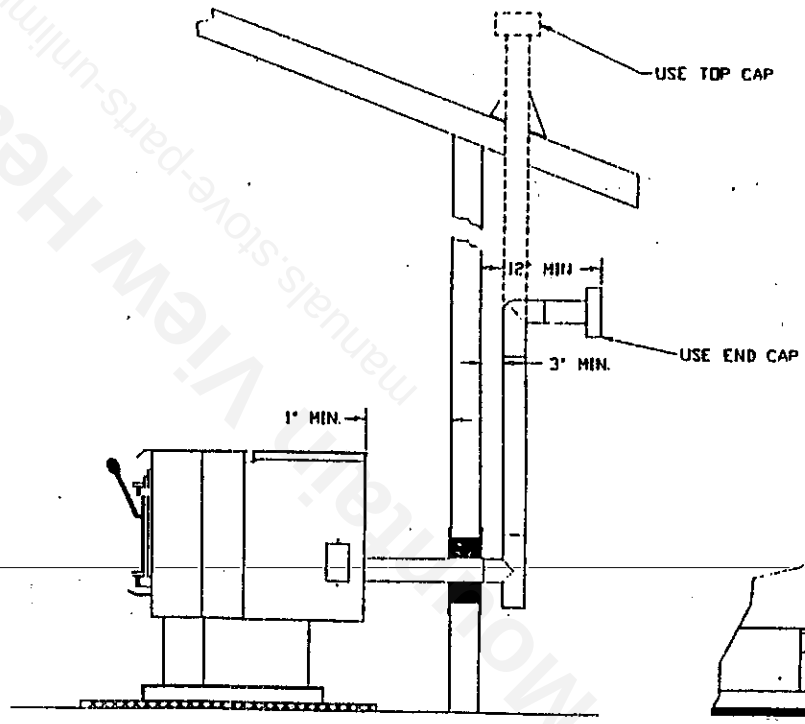
KEY NO.	PART DESCRIPTION	PART NO.
1	AUGER MOTOR	PU-047040
2	COLLAR AND BOLT	PU-2X570
3	AUGER BEARING	PU-UCF204-12
4	LOWER AUGER SHAFT	PU-AF13B
5	BURNPOT	PU-BP96
6	ACCESS PANEL FOR STOVE BACK	MISC
7	PELLET HOPPER	PU-HPR92
8	UPPER AUGER SHAFT	PU-AF61
9	CONTROL BOARD	PU-CB93
10	ROOM AIR BLOWER	PU-4C442
11	DOOR GLASS	AC-69
12	EXHAUST AIR BLOWER-COMBUSTION	PU-076002
13	EXHAUST AIR ADAPTER	CA-159B
14	BRASS VENT (DELUXE MODELS ONLY)	AC-112
15	DOOR	CA-19A

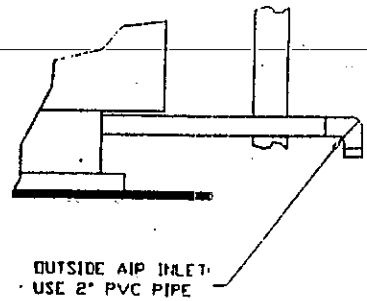
FREESTANDING PELLET VENT INSTALLATION

NOTE:

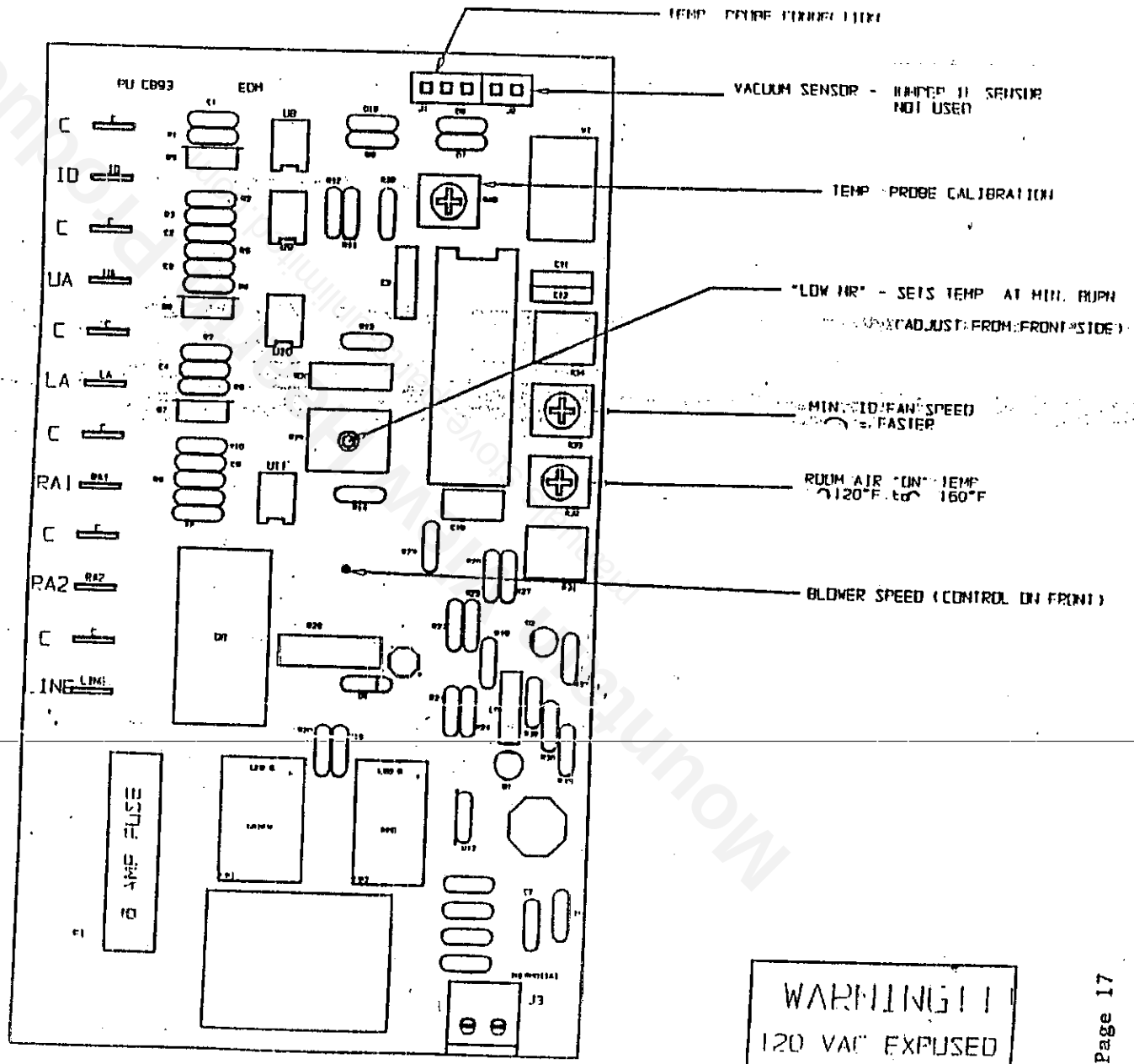
1. IF 3" FLUE PIPE EXCEEDS 15' IN LENGTH, THEN INCREASE TO 4" FLUE PIPE FOR REMAINING FLUE CONNECTIONS.
2. TOTAL FLUE LENGTH SHOULD NOT EXCEED 35'.
3. HORIZONTAL RUN NOT TO EXCEED 4'.
4. FLOOR PROTECTOR REQUIRED MIN. SIZE 36 X 36.



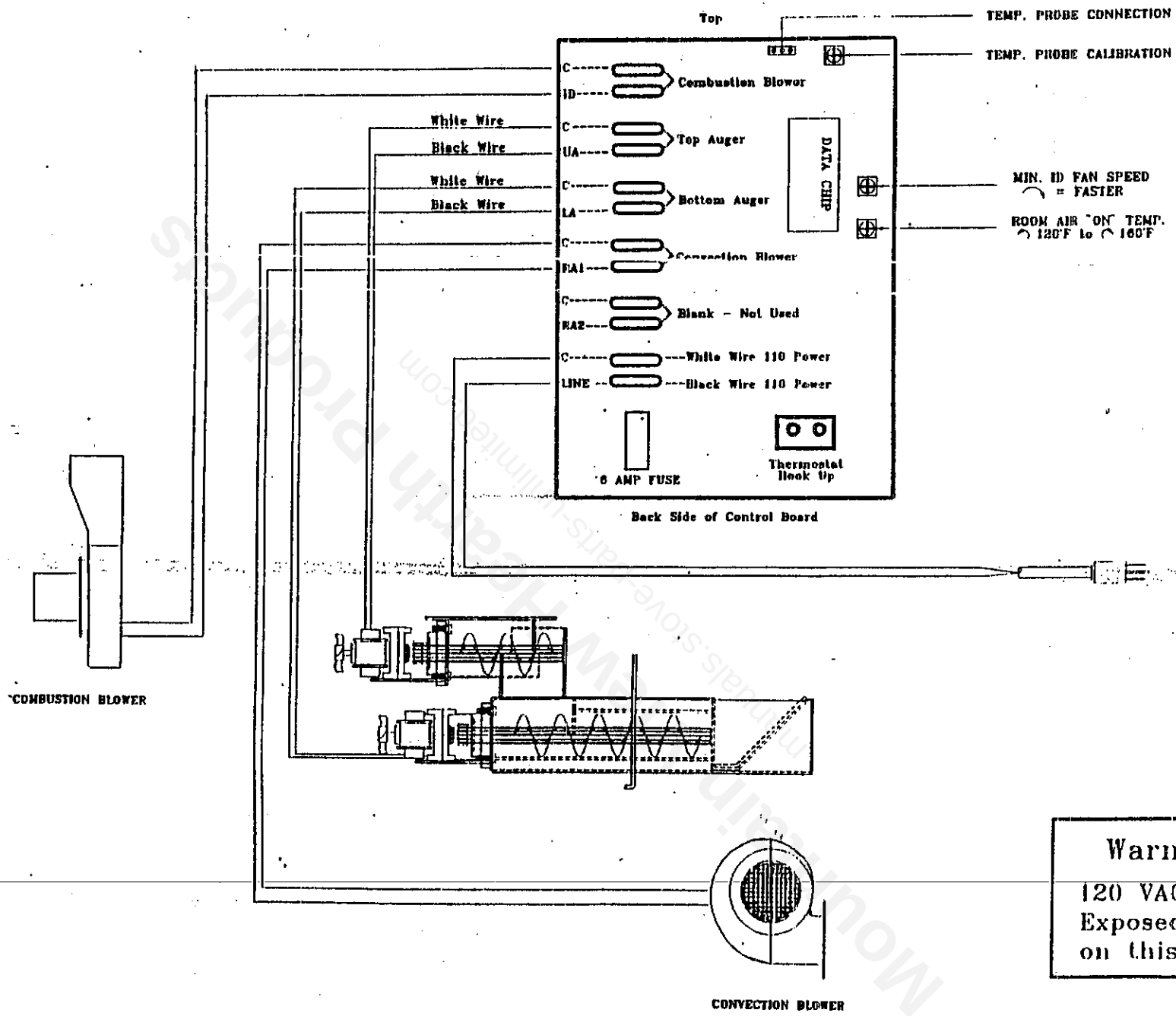




CIRCUIT BOARD DIAGRAM



WARNING!!!
120 VAC EXPOSED



Warning!
120 VAC
Exposed
on this Circuit

Trouble Shooting Guide

WARNING: TO AVOID ELECTRICAL SHOCK, ALWAYS DISCONNECT UNIT BEFORE ATTEMPTING ANY TROUBLE SHOOTING PROCEDURES (UNLESS OTHERWISE INDICATED IN THE GUIDE). IF THE SOLUTION IN THIS GUIDE DOES NOT CORRECT THE PROBLEM, CONSULT YOUR LOCAL DEALER OR CALL THE FACTORY DIRECT AT 1-800-245-6489.

Problem	Cause	Solution
. Red or Green button sticking or releasing prematurely.	Paper label on the control board interfering.	Using a razor blade or a knife, trim around the bottom and sides of the buttons.
Convection blower not operating.	Loose heat sensor.	1. Make sure stove is at 135 degrees F. 2. Check the heat sensor for a tight connection to the rear of the stove and to the control board.
Auger not turning.	A. Loose set screw. B. Bad gear in motor. C. Pellet build-up between top and bottom auger. D. Nut, screw or other foreign matter hung in auger tube.	A. Tighten set screw on auger shaft collar. B. Replace Auger Motor. C. Empty hopper, pull motor by loosening 1/4" set screw. After unplugging the 2 wires from the control board, loosen the 4 - 7/16 nuts from auger bearing. Remove auger and clean out auger tube. Replace auger and reconnect wires. D. Same procedure as in Item C above.
Combustion blower not working.	A. Loose connection. B. Faulty Control Board. C. Bad Blower	A. Check connection at control board. B. Replace the control board. C. Replace Blower
Smoke smell or dust in the room.	Improper exhaust connections.	Check all exhaust pipe connections for leaks, especially the exhaust blower connection. Aluminum backed tape or high temperature silicone can be used to correct leaks.

Trouble Shooting Guide

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Problem	Cause	Solution
6. Lazy fire.	A. Control board out of calibration.	A. Minimum draft adjustment needs to be tu clockwise. See control board illustration .
	B. Exhaust back pressure (wind blowing into vent pipe is the most common cause).	B. Raise or lower the exhaust pipe or chang vent cap to correct this problem.
	C. Excessive Pellet moisture.	C. Vacuum ash in burn pot frequently.
	D. Excessive ash build-up.	D. Remove all baffles; vacuum and clean ur thoroughly.
	E. Bad combustion blower.	E. Replace combustion blower.
7. Blown Fuse. (6 Amp)	A. Power surge.	A. Replace fuse and connect stove to a sur protecto:.
	B. Exposed wire.	B. Check unit for frayed, exposed or loose v connections.
	C. Electric motor shorting out or obstructed.	C. Check blowers, motors and augers for obstruction or if they are locked up.
8. Stove runs 30 to 40 minutes then shuts down.	A. Loose heat sensor.	A. Check the heat sensor for a tight connec to the rear of the stove and the control boarc a cold start-up, always run the unit on the me setting until the room air blower starts up, th select desired setting.
	B. Control Board problem.	B. Contact your local dealer or call the custo service department at the factory.
9. High pellet consumption.	A. Control board out of calibration.	A. While burning the unit on low, the green light on the ON button should burn bright for than 2 seconds and dim for around 14 secor (16 second cycle). To slow the system dowr 1/8 allen wrench or a fat toothpick can be inserted in the hole between the heat range knob and the blower control and turned to left or counter-clockwise. Turn only 1/8 of a inch at a time to allow the control board to re-adjust
	B. Low quality pellets.	B. Always use a premium hardwood pellet.

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Problem	Cause	Solution
10. Squeaking noise.	A. Build-up or foreign material in auger tube. B. Improper Auger alignment. C. Blower Squeaking.	A. See problem 3; solution C. B. Refer to Maintenance section, auger bearings. C. Oil combustion blower by removing rubber cap from oil port. Put in 2 drops of 3 in 1 oil.
11. Pinging or rattling noise.	Loose set screw.	Check set screw on motor cooling fan, exhaust blower and room air blower.
12. Flame inside unit makes rumbling or vibrating noise, especially on high.	A. Unit is air tight. B. Home is air tight.	A. This is normal and will not hurt the unit. It will stop after a short break-in period, usually two or three days. B. You can extend the pellet vent pipe one or two sections, turn your pellet feed rate down or adjust intake air (call the factory customer service).
13. Unit not heating. (Models prior to 1996)	Top Baffle Plate is out of position.	Push top baffle plate all the way to the rear of the stove.

WARRANTY REGISTRATION

PURCHASED BY (NAME) _____

ADDRESS _____

CITY _____, STATE_____, ZIP _____

PHONE #_____

DEALER INFORMATION

PURCHASED FROM (DEALER) _____

ADDRESS _____

CITY _____, STATE_____, ZIP _____

PHONE #_____

UNIT INFORMATION

MODEL NUMBER- TRI-STAR 25-5670

SERIAL NUMBER _____

DATE OF PURCHASE ___/___/___

IMPORTANT NOTICE:

THIS REGISTRATION INFORMATION MUST BE ON FILE FOR THIS WARRANTY TO BE VALID. PLEASE MAIL THIS INFORMATION TO THE ADDRESS BELOW WITHIN TEN (10) DAYS FROM DATE OF PURCHASE FOR THIS WARRANTY TO BE VALID.

Customer Service Department
P.O. Box 250
Monroe, Va. 24574