

INTEGRA

PELLET STOVE

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When the stove is started the auger light comes on. After a minute or two, the light shuts off and the auger stops feeding pellets...

(1) The air sensor has failed or (2) the combustion blower is beginning to go out.

When the stove is started the auger light comes on but no pellets are feeding...

(1) The high-limit switch has failed or (2) the auger motor, complete with gear box, has failed.

When the on/off switch is turned off, the stove continues to run. The only way to turn it off is by pulling the plug...

The low-limit switch is faulty. Replace.

The stove gets through the start cycle ok, but then the auger shuts down and eventually all motors stop...

The low-limit switch is faulty. Replace.

The stove runs erratically each time it is turned on...

All pellet stoves require annual cleaning. If the stove has not been cleaned thoroughly, it can create problems. We highly recommend the purchase of the Integra cleaning video, which demonstrates exactly how the stove should be cleaned each time. Once the stove is cleaned we can properly diagnose any problems that were not solved from the cleaning.

Should the gasket for the combustion blower be replaced each time it is cleaned?

Highly recommended

When the convection fan comes on there is a chirping sound...

Sometimes oiling the bushing will alleviate this problem, if not then (1) the bushing may need replaced, or (2) the convection fan may be going out.

The convection fan surges after it comes on...

The main circuit board is beginning to fail. Replace.

10/31/2006

When the stove is turned on the auger runs continuously...

The main circuit board is defective. Replace.

After the start up cycle, the convection fan runs on high, no matter what setting the dial is on...

There is a delay when the fan is turned from high to low. If this is not part of the problem, replace the main circuit board.

Mountain View Hearth Products
manuals.stove-parts-unlimited.com

Quick Reference Guide for the Integra Pellet Stove

Eprom Reference

Eprom #	Combustion Mtr		Auger On Time		Convection Mtr	
	Min.	Max.	Min	Max	Min.	Max.
2.3	34 V	48V	0.6 sec	3.9 sec	53 V	101 V
2.4	32 V	46 V	0.6 sec	3.9 sec	60 V	101 V
2.5	34 V	50 V	0.6 sec	3.9 sec	60 V	101 V
2.5A	34 V	50 V	0.6 sec	3.9 sec	60 V	101 V
3.1	40 V	52 V	0.6 sec	3.9 sec	60 V	101 V
3.1A	40 V	52 V	0.6 sec	3.9 sec	60 V	101 V
3.2A	40 V	52 V	0.6 sec	3.9 sec	60 V	101 V

Note: All Voltages listed above are AC +/- 10%.

User Control Board Specifications

Air Feed Potentiometer	2.5 V DC =>	Adjust Clockwise to Increase Comb.Mtr Feed
Auger Feed Potentiometer	2.5 V DC =>	Adjust Clockwise to Increase Auger Mtr Feed
Hall IC Test Point	5 V DC	

Air Sensor Test

Bypass the low limit switch, adjust the User Control Board to the Minimum Position, wait 1 minute, then open the stove door. Comb. Mtr. should speed up and auger should stop. *-Light goes out*

Low Limit Switch

Normally Open => Closes at 120° F => Power = 5 V DC
 Switch is tested by the Main Control Board after 15 min. in startup mode. *Close door after 30-45 seconds - feeding begins. Combustion Blower slows to normal.*

High Limit Switch

Normally Closed => Opens at 250° F => Power = 120 V AC
 Switch controls power to Auger Mtr in the event of overheating of the stove.
Red Light on User Control Board blinks even when the high limit switch is open: Auger Mtr is OFF

Self Ignitor

Power = 120 V AC => On for 10 minutes in the Startup Cycle.
 Ignitor should glow cherry red within 1 minute.
 Eprom 3.1 and higher required => Bumpot with slot on left side groove required.
 Heating Element should have a resistance of 65 ohms +/- 10%.

Terminal Block Wiring Assignments

To:	Color	Color	From
Fuse	Black	1	Black Power Cord
Wiring Harness	Grey	2	Black Convection Fan
Wiring Harness	Orange	3	Blue Combustion Fan
High Limit Switch	Yellow	4	Black Auger Motor
Wiring Harness	Black	5	4-Black Auger, Conv., Comb, Fuse
Wiring Harness	Red	6	White Power Cord
Wiring Harness	Blue	7	Brown Thermostat or Jumper
Wiring Harness	Brown	8	Brown Thermostat or Jumper

Integra Pellet Part Number Reference Sheet

Item #	Austroflamm Part #	RIKA Part #	Description
1	*	*	Top Tile
2	RIIB11461	E11358	Top Fins, black
3	RIIZ16762	Z16762	Heat Insulation Cover
4	RIIZ18070	Z18070	Convection Air Deflection Plate, Top
5	RIIZ14911	Z14911	Cast Top, complete
6	RIFZ17494	Z17494	Flue Connector
7	RIF106155	106155	Band Clamp
8	RWZ102661	107973	Low Limit Switch, 120 F
9	RIIZ12388	Z12388	Low Limit Switch Gasket
10	RWOZ12247	Z12247	Combustion Motor Housing
11	ROZ102831	104278	Combustion Motor
12	RIIZ104551	104551	Convection Motor
13	RIIZ104552	104552	Convection Fan Bushing
14	RIIZ14929	Z14929	Convection Fan Deflection Plate, bottom
15	RIIZ14912	Z14912	Upper Cast Wall
16	RIIZ14926	Z20365	Burnpot
17	RIIZ14907	Z14907	Ash Pan
18	RIIZ14300	B11418	Door, complete
19	RIIB10927	E11415	Bottom Fins, black
20	RIIZ14301	B11694	Door Handle, gold
21	RIIZ14913	B11695	Lower Cast Wall, 3 hole
22	RII104066	Z14954	Lower Cast Wall Gasket
23	RIIB11417	B11417	Closing Plate
24	RII102688	102688	Auger Bushing
25	RIIZ14592	Z14592	Auger Mounting Plate
26	RINB11768	B11768	User Control Board, new
27	RPP102658	102658	Auger Motor
28	RIIZ11915	Z11915	Auger Collar
29	RIIB11326	B11326	Auger
30	RIPZ15228	Z15228	Circuit Board Holder
31	RINB11786	B11786	Circuit Board, new
32	RIPB19995	B19995	Transport Safety Plate
33	RIIZ15100	B11597	Wiring Harness
34	RIIE11417	E11417	Heat Insulation Plate
35	RIIZ14593	Z14593	Auger Shaft Cover
36	RIIZ14933	Z14933	Cast Door
37	103693	103693	Glass Gasket
38	RIIZ14847	Z14847	Glass, left
39	RIIZ14846	Z14846	Glass, center
40	RIIZ14848	Z16628	Glass, right with logo

* Please refer to the price list for colors and pricing on these accessories.

Integra Pellet Part Number Reference Sheet

Item #	Austroflamm Part #	RIKA Part #	Description
41	RIIZ14936	Z14936	Glass Mounting Frame, middle
42	RIIZ14935	Z14935	Glass Mounting Frame, left / right
43	100485	100485	Door Rope Gasket - 12mm
44	100002	100002	Hex Head Cap Screw - M5 x 8
45	RIGZ14944	Z14944	Square Mounting Bracket Shim
46	104622	104622	Oval Head Hex Key Screw M8 x16
47	RIIZ14937	Z14937	Door Handle Sleeve

Freestanding Only Parts

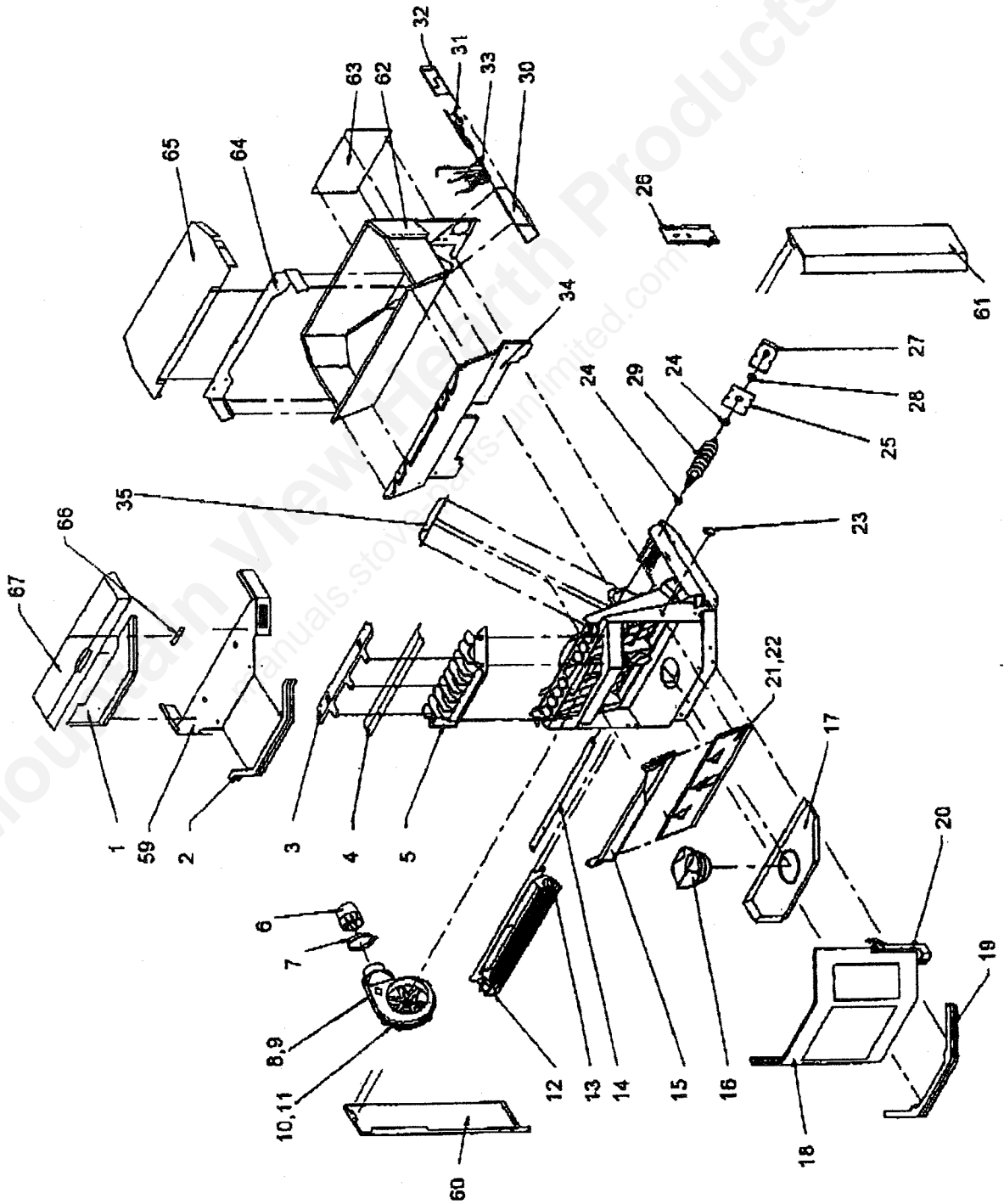
48	RIFB11684	B11992	Hopper Lid, F/S
49	RIIZ14739	Z14739	Rear Side Panel, left / black
50	*	*	Front Side Panel, left (F/S)
51	RIFB11384	B11384	Pedestal, F/S
52	*	*	Front Side Panel, right (F/S)
53	RIIB11711	B11711	Rear Side Panel, right / black
54	RIIB11984	B11984	Cover Plate, rear (F/S)
55	RIFB11715	B11715	Hopper Assembly
56	RIFZ16559	Z16559	Top Cover, F/S
57	RIIB11977	B11977	Hopper Lid Lock Holder Plate, F/S
58	RIFB14977	Z14977	Hopper Lid Lock

Insert Only Parts

59	RIIZ14945	Z14945	Top Cover, Insert
60	*	*	Front Side Panel, left (insert)
61	*	*	Front Side Panel, right (insert)
62	RIIB11424	B11424	Hopper Assembly
63	RIIZ14925	Z14925	Cover Plate, rear (Insert)
64	RIIZ14652	Z14652	Hopper Plate
65	RIIZ15821	Z15821	Rear Hopper Cover, Insert
66	RIFB14977	Z14977	Hopper Lid Lock
67	RIIB11332	B11332	Hopper Lid, Insert

* Please refer to the price list for colors and pricing on these accessories.

Integra Pellet Insert Exploded View Line Drawings

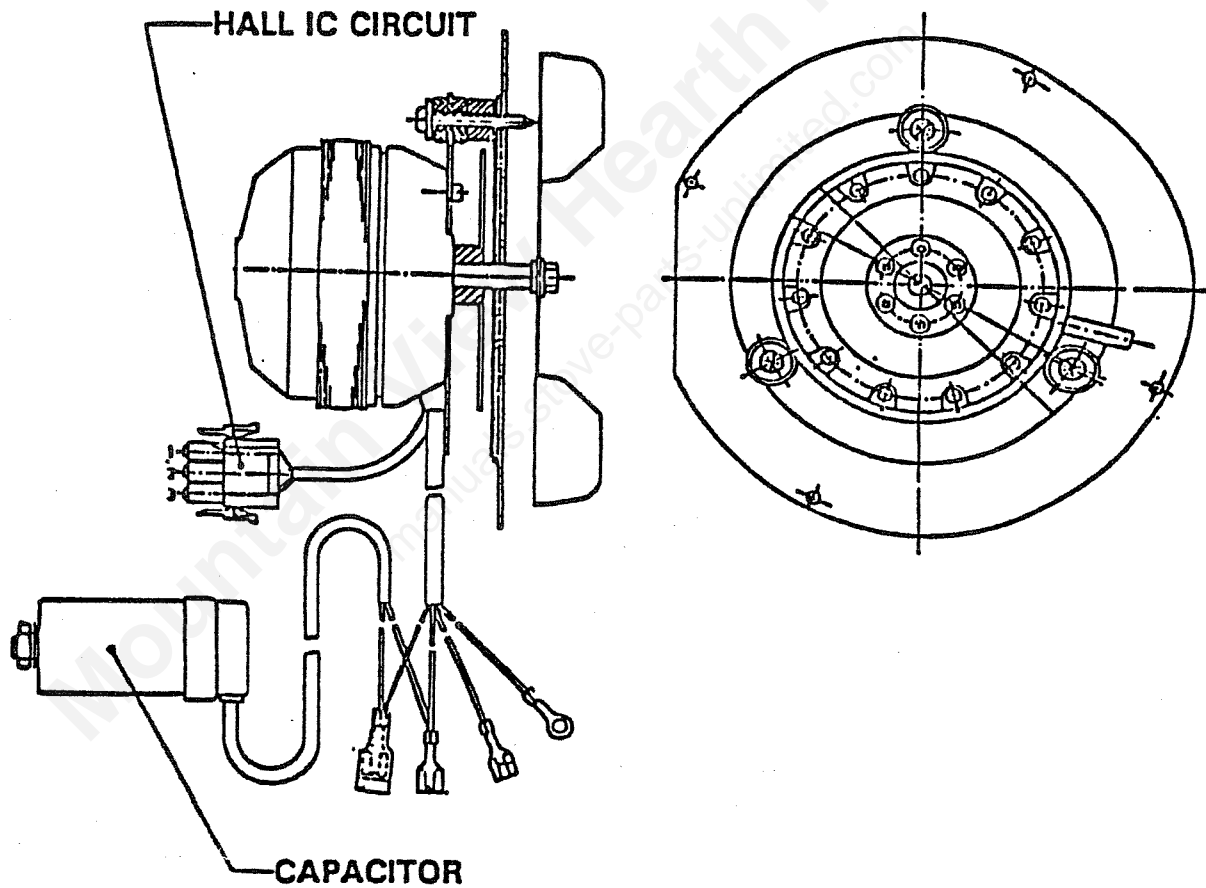


1. ELECTRICAL COMPONENTS:

1.1 COMBUSTION MOTOR:

Manufactured by EBM, Germany, the combustion motor has sealed ball bearings and cast aluminium housing for even exhaust pressure and quiet operation. A Hall IC circuit measures RPMs of the motor, and the motor is capacitor protected against fluctuations in current.

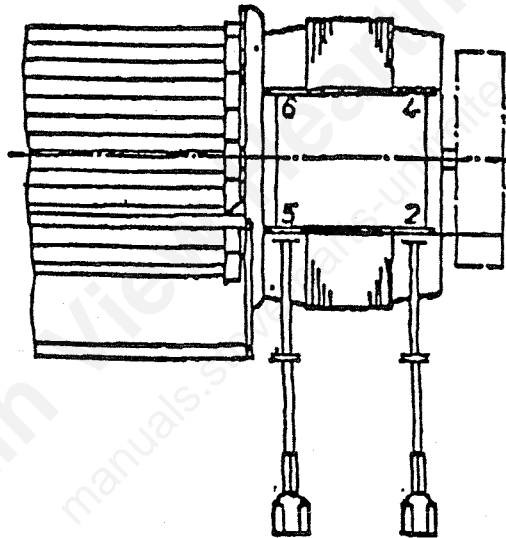
- > Stainless Steel Impellar
- > 115 Volt; 0.31 Amps, 60 Hz.
- > RPM range: 500 - 2300 RPM
- > UL listed
- > Serial #: R2E-150-An89-11 (with Hall IC)
- > cfm = 97cuft/min



1.2 CONVECTION MOTOR:

The convection motor's shape and positioning moves cold air directly through the large volume convection air tubes. Built by Heidolph, Germany, it has its own cooling fan to provide long life.

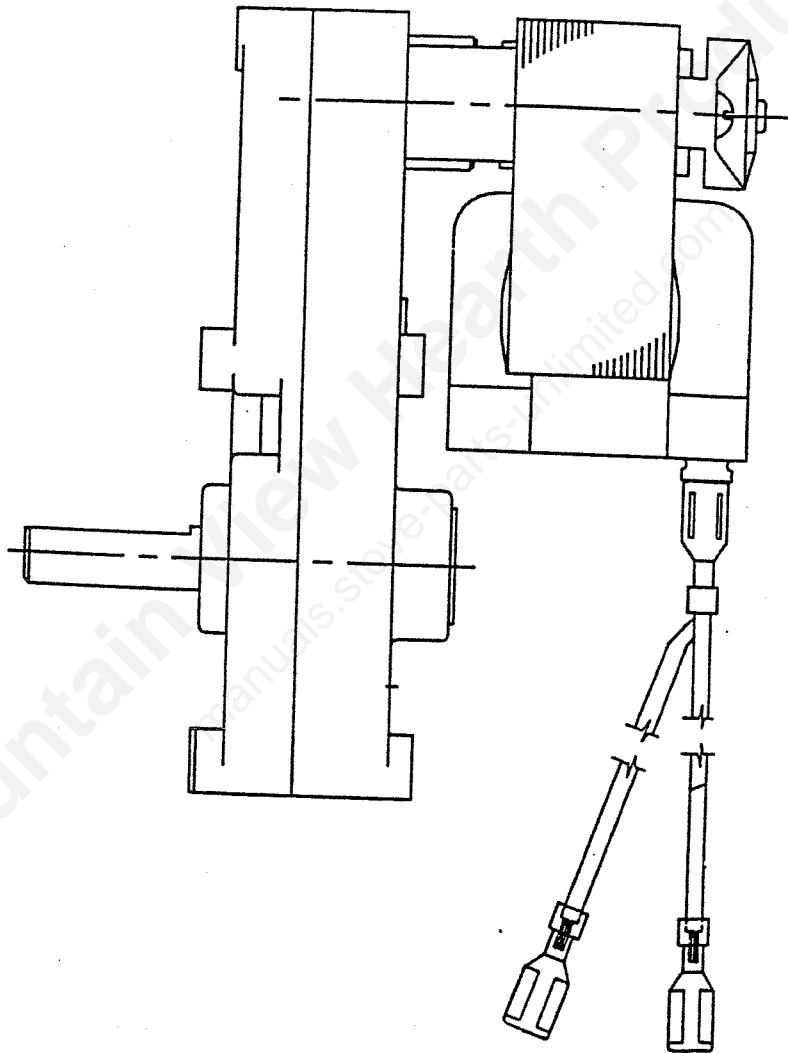
- > 115 Volts; 1.1 Amps, 60 Hz.
- > RPM range: 1350 - 2450 RPM
- > UL listed
- > Serial #: 832 010 0164
- > cfm = 210 cuft/min



1.3 AUGER MOTOR:

Made in the USA by Merkle Korff this auger motor is a low RPM gear motor and is popular among many pellet stove manufacturers.

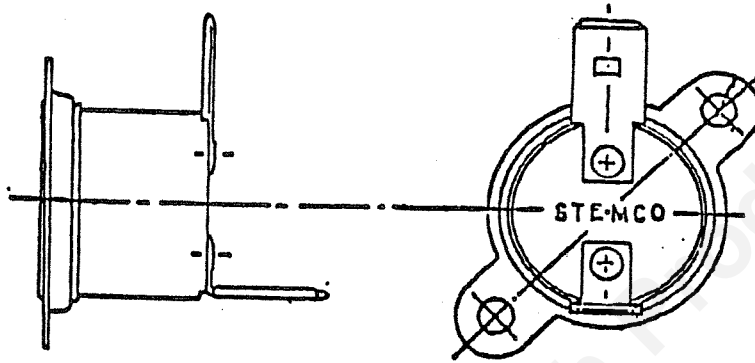
- > 120 Volts; 0.55 Amps, 60 Hz.
- > 1.1 RPM
- > UL listed
- > Serial #: GF X 4728 Rev. D



1.4 HIGH LIMIT SWITCH:

The high limit switch is closed when the stove is cold. The high limit switch shuts down auger feed in the event of overheating in the stove body. This switch is a bi-metal switch that opens at 250° F (+- 7).

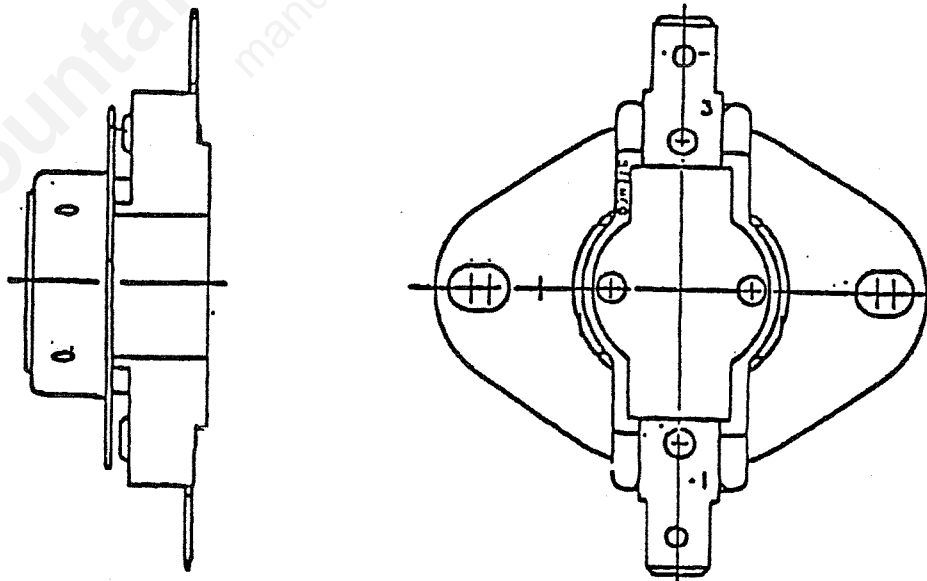
- > closing temp. 201° F
- > manufactured by STEMCO (USA)
- > normally closed switch



1.5 LOW LIMIT SWITCH:

The low limit switch is open when the stove is cold. The switch closes when the stove reaches operating temperature during the start up cycle; it closes at 120° F (+- 6). The low limit switch also shuts down the convection fan and the auger motor during cool down.

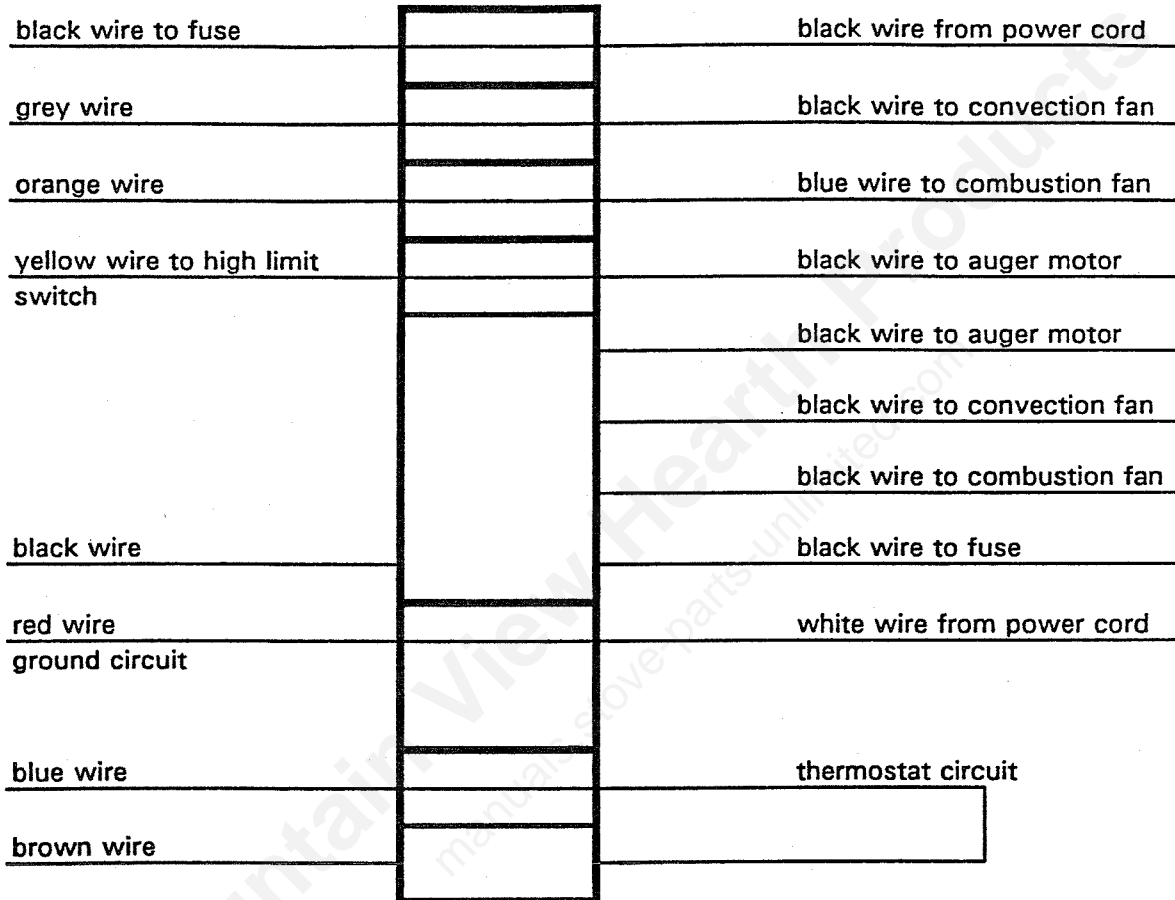
- > opening temp. 110° F (+- 5)
- > 120 Volts AC bi-metal switch
- > manufactured by Therm O Disc



1.6 TERMINAL BLOCK AND WIRING HARNESS:

The terminal block (PVC) is the connection for all electrical components of the stove. The wiring harness provides the mount for the circuit board. Ensuring proper connection of all motors and circuits is essential for correct operation.
> manufactured by Woo Young Co.

TERMINAL BLOCK DIAGRAM



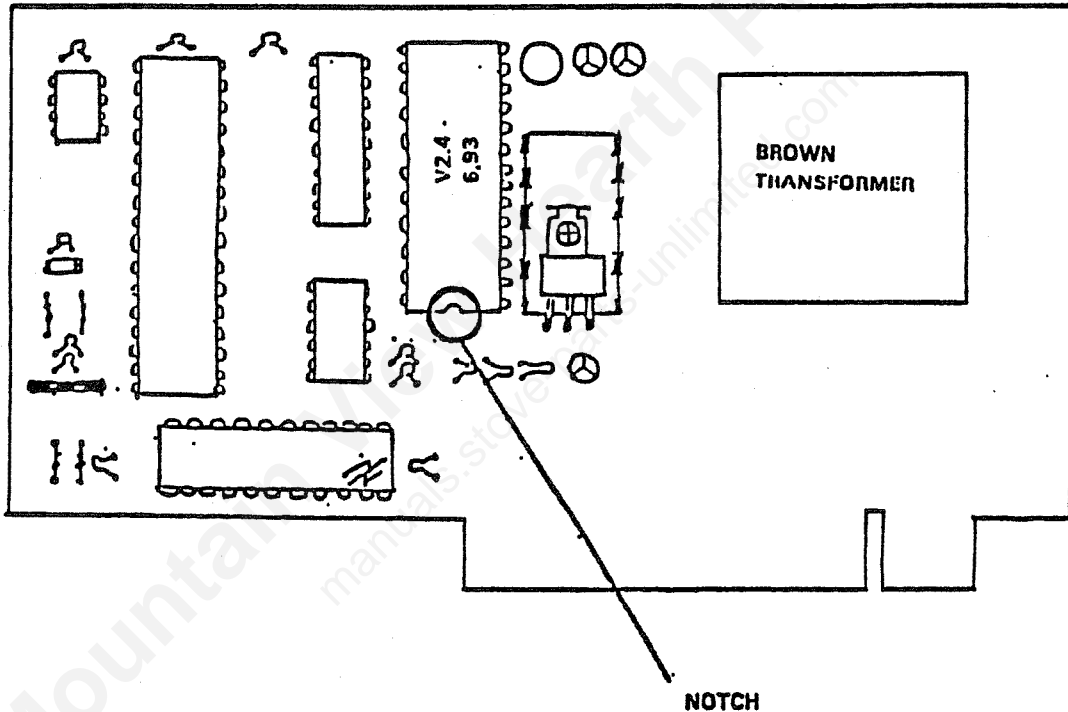
1.7 CIRCUIT BOARD AND EPROM CHIP:

The circuit board controls all functions of the stove with the safety switches, Hall IC circuit and Air Sensor. The EPROM chip (programmed by ABATEC) is a "read only" memory chip with the program of the stove recorded on it.

NOTE:

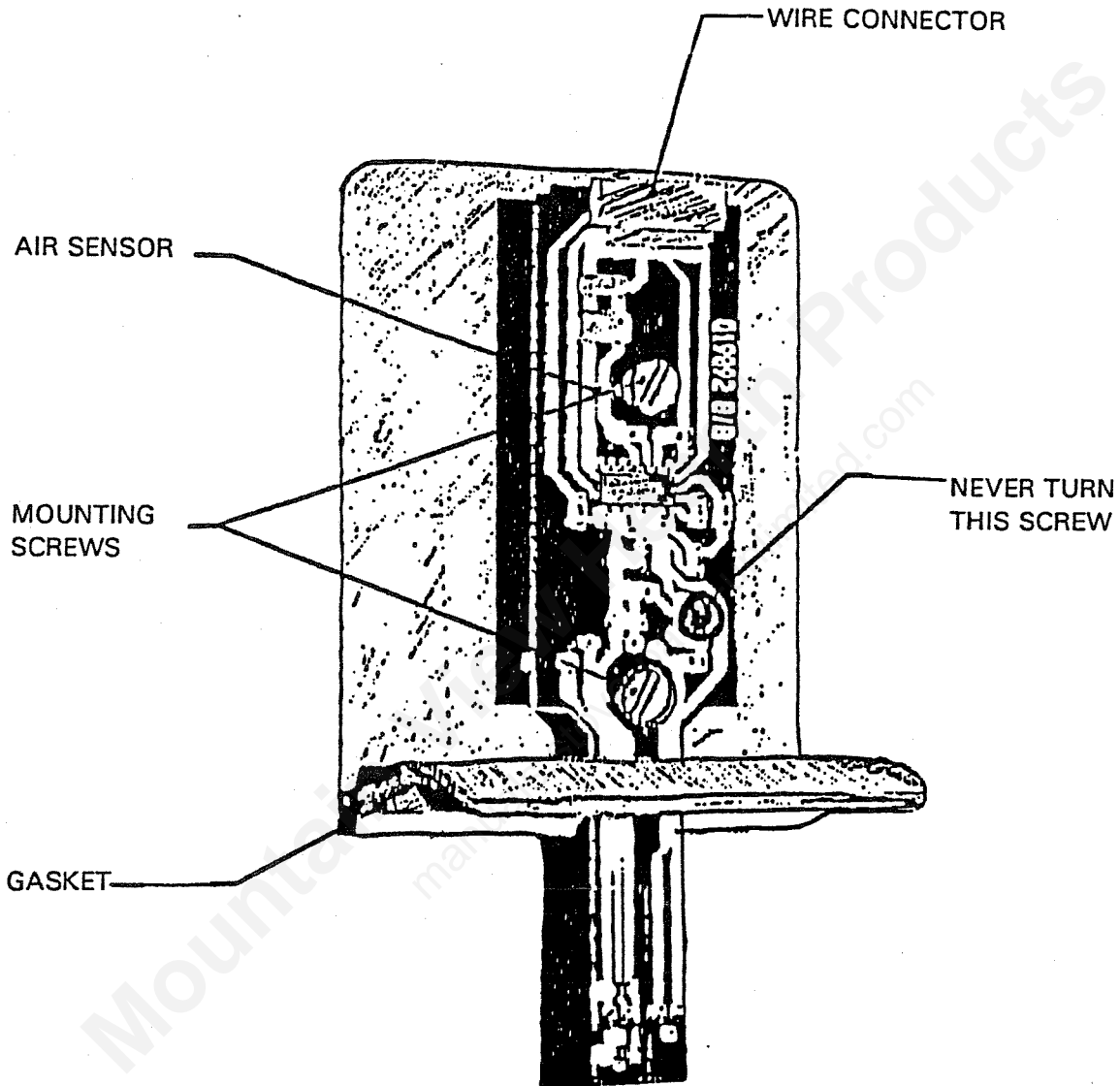
It is possible to change only the EPROM chip. Ensure that the small notch in the chip points to the center of the board.

- > version 2.4: * 8 minutes start up cycle
- > latest version 2.5 with: * delay of convection motor when adjusting stove from high to low setting
- * 12 minutes start up cycle



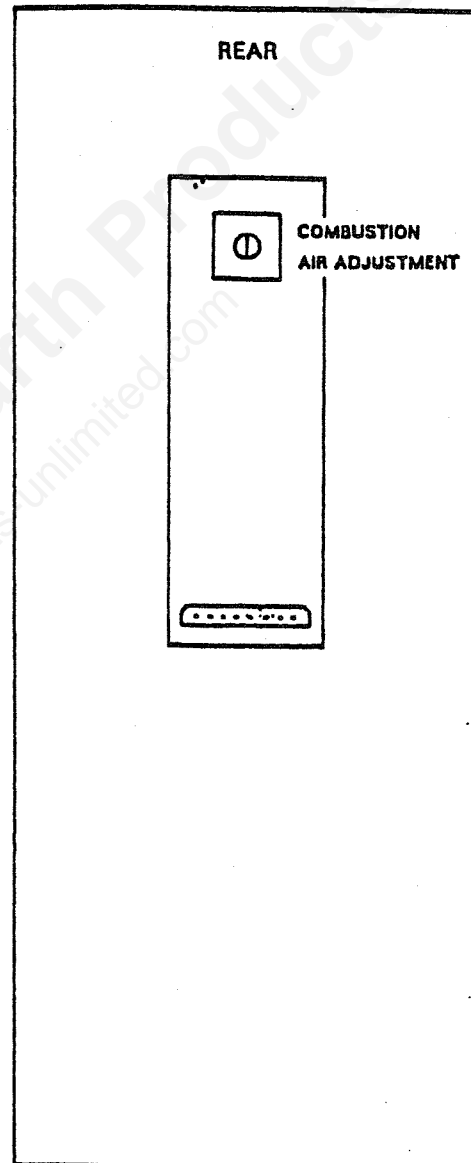
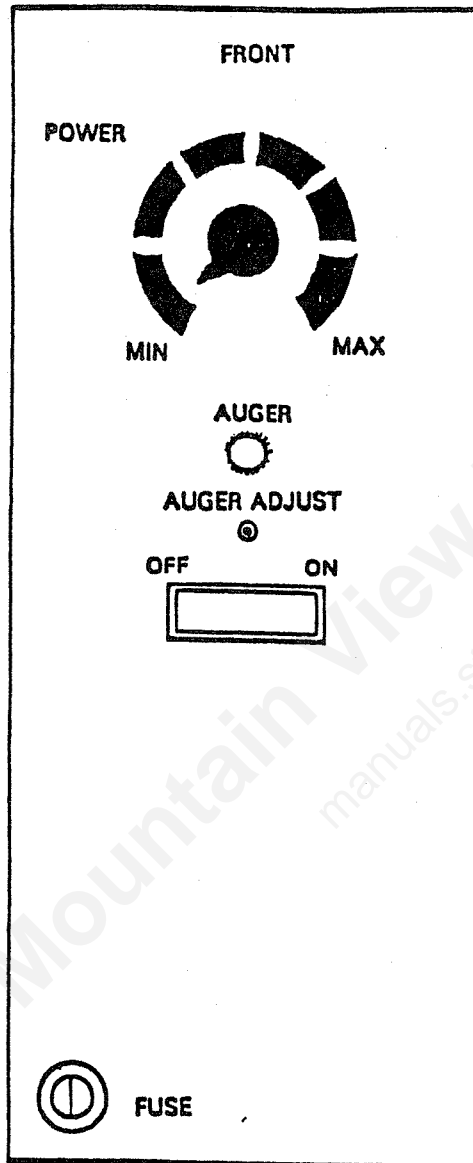
1.8 AIR SENSOR:

The air sensor samples the amount of incoming air and shuts down the auger feed if not enough air is flowing through the stove. The air sensor measures speed, temperature, humidity and density of incoming air and transfers this information to the circuit board. The air sensor adjusts combustion air and auger feed to fine tune air/fuel ratio.



1.9 USER CONTROL BOARD:

The Integra series user control board is the simplest to use in the industry. This board holds the on/off switch, power knob and the main fuse. Adjustments for the air potentiometer and auger potentiometer are made on the user control board. The auger light on the user control board lights whenever power is routed to the auger motor.



2. OTHER COMPONENTS:

2.1 STOVE BODY:

The stove body is precision welded of 5mm - 8mm thick sheet metal. Raw materials are laser cut and robot welded for a gas tight, durable frame.

2.2 DOOR AND WINDOW:

The cast iron door and neo - ceram glass resist high temperatures and ensure air tightness between the door frame and stove body. The long handle is easily opened even when the stove is hot.

2.3 TOP FINS AND BOTTOM FINS:

Decorative fins are easily interchanged and available in black or brass finish.

2.4 HEAT EXCHANGE TUBES AND CLEANING RODS:

Manufactured of stainless steel, the heat exchange tubes provide efficient transfer of heat from the combustion air to the room air. The tubes are easily cleaned with the built in cleaners. Access to the tubes is easily obtained by removal of the cast walls for annual service.

2.5 CAST IRON BACK PLATES:

The back plates of the burn area are high quality cast walls that protect the heat exchange tubes and also transmit heat to the heat exchangers.

2.6 ASH PAN AND BURN POT:

The cast iron burn pot is precision machined to allow the maximum amount of air to pass through. The holes are venturi shaped to increase the air velocity as it enters the burn pot. The design of the burn area is very simple and facilitates the weekly cleaning procedure.

2.7 AUGER:

Heavy gauge steel construction and flight all the way to the top of the shaft minimizes the chance of auger jams. The auger inspection plate is a unique Austro - flamm feature that permits easy cleaning of the auger.

2.8 HOPPER AND HOPPER LID:

The extra - large capacity of the hopper provides the longest burn time in the industry. The hopper lid's size makes it very easy to refill.

2.9 SIDE PANELS:

Interchangeable side panels are powdercoated in distinctive colors:

White
Black
Cranberry
Hammered Grey
Blue
Teal

designer colors:

French Bordeaux
Italian Green
Marble White

3. FUNCTION OF THE STOVE:

NOTE:

The stove arrives with the user control board on the insert packaged separately inside the hopper. This components must be installed before performing the preburn procedure. The user control board on the insert is installed into the right side shroud panel. **INSTALL THIS COMPONENT BEFORE CONNECTING THE STOVE TO 110 VOLTS AC.**

3.1 START UP FUNCTIONS:

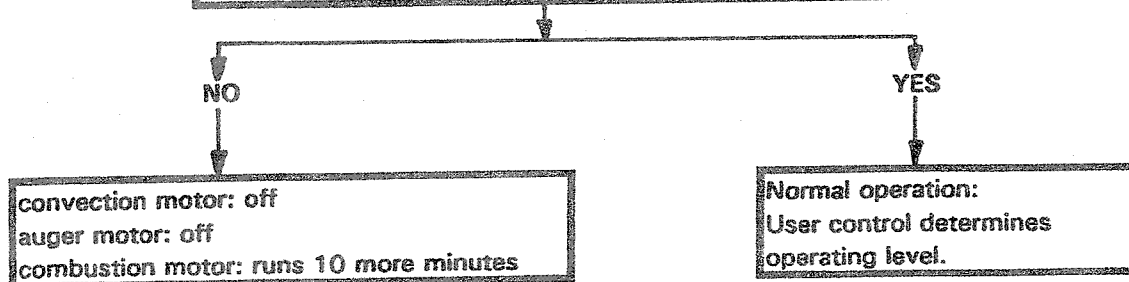
When the on / off switch is turned on, the 12 (8) minute start-up cycle (detailed below) begins. During the start-up cycle, function of the stove is controlled by the circuit board. The user control dial does not affect the operation level of the stove during this cycle, and the on/off switch controls only the auger feed.

After 12 (8) minutes the stove operation is adjustable by the user control board.

After 15 minutes, if the stove has reached operating temperature (>120° F), the start - up cycle is complete and the stove burns in normal operation mode.

START UP MODE

TIME	FUNCTION
0 - 45sec.	combustion motor: from 30% to 33% convection motor: off auger motor: from 20% to 100%
45sec - 12 (8) min.	combustion motor: 100% convection motor: off auger motor: 100%
12 (8) - 15 mi	combustion motor: controlled with user control setting convection motor: on auger motor: controlled with user control setting
after 15 min.	Low limit switch is checked. Is stove reaching operating temperature?



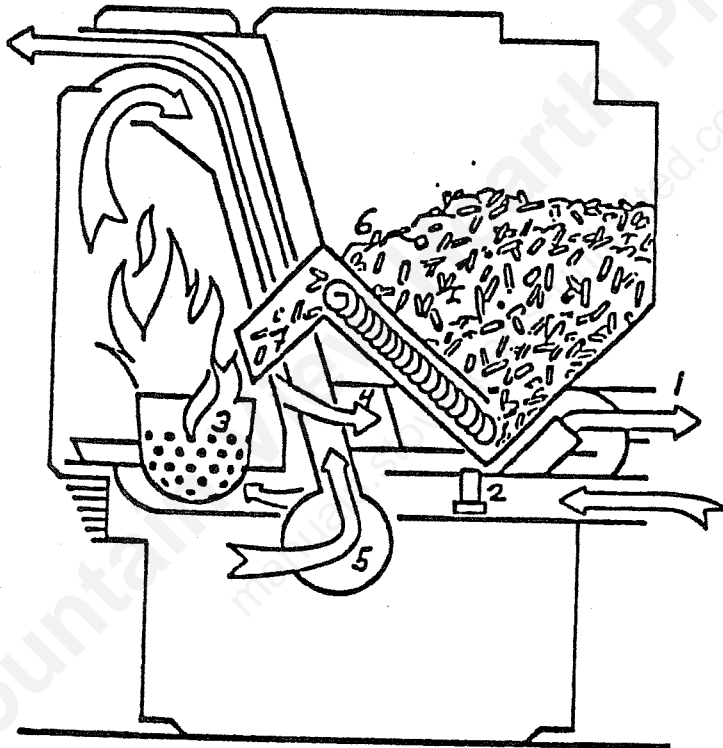
3.2 NORMAL OPERATION OF THE STOVE:

Under normal operation, adjustment of the user control dial regulates auger feed and the convection fan.

The air sensor is constantly measuring incoming air for speed, temperature, pressure and humidity. The air sensor transfers this information to the circuit board.

The circuit board is programmed with a nominal incoming air value. The circuit board reads the air sensor information and compares it against this nominal value.

The combustion motor speed is measured in RPMs by the Hall IC circuit. The circuit board reads the RPM measurement and increases or decreases the combustion motor speed to match the nominal air value.



- 1 Combustion motor with exhaust air
- 2 Air sensor with fresh air
- 3 Burn pot with pellets and flame
- 4 Combustion air
- 5 Convection fan and convection air
- 6 Hopper with pellets
- 7 Auger and auger shaft

3.3 COMPONENTS FUNCTION:

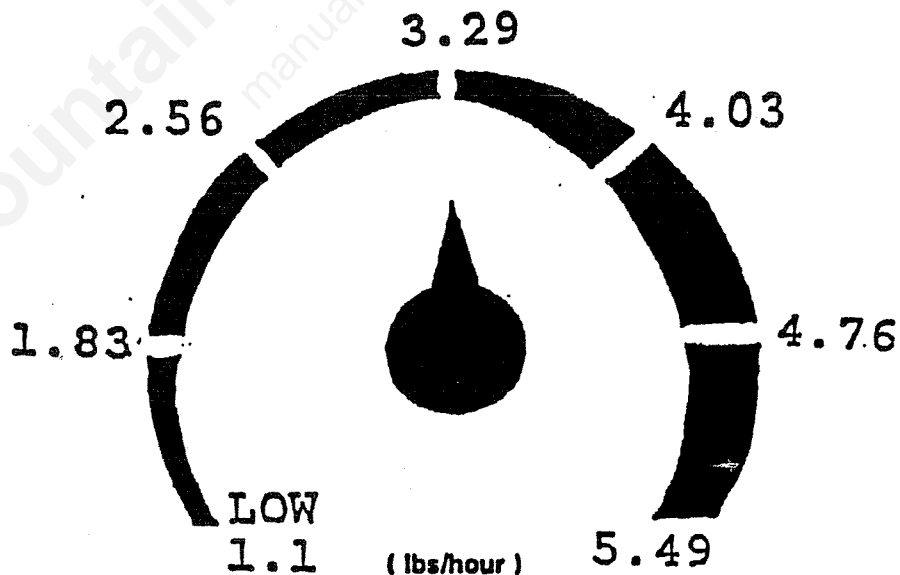
> Hall IC : The Hall IC circuit replaced the vacuum pressure switch readings in the stove to control RPMs of the combustion motor. The Hall IC measurement is more accurate and more efficient than vacuum readings, and it also allows the combustion motor to respond more quickly to changes in the fuel or air supply. Three small gauge wires with a quick connect plug transfer the RPM readings from the combustion motor to the circuit board. The Hall IC is a built in component of the combustion motor.

> User Control Board: The user control board houses many important functions and adjustments.
The on/off button is a dual function switch initiating the start up sequence of the stove and providing power to the auger feed.

NOTE:

When the button is switched to off, only the auger feed is shut down. Combustion and convection motor continue to run without pellet feed until the stove cools below the opening temperature of the low limit switch.

Pellet consumption:



The power knob adjusts auger feed and is infinitely adjustable between the minimum and the maximum setting. During the first 12 (8) minutes the power knob does not affect stove operation. During this time the fuel feed and combustion motor are controlled by the start - up function of the stove.

The auger light when lit indicates that the signal to turn the auger and auger motor has been generated by the circuit board. The length of time the auger runs is determined by the position of the power knob. If the auger light blinks but the auger is not turning, refer to trouble shooting guide.

Power knob adjustment	Auger cycle 4.5sec	
	on	off
minimum	0.6sec	3.9sec
medium	2.25sec	2.25sec
maximum	3.9sec	0.6sec

The length of time the auger motor runs is adjustable by the auger potentiometer. The auger potentiometer is accessible through the hole on the front side of the user control board just below the auger light. The potentiometer is set at the factory to the 12 o'clock position. Turning the potentiometer counter clockwise decreases the on - time of the auger and turning the potentiometer clockwise increases the on - time of the auger. Total possible adjustment to the auger on time is +-22% using the auger potentiometer. An adjustment can be made from 0 Volts to 5 Volts on this potentiometer; the factory setting is on 2.5 Volts:

- more Volts - less capacity
- less Volts - more capacity

The air potentiometer is on the back side of the user control board. The user control board must be removed from the side or shroud panel to adjust the air potentiometer. The air potentiometer is set to 12 o'clock at the factory. Adjusting the air pot. clockwise increases the speed of the combustion motor and turning the potentiometer counter clockwise decreases the speed of the combustion motor. Total possible adjustment via the air potentiometer is $\pm 25\%$. And this potentiometer works exactly the same like the one for the auger.

Flame characteristics	Potentiometer setting	
	Air	Auger
bright yellow, high amount of fly ash, pellets blown out of the burn pot, fire goes out from low fuel.	-- turn counter clockwise	+ turn clockwise
lazy orange flame, black smoke on top of flame, creosote or soot on glass, fire goes out from excess pellets.	+ turn clockwise	-- turn counter clockwise

NOTE:

Make the adjustment just far enough for the flame to burn right.

The user control board holds an in-line fuse which protects the stove from fluctuation in the power supply. The fuse is a 250 Volt, 2 Amp slow blow fuse.

- > **Air wash:** The Integra door and glass are assembled with a gap between them along the top edge of the glass. The negative pressure system draws cold air into the stove through this gap, and the air drifts down the window to help prevent soot and creosote build-up. The gap between the door and the top edge of the glass is 1 - 2 mm (about the thickness of a credit card).

> Room convection air:

Room air is drawn in through the bottom fins by the convection fan. The fan blows the cold air through 8 stainless steel heat exchanger tubes and the heated air moves into the room through the top fins. The convection fan starts after 12 (8) min in the start - up cycle. There is no convection air during the first 12 (8) minutes of the start - up cycle. Turning the power knob to a lower setting will set a delay in the adjustment of the convection fan from about five minutes to the desired output level to prevent temperature rise in the stove body.

> Thermostat option:

To hook up a thermostat to the stove, remove the brown jumper wire on the terminal block (terminals 7 and 8), and connect the thermostat to those terminals.

Recommended thermostats:

- 1 White Rodgers Division
ID36 - 3/6
- 2 Honeywell
T810 D - 1003
- 3 Dayton
2E 156 B

Computer controlled thermostats:

- 1 White Rodgers
1F90 - 60 (17 - 30 Volts AC)

Once the stove is thermostat controlled, the stove will operate at power knob setting until the desired temperature is achieved. When the room reaches the desired temperature on the thermostat; the stove switches to its minimum setting. When the room cools below the thermostat temperature the stove automatically operates at the power knob setting.

NOTE:

You should be able to use any thermostat on the market with a 12milli Volt up to a 24Volts AC rating.

3.4 SAFETY FEATURES:

> **High limit switch:**

The high limit switch is closed during normal stove operation. It is located on the right hand side of the stove at the base of the heat exchanger tube. Power to the auger motor travels through the high limit switch. If the stove temperature rises above 250° F, the switch opens and the circuit to the auger motor is opened, shutting down the auger feed. When the stove returns to a safe operating temperature (200° F) the switch closes and the auger begins feeding pellets again.

> **Low limit switch:**

The low limit switch is open until the stove reaches operating temperature. The low limit switch is located on the combustion motor housing, and it measures the temp. of the exhaust for the circuit board. During the start - up sequence the low limit switch helps ensure that the stove reaches operating temperature. During cool down the switch makes sure that the convection fan and combustion motor operate until the stove is sufficiently cooled.

> **Negative pressure:**

The combustion motor is positioned at the end of the air system providing air to the stove through SUCTION. This negative pressure system is a safety feature to ensure that exhaust gas does not enter the room.

For example, if the door is opened with the stove burning the circuit board senses the decrease of negative pressure via the air sensor. The circuit board then shuts down the auger feed and the combustion fan increases RPMs to keep the exhaust air from entering the room. This prevents smoke from entering the room when the door is opened.

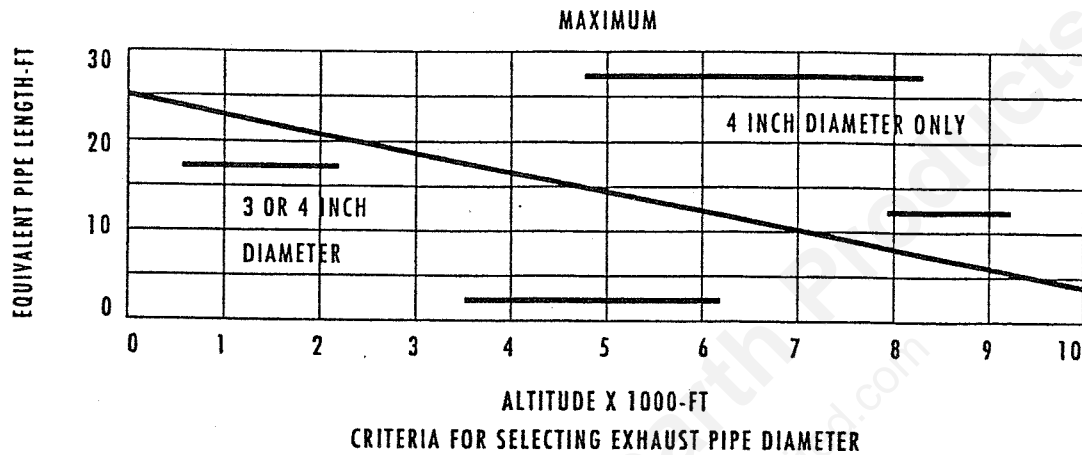
The negative pressure system prevents the exhaust gas from entering the room through any leaks that may occur from faulty gaskets, or broken glass.

> **Protections against power fluctuations:** The fuse on the user control board and the capacitor on the combustion motor protect the electronics from power fluctuations.

4. BURNING AND INSTALLATION OF THE STOVE:

4.1 EXHAUST SYSTEM:

- > Use non combustible floor protection
- > Use a listed pellet pipe with a 3" or 4" diameter

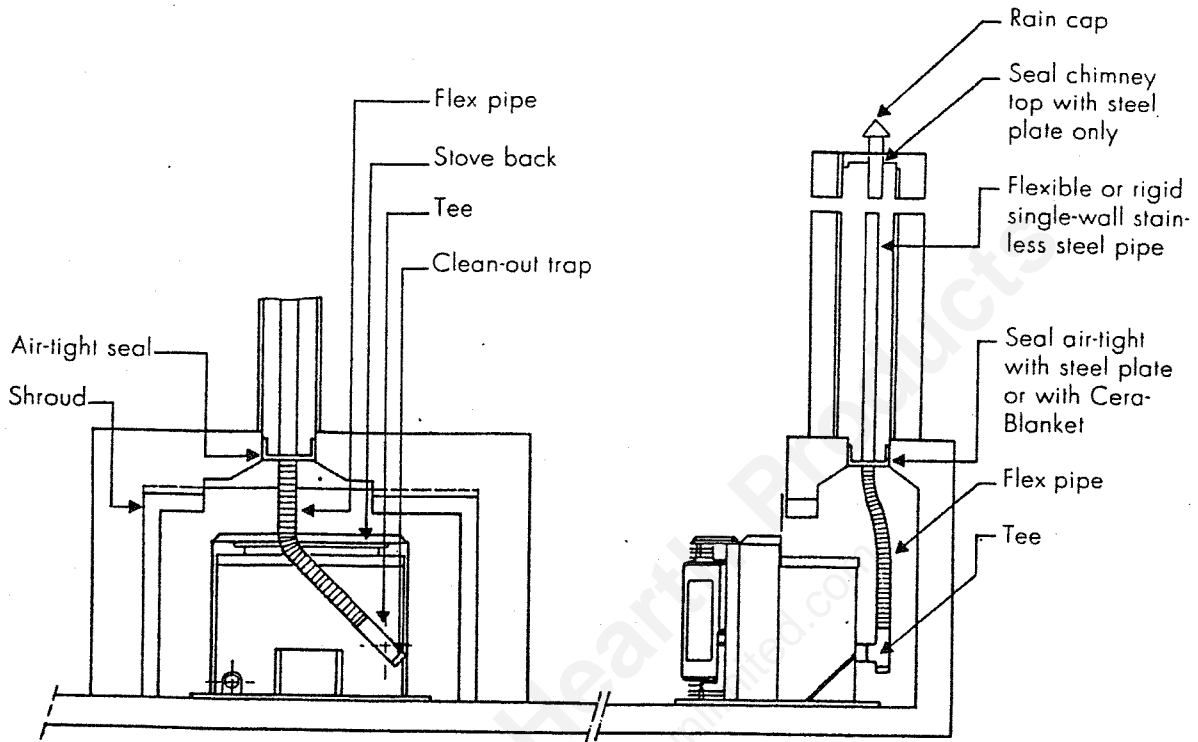


- > Horizontal straight length = 1 x actual length ft.
- > Vertical straight length = 0.5 x actual length ft.
- > 90 elbow or tee = 5 ft.
- > 45 elbow = 3 ft.

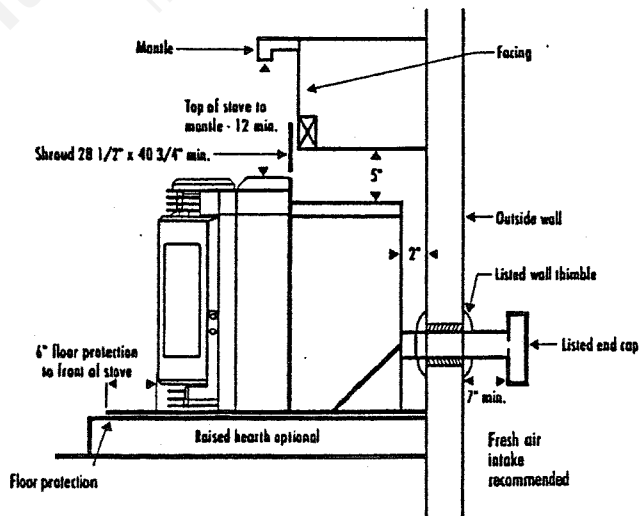
NOTE:

Total number of feet in the system must not exceed 30 feet using this formula.

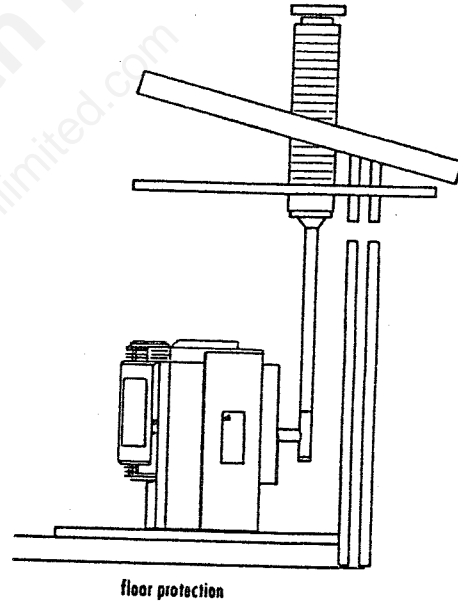
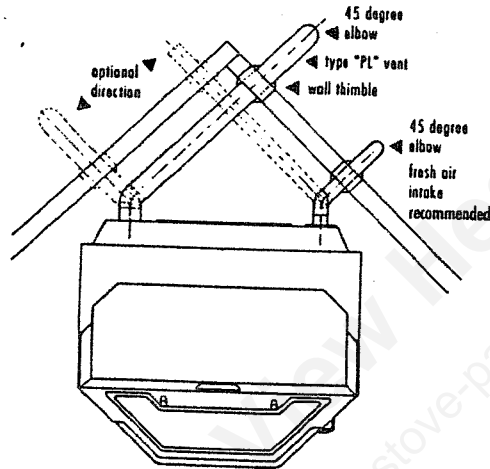
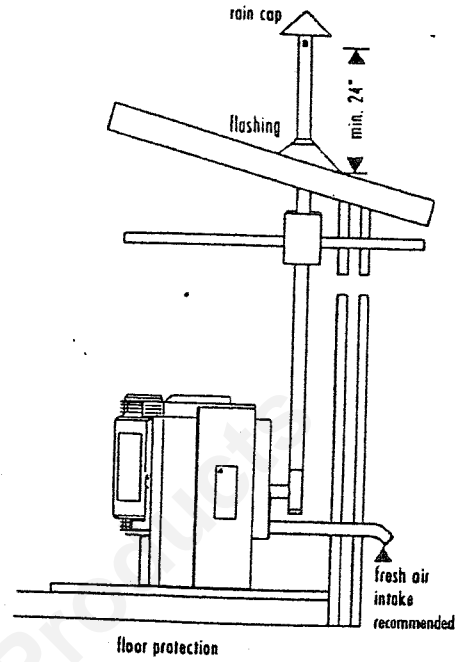
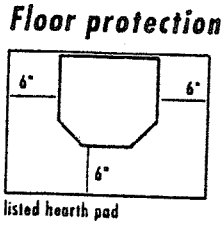
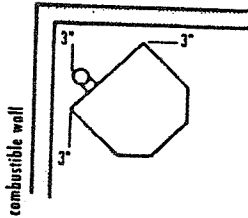
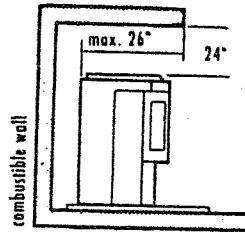
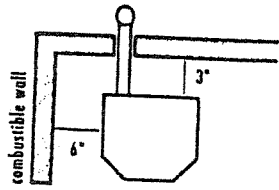
4.2 VENTING INTO AN EXISTING CHIMNEY:



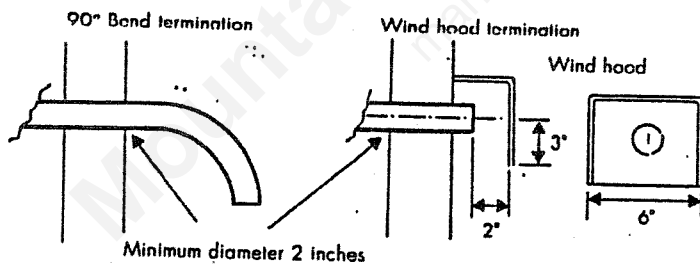
4.3 INSTALLATION INTO COMBUSTIBLE FRAMEWORK



4.4 INSTALLATION FREESTANDING:



4.5 OUTSIDE AIR CONNECTION:



NOTE: Blockage, excessive length or bends in the air intake pipe starve the stove from combustion air.

NOTE: All the installation is a suggestion and recommended by Austroflamm!

5. PREBURN PROCEDURES:

- 5.1 Check shipping carton for any external damage caused by shipping. If container damage is present make thorough inspection of stove for damage. If any damage is present, document damage and file reclamation claim against shipper.

NOTE:

Austroflamm is not responsible for shipping damage and cannot initiate claim.

- 5.2 Check stove to make sure all components are present.
- 5.3 Check bottom of hopper to make sure there is no foreign material that could jam auger.
- 5.4 Check for proper electrical connections.
- 5.5 Install internal circuit board (on the Insert user control board and internal circuit board) and connect power cord to 120 Volts grounded receptacle. Turn the stove on and let it run one cold cycle (about 25 minutes). Place about 10 lbs of pellets in the hopper. Auger will prime itself. After 25 minutes stove will shut down automatically.
- 5.6 Set power knob to maximum setting.
- 5.7 Sequence to start the fire can vary, this is only one method. Place small handful of alcohol impregnated pellets (or pellets mixed with a burning gel) in the burn pot, turn on / off switch to on for a second then off, light pellets , close door, allow fire to establish itself then turn switch back to the on position.

NOTE:

Turning the switch on then off allows only the combustion motor to operate, preventing excess pellets from smothering the fire.

- 5.8 12 (8) minutes into start - up cycle the convection fan will come on.

- 5.9 Let stove burn for approximately 60 minutes. After the first 20 minutes open and close door every 10 minutes to make sure door gasket doesn't stick to curing paint.
- 5.10 After the first 60 minutes, turn the power knob to minimum setting and allow to burn at this level for 30 minutes to ensure that the stove will maintain a minimal fire.
- 5.11 After the 30 minute low fire test, reset power knob to maximum setting and allow stove to burn on high for an additional 30 min.
- 5.12 Turn stove off (auger stops feeding) and check to make sure that after the low limit opens (convection fan shuts down) combustion motor continues for an additional 10 minutes.
- 5.13 You now have a product that you can install with confidence that will function correctly, provided you have properly instructed customer to the operational and maintenance procedures.

NOTE:

Dealers that preburn stoves find 90% of warranty failures during the preburn procedure. It's a lot easier to correct these problems in your shop where you don't have to fight the installation or an irate customer. It's also more economical to make warranty repairs in your shop rather than in the customer's house.

6. MAINTENANCE SCHEDULES:

6.1 BURN POT:

Clean as needed, 2 to 7 times a week, depending on characteristics of pellet fuel used and operational habits of stove owner.

6.2 ASH PAN:

Clean as needed, visually apparent.

6.3 DOOR GLASS:

Clean as needed, usually daily, can be more or less frequent depending on characteristics of pellet fuel used and operational habits of stove owner.

6.4 HEAT EXCHANGE RODS:

Clean 1 or 2 times a day.

6.5 LOWER CAST PANEL:

Remove and clean heat exchange area every ton of pellets, more frequently if using a fuel with a high ash content.

NOTE:

Not doing this procedure can cause auger not to operate, because of restricted air flow.

6.6 HOPPER:

Let hopper run almost empty and vacuum sawdust from sides and contours. Do this monthly if dumping pellets directly from the bag into the hopper. (If customer uses a pellet dispenser that removes sawdust as it dispenses, do this procedure at time of annual service)

6.7 ANNUAL SERVICE:

Remove combustion motor from the cast aluminium housing; clean impellar and housing area. Remove access plate from rear exhaust chamber and vacuum out all ash. Remove both lower and upper cast panels and clean heat exchange tubes. Clean all vent piping, remove convection motor and clean impellar. Remove air sensor and clean with approved solvent (example: Radio Shack aerosol degreaser). Clean hopper and auger pathway, clean dirt and dust from all rear areas of the stove, particularly auger motor and areas close to circuitry

6.8 PROCEDURES FOR CLEANING:

Note:

This procedure will require gaining access to the front and sides of the unit with enough room to move freely. If working on a freestanding model, all side panels will need to be removed.

This procedure can be simplified if you arrive with the appropriate tools and materials. Having these items on hand can expedite the procedure. These may consist of the following:

- 1 High temperature anti-seize compound
- 2 6mm hex key wrench
- 3 Phillips screwdriver
- 4 Flashlight
- 5 Ash vacuum
- 6 Metric ratchet set
- 7 Small soft bristled brush
- 8 Flat tip screwdriver
- 9 Pipe cleaning brush for 2" pipe
- 10 Combustion motor gasket material

First, gain access to the burn area by opening the door and remove any ash or pellets from the burn pot and ash pan. Remove the ash pan and burn pot and place them aside.

Using your 6mm hex key wrench or 10mm socket (for older model) remove the bolts which secure the lower cast wall. The wall should simply fall out and away from the body of the stove. Brush off any ash build-up and set the lower cast wall aside. The same wrench should work as to remove the two bolts holding the upper cast wall. Support should be given as the bolts are removed, since this plate will tend to fall. Once the bolts are removed the bottom of the cast plate should be pulled down and away from the unit. Brush off any residue and set the upper cast wall aside.

You should now have access to the entire heat exchange system. Vacuum out any ash which may have built up in this area. The soft brush and flat tipped screwdriver can be used to clean around and in between the tubes. Carefully brush the uppermost interior of the burn area using the flashlight to determine if grooves on the underside of the cast hood are clear of obstructions which may limit airflow.

On the right side of the stove, remove the two screws which support the circuit board and its chassis. You should now be able to see a small rectangular access plate secured by four screws. Removal of the access plate will give access to the internal combustion chamber. Thoroughly vacuum out all ash build-up using the pipe brush to reach the sides and corners. Special attention should be paid to the small orifice holes which are located directly behind each heat exchange tube and penetrate the forward most wall of the combustion chamber to ensure that they are clear of obstructions. You can determine this by placing a flashlight inside the chamber and stepping in front of the stove. The holes should now be visible.

On the left side of the stove, the combustion motor should be removed from its housing and the blades should be wiped clean. Also, remove the low limit switch and brush it off to prevent premature shut downs. Once completed, regasket the motor and the low limit switch and reinstall.

Of utmost importance before closing up the stove is to place a generous coating of anti-seize compound to all bolts and nuts which are exposed to heat. Once accomplished you are ready to reinstall the back access cover and the upper and lower cast walls. Applying touch up paint to the burn area can leave the stove looking like new.

You may wish to check the hopper to determine if the auger has accumulated fines. This is an easy way to prevent future call backs and takes just a few moments. If you find a build-up of fines, vacuum out what you can. If the problem is serious you may need to remove the shaft and clean out the residue from the back side of the unit.

Providing this service a minimum of every two tons will maintain proper combustion, prevent future service requirements, and extend the life of the stove. Many times the customer will observe the procedure and perform it themselves. This procedure will protect a valuable investment the client has made in your company. It is in your best interest to let them know it was a good investment.

TROUBLE SHOOTING:

USE OF THIS TROUBLE SHOOTING GUIDE:

- 1 Operate the defective unit through one cold cycle and one hot cycle to examine the exact problem occurring in the stove. **DO NOT** rely on the stove owner's account of the symptoms. Examine the symptoms at the start of the service call. Pay special attention to timing of symptoms. This can be done with a stop watch or other timing devices.
- 2 Consult the trouble shooting section for related causes of the symptoms detected in stove operation. Do not assume a part is defective because of similar previous cases. Always begin to test for a certain problem at the beginning of the trouble shooting procedure to eliminate all possible causes.

NOTE:

If symptoms do not agree with any possible causes found in the trouble shooting guide, consult Austroflamm and discuss other possible causes with our technicians.

- 3 Perform specific tests to all the parts which may be suspect before replacing parts. Refer to the trouble shooting guide for specific tests for components.

IMPORTANT

Automatically changing parts that may or may not be defective can be troublesome. If the part is not at fault then the symptoms will change slightly, further confusing the actual problem. **CONSULT AN AUSTROFLAMM TECHNICIAN** if you are unsure what is causing the problem. **DO NOT CHANGE PARTS** without a specific reason for doing so. This will minimize trouble shooting time on the unit.

- 4 Replace the defective part(s) and check stove operation through one cold cycle. Then light stove and check operation at all settings.

NOTE:

If repair is being performed under warranty, be sure to obtain the purchaser's signature on the Warranty Claim Form. Collect old parts from the repair and return these together with the Warranty Claim Form to Austroflamm for credit. An RA# will be required before returning any parts. This # can be received by calling Austroflamm.

OPERATIONAL TESTS

The following test procedure will allow checking of individual functions which may be at fault. Each test sequence is preceded with bypassing the start-up cycle. Operational tests prescribed below are begun at the lowest setting in normal operation.

CONVECTION FAN

- 1 Set switch to OFF, power knob to minimum
- 2 Connect a jumper wire across the LT - LIT is the low limit switch. Causes the stove to think there is a fire in it in order to conduct the test.
- 3 Plug stove in, convection fan and combustion motor start
- 4 Turn switch to ON
- 5 Measure voltage going to convection fan
MINIMUM 60 VAC +/- 10%
- 6 Turn power knob to maximum
- 7 Measure voltage going to convection fan
MAXIMUM 95 VAC +/- 10%

Measure voltage between the two leads to the convection fan (posts 2 & 5.)

If voltage is OK, but fan does not operate:

Check fan direct to power. If it will not run on 110 VAC, the fan is defective.
Check wiring to fan for any breaks or pinching.

If voltage is greater than maximum (110 V AC):

Main Circuit Board is defective

If voltage is less than minimum or zero:

Measure DC voltage going from LT switch to board
It must be minimum 1 V DC

If voltage is 1 V DC or greater then the main board is defective

If voltage is below 1 V DC, then there is a wiring or connection problem on the LT circuit.

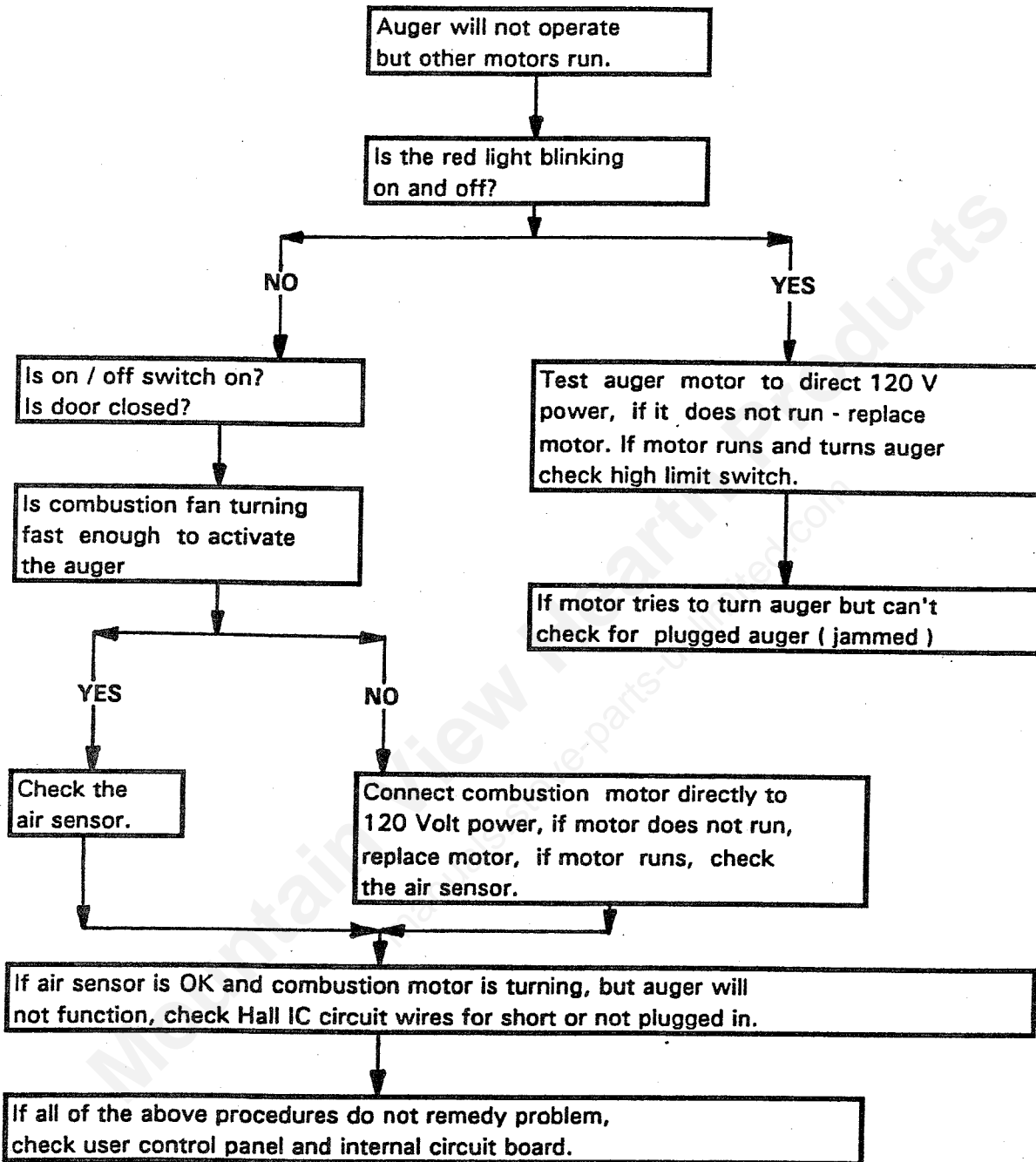
COMBUSTION MOTOR

- 1 Set switch to OFF, power knob to minimum
- 2 Connect a jumper wire across the LT
- 3 Plug stove in, convection fan and combustion motor start
- 4 Turn switch to ON, wait 45 seconds
- 5 Measure voltage going to combustion motor
MINIMUM 40 VAC +/- 10%
- 6 Turn power knob to maximum
- 7 Wait 45 seconds (for motor to fully change settings.)
- 8 Measure voltage going to combustion motor
MAXIMUM 52 VAC +/- 10%
- 9 Open the door, allow air sensor to shut off fuel and speed up combustion motor.
If the fuel continues and combustion motor does not change then the air sensor is defective.
- 10 Measure voltage to motor with door open and combustion motor at full speed.
VOLTAGE 100 VAC +/- 10%
If voltage is always 0 VAC, then the circuit board or wiring to the motor is defective.
- 11 Close door, motor returns to power knob setting.
If motor does not return to low setting (40 V), circuit board or air sensor is defective.
If voltage is always too high (90 VAC and higher) and motor will not turn, then the motor may be defective.

Measure voltage between the two leads to the combustion motor (posts 3 & 5.)

7. TROUBLE SHOOTING:

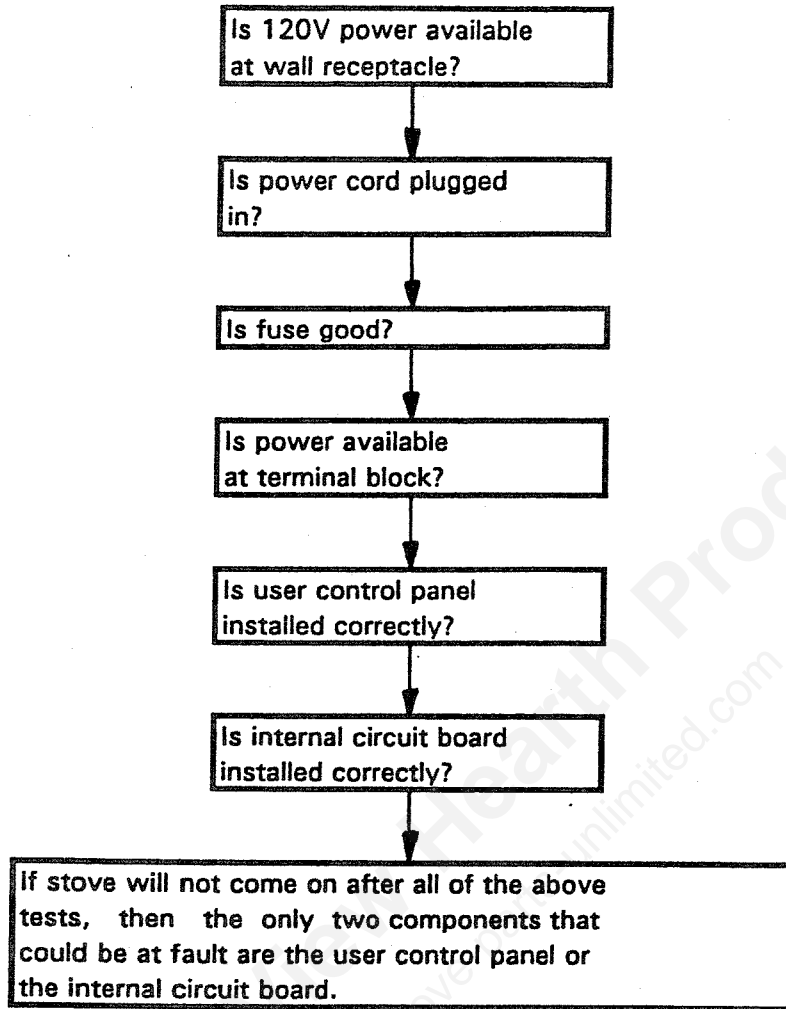
7.1 AUGER WILL NOT OPERATE:



NOTE:

If red light is indicating that auger is working, user control panel and internal circuit board are not the problem.

7.2 STOVE WILL NOT TURN ON:



NOTE:

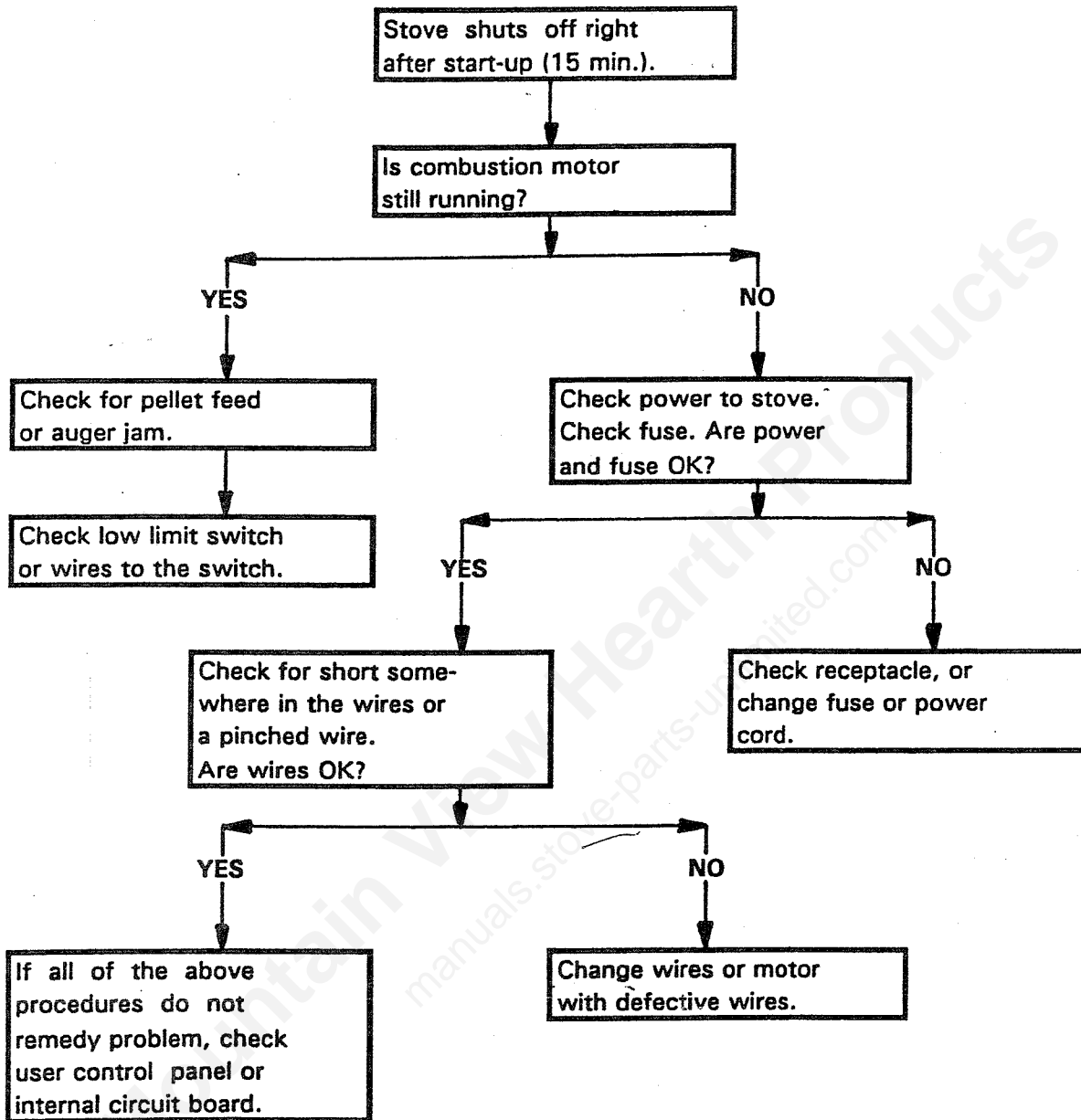
Make sure combustion motor impellar blades are free (spin test). If motor will turn by hand but won't turn on, then proceed with trouble shooting procedures.

NOTE:

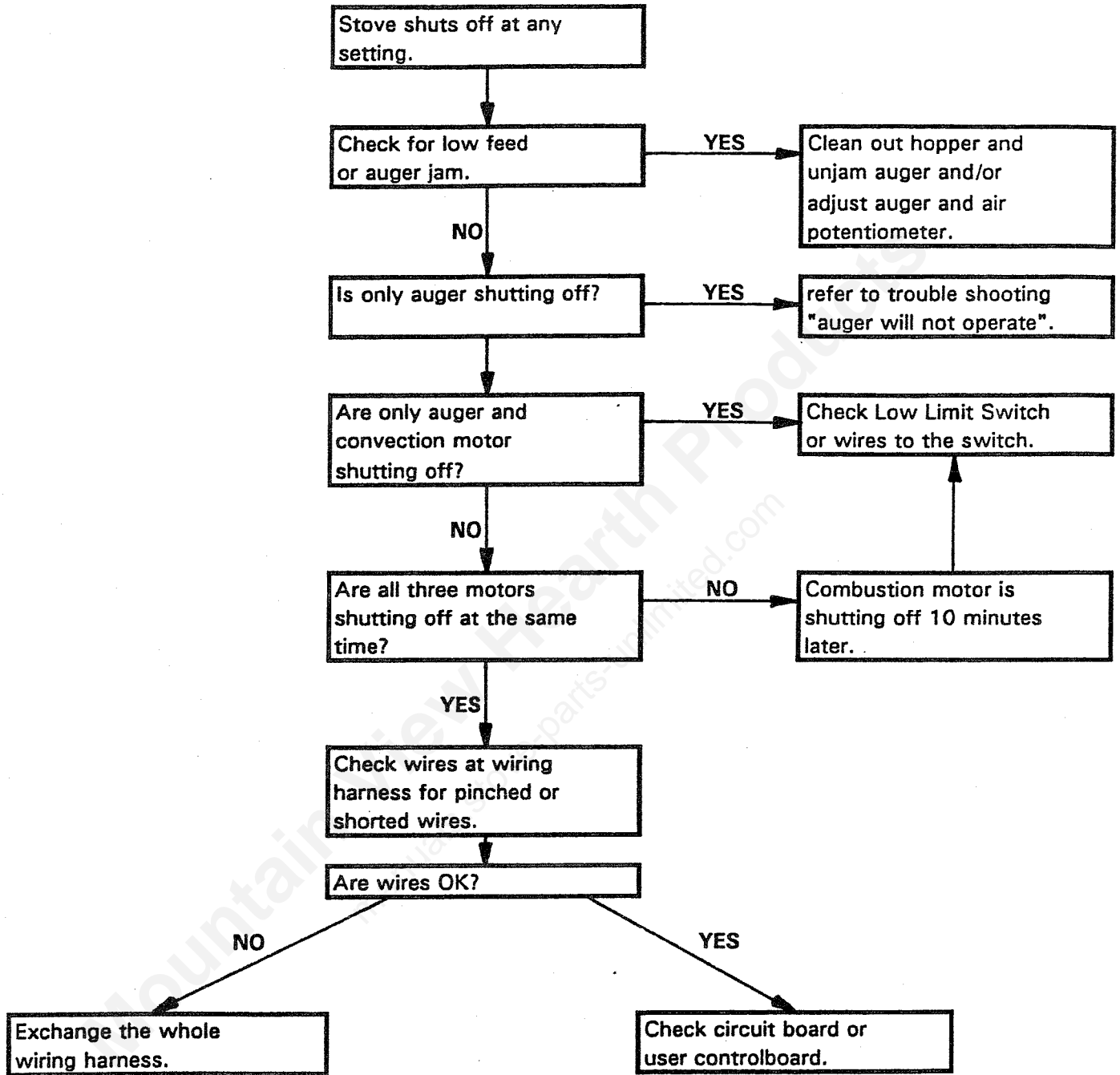
If stove shuts down, no matter at what time or setting, check low limit switch and high limit switch or wires to these two switches first. If the two switches and the wires are OK, go to regular trouble shooting.

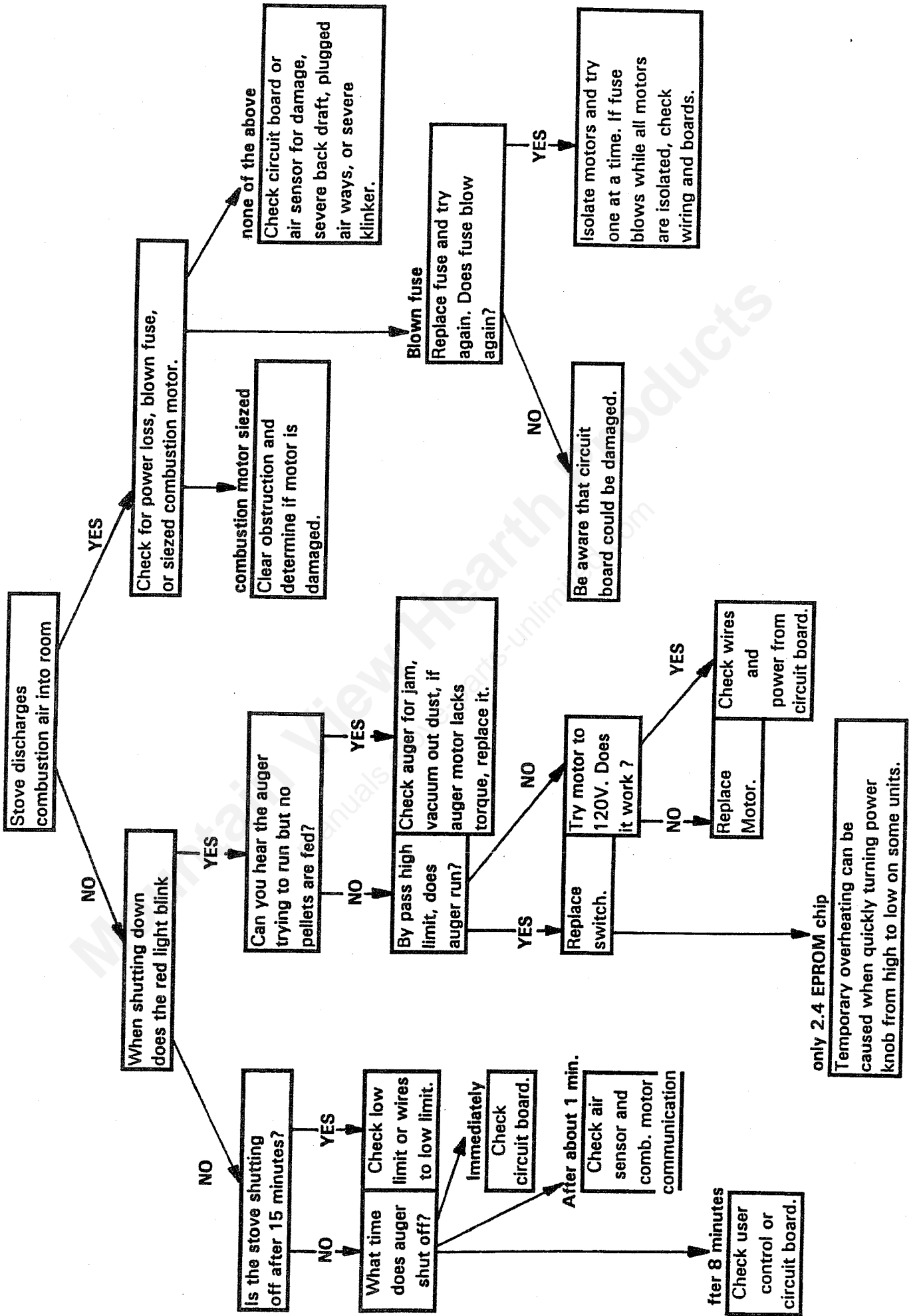
7.3 STOVE SHUTS OFF:

> AFTER START UP:

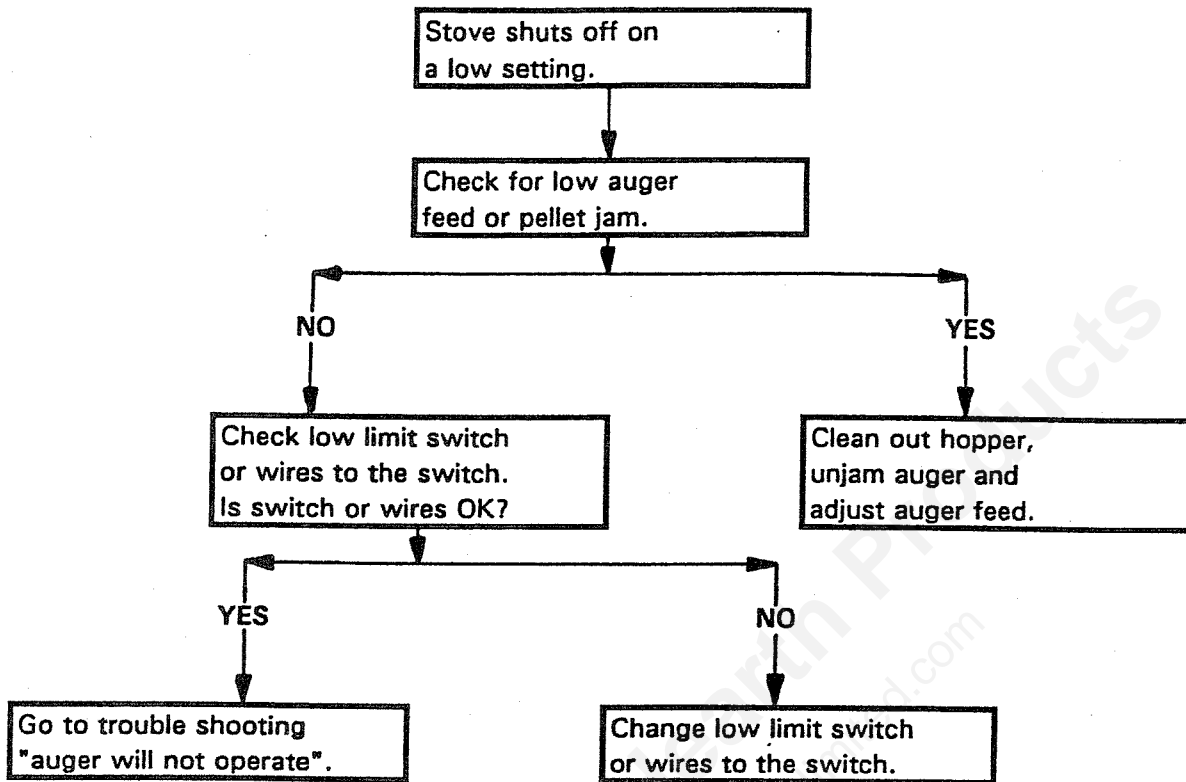


> at any setting:





> ON A LOW SETTING:



7.4 SPECIFIC SYMPTOMS:

Fuse blows: > when stove is initially plugged in: check for dead short in wiring leading to the motors or the motors themselves, replace faulty motor.

> with on/off switch turned on, check motor for excessive current draw, auger: 0.55 Amps

combustion motor: 0.31 Amps

convection motor: 1.1 Amps

If all motors check out OK, replace either user control panel or internal circuit board.

NOTE: Replace fuse and retest. If fuse blows again, determine time elapsed before it shorts. If immediate, isolate motors and try again. Install motors individually and test. If fuse blows while all motors are disconnected check control board, circuit board, air sensor and wiring harness.

Bad low limit switch:

- > Stove starts, runs for 15 minutes then auger motor and convection motor stops, but combustion motor continues for 10 minutes.
- > Stove stays on even when cold.
- > Stove starts in operational mode (all motors running) when plugged in even when on/off switch is in the off position.
- > Stove runs on low for a while, then auger and convection motor quit but combustion motor runs for 10 more minutes. (This symptom can also be caused by a low pellet feed setting.)

Faulty air sensor:

- > Combustion motor just barely turns, auger won't come on, red light is not blinking.
- > Auger starts, cycles a few times then quits.
- > Auger quits, then combustion motor speeds up.
- > Auger runs for a while then stops, then starts then stops (very erratic).

NOTE:

These symptoms could also be caused by a faulty Hall IC circuit (replace combustion fan).

Any motor comes on runs full speed when stove is first connected to power source and on/off switch is in the off position, check for short in wire between affected motor and the internal circuit board.

Combustion motor will not turn with operational voltage but runs OK when given full 120 Volts. Replace motor.

Convection motor shuts down (any time after start - up), but other motors continue to run. Check for blockage in fan, let motor run on direct 120 Volts out of the receptacle, see if motor gets too hot while operating in stove.

Check user control board or internal circuit board if:

- > there is no control over stove.
- > the auger continues to feed, even if the stove is shut off.
- > there is no control over pellet feed.
- > convection motor starts when you first start the stove.

8. DIFFERENT READINGS:

8.1 INFORMATION ABOUT EXHAUST TEMPERATURE, CO AND CO₂ :

	Power knob setting	
	minimum	maximum
Exhaust temperature	194° F - 212° F	392° F - 428° F
CO	200 ppm	100 ppm
CO ₂	3%	8%

8.2 VACUUM IN COMBUSTION CHAMBER:

Power knob setting	Stove in operation			
	in "WC		in mbar	
	cold	hot	cold	hot
minimum	0.03	0.06	0.02 to 0.05	ca. 0.08
maximum	0.1	0.17	0.07 to 0.11	ca. 0.23

8,3 RPM READING ON THE MOTORS:

(measured on a cold stove)

Power knob setting	combustion motor	convection motor
minimum	500 - 650 RPMs	800 - 1000 RPMs
maximum	1000 - 1300 RPMs	1950 - 2300 RPMs

8.4 OPERATIONAL VOLTAGE TEST:

COMBUSTION MOTOR

Knob setting	Voltage reading
min	40 VAC
med	46 VAC
max	52 VAC

Measure combustion motor voltage on the two leads going to the combustion motor from terminal block posts 3 and 5. Take the voltage reading beginning on low in normal operation, then switch to high for the maximum reading. Wait 45 seconds after changing the power knob: the motor takes this time to settle to its speed.

CONVECTION FAN

Knob setting	Voltage reading
min	60 VAC
med	76 VAC
max	95 VAC

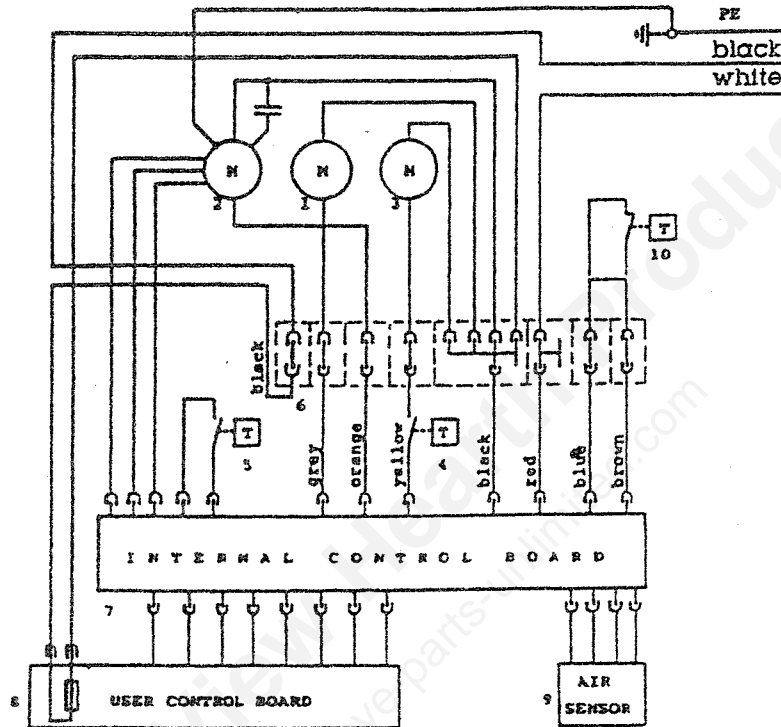
Measure convection fan voltage on the two leads going to the convection fan from terminal block posts 2 and 5. Take the voltage reading beginning on low in normal operation, then switch to high for the maximum reading.

AUGER MOTOR

Auger motor voltage is always 110 VAC.
When the red light illuminates, 110VAC is measured on both leads going to the motor (posts 4 & 5 on terminal block.)
ALL Knob Settings: 110VAC when red light is on.

9. SCHEMATICS OF THE STOVE:

MAINS
CONNECTION
110 VOLTS 60Hz



- 1 CONVECTION MOTOR
- 2 COMBUSTION MOTOR
- 3 AUGER MOTOR
- 4 HIGH TEMPERATURE SWITCH
- 5 LOW TEMPERATURE SWITCH
- 6 TERMINAL BLOCK
- 7 INTERNAL CIRCUIT BOARD
- 8 USER CONTROL BOARD
- 9 AIR SENSOR
- 10 JUMPER OR THERMOSTAT

10. DIFFERENCES BETWEEN THE INTEGRA INSERT AND FREESTANDING

The Integra series is available in either an Insert and a Freestanding configuration. The Insert and the F/S both boast the largest hopper capacities in the industry.

	Insert	F/S
Hopper capacity	99 lbs	112 lbs
Overall height	23 2/3"	32"
Gross weight	258 lbs	295 lbs
Hopper lid	5" x 24"	10" x 23"

The user control board on the Insert is mounted on the right hand side shroud panel, on the F/S the user control board is mounted on the right side panel on the stove.

CERTIFICATION

The Integra Insert and F/S are certified according to UL 1482. Testing on the Integra series was completed by Warnock Hersey to the USA and Canadian standards.

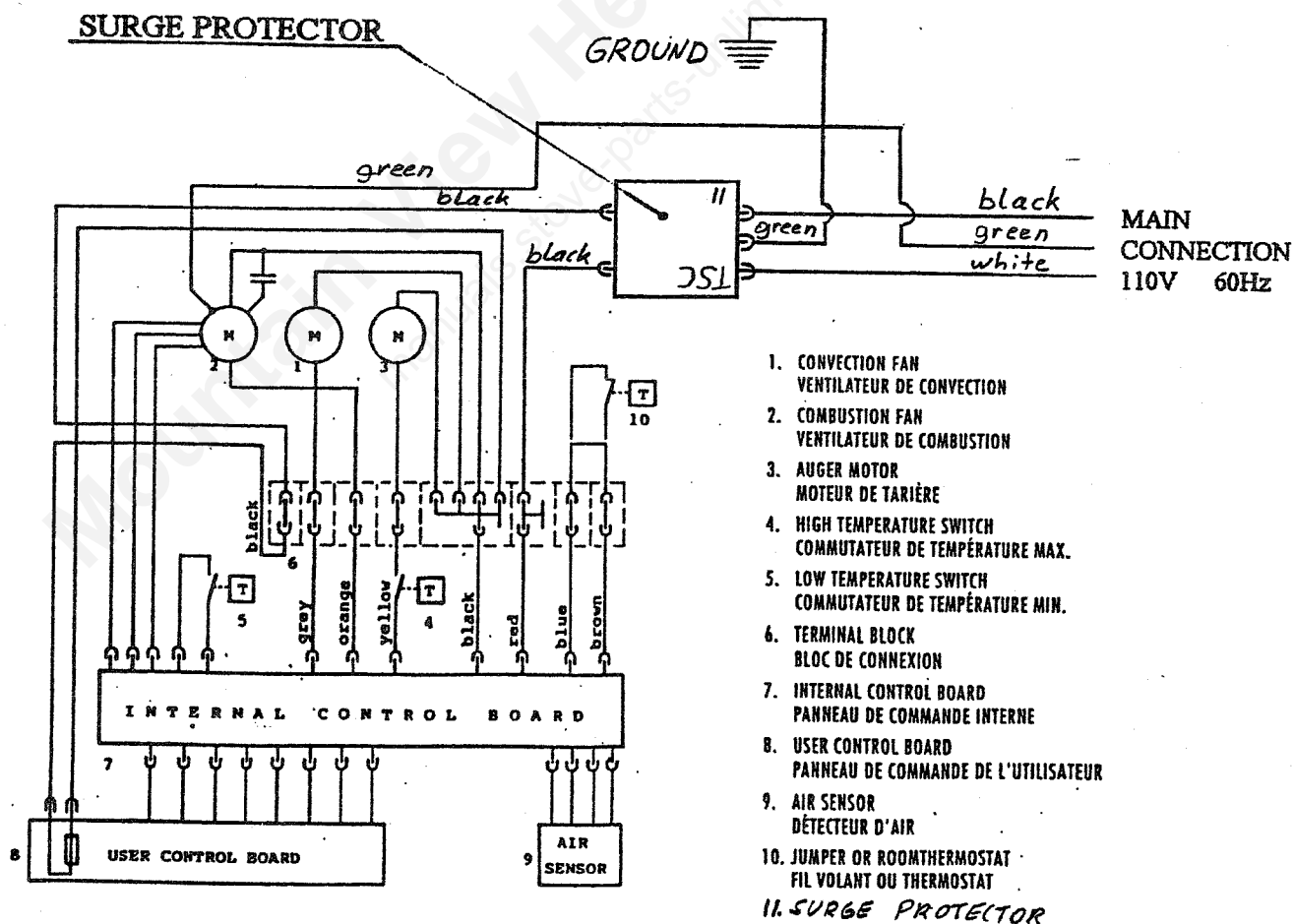
EFFICIENCY AND PELLET CONSUMPTION

A recent test in March, 1993, rated the Integra at 88.1% efficient, the cleanest operating stove tested. Heating capacity is 2000 - 2500 sqft. Heat output was measured at 7000 - 40000 BTU / hour. The auger adjustment regulates the pellet feed from 1.1lbs/hr on low to 5.6 lbs/hr on maximum. Maximum fuel consumption occurs when using smaller, softer pellets. For maximum efficiency select larger, harder pellets.

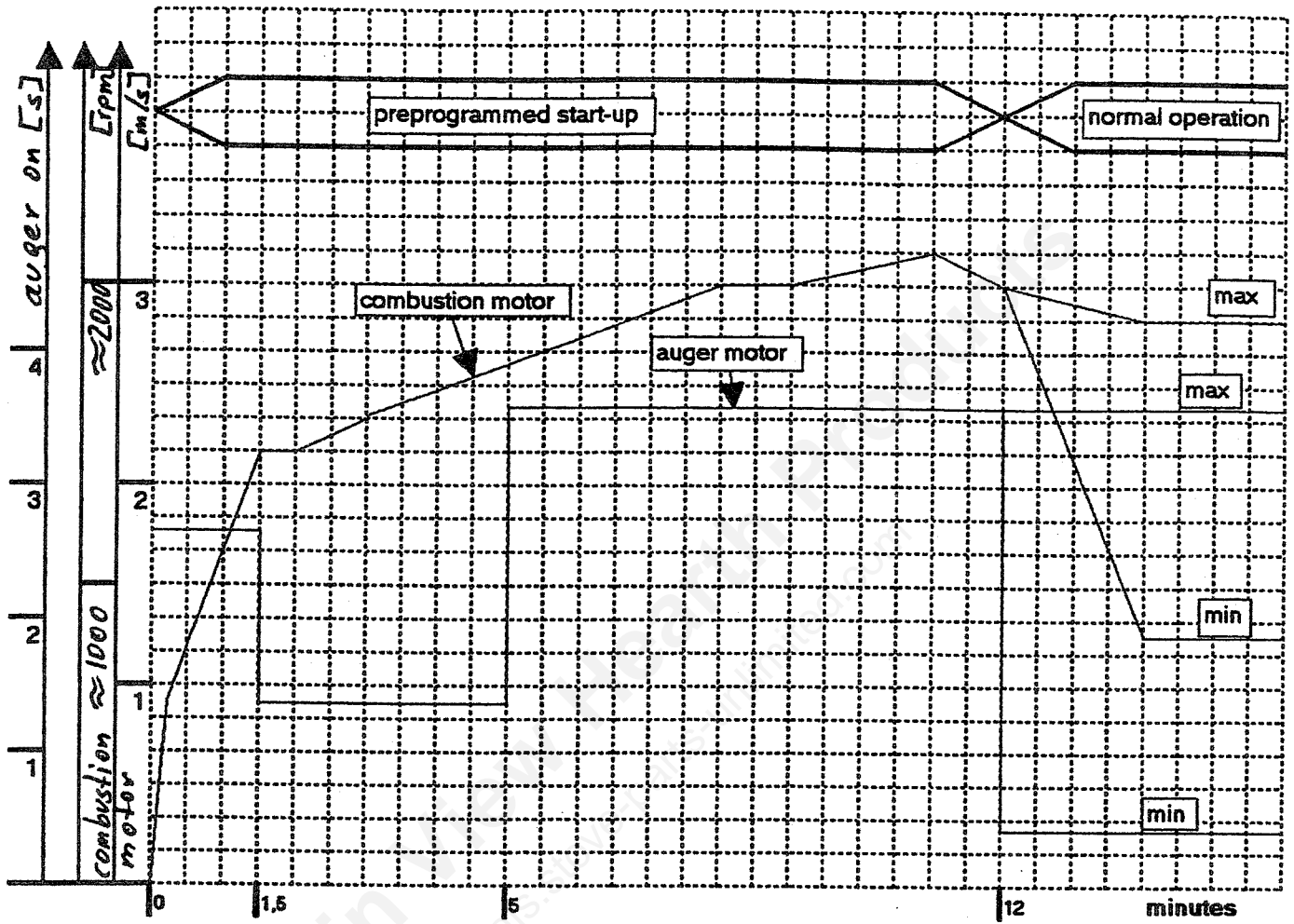
DESCRIPTION

INSTALLATION OF THE SURGE PROTECTOR

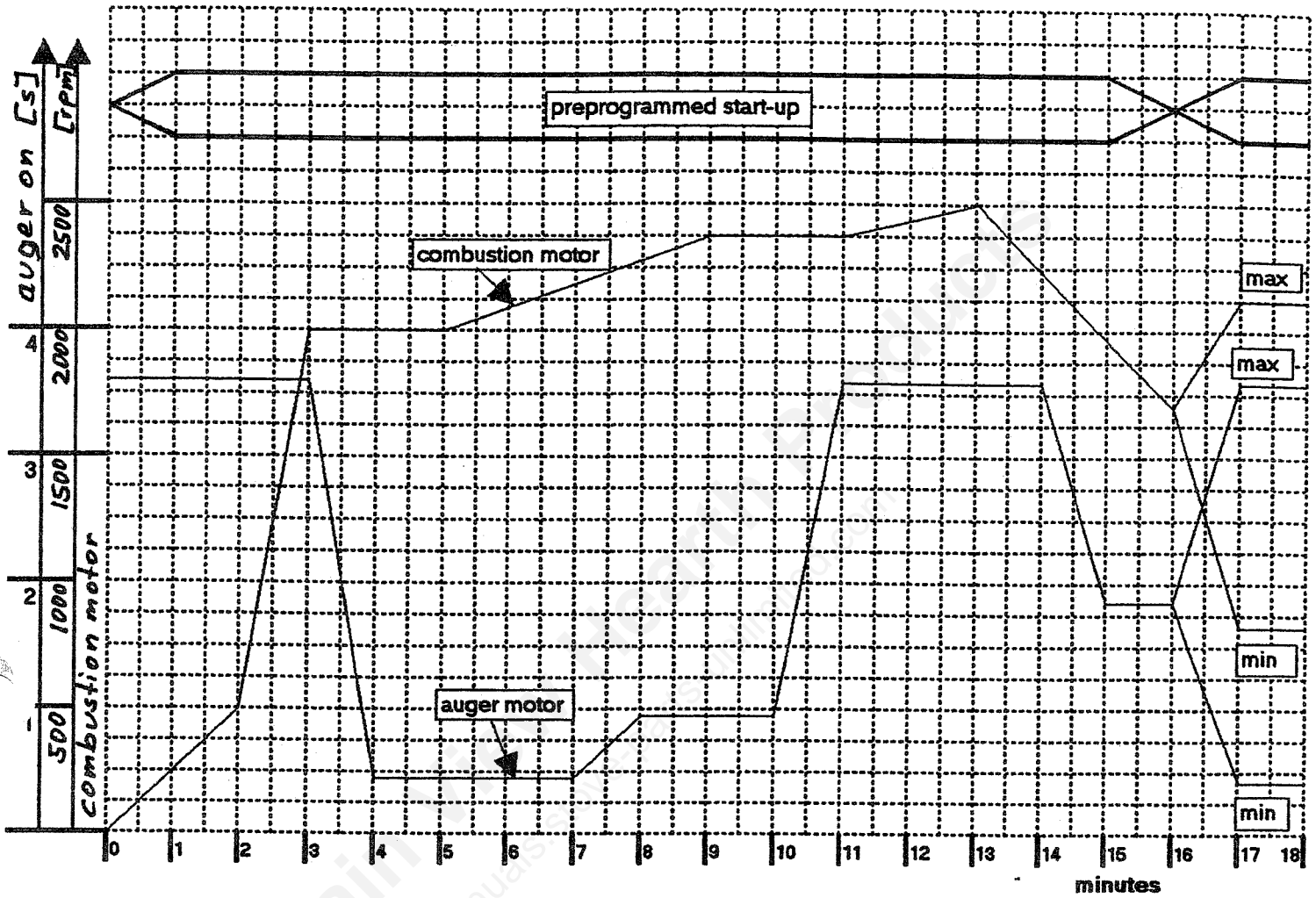
1. Unplug the stove and make sure that there is no power going to the stove.
2. Disconnect the power cord wires from the terminal block. (black - terminal 1 / white - terminal 6)
3. Attach filter to stove body with adhesive tabs.
4. Secure filter ground wire (green) and power cord ground wire (green) to chassis with the combustion motor ground wire (green) securing screw.
5. Attach power cord black wire to upper filter tab, and power cord white wire to lower filter tab connection.
6. Attach upper filter black load wire to terminal 1 of the stove's terminal block.
7. Attach lower filter black load wire to terminal 6 of the stove's terminal block.
8. Plug power cord into wall power and test the unit.



5. Schematics:



5. Schematics preprogrammed start-up:

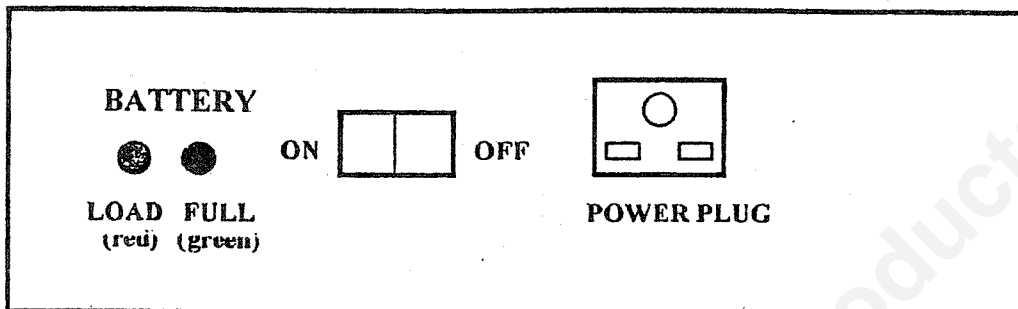


DESCRIPTION

BATTERY BACK-UP SYSTEM

NOTE: Install the new 3.0 EPROM chip before using the battery back-up system.

FRONT VIEW:



ON/OFF: Main power on/off switch.

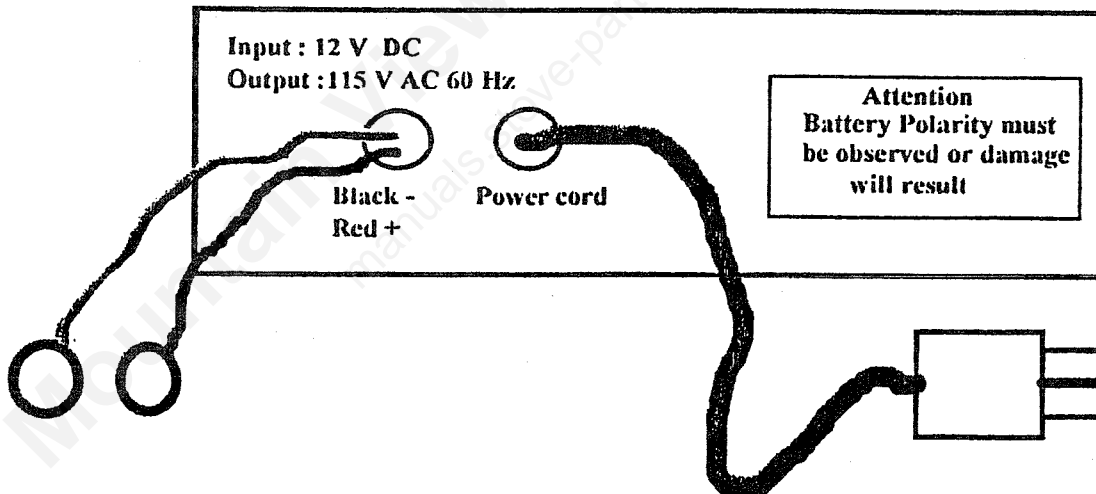
POWER PLUG: 115 Volt, 60Hz output. Connection to the pellet stove.

BATTERY: Shows the status of the battery.

LOAD: The battery is charged with constant 2 Amp. power. Charging will start when power goes below 12.8 Volt. Charging ends when power goes above 13.8 Volt.

FULL: Battery is fully charged.

REAR VIEW:



BLACK -: Connect the black wire to the negative terminal on the battery.

RED +: Connect the red wire to the positive terminal on the battery.

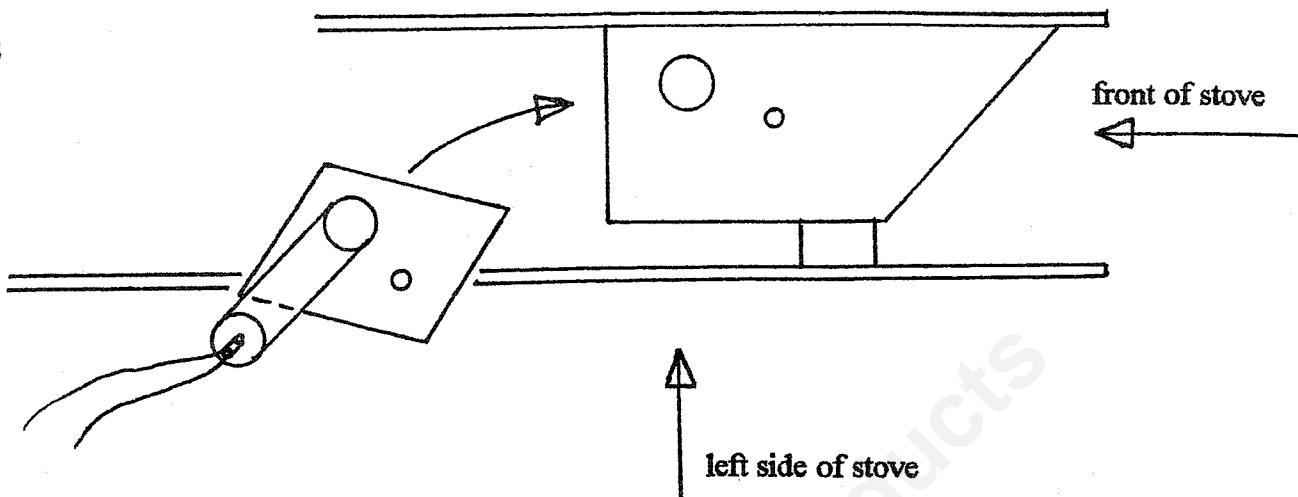
NOTE: Use only a 12 Volt DC deep cycle battery.

POWER CORD: Connect the power cord to the wall receptacle.

NOTE: Device is fuse protected.
Wrong connection to the battery will destroy the battery back-up device.
A beep sounds when the battery voltage drops below 10.5 Volts, unit stops sending power to the stove.

7. Connect the mounting pipe with heating cartridge and the mounting screw. (fig. 3)

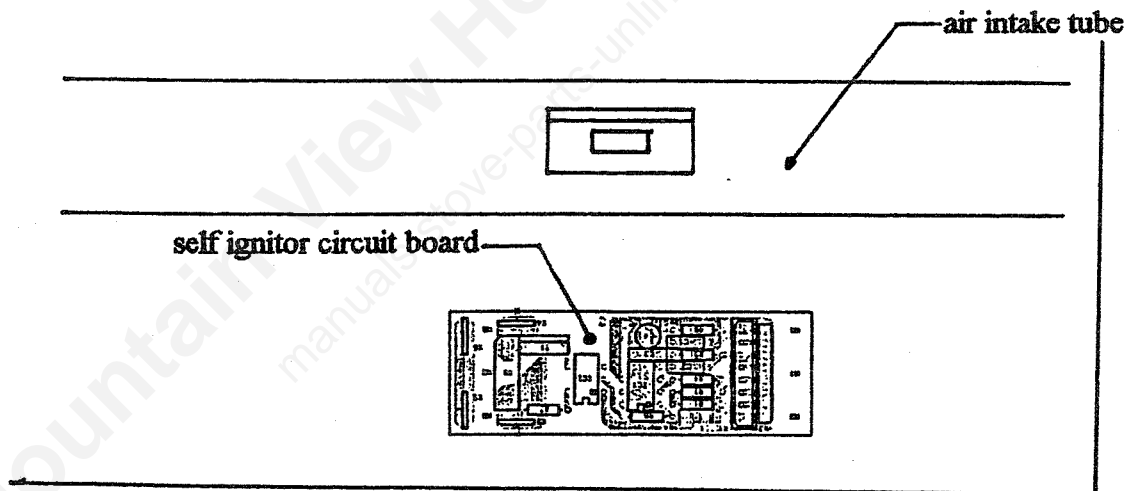
fig. 3



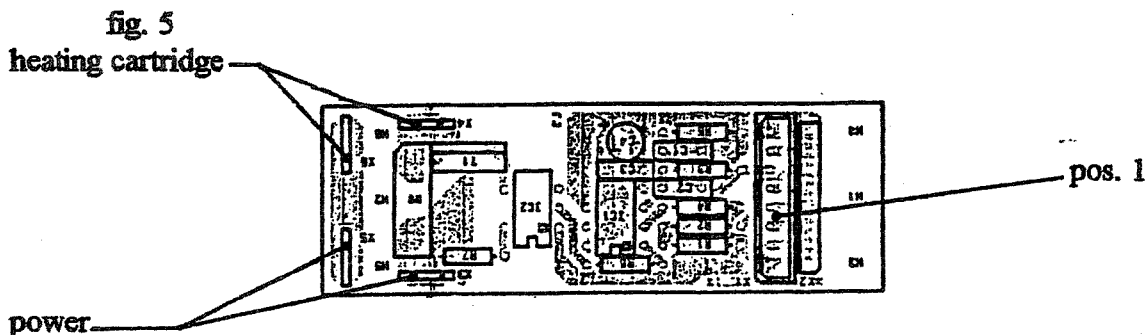
8. Place the wires from the heating cartridge through the stove body *below* the convection fan to the user control board. Secure them with the premounted cable clamps.

9. Fasten the enclosed self-ignitor circuit board onto the stove body with premounted adhesive tab, next to the air intake tube below the air sensor. (fig. 4)

fig. 4

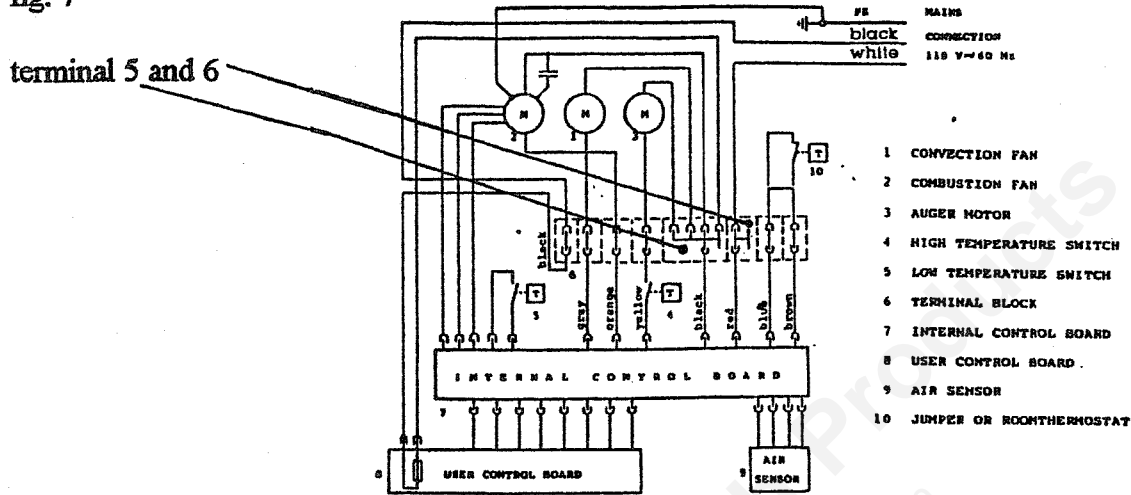


10. Refer to the wiring diagram in fig. 5.



12. Connect the two wires coming from the heating cartridge (described in paragraph 8) to the two terminals on the self-ignitor circuit board designated as "heating cartridge". (fig. 5) Connect the two loose wires delivered in this kit to the two terminals designated as "power" on the circuit board (fig. 5) and the other end of those two wires to terminals 5 and 6 on the main terminal block of the stove. (fig. 7)

fig. 7



13. Disconnect the white quick disconnect off the stove's user control board and plug it into the self ignitor circuit board. (pos. 1) Connect the quick disconnect plug coming from the self ignitor circuit board to the free terminal on the stove's user control board.

14. Place all wires carefully. Do not pinch any wires while reassembling the stove. Check connections before plugging the stove back in.

15. Enlarge the hole in the burn pot which is facing the heating cartridge to a 9/32" diameter.

16. Reinstall the burn pot, and you are ready to burn the stove.

PARTS LIST

#	Description	pc.
1	EPR0M 3.0 self ignitor	1
2	heating cartridge with wires	1
3	heating cartridge pipe	1
4	pipe mounting bracket	1
5	self ignitor circuit board	1
6	drilling jig	1
7	mounting screw	1
8	installation manual	1
9	wires black	2

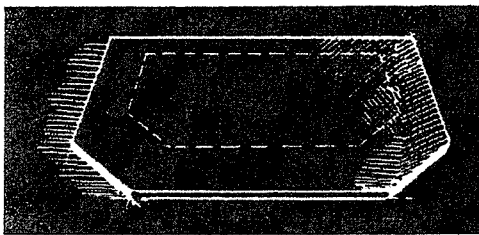
EXHAUST SYSTEM

It is recommended that only an authorized Austroflamm dealer or technician install your pellet stove.

The following installation guidelines must be followed to ensure conformity with both the safety listing of this stove and with local building codes.

FLOOR PROTECTION

The AUSTROFLAMM Integra pellet stove must be installed on a non-combustible surface. A single-layer, non-combustible floor protection is required.



Design Guidelines for the Exhaust System

The stove must be connected to a listed pellet pipe.

A 3"/76 mm single-wall stainless steel flexible or rigid exhaust pipe should be used for insert installations and be attached to the stove with a single or double wall stainless steel "tee" with a clean-out cap. When venting into an existing chimney (masonry or factory-built), the chimney must be inspected and cleaned and all creosote removed.

A full reline should be used in all existing chimney installations.

The exit terminal must be located no less than 60"/1,5 m from any opening through which combustion products could enter the building (i. e. windows and doors), no less than 24"/610 mm

from an adjacent building, and no less than seven foot above grade, when located adjacent to public walkways. It must be arranged so that exiting flue gases will not be a hazard to people, overheat combustible structures, or enter the building.



Keep trees, plants, and shrubs at least 36"/915 mm away from vent termination.

It is recommended that a single or double clean-out tee be installed at every 90 degree junction to provide for the collection of flyash and to permit periodic cleaning of the exhaust system.

90 degree elbows accumulate fly ash and soot, thereby reducing exhaust flow and stove performance.

The total length of the horizontal vent must not exceed 30 ft/9 m! The "PL" vent or single-wall stainless 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 high-temperature silicone sealer (RTV).



To determine whether a 3 inch or a 4 inch exhaust system should be used, follow the guidelines below.

1. Determine equivalent length of exhaust pipe in feet for proposed installation, using the following guidelines:

- Horizontal straight pipe = 1 x actual length ft.
- Vertical straight pipe = 0.5 x actual length ft.
- 90 degree elbow or tee = 5 ft.
- 45 degree elbow = 3 ft.

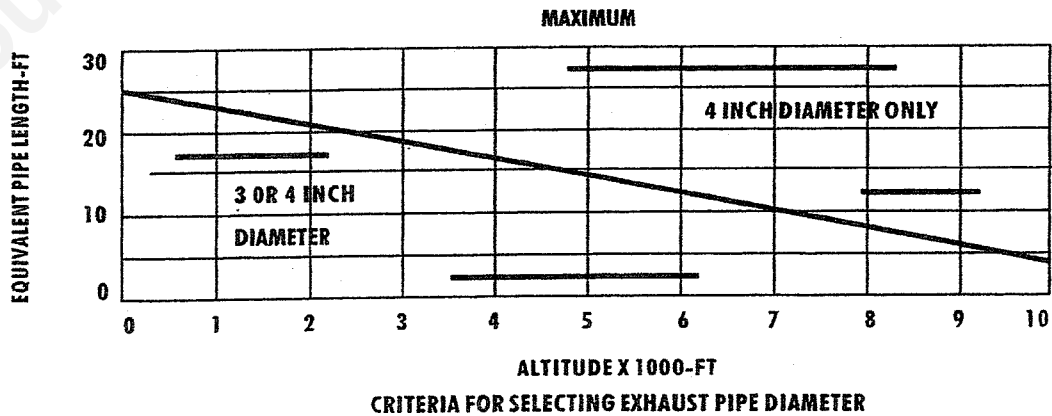
Sample Calculation, Equivalent Pipe Length:

- a) Horizontal pipe = 1 x (2+1) = 3 ft.
- b) Vertical pipe = 0.5 x 8 = 4 ft.
- c) 90 degree tee = 2 x 5 = 10 ft.
- d) 45 degree elbow = 1 x 3 = 3 ft.
- Total = 20ft.

For example, if the stove is installed above 2,500 ft. altitude, a 4" diameter exhaust vent is required.

Below 2,500 ft. altitude, a three inch or four inch diameter is appropriate.

2. Determine whether a three or four inch pipe is necessary, based on equivalent pipe length, using the calculations above and the altitude of the installation found on the diagram below.



INSTALLING THE INTEGRA PELLET STOVE INSERT

The Integra pellet stove may be installed in a variety of applications, as discussed below. The insert may be installed in a. listed, factory-built fireplaces; b. masonry fireplaces; or c. a newly constructed combustible framework.

Do not remove brick or mortar from the fireplace to accommodate the insert. For masonry chimneys a direct connection from the exhaust to the first tile liner is required, and it is important that the pipe (flexible or rigid single wall stainless steel) terminate no less than 12"/305 mm above the air-tight seal. For a combustible framework, the opening must be a minimum of 25"/635 mm high and 39"/990 mm wide, with 2"/50 mm of clearance to the back of the stove and floor protection of a recommended hearth pad or concrete board or equivalent.



We strongly recommend a full relined vent system for all insert installations. Factory-built fireplaces and zero clearance fireplaces require a listed stainless steel liner from the exhaust to the termination of the fireplace chimney.

Floor protection in front of the stove must be made of non-combustible material or equivalent, extending in front of the unit six inches and four inches to the sides at the front.



Before completing the installation by pushing the insert into its position in the fireplace, we recommend that the unit and all its components are fully assembled.

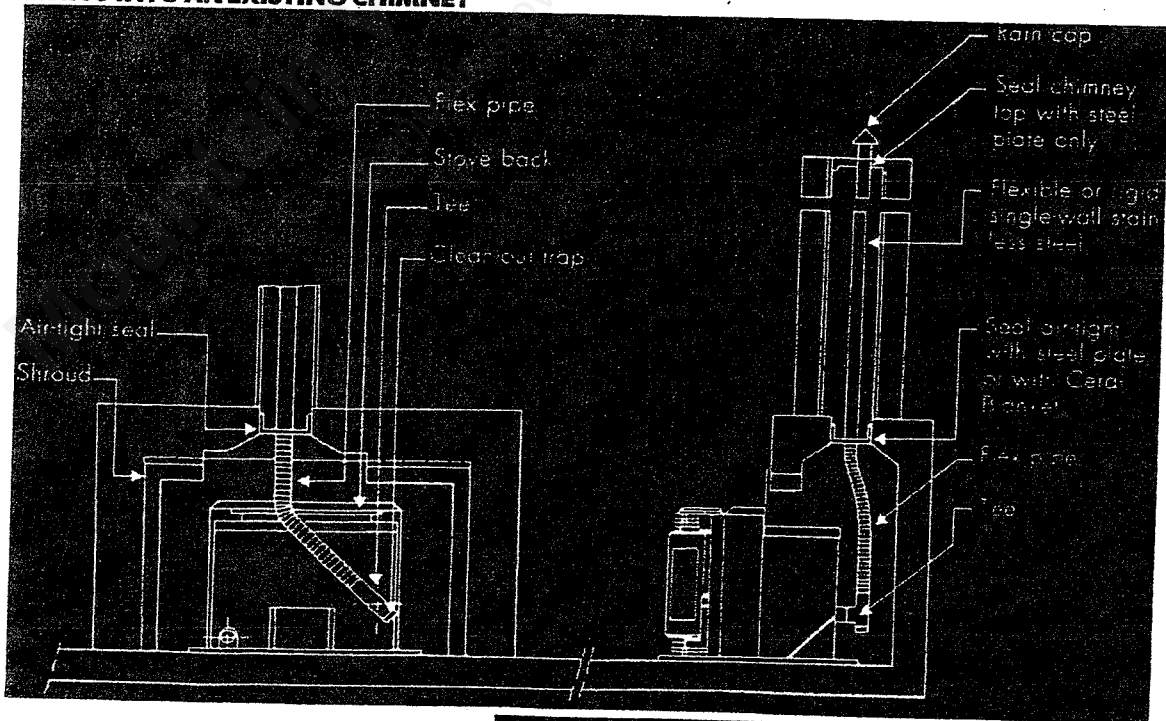
Special care should be taken when handling any circuitry. Unit should be unplugged. The circuit boards should never come in contact with metal surfaces or plastics.



For detailed information on the dimensions of the unit or questions about installation, please see drawing or consult your authorized Austroflam dealer. (Fig. 5)

All joints for the connector pipe should be fastened with at least 3 screws. If the insert is vented horizontally, all joints shall be gas-tight in accordance with local applicable codes.

VENTING INTO AN EXISTING CHIMNEY




STOVE ASSEMBLY

The Integra insert requires a 3-piece shroud for proper installation. The shroud comes in three different sizes to cover most fireplace openings. The right side of the shroud has a pre-mounted door for easy installation of the control panel.

1. Remove the rear hopper cover.
2. Mount left and right shroud side panels with two screws per panel on the stove, matching pre-cut holes in panels with those in the hopper walls behind the side panels.
3. Attach top shroud panel to side panels from behind, then secure from inside the hopper with two front-mounted screws. Replace rear hopper cover.
4. Install control panel according to instructions below (Fig. 10).
5. Slide the assembled insert and shroud into fireplace opening.

Three shroud sizes are available:

	Height	Width
Small (in/mm)	28-1/2"/724	x 40-3/4"/1035
Medium (in/mm)	32"/813	x 44"/1118
Large (in/mm)	36"/914	x 47-1/2"/1207

 During installation caution must be used to avoid damage to the auger motor and motor wires located at the bottom rear side of the stove.



For electrical connection on the left side of the fireplace or stove, lay the cord over the stove and make sure that the cord does not touch the surface of the combustion motor or exhaust vent! (Fig. 9)

CONTROL PANEL INSTALLATION (Fig. 10)

Unplug stove prior to installation!

The Integra Insert-Stove has an internal electronic control board mounted in the stove and a user control panel mounted on the stove shroud. The user control panel is mounted to a steel bracket for easy installation into the side shroud using a single fastener. The user control board can be removed or replaced without removing the side shroud. There is a control cable with a quick-disconnect plug that is used to connect to the control board mounted on the side of the hopper. The other end of the control cable is permanently attached to the internal control board. Also 2 black wires from the terminal block need to be connected to the fuse terminal on the user control board. If a thermostat is used, its two wires should be inserted through the grommet located at the back of the stove and connected to the terminal block. Also the blower and motor wires attach directly to quick disconnects on the terminal block as indicated on the schematic diagram. Ensure all connections are tight before completing installation of the Integra pellet stove.

STOVE ASSEMBLY/OPTIONS



ATTENTION: Do not allow loose screws to fall into the hopper! They will jam the auger and damage the stove!

To install the interchangeable steel sides, slide the side panel onto the two pins at the side extensions of the stove bottom plate (Fig. 11).

1. Push panel toward the stove until vertical.
2. Secure top with two screws from inside the hopper.
3. Repeat on other side of stove.

CONVECTION FINS FOR TOP AND/OR BOTTOM (Fig. 12, 13)

Top fins may be in gold or black. To interchange the fins:

1. Remove top tile.
2. Unscrew the two 3 mm allen head bolts holding the top fins in place.
3. Remove the fins from the top plate.
4. Assembly is reverse of removal.

The bottom fins are replaced in the same manner, but the bolts are removed from the underside.



The bottom fins can only be changed before an insert is installed.

BRASS SHROUD TRIM (Fig. 14)

To enhance the beauty of the Integra

THERMOSTAT OPTION

INSTALLATION OF WALL THERMOSTAT (Fig. 15, 16)

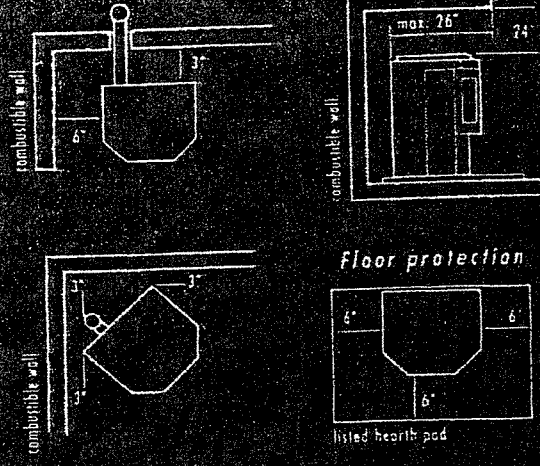
The Integra Pellet Stove can be operated with a wall-mounted thermostat. However, a wall thermostat is not supplied with the stove. A wall thermostat can be purchased from your dealer or at most home improvement centers or hardware stores. A 24 Volt or lower thermostat is required. The wall thermostat will have instructions with it as to where to place it in the room. Please follow the thermostat manufacturer's instructions carefully. There are two terminals on the terminal block, number 7 and 8, with a jumper wire across them. The jumper

wire must be removed and the thermostat wires connected in its place (see illustration). Be sure to replace the jumper wire when not using a thermostat.

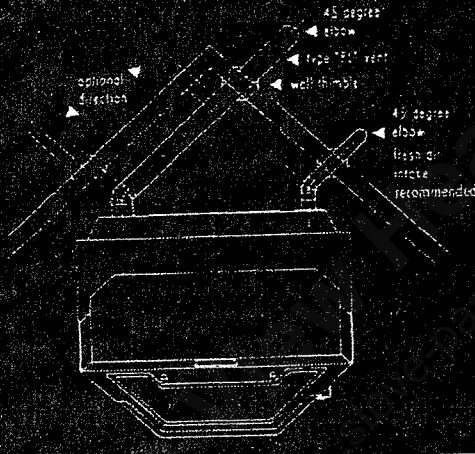
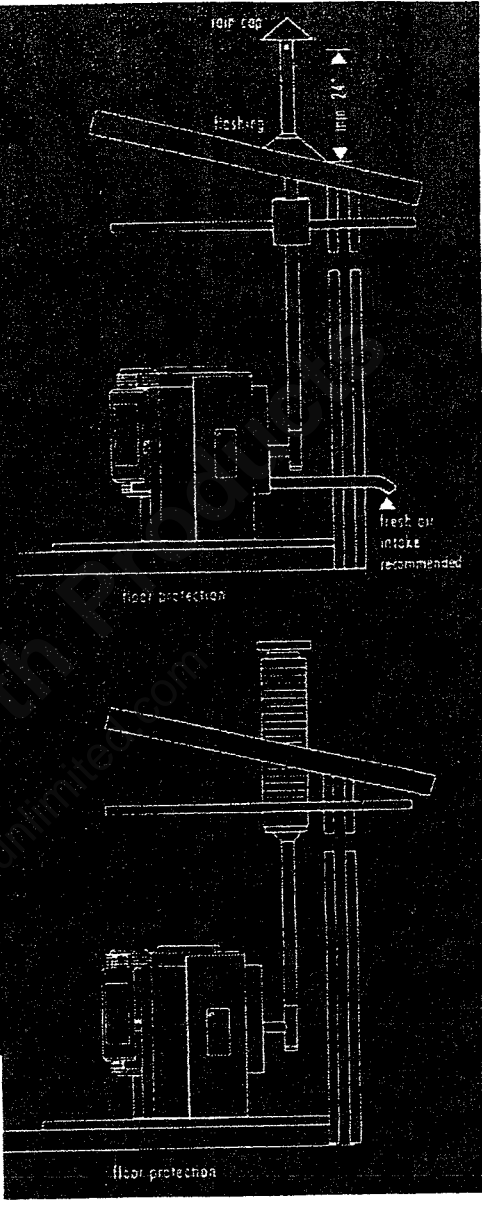
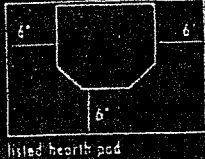
The optional thermostat allows the stove to switch between a high-heat setting (DEMAND) and a low setting (PILOT) at the command of the wall-mounted thermostat. The DEMAND setting is controlled by the "Power Knob" selector switch. Maximum settings may be chosen in the DEMAND mode, depending on the heat output desired. While in the PILOT mode, the stove automatically adjusts itself to the lowest setting.

INSTALLATION FS/INSTALLATION IN COMBUSTIBLE FRAMEWORK

Clearances to combustibles (inch/mm)



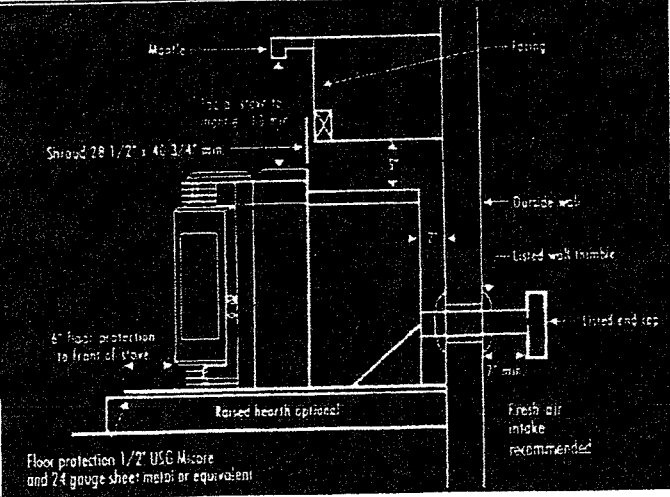
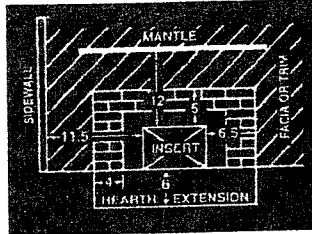
Floor protection



see drawing...

For detailed information on the dimensions of the unit or questions about installation, please see drawing or consult your dealer.

Installation of Insert in combustibles framework (inch/mm)



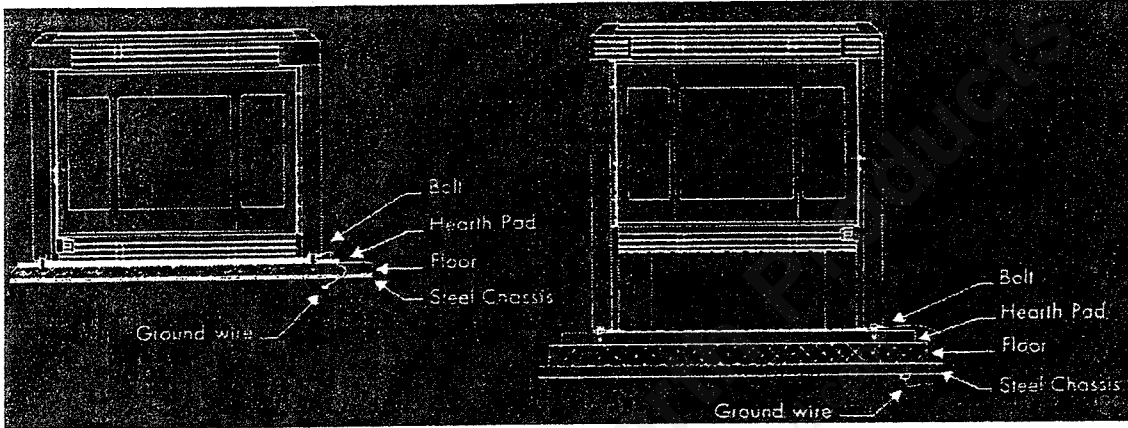
MOBILE HOME INSTALLATION

In addition to our standard installation instructions, the following requirements are mandatory for installation in a mobile home:

1. Stove must be permanently bolted to the floor.

2. Stove must have permanent outside air source.

3. Stove must be permanently electrically grounded to the steel chassis of the home.



Design guidelines for outside combustion air connection

1. A connection to the outside is **REQUIRED** for mobile home installations
2. Only steel or aluminum pipe with a two inch outside diameter and a minimum thickness of 0.016"/0.40 mm approved for use as outside air connection (straight or flexible). PVC pipe is **NOT** approved and should never be used.

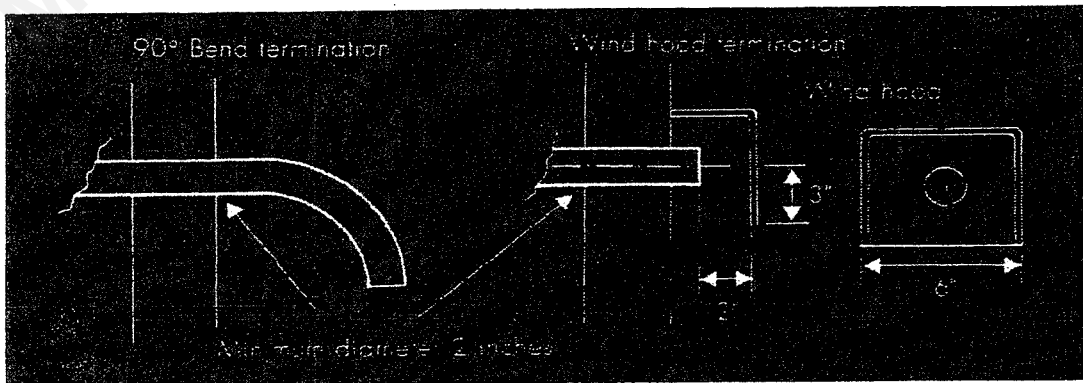
with a wind hood (see diagram below). Failure to do so could result in a "burn back" during high winds blowing directly up the air inlet during a simultaneous power failure.

4. Blockage, excessive length or bends in the air intake pipe may starve the stove of combustion air.

3. If the air inlet is connected to the outside, it **MUST** be terminated with a vertical 90 degree bend (down) or



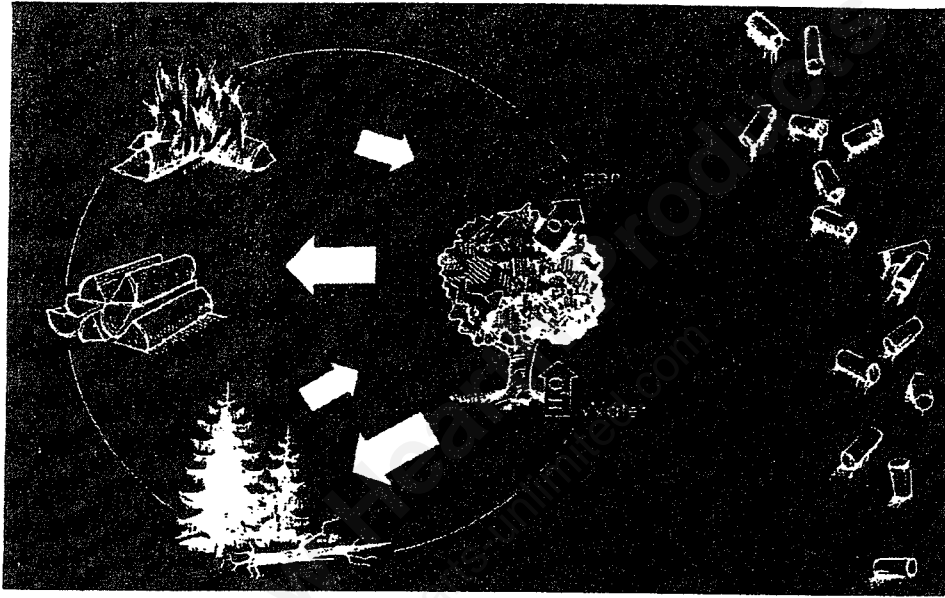
A 90 degree bend is equivalent in restriction to approximately 30 inches of straight inlet pipe.



A NEW HEATING PHILOSOPHY

In today's world, anyone manufacturing and marketing heating appliances has more than just the responsibility of producing a quality, safe product. It is essential that wood heating appliances apply technology which is environmentally friendly and, at the same time, extremely efficient.

Austroflamm is 100% committed to this obligation. Austroflamm continues to do research and development in pellet stove combustion technology. This gives you, as an Austroflamm customer, the assurance that you are buying the most advanced product available in the marketplace.

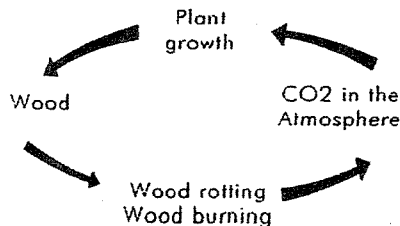


WHY HEAT WITH PELLETS?

Chemically speaking, burning wood is exactly the same process as wood rotting by itself. Rotting wood as well as burning wood releases CO_2 . It is CO_2 that trees need to grow, and, therefore, burning wood has no negative impact on the CO_2 cycle.

Heating with pellets means that the burning process is carefully controlled, and wood is added to the combustion process only in precise quantities. This results in the efficient and, therefore, environmentally friendly incineration of

wood. In the past, waste wood products were simply discarded into local landfills to rot. Heating with pellets is an economical and a distinctly advantageous alternative to dumping. It is a natural and intelligent method of recycling. Heating with your Austroflamm pellet stove is designed to be easy and user-friendly. Because of its exceptionally large hopper, low pellet consumption, and very simple control panel, your Austroflamm pellet stove is, indeed, easy and convenient to operate.



As of the fall 2001 certain Integra stove models can be equipped to burn shelled corn, thereby extending the fuel options into new biomass fields.

WHAT ARE PELLETS?


The Austroflamm Integra is a pellet stove, designed to burn wood pellets. Pellets are made of waste material from saw mills, woodworking operations as well as dead wood from forestry operations. The wood pellet industry is organized through the **P.F.I. (Pellet Fuel Institute)**, and it is recommended that only wood pellets, manufactured to the standards set by the P.F.I. be used in this stove. All pellets made to these standards are labelled with an official P.F.I. registration number on the bag. This guarantees the consumer that the fuel is certified as to moisture and ash content. (For more information visit the P.F.I web site: www.pelletheat.org)

The P.F.I. allows two grades: standard and premium quality pellets. The important difference in these pellet grades is their ash content.

Premium quality:
1% (or less) ash content

Standard quality:
Up to 3% ash content

see drawing...



A higher ash content in the fuel means more combustion residue which, in turn, means more frequent cleaning intervals. See Routine Maintenance.

ASH

It is highly recommended that you use the lowest ash-content fuel available. Fuel with a 3% ash content may require the stove to be cleaned as often as every day or two, where as fuel with a 1% ash content may only require cleaning once every one to two weeks. Ash - since it is a completely natural product - makes an excellent fertilizer for all your garden plants. However, it should be aged and "quenched" with water before use.



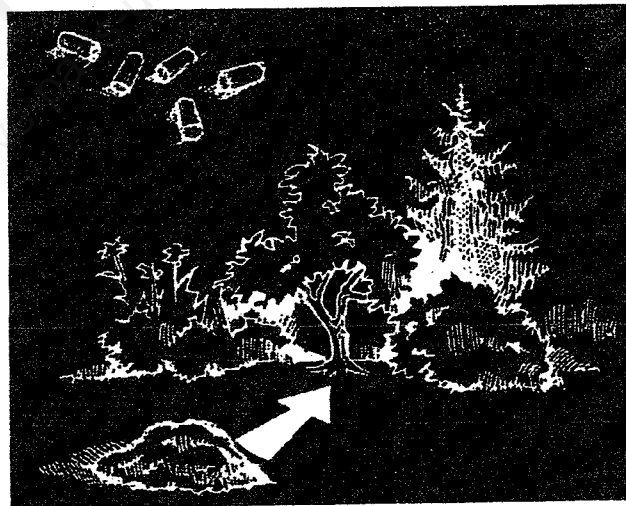
Please note that use of improper fuels will void your warranty and may cause damage or seriously affect the performance of your stove.

The current P.F.I. standards for residential pellet fuels are as follows:

	Standard Quality	Premium Quality
Heating value	8,200 BTU/lb (minimum)	8200 BTH/lb (minimum)
Bulk density	40 lb/ft ³ (minimum)	40 lb/pi ³ (minimum)
Moisture content	8% (maximum)	8% (maximum)
Ash content	3% (maximum)	1% (maximum)
Size	1/4" ÷ 5/16" diameter 1 1/2" long (maximum)	1/4" ÷ 5/16" diameter 1 1/2" long (maximum)
Fines	0,5% (maximum) through a 1/8" screen	0,5% (maximum) through a 1/8" screen



Caution: Burning dirty or wet pellets or pellets containing salt contaminates the environment, imperils the function of your pellet stove, and may mean the loss of manufacturer's warranty.



Caution: Embers may be embedded and hidden in the ash. Store in metal containers only!

THE AUSTROFLAMM EXCLUSIVE PATENTED "ELECTRONIC AIR SENSOR" SYSTEM FOR PELLET STOVES

WHAT YOU GET

1. **Altitude compensation:** The Integra pellet stove automatically compensates for variations in air density and altitude.
2. **Efficiency:** Combustion air is electronically regulated for maximum efficiency according to temperature of incoming air.
3. **Fuel consumption:** At each infinitely variable heat setting, combustion air and convection air are regulated according to the quality and quantity of fuel used.
4. **Clean:** Fresh intake air and expelled waste gases are automatically and continually monitored to determine optimum combustion efficiency. The combustion is perfectly balanced at all heat settings and levels of fuel consumption, exhaust emissions are at an absolute minimum.
5. **Heat output:** Because the stove is continually self-regulating for optimum combustion efficiency, the maximum possible heat output per pound of fuel used is achieved and constantly maintained.
6. **Safety:** In case the door is opened or the door glass breaks during operation, the air sensor automatically adjusts to prevent hazardous exhaust from entering the room.
7. All operating systems of the stove, including the combustion process, are constantly regulated and adjusted according to specific line voltage available. Any voltage drop is automatically and immediately compensated for.

HOW IT WORKS

1. The incoming fresh air to the stove is measured by the "cooling effect" this air flow has on an electrical resistor, located inside the two inch air intake duct. The resistance measured by this electronic air sensor determines the volume and density of the air entering the stove's combustion area. This volume is then compared to the nominal value. If the actual value does not equal the nominal value, the control board adjusts the combustion fan to achieve the nominal value.
2. Adjacent to the air speed/density indicator is a temperature sensor. Here different air temperatures, from -4°F to $+122^{\circ}\text{F}$ as well as relative humidity are compensated for. The lower density of the air at higher-than-sea-level conditions allows for less cooling of the electronic air sensor. Therefore, the combustion motor will automatically speed up until the amount of oxygen for combustion is the same as at sea level.
3. The nominal value (set point) of the air/fuel ratio is an optimum setting determined through extensive testing.

No user should ever change this optimized adjustment once it leaves the factory!

The 2 air sensor prongs inside the air intake tube have to be cleaned once a year by an authorized Austroflamm dealer or technician to guarantee trouble-free operation of the stove.

INTEGRA PELLET

CONTROL PANEL FUNCTIONS

1. POWER KNOB

The power knob allows adjustment of the stove's fuel supply and heat output into the room (except during the start cycle for 12 minutes). The power knob is infinitely variable from low to high and simultaneously adjusts blower speed, fuel feed, and convection air. The control board automatically sets the optimum ratio of fuel to air for each infinitely variable setting from low to high, based on a performance curve preset at the factory. If the stove is operated with the optional thermostat, the power knob is used only to choose the power level during the thermostat DEMAND mode. Using a thermostat allows the stove to switch between any heat setting and a low PILOT setting. While in the PILOT mode, the stove automatically adjusts itself to its lowest setting.

2. AUGER LIGHT

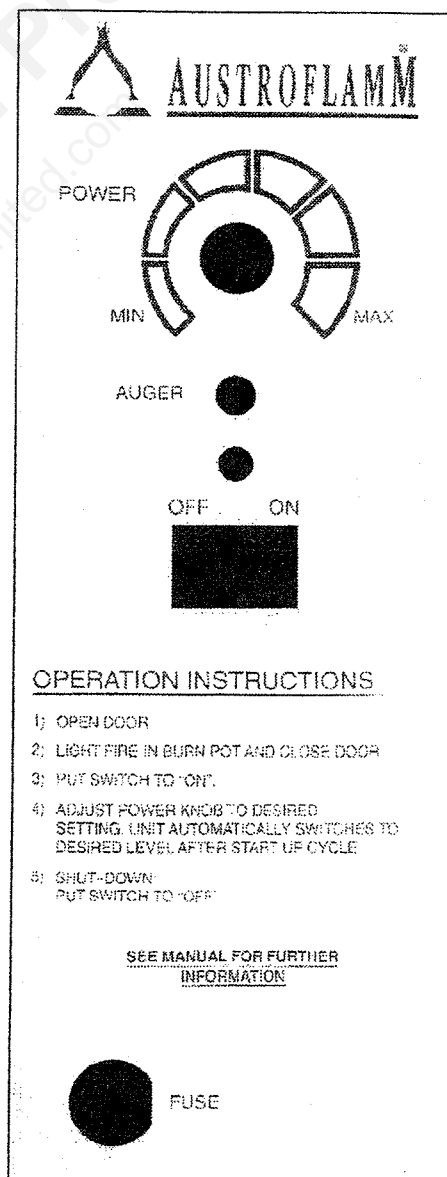
The red light on the control panel will flash on whenever the auger is in motion, feeding pellets to the combustion chamber.

3. FUEL SWITCH ON/OFF

The fuel on/off switch allows power to be sent to the auger fuel feed motor under the proper conditions. When the on/off switch is turned to "ON" the stove's preprogrammed start up cycle begins. Once started, switching to "OFF" will shut down the fuel feed only. The combustion and convection blowers will continue to operate until the stove has cooled down to a sufficiently safe level (approximately 45 minutes). Once the cooling down process is completed, the stove will automatically shut itself off. As a safety feature, if the exhaust temperature in the flue does not reach 120° F within 15 minutes during start up, the stove will automatically go into shut down mode.

4. ROOM CONVECTION AIR

The power knob on the control panel varies the speed of the convection air fan. Convection air is taken in at the bottom of the stove, passed through a highly efficient heat exchanger inside the stove, and forced back out into the room through the fins at the top of the stove. At all settings between low and high or any setting in between, the convection air will automatically be adjusted to the optimum level, according to the amount of fuel feed that is selected.



HOW TO START YOUR FIRE (Fig. 18)



Before attempting to light your Integra stove, ensure that the burn pot and the area beneath the burn pot are completely clear of ash or other materials.

The first time pellets are added to the hopper, there are no pellets in the auger shaft. Allow the stove to prime the auger by turning it on without attempting to light a fire. The stove will stop after 25 minutes, then proceed with lighting instructions.

Use only approved starter materials to start the fire. NEVER USE FLAMMABLE LIQUIDS SUCH AS GASOLINE OR KEROSENE TO START THE STOVE.



Under no circumstances should you put anything flammable into the burn pot when the stove is lit or when there are hot embers.

1.

Place a small handful of pellets in the burn pot. Add 1-2 tablespoons of alcohol gel and mix thoroughly. Place 10-15 dry pellets on top.



Other starting materials are available. Please consult your authorized Austroflam dealer.

2.

Prepare to light the starter material. Turn the ON/OFF switch to "ON" then immediately to "OFF" again. This starts the combustion motor. Light the starter material and leave the door slightly ajar (hook the latch on the door but do not lower the handle, closing the door tightly.)

3.

Allow the starter material to catch fire (about 1-2 minutes). When the starter material develops a vibrant flame, turn the ON/OFF switch to "ON" and close the door handle tightly.

NEVER LEAVE THE STOVE UNATTENDED WITH THE DOOR OPEN AJAR.



If the stove feeds too many pellets and the fire is drowned out, turn the switch to "OFF" and allow the starter fire to grow. After it is reestablished, turn the switch to on again.

4.

After 16 minutes, the preprogrammed start cycle is complete, and the power knob can be set to the desired heat output level.

The Integra pellet stove burns approximately 1,1 lbs/0,45 kg per hour on the lowest setting and 5,6 lbs/2,5 kg per hour on the highest setting. The stove may be operated on a continuous basis, but it is recommended to vary the power knob to a low setting and to set the power knob to a low setting for extended burn periods!

If there are any questions, please contact your certified Austroflam dealer.

SELF IGNITION SYSTEM (=SIS)

The SIS starts up by turning the ON/OFF switch to "ON" and switches off automatically after 10 minutes.

It is possible that you have to repeat the process when you heat the stove for the first time (for example, if the auger has not been filled completely with pellets). Also, be aware that the burn pot must be reasonably clean in order for the heat of the ignitor rod to reach the newly fed pellets.



Attention: when starting the stove, the door must be completely closed. Otherwise, the SIS will not kick in and the stove will not start.

ADDING FUEL

It is recommended that the hopper level be properly maintained so that the fire does not inadvertently go out due to lack of fuel. Fuel can be added to the hopper at any time during normal operations.



Do not attempt to clean or otherwise come in contact with the auger during operation.

**Hopper capacity Integra insert:
99 lb/45 kg**

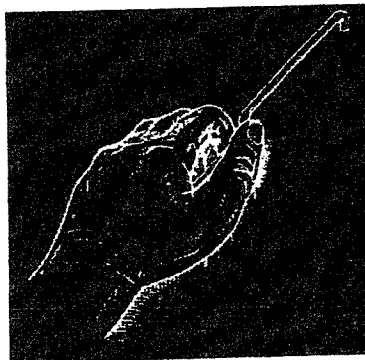
**Hopper capacity Integra FS:
112 lb/50 kg**

When pouring pellets directly from the bag, avoid dumping excess fines or sawdust into the hopper. These will accumulate over a season and should be removed as needed to ensure proper function of the auger.

AUSTROFLAMM MAINTENANCE TOOL

The AUSTROFLAMM maintenance tool is nicknamed the "cold hand". Use this tool instead of your hands when performing certain maintenance functions, such as:

1. Cleaning the heat exchanger tubes;
2. Cleaning the burn pot;
3. Stirring pellets in the hopper if they become hung up on the sloped side walls.



TURNING THE PELLET STOVE OFF:



Your Austroflamm pellet stove has built-in safety features to prevent overheating in case of malfunction. It is therefore necessary to remember that these safety features can not work if the stove is unplugged.

Turn the "On/Off" switch to the "Off" position. This will switch off the auger motor, and pellets will stop feeding. Both blowers will continue to operate for a period of time (up to 45 minutes) until the exhaust temperature cools down sufficiently. The blowers will automatically turn off after this period of time.

AUTOMATIC SAFETY FEATURES

1. POWER OUTAGE

During a power outage, the stove will shut down automatically. If the outage lasts only a few seconds (15 seconds or less), the stove will restart. If it lasts longer (15 seconds or more), the stove's blowers will restart, but the fire will not relight.

In the event of a power failure, a small amount of smoke may leak from the top of the window glass, the hopper, and from the combustion air intake (if it is not vented to the outside). This will not persist for more than 3 to 5 minutes and will not be a safety hazard.

Using a full reline of the chimney (insert) or installing approved venting above the roofline (F/S) can help promote

natural upward venting during a power outage.

2. OVERHEATING

A high temperature switch will automatically shut down the stove in the event of overheating. For safety reasons, each motor also has an automatic high-temperature switch which turns the motor off if overheating occurs. The stove will have to be manually relighted. Let the stove cool for at least 45 minutes before restarting.

3. INSUFFICIENT FUEL SUPPLY

During start up or during normal operation, if unusually low temperatures exist in the exhaust gas, the stove will shut down to prevent excess power consumption.

ROUTINE MAINTENANCE (Fig. 19)

ALWAYS UNPLUG THE STOVE BEFORE PERFORMING ANY MAINTENANCE WORK.

The amount of fly ash build-up in your stove varies depending on the ash content of the fuel used. Stove maintenance and cleaning interval frequency depends on the fuel selected and the level of operation used most often.



Your stove must be shut off and allowed to cool thoroughly before routine maintenance is performed.

Routine maintenance includes cleaning or inspecting the following areas:

1. Heat exchanger tubes
2. Burn pot
3. Ash pan
4. Chimney
5. Gasket
6. Exhaust manifold
7. Hopper

1. HEAT EXCHANGER TUBES (Fig.19.1)

Heat transfer from the fire to room air is most efficient when the heat exchanger tubes are kept clean. Behind the top tile are two built-in cleaning rods. Pull up each rod twice daily during normal

operation to ensure efficient heat transfer. This can be accomplished while the stove is in operation.

Caution: The rods will be hot while the stove is operating. Use the Austroflam "cold hand" tool, shipped with your stove, to pull up the heat exchanger cleaners.


At regular intervals (every 4 to 6 weeks) the lower cast wall which covers the heat exchanger tubes (**Fig. 19.2**) must be removed, and the area at the base of the tubes must be thoroughly cleaned. The fly ash which has been scraped off the tubes daily will accumulate. This fly ash must be removed to ensure consistent proper operation of your stove.



Always apply high-temperature anti-seize compound to the lower cast wall retaining bolts. Do not overtighten these bolts during reinstallation.

Failure to clean the area behind the lower cast wall will dramatically lower the efficiency and will ultimately prevent any (normal) operation of your stove.

2. BURN POT (Fig. 19.3)

 The cleaning interval for the burn pot is dependent on the ash content of your fuel and power level most frequently used. High ash fuels and low power settings will cause more frequent cleaning intervals. Lower ash fuels and higher power settings will allow longer cleaning intervals.

Turn the stove off and allow the stove to cool. Lift the burn pot out of the stove and empty any accumulated ash. Check the burn pot to make sure that all holes are absolutely clear of obstructions. Before reinstalling the burn pot, vacuum out any ash which may have accumulated in the area below the burn pot. Also clean the ash pan as directed in step 3 before reinstalling the burn pot. Make sure the burn pot rests level and the high flange of the burn pot is forward during reinstallation.

3. ASH PAN (Fig. 19.4)

Shut the stove down and allow the stove to cool before cleaning the ash pan. The ash pan should be cleaned with the burn pot on a weekly or bi-weekly basis. With the burn pot removed, slide the ash pan straight out of the burn area. Empty contents into a flame-proof container. Store this container on a non-combustible surface only. Reinstall the ash pan and then the burn pot. Never attempt to operate your stove without the ash pan installed under the burn pot.

4. CHIMNEY

Some fly ash will accumulate in the exhaust venting on your stove. A clean out tee at the base of the exhaust system permits frequent cleaning of the exhaust system. In addition to servicing this clean out tee, the entire exhaust system must be inspected annually to prevent damage to the product or your home. Fly ash build-up in the exhaust system will hamper performance and can cause a serious safety hazard if not removed.

5. DOOR ROPE GASKET (Fig. 19.5)

The condition of the rope gasket around the door and windows should be checked periodically. Replace or repair as necessary.

6. ASH-SCRAPER (Fig. 19.6)

With your starter kit, you received an "ash-scraper". It is used for cleaning the exhaust manifold including the holes along the base of the heat exchanger tubes. (see below item 7.)


7. EXHAUST MANIFOLD (Fig. 19.7)

Fly ash accumulation will occur in the exhaust manifold and must be removed annually or bi-annually depending on the ash content of your fuel and the level of operation.

The exhaust manifold is located behind the heat exchanger tubes, and access to the manifold is behind the right side panels of the stove. Remove the right side panels, taking care to place the user control board safely out of the way, and locate the exhaust manifold access plate. Remove the access plate and thoroughly clean any fly ash or creosote from this area. Verify that the holes along the base of the heat exchanger tubes are clear by placing a flashlight inside the exhaust manifold and look for the light coming through the holes at the front of the stove (with lower cast wall removed).

Reinstall the access plate with new gasket material and always apply high temperature anti-seize compound to the bolt threads before reinstalling.

8. HOPPER

 Never attempt to check the auger at the bottom of the hopper when the stove is plugged in or in operation.

Pellets may break down during handling producing a sawdust-like material called fines. Dumping pellets directly from the bag into the hopper will allow these fines to collect in the hopper. Once or twice a year it is recommended to empty the hopper completely and vacuum out

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all accumulation of fines. The auger inspection cover may be removed to check the auger for fines as well.

Pellet dispensers are available to help limit the quantity of fines which make their way into the hopper. Please check with your authorized Austroflamm dealer.

9. COMBUSTION MOTOR HOUSING (Fig. 19.8)

The frequency of this service depends on the frequency of the use of the stove and the quality of the pellets.

Remove 4 screws (see drawing) and carefully pull the motor from the housing. Remove flyash with an ash vacuum cleaner. Check the insulation before re-inserting the motor into the housing.

Never attempt to remove the housing when the stove is plugged in.

In addition to the routine maintenance described above, other important maintenance points must be addressed by your authorized Austroflamm dealer or technician. The annual service is required to ensure proper operation and longevity of the stove.



If no annual service is done by an authorized Austroflamm dealer or technician, a potentially hazardous situation may result.

Prevent damage to the stove, persons, or property by having a complete annual service performed by your authorized Austroflamm dealer or technician.

TROUBLESHOOTING GUIDE

PROBLEM:

Fire burns with a lazy, orange flame. Pellets build up in the burn pot, and the window gets sooted up.

Cause:

1. Insufficient combustion air/excessive fuel feed

Solutions:

1. Remove any clinkers or ash, which might be obstructing the primary air holes, from the bottom of the burn pot. Change to a better grade of fuel, if necessary.
2. Check that heat exchanger tubes are not clogged with ash.
3. Check for blockage in the air inlet duct or exhaust pipe.
4. Check gasket around door for leaks by squeezing a \$-bill between the door and the firebox. If the \$-bill cannot be pulled out, the seal is ok.
5. Check combustion blower impeller for soot and other deposits by removing the blower.

6. Clean impeller or remove blower for further service, if necessary.

Caution: Do not bend impeller

7. Adjust fuel feed down (potentiometer on front of control board)
8. Adjust combustion air trim up (this potentiometer is located on the rear of the control board).

PROBLEM:

Fire goes out, or stove shuts down automatically.

Cause(s):

1. Hopper is empty.
2. Pellets not feeding.
3. High-limit temperature switch has been tripped.
4. Fuel feed rate is too low.
5. Door is not sealed or not closed tightly.
6. Bad fuel quality.
7. Low-limit switch has been tripped.
8. Defective air sensor.

Solutions:

1. Refill hopper
2. See "Pellets Will Not Feed", below.
3. Allow stove to cool for one hour and relight.
4. See "Routine Maintenance".
5. Call your authorized AUSTROFLAMM dealer to adjust fuel control.

PROBLEM:

Pellets will not feed.

Cause(s):

1. Hopper is empty.
2. Auger circuit board or high-limit snap switch may be defective.
3. Stove door open.

Solutions:

1. Check hopper contents. Add pellets, if necessary.
2. Have your authorized AUSTROFLAMM dealer diagnose the problem and replace parts.

PROBLEM:

Stove runs for 15 minutes and then shuts down.

Cause(s):

1. Exhaust gas is not up to temperature.
2. Low-limit switch may need to be replaced.
3. Wires to the low-limit snap switch may be loose or disconnected.

Solutions:

1. Relight stove if necessary.
2. Have an authorized AUSTROFLAMM dealer replace the low-limit switch.
3. Check wiring, refer to service manual. Make sure there are good connections between the wires and their terminals.

PROBLEM:

Blowers will not shut off after the fuel has been switched off and the stove has cooled down.

Cause(s):

1. Low-limit snap switch has failed in the closed position.

Solutions:

1. Replace the low-limit snap switch or contact your authorized Austroflamm dealer.

PROBLEM:

Blowers will not operate.

Cause(s):

- No power to stove.
- No power to control board.

Solutions:

1. Check to see that the stove is plugged into the wall outlet. Check to see if your circuit board breaker has "tripped".
2. Check wire connections.
3. Check fuse on control panel.
4. Call your dealer or certified technician.

PROBLEM:

Soot or fly ash in the house.

Cause(s):

1. Cleaning the window, particularly when the stove is in operation.
2. Leakage at the joints between the combustion fan, exhaust pipe, and pellet vent. This will be evidenced by dust on the impeller of the convection fan and in the heat exchanger tubes, or by ash on the floor behind the stove, ash in the room or soot in the house.
3. Improper installation.

Solutions:

1. Shut down stove before cleaning to prevent further dispersion into the room.
2. Check for any leaks in the exhaust system. Seal with RTV high-temperature metal coated tape.
3. Contact your dealer / installer.



Note: Warranty service MUST be performed by an authorized Austroflamm dealer or technician to be covered under warranty.

troubleshooting2

Auger does not operate but other motors run:

If the red is not light blinking:

Check the On/Off switch is On?

Check the door is closed?

Check the Combustion fan is turning fast enough?

If not, test combustion motor by connecting it to 120 V.

If motor is fine, check Air sensor

If air sensor is OK and combustion motor is turning, check Hall sensor wiring on the combustion motor.

If the above checks are fine, the problem is in the user control panel or the internal circuit board

If the red is light blinking?

Test auger motor by connecting it to 120 V.

If it does not run - replace motor.

If motor runs and turns auger check high limit switch.

If motor tries to turn auger but can't, check for plugged or jammed auger.

Stove will not turn on:

Check the 120-Volt power available and power cord plugged in?

Check the fuse

Measure the power at the terminal block

Check the connections on the User control panel

Check the control board is installed correctly

Stove shuts off after startup:

If stove shuts off right after startup and the combustion motor is running, check for an auger jam or the low limit switch circuit.

If stove shuts off right after startup and the combustion motor is not running, check for a problem in the wiring. If the wiring is ok, check the internal circuit board and User control panel.

Stove shuts off at any setting after startup:

troubleshooting2

Check for Auger Jam and review Auger troubleshooting section.

If Auger and Convection motors turn off at the same time, check the Low Limit switch.

If all three motors are shutting off at the same time, Check wiring.

If wiring is OK, check internal circuit board and user control panel.

Stove Discharges smoke into room:

Check for power loss, blown fuse or seized combustion motor.

Check for plugged airway.

Check the internal circuit board and User control panel.

Stove shuts off on a low setting:

Check for low auger feed or pellet jam.

Check the Low limit switch and its wiring

Stove blows:

Check for dead short on each motor and motor wires.

Check motor current draw, Auger = .55 amps, Combustion = .31 amps, Convection = 1.1 amp.

Bad low limit switch:

Stove starts and runs for 12 or 8 minutes then auger and convection motors stop, Combustion motor continues for another 10 minutes.

Stove stays on even when cold.

Faulty Air Sensor:

Combustion motor just barely runs, Auger motor will not turn, red light is not blinking,

Auger and Combustion motors run very erratic.

Any motor runs full speed when stove is first connected to power source.

Check motor wiring

Replace the control board.

Any motor fails to run.

Quick Reference Guide for the Integra Pellet Stove

Eprom Reference

Eprom #	Combustion Mtr		Auger On Time		Convection Mtr	
	Min.	Max.	Min	Max	Min.	Max.
2.3	34 V	48V	0.6 sec	3.9 sec	53 V	101 V
2.4	32 V	46 V	0.6 sec	3.9 sec	60 V	101 V
2.5	34 V	50 V	0.6 sec	3.9 sec	60 V	101 V
2.5A	34 V	50 V	0.6 sec	3.9 sec	60 V	101 V
3.1	40 V	52 V	0.6 sec	3.9 sec	60 V	101 V
3.1A	40 V	52 V	0.6 sec	3.9 sec	60 V	101 V
3.2A	40 V	52 V	0.6 sec	3.9 sec	60 V	101 V

Note: All Voltages listed above are AC +,- 10%.

User Control Board Specifications

Air Feed Potentiometer 2.5 V DC => Adjust Clockwise to Increase Comb.Mtr Feed
 Auger Feed Potentiometer 2.5 V DC => Adjust Clockwise to Increase Auger Mtr Feed
 Hall IC Test Point 5 V DC

Air Sensor Test

Bypass the low limit switch, adjust the User Control Board to the Minimum Position, wait 1 minute, then open the stove door. Comb. Mtr. should speed up and auger should stop.

Low Limit Switch

Normally Open => Closes at 120⁰ F => Power = 5 V DC
 Switch is tested by the Main Control Board after 15 min. in startup mode.

High Limit Switch

Normally Closed => Opens at 250⁰ F => Power = 120 V AC
 Switch controls power to Auger Mtr in the event of overheating of the stove.
Red Light on User Control Board blinks even when the high limit switch is open: Auger Mtr is OFF

Self Ignitor

Power = 120 V AC => On for 10 minutes in the Startup Cycle.
 Ignitor should glow cherry red within 1 minute.
 Eprom 3.1 and higher required => Bumpot with slot on left side groove required.
 Heating Element should have a resistance of 65 ohms +,- 10%.

Terminal Block Wiring Assignments

To:	Color	Color	From
Fuse -----	Black --	1	-- Black ----- Power Cord
Wiring Harness -----	Grey --	2	-- Black ----- Convection Fan
Wiring Harness -----	Orange --	3	-- Blue ----- Combustion Fan
High Limit Switch -----	Yellow --	4	-- Black ----- Auger Motor
Wiring Harness -----	Black --	5	--4-Black ----- Auger, Conv., Comb, Fuse
Wiring Harness -----	Red --	6	--White ----- Power Cord
Wiring Harness -----	Blue ----	7	--Brown ----- Thermostat or Jumper
Wiring Harness -----	Brown --	8	--Brown ----- Thermostat or Jumper