

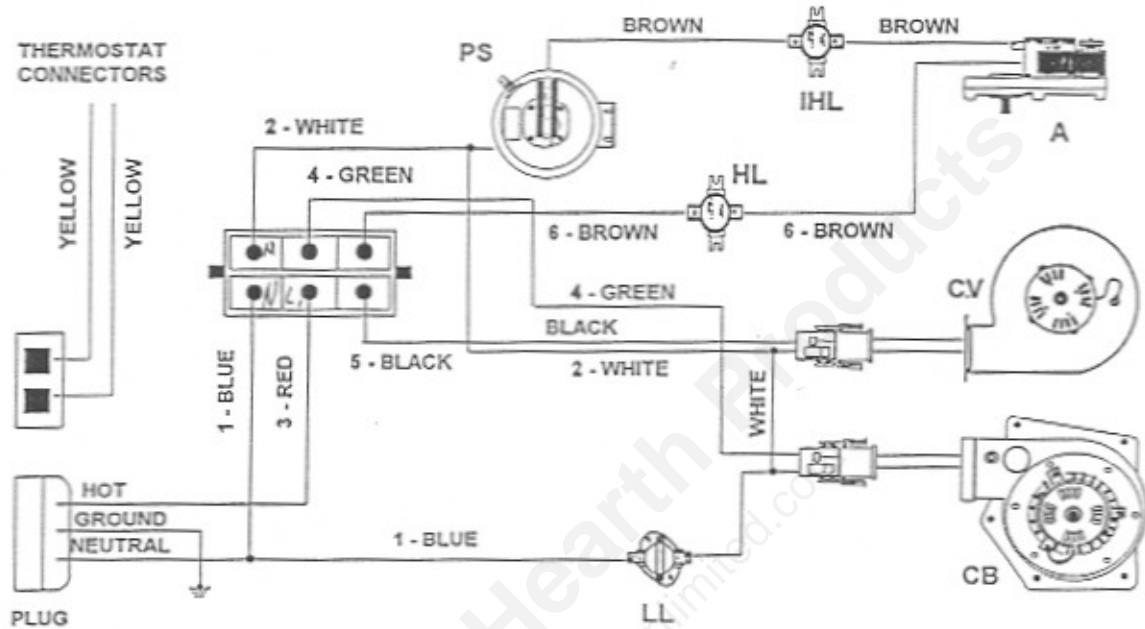
## Pressure Specifications on Product

06-26-95

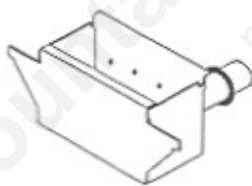
Advantage:	Combustion pos. #1	- .05 to - .20
	Combustion pos. #5	- .35 to - .65
	Convection High	+ .65 to + .85
	Convection Low	+ .10 to + .33
Quest:	Combustion High	- .08 to - .17
	Combustion Low	- .43 to - .56
	Convection High	+ .25 to + .45
	Convection Low	+ .10 to + .20
Cascade:	Combustion High	- .28 to - .55
	Combustion Low	- .11 to - .25
	Convection High	+ .18 to + .39
	Convection Low	+ .09 to + .17

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

**ADVANTAGE II-T / ADVANTAGE III**  
**Serial numbers 75864 - UP**  
**SSAC TOUCH PAD CONTROLS with HARNESS**



**CONVENTIONAL  
 BURN POT**



**PN 12150802**

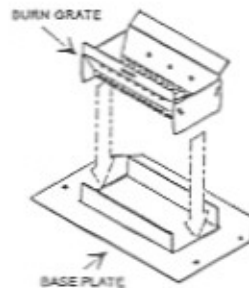
**4.5" TUBE LENGTH**

**SN 18145 - 59831**

**PN 12150804**

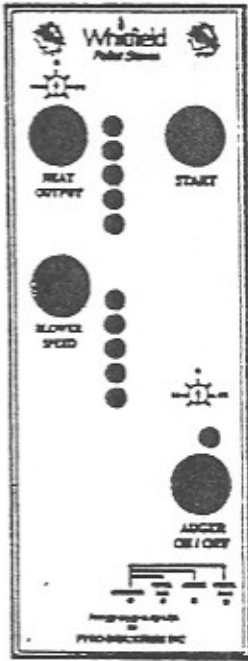
**2.5" TUBE LENGTH**

**SN 59831 - UP**

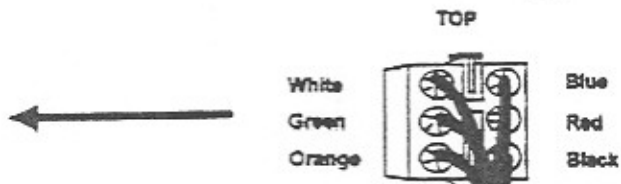


**Part Number  
 12151264**  
 (Ultra Grate Retrofit Kit)

**Part Number  
 12150812**  
 (Ultra Grate alone)

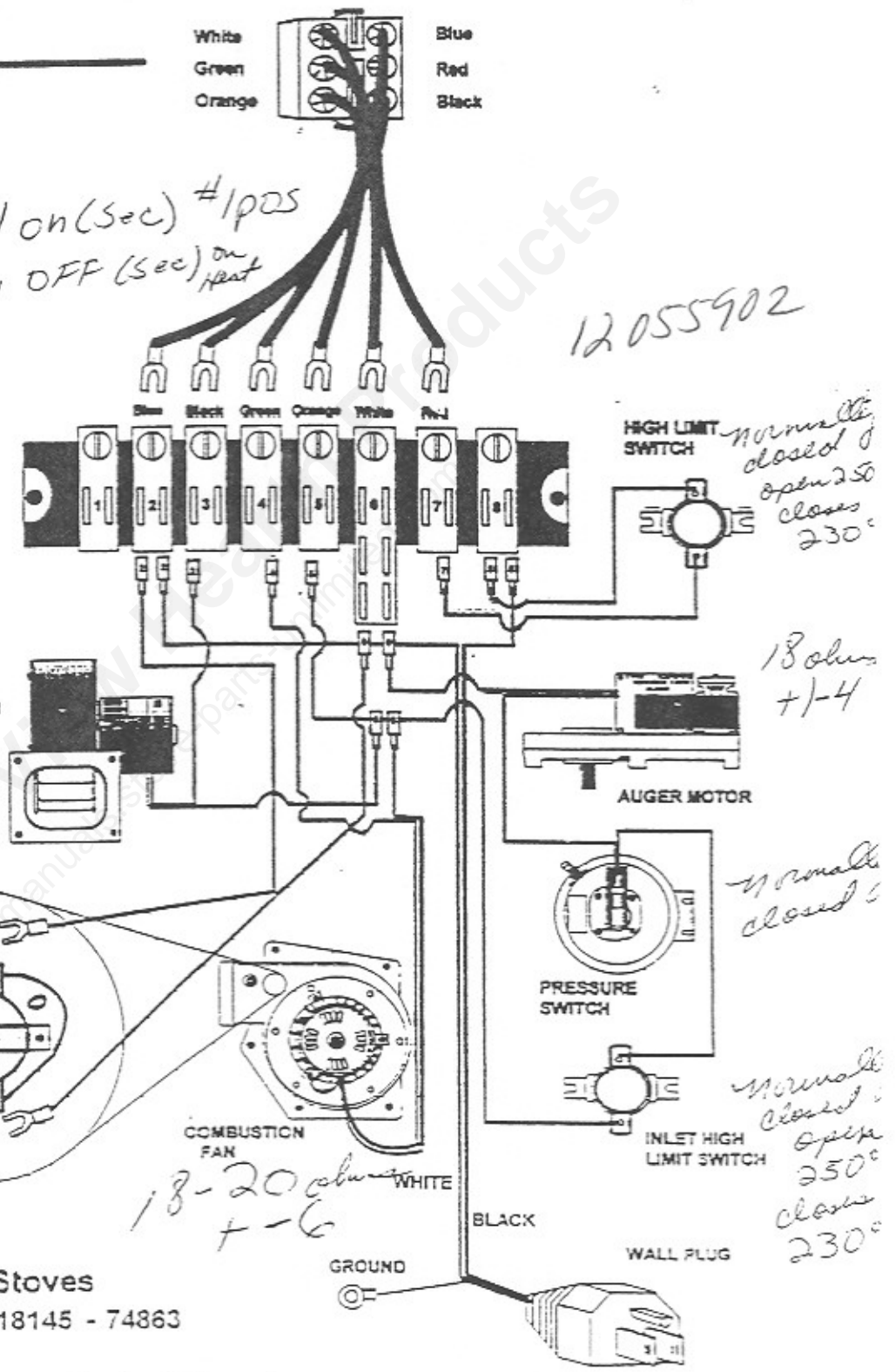


#1) 70V  
#2) steps  
#4  
#5



1.4 on (sec) #1 pos  
7, OFF (sec) on heat

12055902



CONVECTION FAN  
10-12 OHM  
(+/-6)

LOW LIMIT SWITCH  
Normally open  
closes at 140°  
opens at 120°

COMBUSTION FAN  
18-20 ohms  
+/-6

HIGH LIMIT SWITCH  
normally closed  
opens 250°  
closes 230°

18 ohms  
+/-4

PRESSURE SWITCH  
normally closed

INLET HIGH LIMIT SWITCH  
normally closed  
opens 250°  
closes 230°

For Advantage Series Stoves  
Serial Number Range 18145 - 74863

This shows using the new Control Board

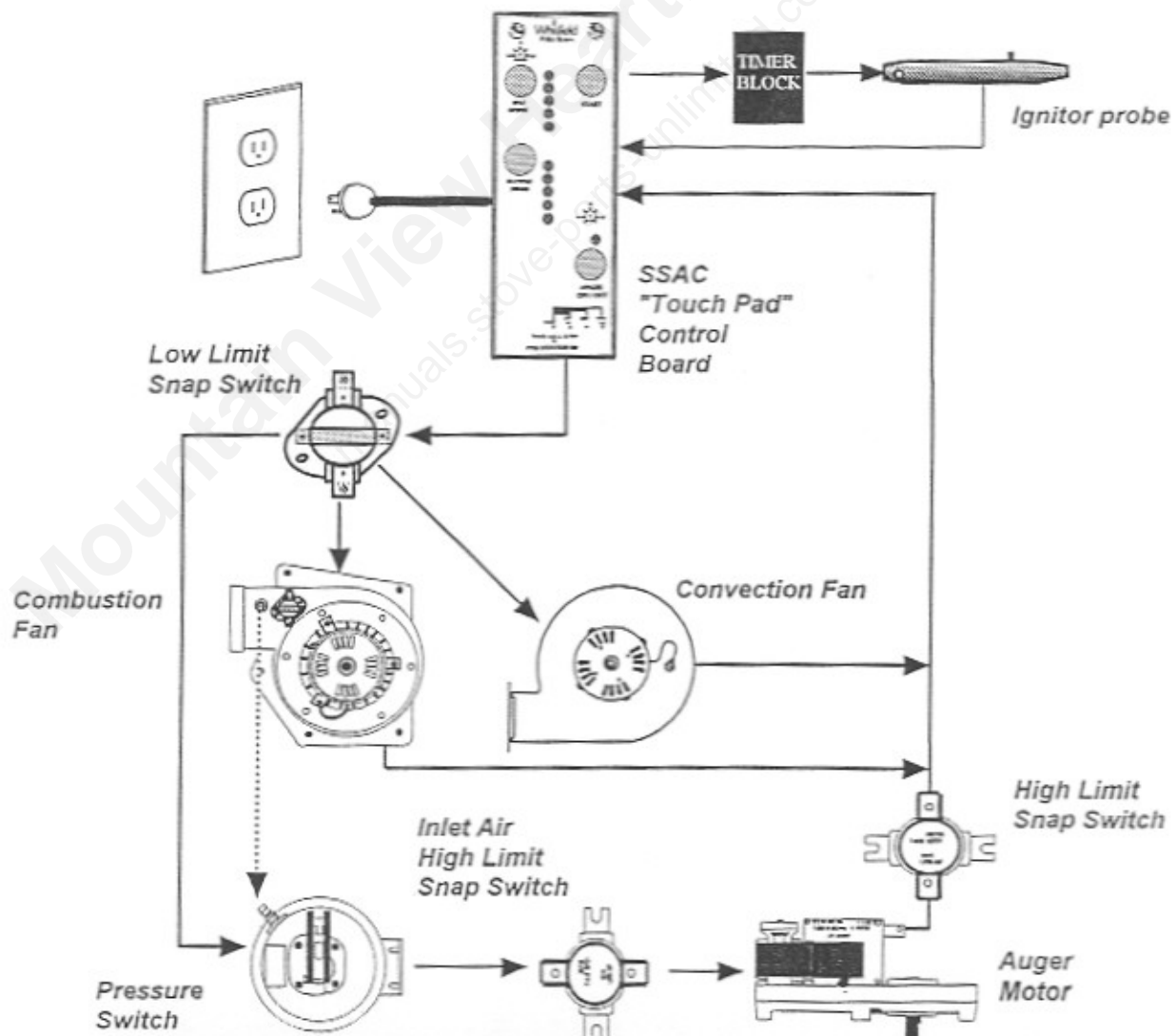


511 Dennis [unclear] 7/13/08  
**SSAC "Touch Pad"  
Control Board System**  
Advantage serial numbers 75864 & Up

This electrical system takes power from a 110 VAC outlet. A 30 minute timer built in the board allows for start-up power to operate all components. The default settings on start are position #3 for Heat output and position #1 on Blower control. The Ignitor is provided power for the first 15 min. of stove operation. The Low Limit Switch close at 140 degrees F measured exhaust gas temperatures. The Ignitor can not be reactivated until the Low Limit Switch is open. The auger system power is regulated by the High Limit Switches and the Pressure Switch. If these switches do not stay closed, power is lost to the Auger motor. The fans will continue to operate if the High Limit Switch opens until the stove cools and the Low Limit Switch opens.

There are two trim pots on the front of the control board. These allow adjustment of the Combustion voltage and the auger feed time. On the lower right face of the board access for voltage checks is provided. (See pages 13 for trim ranges).

The control board contains a 6 amp Fast acting fuse on the bottom underside of the board. There are two Thermostat connection spades here also. The two yellow wires in the wire harness go there.



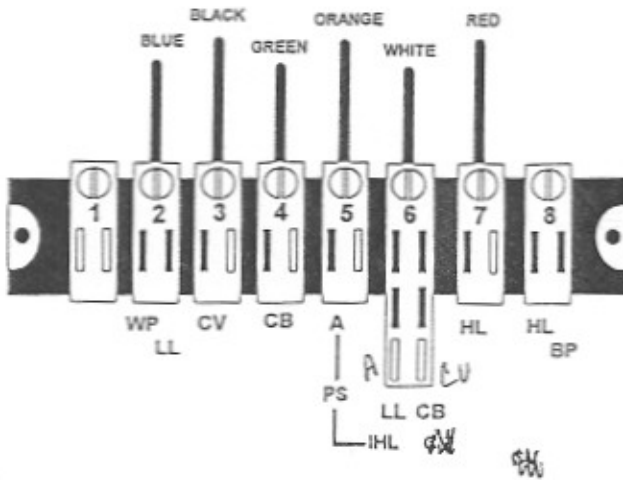
disk # 3

S:\DENW\WP7\CIR 3.DWG



# ELECTRICAL CIRCUITS

Re wire stove  
Like this

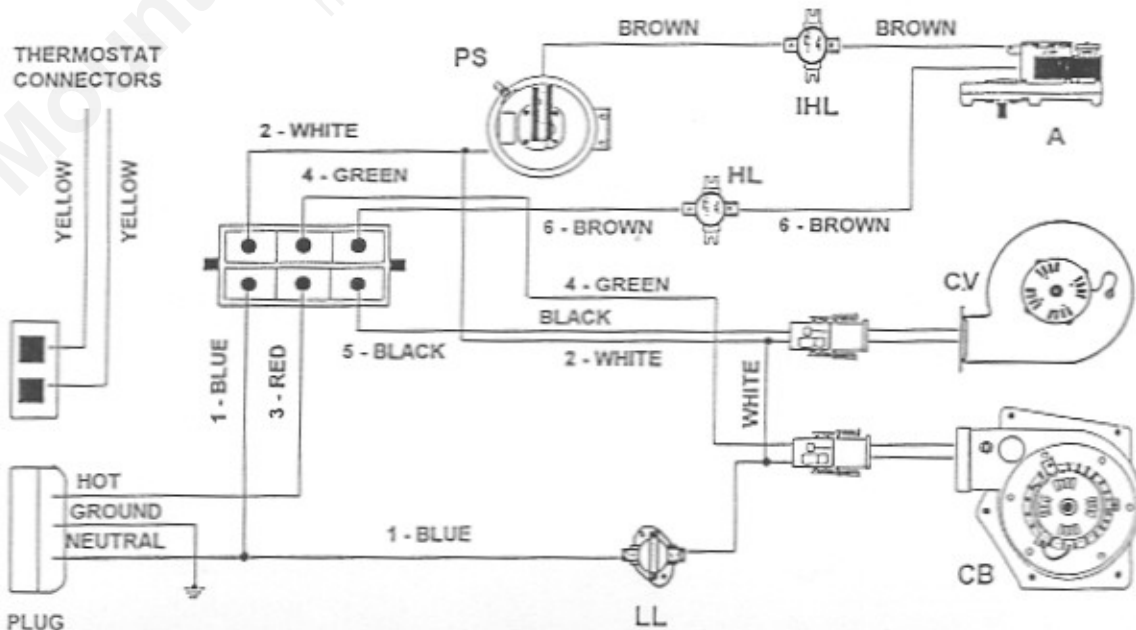


ADVANTAGE II - T  
Serial numbers  
38081- 75864  
SSAC ROTARY  
CONTROLS

GO 2? ONLY

(USED ON ADVANTAGE III Serial numbers 343377 - 75864)

ADVANTAGE II-T / ADVANTAGE III  
Serial numbers 75864 - UP  
SSAC TOUCH PAD CONTROLS with HARNESS



Disb#12



## Pyro Industries, Inc.

695 Pease Road  
Burlington, WA 98233  
(206) 757 - 9728  
Fax (206) 757 - 9721

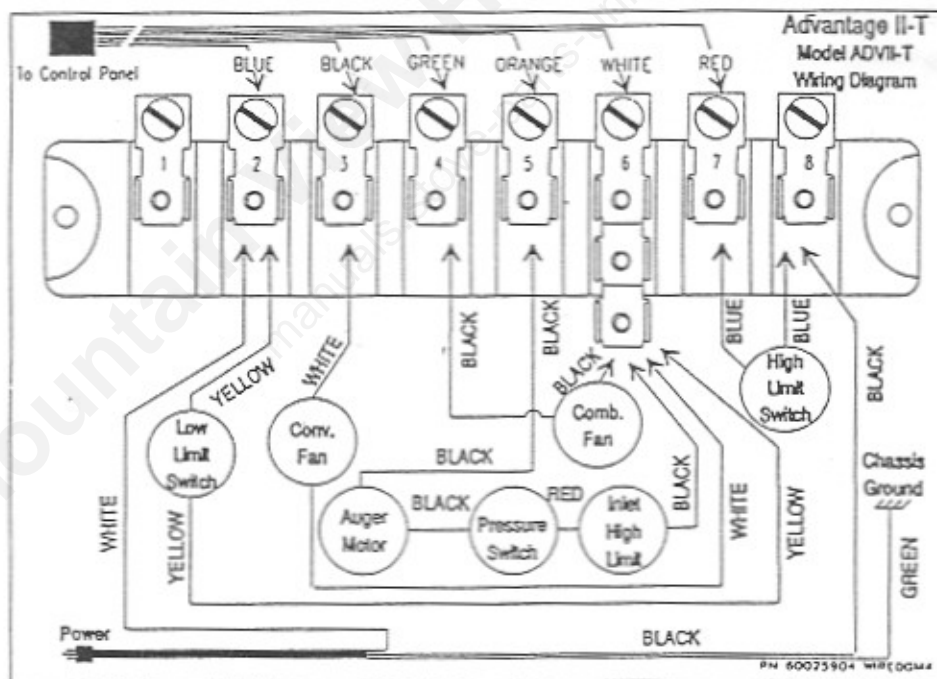
Date: 10/21/91  
Bulletin # 21  
Model: ADV II-T  
Starting Serial # 38081

Page 1 Of 1

# Whitfield Pellet Stove Technical Bulletin

## CURRENT SENSING RELAY REMOVED

The current sensing relay has been deleted from the Advantage II-T pellet stove. The change will take effect on all Advantage II-T stoves beginning with serial # 38081 or greater. This will obviously change the wiring diagram. When servicing a Whitfield Advantage II-T stove with a serial number 38081 or greater, please refer the diagram below.



**REASON FOR CHANGE :** The current sensing relay has proven to be a redundant safety feature and is no longer required for safety certification.

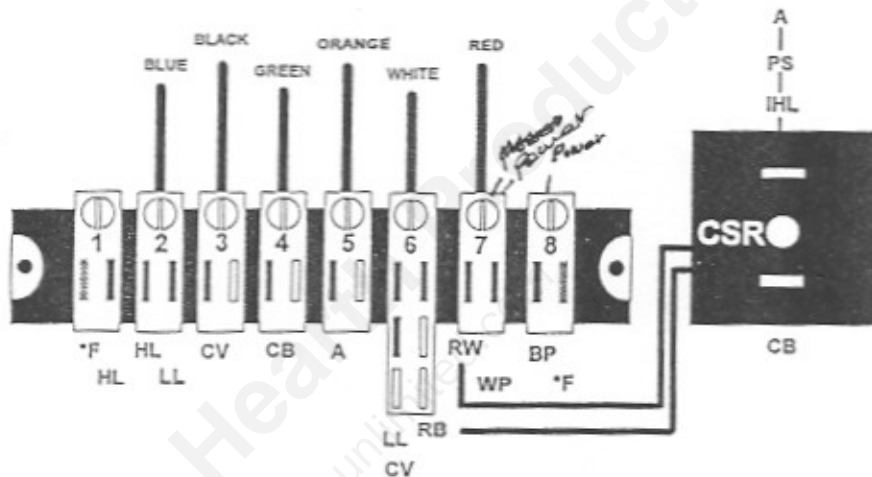
21120410 (10P7) CIR 2 Draw



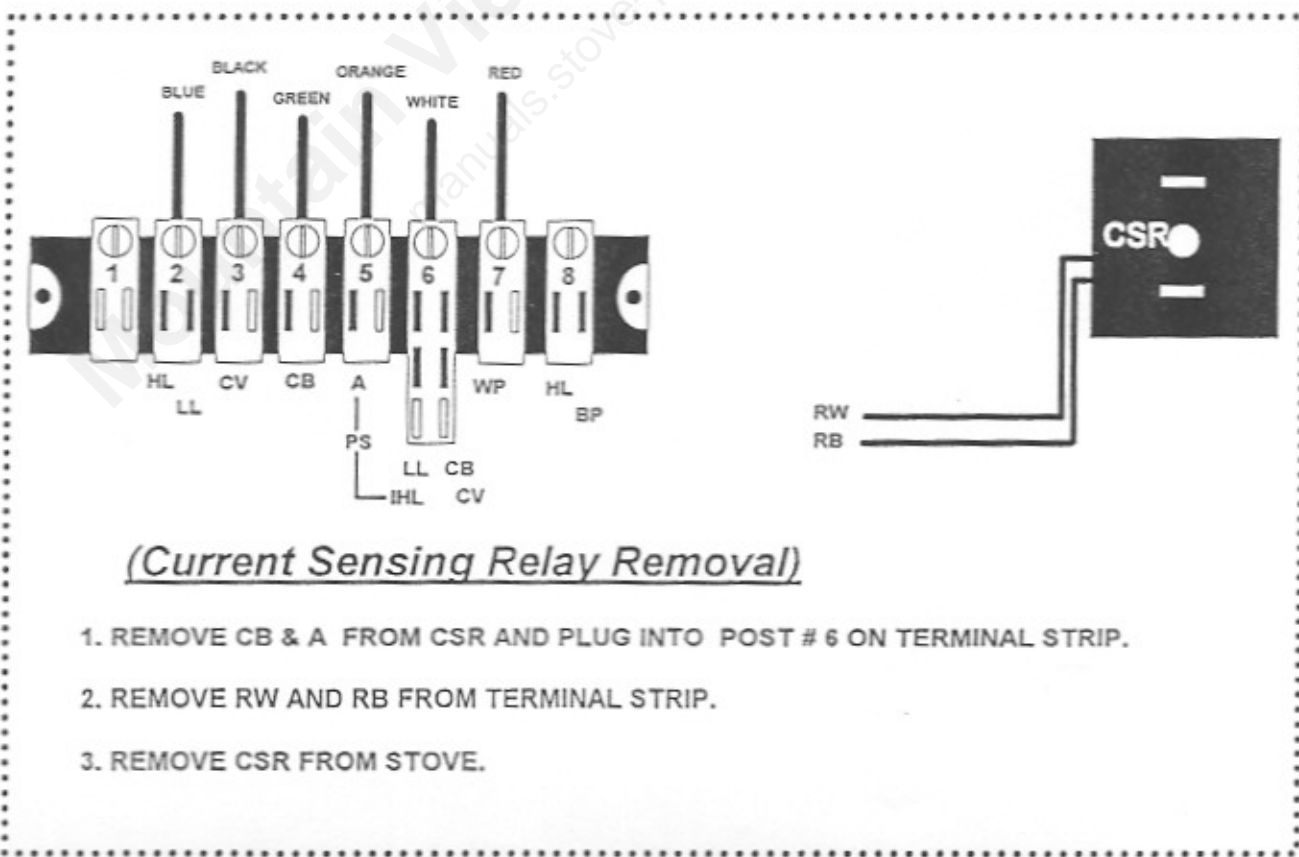
# ELECTRICAL CIRCUITS

your current stove

**ADVANTAGE II - T**  
Serial numbers  
19912 - 31037  
SSAC ROTARY  
CONTROLS



\*F (In-line fuse was added for ICM Rotary control board only)



### (Current Sensing Relay Removal)

1. REMOVE CB & A FROM CSR AND PLUG INTO POST # 6 ON TERMINAL STRIP.
2. REMOVE RW AND RB FROM TERMINAL STRIP.
3. REMOVE CSR FROM STOVE.

Dissect 2

714-333-3830

5:12 PM 10/17/07 CJK/DEW

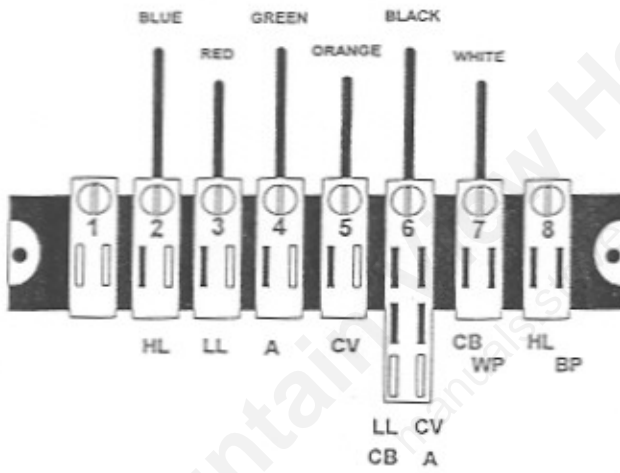
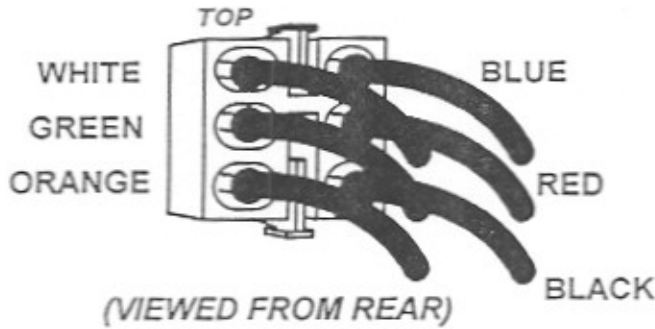


# ELECTRICAL CIRCUITS

## LEGEND

HL	HIGH LIMIT SWITCH
LL	LOW LIMIT SWITCH
A	AUGER MOTOR
CV	CONVECTION FAN
CB	COMBUSTION FAN
WP	WHITE POWER LEAD
BP	BLACK POWER LEAD
RW	RELAY WHITE LEAD
RB	RELAY BLACK LEAD
F	FUSE LEAD
PS	PRESSURE SWITCH
IHL	IN-LET HIGH LIMIT SWITCH
CSR	CURRENT SENSING RELAY

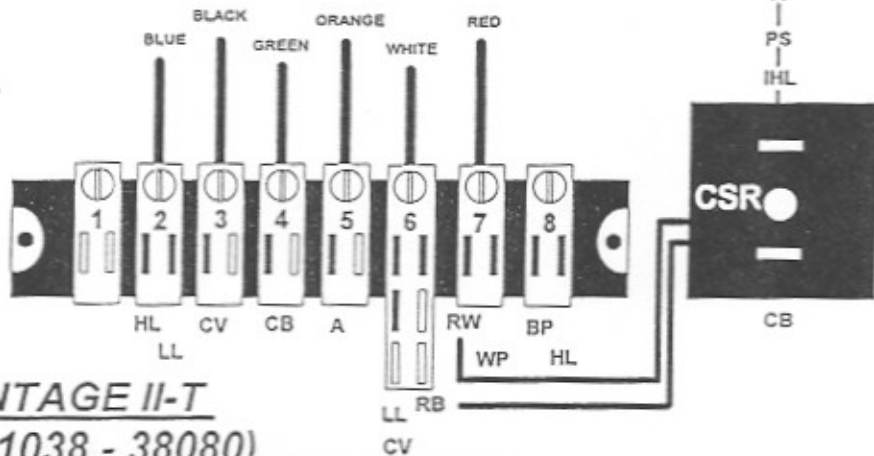
### MOLEX CONNECTOR TO CONTROL BOARD



### ADVANTAGE II RK Controls Serial numbers 7401 - 18144



### ADVANTAGE II - T Serial numbers 18145 - 19911 SSAC ROTARY CONTROLS



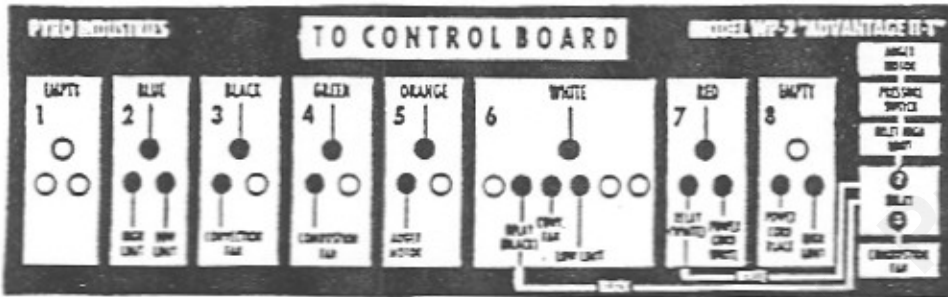
### (USED ON ADVANTAGE II-T Serial numbers 31038 - 38080)

*Discontinued*

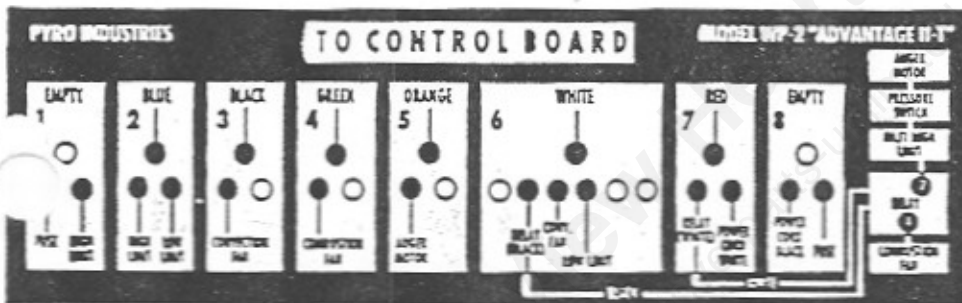
# ADVANTAGE SERVICE MANUAL

## Advantage II -T Electrical Hook-up Diagram and Control Panel Installation

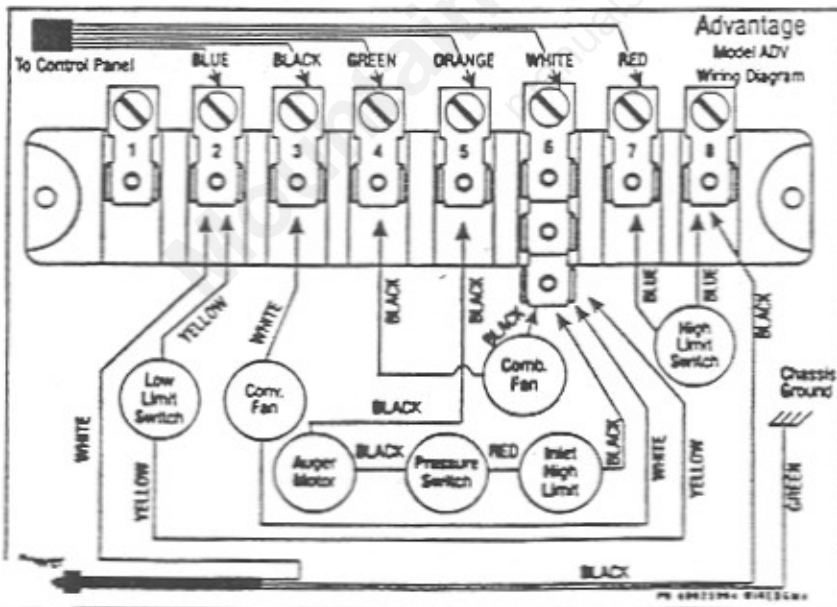
The electronic control board is mounted to an aluminum bracket for easy installation into the right hand stove or shroud side panel using a single fastener. The control board can be removed or replaced without removing the side panel or the side shroud, see diagram below. Be sure to unplug the stove before removing the control panel. The control cable (gray) is fitted with a black or gray quick-disconnect "AMP" connector that plugs into the back of the control board. The other end of the control cable is permanently attached to the screw terminals. The blower and auger motor wires attach directly to quick disconnects on the terminal block as indicated on the hook-up diagram below.



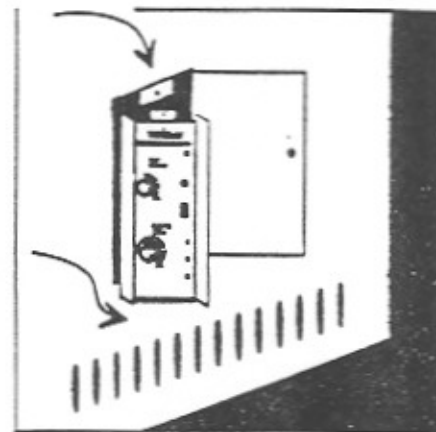
Serial No. 18145 - 19911  
& 31038 - 38080



Serial No. 19912 - 31037  
with In-line Fuse Holder



Stoves with Serial No. 38081 & up  
No Current Sensing Relay

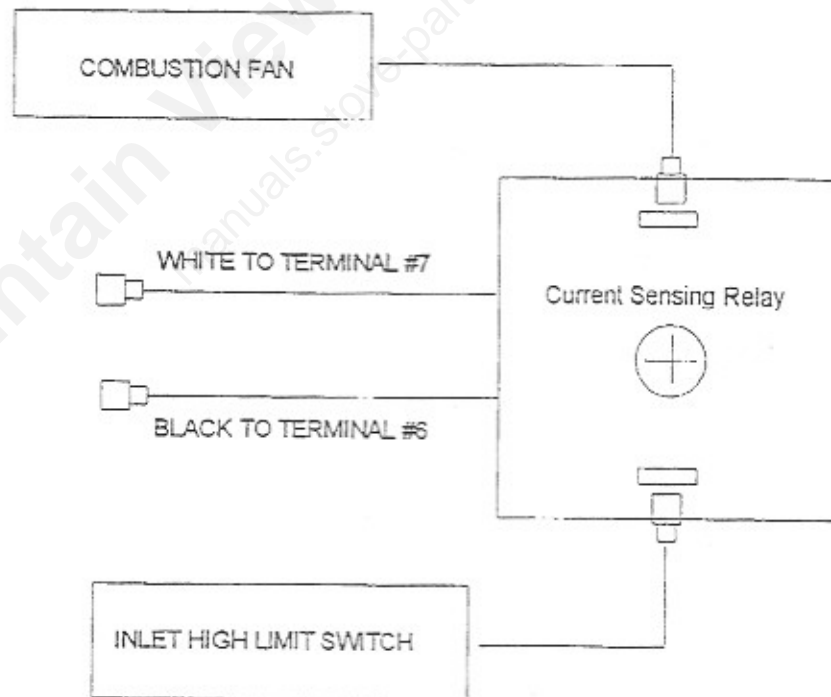


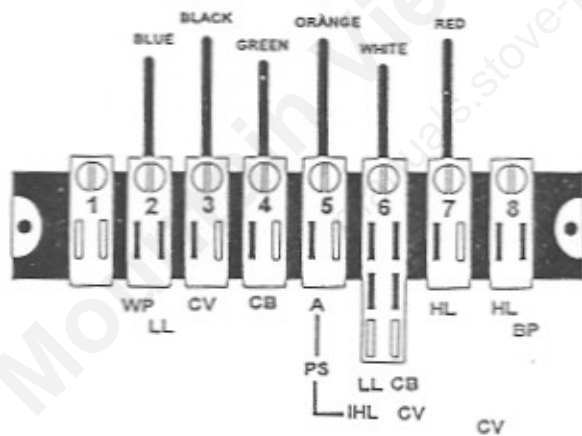
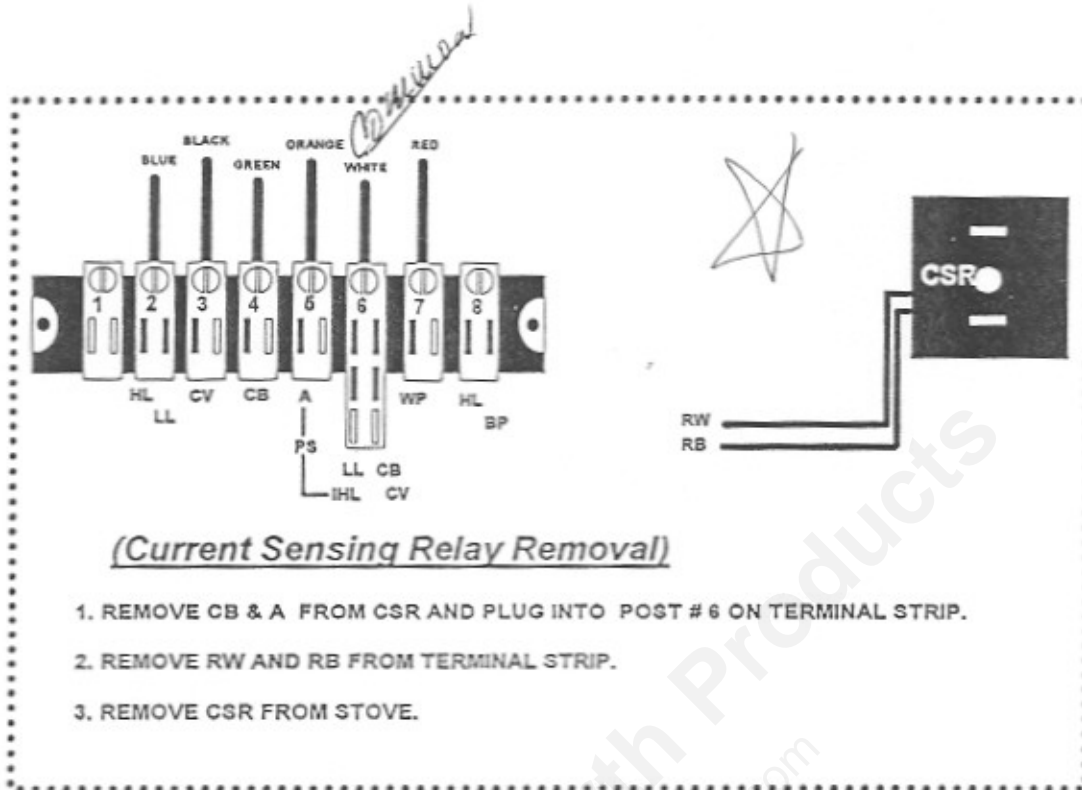
Control Panel Installation

## REMOVAL OF THE CURRENT SENSING RELAY.

The current sensing relay was installed in series with the combustion blower and the inlet high limit switch on serial numbers: 18145 through 38080. If the current sensing relay detects "0" (zero) current being drawn by the combustion blower motor (I.E. blower motor is shorted or thermal protector on the fan has tripped out) the relay will turn power off to the auger motor. The current sensing relay was deleted from the stoves as a redundant safety feature at Serial #: 38081.

\*\*\*To remove the current sensing relay from the system you will need to remove the white and black wires coming from the relay, going to terminal post 6 & 7. Place the wires going to the top of the relay (combustion fan lead & inlet high limit switch lead), place both of these wires on terminal #6, and remove the current sensing relay from the system...

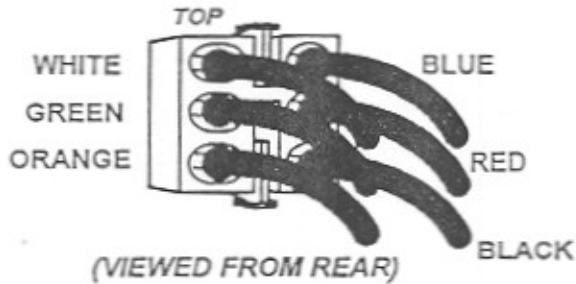




**ADVANTAGE II - T**  
**Serial numbers**  
**38081- 75864**  
**SSAC ROTARY**  
**CONTROLS**

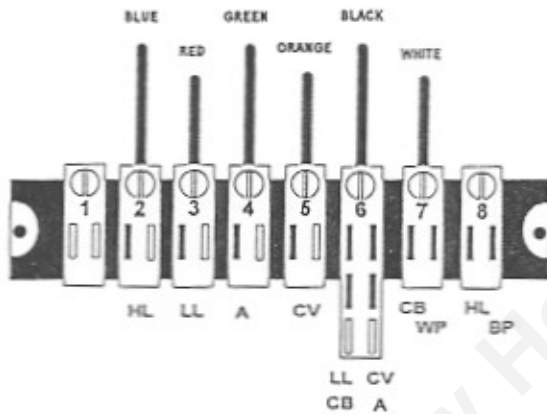
**(USED ON ADVANTAGE III Serial numbers 343377 - 75864)**

**MOLEX CONNECTOR TO CONTROL BOARD**



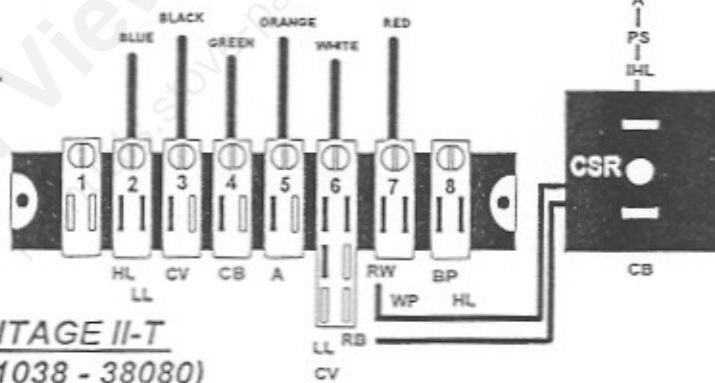
**LEGEND**

HL	HIGH LIMIT SWITCH
LL	LOW LIMIT SWITCH
A	AUGER MOTOR
CV	CONVECTION FAN
CB	COMBUSTION FAN
WP	WHITE POWER LEAD
BP	BLACK POWER LEAD
RW	RELAY WHITE LEAD
RB	RELAY BLACK LEAD
*F	FUSE LEAD
PS	PRESSURE SWITCH
IHL	IN-LET HIGH LIMIT SWITCH
CSR	CURRENT SENSING RELAY



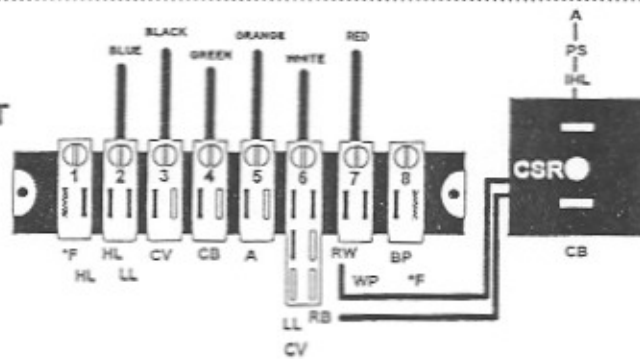
**ADVANTAGE II RK Controls**  
Serial numbers 7401 - 18144

**ADVANTAGE II - T**  
Serial numbers  
18145 - 19911  
SSAC ROTARY  
CONTROLS

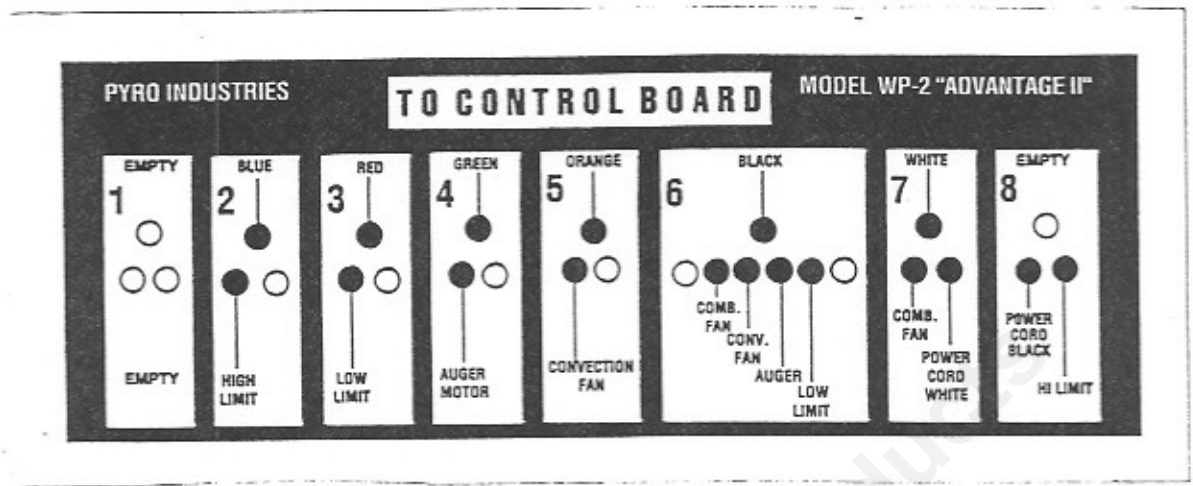


(USED ON ADVANTAGE II-T  
Serial numbers 31038 - 38080)

**ADVANTAGE II - T**  
Serial numbers  
19912 - 31037  
SSAC ROTARY  
CONTROLS



\*F (in-line fuse was added for ICM Rotary control board only)

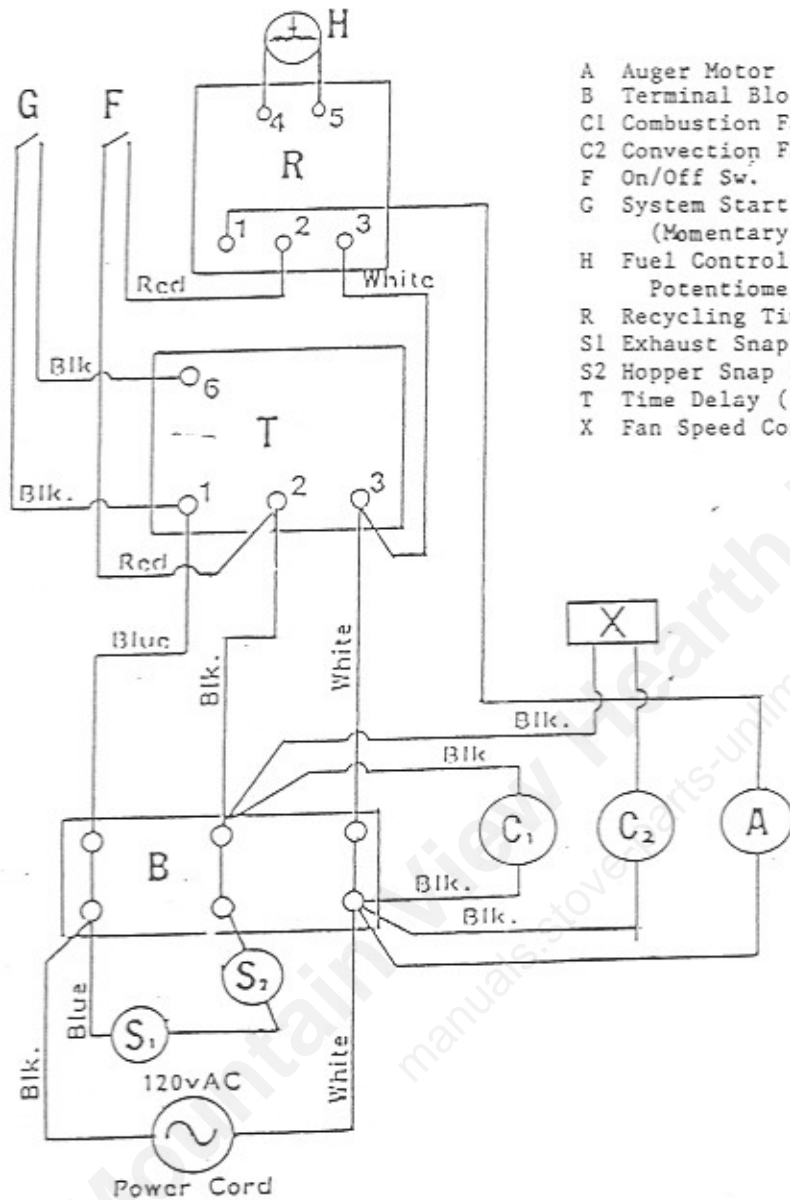


**Whitfield**  
 Hearth Products

TERMINAL STRIP FOR SN 7401-18,144

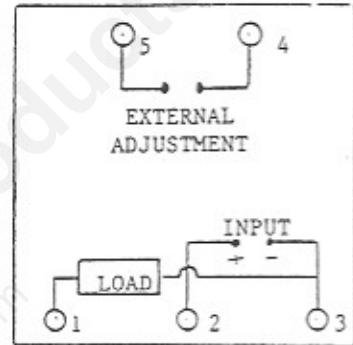
RK System  
 WP-2

333-333-0333

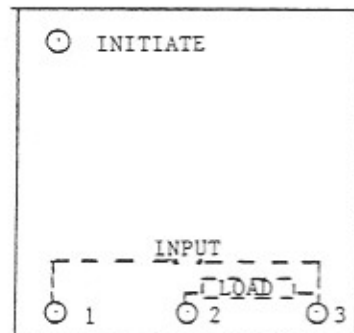


- A Auger Motor
- B Terminal Block
- C1 Combustion Fan
- C2 Convection Fan
- F On/Off Sw.
- G System Start Sw. (Momentary)
- H Fuel Control Potentiometer
- R Recycling Timer
- S1 Exhaust Snap Sw.
- S2 Hopper Snap Sw.
- T Time Delay (30 Min.)
- X Fan Speed Control

SSAC RECYCLING TIMER

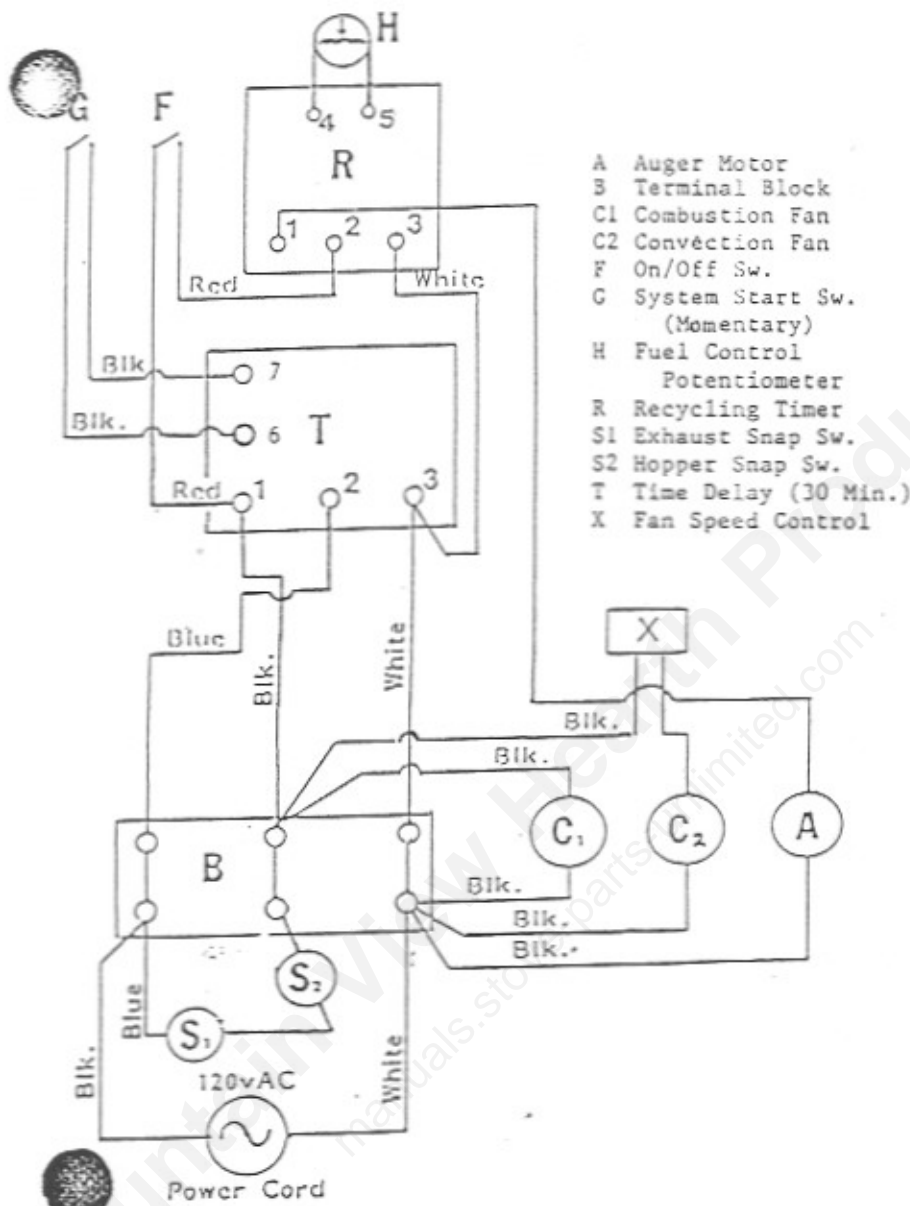


SSAC 30 MIN TIMER



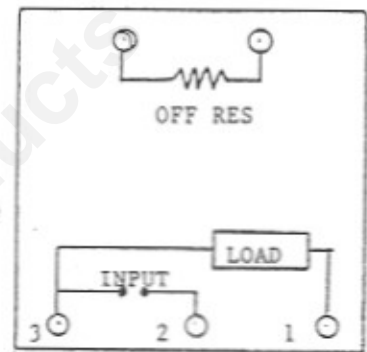
## WP-2 WIRING DIAGRAM

USING SSAC CONTROLS

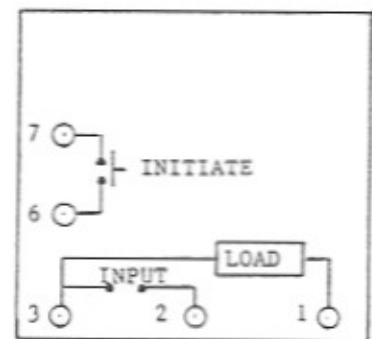


- A Auger Motor
- B Terminal Block
- C1 Combustion Fan
- C2 Convection Fan
- F On/Off Sw.
- G System Start Sw. (Momentary)
- H Fuel Control Potentiometer
- R Recycling Timer
- S1 Exhaust Snap Sw.
- S2 Hopper Snap Sw.
- T Time Delay (30 Min.)
- X Fan Speed Control

ACP RECYCLING TIMER



ACP 30 MIN TIMER



# WP-2 WIRING DIAGRAM

USING ACP CONTROLS

TIMER

4

PUT

3

TIMER

3

3

# QUEST SERVICE MANUAL

## Appendix C

1. In Trouble shooting a Quest Stove, the following negative pressure (MAGNEHELIC) readings measured at the firebox may be used:

<u>Damper Full Open</u>	<u>Damper Closed</u>
-0.17 Cold	-0.04 Cold
-0.10 Hot	-0.02 Hot

The access port for taking the readings is found on the front side of the stove, just above the door latch. Be sure your Magnehelic Gauge is hooked up on the "low pressure" (Vacuum) side.

2. Feed Rates on a factory specification control board should be as follows:

Lowest Feed Rate:

On Time: 1.5 seconds

Off Time: 9.5 seconds

Highest Feed Rate:

On Time: 1.5 seconds

Off Time: 1.7 seconds \*

\*The procedure detailed on the previous page allows an increase in the High End "off time" to approximately 2.1 seconds. This change results in less High End feed rate.

# QUEST SERVICE MANUAL

## QUEST WIRING DIAGRAM

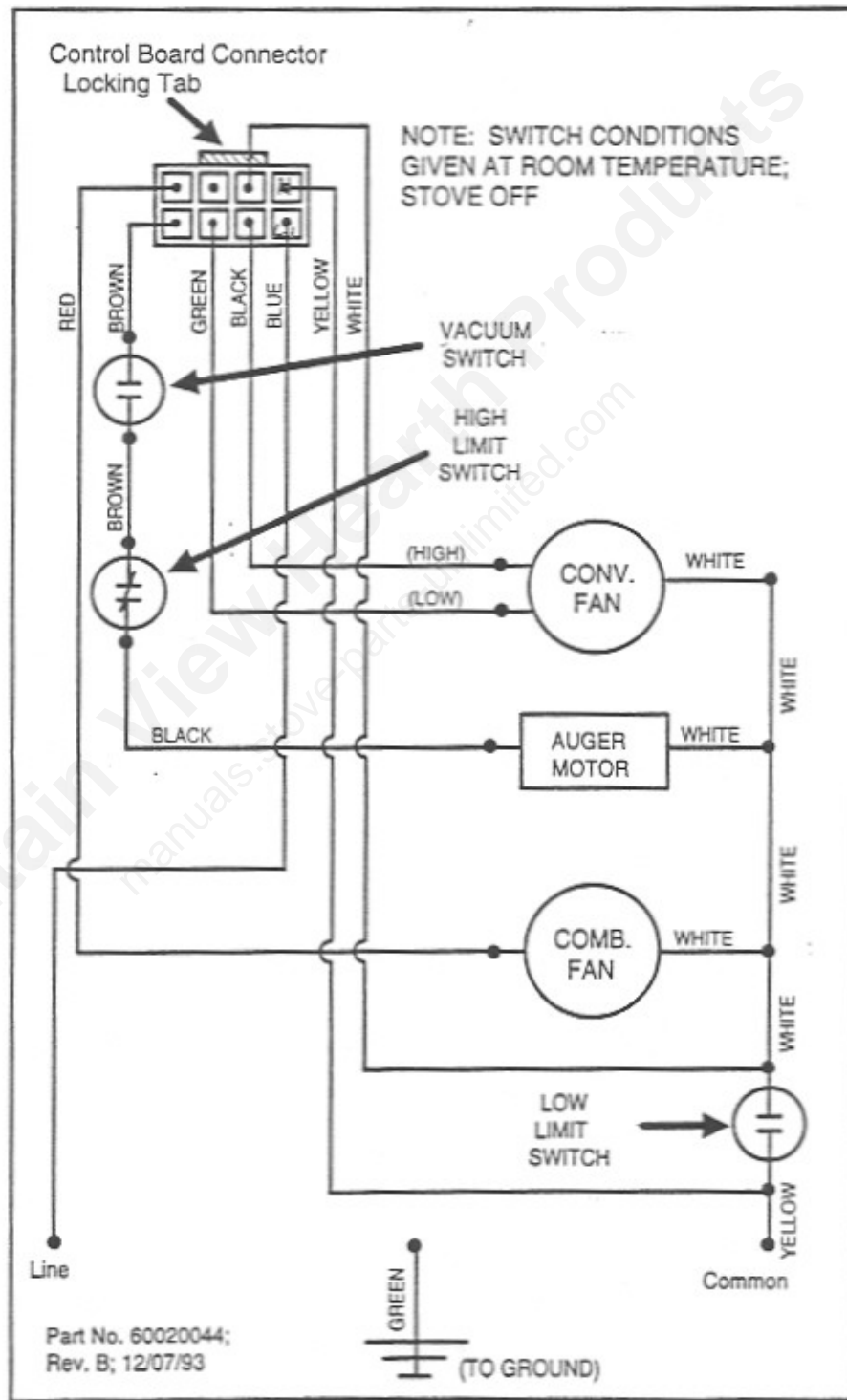


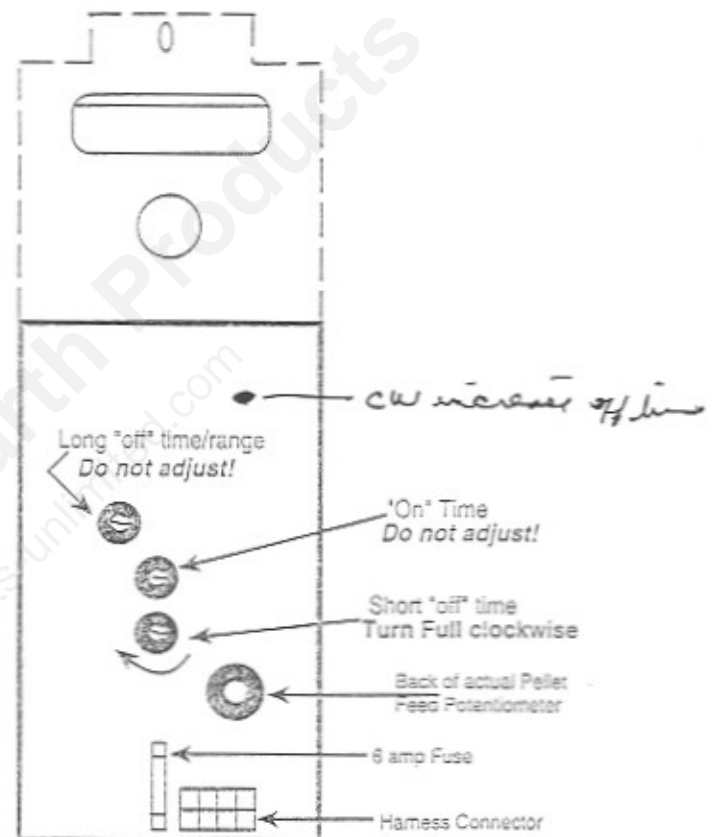
Figure 29 -Wiring Diagram

## Appendix B

### Control Board Adjustment

**WARNING:** The following procedure for reducing High End feed rate is to be used only when all other steps have been taken to eliminate fuel "piling" in the grate.

1. Unplug the power cord from the wall or the back of the stove.
2. a). Disconnect the control board cable connector. b). Loosen the set screw on the Damper Control Knob with the 1/16" hex head wrench, supplied. c). Using a 1/4" socket or nut-driver, remove the #8 Tek screw at the top of the control board and take the board out of the stove.
3. Carefully remove the valox cover from the back of the board.
4. a). Take a moment to identify the four potentiometers on the back of the board. There are three small ones and one larger (which is the back of the Pellet Feed Knob). b). Go to the third small potentiometer from the top (see figure) and remove the pink protective coating with a small screw driver or knife blade.
5. Using a small screwdriver, turn the adjustment screw on this potentiometer clockwise through its full rotation. This adjustment will reduce high end fuel feed rate by 1/4 to 1/2 pound per hour. Pile-up with the particular brand of fuel should be eliminated. **NOTE: Do not adjust the top two potentiometers!**
6. Replace the valox cover and re-install the Control board into the stove. Turn the damper actuation rod and then verify that the damper knob is properly indexed for a full open or full closed setting.



Rear View of  
Quest Control Board

**NOTE:** Control Board Back Pictured with VALOX Cover removed and most components not shown for clarity

Figure 31 -- Control Board Adjustment

CASCADE



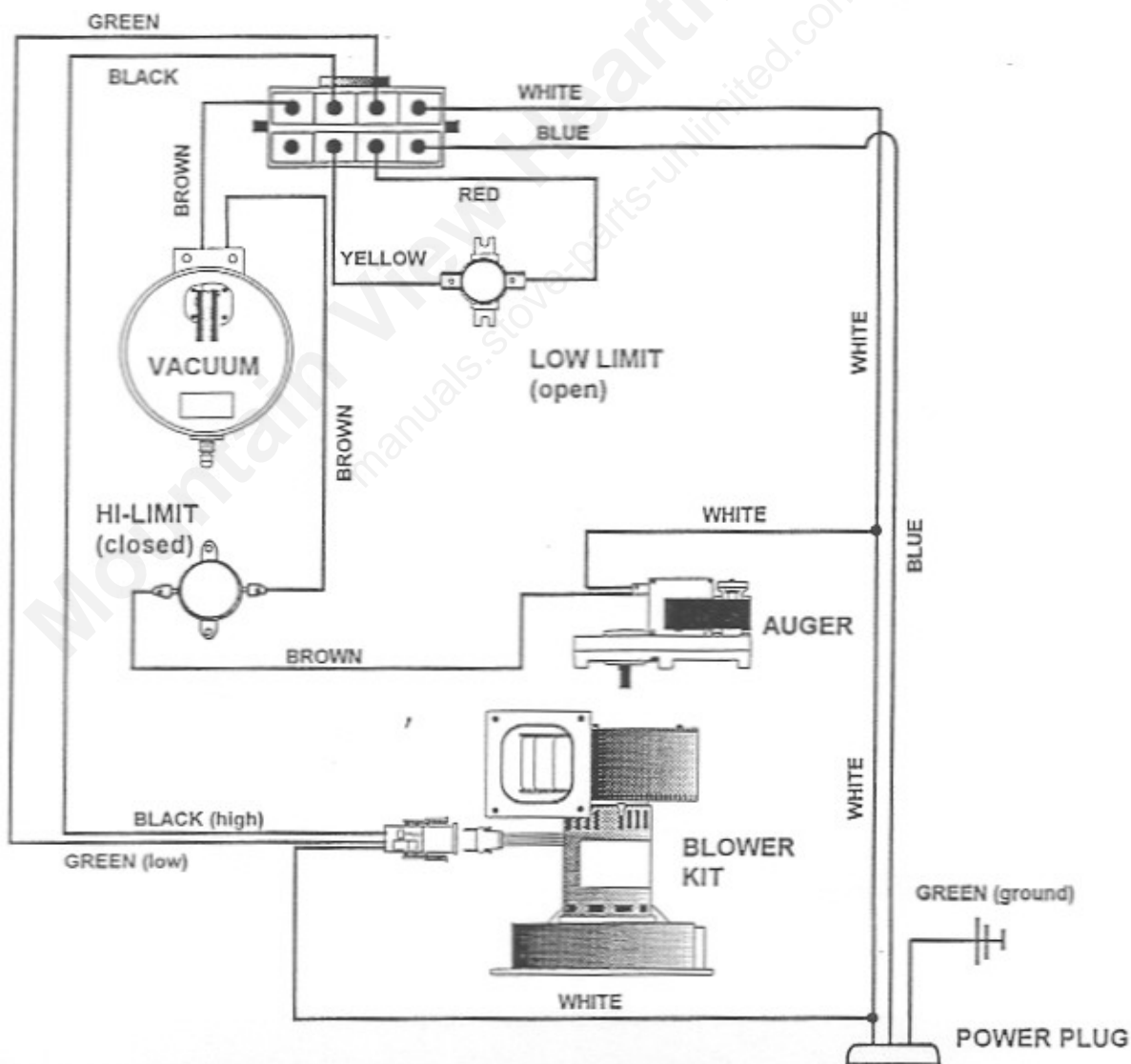
## WIRE DIAGRAM

### Fuel Feed Trim Control System

This electrical system uses 110VAC power. The Heat Output slide switch activates a 25 minutes timer on the control panel. If the exhaust does not reach operating temperature within the first 25 minutes, the stove will automatically shut down. The Low Limit switch will close if operating temperature is reached and keep power on the stove until the exhaust cools below operating temperature.

The High Heat position increases the fuel feed rate and blower speed for maximum heat output. The Low Heat position will decrease the fuel feed and blower speed. The Damper on the righthand side of the stove assists air movement. With the damper out, more air is allowed to pass through the stove. With the damper in, less air is allowed to pass.

To shut the stove off, slide the switch to "OFF". This shuts off fuel feed but allows the blower to run until operating temperatures no longer exist. This provides air flow for exhaust gases as the stove shuts down.



# PRODIGY SERVICE MANUAL

## 6) CONTROL PANEL ADJUSTMENTS

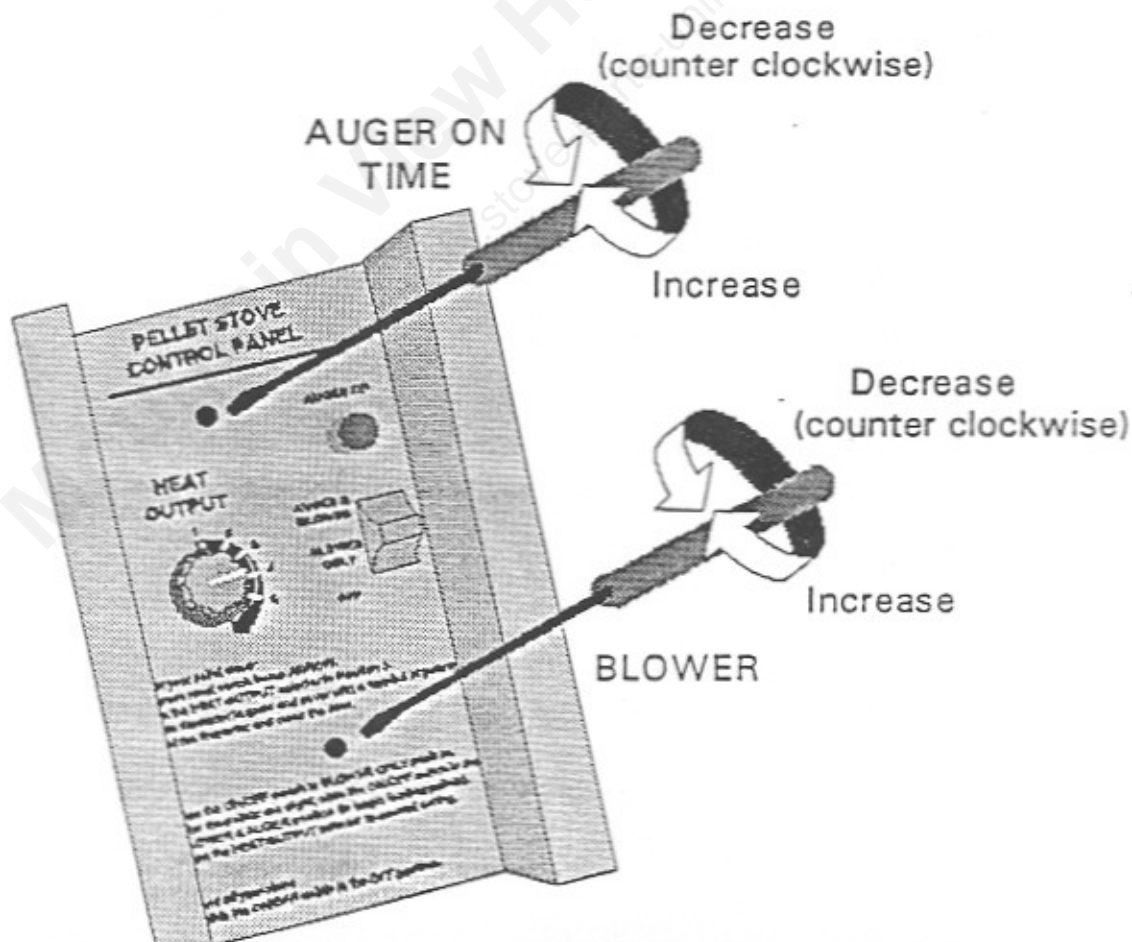
If the readings on the previous page cannot be achieved, two separate trim knobs are provided on the front of the SSAC control board to permit adjustment of the auger motor "on" time and the convection/combustion blower speed.

1) With the convection/combustion motor running, remove the lower plug on the front of the control board. Adjust the trim knob until the magnehelic gauge gives a reading of +.15 to +.20 on position # 1.

2) Slide the "ON/OFF" switch to the "blower/auger motor" position. While watching the red LED light on the control panel, check to see that the auger "ON" time is set at approximately 1.6 seconds on. Remove the upper plug and adjust trim knob if necessary. Do not touch the back of the control surface.

Note\* Stoves with serial # 1001 - 2282 have an ICM brand control board. The trim adjustments are located on back side of the control board. Adjustments are on the front of the SSAC control board.

The "WP3/WW1" switch on the back of the control board should be in the WW1 position for correct operation.



# PRODIGY SERVICE MANUAL

## 5) PRODIGY SET- UP PROCEDURES (serial #1001 or greater)

The plenum pressure must be measured and recorded when the stove is first installed.

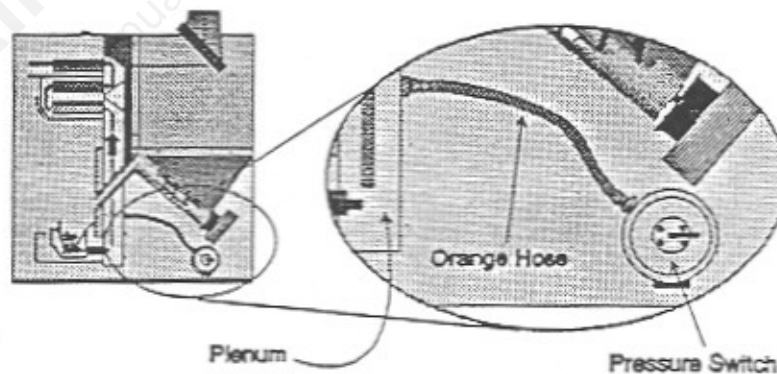
Use a magnehelic draft gauge with a one- eighth (1/8") inch hose attached to the upper connection on the gauge. (This will measure positive plenum pressure in inches of water ). Disconnect the rubber vacuum hose from the pressure switch and insert the magnehelic gauge hose (small) into the pressure switch hose ( large) to obtain a plenum reading. (See diagram below for plenum and hose hook- up diagram.)

COLD plenum pressures should be within the following limits:

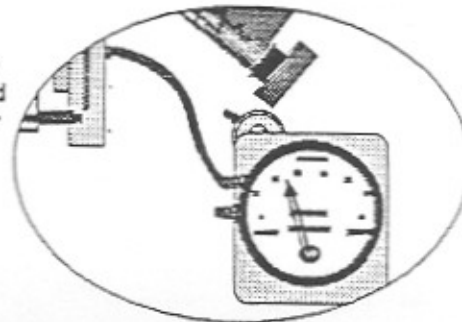
TO BE USED FOR.....	HEAT OUPUT SWITCH POSITION	PLENUM PRESSURE IN. WATERGAUGE	Auger "ON"
SET- UP	1	+ .15 TO +.20	1.5 - 1.7 sec.
Trouble Shooting Only	2	+ .35 TO +.50	1.5 - 1.7 sec.
Trouble Shooting Only	3	+ .55 TO +.65	1.5 - 1.7 sec.
Trouble Shooting Only	4	+ .70 TO +.80	1.5 - 1.7 sec.
Trouble Shooting Only	5	+ .85 TO +.95	1.5 - 1.7 sec.

NOTE\* THE DATA ABOVE REFLECTS COLD PLENUM PRESSURES THAT THE WP3 & WP3 II PRODIGY STOVES ARE ADJUSTED TO AT THE FACTORY. THE POSITION #1 SETTING IS THE MOST IMPORTANT, AS IT IS THE MINIMUM PRESSURE THAT IS NEEDED TO OPERATE THE PRESSURE SWITCH AND PREVENT NUISANCE TRIPPING.

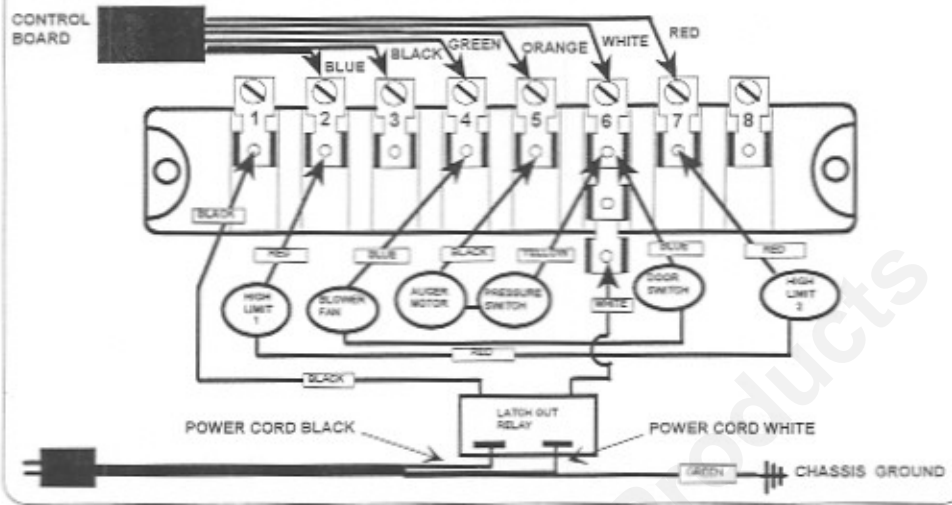
### PLENUM PRESSURE SET UP PROCEDURE



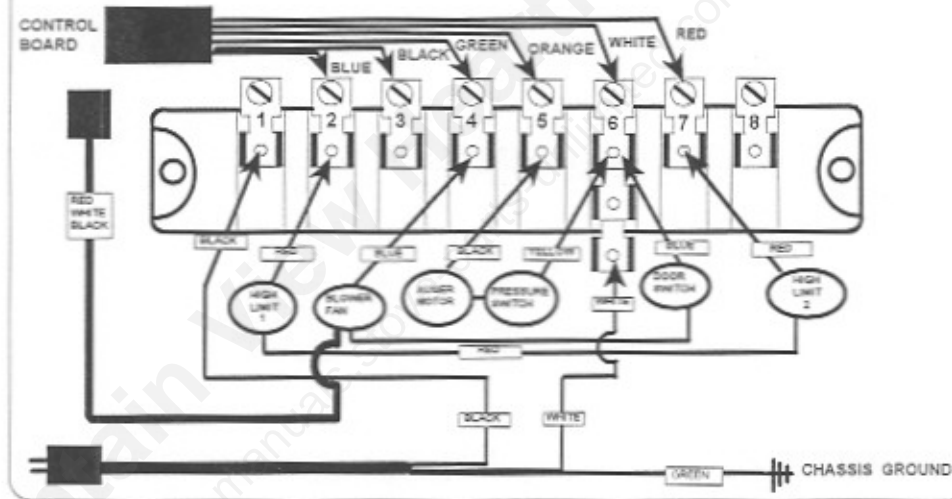
Disconnect the orange hose from the pressure switch and place it on the top connector of the magnehelic gauge



**PRODIGY (ICM BOARD, LATCH OUT RELAY and NO EXHAUST FAN)**



**PRODIGY (SSAC BOARD, HALL-EFFECT FAN and NO EXHAUST FAN)**



**PRODIGY II (SSAC BOARD, SLAVED EXHAUST FAN and BOOSTER RELAY)**

