



4827

**COMPACTA MODULAR
DECK OVEN****4 DECK MODEL SHOWN****- NOTICE -**

This Manual is prepared for the use of trained Hobart Service Technicians and should not be used by those not properly qualified. If you have attended a Hobart Service School for this product, you may be qualified to perform all the procedures described in this manual.

This manual is not intended to be all encompassing. If you have not attended a Hobart Service School for this product, you should read, in its entirety, the repair procedure you wish to perform to determine if you have the necessary tools, instruments and skills required to perform the procedure. Procedures for which you do not have the necessary tools, instruments and skills should be performed by a trained Hobart Service Technician.

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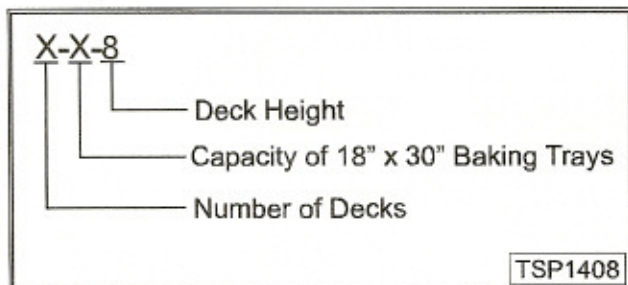
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GENERAL

INTRODUCTION

General

- This manual is for the Chandley compacta module baking ovens having 8" deck height and are factory configured up to five decks high.
- Explanation of model number



- A limited number of electric deck ovens were manufactured with a Analog Timer Control. This manual will have (Analog Timer Control) or (Digital Timer Control) after the heading when the information pertains to the individual control.

Initial Heating

- The oven reaches baking temperature and steam ready in approximately 45 minutes.

Steam System

- Available on Chandley compacta module baking ovens. The self contained steaming system drops water in hot steam compartment assembly. This process is timed to prevent flooding. Steam recovery will take approximately 15 minutes or less.

All of the information, illustrations and specifications contained in this manual are based on the latest product information available at the time of printing.

OPERATION

Refer to the Instruction Manual for specific operating instructions.

CLEANING

Refer to the Instruction Manual for specific cleaning instructions.

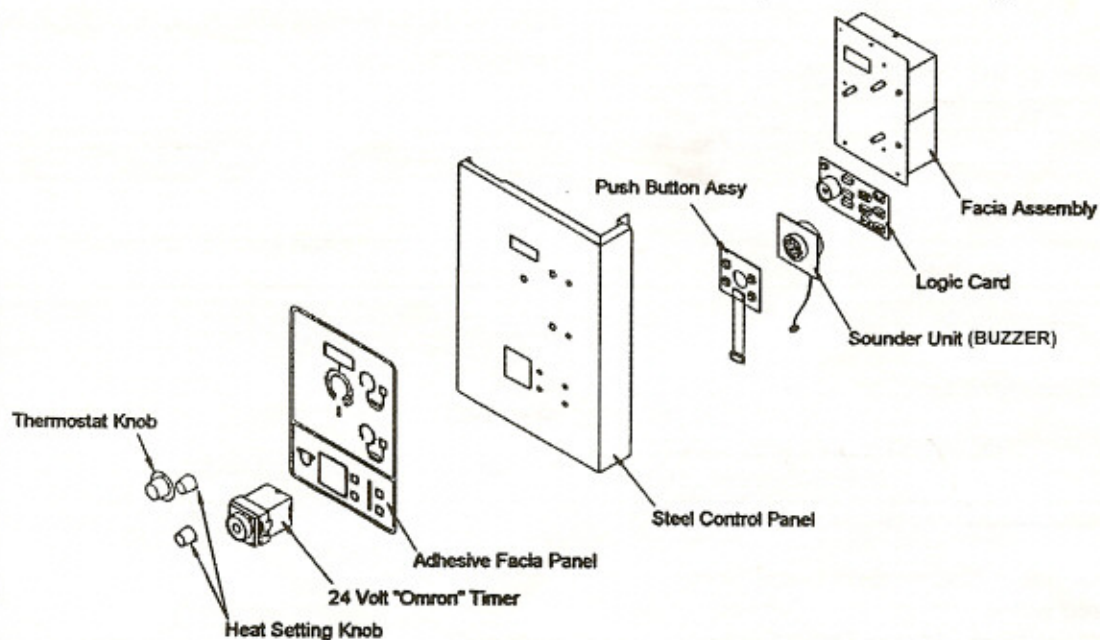
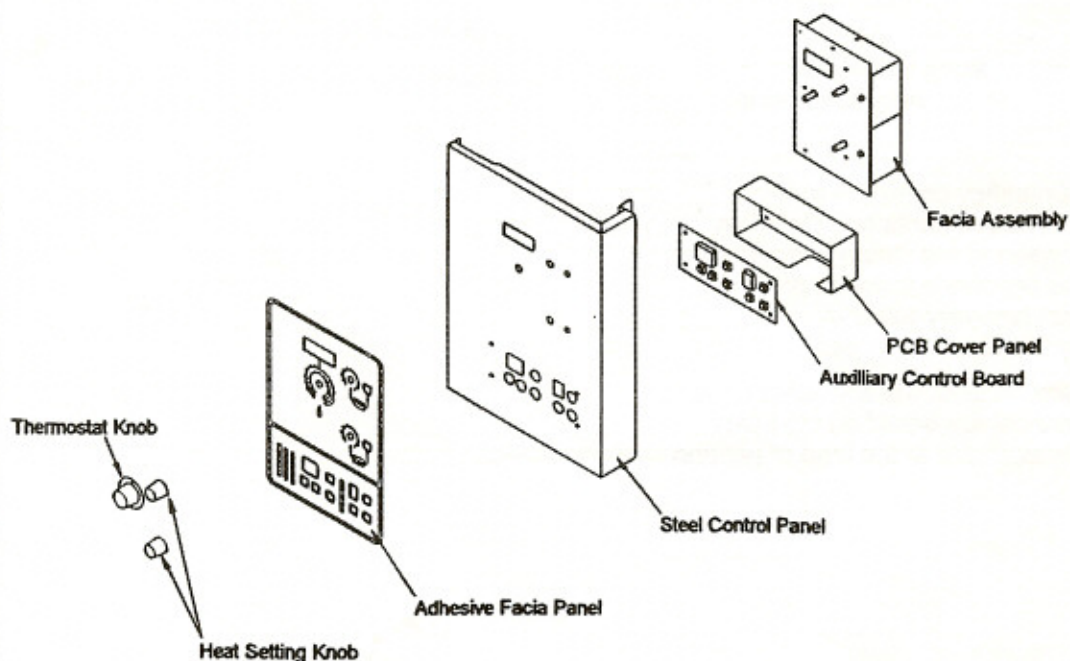
TOOLS

Standard

- Standard set of hand tools.
- Standard set of metric tools
- Volt/Ohm meter

Special

- Temperature tester (thermocouple type).
- Field service grounding kit Part #TL-84919
- Loctite #242 Part #520228
- Beaker Part #519927

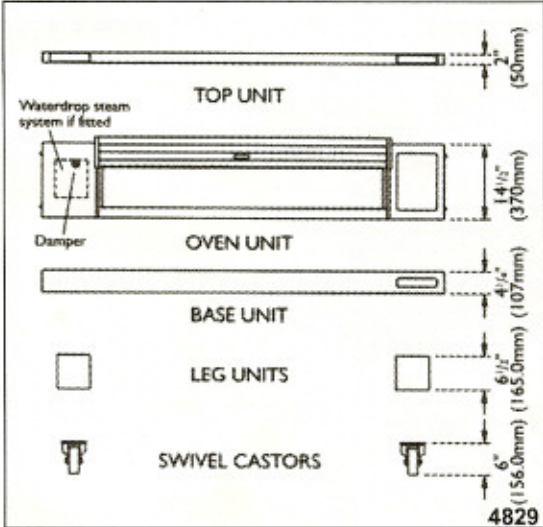
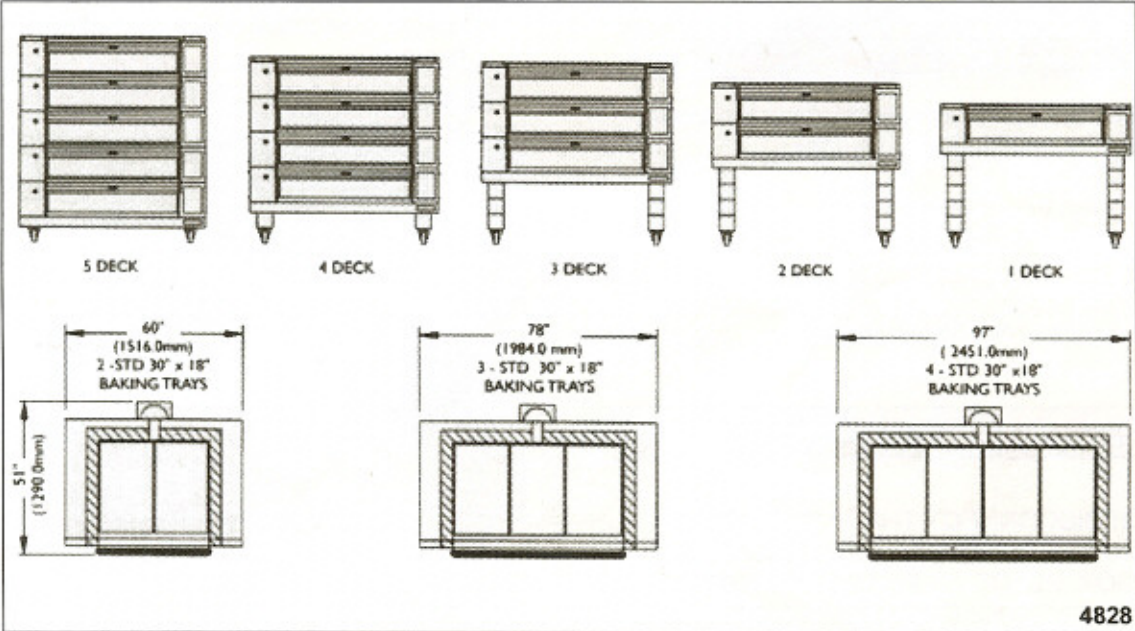
CONTROL LOCATION**Facia Panel Component Identification. (Analogue Timer).****Facia Panel Component Identification. (Digital Timer).**

4830

SPECIFICATIONS

AMP DRAW PER LINE									
MODEL	VOLTAGE	L1	L2	L3	MODEL	VOLTAGE	L1	L2	L3
1-2-8	208/60/3	18.32	18.32	18.32	2-3-8	208/60/3	50.52	50.52	50.52
	240/60/3	15.88	15.88	15.88		240/60/3	43.78	43.78	43.78
	480/60/3	7.94	7.94	7.94		480/60/3	21.89	21.89	21.89
2-2-8	208/60/3	36.64	36.64	36.64	1-4-8	208/60/3	28.31	28.31	28.31
	240/60/3	31.76	31.76	31.76		240/60/3	24.54	24.54	24.54
	480/60/3	15.88	15.88	15.88		480/60/3	12.27	12.27	12.27
1-3-8	208/60/3	25.26	25.26	25.26	2-4-8	208/60/3	56.63	56.63	56.63
	240/60/3	21.89	21.89	21.89		240/60/3	49.08	49.08	49.08
	480/60/3	10.95	10.95	10.95		480/60/3	24.54	24.54	24.54

Dimensions



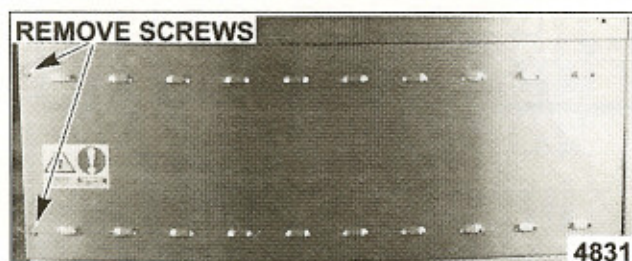
NOTE: Leg unit height will depend on number of decks stacked.

REMOVAL AND REPLACEMENT OF PARTS

SIDE PANEL

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING SERVICED.

1. Remove screws from rear of panel.



2. Pull the rear of the panel away from the oven.
3. Pull the panel toward the rear of the ovens.
4. Disconnect the ground wire from the frame of the oven.
5. Lower the panel to remove from the oven.
6. Reverse the procedure to install.

SIDE CONTROL COVER

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING SERVICED.

1. Remove the side panel as outlined under "SIDE PANEL".
2. Remove screws from side control cover.

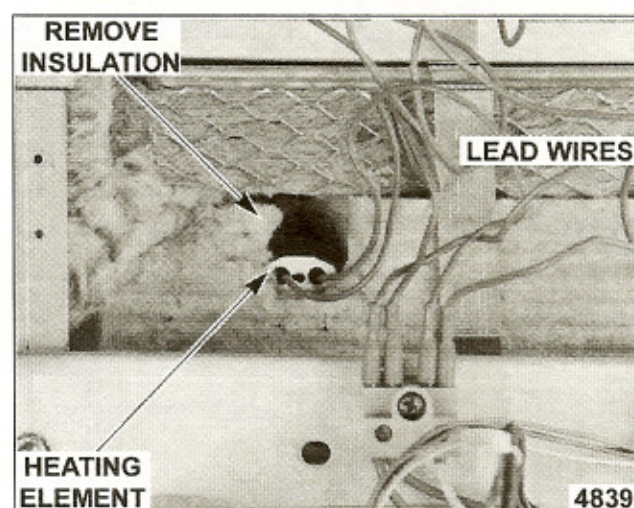


3. Pull the side control cover out away from the oven.
4. Reverse the procedure to install.

HEATER (OVEN)

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING SERVICED.

1. Position the oven so there is room to remove the heater (front control panel side).
2. Remove the side panel as outlined under "SIDE PANEL".
3. Disconnect the lead wires at the terminal block.
4. Remove enough insulation from around the heater to expose the screws that secure the heater.



5. Remove the screws and pull the heater assembly from the oven.
6. Reverse the procedure to install.

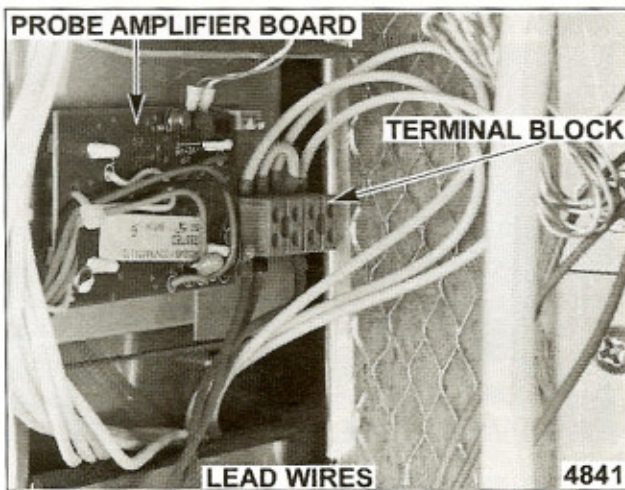
HEATER (STEAM)

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING SERVICED.

1. Position the oven so there is room to remove the heater (opposite front control panel side).
2. Remove the side panel as outlined under "SIDE PANEL".
3. Remove the access cover from the back panel.

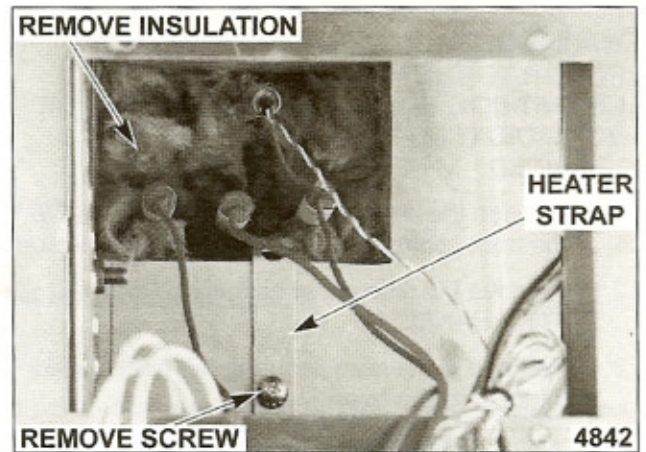


4. Disconnect the lead wires from the terminal block.



5. Remove the screw that secures the heater strap from the steam compartment.

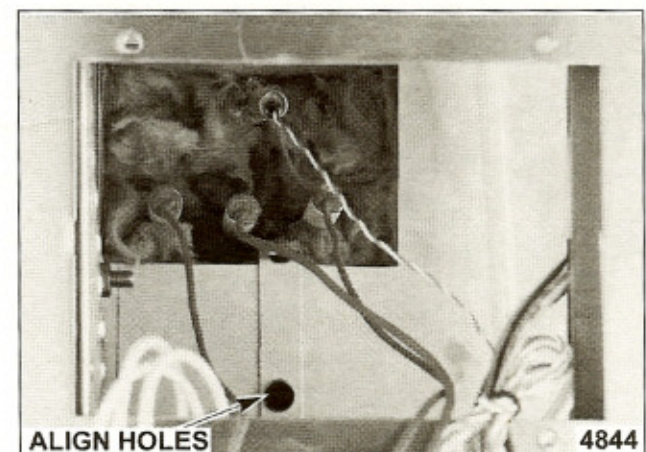
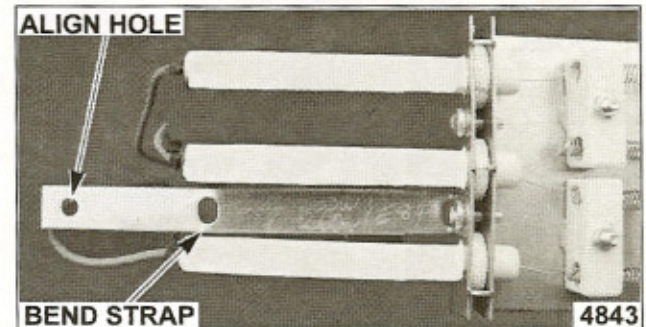
6. Remove the insulation from around the heater leads.



7. Remove the heater assembly from the steam compartment.

CAUTION: Be careful of the ceramic insulators, do not install heaters with cracked or broken insulators.

8. Install the replacement heater.
9. Bend the strap so the strap hole aligns with the mounting hole at the side of the steam compartment.

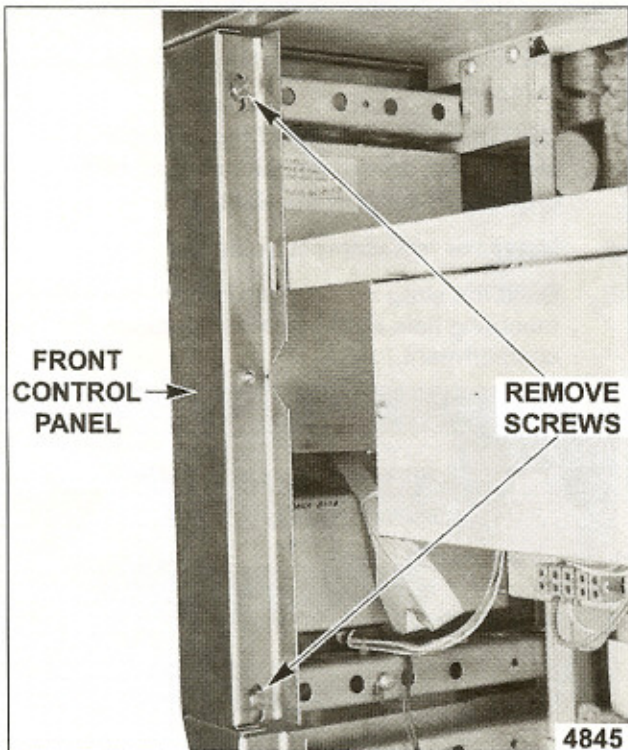


10. Reverse from step 6 to finish the installation.

FRONT CONTROL PANEL

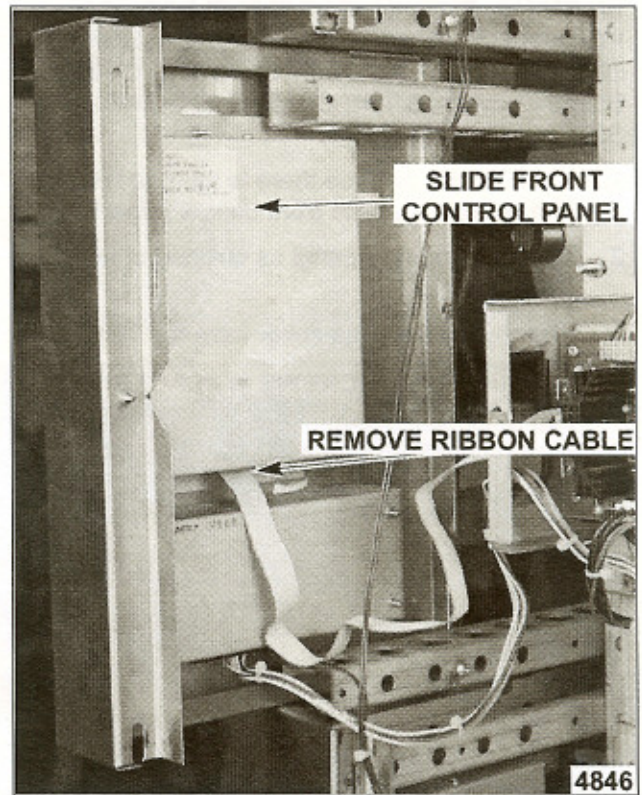
WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING SERVICED.

1. Position the oven so there is room to remove the front control panel (front control panel side).
2. Remove the side panel as outlined under "SIDE PANEL".
3. Remove the screws securing the front control panel from the oven.



4. Remove the ribbon cable connector from the fascia control.

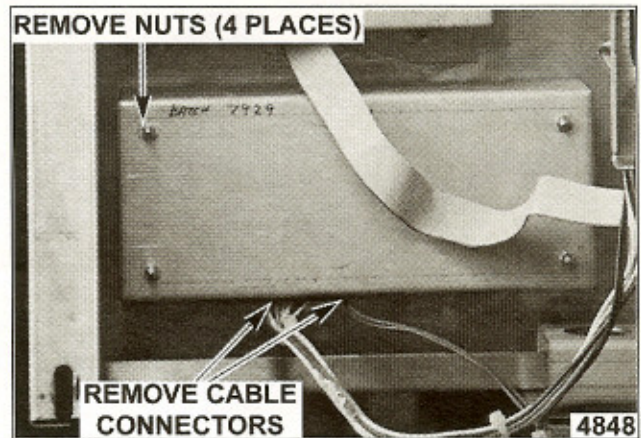
NOTE: Front control panel can be slid away from oven on the mounting tracks for ease of servicing controls.



5. Remove nuts securing PCB cover panel from the front control panel.

NOTE: Do not damage lead wires.

6. Remove cable connectors from the logic control.

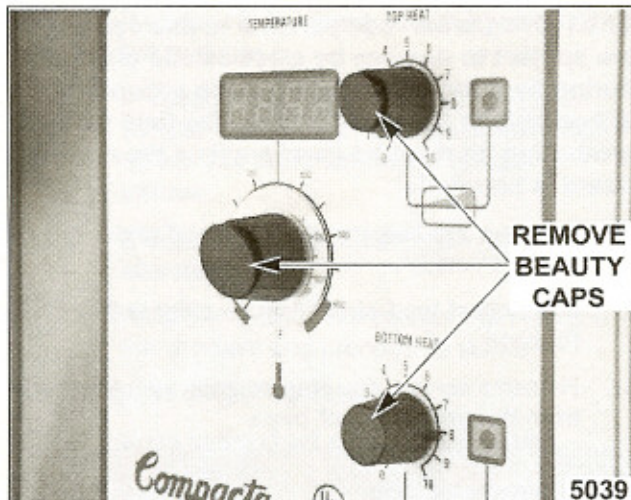


7. Reverse the procedure to install.

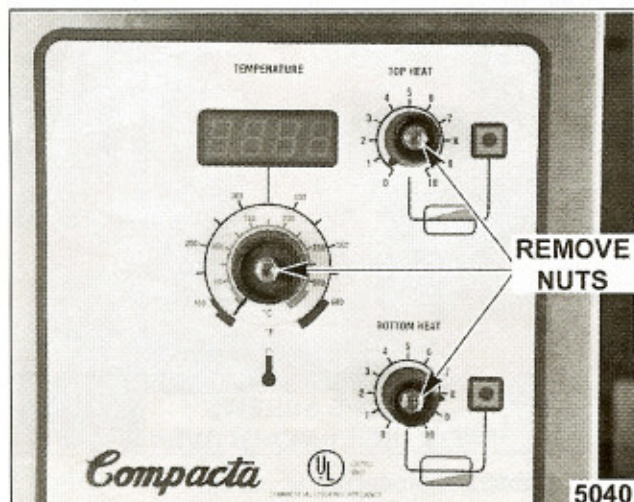
FACIA ASSEMBLY

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING SERVICED.

1. Remove the beauty caps from the end of the thermostat and heat setting knobs.

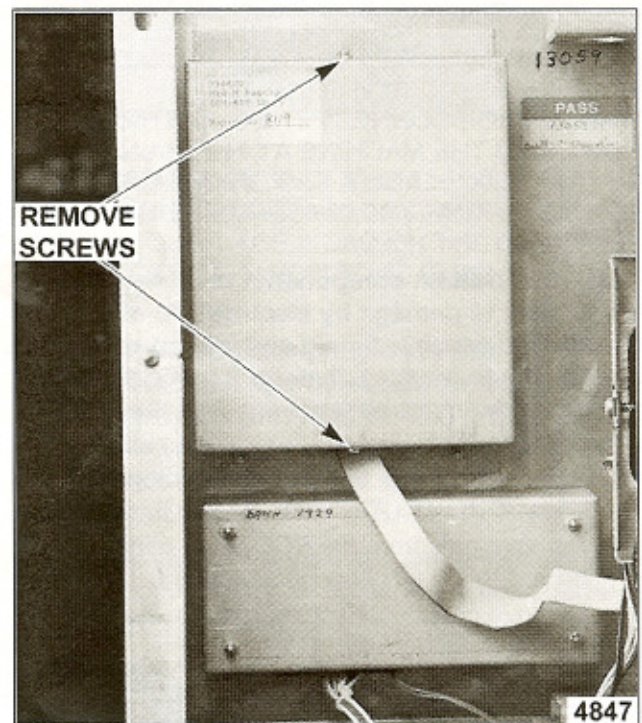


2. Remove the nuts securing the thermostat and heat setting knobs from the front control panel.



3. Remove the front control panel as outlined under "FRONT CONTROL PANEL".

4. Remove screws securing faica control cover from front control panel.



5. Disconnect all cable and wire connection from faica.
6. Remove nuts securing faica from front control panel.
7. Reverse the procedure to install.

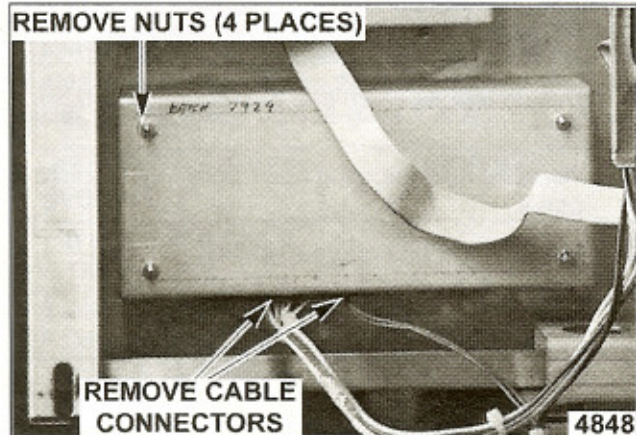
AUXILIARY CONTROL BOARD USED WITH DIGITAL TIMER CONTROL

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING SERVICED.

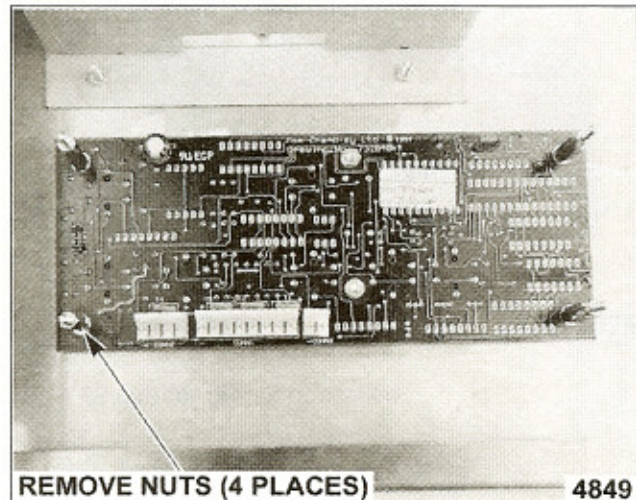
CAUTION: Certain components in this system are subject to damage by electrostatic discharge during field repairs. A field service grounding kit is available to prevent damage. The field service grounding kit must be used anytime the control board is handled.

1. Remove the front control panel as outlined under "FRONT CONTROL PANEL".
2. Remove nuts from the PCB cover panel to gain access to the auxiliary control board.
3. Remove cable connectors from the auxiliary control board.

REMOVE NUTS (4 PLACES)



4. Remove nuts securing the auxiliary control board from the front control panel.



5. Reverse the procedure to install.

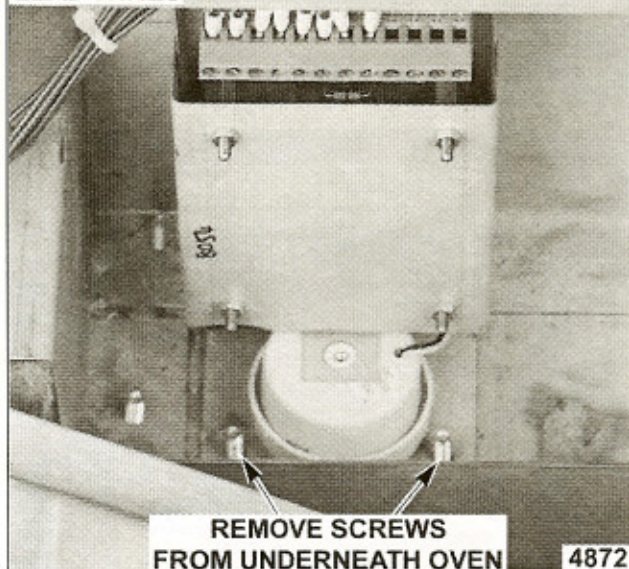
SOUNDER UNIT (BUZZER) USED WITH DIGITAL TIMER CONTROL

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING SERVICED.

CAUTION: Certain components in this system are subject to damage by electrostatic discharge during field repairs. A field service grounding kit is available to prevent damage. The field service grounding kit must be used anytime the control board is handled.

1. Remove the side panel as outlined under "SIDE PANEL".
2. Disconnect lead wires from sounder unit (buzzer).
3. Remove screws securing sounder unit (buzzer) from the under side of oven.

LEAD WIRES



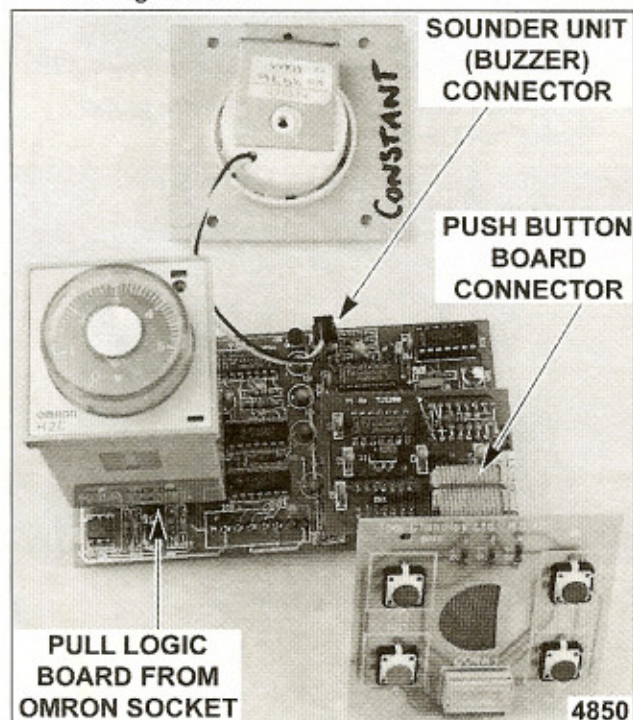
4. Reverse the procedure to install.

LOGIC, PUSH BUTTON & BUZZER CONTROL BOARDS USED WITH ANALOG TIMER CONTROL

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING SERVICED.

CAUTION: Certain components in this system are subject to damage by electrostatic discharge during field repairs. A field service grounding kit is available to prevent damage. The field service grounding kit must be used anytime the control board is handled.

1. Remove the front control panel as outlined under "FRONT CONTROL PANEL".
2. Remove nuts securing sounder unit (buzzer) from the front control panel.
3. Disconnect sounder unit (buzzer) cable connector from the logic board.
4. Remove nuts securing logic board from the front control panel and pull from the "Omron" timer socket.
5. Disconnect push button cable connector from the logic board.

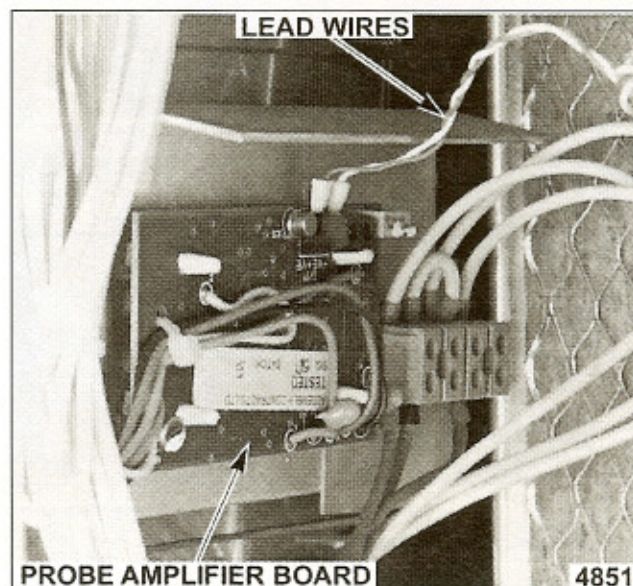


6. Remove nuts securing push button board from the front control panel.
7. Reverse the procedure to install.

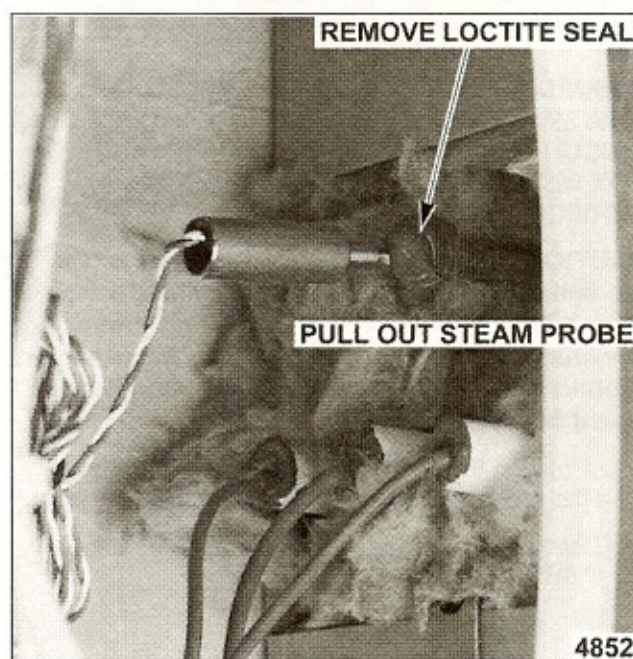
STEAM PROBE

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING SERVICED.

1. Position the oven so there is room to remove the steam probe (opposite front control panel side).
2. Remove the side panel as outlined under "SIDE PANEL". Disconnect lead wires from probe amplifier board.

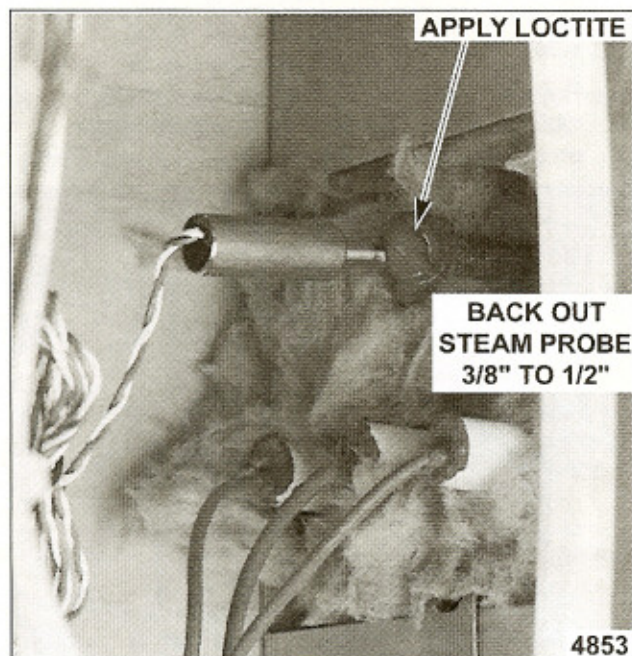


3. Remove the loctite seal from around the probe.
 - A. Pull probe out from the steam generator.



4. Install the replacement probe fully into the steam generator.
5. Back the probe out from the steam generator approximately $\frac{3}{8}$ " to $\frac{1}{2}$ ".
 - A. Apply a bead of "Loctite #242" around the probe.

NOTE: Allow loctite to thoroughly dry before placing oven back into operation.



6. Reconnect lead wires.
7. Install side panel.

PROBE AMPLIFIER BOARD

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING SERVICED.

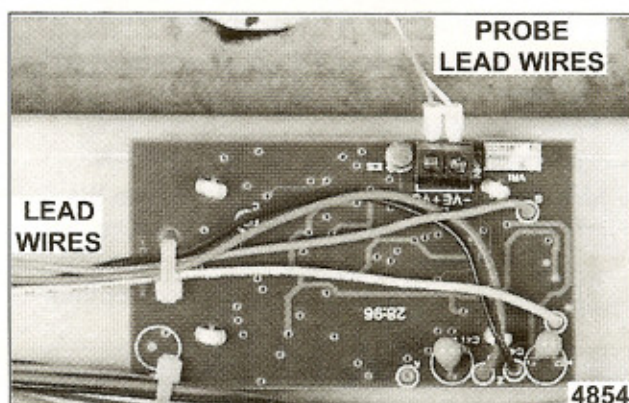
CAUTION: Certain components in this system are subject to damage by electrostatic discharge during field repairs. A field service grounding kit is available to prevent damage. The field service grounding kit must be used anytime the control board is handled.

1. Position the oven so there is room to remove the probe amp board (front control panel side).
2. Remove the side panel as outlined under "SIDE PANEL".

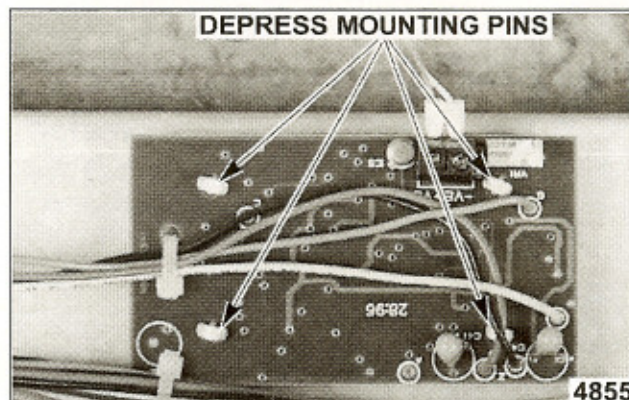
3. Remove the screws securing the side control cover from the oven.



4. Disconnect lead wire connector and probe wires.



5. Depress mounting pins and remove probe board from oven.

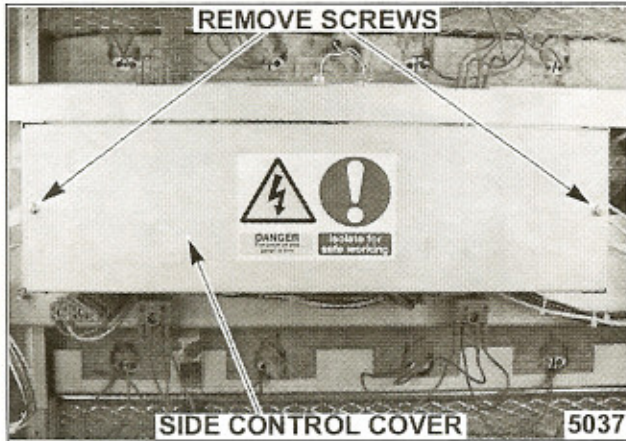


6. Reverse the procedure to install.

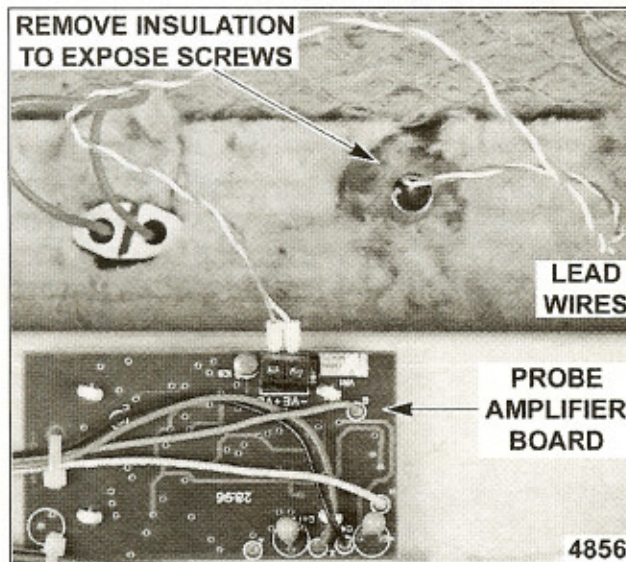
TEMPERATURE PROBE

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING SERVICED.

1. Position the oven so there is room to remove the temperature probe (front control panel side).
2. Remove the side panel as outlined under "SIDE PANEL".
3. Remove the screws securing the side control cover from the oven.



4. Disconnect lead wire from the probe amplifier board.
5. Remove enough insulation from around the thermocouple to expose the screws that secure it.

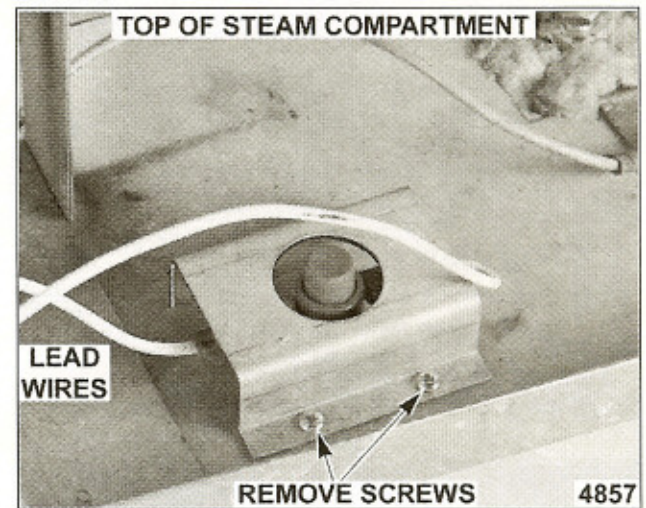


6. Remove the screws securing thermocouple from the oven.
7. Reverse the procedure to install.

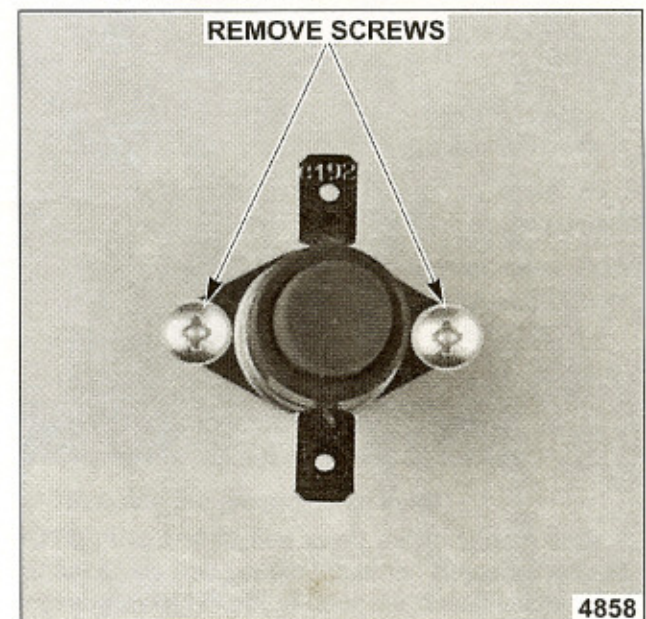
STEAM GENERATOR HI-LIMIT (MANUAL RESET)

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING SERVICED.

1. Position the oven so there is room to remove the hi-limit (opposite front control panel side).
2. Remove the side panel as outlined under "SIDE PANEL".
3. Remove screws securing hi-limit's protection cover from the steam compartment.

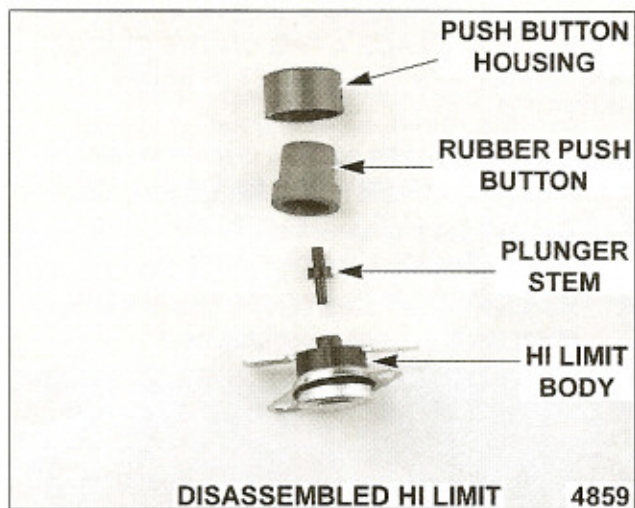


4. Disconnect the lead wires from the hi limit.
5. Remove screws securing hi-limit from the steam compartment.

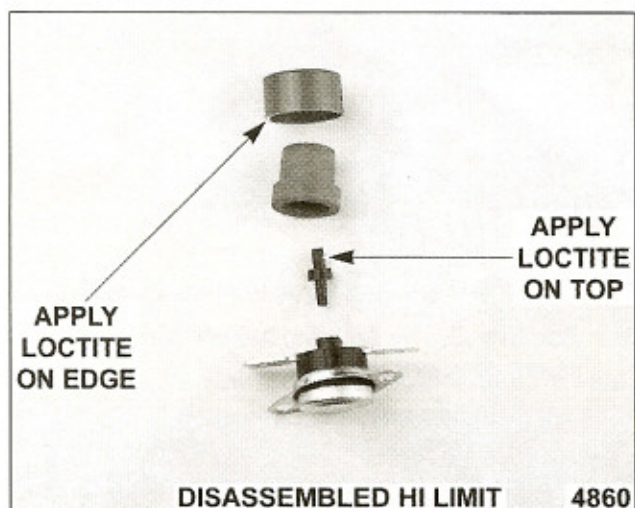


6. Disassemble replacement hi-limit push button assembly.

CAUTION: Be careful not to lose or damage replacement hi-limit assembly parts during disassembling and reassembling.



- A. Apply a small bead of "Loctite #242" on the top of the plunger stem and also around bottom edge of the push button housing.



- B. Reassemble hi-limit.

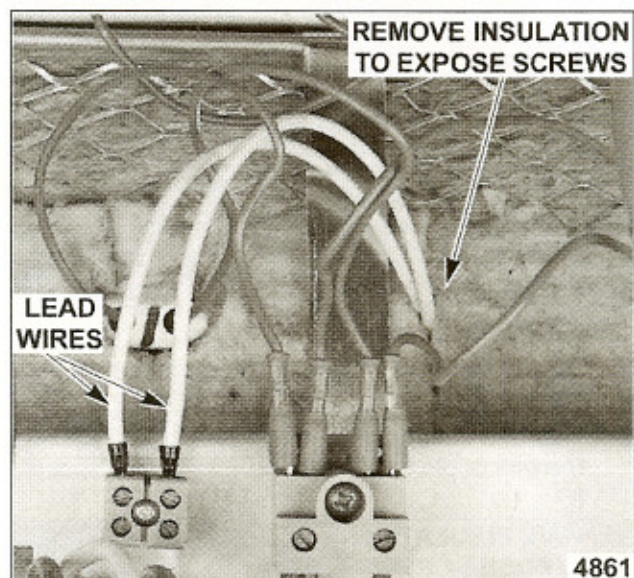
NOTE: Allow loctite to thoroughly dry before actuating the hi-limit's manual reset button.

7. Reverse from step 4 to finish the installation.

OVEN COMPARTMENT HI-LIMIT (AUTO RESET)

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING SERVICED.

1. Position the oven so there is room to remove the hi-limit (front control panel side).
2. Remove the side panel as outlined under "SIDE PANEL".
3. Disconnect the hi-limit lead wires.
4. Remove enough insulation from around the hi-limit to expose the screws that secure the hi-limit.

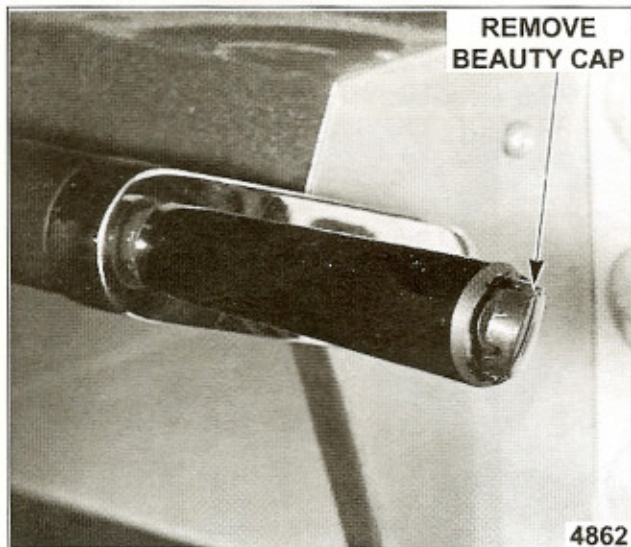


5. Remove the screws securing hi-limit from the oven and remove hi-limit.
6. Reverse the procedure to install.

DOOR

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING SERVICED.

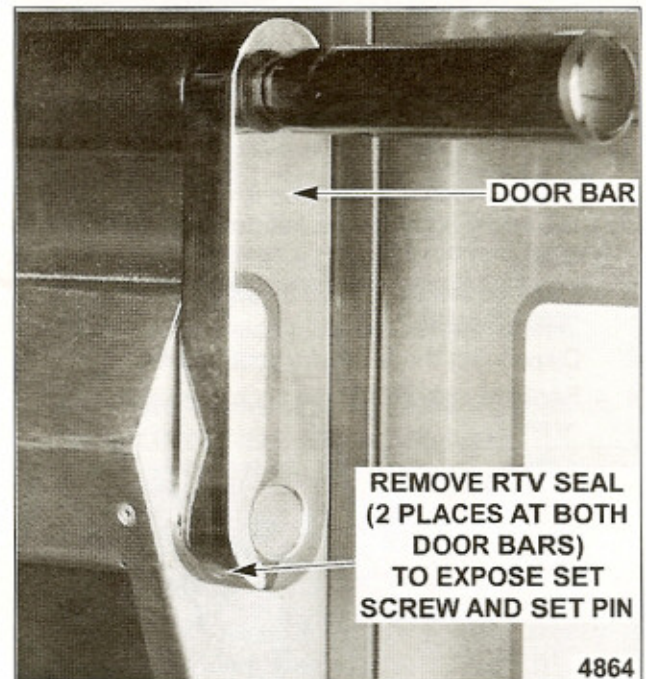
1. Remove the beauty cap from the end of the door handle by prying.



2. Remove the screws at both ends of door handle.



3. Remove the R.T.V. seal on both door bars to expose set screws and set pins.



- A. Remove the set screws from both door bars.
- B. Knock out set pins from both door bars.
4. Push door rod completely out away from the door assembly and remove the door from the oven compartment.

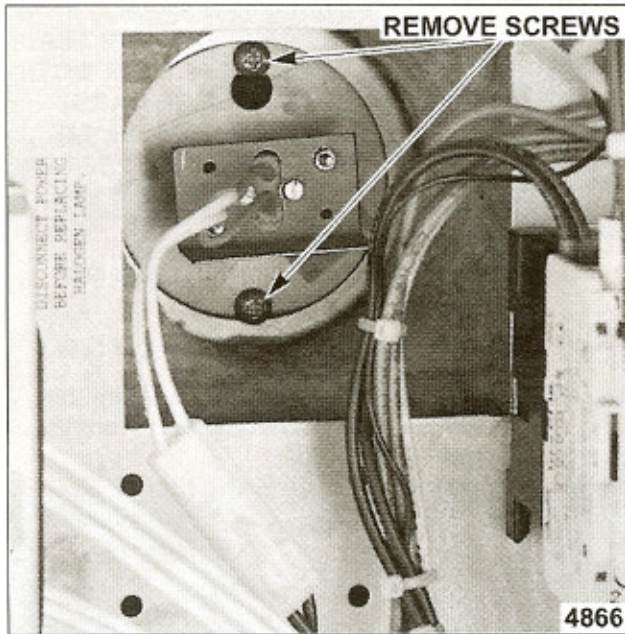


5. Reverse the procedure to install.
- NOTE:** After installation apply loctite at both door bar set screw and set pin locations to ensure screws or pins will not fall out of door bar during subsequent services.

CAVITY LIGHT & SOCKET

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING SERVICED.

1. Position the oven so there is room to remove the cavity light and socket (front control panel side).
2. Remove the side panel as outlined under "SIDE PANEL".
3. Disconnect the lead wire connector.
4. Remove screws securing light socket from the oven.



CAUTION: Do not touch the bulb with bare skin, use of a cloth or glove recommended when handling the bulb.

5. Pull light and socket from the oven cavity.

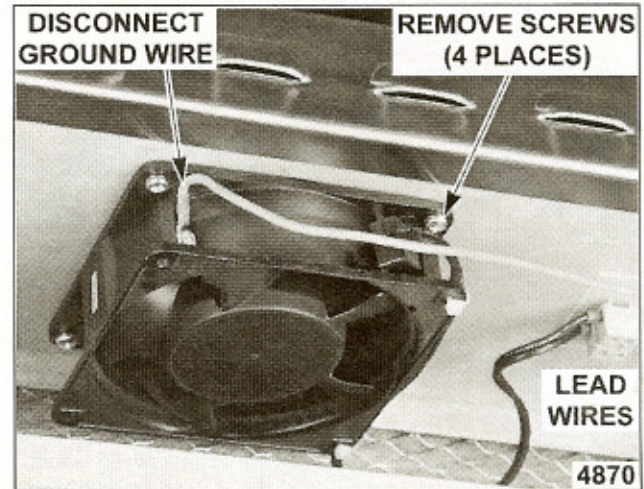
NOTE: Replacement bulb Halogen 20 watt @ 12 volt.

6. Reverse the procedure to install.

FAN-CONTROL COMPARTMENT

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING SERVICED.

1. Position the oven so there is room to remove the fan-control (front control panel side).
2. Remove the side panel as outlined under "SIDE PANEL".
3. Disconnect the ground and lead wires.
4. Remove screws securing fan from the oven.



NOTE: Use of offset screwdriver helpful to remove the fan mounting screws.

5. Reverse the procedure to install.

SERVICE PROCEDURES AND ADJUSTMENTS

WARNING: CERTAIN PROCEDURES IN THIS SECTION REQUIRE ELECTRICAL TEST OR MEASUREMENTS WHILE THE POWER IS APPLIED TO THE MACHINE. EXERCISE EXTREME CAUTION AT ALL TIMES. IF TEST POINTS ARE NOT EASILY ACCESSIBLE, DISCONNECT POWER, ATTACH TEST EQUIPMENT AND REAPPLY POWER TO TEST.

TEMPERATURE PROBE TEST "J" TYPE

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING SERVICED.

1. Disconnect the temperature probe lead wires.
2. Check the resistance across the probe leads.
 - A. If there is a millivolt reading as per the chart below $\pm 10\%$ the probe is good, if not replace the probe.

PROBE TEMP.		MILLIVOLT READING	PROBE TEMP.		MILLIVOLT READING
Deg. F.	Deg. C.		Deg. F.	Deg. C.	
41	5	0.253	284	140	7.459
50	10	0.507	302	150	8.01
68	20	1.019	320	160	8.562
86	30	1.537	338	170	9.115
104	40	2.059	356	180	9.669
122	50	2.585	374	190	10.224
140	60	3.116	392	200	10.779
158	70	3.65	410	210	11.334
176	80	4.187	428	220	11.889
194	90	4.726	446	230	12.445
212	100	5.269	464	240	13.00
230	110	5.814	482	250	13.555
248	120	6.36	500	260	14.11
266	130	6.909	518	270	14.665

WATER FLOW MEASUREMENT

1. Adjust the ovens water regulator to 15p.s.i.g. static pressure.
2. Shut off ovens main water shutoff valve before proceeding.
3. Disconnect a water line downstream from the flow valve.
 - A. Place a beaker under the disconnected water line to catch water for taking a water flow measurement.
4. Open the ovens main water shutoff valve for 12 seconds to take a water measurement.

NOTE: Water captured in the beaker should measure approximately 10 oz.. If measurement not adequate, adjust the flow valve to achieve this measurement.

5. Reconnect water line and put oven into operation and check steam ready or recovery time (15 minutes max.).

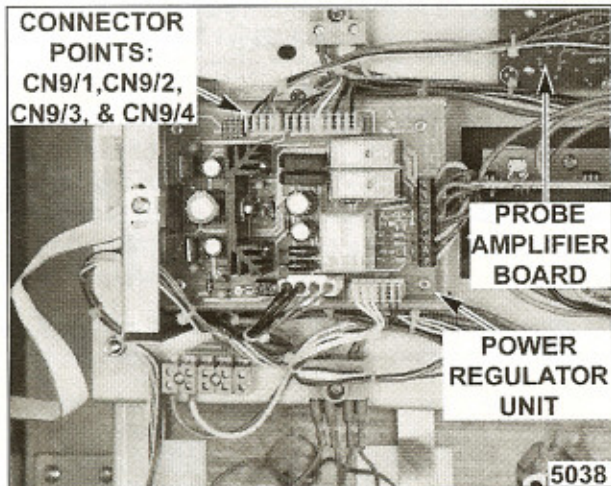
NOTE: Steam recovery time should be approximately 12 minutes (minimum) to 15 minutes (maximum). If recovery time is greater than or less than stated times, make further adjustment to the flow valve.

PROBE AMPLIFIER BOARD TEST

WARNING: THE FOLLOWING STEPS REQUIRE POWER TO BE APPLIED TO THE UNIT DURING THE TEST. USE EXTREME CAUTION AT ALL TIMES.

1. Test input voltage for 15 VDC to probe amplifier board across connectors CN9/3 & CN9/4.
2. Test output voltage for 10mv per 1 deg. C \pm 10% oven compartment temperature across connectors CN9/1 & CN9/2.

CONNECTOR
POINTS:
CN9/1,CN9/2,
CN9/3, & CN9/4



TRANSFORMER TEST

WARNING: THE FOLLOWING STEPS REQUIRE POWER TO BE APPLIED TO THE UNIT DURING THE TEST. USE EXTREME CAUTION AT ALL TIMES.

1. Test the (primary windings) input voltage and verify it against the data plate voltage.
2. Test the (secondary windings) output voltage for 24VAC.

HEATER TEST (OVEN)

WARNING: THE FOLLOWING STEPS REQUIRE POWER TO BE APPLIED TO THE UNIT DURING THE TEST. USE EXTREME CAUTION AT ALL TIMES.

1. Measure the voltage at the heating element terminals and verify it against the data plate voltage.
 - A. If voltage is incorrect, find the source of the problem.
 - B. If voltage is correct, check current draw (amps) through the heating element lead wires. **See table below for proper values.**
 - C. If current draw is correct then heating element is ok.
 - D. If current draw is not correct then replace the element and proceed to step 2.
2. Check for proper operation.

NOTE: Values in the chart are nominal values.

NOTE: TH1 & BH1 heating elements intentionally have a higher amp draw for better recovery of oven heat after opening and closing of the oven door.

208/240Volt	TH1	TH2	TH3
Amp draw per heater	4.2 amp	4.0 amp	4.0 amp
208/240Volt	BH1	BH2	BH3
Amp draw per heater	4.2 amp	4.0 amp	4.0 amp
480Volt	TH1	TH2	TH3
Amp draw per heater	3.1 amp	2.2 amp	2.2 amp
480Volt	BH1	BH2	BH3
Amp draw per heater	3.1 amp	2.2 amp	2.2 amp

HEATER TEST (STEAM)

WARNING: THE FOLLOWING STEPS REQUIRE POWER TO BE APPLIED TO THE UNIT DURING THE TEST. USE EXTREME CAUTION AT ALL TIMES.

1. Measure voltage at the heating element terminals and verify against the data plate voltage.
 - A. If voltage is incorrect, find the source of the problem.
 - B. If voltage is correct, check current draw (amps) through the heating element lead wires. **See table below for proper values.**
 - C. If current draw is correct then heating element is ok.
 - D. If current draw is not correct then replace the element and proceed to step 2.
2. Check for proper operation.

NOTE: Values in the chart are nominal values.

208/240Volt

Amp draw per heater	2.5
----------------------------	-----

480Volt

Amp draw per heater	2.0
----------------------------	-----

**LOGIC CONTROL
JUMPER SETTINGS
USED WITH ANALOG TIMER
CONTROL**

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING SERVICED.

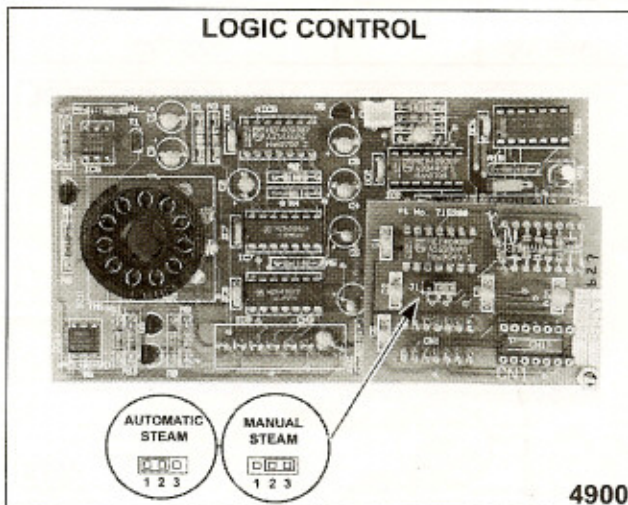
CAUTION: Certain components in this system are subject to damage by electrostatic discharge during field repairs. A field service grounding kit is available to prevent damage. The field service grounding kit must be used anytime the control board is handled.

1. Check the auxiliary control jumpers are set to the proper setting as shown in the chart below.

STEAM SYSTEM	JUMPER	SETTING
Automatic Steam	J1	Jumper pins 1 & 2 together
Manual Steam	J1	Jumper pins 2 & 3 together

Automatic Steam: Steam turns on automatically when oven is powered up.

Manual Steam: Steam must be manually powered on after oven is powered up.



2. Check for proper operation.

AUXILIARY CONTROL JUMPER SETTINGS USED WITH DIGITAL TIMER CONTROL

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING SERVICED.

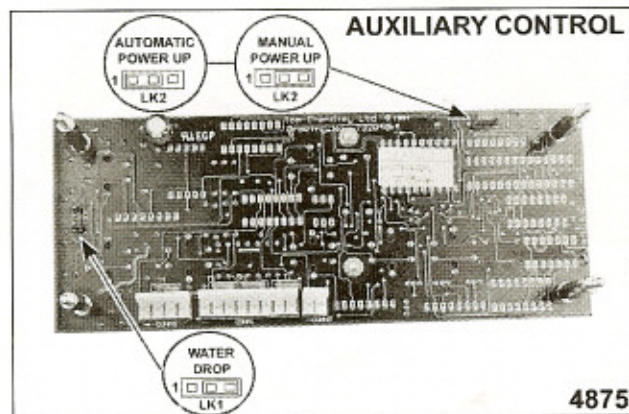
CAUTION: Certain components in this system are subject to damage by electrostatic discharge during field repairs. A field service grounding kit is available to prevent damage. The field service grounding kit must be used anytime the control board is handled.

1. Check the auxiliary control jumpers are set to the proper setting as shown in the chart below.

CAUTION: The control boards for steam capable and timer only applications are not interchangeable.

CAUTION: In water drop application jumper LK1 must not be fitted across pins 1 & 2.

STEAM SYSTEM	JUMPER	SETTING
Water Drop	LK1	Jumper pins 2 & 3 together
Automatic Power Up	LK2	Jumper pins 1 & 2 together
Manual Power Up	LK2	Jumper pins 2 & 3 together



2. Check for proper operation.

FACIA CONTROL FUNCTION SWITCH SETTINGS

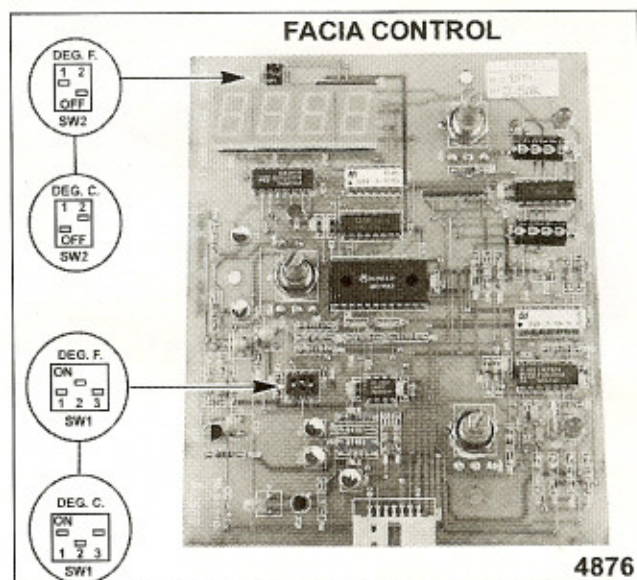
WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING SERVICED.

CAUTION: Certain components in this system are subject to damage by electrostatic discharge during field repairs. A field service grounding kit is available to prevent damage. The field service grounding kit must be used anytime the control board is handled.

1. Check the facia control function switches are set to the proper settings for deg. F. or deg. C. as shown in the chart below.

NOTE: Switches SW1 and SW2 must both be set to match for deg. F. or deg. C. setting.

SWITCH	SETTING		
SW1 °F.	1	2	3
	OFF	ON	OFF
SW1 °C.	1	2	3
	ON	OFF	ON
SW2 °F.	1	2	
	ON	OFF	
SW2 °C.	1	2	
	OFF	ON	

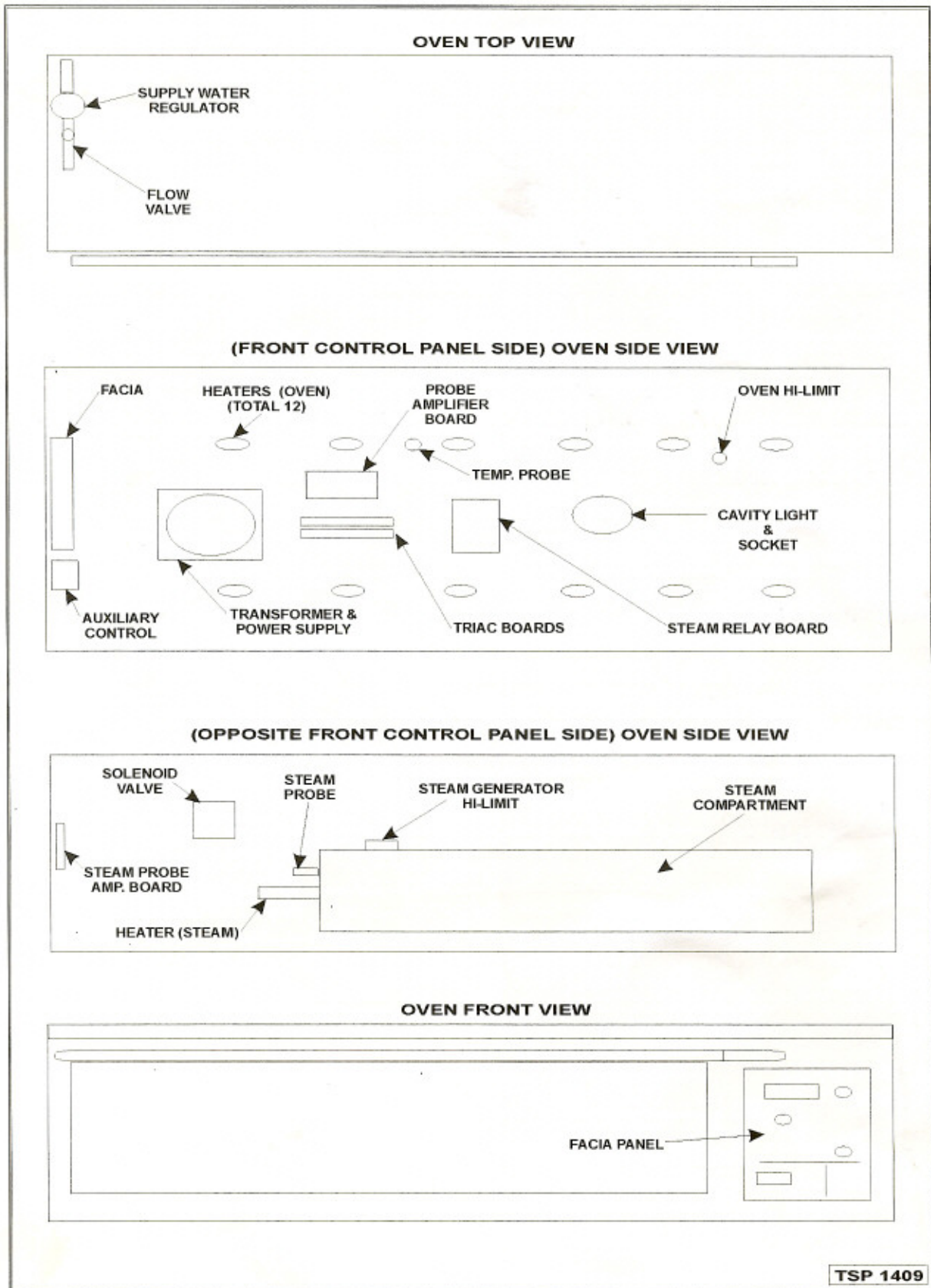


2. Check for proper operation.

ELECTRICAL OPERATION

COMPONENT FUNCTION

Facia	Controls operation of the: A. Oven temperature. B. Percentage of power to heating elements.
Auxiliary Board	Controls operation of the: A. Bake timer. B. Steam generator heating elements. C. Water solenoid valve.
Logic Board	Controls operation of the bake timer.
Push Button Board	Allows operator to activate and indicate operation of the steam generator and timer.
Power Supply	Provides 24vac to all electronic controls.
Probe Amplifier	Monitors the oven baking temperature.
Steam Board	Monitors the steam generator temperature.
Steam Relay Board	Cycles power to the steam generator and the solenoid valve.
Triac Board	Provides power to cycle the oven top and bottom heating elements.
Solenoid Valve	Provides supply water to the steam generator.
Heater (Oven)	Provides heat to the oven baking compartment.
Heater (Steam)	Provides heat to the steam generator.
Control Fuses	Provide current protection for the controls.
Main Fuses	Provide current protection for the oven.
Sound Card (Buzzer)	Indicates elapsed bake time.
Transformer	Steps down line to 24vac for the power supply.

COMPONENT LOCATION

SEQUENCE OF OPERATION

Pre-Heat

1. Conditions
 - A. Control "off".
 - B. Unit connected to proper voltage.
 - C. High limits closed.
 - D. 24 volts to the controls.
 - E. Set top and bottom heat knobs to "10" highest setting.

NOTE: Top and bottom heat settings should be considered as percent run time (on and off cycling), 10 being equivalent to 100% heat input run time and 1 being equivalent to 10% heat input run time.

2. Thermostat knob turned "on"
 - A. Oven light illuminates oven compartment.
 - B. Set thermostat to desired temperature setting.
 - C. Control energizes the heaters.
3. Control cycles on set temperature until control is turned off or a bake cycle is initiated.

NOTE: Top and bottom heat indicators will stop flashing when the desired temperature is reached.

Bake Mode

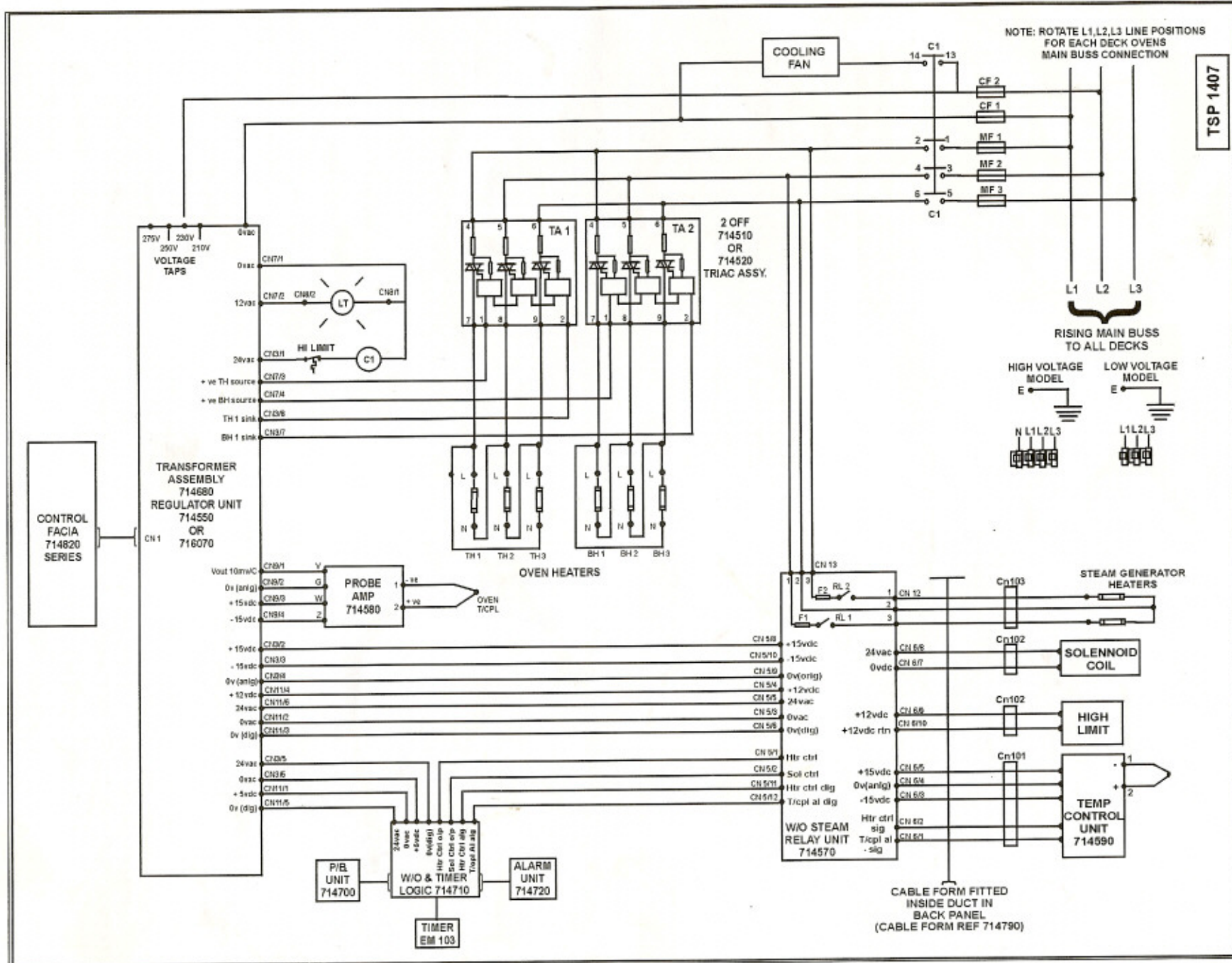
4. Oven has been pre-heated to desired temperature.
5. A bake cycle is initiated.
6. Oven cycles on set temperature. Top and bottom heat zones will cycle on the percentage of heat input set.
7. Time expires and alarm sounds.
8. Silence the alarm by pressing the stop/reset keypad.

Steam Mode

1. Time is entered into the bake timer and steam timer.
2. Oven pre-heated.
3. Push steam system "on" keypad.
 - A. Steam relay board is energized to supply power to the steam generator heating element. (Steam ready in approximately 45 minutes).
 - 1) Steam generator system recovers and ready in approximately 12 to 15 minutes.
4. Push the "steam" keypad.
 - A. The steam relay board is energized to open the solenoid valve (at the #9 steam setting).
 - 1) Solenoid valve is open approximately for 12 seconds dropping water into steam generator which produces steam in the oven compartment.
5. Steam time expires.
 - A. Steam generator heating element re-energized.
6. Oven operates in the bake mode until time expires or control setting is changed.

WIRING DIAGRAMS

208/60/1, 240/60/3, 480/60/3



TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSES
Ovens will not turn on (All decks)	1. Check supply voltage.
Oven will not turn on (One or multiple decks)	1. Check supply voltage (if single deck). 2. Control fuse(s) open. 3. Transformer inoperative. 4. Power supply board malfunction. 5. Control malfunction.
Control turns on but oven does not heat.	1. Main fuse(s) open. 2. High limit open. 3. Contactor inoperative. 4. Power supply malfunction. 5. Triac board fuses open. 6. Triac board inoperative. 7. Thermocouple inoperative. 8. Control malfunction.
Oven slow to heat.	1. Damper open. 2. Oven directly vented or too close to power vent. 3. Door open for extended time. 4. Percentage of power too low (top/bottom settings). 5. Supply voltage below 10% of rating. 6. Transformer not tapped to proper supply voltage terminal. 7. Triac board fuse open. 8. Triac board malfunction. 9. Heater inoperative. 10. Bottom heaters insulated with crumbs. 11. Incorrect voltage rating of heaters. 12. Probe malfunction.
Product cooks slow in a specific area of the oven. (I.e. front bottom)	1. Triac board fuse open. 2. Triac board malfunction. 3. Heater inoperative. 4. Bottom heaters insulated with crumbs. 5. Products loaded incorrectly (heat flash).
Product burns	1. Triac board malfunction. 2. Probe malfunction. 3. Control setting incorrect. 4. Control malfunction. 5. Products loaded incorrectly (heat flash).
Product burns in a specific area. (I.e. top middle)	1. Triac board malfunction. 2. Products loaded incorrectly (heat flash). 3. Ceramic deck plates broken or cracked. 4. Bottom heaters insulated with crumbs.
Oven temperature higher than set temperature.	1. Probe malfunction. 2. Probe amplifier. 3. Control malfunction.
No steam - Steam ready light ON.	1. Main water shut off. 2. Filter system inoperative. 3. Supply pressure regulator inoperative. 4. Deck water valve shut off. 5. Deck pressure regulator inoperative. 6. Flow valve malfunction. 7. Solenoid valve malfunction.

SYMPTOM	POSSIBLE CAUSES
No steam - Steam ready light OFF.	<ol style="list-style-type: none">1. High limit open.2. Heaters inoperative3. Steam relay board malfunction.4. Steam compartment probe malfunction.5. Steam probe amplifier malfunction.6. Steam logic board malfunction.
Too little steam	<ol style="list-style-type: none">1. Steam time set too low.2. Not enough recovery time between bakes.3. Restrictions in water supply components.4. Water supply components not adjusted properly.5. Heater malfunction.6. Steam probe amplifier malfunction.7. Steam relay board malfunction.
Too much steam	<ol style="list-style-type: none">1. Too much water entering the steam compartment.
Steam recovery time too long	<p>Oven directly vented or too close to power vent.</p> <ol style="list-style-type: none">1. Too much water entering the steam compartment.2. Solenoid valve malfunction.3. Steam relay board malfunction.4. Heater malfunction.
Vent does not operate.	<ol style="list-style-type: none">1. Mechanical malfunction.

CONNECTOR VOLTAGE MEASUREMENTS - New Style P.S.U.

CN1 Ribbon Connection		CN2 8-Way IDC Connector on PSU		CN3 4-Way IDC Connector On PSU Board		CN4 8-Way IDC Connector on Logic Card/Aux PCB		CN5 12-Way IDC Connector on Steam Relay Board		CN6 6-Way IDC Connector on PSU	
		Right to Left		Right to Left		Left to Right		Top to Bottom		Left to Right	
PIN #1	+15 Volts	PIN #1 Black	24 VAC to Contactor Coil (Ref: CN3/4)	PIN #1 Yellow	Amplified Voltage to Fascia 10mV/Deg C	PIN #1 Red	+5 Volts	PIN #1 Blue	Elements Heating Signal +5V = On 0V = Off	PIN #1 White	"0" Volt Reference to Logic Board
PIN #2	-15 Volts	PIN #2 Red	+15 Volts	PIN #2 Green	"0" Volt Reference	PIN #2 White	0" Volt Reference (Digital)	PIN #2 White	Solenoid Output Signal +5V = On 0V = Off	PIN #2 White	"0" Volt Reference to Steam Relay Board Solenoid
PIN #3	Temp Input 10mV/Deg C	PIN #3 Black	-15 Volts (Ref: CN3/5)	PIN #3 Red	+15 Volts	PIN #3 Orange	Call for Heat Signal +5V = On 0V = Off	PIN #3 White	"0" Volt Reference (Digital)	PIN #3 White	"0" Volt to Solenoid via Steam Relay Board
PIN #4	(0 Volts) Analog Ground	PIN #4 Green	"0" Volt Reference (Analog)	PIN #4 Black	-15 Volts	PIN #4 Yellow	Fault Alarm Signal +5V = Healthy 0V = Fault	PIN #4 Red	+12 Volts	PIN #4 Red	+12 Volt Supply via Hi-Limit to Steam Relays
PIN #5	+5 Volts	PIN #5 White	"0" Volt Reference (Digital)			PIN #5 White	Solenoid Output Signal +5V = On 0V = Off	PIN #5 Purple	24 VAC for Solenoid	PIN #5 Purple	24 VAC
PIN #6	-5 Volts	PIN #6 Red	+5 Volts			PIN #6 Blue	Elements Heating Signal +5V = On 0V = Off	PIN #6 White	0 VAC (Reference for PIN #5)	PIN #6 Purple	24 VAC to Solenoid via RL3
PIN #7	(0 Volts) Digital Ground	PIN #7 Black	Bottom Heat +1 / +24 Volts Switching			PIN #7 Purple	24 VAC (Ref: CN4/6)	PIN #7	NOT USED		
PIN #8	-5 Volts	PIN #8 Black	Top Heat +1 / +24 Volts Switching			PIN #8 White	0 VAC (Reference for CN4/7)	PIN #8 Red	+15 Volts		
PIN #9	10.8 VAC Supply							PIN #9 Green	"0" Volt Reference (Analog)		
PIN #10	10.8 VAC Switched Return to Power Light							PIN #10 Black	-15 Volts		
PIN #11	Contactor Enable Signal							PIN #11 Orange	Call for Heat Signal +5V = On 0V = Off		
PIN #12	NOT USED							PIN #12 Yellow	Fault Alarm Signal +5V = Healthy 0V = Fault		
PIN #13	Bottom Heat Control +1 / +24 Volts										
PIN #14	Top Heat Control +1 / +24 Volts										

"NEW STYLE" POWER SUPPLY UNIT

- NOTE: There are two each #5 & #6 connectors. Identify as to location (PSU Assembly or Steam Relay Board)
- Wire colors noted are subject to change.
 - CN1 is a ribbon cable connection and has no access for voltage measurements at this time.
 - "Left to Right" indicates PIN #1 is on the left looking straight in.
"Right to Left" indicates PIN #1 is on the right looking straight in.
"Top to Bottom" indicates PIN #1 is on the top looking straight in.
"Bottom to Top" indicates PIN #1 is on the bottom looking straight in.

CONNECTOR VOLTAGE MEASUREMENTS - New Style PSU (continued)

CN6 8-Way Terminal Connector on PSU		CN6 10-Way Plug Connector on Steam Relay Board		CN8 2-Way Plug Connector on Lamp Assembly		CN9 4-Way Plug Connector on PSU		CN12/13 3-Way Plug Connector on Steam Relay Board	
Bottom to Top		Bottom to Top				Right to Left		Top to Bottom	
PIN #1 Pink	18 VAC Reference to Reference Term. #2	PIN #1 Orange	Fault Alarm Sig (Pod Probe) +5V = Healthy 0V = Fault	PIN #1 Black	12 VAC (Deck Light)	PIN #1 Black	12 VAC (Deck Light)	CN12/1 Blue	L2 Pod Element Supply In
PIN #2 Blue	Analog Ground Ref. for Term. #1 & 3	PIN #2 Yellow	Call for Heat Signal +5V = On 0V = Off	PIN #2 Black		PIN #2 Black		CN12/2 Yellow	L3 Pod Element Supply In
PIN #3 Pink	18 VAC Reference to Reference Term. #2	PIN #3 Black	-15 Volts			PIN #3 Red	24 Volts (Top Heat)	CN13/1 Blue	L2 Out to Pod Element
PIN #4 Purple	9 VAC Reference to Term. #5	PIN #4 Green	"0" Volt Reference (Analog)			PIN #4 Red	24 Volts (Bottom Heat)	CN13/2	L3 Out to Pod Element
PIN #5 Purple	Analog Ground Ref. for Term. #4 & 6	PIN #5 Red	+15 Volts			SEE NOTES on PAGE 1			
PIN #6 Red	24 VAC Reference to Term. #5	PIN #6 White	NOT USED						
PIN #7 Brown	10.8 VAC Reference to Term. #8	PIN #7 White	0 VAC to Solenoid (Reference for CN6/8)						
PIN #8 Green	Analog Ground Ref. for Term. #7	PIN #8 White	24 VAC to Solenoid (Ref: CN6/7)						
		PIN #9 White	+12 Volts Out to Hi-Limit						
		PIN #10 White	+12 Volts Return from Hi-Limit						