



**PARTS & SERVICE MANUAL**  
for  
**PANORAMA ROTISSERIE**  
**MODEL SP-5**



**THIS MANUAL SHOULD BE RETAINED FOR FUTURE USE**

## ELECTRICAL REQUIREMENTS



**STOP!**

DO NOT ATTEMPT INSTALLATION UNTIL YOU HAVE READ THE FOLLOWING INFORMATION!



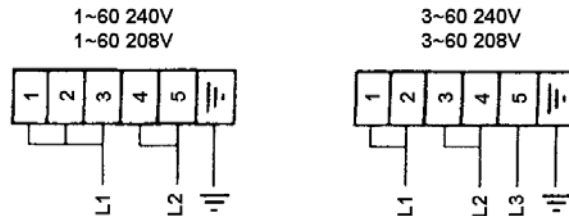
**CAUTION**



This equipment is constructed of the very finest materials attainable. In order to attain maximum efficiency and reliability from this equipment, please follow guidelines below concerning electrical hook-up and site preparation. In addition to its glass and metal components, this unit contains various microprocessors and electrical components that are sensitive to harsh environments and electrical static, spikes, voltage sags, etc., similar to any computerized device. Outlined below are areas to be considered when performing installation.

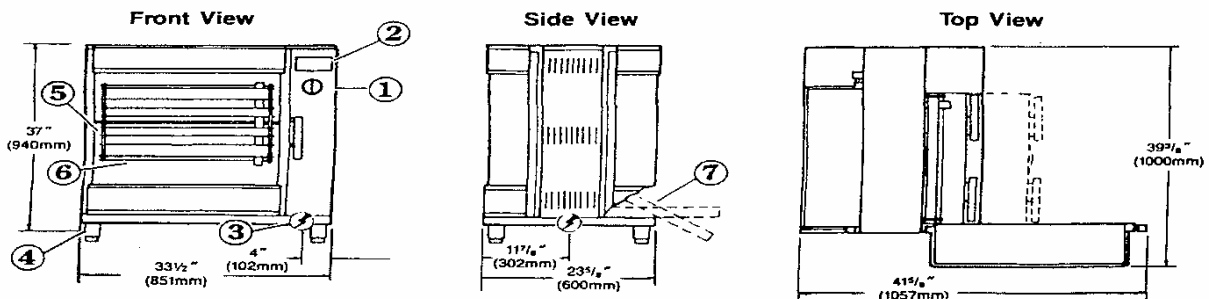
1. DEDICATED LINE – No other equipment may be connected to this line.
2. CORRECT VOLTAGE – The voltage is specified on the data plate. This is not a dual voltage unit. Check voltage with a meter to ascertain actual voltage (i.e. 208V or 240V).
3. SUPPLY CONNECTION WIRE GAUGE:     1 Phase – No. 8 AWG  
   3 Phase – No. 10AWG  
   Wire to be suitable for at least 60° C
4. TERMINAL BLOCK CONFIGURATION:

### TERMINAL BLOCK CONFIGURATION



5. Never block air intake on the bottom or exhaust from left side louvers.
6. Legs must be secured and used to level the equipment.
7. No obstructions under, on top, or around the unit to restrict air flow or cause unsafe conditions.

### MECHANICAL DIMENSIONS



Unit Weight – 216 lbs. (98 kg.)

#### KEY

- |   |                   |                          |
|---|-------------------|--------------------------|
| 1. Switch with program selector                                 | 2. Display Window | 3. Electrical Connection |
| 4. Adjustable Feet  | 5. Rotor Unit     | 6. Double Spits, 5 pcs.  |
| 7. Fat Tray, pull and tilt for emptying. The tray is removable. |                   |                          |

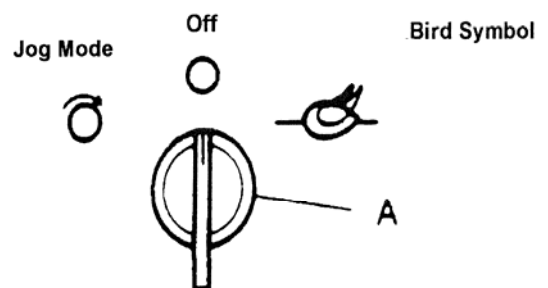
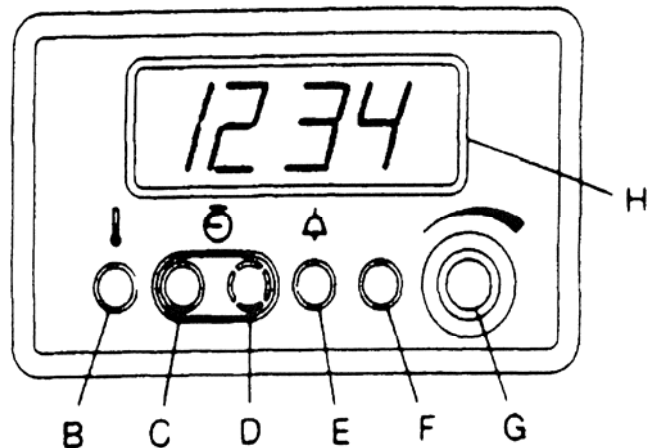
## OPERATING INSTRUCTIONS

For units manufactured before Serial Number SP0002237

1. For initial start-up, set clock for proper time of day. (Press F while turning G)
2. Load rotisserie with product.
3. Set required cooking temperature (Press B while turning G). When B is released, actual oven temperature will appear briefly until set temperature is reached.
4. FOR AUTOMATIC COOKING CYCLE: Set required cooking time. Allow approximately 20 minutes preheat time (Press C while turning G). Start cooking cycle by turning SELECTOR A to "Bird Symbol." Press D to display the hour that cooking will be completed. At that time, the buzzer will sound and the rotisserie will shut off.

FOR MANUAL COOKING CYCLE: Set required cooking time. Allow approximately 20 minutes preheat time (Preheat E while turning G). Start cooking time is completed, buzzer will sound and the rotisserie must be manually turned off.

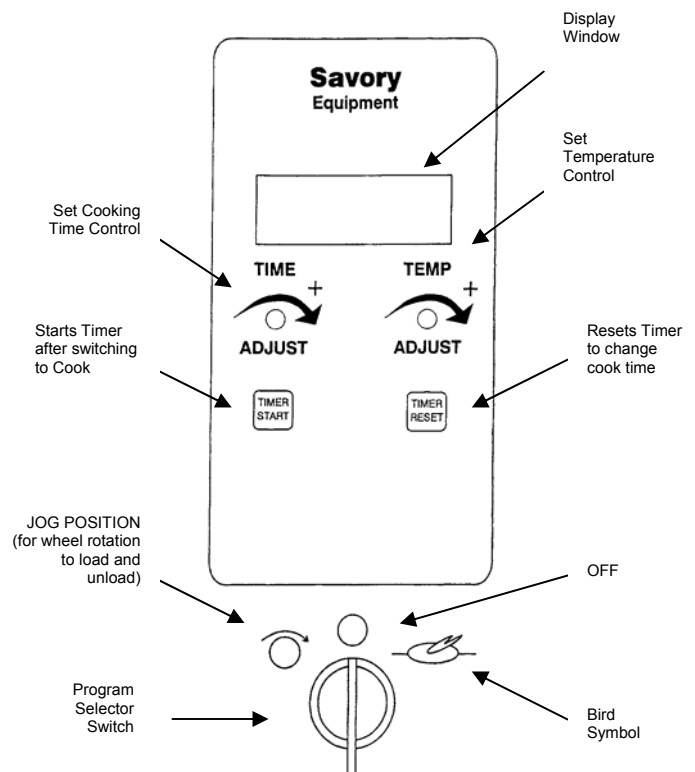
5. Once cooking time is completed, turn SELECTOR A to "Jog Mode" for holding.
6. The buzzer can be turned off by pressing E.
7. To stop unit at any time, turn SELECTOR A to "Off Mode."



## OPERATING INSTRUCTIONS

For units manufactured after Serial Number SP0002236

1. Load rotisserie with product. Set selector switch to "Off Mode."
2. Set required cooking temperature by turning the TEMP ADJUST knob to the right to raise temperature or left to lower it (the temperature setting will appear on the right side of the display window and will flash on and off until the oven reaches the set point).
3. Set required cooking time by turning the TIME ADJUST knob to the right to increase time or to the left to lower it. Allow approximately 20 minutes preheat time (the time setting will appear as minutes and hours on the display).
4. Start cooking by turning selector switch to the "Bird Symbol" and press TIMER START (the two dots between hours and minutes will flash on and off when timer is running). When cooking time is completed, buzzer will sound.
5. After cooking is completed, turn the selector to "Off Mode" to stop the rotisserie, or to "Jog Mode" for holding the product.
6. The buzzer can be turned off by pressing TIMER RESET.
7. To stop unit at any time, turn selector switch to "Off mode."



## CLEANING INSTRUCTIONS

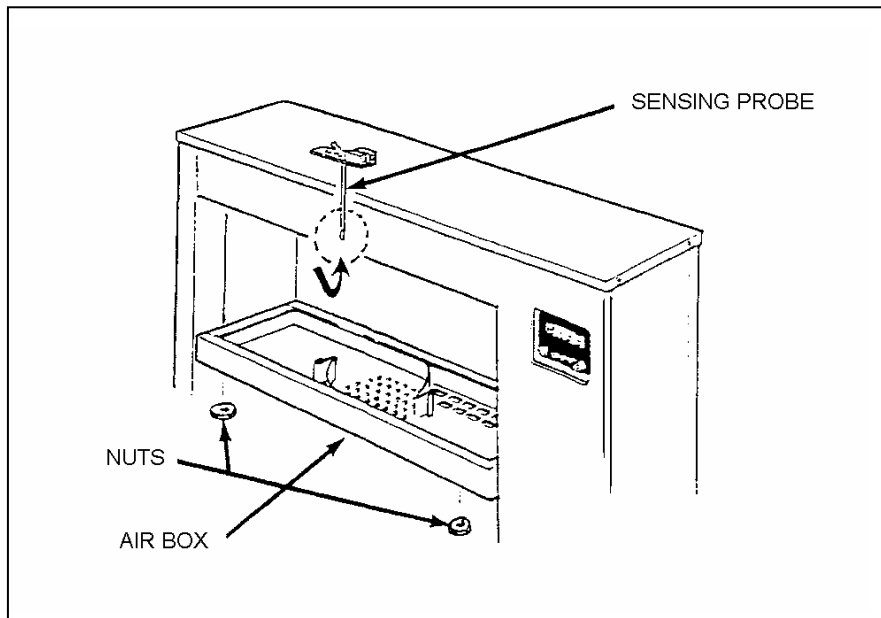
### DAILY GENERAL CLEANING

To keep the Panorama displaying product at its best, it should be kept clean. The grease tray should be emptied and the interior and exterior of the glass cleaned after every cooking cycle. The interior panels should be wiped with a cloth.

At the final shutdown, the drip trays, grease trays, spits and/or baskets should be removed and thoroughly washed with a suitable detergent. The exterior metal surface should be wiped with a dampened cloth and the glass cleaned.

Be certain to clean around areas where the door gaskets make contact with the metal panels of the machine.

### WEEKLY AIR BOX CLEANING



The Air Box should be removed weekly for cleaning.



**CAUTION: THE UNIT MUST BE COOL BEFORE ATTEMPTING CLEANING PROCEDURES.**

1. Open the door and remove the four (4) large nuts located in the upper cooking chamber.
2. Once the nuts have been removed, the "Air Box" will drop down for removal and cleaning.
3. Clean the grease from the "Air Box" using a suitable detergent.
4. Wipe down the temperature sensing probe which is depicted in the diagram shown above. This must be kept grease-free for proper temperature sensing.
5. **IMPORTANT – AIR BOX MUST BE COMPLETELY DRY BEFORE RE-INSTALLING.**
6. **IMPORTANT – ONLY HAND TIGHTEN THE NUTS. THE METAL WILL EXPAND WHEN HEATED.**

## IMPORTANT NOTICE EFFECTIVE 3/1/94

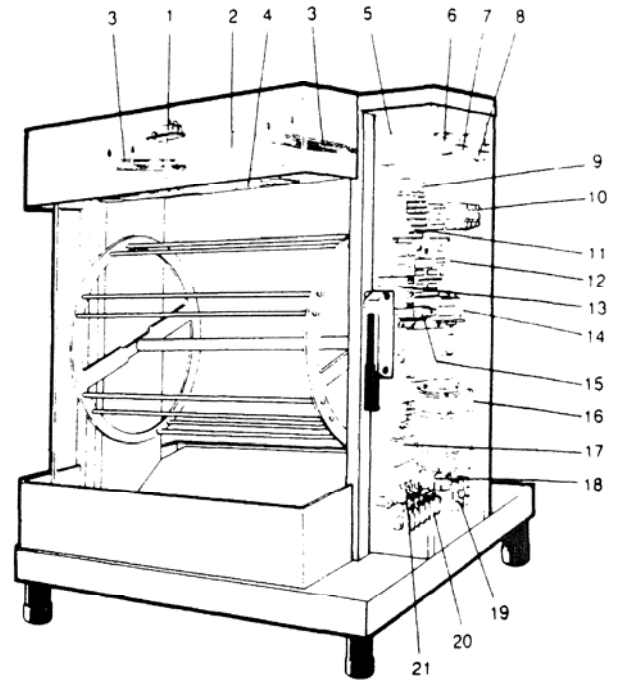
We have redesigned the controls on the SP-5 Panorama Rotisserie Oven. Starting with Serial Number SP0002237, all of the new units will be manufactured with a new time/temp control. This control cannot be retrofitted into the units with a display and power unit.

### NEW PART NUMBERS:

15856 – RTD Probe  
 19378 – Door Switch  
 19390 – Controller

### DISCONTINUED PART NUMBERS:

15250 – PT-500  
 15273 – Power Unit  
 15271 – Safeguard  
 15269 – Display (limited supply)  
 15317 – Transformer  
 15794 – Peg



These part numbers will still remain active:

COMPONENT LOCATION			
POSITION	COMPONENT	MARKING	SAVORY PART #
1	Temp. Body	PT	15250* (see above)
2	Fan Motor	M2	15263
3	Element, 2000W	E3 – 34	208V – 15274 240V – 15284
4	IR-Lamp	H1 – H2	15275
5	Display		15269* (see above)
6	Cooling Thermostat	B1	15252
7	Heating Thermostat	B2	15253
8	Overheat Protection	F1	15251
9	Switch	S1	15272
10	Contactora	K1	15258
11	Terminal Block	X1	15257
12	Power Unit	A1	15273* (see above)
13	Time Relay	K2	15268
14	Transformer	T1	15317
15	Capacitor Fan	C2	15260
16	Grill Motor	M1	15264
17	Capacitor Motor 3.75 mf	C1	15120 (15261)
18	Capacitor	C3	15260
19	Fuse	F2 – F3	*15452 (15259)
20	Connection Block	X3	15256
21	Terminal Block	X2	15281

## PROTECTIVE COVER (#15271)

### Disassembly Instructions:

1. Disconnect main voltage.
2. Disconnect the band cable from the power section.
3. Loosen the three nuts that hold the protective cover.
4. Pull the display unit backwards.
5. Change the keyboard cover.

### Assembly Instructions:

1. Assemble in reverse order according to steps 1-5 above.

NOTE: The guide pin in the keyboard cover must fit the hole in the display unit's timer. In order to make operation easy, push the keyboard cover underneath the encoder knob.

REQUIRED PARTS	QUANTITY	POSITION
Keyboard Cover	1	1

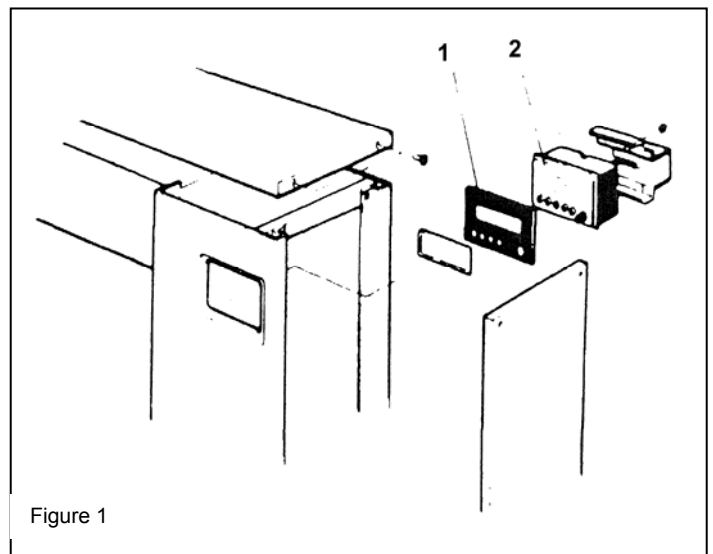


Figure 1

## DISPLAY UNIT (#15269)

### Disassembly Instructions:

1. Refer to the Keyboard Cover instructions above.

REQUIRED PARTS	QUANTITY	POSITION
Display	1	2

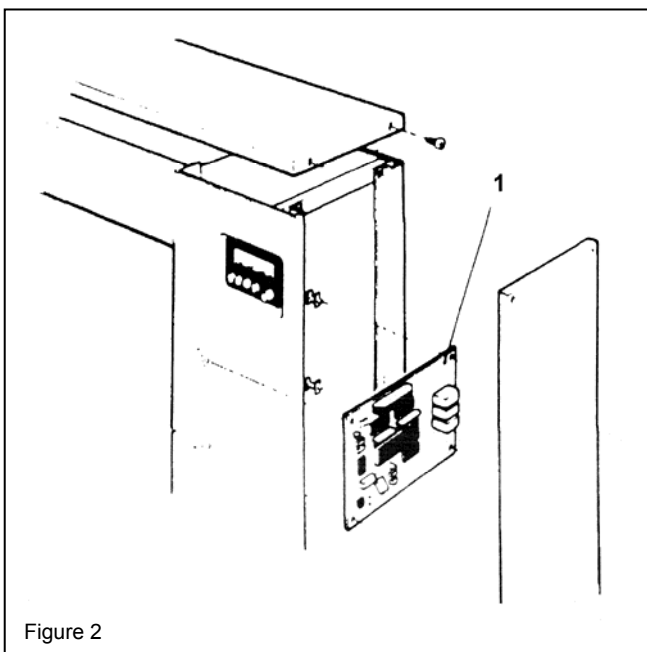


Figure 2

## POWER UNIT (#15269)

### Disassembly Instructions:

1. Disconnect main voltage.
2. Disconnect all wires to the printed circuit board.
3. Carefully squeeze the four plastic distance pins that hold the circuit card in place and pull backwards.

### Assembly Instructions:

1. Assemble in reverse order according to steps 1-3 above.

REQUIRED PARTS	QUANTITY	POSITION
Power Unit	1	1

## PT-500 THERMOCOUPLE (#15250)

### Disassembly Instructions:

1. Disconnect main voltage.
2. Loosen the nut on the distance screw that holds the thermocouple.
3. Pull the thermocouple upwards.

### Assembly Instructions:

1. Assemble in reverse order according to steps 1-3 above.

NOTE: It is very important when you assemble, to make sure the thermocouple nose is inserted between the fan wheel and "Air Box" baffle plate. Make sure the thermocouple wires do not come in contact with the high voltage conductors in the grill.

REQUIRED PARTS	QUANTITY	POSITION
PT-500 Thermocouple	1	1

## OVERHEAT PROTECTION (F1) (#15251)

### Disassembly Instructions:

1. Disconnect main voltage.
2. Remove the "Air Box".
3. Remove the hub. Refer to the instructions for motor disassembly.
4. Remove the right inner wall.
5. Disconnect the thermostat bulb from its holder and pull it through the wall from the electrical compartment.
6. Replace the overheat protection.

### Assembly Instructions:

1. Assemble in reverse order according to steps 1-6 above.

NOTE: Make sure the distance between the bulb and the post exceeds 14mm (9/16"), otherwise the overheat protection will not work.

REQUIRED PARTS	QUANTITY	POSITION
Thermostat	1	1

## COOLING THERMOSTAT (B1) (#15252)

### Disassembly Instructions:

1. Disconnect main voltage.
2. Loosen the yokes that hold the bulb.
3. Remove the thermostat.

### Assembly Instructions:

1. Assemble in reverse order according to steps 1-3 above.

NOTE: The cooling thermostat should make at 140°F +/- 50°F. This should be accomplished by turning the shaft's D-shaped end plane so its position is perpendicular to the long axis of the grill.

REQUIRED PARTS	QUANTITY	POSITION
Cooling Thermostat	1	1

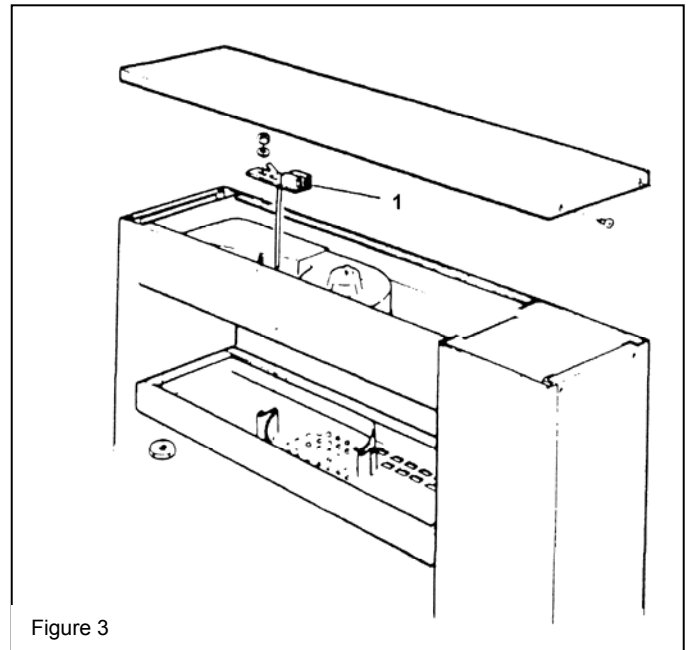


Figure 3

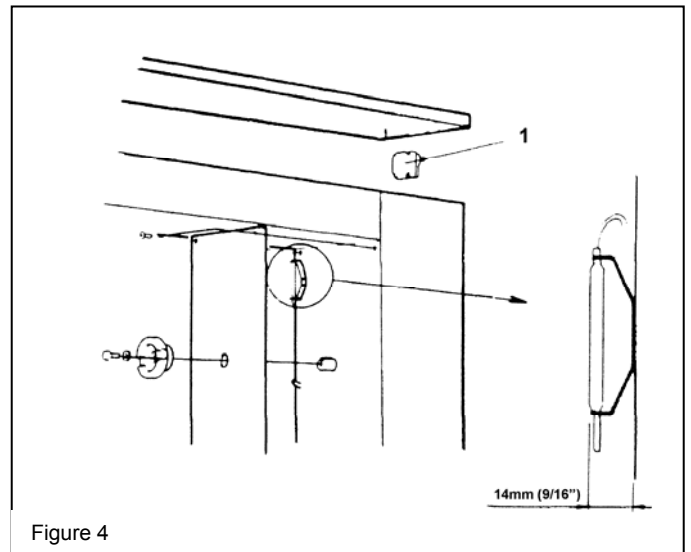
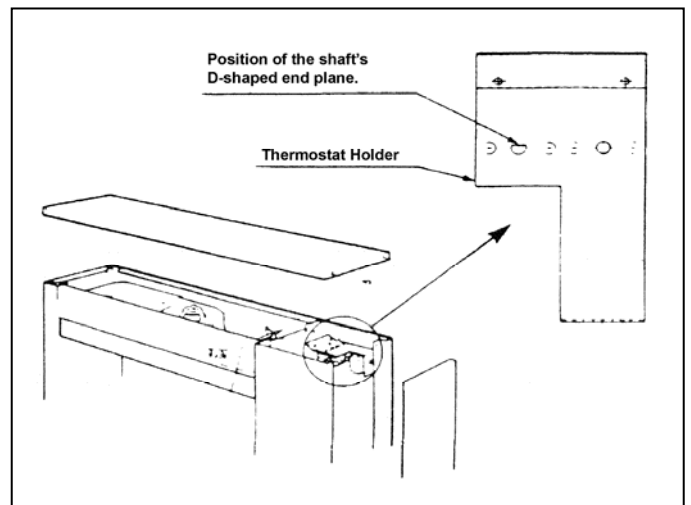
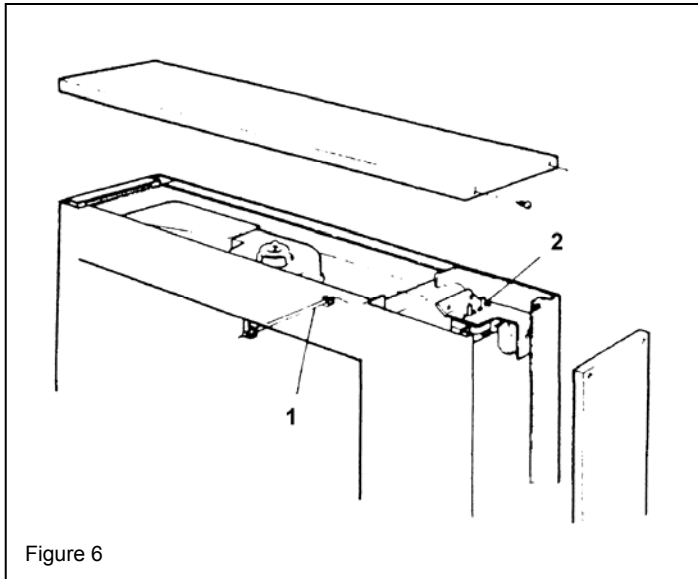


Figure 4





### HEAT THERMOSTAT (B2) (#15253)

**Disassembly Instructions:**

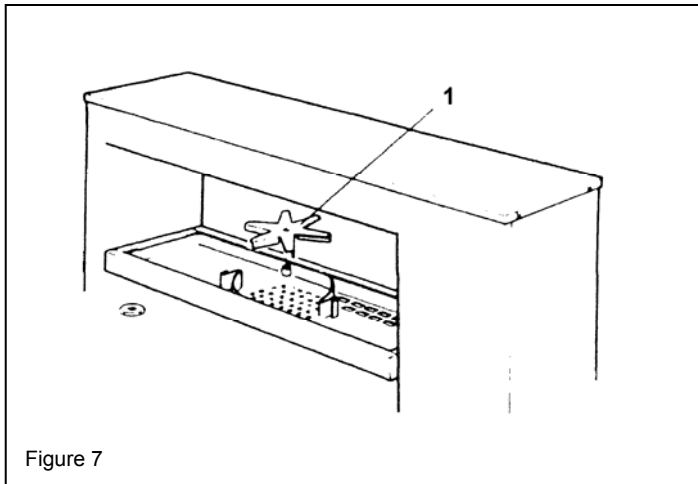
1. Disconnect main voltage.
2. Remove the "Air Box".
3. Disconnect the thermostat bulb from its holder and pull it through the roof.

**Assembly Instructions:**

1. Assemble in reverse order according to steps 1-3 above.  
NOTE: The thermostat should be turned clockwise as far as possible (250°C - 480°F).

REQUIRED PARTS	QUANTITY	POSITION
Heating Thermostat	1	2

Figure 6



### FAN WHEEL

**Disassembly Instructions:**

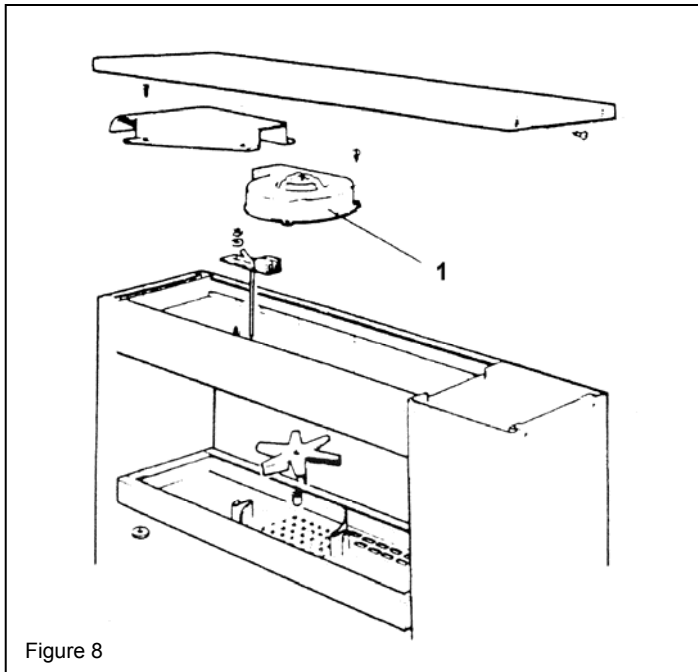
1. Disconnect main voltage.
2. Remove "Air Box".
3. Remove the nut holding the fan wheel. Note the left hand threads.

**Assembly Instructions:**

1. Assemble in reverse order according to steps 1-3 above.

REQUIRED PARTS	QUANTITY	POSITION
Fan Wheel	1	1

Figure 7



### FAN MOTOR (#15263)

**Disassembly Instructions:**

1. Disconnect main voltage.
2. Remove the fan wheel
3. Remove the PT-500 Thermocouple.
4. Remove the air duct.
5. Disconnect the electrical feed wires.
6. Change the fan.

**Assembly Instructions:**

1. Assemble in reverse order according to steps 1-6 above.

REQUIRED PARTS	QUANTITY	POSITION
Fan Motor	1	1

Figure 8



## ELEMENTS

### Disassembly Instructions:

1. Disconnect main voltage.
2. Disconnect the electrical wiring.
3. Remove the "Air Box".
4. Disconnect the element fixture.
5. Remove the element.

### Assembly Instructions:

1. Assemble in reverse order according to steps 1-5 above.

NOTE: The maximum permissible torque to be applied when tightening the electrical wire connections is 10.6 in. lbs.. Use the double nut underneath.

REQUIRED PARTS	QUANTITY	POSITION
Element	1	1

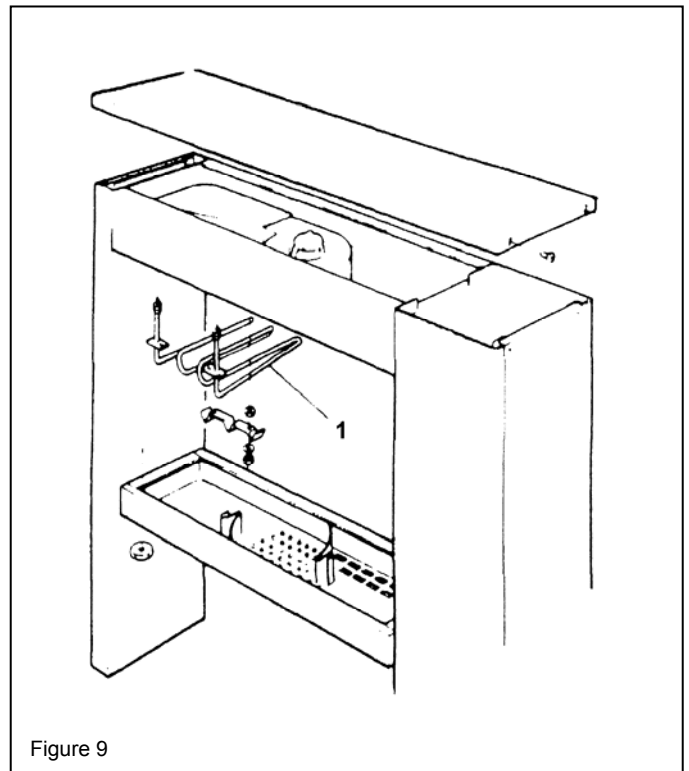


Figure 9

## GRILL MOTOR

### Disassembly Instructions:

1. Disconnect main voltage.
  2. Remove the nut from the center of the hub.
  3. Maximum torque is 9.5 in. lbs.. Use the radial slots in the hub for holding.
  4. Remove the connector wires on the motor plate.
  5. Pull the motor plate with the motor backwards.
- NOTE: Make sure the motor shaft follows along. If not, there is a risk of losing the key between gear box shaft and the motor shaft. In case the motor shaft does not protrude through its bearing mount, polish the part of the shaft that protrudes through the bearing into the grill chamber.

### In case polishing is not sufficient:

1. Remove the "Air Box".
2. Remove the right inner wall.
3. Remove the three screws holding the bearing mount.
4. The motor with its shaft and bearing mount can now be withdrawn through the electrical compartment.

### Assembly Instructions:

1. Assemble in reverse order according to steps 1-5 above.
- NOTE: Check the direction of rotation, which is supposed to be counter-clockwise seen from the grill chamber side. The bearing is self-lubricating and should not be lubricated. Check the measurements between bearing shelf and the hub according to Figure 15.

REQUIRED PARTS	QUANTITY	POSITION
Grill Motor	1	1

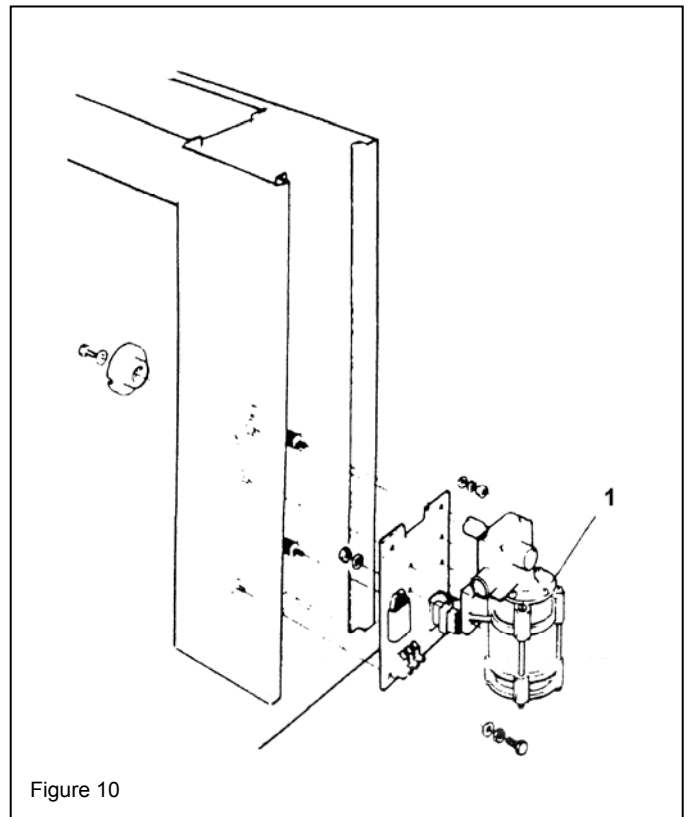
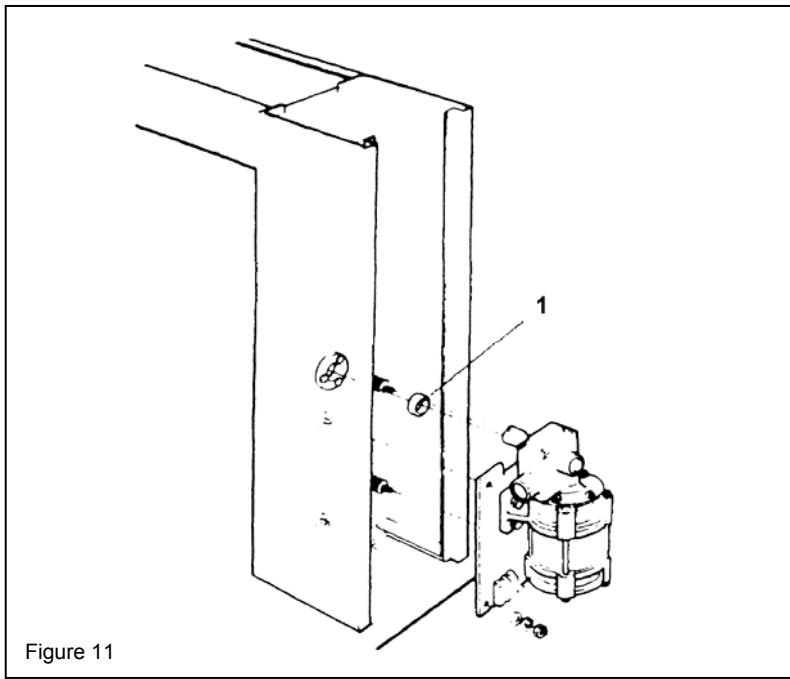


Figure 10



## SLEEVE BEARING

### Disassembly Instructions:

1. Disconnect main voltage.
2. Remove the Grill Motor.
3. Force the journal bearing out of the bearing mount by pressing.

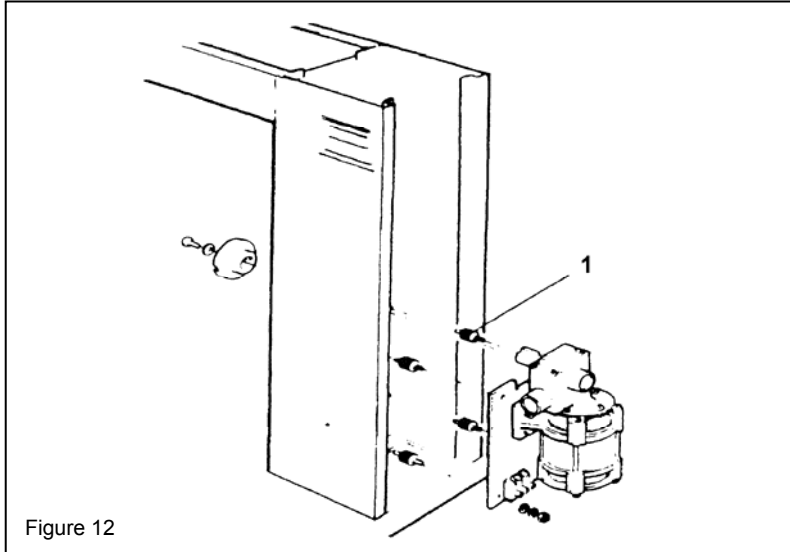
### Assembly Instructions:

1. Assemble in reverse order according to steps 1-3 above.

NOTE: The joint in the sleeve bearing should not be positioned in a vertical direction.

REQUIRED PARTS	QTY	POSITION
Sleeve Bearing	1	2

Figure 11



## RUBBER MOUNTS

### Disassembly Instructions:

1. Disconnect main voltage.
2. Remove the Grill Mount.
3. Remove the rubber mount.

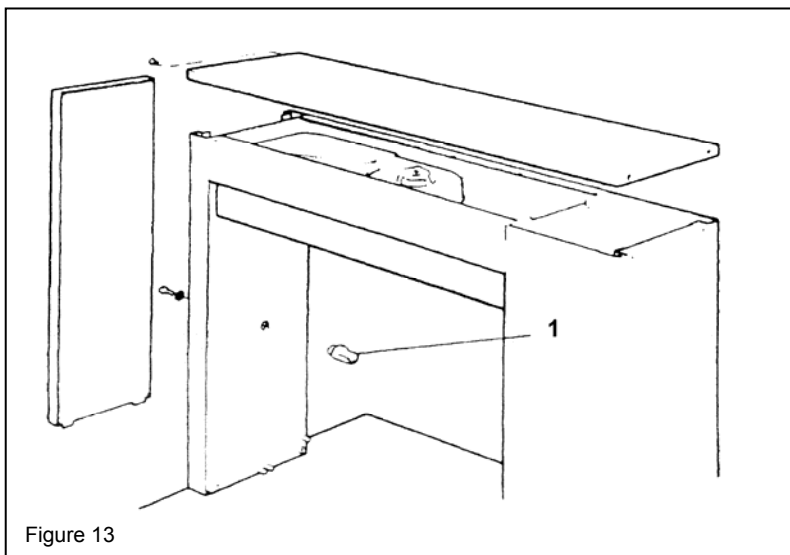
### Assemble Instructions:

1. Assemble in reverse order according to steps 1-3 above.

NOTE: The control measurements according to Figure 15.

REQUIRED PARTS	QTY	POSITION
Rubber Mounts	1	1

Figure 12



## BEARING SHELF

### Disassembly Instructions:

1. Disconnect main voltage.
2. Remove the left outer wall.
3. Remove the bolt holding the bearing shelf.

### Assembly Instructions:

1. Assemble in reverse order according to steps 1-3 above.

NOTE: Make sure the bearing shelf is assembled with the milled surface horizontal. Note the control measurements according to Figure 15.

REQUIRED PARTS	QTY	POSITION
Bearing Shelf	1	1

Figure 13

## LEFT INNER WALL

### Disassembly Instructions:

1. Disconnect main voltage.
2. Remove the Bearing Shelf
3. Remove the "Air Box".

### Assembly Instructions:

1. Assemble in reverse order according to steps 1-3 above.  
NOTE: Check the measurements according to Figure 15

REQUIRED PARTS	QUANTITY	POSITION
Inner Wall	1	1

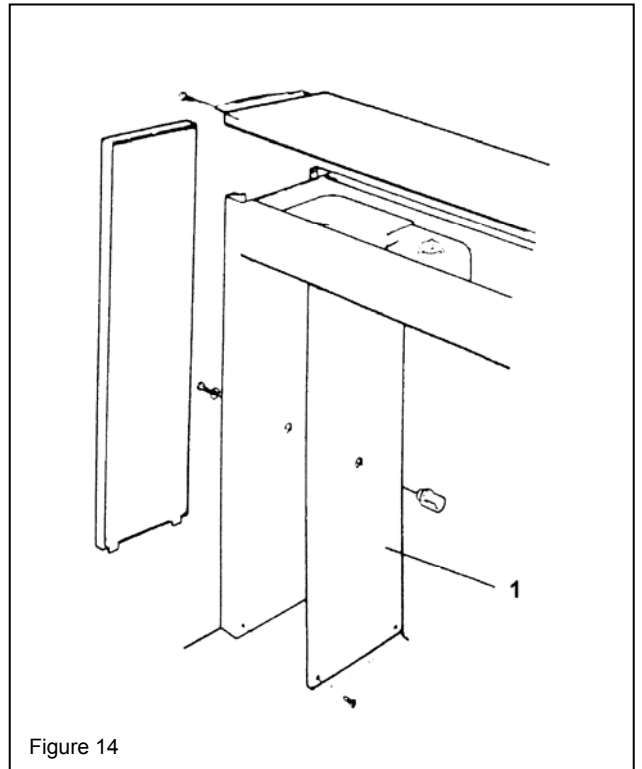


Figure 14

## RIGHT INNER WALL

### Disassembly Instructions:

1. Disconnect main voltage.
2. Remove the right inner wall (Refer to Overheat Protection Instructions).

### Assembly Instructions:

1. Assemble in reverse order according to steps 1-2 above.  
NOTE: Check the measurements according to Figure 15

REQUIRED PARTS	QTY	POSITION
Inner Wall	1	1

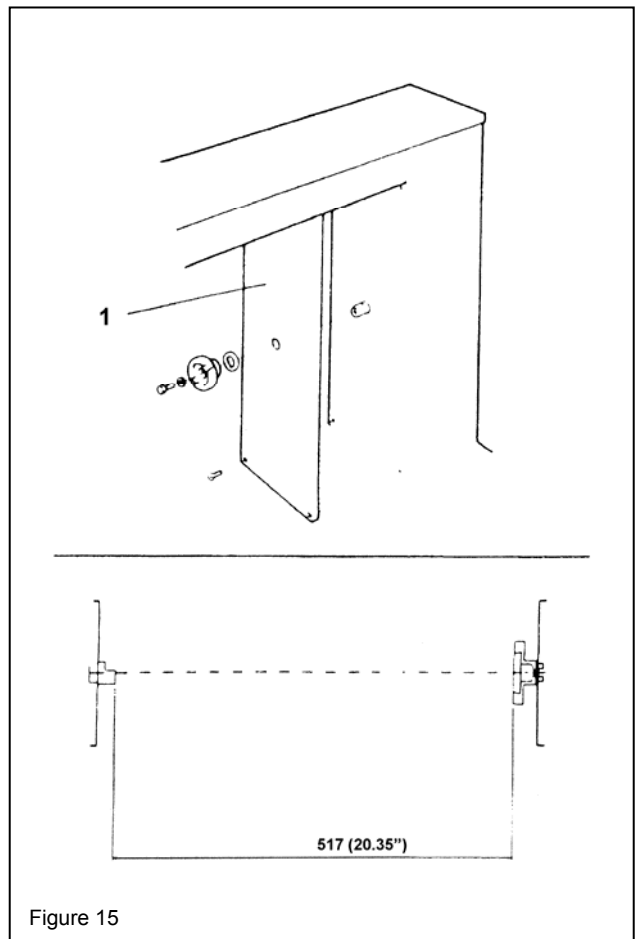
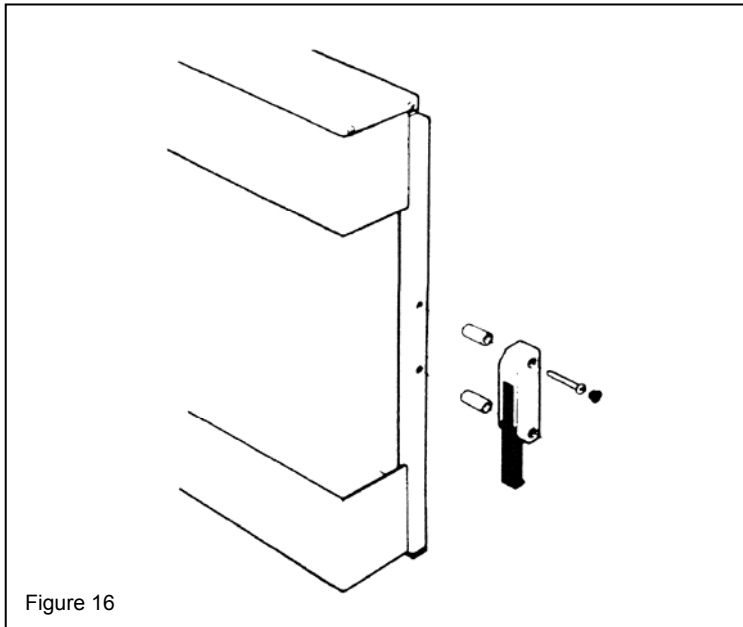


Figure 15



## LOCK HANDLE

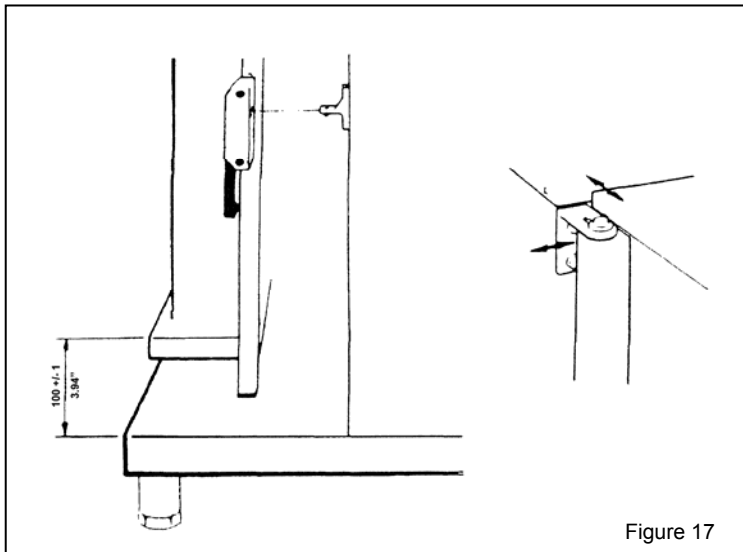
### Disassembly Instructions:

1. Disconnect main voltage.
2. Remove the screws.
3. Remove the Lock Handle.

### Assembly Instructions:

1. Assemble in reverse order according to steps 1-3 above.
- NOTE: Use lock liquid on the screws.

Figure 16

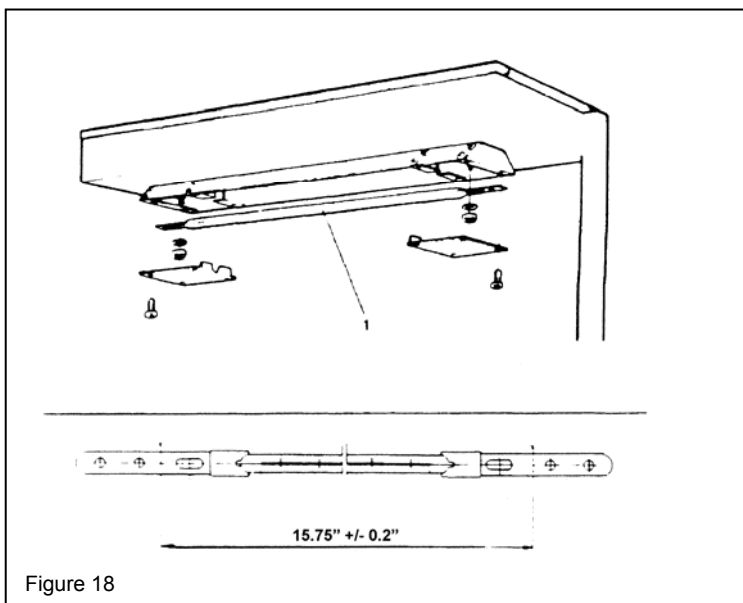


## LOCK CASTING

### Adjusting Instructions:

1. Disconnect main voltage.
- NOTE: Before adjusting the lock casting, the door should be adjusted to 100 +/- 1mm (3.94").
2. Loosen the screws in the casting so the casting can be adjusted.
  3. Adjust the casting so that it lines up with the center of the hole in the handle and the vertical measurement will be in accord with what is shown in Figure 17.
  4. Re-tighten the screws.
  5. Adjust the lock wedge to make the gap between the roof and the door roof parallel.

Figure 17



## IR – LAMPS (#15275)

### Disassembly Instructions:

1. Disconnect the main voltage.
2. Remove the door roof.
3. Remove the lids over the lamps.
4. Remove the nuts on the connector cable screws.

### Assembly Instructions:

1. DO NOT touch the IR-Lamps with your fingers.
2. Trim the connector strips to size.
3. Assemble in reverse order according to steps 1-4 above.

NOTE: Make sure you don't apply torque to the connector strip. Check to make sure the lamp is not rigidly mounted. Remove the protective cover paper.

REQUIRED PARTS	QTY	POSITION
Quartz Tube	1	1

Figure 18

## INSULATION GROMMETS

### Disassembly Instructions:

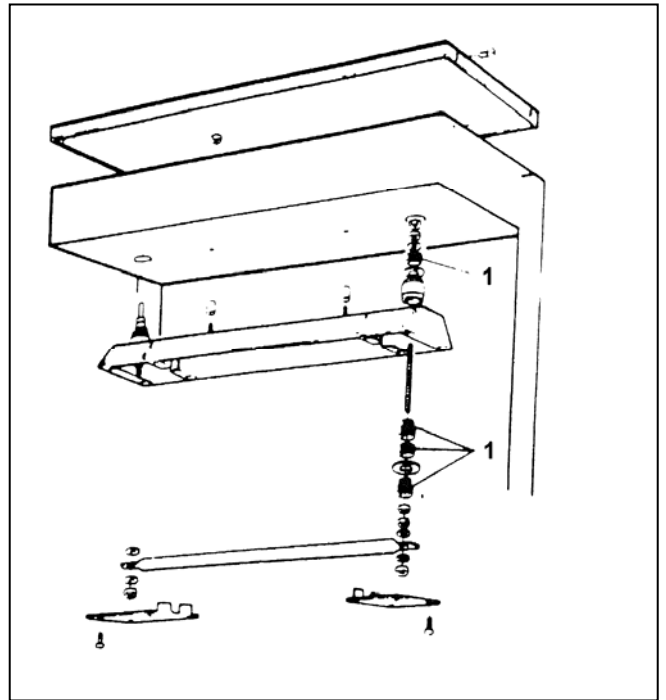
1. Disconnect main voltage.
2. Remove the quartz tube.
3. Remove the electrical connections.
4. Remove the nuts that hold the IR fixtures in place.
5. Remove the top nut from the stud screw.
6. Disassemble the insulation grommets.

### Assembly Instructions:

1. Assemble in reverse order according to steps 1-6 above.

NOTE: The insulation assembly should not be rigid when assembled.

REQUIRED PARTS	QUANTITY	POSITION
Insulation Grommets	1 Set	1



## DOOR GASKETS

### Disassembly Instructions:

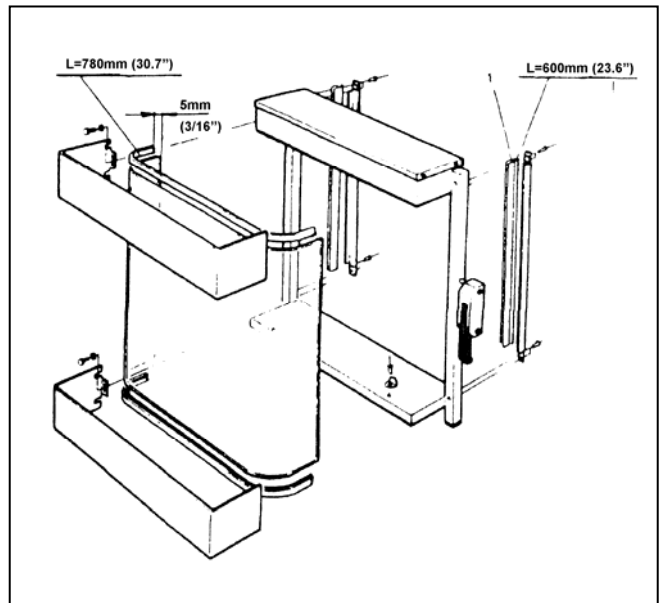
1. Disconnect main voltage.
2. Remove the 4 pop rivets by drilling out their centers.
3. Remove the glass trim strip.
4. Remove the gasket.

### Assembly Instructions:

1. Assemble in reverse order according to steps 1-4 above.

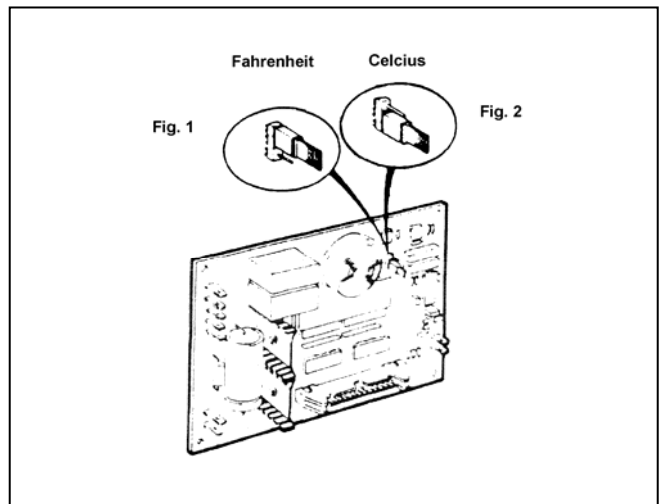
NOTE: Fill the pop rivets with silicone sealant.

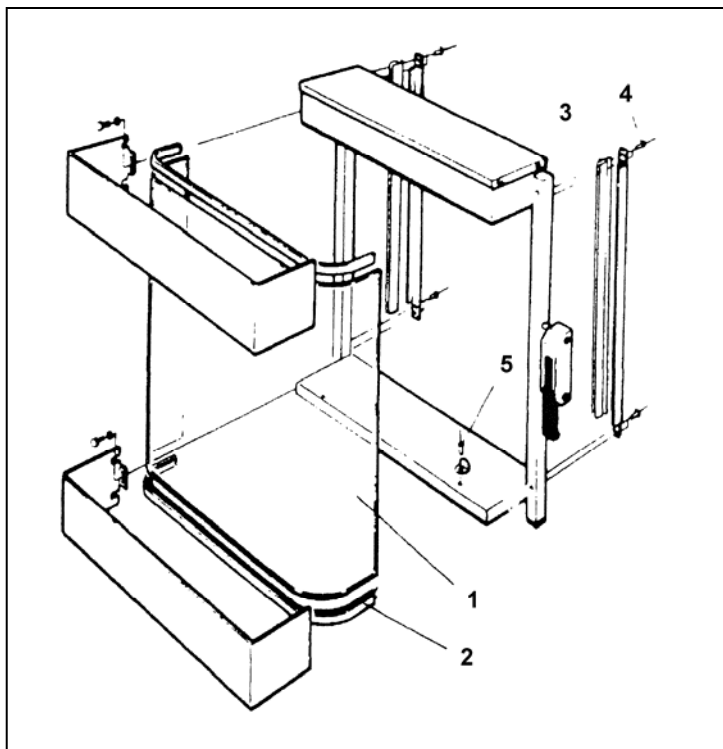
REQUIRED PARTS	QTY	POSITION
Door Gasket	1	1



## POWER UNIT

This figure shows how to change between degrees Celsius (Fig 2) instead of Fahrenheit (Fig 1).





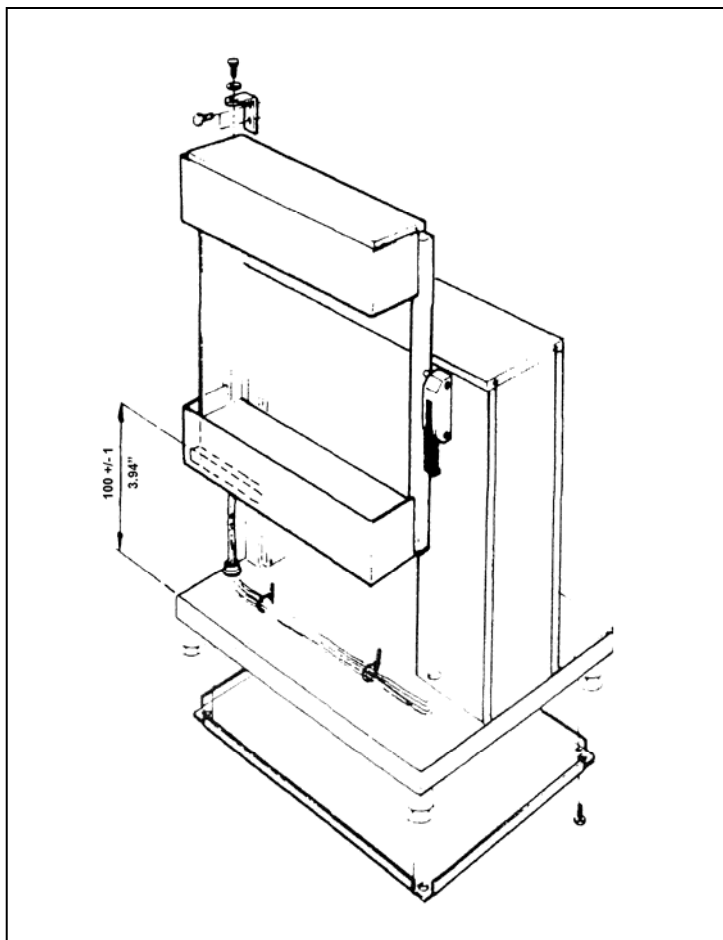
## GLASS FRONT

### Disassembly Instructions:

1. Disconnect main voltage.
2. Remove the pop rivets holding the washers by drilling out their centers.
3. Remove the pop rivets holding the glass strip by drilling.
4. Remove the silicone strip.

### Assembly Instructions:

1. Install new silicone strips on both top and bottom.
2. Install new silicone strips on the glass strips.
3. Place the glass front with the upper and lower silicone strip in the door.
4. Push the glass front with the upper and lower silicone strip in the door.
5. Install the glass strip.
6. Adjust the glass front to center it and then pop rivet the glass strips in place.
7. Push the glass front toward the grill and pop rivet the washers in place to make the glass solidly fixed.
8. Fill the pop rivets with silicone sealant.



REQUIRED PARTS	QTY	POSITION
Glass Front	1	1
Glass Gasket	2	2
Door Gasket	2	3
1/8" Pop Rivets, Length	8	4
5/32" Pop Rivets, Length	4	5

## DOOR REMOVAL

1. Disconnect main voltage.
2. Disconnect the electric connections in the electric compartment.
3. Remove the cover plate underneath the grill.
4. Remove the bolt in the pivot.
5. Tilt the door forward and lift the door upwards.

## DOOR INSTALLATION

1. Make sure the (3.94") +/- 1mm distance is kept when you assemble.
2. Also make sure the transparent cable protection is inserted through the pivot bushing.
3. Assemble in reverse order according to steps 1-5 above.

NONE: Connect the earth cable.

<b>FAULT DESCRIPTION</b>	<b>POSSIBLE FAULT</b>	<b>ACTION</b>
Grill is totally unresponsive	<ol style="list-style-type: none"> <li>1. No current to grill.</li> <li>2. Fuse F2 blown.</li> <li>3. Temperature limiter device F1 tripped.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check main voltage.</li> <li>2. Replace fuse.</li> <li>3. Reset temperature limiter.</li> </ol>
Display is dark but manual position functions.	<ol style="list-style-type: none"> <li>1. Bandcable contact on power unit A1 (PCB A1) does not make contact.</li> <li>2. No voltage to power unit (18V).</li> <li>3. Faulty power unit.</li> <li>4. Faulty display.</li> </ol>	<ol style="list-style-type: none"> <li>1. Connect bandcable.</li> <li>2. Check power to and from transformer.</li> <li>3. Replace power unit.</li> <li>4. Replace display.</li> </ol>
Impossible to set clock	<ol style="list-style-type: none"> <li>1. Peg in the keyboard's protective cover not in contact.</li> <li>2. Display encoder out of action.</li> <li>3. Power unit A1 does not work.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace peg.</li> <li>2. Replace display.</li> <li>3. Check eeprom mounting. Replace power unit A1.</li> </ol>
Time, temperature and automatic functions all work but the grill does not start.	<ol style="list-style-type: none"> <li>1. Automatic function incorrectly programmed.</li> <li>2. Faulty power unit.</li> <li>3. Start of program delayed.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reset to zero. Read operations manual.</li> <li>2. Replace power unit.</li> <li>3. Check ready time if auto symbol is blinking.</li> </ol>
The grill starts but does not heat up	<ol style="list-style-type: none"> <li>1. Short in the PT-500 thermocouple.</li> <li>2. Faulty power unit A1.</li> <li>3. Faulty contactor K1.</li> <li>4. Faulty element E3, E4.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace PT-500 thermocouple.</li> <li>2. Replace power unit.</li> <li>3. Replace contactor K1.</li> <li>4. Replace element E3, E4.</li> </ol>
Grill takes long time to heat up	<ol style="list-style-type: none"> <li>1. One of the elements does not work.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace element.</li> </ol>
Grill temperature control is unresponsive	<ol style="list-style-type: none"> <li>1. PT-500 not properly connected.</li> <li>2. Faulty PT-500 thermocouple (see chart).</li> <li>3. Faulty power unit A1.</li> <li>4. Faulty contactor K1.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check connection.</li> <li>2. Replace PT-500 thermocouple.</li> <li>3. Replace power unit A1.</li> <li>4. Replace contactor K1.</li> </ol>
Temperature Control functions but at too low a level	<ol style="list-style-type: none"> <li>1. PT-500 thermocouple influenced by element radiation.</li> <li>2. Faulty PT-500 thermocouple (see chart).</li> <li>3. Faulty convection motor operation (M2).</li> <li>4. Faulty power unit A1.</li> </ol>	<ol style="list-style-type: none"> <li>1. Install the air box with the baffle plate between the element and the PT-500 thermocouple.</li> <li>2. Replace the PT-500 thermocouple.</li> <li>3. Check run capacitor C-2. Overheating due to lack of air circulation.</li> <li>4. Replace power unit A1.</li> <li>5. Replace M2.</li> </ol>
Fan M2 starts immediately when grill is hooked up to mains	<ol style="list-style-type: none"> <li>1. The cooling thermostat B1 is not adjusted correctly.</li> <li>2. Wrong cooling thermostat B1.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust B1, M2 should start at 60°C, 140°F.</li> <li>2. Replace cooling thermostat B1.</li> </ol>
Fan M2 does not work	<ol style="list-style-type: none"> <li>1. Faulty cooling thermostat B1.</li> <li>2. Faulty fan motor M2.</li> <li>3. Faulty C2.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace cooling thermostat.</li> <li>2. Replace fan motor M2.</li> <li>3. Replace C2.</li> </ol>
Grill motor does not start	<ol style="list-style-type: none"> <li>1. Overload.</li> <li>2. Timer relay K2 does not work.</li> <li>3. Wrong capacitor C1 or C3.</li> <li>4. Faulty grill motor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Correct by loading product evenly.</li> <li>2. Replace timing relay.</li> <li>3. Replace capacitor.</li> <li>4. Replace capacitor C3.</li> <li>5. Replace grill motor.</li> </ol>
Grill motor stops & starts	<ol style="list-style-type: none"> <li>1. Overhead motor.</li> <li>2. Weak or faulty run capacitor C1.</li> <li>3. Overload.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check operation of time relay K2. Opens after 3 seconds.</li> <li>2. Replace C1.</li> <li>3. Correct by loading product evenly.</li> </ol>

## PT-500 TEMPERATURE / RESISTANCE TABLES

#15250 – PT500, RTD  
(used prior to S/N SP0002237)

FOR REFERENCE ONLY				
Ohm/°F = Value @ Center of 100°F Span				
TEMP °F	0	25	50	75
100	575	603	625	650
200	685	700	732	760
300	780	810	841	863
400	892	905	941	965
500	988	-	-	-

#15856 – RTD, 1000 OHM  
(Starting with S/N SP0002237)

Temp °F	0	10	20	30	40	50	60	70	80	90	Ω	°F
0	921.190	942.790	964.350	985.880	1007.368	1028.814	1050.224	1071.594	1092.927	1114.221		2.14
100	1335.476	1156.693	1177.872	1199.011	1220.113	1241.176	1262.200	1283.186	1304.133	1325.042		2.11
200	1345.913	1366.744	1387.538	1408.293	1429.009	1449.687	1470.326	1490.927	1511.489	1532.013		2.07
300	1552.498	1572.945	1593.953	1613.723	1634.054	1654.347	1674.601	1894.817	1714.994	1735.133		2.03
400	1755.233	1775.295	1795.318	1815.303	1835.249	1855.157	1875.026	1894.857	1914.649	1934.402		1.99
500	1954.117	1973.794	1993.432	2013.032	2032.593	2052.116	2071.600	2091.045	2110.452	2129.821		1.95
600	2149.151	2168.443	2187.698	2206.910	2226.086	2245.224	2264.323	2283.383	2302.405	2321.389		1.91
700	2340.334	2359.240	2378.108	2396.938	2415.729	2434.481	2453.195	2471.871	2490.508	2509.106		1.88
800	2527.686	2546.187	2564.670	2583.115	2601.521	2619.886	2638.217	2656.507	2674.759	2692.973		1.84
900	2711.147	2729.264	2747.382	2785.441	2783.462	2801.444	2637.293	2837.293	2855.180	2872.986		1.80
1000	2890.778	-	-	-	-	-	-	-	-	-		-

### #19390 ELECTRONIC TIME / TEMPERATURE CONTROL CONTROL ERROR CODES

Error codes are provided to aid in determining the nature of common oven failures and to inform the user of possible safety or performance problems. Each error has an associated code number that is displayed in the time digits when the error occurs. The control also sounds a series of attention tones. The control must be powered down to clear the failure mode.

If a service call is received, sighting any of the following “Error Codes,” please instruct the customer to turn the oven off and wait for service.

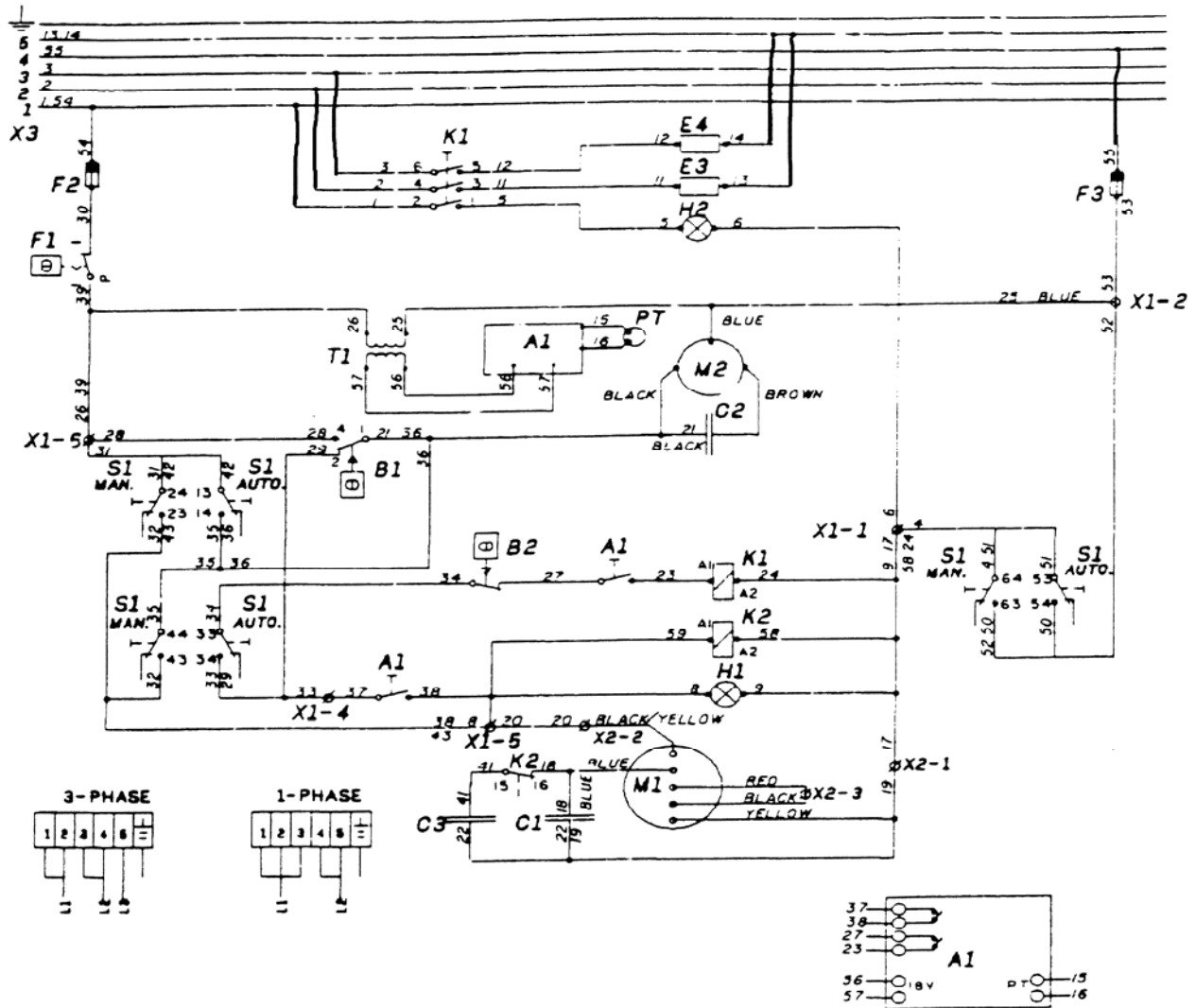
Prior to replacing any of these parts, all the wiring and voltages to the controller should be verified.

ERROR CODE #	ACTION TO BE TAKEN
F1	Replace the T/T Controller (#19390)
F2	Oven temperature has exceeded 551°. Check actual oven temperature and resistance of RTD Sensor and replace if necessary.
F3	The RTD Sensor (#15856) may have an open circuit. Check the resistance and replace if necessary. If F3 still appears, replace controller.
F4	The RTD Sensor (#15856) may have a short circuit. Check the resistance and replace if necessary.
F5	Replace the T/T Controller (#19390)
F6	Replace the T/T Controller (#19390)
F7	Replace the T/T Controller (#19390)



## CIRCUIT DIAGRAM

For units manufactured prior to Serial number SP0002237

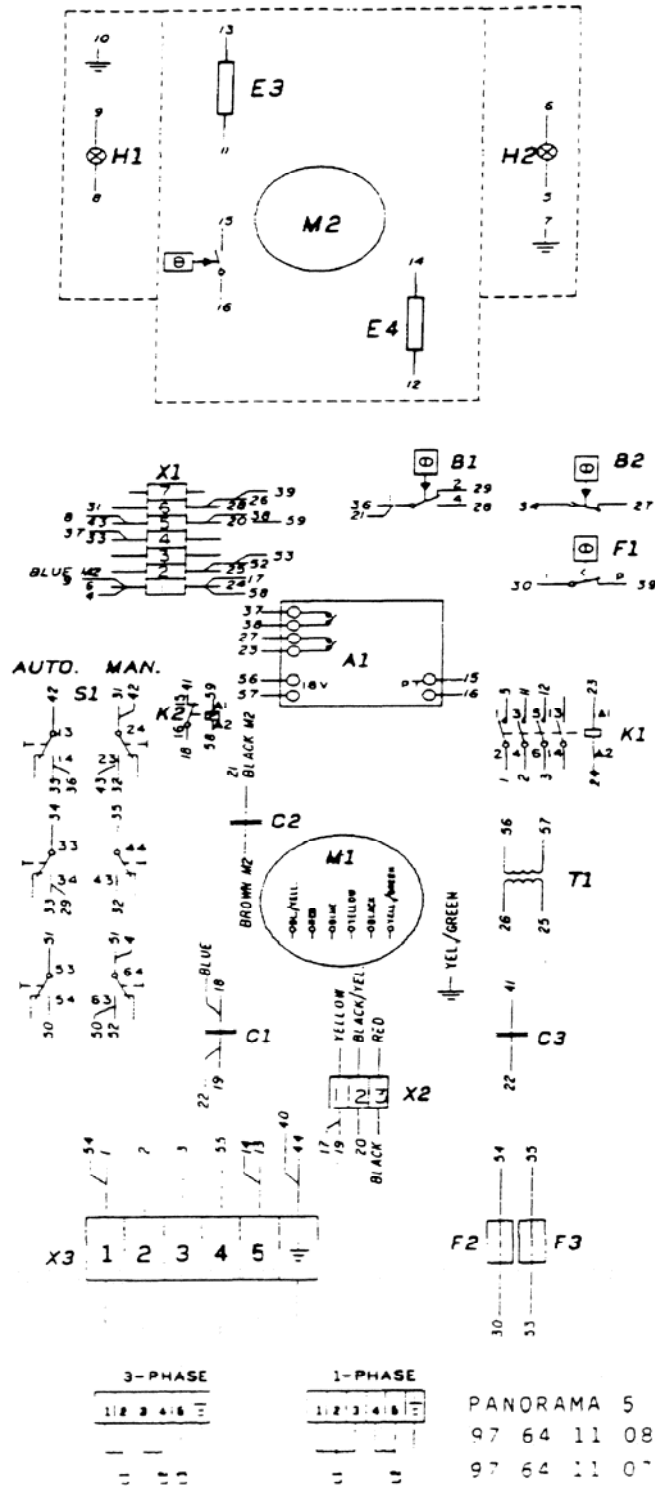


- |       |                            |
|-------|----------------------------|
| A1    | PCB                        |
| B1    | COOLING THERMOSTAT         |
| B2    | HEATING THERMOSTAT         |
| F1    | TEMPERATURE LIMITER        |
| F2-F3 | FUSES                      |
| C1    | CAPACITOR GRILLMOTOR 2.5MF |
| C2    | CAPACITOR FAN 2MF          |
| C3    | CAPACITOR GRILLMOTOR 2.5MF |
| H1-H2 | IR-LAMP                    |
| E3-E4 | HEATING ELEMENT            |
| K1    | CONTACTOR                  |
| K2    | TIME RELAY                 |
| M1    | GRILLMOTOR                 |
| M2    | FANMOTOR                   |
| PT    | TEMPERATURE THERMISTOR     |
| S1    | SWITCH                     |
| X1    | TERMINAL BOARD             |
| X2    | TERMINAL BOARD             |
| X3    | CONNECTION BLOCK           |

97 64 11 08-07  
 ~60 208V / 3~60 208V  
 97 64 11 07-07  
 ~60 240V / 3~60 240V

# CABLE LIST

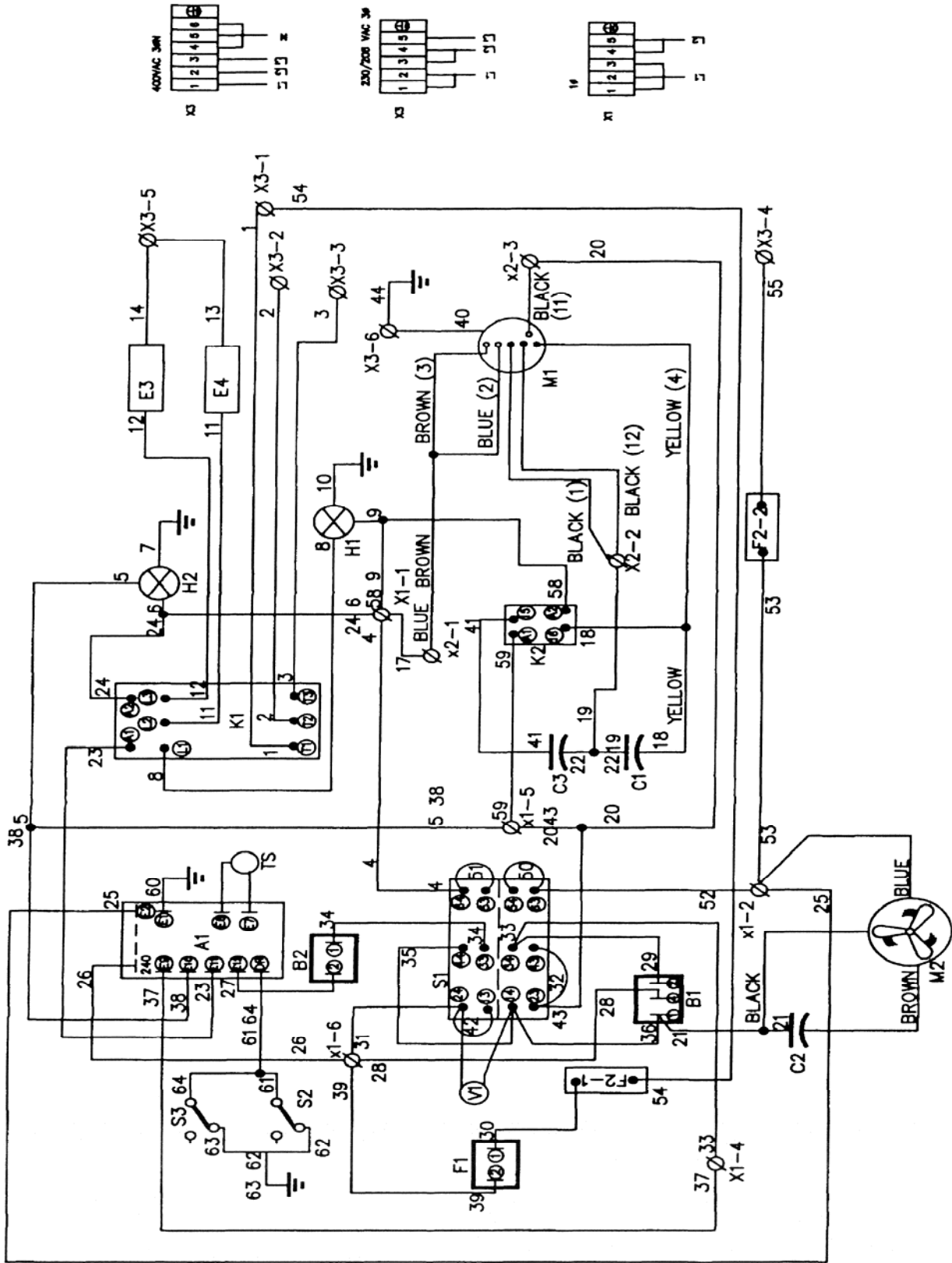
For units manufactured prior to Serial Number SP0002237



X2-A1	K1-5	59	ULIO5C	6 SV	320	7	LSA	7	FM
X1	K2-A2	58	ULIO5C	6 SV	410	7	FM	7	LSA
T	A1	57	ULIO5C	16 SV	180	5	G	7	FM
X3-4	F3	55	ULIO5C	4 SV	50	7	LSA	5	G
X3-1	F2	54	ULIO5C	4 SV	90	7	LSA	5	G
X1-2	F3	53	ULIO5C	4 SV	750	7	FM	5	G
SI-63	X1-2	52	ULIO5C	4 SV	50	7	LSA	7	FM
SI-64	SI-53	51	ULIO5C	4 SV	100	7	LSA	7	LSA
SI-63	SI-54	50	ULIO5C	4 SV	100	7	LSA	7	LSA
X3-J	BOTT	44	ULIO5C	4 GG	270	7	LSA	5	R
SI-23	X1-5	43	ULIO5C	16 SV	210	7	LSA	7	FM
SI-24	SI-13	42	ULIO5C	16 SV	100	7	LSA	7	LSA
K2-15	C3	41	ULIO5C	16 SV	650	7	LSA	7	FM
MP-J	X3-J	40	ULIO5C	16 GG	200	5	R	7	LSA
FI-P	X1-6	39	ULIO5C	16 SV	180	7	FM	7	FM
A1	X1-5	38	ULIO5C	16 SV	330	7	FM	7	FM
X1-4	A1	37	ULIO5C	16 SV	230	7	FM	7	FM
SI-4	BI	36	ULIO5C	16 SV	300	7	LSA	7	LSA
SI-14	SI-44	35	ULIO5C	16 SV	170	7	LSA	7	LSA
SI-33	B2	34	ULIO5C	16 SV	480	7	LSA	7	FM
SI-34	X1-4	33	ULIO5C	16 SV	240	7	LSA	7	FM
SI-23	SI-43	32	ULIO5C	16 SV	100	7	LSA	7	LSA
X1-6	SI-24	31	ULIO5C	16 SV	190	7	FM	7	LSA
F2	FI-1	30	ULIO5C	16 SV	780	5	G2	5	FM
B1-2	SI-34	29	ULIO5C	16 SV	510	7	FM	7	LSA
X1-6	BI-4	28	ULIO5C	16 SV	100	7	FM	7	FM
B2	A1	27	ULIO5C	16 SV	300	7	FM	7	FM
T1	X1-6	26	ULIO5C	16 SV	460	5	RM	7	FM
T1	X1-2	25	ULIO5C	16 SV	420	5	RM	7	FM
K1-A2	X1	24	ULIO5C	16 SV	140	7	LSA	7	FM
A1	K1-A1	23	ULIO5C	16 SV	370	7	FM	7	LSA
C3	C1	22	ULIO5C	16 SV	520	7	FM	7	FM
BI-1	C2	21	ULIO5C	16 SV	680	7	FM	7	FM
X1-5	X2-2	20	ULIO5C	16 SV	720	7	FM	7	FM
X2	C1	19	ULIO5C	16 SV	390	7	FM	7	FM
K2-10	C1	18	ULIO5C	16 SV	250	7	LSA	7	FM
X2-1	X1-1	17	ULIO5C	16 SV	680	7	FM	7	FM
A1	PT	16	SFF-2	6 SV	880	7	FM	7	FM
A1	PT	15	SFF-2	16 SV	890	7	FM	7	FM
E4	X1-5	14	SR-ML	14 SV	1040	5	R	7	LSA
E3	X3-5	13	SR-ML	14 SV	1340	5	R	7	LSA
K1-5	E4	12	SR-ML	14 SV	910	7	LSA	5	R
K1-3	E3	11	SR-ML	14 SV	1020	7	LSA	5	R
H1-J	B1	10	SFF-2	16 GG	1240	5	R	5	R
H1	X1-1	9	SFF-2	16 SV	2460	5	R	7	FM
X1-5	H1	8	SFF-2	16 SV	2855	7	FM	5	R
H2-J	B1	7	SFF-2	16 GG	1530	5	R	5	R
H2	X1-1	6	SFF-2	16 SV	2650	5	R	7	FM
K1-1	H2	5	SFF-2	16 SV	3160	7	LSA	5	R
X1-1	SI-64	4	ULIO5C	14 SV	110	7	FM	7	LSA
X3-3	K1-6	3	ULIO5C	14 SV	700	7	LSA	7	LSA
X3-2	K1-4	2	ULIO5C	14 SV	690	7	LSA	7	LSA
X3-1	K1-2	1	ULIO5C	14 SV	680	7	LSA	7	LSA

PANORAMA 5

97 64 11 08-07 ~60 208V / 3 ~60 208V  
 97 64 11 07-07 ~60 240 ? ~60 240





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