



TECHNICAL SERVICE GUIDE

GE 30" Free-Standing Radiant / Convection Range

GE Radiant Self Clean Range Models:

JBP65GS1
JBP75GS1
JBP75WS1
JBP75AS1
JBP76GS1
JBP77GS1
JBP78GS1
JBP79GS1
JBP79WS1
JBP79AS1

GE Radiant Self Clean Range Models:

JBP80GS1
JBP80WS1
JBP80AS1
JBP90GS1
JBP90WS1
JBP90AS1



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1993 GE 30" FREE-STANDING RADIANT/CONVECTION RANGES

A new series of 30" Free-Standing Ranges will go into production in September 1993. The GE Line contains 10 new Radiant Top Ranges with self clean ovens, and the Profile Line has two groups of models (Coil Top with Convection/Self Clean Oven and Radiant Top with Convection/Self Clean Oven). The following chart list the models and a summary of their features:

GE BRAND 30" FREE-STANDING RADIANT TOP RANGES

MODEL NO.	COLOR	CONTROL TYPE	SURFACE ELEMENTS	DOOR TYPE
JBP65GS1	WHITE / ALMOND	QUICKSET II SINGLE LINE BREAK	2-6" & 2-8" RADIANT UNITS	BLACK GLASS WINDOW
JBP75GS1	WHITE / ALMOND	QUICKSET III SINGLE LINE BREAK	2-6" & 2-8" RADIANT UNITS	LARGE BK GLASS WINDOW
JBP75WS1	WHITE	QUICKSET III SINGLE LINE BREAK	2-6" & 2-8" RADIANT UNITS	LARGE WH GLASS WINDOW
JBP75AS1	ALMOND	QUICKSET III SINGLE LINE BREAK	2-6" & 2-8" RADIANT UNITS	LARGE AD GLASS WINDOW
JBP76GS1	WHITE / WHITE	QUICKSET III SINGLE LINE BREAK	2-6" & 2-8" RADIANT UNITS	LARGE WH GLASS WINDOW
JBP77GS1	ALMOND/ ALMOND	QUICKSET III SINGLE LINE BREAK	2-6" & 2-8" RADIANT UNITS	LARGE AD GLASS WINDOW
JBP78GS1	BLACK / BLACK	QUICKSET III SINGLE LINE BREAK	2-6" & 2-8" RADIANT UNITS	LARGE BK GLASS WINDOW
JBP79GS1	BLACK / BLACK	QUICKSET IV	2-6", 1-8" & 1-6/9" RADIANT UNITS	LARGE BK GLASS WINDOW
JBP79WS1	WHITE / WHITE	QUICKSET IV	2-6", 1-8" & 1-6/9" RADIANT UNITS	LARGE WH GLASS WINDOW
JBP79AS1	ALMOND/ ALMOND	QUICKSET IV	2-6", 1-8" & 1-6/9" RADIANT UNITS	LARGE AD GLASS WINDOW

GE PROFILE BRAND 30" F.S. COIL TOP - CONVECTION / SELF CLEAN OVEN

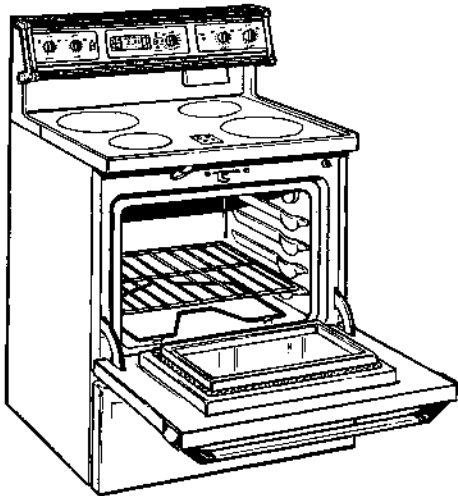
MODEL NO.	COLOR	CONTROL TYPE	SURFACE ELEMENTS	DOOR TYPE
JBP80GS1	BLACK / BLACK	QUICKSET V	2-6" & 2-8" S.U. W/ BLACK BOWLS	LARGE BK GLASS WINDOW
JBP80AS1	ALMOND/ ALMOND	QUICKSET V	2-6" & 2-8" S.U. W/ BLACK BOWLS	LARGE AD GLASS WINDOW
JBP80WS1	WHITE / WHITE	QUICKSET V	2-6" & 2-8" S.U. W/ GRAY BOWLS	LARGE WH GLASS WINDOW

GE PROFILE BRAND 30" RADIANT TOP - CONVECTION / SELF CLEAN OVEN

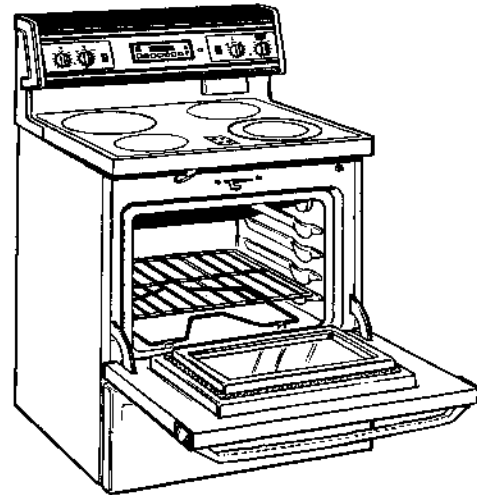
MODEL NO.	COLOR	CONTROL TYPE	SURFACE ELEMENTS	DOOR TYPE
JBP90GS1	BLACK / BLACK	QUICKSET V	2-6", 1-8" & 1-6/9" RADIANT UNITS	LARGE BK GLASS WINDOW
JBP90AS1	ALMOND / ALMOND	QUICKSET V	2-6", 1-8" & 1-6/9" RADIANT UNITS	LARGE AD GLASS WINDOW
JBP90WS1	WHITE / WHITE	QUICKSET V	2-6", 1-8" & 1-6/9" RADIANT UNITS	LARGE WH GLASS WINDOW

WARRANTY: Full One Year - Covers any part and service labor in home that fails because of manufacture defect.

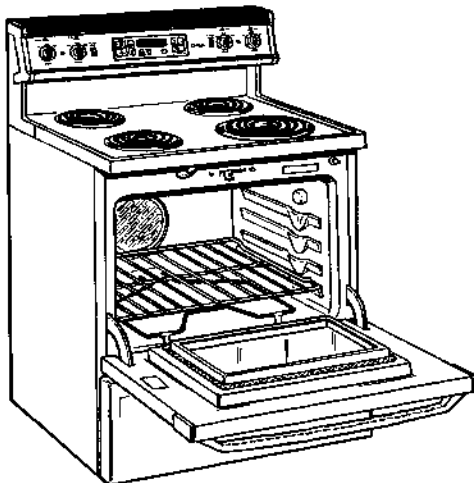
Full Five Year - Covers Cracking ceramic top due to thermal shock, Discoloration, Wear Off of Pattern, Cracking of rubber seal around porcelain edges and Radiant Heating Elements against burn out.



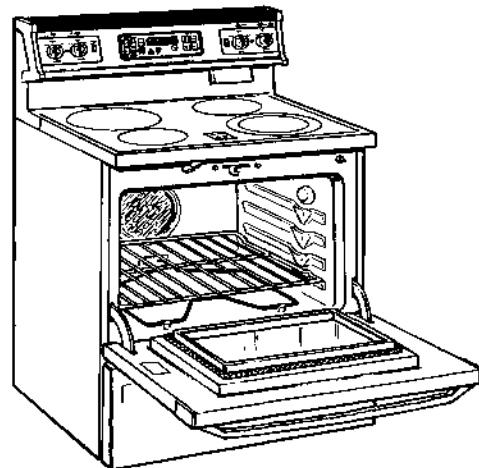
JBP65, JBP75, JBP76, JBP77, JBP78 SERIES



JBP79 SERIES



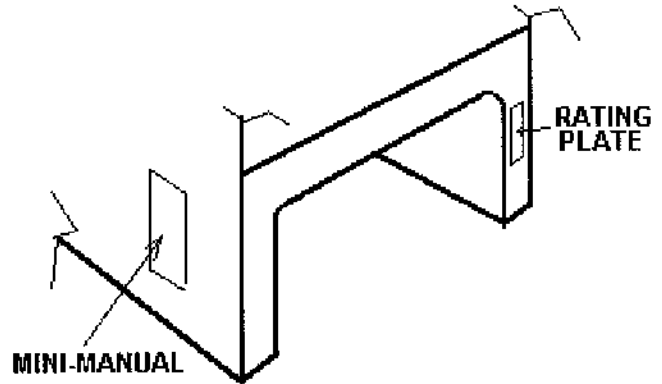
JBP80 SERIES



JBP90 SERIES

RATING PLATE:

The Rating Plate is located on the right hand filler panel behind the storage drawer.



MINI-MANUAL / SCHEMATIC WIRING DIAGRAM:

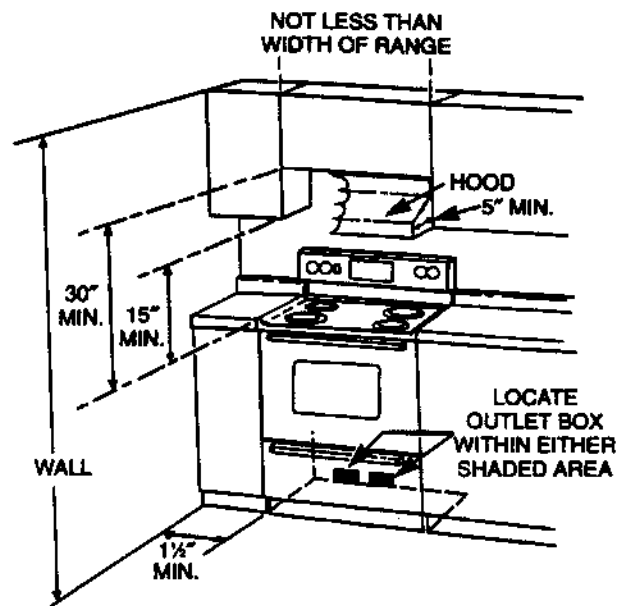
The Mini-Manual / Schematic Wiring Diagram is located on the left body side in drawer area.

INSTALLATION:

The range must be connected to a power supply circuit of proper voltage and frequency as specified on the rating plate.

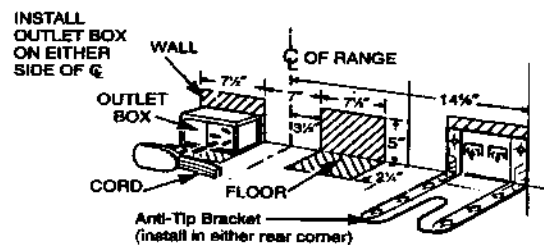
The range should have:

- 1½" minimum spacing from adjacent vertical walls above the cooktop surface.
- 30" minimum clearance between surface units and bottom of unprotected wood or metal top cabinet.
- 15" minimum clearance between countertop and adjacent cabinet bottom.
- 15" minimum clearance between countertop and adjacent cabinet bottom.



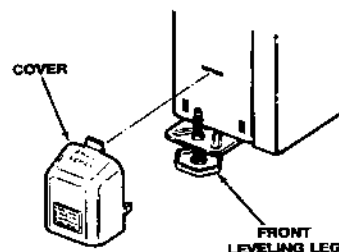
The outlet box is located 3½" to the left or right of the centerline of the range and no more than 5" from the floor.

The Anti-Tip Bracket should be installed directly in line with either the right or left rear leveling leg as described in the instructions provided with the product. (Anti-TIP Bracket Kit No. WB02x7876).



To Level The Range:

1. Remove storage drawer and plastic covers over front leveling legs.
2. Adjust the leveling feet up or down using a wrench or channel locks to level range.
3. Replace plastic covers and storage drawer.

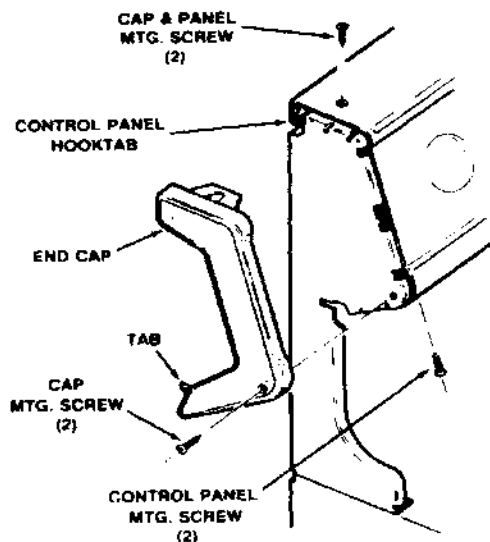


CONTROL PANEL

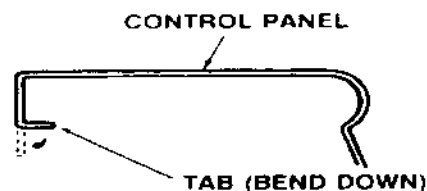
The control panel assembly contains the following components depending upon model features - infinite heat switches (4), indicator lights, oven control, surface light switch, oven light switch and 6/9" unit select switch. All the components can be serviced from the front.

To Access Control Panel Assembly:

1. **DISCONNECT POWER TO RANGE.**
2. Remove 2 End Caps mounted by 2 screws each (one on top and one on side), pull bottom of end cap forward to release bottom tab and then to the side to clear top screw mounting tab.
3. Remove two screws across bottom of control panel.
4. Pull down and forward on bottom of control and rotate up to clear end plates.
5. Slide top of control panel back to disengage tabs from back of range and LIFT off.
6. lay control on protective surface to prevent damage.
7. Reinstall in reverse order.



NOTE: Prior to installing - bend the two tabs on back of control panel assembly (one each side) straight down. This eliminates the need to remove the back cover to install control panel.



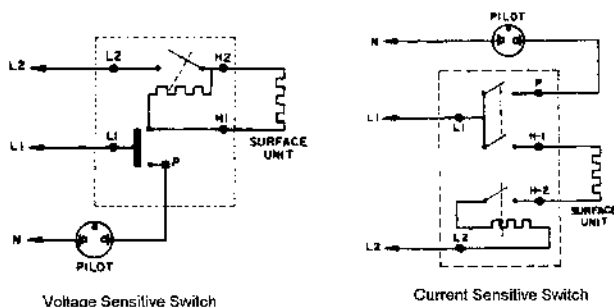
INFINITE HEAT SWITCHES

The infinite heat switches are mounted to the control panel assembly across the back of the range.



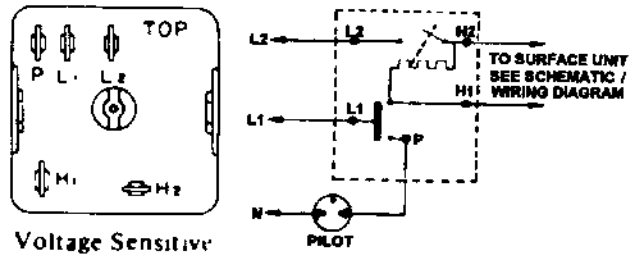
The range can have one of two types of infinite heat switches:

- Current sensitive type with the switch bi-metal heater in series with the surface unit load.
- Voltage sensitive type with the switch bi-metal heater parallel with the surface unit load.



30" FREE-STANDING RADIANT / CONVECTION RANGE
INFINITE HEAT SWITCHES CONTINUED

Replacement Switches are the voltage sensitive type. Proper connection of all leads must be observed (L1 lead connected to L1 terminal on switch, etc.). Reversed wiring of one switch can cause one or more switches to blow when a correctly wired switch and a reversed wired switch are turned on simultaneously.



INFINITE HEAT SWITCH REPLACEMENT:

The infinite heat switches can be accessed one of two ways:

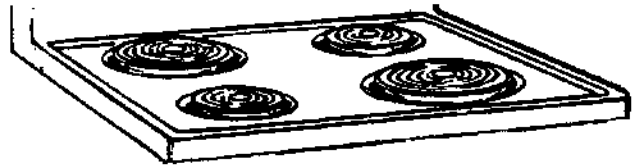
1. **Back Cover Removal** - the range must be pulled out from the wall to access back cover. **Care must be taken not to damage floor.**
2. **Control Panel Removal** - see control panel access.

SURFACE COOKING

The ranges use three different types of surface cooking elements.

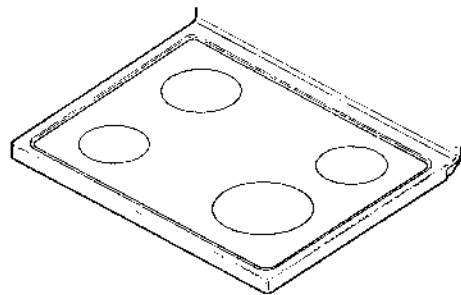
1. PLUG-IN SURFACE UNITS (JBP80 Series)

The models have 2 - 6" 1325 watt and 2 - 8" 2350 watt coil units.



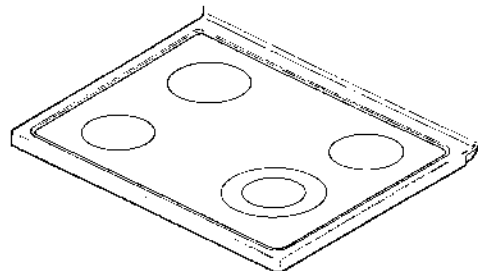
2. RADIANT HEATING ELEMENTS (JBP65, JBP75, JBP76, JBP77, & JBP78 Series)

This series of models have 2 - 6" 1400 watt and 2 - 8" 1900 watt heating elements.



3. RADIANT HEATING ELEMENTS (JBP79 & JBP90 Series)

This group of models have 2 - 6" 1400 watt, 1 - 8" 1900 watt and 1 - 6/9" 2400 watt dual element.



PLUG - IN SURFACE UNITS

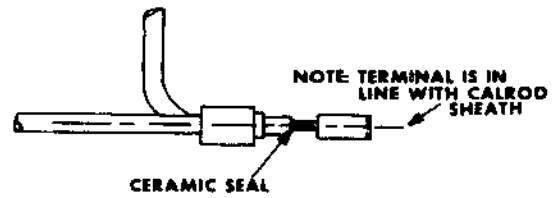
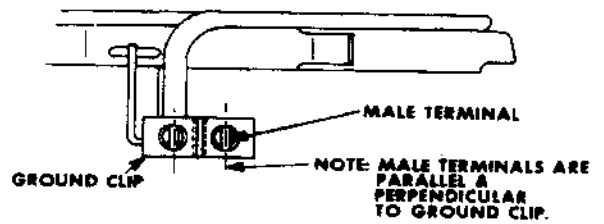
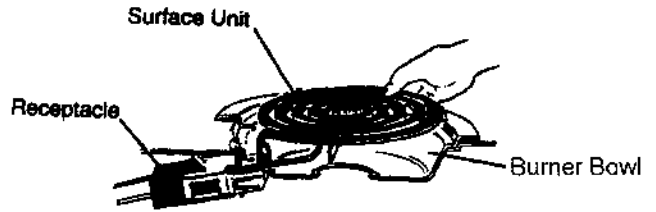
The Plug - In unit is removed from the range by lifting slightly (No more than 1") on the side opposite the receptacle and pulling straight out.

When inserting units make sure the burner bowl opening is properly aligned with the receptacle.

Plug - In Unit Terminals should be straight and parallel. If terminals need to be straightened due to unit being dropped or damaged, care should be taken not to damage the ceramic seals in the ends of the sheath.

Possible Causes for Wobbly, Uneven or Rattling Surface Units

- Burner Bowls not flat
- Cooktop not flat
- Surface Unit Support (spider) not flat
- Receptacle Block / Clip mounted crooked
- Loose or stripped mounting screw
- Bent Surface Unit Terminals

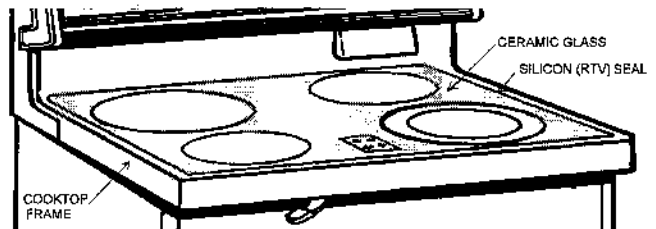


RADIANT TOP RANGE

The Radiant Top is a ceramic glass panel sealed into a metal frame by silicon with 4 heating elements, temperature limiters and hot surface lights mounted to the underneath side.

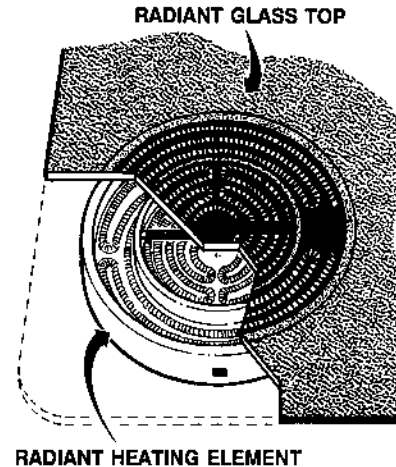
CERAMIC GLASS & FRAME ASSEMBLY:

The glass panel is made of a durable ceramic material that is able to withstand extreme swings in temperature, stains, scratches along with transmitting heat efficiently. The panel is sealed into the cooktop frame by silicon which provides for a smooth water tight seal. The edge of the frame has a lip around the perimeter which helps to contain spills.



RADIANT HEATING ELEMENTS:

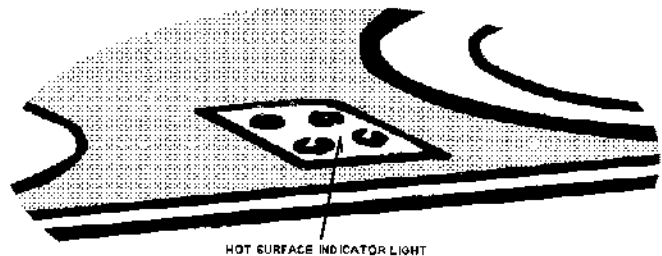
The 4 heating elements are located in the target areas on the underneath side of the ceramic glass. The elements respond quickly when power is applied glowing red within approximately 10 seconds. The response of the units cycling on and off can be seen through the glass in the target areas.



HOT SURFACE INDICATOR LIGHTS:

The hot surface indicator lights are located at the center front of the glass top. When a unit is turned on the light for that unit comes on immediately and remains on until the glass area above the heating element has cooled below 150°F.

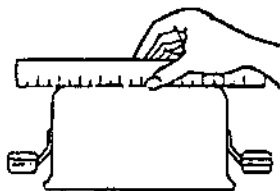
NOTE: The glass temperature is only monitored directly above the heating element.



COOKWARE:

Use of correct cookware can affect the cooking performance and cleaning of the ceramic glass cooking surface. The following is a few methods for checking cookware performance:

- **FLAT BOTTOM** - Turn the pan upside down and place a straight edge across the bottom of the pan. The straight edge should fit flush against the bottom of the pan. Check the pan bottom in several directions.



- **HEAT DISTRIBUTION** - Place about one inch of water in the pan. Turn element on high heat. Observe the bubble pattern as the water starts to boil. If the pan is flat (making good contact with the surface), it

will have even bubble distribution. Bubbles localized indicates an uneven pan.

- **TYPES OF COOKWARE**

Stainless Steel: Highly recommended - with sandwich clad bottom (layer of aluminum or copper between two layers of stainless steel).

Aluminum: Heavy weight recommended. Provides good conductivity. Can leave some residue that appears to be scratches. Avoid thin aluminum pans.

Copper Bottom: Good performance, but may leave residue that must be cleaned immediately. Boiled dry pots can cause copper to bond to glass.

Porcelain/Enamel: Good performance with thick flat smooth bottoms.

Glass-ceramic, Stoneware & Cast Iron: Poor performance, (not recommended) will scratch glass surface.

CERAMIC COOKTOP CLEANING:

The glass ceramic top requires some special care in maintaining the appearance of the surface. The use of normal household cleaners can damage the ceramic surface. Many of these cleaners contain ammonia, chemicals and other abrasives.

GE recommends and supplies with the product a COOK TOP CREME and RAZOR SCRAPER for cleaning the ceramic top.



CLEANING PROCEDURE:

Light or Normal Soil:

1. Rub a small amount of Cook Top Creme onto soiled area with a damp paper towel.
2. Buff with a dry paper towel until all soil and creme are removed.

Frequent cleaning leaves a protective coating which is essential in preventing scratches and abrasions.

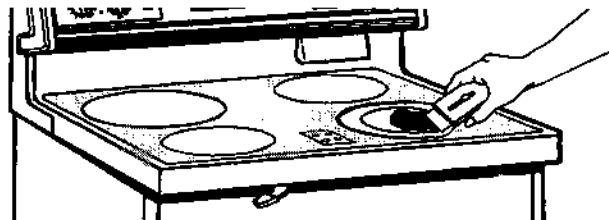
Heavy Burned on Soil:

1. Carefully scrape soil with razor scraper holding at a 30° angle against the ceramic surface.
2. Apply a few drops of Cook Top Creme to soiled surface and rub in with damp paper towel.
3. Buff with a dry paper towel.
4. If soil remains repeat the above process.

NOTE: Do not use a **dull** or **nicked** razor blade.

Sugary Spills:

These types of spills must be cleaned up while the cooking surface is still hot. If they are allowed to cool and harden they could damage cooktop. Using a oven mitt scrape the spill to a cool area of the cooktop and remove. Do not continue to use unit. After area has cooled clean by above procedure.



APPEARANCE DEFECTS:

Scratches, marks (cooking utensils), discoloration stains, spots etc. can be caused by food soils, cookware, cleaning solutions or water marks.

- **BEFORE** replacing **COOKTOP** try using above cleaning procedure. Many of these defects are actually soils or marks that can be cleaned off.

RADIANT HEATING ELEMENTS

HEATING ELEMENTS:

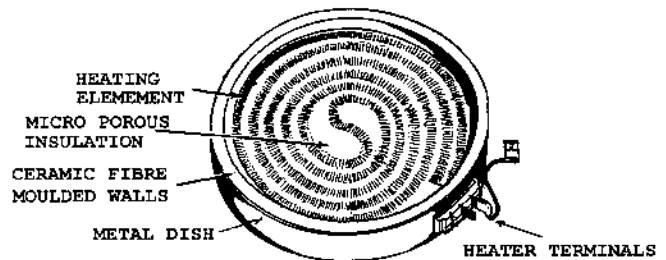
The Radiant Heating Element consist of a spiral wound resistance wire attached to micro porous insulation with molded ceramic fibre walls in a corrosion protected metal dish. The heating elements come in two different constructions.

NOTE: When replacing heating elements it is necessary to replace with same type as removed, otherwise an appearance problem could exist when the heating elements cycle.

REDRING CONSTRUCTION

The Heating Elements come in two sizes:

- 6" - 240 Volt 1400 Watts
- 8" - 240 Volt 1900 Watts

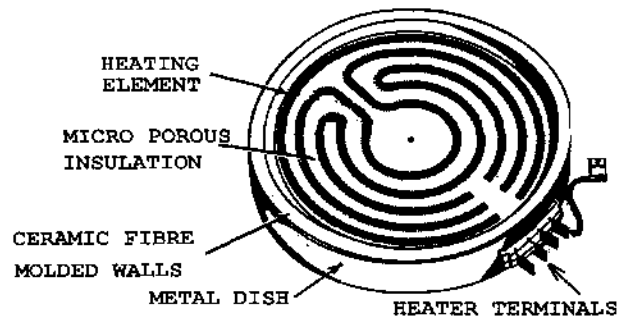


CERAMASPEED CONSTRUCTION

The Single Heating Elements come in two sizes:

- 6" - 240 Volt 1400 Watts
- 8" - 240 Volt 1900 Watts

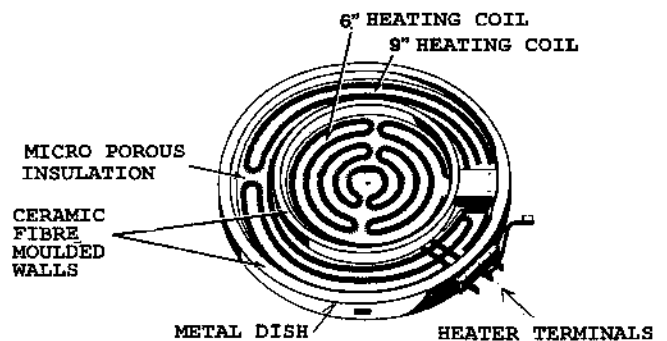
SINGLE ELEMENT



The Dual Heating Element has two coils and can be used either as a 6" or 9" unit with the following wattages:

- 6" 240 Volt 1000 Watts
- 9" 240 Volt 2400 Watts

DUAL ELEMENT

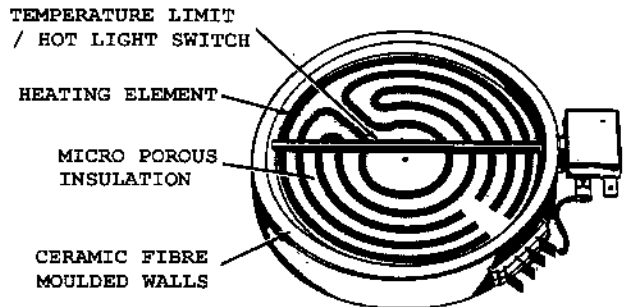
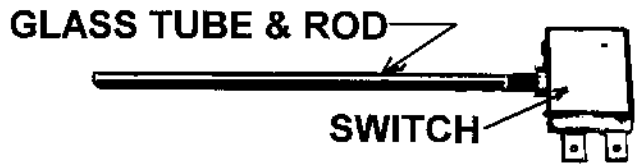


TEMPERATURE LIMIT / HOT LIGHT SWITCH:

The Temperature Limit / Hot Light Switch is attached to the heating element base with a glass tube and metal rod that extends across the center of the element. The rods expansion and contraction operates the contacts inside the switch, thus controlling the hot light operation and breaking power to the unit if the glass gets to hot.

The Temperature Limit / Hot Light Switch performs two functions:

1. Turns on HOT LIGHT as soon as power is applied to a unit. The Hot light will remain on until the Glass Surface above the heating unit has Cooled Below 150°F (Even after surface unit switch has been turned off).
2. Detects when Glass Temperature above a unit has exceeded its limit of approximately 1031°F and disconnects power to that unit. When glass temperature cools below 1031°F, the unit will turn back on.



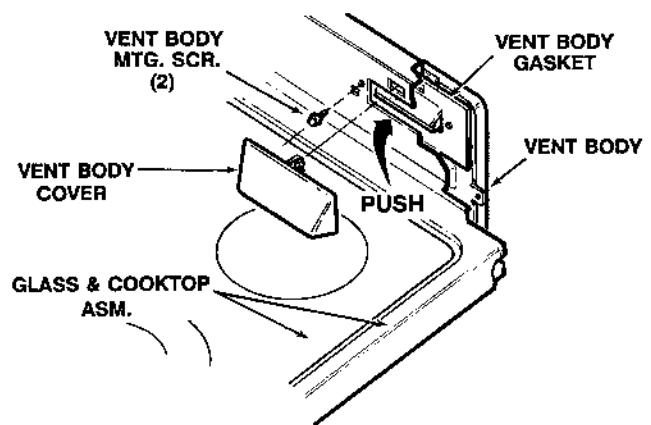
The temperature limit / hot light switch can not be calibrated, but can be replaced independently of the heating element.

TO SERVICE RADIANT ELEMENTS:

1. **DISCONNECT POWER TO RANGE**
2. Remove Vent Body Cover from back of Cooktop by pushing up on bottom of cover and pulling forward. (NOTE: Vent body cover is not intended to be removed by customer).

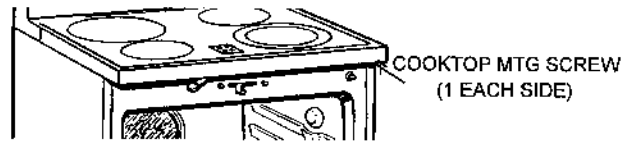
IMPORTANT: Vent Body must clear cooktop opening to avoid damaging porcelain.

3. Remove 2 screws securing vent body to cooktop and push back through opening.



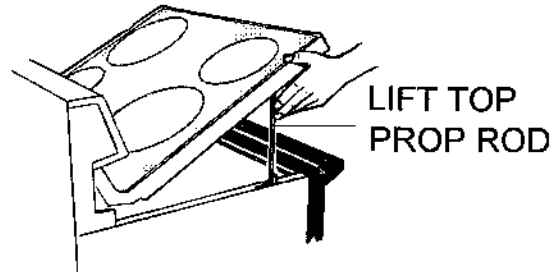
30" FREE-STANDING RADIANT / CONVECTION RANGE
 TO SERVICE RADIANT HEATING ELEMENTS CONTINUED

- Remove two screws from front edge of Cooktop above door and lift Cooktop up. (Cooktop is hinged in rear).



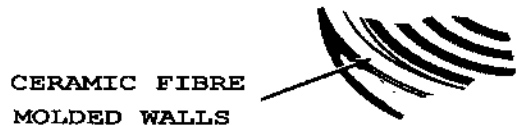
CAUTION: *Extra CARE MUST be taken to avoid scratching the underneath side of the ceramic glass. Scratches can cause the glass to break.*

- Support Cooktop making sure not to damage glass or range body. (Lift top prop rod can be used).

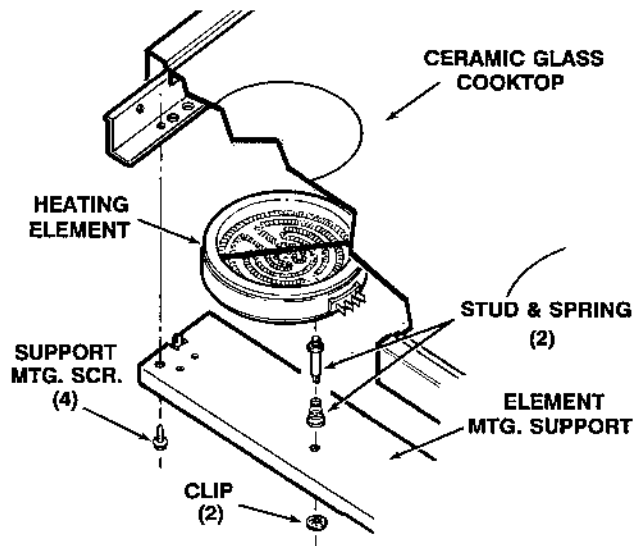


NOTE: When raising Cooktop do not raise above a 45° angle to avoid damage to end caps and Cooktop assembly.

CAUTION: *Fibre Ceramic material is very fragile on heating element - avoid contacting.*



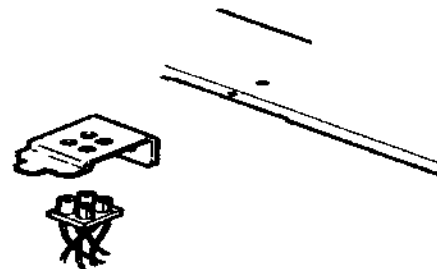
- Mark heating element stud holes and support screws location. Remove the clips from the mounting studs on the heating element that must be serviced.



- Remove 4 screws (two each side) mounting the radiant element support and lower down on top of oven liner.

NOTE: When servicing front elements remove hot light bracket before lowering element support.

- Hot light bracket is mounted to front support by one screw and tabbed into cooktop flange.



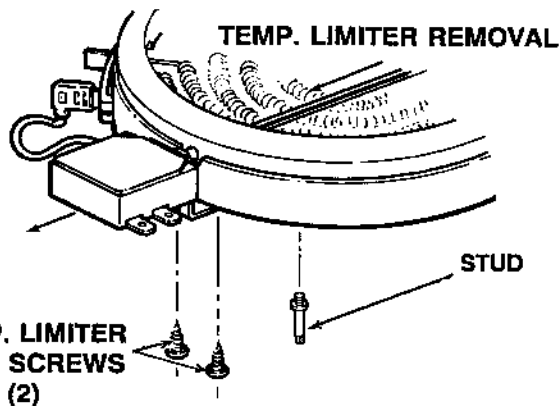
- Disconnect wires and lift element off.

30" FREE-STANDING RADIANT / CONVECTION RANGE
TO SERVICE RADIANT HEATING ELEMENTS CONTINUED

9. Remove mounting studs (3/16" wrench or socket) and temperature limit / hot light switch for old element and install on new element.

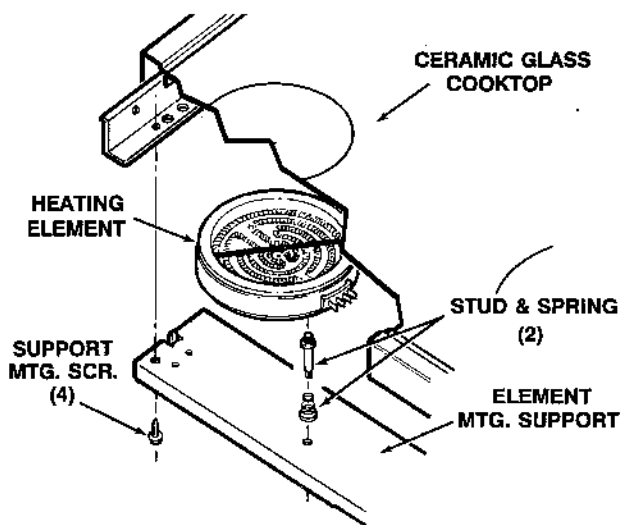
NOTE: Reference heating element removed for stud location DO NOT OVER TIGHTEN STUDS.

- Temperature limit /hot light switch is mounted to elements metal case by two screws.

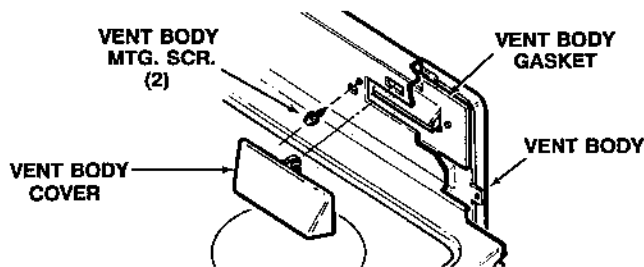


10. Position Springs over mounting studs and insert into marked holes. Make sure larger diameter end of spring is towards support bracket. (It is not necessary to reinstall clips but, aids in assembly).

11. Remount support to COOKTOP making sure that the Radiant Elements are pressed firmly against bottom of glass and aligned with target areas (Always start the left two screws first for proper alignment).



12. Lower cooktop slowly making sure vent body and gasket aligns with cooktop opening.
13. Drive mounting screws and attach vent cover to cooktop.
14. Replace cooktop mounting screws at front edge above door.



HOT LIGHT:

The four hot lights will be replaced as one assembly. Both front and rear element supports must be removed from cooktop to access hot light terminals on elements.

MOUNTING BRACKET



HOT LIGHTS

COOKTOP REMOVAL:

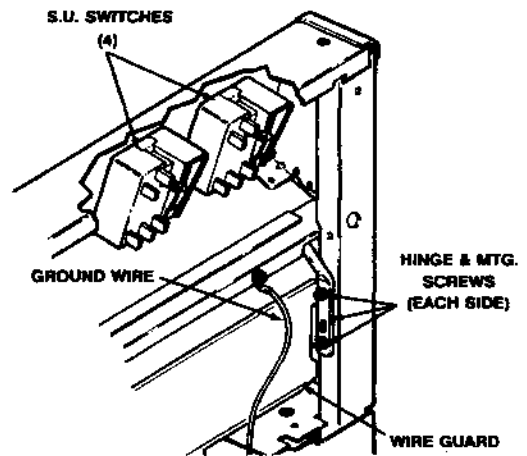
1. **DISCONNECT POWER**, Pull Range out from wall and remove top back wire cover.
2. Remove 2 hinge arm brackets and disconnect ground wire from cooktop.
3. Remove 2 screws from front edge of cooktop.
4. Raise cooktop to 90° angle by carefully rotating cooktop out from under control panel assembly.

NOTE: Place a protective covering between cooktop back and range body.

5. Remove hot light bracket and the two element support brackets and carefully lay them on top of oven liner and lift cooktop off.

6. Reassemble in reverse order.

NOTE: Care must be taken not to scratch underneath side of glass.



SELF CLEAN OVEN CONTROL SYSTEMS

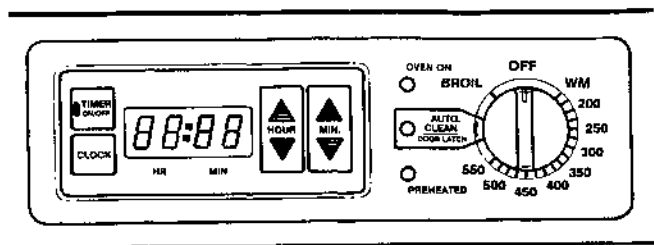
The new models will use one of the following types of electronic oven control systems.

1. QUICKSET 2 Control - consists of a time of day clock and selector knob for choosing the desired oven function.
2. QUICKSET 3 Control - same as quickset 2 except it contains automatic oven timing function (variable clean time & time bake).
3. QUICKSET 4 (ERCII) Control - full electronic touch pad control.
4. QUICKSET 5 Control - contains convection oven feature, child lockout along with similar functions as the quickset 4 control.

QUICKSET 2 & 3 CONTROLS:

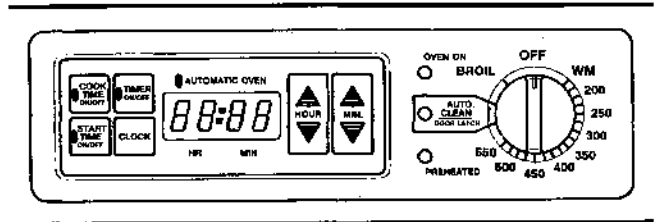
QUICKSET 2

Oven control system consists of a Selector Knob for choosing Bake, Broil or Clean modes and electronic time of day clock and timer (No oven control timing functions).



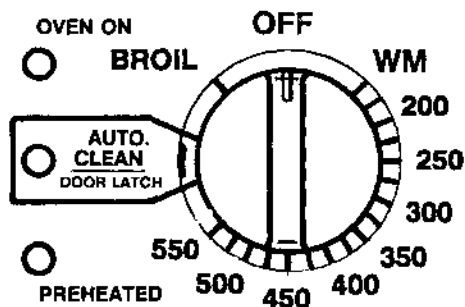
QUICKSET 3

Complete oven control system including automatic oven timed functions (time bake, delay start & stop). Control consists of a Selector Knob for choosing Bake, Broil or Clean modes a electronic clock and timer along with Cook Time and Start Time Pads.



CONTROL OPERATION:

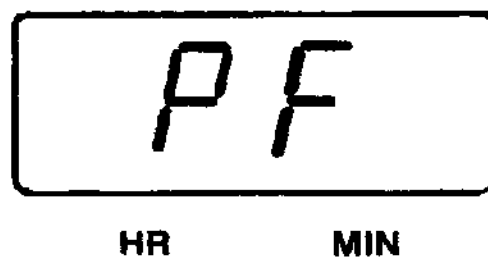
The oven heating is controlled by a function knob. The knob has a 360° rotation with détentes at the clean, broil and at the lowest and highest bake settings. If the knob is set in the dead spaces between détentes the oven will not operate.



POWER UP OR AFTER POWER FAILURE:

QUICK SET - 2 & 3

Display will flash "PF" until the clock is set or a heating function is selected. When a heating function is selected before setting the clock the display will blank out. When display blanks out press the clock pad and set the time of day.

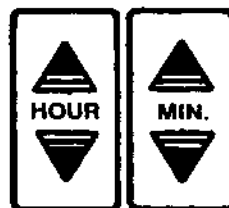


INCREASE / DECREASE PADS:

QUICK SET - 2 & 3

Each control has two Increase / Decrease Pads to aide in the selection of time in hours and minutes.

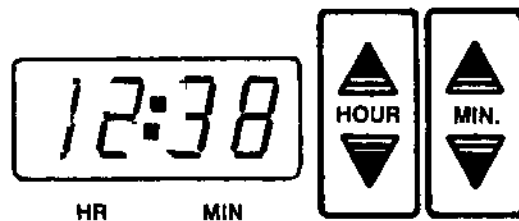
- Hour Pad used for selecting time in one hour intervals.
- Minute Pad for selecting time in minutes.



TO SET CLOCK:

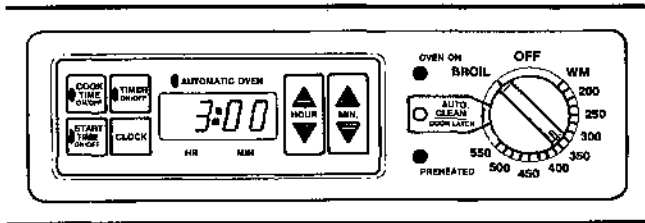
QUICK SET - 2 & 3

- Touch Clock Pad
- Touch Hour pad to Select Time in hours
- Press minute Pad to select correct time of day.
- Touch Clock Pad

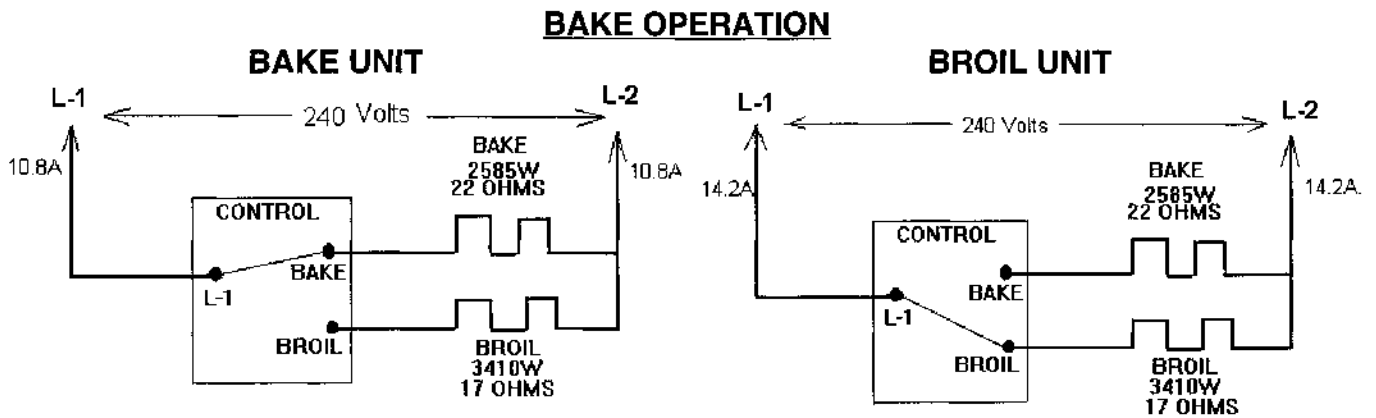


TO BAKE:

1. Rotate Select Knob to desired temperature setting.
2. " ON " light comes on and the unit begins its sequence cycle.
3. After oven reaches selected temperature the Control will give six (6) short beeps and Preheat Light will come on and remain on for the balance of the Bake Operation.

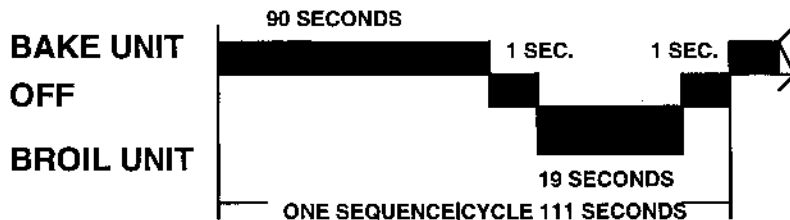


During the BAKE OPERATION both the Bake & Broil heating elements are used. The control cycles relays to supply power to either the bake or broil unit. Both units can never be on at the same time.



SEQUENCE CYCLE

Each complete sequence cycle is 111 seconds, Bake Unit "ON" 90 seconds followed by Broil Unit "ON" 19 seconds with a 1 second delay between switching from one unit to the other.



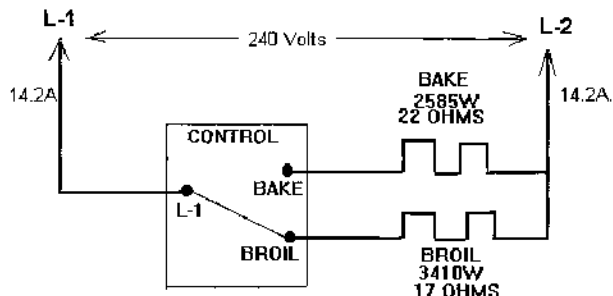
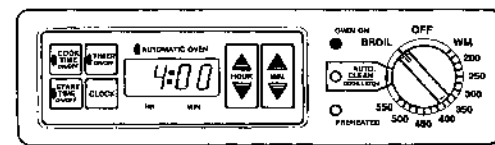
NOTE: Sequence cycle starts during the preheat phase and continues throughout the bake mode of operation.

- When the oven has reached its pre-selected temperature and cycles "OFF", the next heat cycle will start where the previous cycle left off.
- Example - Oven cycles "OFF" 45 seconds into the sequence cycle (bake unit), when the oven calls for heat the bake unit will come on for 45 seconds and then switch to the broil unit.

QUICK SET - 2 & 3

TO BROIL:

1. Open Oven Door to Broil Stop.
2. Rotate Knob to Broil détente.
3. "ON" light comes on until oven is turned "OFF".



CLEAN OPERATION:

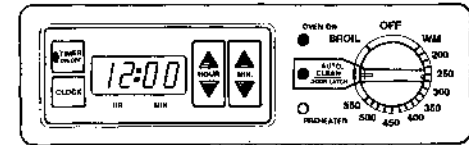
QUICKSET - 2

1. Move latch handle as far to the right as it will go.



2. Rotate Knob to the Clean détente.

3. Door Latched Light and "ON" Light comes on.



The Clean Time is preset for a total of 4 hours and 20 minutes which includes a 50 minute cool down. (The Clean Time is Automatically set for 4hrs. and 20 mins. and can not be changed). Both the "ON" Light and Door Latched Light will stay on for the complete 4 hours and 20 minutes.

QUICKSET -3

1. Move latch handle as far to the right as it will go.

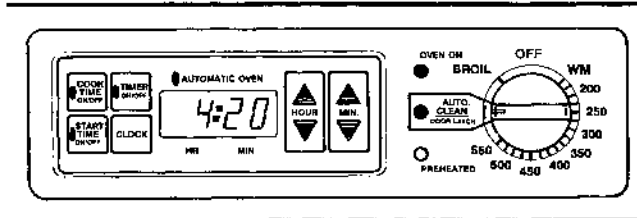


2. Rotate Knob to the Clean détente

3. Door Latched Light and "ON" Light come on and Display shows 4 Hrs. & 20 Mins.

4. Display will count down to zero.

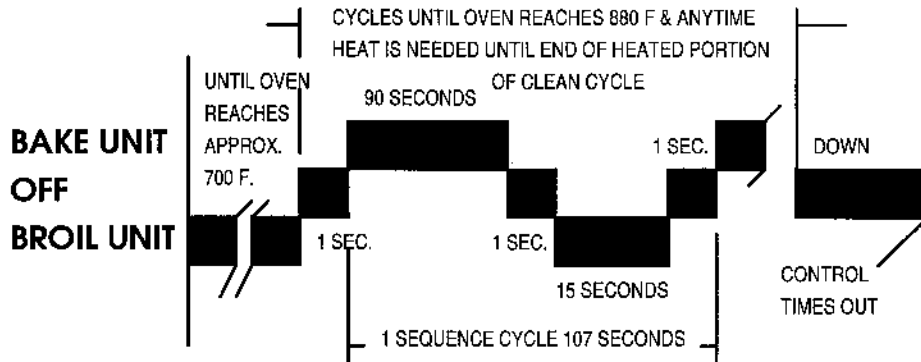
NOTE: Clean Time can be varied between 3hrs. & 5hrs. & 59 mins.



At the conclusion of the Clean Cycle the latch and on lights will flash until the Select Knob is set to the off position and door is unlatched. The control will not let the bake or broil modes operate if the door is latched (latch light will flash).

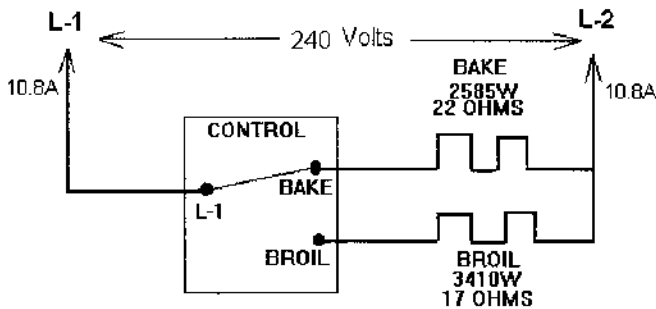
SEQUENCE CYCLE

During the initial heat up period the Broil Unit only is used until the oven reaches approximately 700° F. then it will begin a similar sequence cycle pattern as the bake mode. Each complete sequence cycle is 107 seconds, Bake Unit "ON" 90 seconds followed by Broil Unit "ON" 15 seconds with a 1 second delay between switching from one unit to the other.

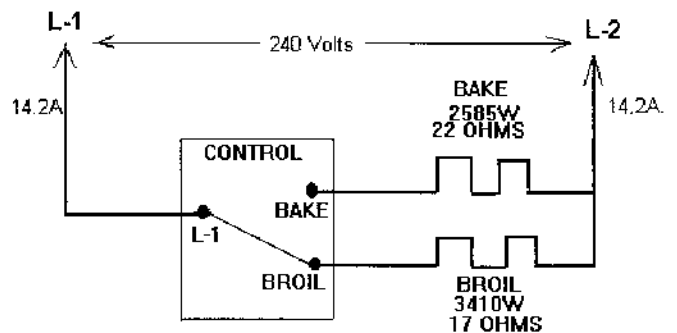


When the oven has reached its clean temperature and cycles "OFF", the next heat cycle will start where the previous cycle left off.

BAKE UNIT OPERATION



BROIL UNIT OPERATION



COOK TIME & START TIME (Quick Set - 3 Only)

These Pads are used for either Time Bake or Delay Start for Clean.

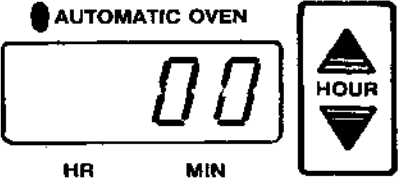


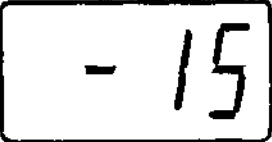

1. Press Start Time pad and then use Hour and Minute pads to select when oven is to start.
2. Press Cook Time if you want to control length of the cooking operation.



QUICK SET - 2 & 3 Bake Temperature Adjustment:

The Bake Temperature can be adjusted by $\pm 35^{\circ}\text{F}$ in 5° increments.

To Adjust Oven Bake Temperature:

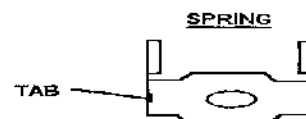
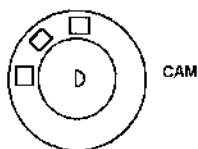
<p>1. Press and hold both the INCREASE and DECREASE HOUR Pads for about 4 seconds. Display will change from time of day to show 00.</p>	
<p>2. Raise or lower oven temperature by using the Hour Increase/Decrease Pads.</p>	
<p>3. Using the up HOUR Pad arrow will increase temperature in 5° increments up to 35°. The display will show the temperature without a + sign.</p>	
<p>4. Using the down HOUR Pad arrow will decrease temperature in 5° increments up to 35°. The temperature will be displayed with a - sign in front of the number.</p>	
<p>5. Approx. 5 seconds after temperature is changed the display will return to time of day and oven is ready for use.</p>	

DÉTENTE - SPRING & CAM

Each control contains a Spring and Cam mounted to the shaft of the rotary switch on the control. Their purpose is to provide a positive to the control as it is rotated from one mode of operation to another. **The spring and cam do not come with replacement controls.**

To Remove Cam & Spring:

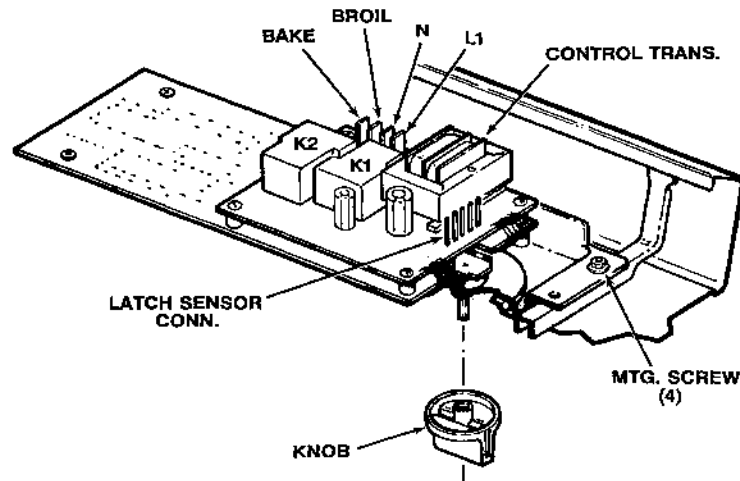
1. Rotate knob to warm position and pull knob off.
2. Gentle pull cam off shaft.
3. Remove spring mounting nut and lift spring off.



NOTE: The control will function without the cam & spring.

QUICKSET 2 & 3 CONTROL SYSTEM

The back of the Quick Set Controls contain 2 relays, control transformer, sensor connector, latch switch connector and four terminals (L-1, N, Bake & Broil).



CONTROL VOLTAGES:

NOTE: All QuickSet Controls have **Single Line Break.**

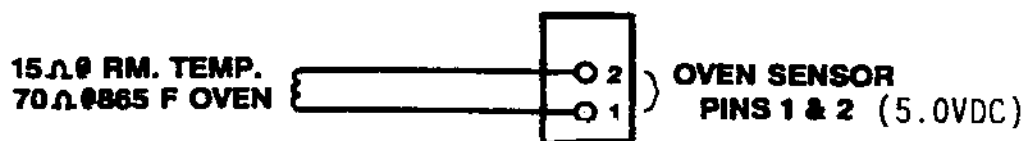
The following voltages must be present on the control board with the Select Knob in the "OFF" position.

TERMINALS	VOLTAGE
L-1 to N	120 volts (all the time) control transformer
L-1 to BAKE	240 volts (Knob in "OFF" position)
L-1 to BROIL	240 volts (Knob in "OFF" position)

STATIC TAPE: On the face of the control running from the shaft of the switch over to the mounting flange is a piece of metal tape. The purpose of the tape is to ground the shaft of the control to guard against static discharge which can damage the circuit boards.

SENSOR & LOCK CIRCUIT

<u>SENSOR CIRCUIT</u>	<u>TO CHECK SENSOR CIRCUIT:</u>
The Sensor Circuit consists of: <ul style="list-style-type: none"> • Sensor • Sensor Wiring and Connector 	1. Disconnect Power to Range and unplug sensor. 2. Measure resistance of Sensor - 15Ω at 75°F. room temperature. (Voltage at terminals on control measures 5.0 VDC.)



FLASHING LIGHT CODES

LIGHT	MEANING
Preheat Light Flashing - with control knob in any position except "OFF"	Shorted / open Sensor or Sensor Circuit Shorted to range frame.
Door Latch Light Flashing	<ul style="list-style-type: none"> Control set to cooking mode with door locked Control set to clean with door unlocked.
Oven On and Door Latch Light Flashing	The clean cycle has timed out and Select Knob has not been turned to "OFF" and door unlatched.

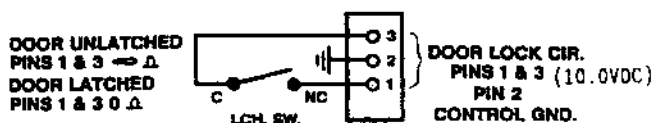
DOOR LOCK CIRCUIT

The Lock Switch is located on the back left of the Latch Mechanism. The switch connects to Pins 1 & 3 on the control board.

Ohm Meter Test

Door Unlatched Pins 1 & 3 $\infty \Omega$.

Door Latched Pins 1 & 3 0 Ω .

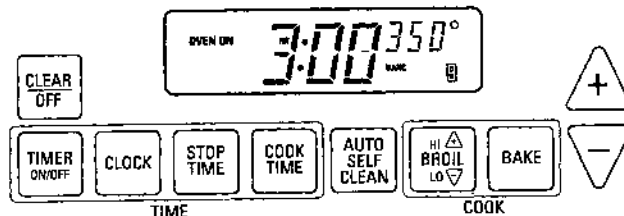


See page no. 33 for Latch Mechanism.

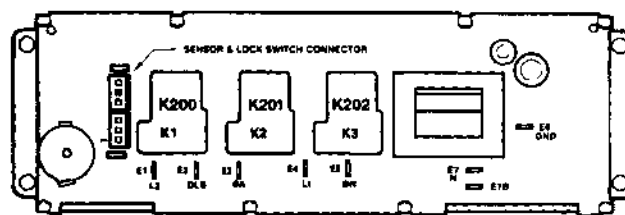
QUICKSET - 4 OVEN CONTROL SYSTEM (ERC II)

Electronic Self Clean Oven touch control with automatic oven timed functions (time bake, delay start & stop times), auto self clean (with variable clean time [2 to 4 hrs.], Hi / Lo Broil, Bake and Time of Day Clock and Timer.

See Technician Manual **Pub No. 31-0306** for control operation.



The back of the control consists of 3 Relays (Bake [K201 or K2], Broil [K202 or K3] and Double Line Break [k200 or K1]), Sensor & Lock Switch Connector and Control Transformer.



RELAY CONTACT OPERATION:

RELAY	TERMINALS	VOLTAGE *	MODE
K1 - LINE BREAK	DLB TO N	120 VAC	ALL
K2 - BAKE	BA TO DLB	240 VAC	BAKE
K3 - BROIL	BR TO DLB	240VAC	BROIL

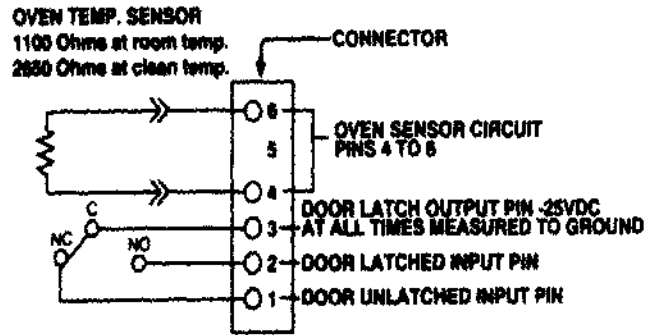
* Temperature / Mode Selection Necessary for operation of Relay contacts.

NOTE: Voltage must be present and across L1 to N for Control to operate.

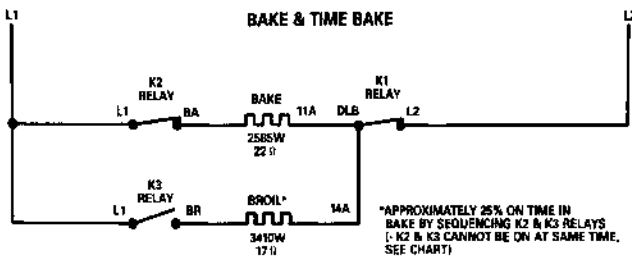
SENSOR & LOCK CIRCUITS OHMMETER TEST:

DISCONNECT POWER and make measurements from side of connector.

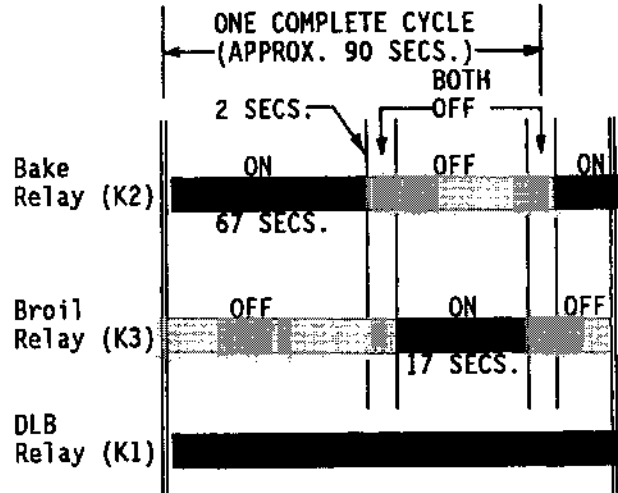
CIRCUIT	TERMINALS	OHMS
Oven Sensor	4 to 6	1100 (r Room Temp.
Door Unlatched	3 to 1	0
Door Latched	3 to 2	0



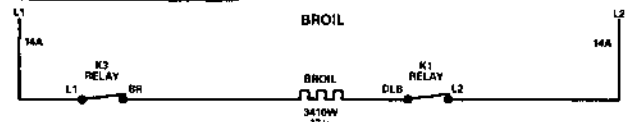
BAKE CIRCUIT:



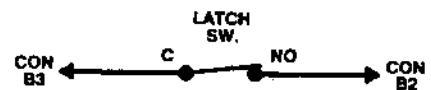
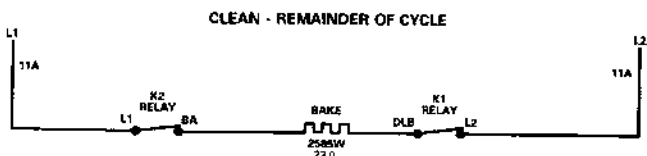
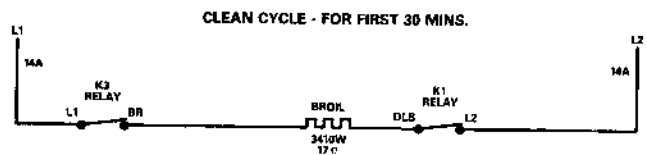
Relay Sequencing After Initial Pre-Heat Cycle



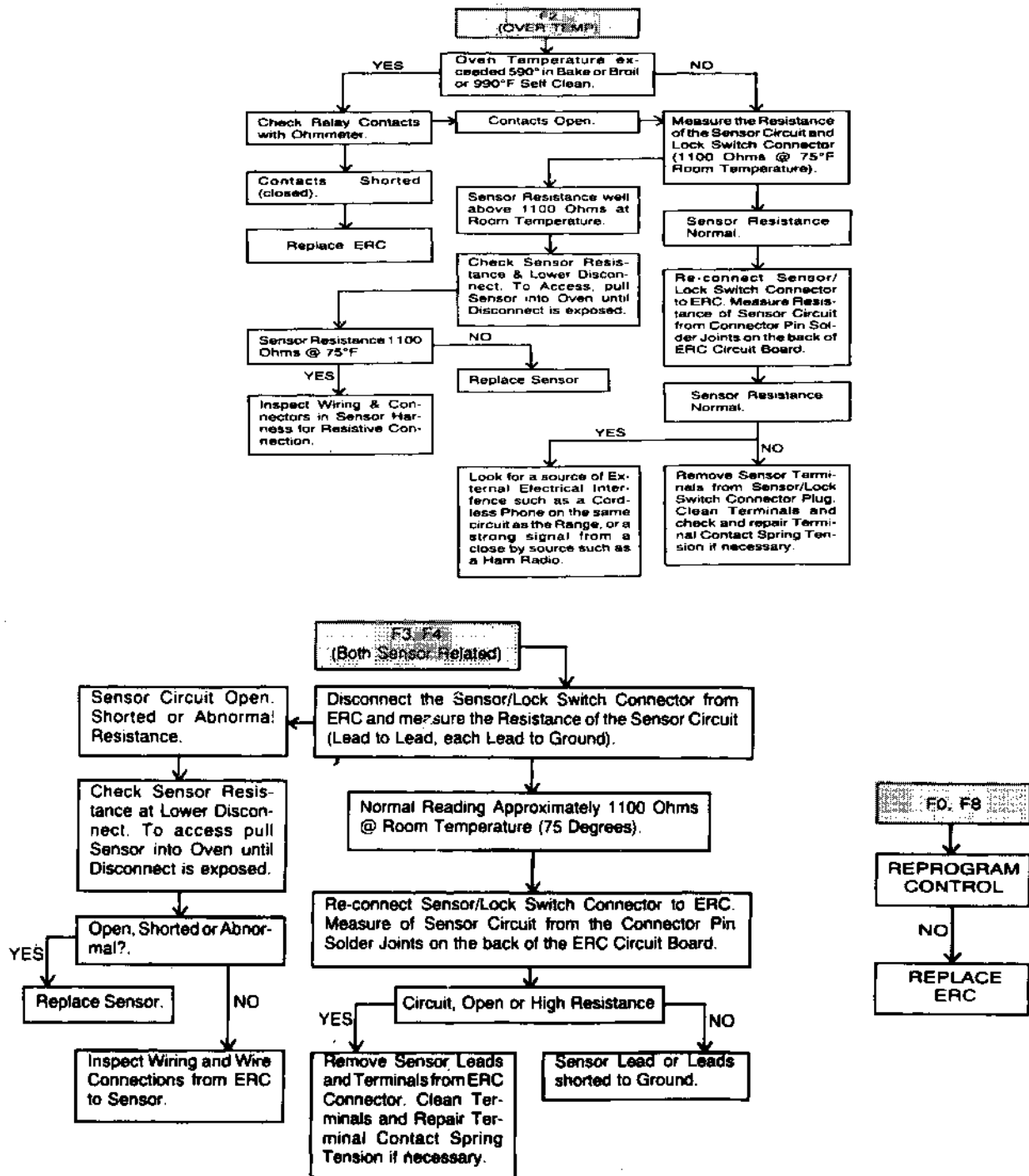
BROIL CIRCUIT:






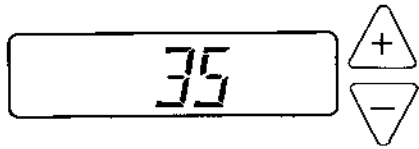

CLEAN CIRCUIT:



ERC FAILURE CODES FLOW CHART



BAKE TEMPERATURE CALIBRATION:

<p>The bake temperature can be adjusted by $\pm 35^{\circ}$ F. from the factory setting. <u>To Adjust The Bake Temperature:</u></p>	
<p>1. Press BAKE pad.</p>	
<p>2. Select any temperature above 500° F. by pressing the INCREASE pad.</p>	
<p>3. Immediately Press and Hold BAKE pad until "00" or previously entered temperature is displayed.</p>	
<p>4. Press the INCREASE or Decrease pad to change the oven temperature $+35^{\circ}$ or -35° in 5° steps.</p>	
<p>5. Press CLEAR / OFF pad to return to normal operation.</p>	

QUICKSET - 5 SELF CLEAN CONVECTION CONTROL:

The Convection Electronic Touch Control is similar to ERCII control used on 30" free standing ranges. The control system consists of the Electronic Control, Sensor, Door Latch Mechanism, and door lock circuit. The control has the following features:

BAKE, BROIL (HI & LO), CONVECTION BAKE, CONVECTION ROAST, COOK TIME, STOP TIME, TEMPERATURE PROBE, CHILD LOCKOUT, CLOCK AND TIMER.



CONTROL OPERATION:

Power Up or After Power Failure:

All segments of the display will light for about 5 seconds, then last set time of day will flash in display until the clock is set or another function is used.



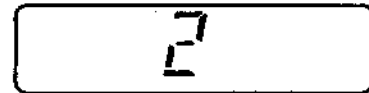
INCREASE / DECREASE PADS:

The following outlines the functions of the pads:

- Used to select Time, Temperature, Start & Stop Times, HI/LO Broil, etc.
- Pads will not function unless one of the program pads are touched first.
- No audible tone when touched.
- Used to initiate programs. If not touched within 20 seconds after program selection will default to time of day.

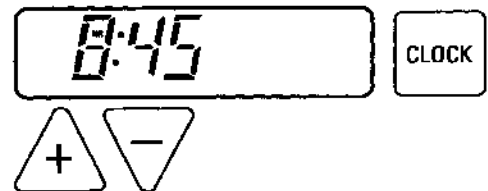


NOTE: Increase / Decrease pad speed can be changed by pressing and holding increase / decrease and timer pads for 2 to 3 seconds. A number between 1 & 5 will be displayed. 1 being slowest and 5 being fastest.



TO SET THE CLOCK:

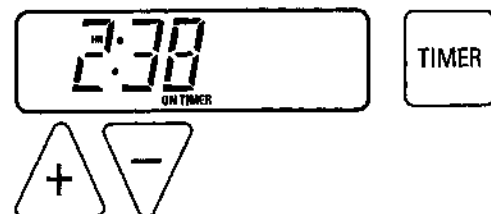
1. Touch Clock pad
2. Press Increase / Decrease pad to set time of day.
3. Press clock pad again to lock numbers in or they will automatically lock in after one minute.



TO SET TIMER:

The Timer does not control any oven operations. Maximum Timer setting 9 hours and 55 minutes.

1. Touch Timer pad
2. Press Increase / Decrease pads to select desired time. Timer will automatically start.



When the Timer reaches the last minute during the count down the display will change to seconds and a single beep will sound. at the end of the cycle the timer will signal and change to 00. Press timer pad of clear off pad to return to time of day.



DISPLAY CHANGED TO SECONDS



TIMER TIMED OUT



DISPLAY RETURNED TO TIME OF DAY

END OF CYCLE TONE:

At the "END" of a cycle the control will "BEEP" 3 times followed by a signal tone every six seconds until canceled.

The tone every six seconds can be eliminated by pushing and holding the CLEAR / OFF pad for 10 seconds.



CHILD LOCKOUT FEATURE:

The Control Has The Provision To Lock The Control Panel To Prevent The Oven From Being Used.

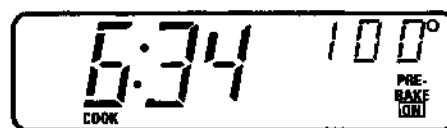
To Lock Control Panel - Press and hold INCREASE / DECREASE pads along with STOP TIME pad for approximately 2 seconds. The word "OFF" will appear in display and then disappear. Anytime the control is tried to be used "OFF" will be display.

Repeat above procedure to unlock control.



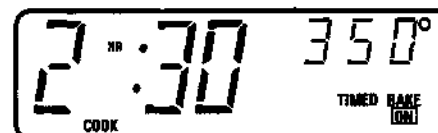
BAKE OPERATION:

1. Touch Bake Pad.
 - Control will "BEEP", ___° and SET Bake will appear in Display.
2. Press Increase /Decrease Pad.
 - Previous bake temperature will be displayed.
 - At initial power up or after power failure 170°F will be displayed.
3. Select desired temperature using Increase / Decrease pads.
 - After about 5 seconds the bake relay will close and display will show 100° and ON.



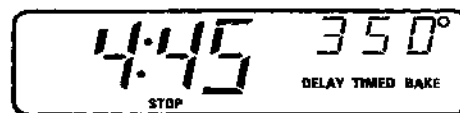
TO TIME BAKE:

1. Touch COOK TIME pad
 - 0HR:00 and oven on time will flash
2. Press Increase or Decrease Pad for desired length of baking time.
3. Touch BAKE pad and select desired temperature.
 - Same procedure as bake.



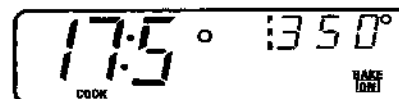
TO SET DELAY START:

1. Touch COOK TIME pad and select length of cooking time
2. Press STOP TIME pad
 - Stop Time will flash in display.
3. Press Increase / Decrease pad until desired stop time appears in display.
4. Touch Bake and select Temperature.
 - Same procedure as bake.



TEMPERATURE PROBE OPERATION:

1. Plug Probe into receptacle.
2. Touch PROBE PAD.
 - SET PROBE ---° will appear in display.
3. Press Increase / Decrease pad and select probe temperature.
 - Display will show "LO" until 100°F probe temperature is reached.
 - Control will track temperature until set temperature is reached.
 - Oven will signal and turn "OFF".
4. Touch Bake pad and select oven temperature.



Probe Temperature Range is 100° to 200°F.

TO BROIL:

1. Open door to broil stop.
2. Touch BROIL pad.
 - SET --- with the word broil will appear in display.
3. Press Increase pad for HI (550°F) or Decrease pad for LO (450°F) Broil.
 - LO or HI and "ON" will be displayed.



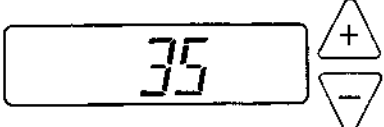

BAKE TEMPERATURE CALIBRATION:

The bake temperature can be adjusted by $\pm 35^\circ$ F. from the factory setting.
To Adjust The Bake Temperature:

1. Press BAKE pad.
2. Select any temperature above 500° F. by pressing the INCREASE pad.
3. Immediately Press and Hold BAKE pad until "00" or previously entered temperature is displayed.



BAKE CALIBRATION CONTINUED

4. Press the INCREASE or Decrease pad to change the oven temperature +35° or -35° in 5° steps.	
5. Press CLEAR / OFF pad to return to normal operation.	

CLEAN OPERATION:

1. Latch Oven Door.

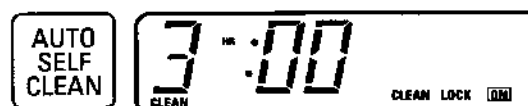


2. Touch CLEAN pad

- --- SET CLEAN TIME in display.

3. Press Increase / Decrease pad.

- CLEAN and 3HR: 00 will be displayed.

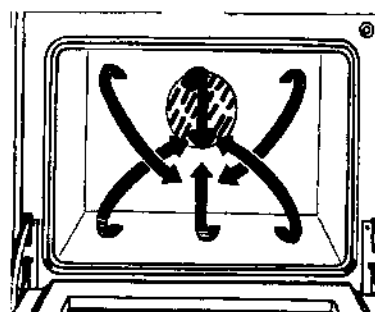


NOTE: Clean time can be varied between 2 and 4 hours in 5 minute intervals.

4. When the word lock disappears from the display the door can be unlocked.

CONVECTION COOKING

Convection cooking is the movement of heated air in the oven cavity. This is accomplished by a fan mounted on the rear wall of the oven cavity. The fan operates anytime one of the convection cooking modes is selected and the oven door closed. This provides for a more even heat distribution during the cooking operations. As a result of even heat distribution food browns more evenly and temperatures can be reduced by as much as 25°F for some foods. Cooking times of more than 15 minutes due not require preheating of the oven.



WHEN TO USE CONVECTION BAKE OR CONVECTION ROAST:

CONVECTION BAKE

- Ideal for bake foods when more than one shelf is being used.
- Large quantities of baked foods.
- Cookies, biscuits, muffins cupcakes, ETC.

CONVECTION ROAST

- Large tender cuts of meat uncovered.
- Roasting pans with low sides to allow air movement around food.

TO CONVECTION BAKE:

1. Place the food in the oven making sure pans do not touch.
2. Touch Convection Bake Pad.
 - SET ---° and CONV BAKE will appear in Display.
3. Touch Increase or Decrease Pad.
 - Previously baking temperature will appear.

NOTE: At initial power up or after power failure 170°F will be displayed.

4. Select desired temperature using Increase or Decrease Pad.
5. "ON" appears in display. After 25 to 30 seconds the word SET will disappear from display and Selected Temperature will change to oven temperature and begin rising in 5° increments until selected temperature is reached. Display will show 100°F until oven reaches 100°F.



CONVECTION ROAST:

1. Place the food in the oven making sure pans do not touch.
2. Touch Convection Roast Pad.
 - SET ---° and CONV will appear in Display.
3. Same procedure as Convection Bake.

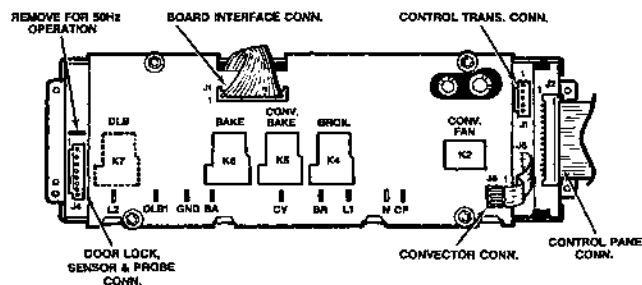
CONVECTION OVEN CONTROL SYSTEM:

The oven control system consists of Key Panel Assembly, Relay and Control Board Assembly, Control Transformer, Sensor, and Latch Mechanism.

ELECTRONIC OVEN CONTROL

The Oven Control is made up of the smart board and relay board mounted in a housing. The Relay Board consists of 4 relays, (Bake, Broil, Conv Bake and Conv Fan), a series of ¼" terminals, Control Transformer Connector and Sensor, Meat Probe and Lock switch Connector along with Key Panel Ribbon Connector.

NOTE: Convection Connector must be properly aligned (Pin 1 to Pin 1) to avoid damage to control.



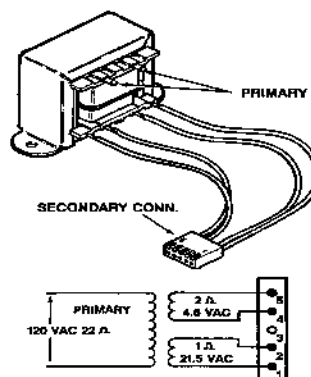
CONTROL VOLTAGES:

L1 to BA *	240 VAC WHEN OVEN IS NOT CALLING FOR HEAT
L1 to BR *	240 VAC WHEN OVEN IS NOT CALLING FOR HEAT
L1 to CV *	240 VAC WHEN OVEN IS NOT CALLING FOR HEAT
L1 to CF **	APPROX. 120 VAC WITH OVEN DOOR CLOSED

* **NOTE:** If 0 or 120 VAC is read, press CLEAR / OFF and recheck. If 240 VAC is not present check BA to N, BR to N and CV to N (should read 120VAC). If 120 VAC is not present check wiring.
 **If 120 VAC is not present check door frame switch.

CONTROL TRANSFORMER:

The Control Transformer is a separate component from the electronic control and is mounted on the lower left center of the range body back (Near bake unit terminals). The Primary and Secondary voltages, coil resistance and connector pins are shown in the diagram.

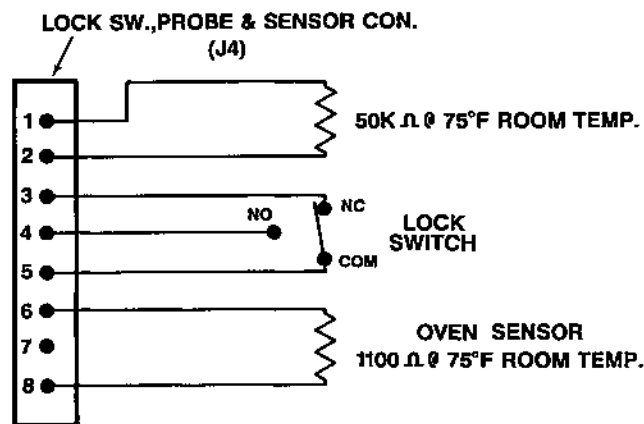


OVEN SENSOR, DOOR LOCK SWITCH & MEAT PROBE CONNECTOR:

Sensor: The control monitors the oven temperature through sensor and sensor circuit. The sensor is located on the upper left rear of the oven cavity.

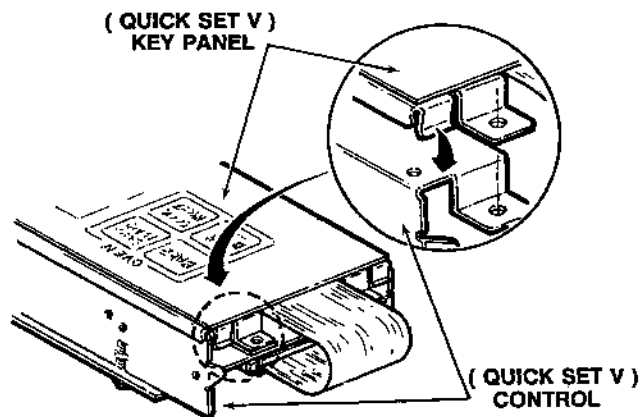
Lock Switch: The lock switch tells the control if the oven door is lock and ready for clean or unlocked and ready for cooking modes of operation. The switch is located on latch mechanism (See page no. 33).

Probe: The temperature Probe receptacle is located on the top left front of the oven cavity side wall.



KEY PANEL:

The Key Panel (control panel) and electronic control are separate components and must be tested individually. The Key Panel pushes on to the front of the Electronic Control with a ribbon connector between supply the signal for the operation chosen.



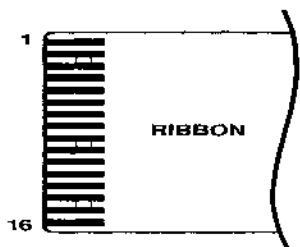
Key Panel Test: Depress each pad on the key panel followed by the CLEAR / OFF pad. If the key panel is functioning properly the following should occur:

- Bake, Broil, Convection Bake, Convection Roast, Clean, Timer, Clock, Stop Time and Cook Time Modes - Audible tone plus display showing mode of operation selected.
- Clear / Off - Audible time and display shows time of day.
- Probe - Audible tone if probe is plugged in, display will show probe.
- Increase / Decrease pad - No audible tone. Can only be used after another function has been selected.

If some pads work and some don't the problem is probably the key panel.

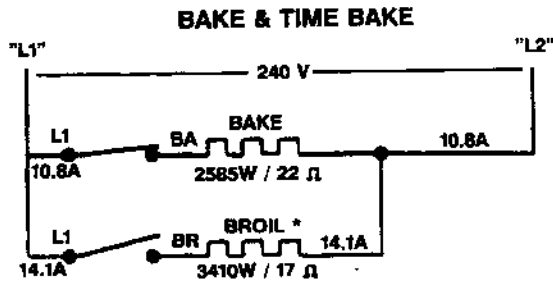
To verify that the key panel is the problem perform the Ohm meter Test. If the meter reads $\infty \Omega$ when depressing the pad or shows some resistance without depressing the pad the key panel is bad.

Set meter on scale that will read approximately 5000Ω . Connect leads to ribbon cable as indicated in the chart for each function. Depress function pad. Meter should read less than $\infty \Omega$ if switch contact is working.



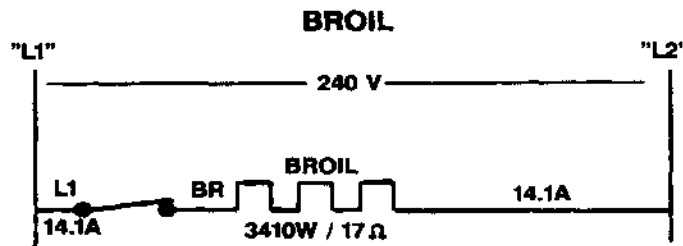
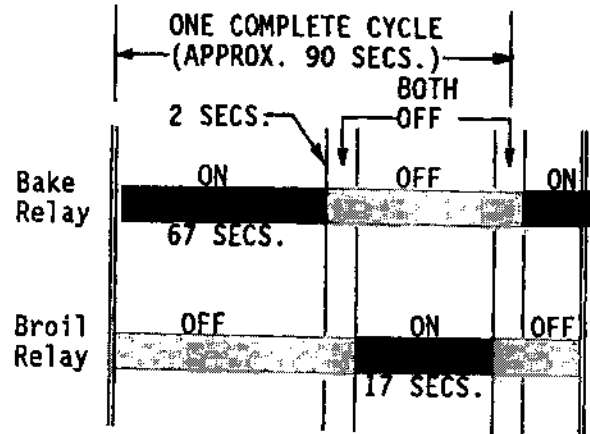
FUNCTION	CONDUCTORS	FUNCTION	CONDUCTORS
BAKE	3-8	TIMER	3-9
BROIL	4-8	CLOCK	4-9
CLEAN	5-8	STOP TIME	5-9
CLEAR/OFF	1-12	COOK TIME	8-9
CONV. BAKE	6-8	DOWN ARROW	16-15
CONV. ROAST	7-8	UP ARROW	16-14
PROBE	3-10		

OVEN CIRCUITS:

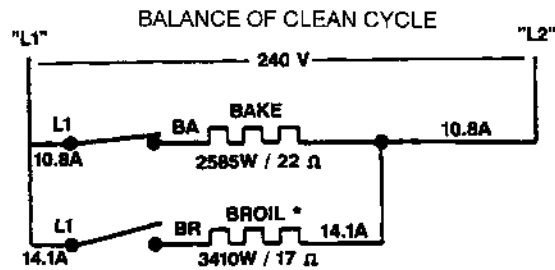
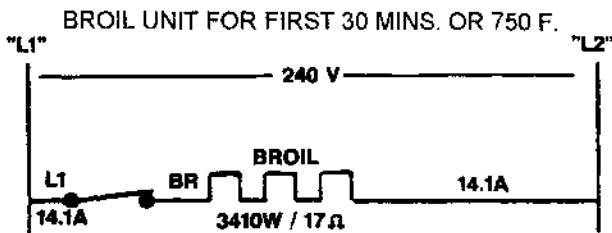


Approximately 25% ON-TIME IN BAKE
 * Bake & Broil Units cannot be on at the same time.
 BAKE UNIT ONLY during pre-heat cycle

Relay Sequencing After Initial Pre-Heat Cycle



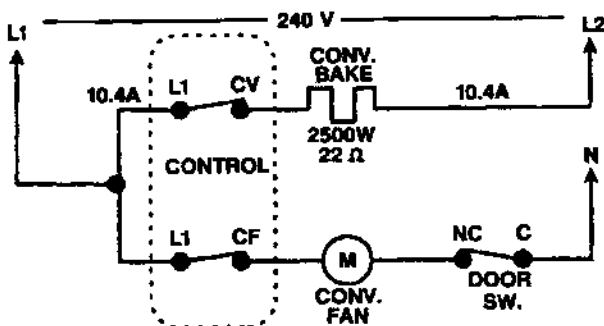
CLEAN CYCLE



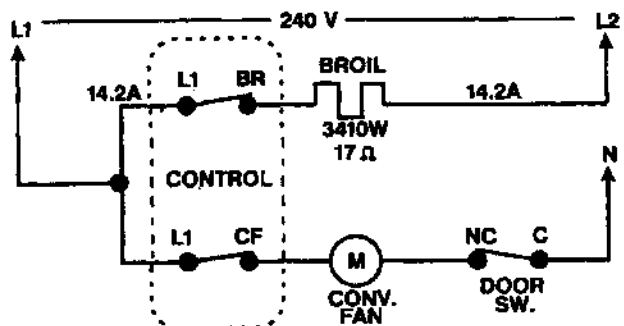
BROIL UNIT ON APPROX. 15 SECS. EVERY 90 SECS.

* Bake & Broil Units cannot be on at the same time.

CONVECTION BAKE



CONVECTION ROAST



ERC FAILURE CODES

FAILURE CODE	MEANING	CORRECTION
-F1- -F7-	Stuck Key	<p>Determine if problem is with the Key Panel or Control by:</p> <ol style="list-style-type: none"> 1. Turn Power Off. Disconnecting Ribbon Cable from control 2. Turn Power On and wait at least 32 seconds to see if Code re-occurs. <p>If code re-occurs, problem is in the Control. If code does not re-occur problem is with the Key Panel.</p>
-F2-	<p>OVEN OVER TEMP.</p> <ul style="list-style-type: none"> • Door unlocked - oven exceeded 624°F. • Door locked - oven exceeded 925°F. <p>REMEMBER: ERC measures resistance of sensor circuit, not actual oven temperature.</p> <p><u>DURING CLEAN</u></p>	<p>If actual over temperature condition occurred:</p> <ul style="list-style-type: none"> • Look for welded relay contacts on bake or broil relays. <p>If no over temperature condition occurred:</p> <ul style="list-style-type: none"> • Look for a high resistance connection or any other cause of high resistance in the sensor circuit. (Intermittent Sensor or Sensor Circuit) • Lock switch opened and oven in excess of 624°F.
-Fd-	Shorted Meat Probe	<p>Make The Following Checks:</p> <ul style="list-style-type: none"> • Make sure J4 Plug is plugged in the correct direction and connected to the ERC. • Check wiring and probe receptacle for short.

-F3- -F4-	Open/Shorted Sensor	<p>Measure Sensor circuit Resistance at sensor/lock switch connector J4 ERC (should read approx. 1100 Ω at room temperature). Measure lead to lead and each lead to chassis ground.</p> <p><u>If Open/Shorted Circuit look for:</u></p> <ul style="list-style-type: none"> • Open/shorted sensor - measure directly across sensor (pull sensor leads into oven approx. 10" and cut leads at crimp connector and check sensor. • Cut or pinched sensor harness wire. • Loss of terminal contact at ERC. • One or both sensor leads shorted to ground. <p><u>If Circuit Appears to be Normal (Approx 1100 Ω):</u></p> <p>Re-install sensor disconnect plug to ERC and measure sensor resistance and solder joints on back of ERC circuit board. If circuit is open problem is in the connector block. Remove terminals from block and reform to restore contact pressure.</p>
-F9-	Lock Switch	<p>Check wiring to door lock switch (the wire harness may be connected wrong). Check for stuck lock switch.</p>

CONVECTION BAKE ELEMENT & FAN ASSEMBLY

The convection Bake Element and Fan Blade are located on the back wall of the oven liner behind the panel with the slots in the center.

To Access Convection Bake Element & Fan Blade:

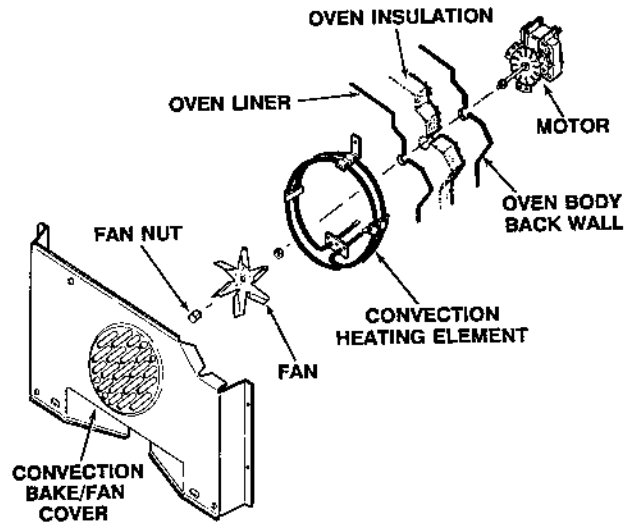
1. **DISCONNECT POWER TO RANGE**, remove oven door and oven racks.
2. Remove 4 screws mounting panel (2 on each side) and pull forward.

To Remove Convection Bake Element:

Remove 3 screws mounting element to back wall and pull forward and disconnect leads.

To Service Fan:

Fan Blade can be serviced from inside oven. Range must be removed from installation to access Convection Fan Motor.



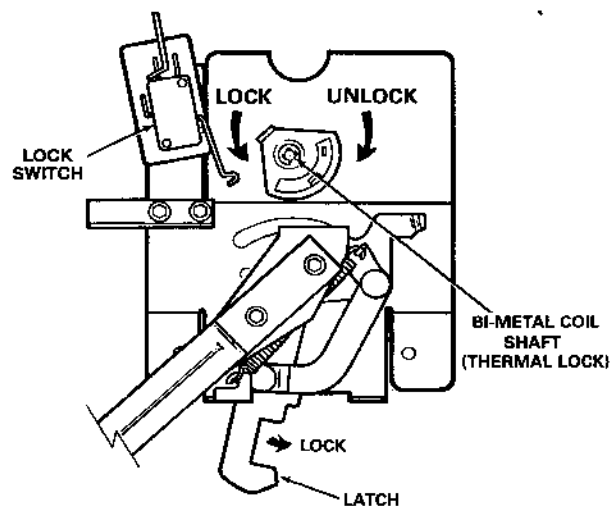
NOTE: When servicing bake unit, broil unit or sensor the convection fan cover must be removed.

DOOR LATCH MECHANISM

The Latch Mechanism is thermally operated. When the latch handle is moved to the clean position the latch hook engages into a slot in the oven door.

As the clean cycle progresses the increasing oven temperature causes the bi-metal coil on the latch mechanism to expand. This expansion causes a cam to rotate into the path of the latch mechanism thus locking it into position.

The door locks up when the oven has reached a temperature of between 560° and 600° F and will remain locked until the oven has dropped to around 520° F.



NOTE: The door can be unlocked by manually rotating the Latch Arm Stop on the back of the latch to the unlock direction as shown in the above illustration and moving the latch handle to the unlock position.

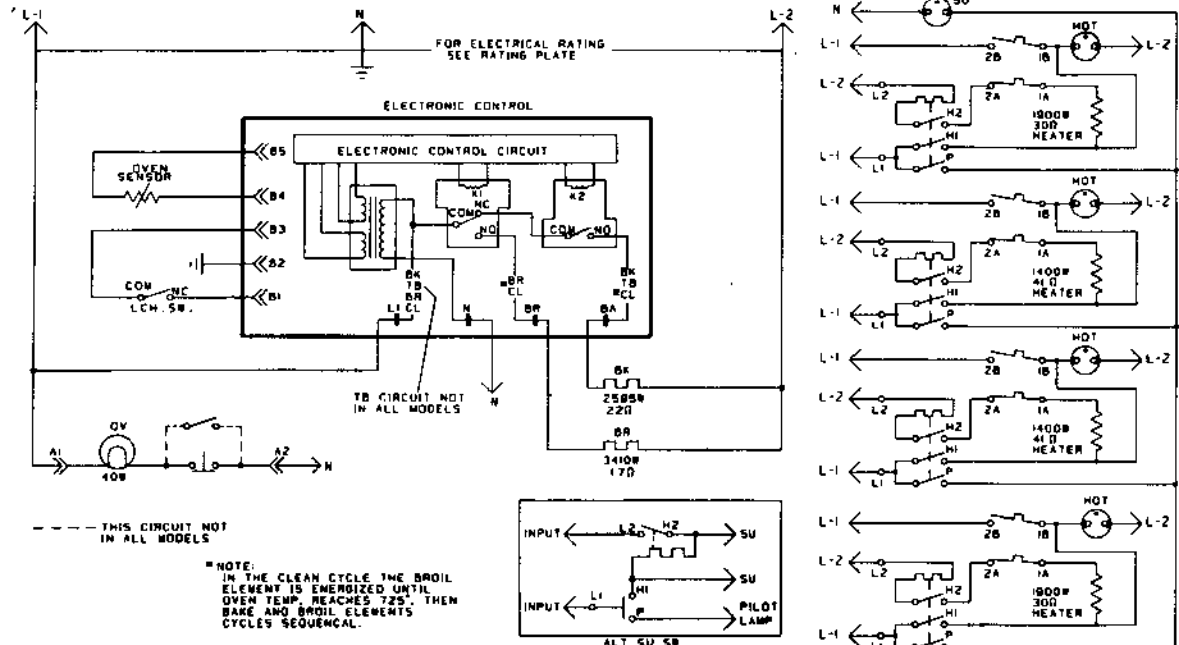
NOTE: When installing new latch make sure that the Latch Arm Stop is Rotated Fully to the Unlocked position.

SCHEMATIC / WIRING DIAGRAM INDEX

<u>PUB NO.</u>	<u>MODEL NOS.</u>	<u>PAGE NO.</u>
31- 1444	JBP65GS1 JBP75AS1 JBP75GS1 JBP75WS1 JBP76GS1 JBP77GS1 JBP78GS1	35
31-1445	JBP79GS1 JBP79AS1 JBP79WS1	36
31-1448	JBP80GS1 JBP80WS1 JBP80AS1	37
31-1449	JBP90GS1 JBP90AS1 JBP90WS1	38

SCHEMATIC DIAGRAM

164D8659P001



WIRING DIAGRAM

164D8019 SH.20

COLOR	SYMBOL
RED	R
WHITE	W
BLACK	B
GREEN	G
YELLOW	Y
ORANGE	O
BLUE	N
GRAY	S

NOTE: ALL LEADS WITH DESIGNATION NUMBERS THAT ENTER COMMON LEAD PATH MUST BE TRACED TO THEIR TERMINATIONS.

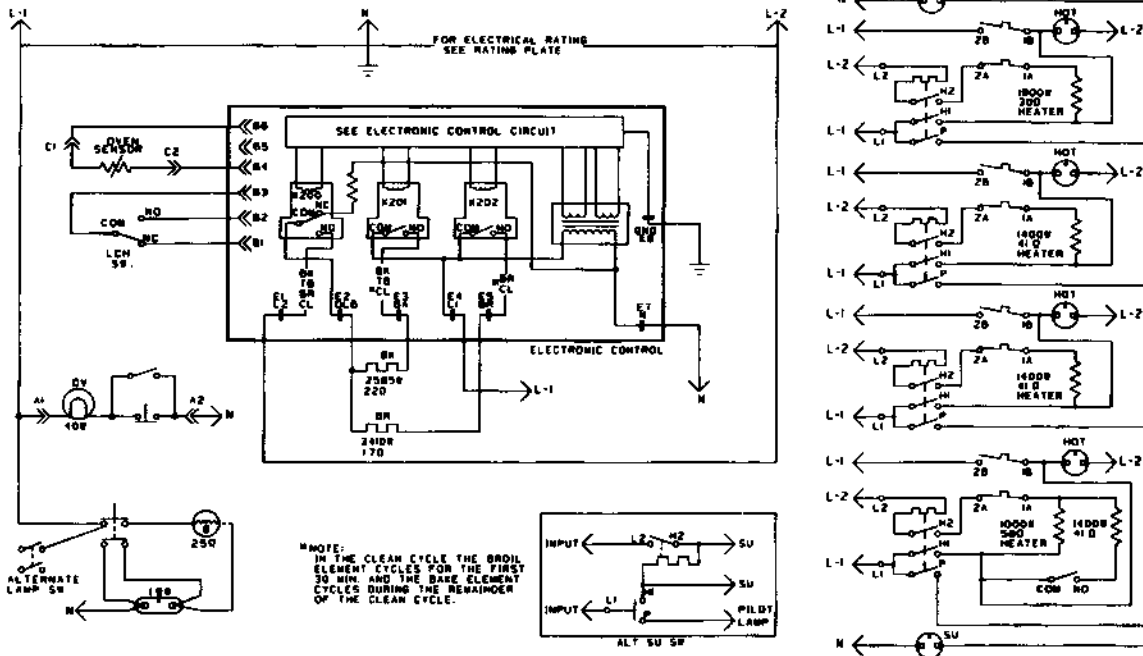
WARNING
POWER MUST BE DISCONNECTED BEFORE SERVICING THIS APPLIANCE

NOTE: FOR SERVICE REPLACEMENT ON ALL RADIANT HEATING ELEMENT LEADS USE 16 GA. 250°C WIRE.

FOR SERVICE REPLACEMENT ON ALL OTHER LEADS USE 16 GA. 150°C WIRE EXCEPT AS NOTED ON INDIVIDUAL LEADS.

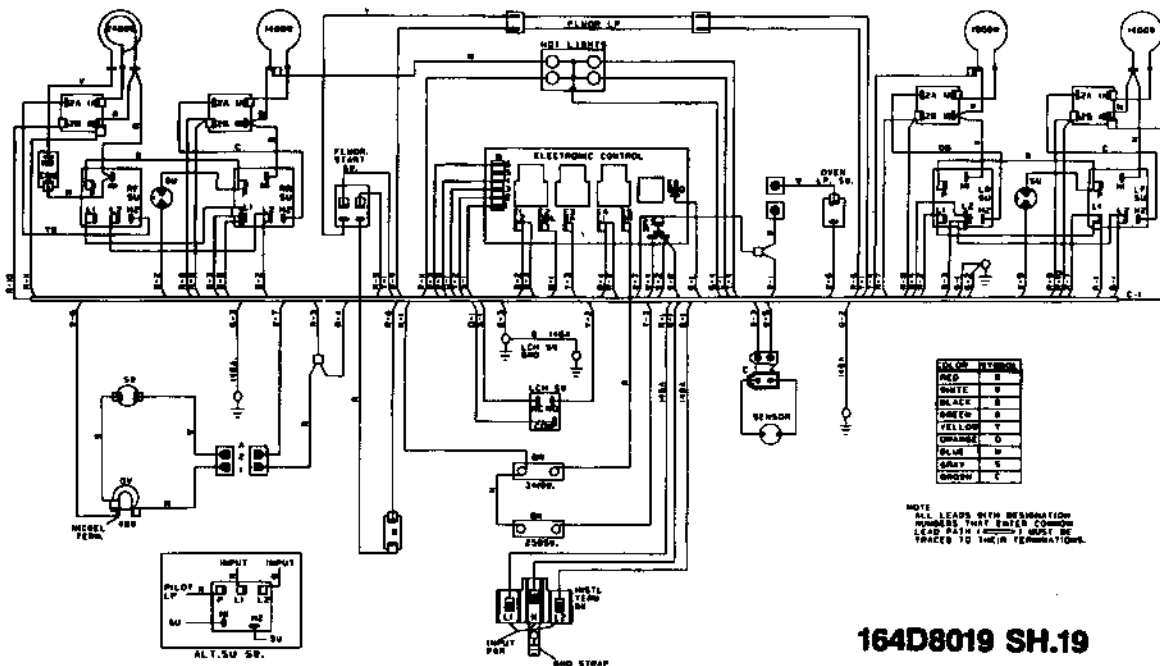
SCHEMATIC DIAGRAM

164D8658P001



WIRING DIAGRAM

WARNING
POWER MUST BE DISCONNECTED
BEFORE SERVICING THIS APPLIANCE

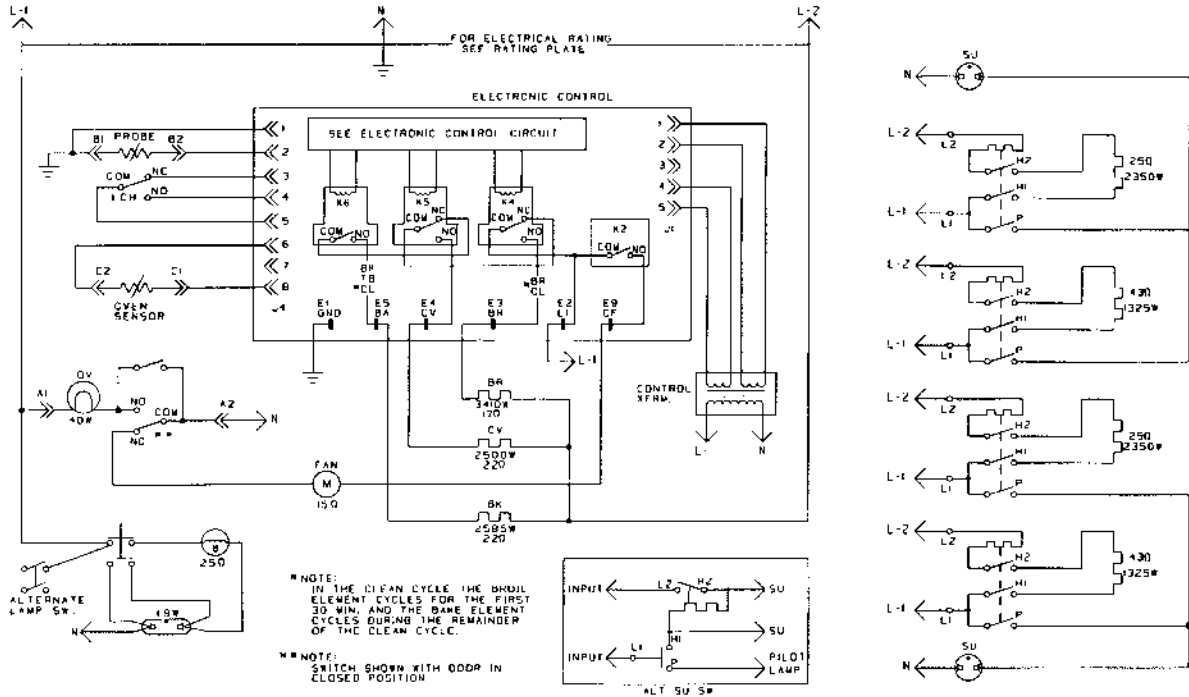


164D8019 SH.19

NOTE: FOR SERVICE REPLACEMENT ON ALL RADIANT HEATING ELEMENT LEADS USE 16 GA. 250°C WIRE.
FOR SERVICE REPLACEMENT ON ALL OTHER LEADS USE 16 GA. 150°C WIRE EXCEPT AS NOTED ON INDIVIDUAL LEADS.

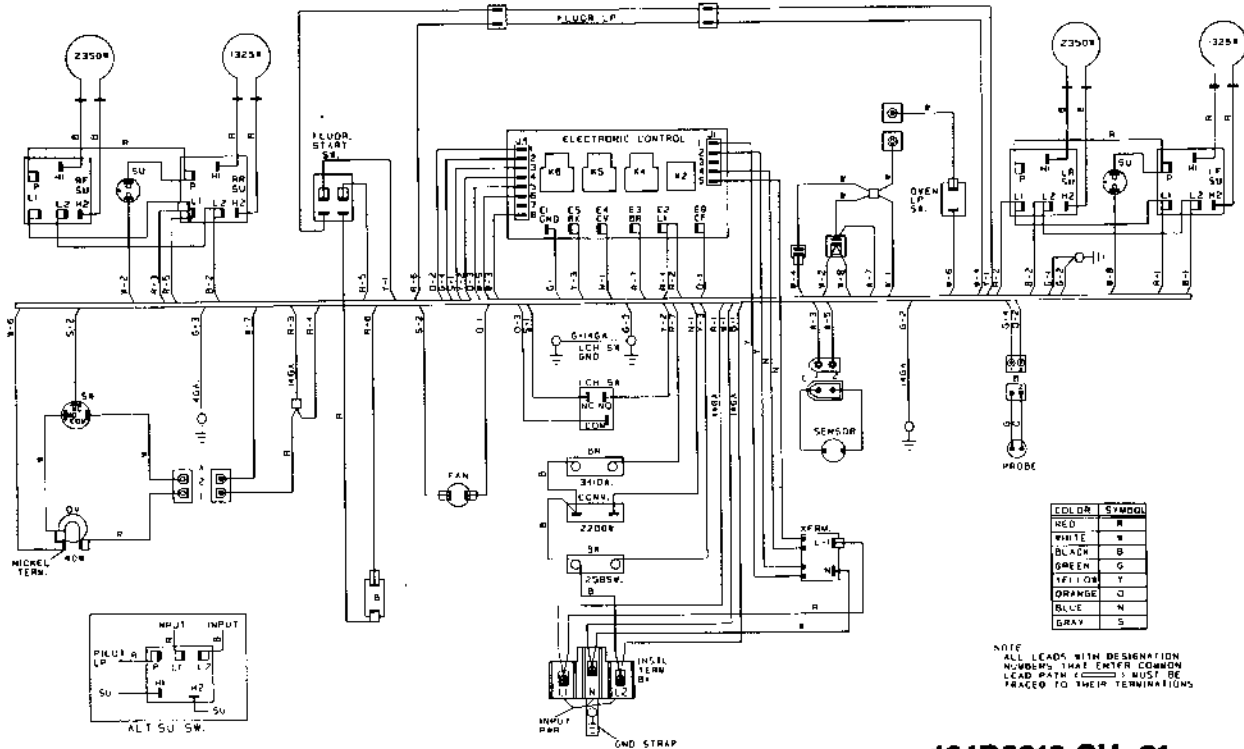
SCHEMATIC DIAGRAM

164D8660P001



WIRING DIAGRAM

WARNING
POWER MUST BE DISCONNECTED
BEFORE SERVICING THIS APPLIANCE

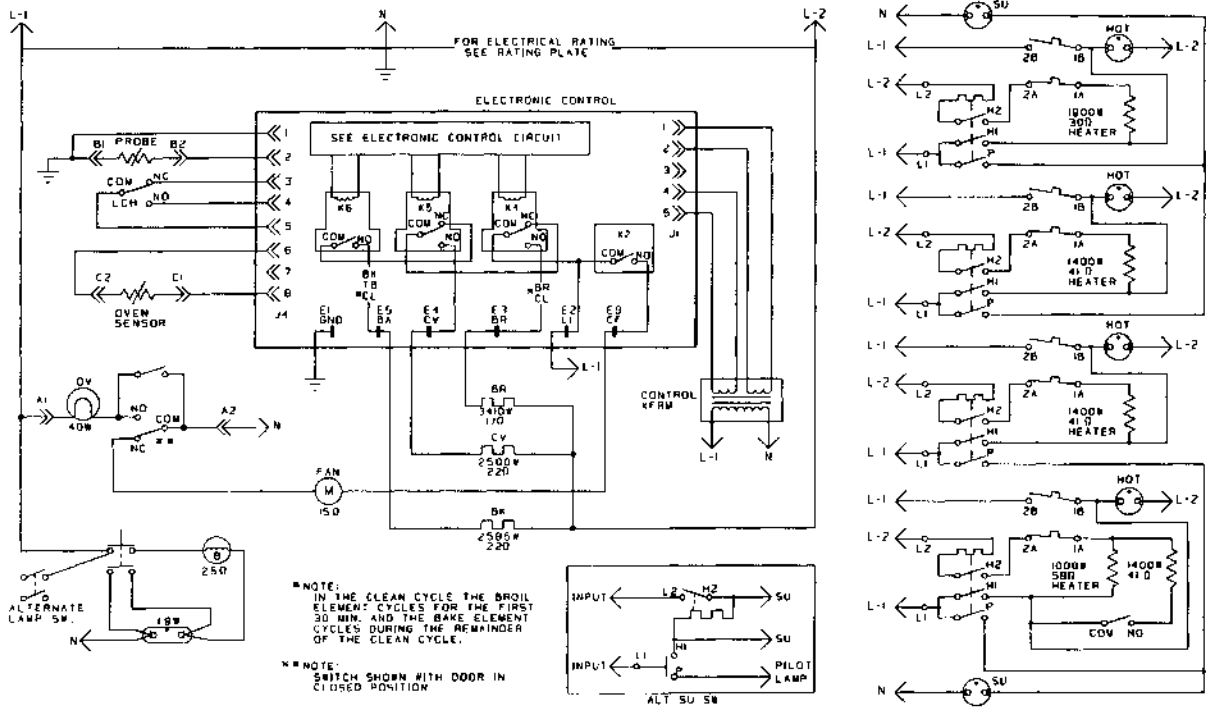


164D8019 SH. 21

NOTE: FOR SERVICE REPLACEMENT USE 18 GA. 150°C WIRE EXCEPT AS INDIVIDUALLY NOTED ON LEADS. ALL 150°C WIRE COLOR DESIGNATED BY HASH MARK.

SCHEMATIC DIAGRAM

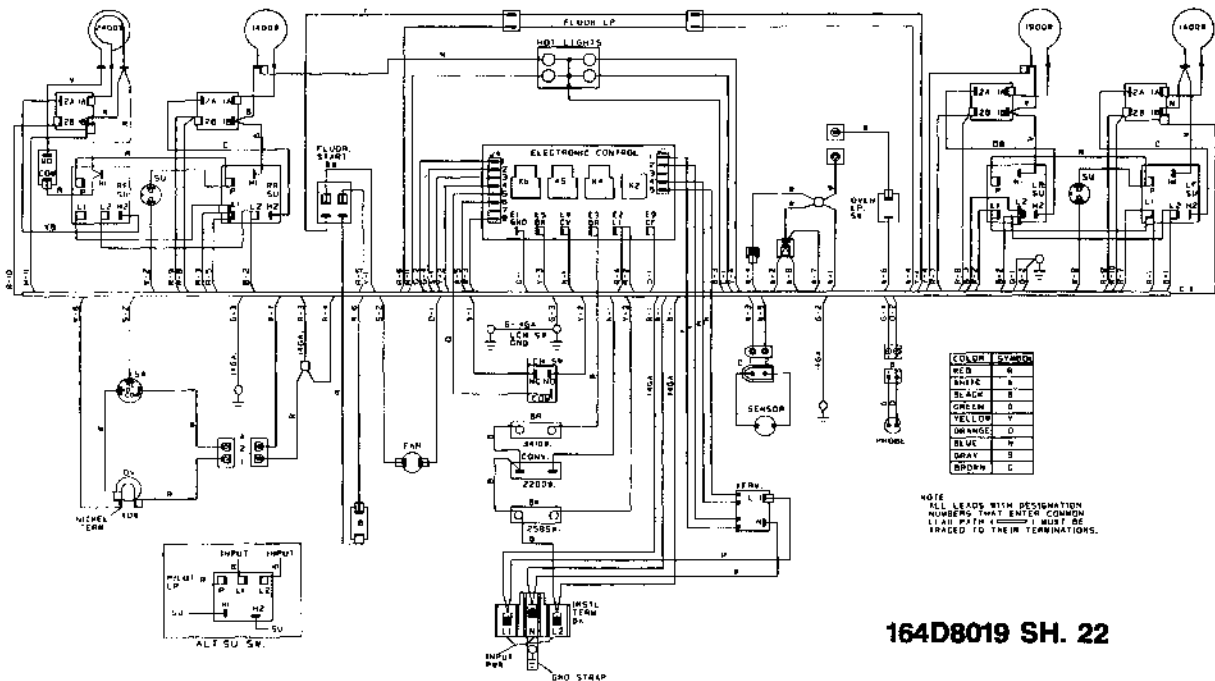
164D8661P001



WIRING DIAGRAM

WARNING

POWER MUST BE DISCONNECTED BEFORE SERVICING THIS APPLIANCE



NOTE: FOR SERVICE REPLACEMENT ON ALL RADIANT HEATING ELEMENT LEADS USE 18 GA. 250 C WIRE. FOR SERVICE REPLACEMENT ON ALL OTHER LEADS USE 18 GA. 150 C WIRE EXCEPT AS NOTED ON INDIVIDUAL LEADS