

Technician Manual

GE Built-in Wall Ovens

"V1" Series "V2" Series Double Wall Ovens 30" single

30" Double Kenmore Monogram

30" Built - In Wall Ovens

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"V1" Series 30" Double Built - In Wall Ovens

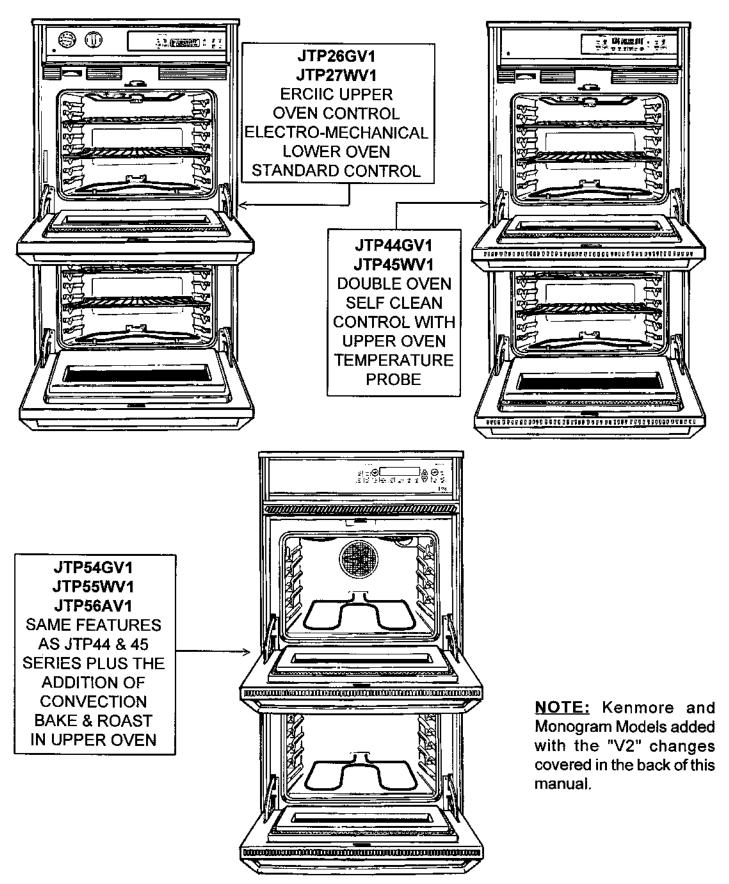
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30" ELECTRIC DOUBLE BUILT - IN WALL OVEN "V1" SERIES

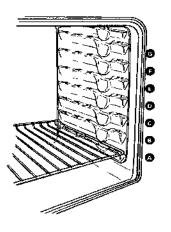
The 30" Electric Double Wall Ovens went into production in the spring of 1995. There will be both a GE model family along with a Profile model family. These models will have many of the same features as the 30" single built - in line introduced in the fall of 1994.

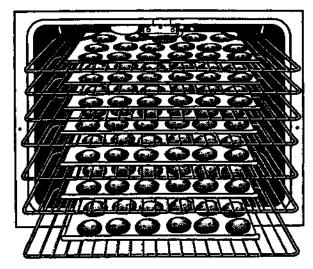


Convection Oven Accessories:

7 Shelf Positions:

Convection models come with three shelves.
Additional shelves can be ordered in 2 shelf kits (Pub No. 3-A014).



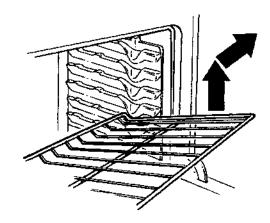


1 to 7 shelf convection baking is possible.

Oven Shelf Removal and Replacement:

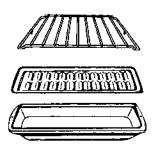
To Remove Oven Shelf - pull forward and tilt up the front to clear raised extension on rear of shelf.

To Replace Oven Shelf - place the shelf on the desired shelf support (curved extension of shelf) facing up and toward rear of oven. Tilt up front of shelf and push toward back of oven until it goes past the bump on the oven shelf support.



Convection Roasting Rack:

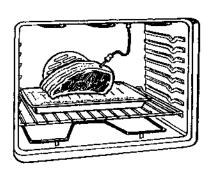
The Roasting Rack is designed to fit on top of the broiler pan and grid. This permits the heated air to circulate under the meat and increase the browning on the underside of the meat or poultry.



Temperature Probe:

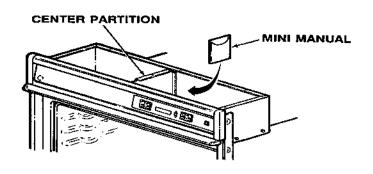
Convection Profile models come with the temperature probe feature. The Probe Outlet is located on the top right front of the oven cavity.





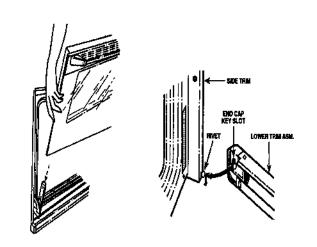
RATING PLATE AND MINI - MANUAL / SCHE-MATIC WIRING DIAGRAM LOCATIONS:

- Rating Plate is located on the LOWER LEFT corner of the front frame behind oven door.
- Mini-Manual is located on rear wall of component compartment behind control.

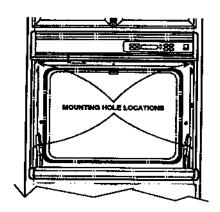


TO REMOVE FROM INSTALLATION:

- 1. Disconnect Power and remove oven door.
- 2. Remove lower trim by Pushing Up and then Pulling Forward.



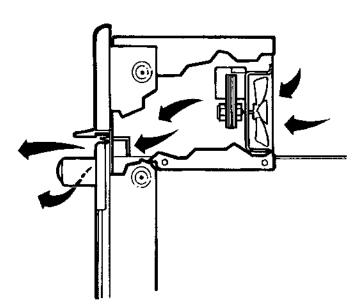
- 3. Remove 8 screws from oven front frame.
- 4. Pull the oven forward.
- 5. Reinstall in reverse order.



COMPONENT COMPARTMENT AIR FLOW:

The component compartment contains two (2) fans for cooling the components located on the rear wall of the component compartment.

Fan blades pull air in from the back of the unit and circulate it in the component area. The air is then exhausted out through the louvers just below the control panel assembly. The air then travels either above the top of the door or through slots in the area above the inner door panel and exits out behind the door handle.



Self Clean Oven Door:

The door assembly can be broken down into two basic assemblies: (1) Outer assembly that consists of door handle, outer glass, bottom trim and frame. (2) Inner assembly that is made up of inner panel, gasket, glass panels (3) and vent.

To Replace Outer Glass Panel:

- 1. Open door to first stop and lift off hinges.
- 2. Remove 6 screws from bottom trim and lift off.
- Slide glass out from under vent trim and lift off.
- Reassemble in reverse order.

To Replace Door Handle, Top Trim or Frame:

- 1. Open door to first stop and lift off hinges.
- Remove 4 screws from bottom trim (do not remove two 2 outside screws).
- Remove 4 screws from side trim (2 on each side). Leave top screws on each side.
- Remove two screws that mounts the *door handle and heat deflector. The end caps can also be removed by sliding out.
- To replace the vent trim the two screws on the side trim must be removed.
- 6. Reassemble in reverse order.
- NOTE: Door handle on Profile Models is a one piece soft touch handle.

To Replace Middle and Inner Glass:

 Separate door into two assemblies (Inner and Outer).

(Middle Glass Access)

Remove two screws from inner door assembly that mounts one of the middle glass retainers.

Middle glass can then be pulled out of other retainer.

Note: Middle Glass does not have any reflective coating.

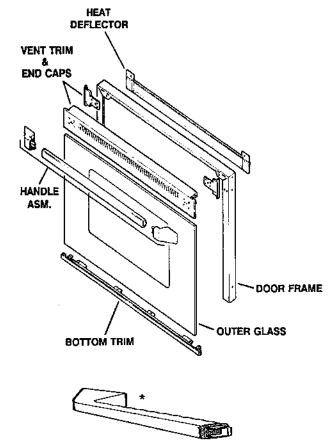
(Inner Glass Access)

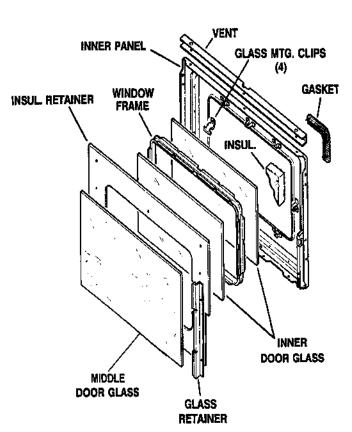
- Remove six screws mounting Insulation Retainer and lift off.
- 4. Remove four strips of Insulation from around Inner Window Assembly.
- 5. Remove the four screws and mounting clips from inner panel.

Inner Glass and frame can then be removed.

Note: Both Inner Glass Panes have Reflective Coating on both sides of the glass.

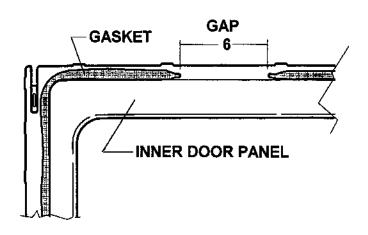
Reassembly in reverse order.





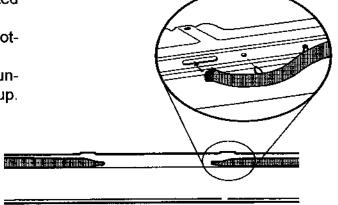
Oven Door Gasket:

The Gasket forms a seal around the front edge of the oven liner and the inner door panel except for approximately a six inch opening at the center bottom. The gasket is attached to the inner door panel by a chain of spring clips.



To Remove Door Gasket:

- Open door to Broil Stop position and lift off range. Lay door face down on a flat protected surface.
- 2. Pull ends of gasket out of the slots at the bottom of the door.
- 3. Finish removing gasket by placing finger under gasket beside the clip and pull straight up.

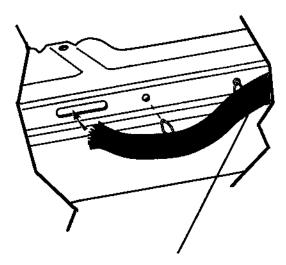


To Install Gasket:

- 1. Locate the center clip of the gasket.
- 2. Place finger on top of spring clip and press into center top hole in inner door panel.

Note: Gasket will go on better if folded up at 90° beside the clip being inserted.

- 3. Continue this process all the way around inner panel until all clips have been inserted.
- 4. With small screw driver tuck loose ends of gasket into slots at the center bottom of door panel.
- 5. After gasket has been installed, wipe finger around outer perimeter of gasket pressing it up against side of inner panel.



BEND GASKET 90 DEGREES BESIDE CLIP & PRESS DOWN

Standard Oven Door:

The door assembly can be broken down into two basic assemblies: (1) Outer assembly that consists of door handle, outer glass, bottom trim and frame. (2) Inner assembly that is made up of inner panel, gasket, glass panel and vent.

To Replace Outer Glass Panel:

- Open door to first stop and lift off hinges.
- 2. Remove 6 screws from bottom trim and lift off.
- Slide glass out from under vent trim and lift off.
- 4. Reassemble in reverse order.

To Replace Door Handle, Top Trim or Frame:

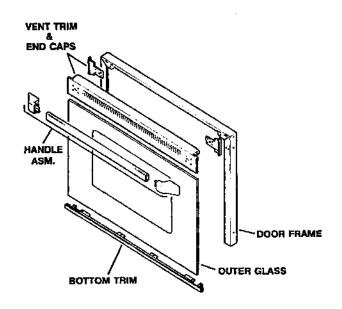
- 1. Open door to first stop and lift off hinges.
- Remove 4 screws from bottom trim (do not remove two 2 outside screws).
- 3. Remove 4 screws from side trim (2 on each side). Leave top screws on each side.
- Remove two screws that mounts the door handle. The end caps can also be removed by sliding out.
- 5. To replace the vent trim the two screws on the side trim must be removed.
- Reassemble in reverse order.

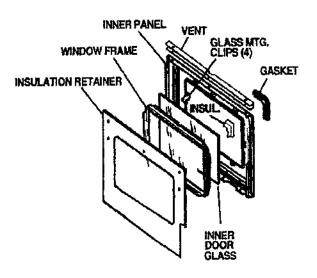
To Replace Inner Glass:

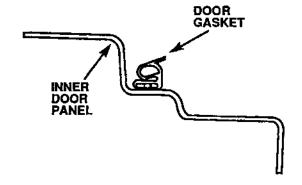
- 1. Separate door into two assemblies (Inner and Outer).
- 2. Remove six screws mounting Insulation Retainer and lift off.
- Remove four strips of Insulation from around Inner Window Assembly.
- Remove the four screws and mounting clips from inner panel.
- Inner Glass and frame can then be removed.
- 5. Reassembly in reverse order.

Standard Oven Door Gasket:

The Standard Door Gasket is held to the inner panel by a series of individual spring clips. Locate the center spring clip on the gasket and insert it into the middle hole at the top of the inner door panel. When gasket is installed make sure that the gasket ends are equal on both sides.







Door Hinge Assemblies:

The door hinge comes as a complete assembly. The hinges are marked either as a left ("L") or right ("R") hinge. For the hinges to operate properly the hinge arms should be perpendicular to the front frame and parallel to each other.

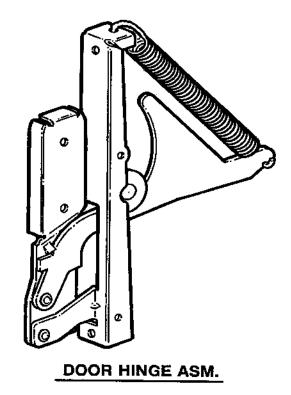
Note: Self Clean and Standard Hinges are different part nos.

Standard Oven Hinges:

Right Hinge - WB10K5015 Left Hinge - WB10K5016

Self Clean Oven Hinges:

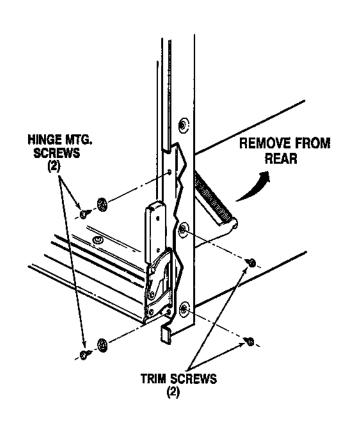
Right Hinge - WB14K5014 Left Hinge - WB14K5015



Door Hinge Replacement:

- Open door to first stop and lift door off by firmly grasping on each side and pulling straight up. Be careful not to let the hinge arms snap back on your fingers.
- Remove four screws mounting oven in wall and slide forward approximately 6". Take necessary precautions to insure that oven dose not slip forward.
- Remove the 2 lower side trim screws and the two screws that mount the hinge to the front frame.
- Grasp the hinge from the rear and rotate bottom of hinge towards the rear of the oven and while guiding the hinge arm through the slot in the front frame.
- 5. Reinstall in reverse order.

Note: Make sure hinge arms are parallel with each other and perpendicular to front frame. (If not this may cause the hinge to bind on the receiving channel of the door.)

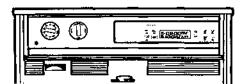


Control Panel:

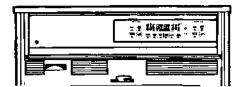
Three basic control panel assemblies exist -

- ERCIIC with Electro-Mechanical controls for lower oven, series which consist of the control, key panel, knobs, end caps, eyebrow and oven light switch
- Double Oven self clean ERC series which consist of the control, key panel, end caps and eye-brow
- Double Oven self clean \ convection ERC series contains the key panel, eyebrow and end caps.

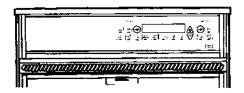
Each series also come in different colors.



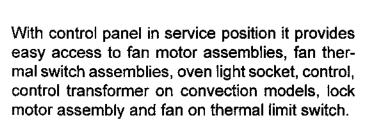
ERCIIC & Standard Controls

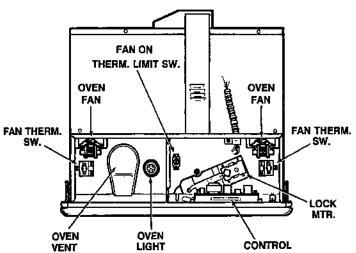


Double Oven Self Clean Control



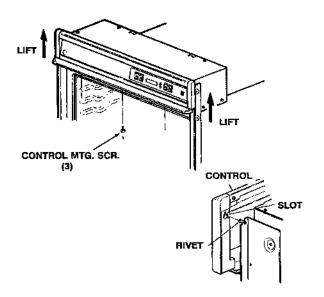
ERC Convection Control Panel





Control Panel Access:

- Disconnect POWER and open oven door.
- 2. Remove 3 screws from across bottom of control panel.
- 3. Push up on control panel assembly to release mounting rivets on top corners of end caps.
- 4. Reinstall in reverse order.



Oven Controls:

Three types of controls will be used on the 30" double wall ovens.

- ERCIIC Control with motorized door lock system (upper oven) and Standard Control (lower oven).
- ERC Double Oven Self Clean Control with motorized lock system.
- ERC Convection Oven Control with motorized door lock system.

ERCIIC with Motorized Lock System:

The control system consists of the Control, Sensor, Sensor Circuit, Lock Motor Assembly, Lock Motor Circuit, Fans and Fan Thermal Switches and a 12 hour clock.

BAKE CLEAR OFF | MI AUTD | SELF | CLEAN | | I S | CLEAN | | I S | CLEAN | | I S | CLEAN | | I MER | CLOCK | | I MER | C

ERCIIC Control Operation:

Power Up or After Power Failure:

All segments of the display will light for about five seconds, then the 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 + / - (increase / decrease) pads:

- Used to select time, temperature, start / stop times, HI / LO Broil, Etc.
- + / (Increase / Decrease) pads will not function unless one of the program pads are touched first.
- The only pads on the control that do not have and audible tone when touched.
- Used to initiate programs if not touched within 30 seconds control will default back to time of day.

To Set Clock:

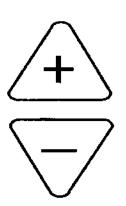
- Touch Clock Pad
- Press + / pad to select correct time of day.

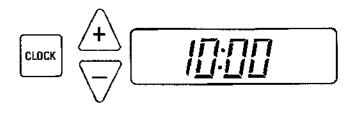
To Set Timer:

- Press Timer pad.
- Press + / pad to select desired time.

Note: To stop timer or turn timer off, Press and hold timer pad.

Last minute will count down in seconds.







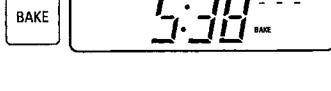
End of Cycle Tone:

At the "End" of a cycle the control will "BEEP" 3 times followed by a single tone every 6 seconds until cancelled or another function is selected. The tone every 6 seconds can be eliminated by pressing and holding the CLEAR / OFF pad for 10 seconds. To return tone repeat above step



Bake Operation:

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





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



Delayed Bake Operation:

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



Broil Operation:

- · Open door to broil stop.
- Touch BROIL pad.
 - * --- with the word Broil will appear in display.
- Press + pad for Lo Broil (450°F).
 Press + pad again for Hi Broil (550°F).
- LO or HI along with Broil and "ON" will be displayed.



Bake Temperature Calibration:

The bake temperature can be adjusted by ± 35°F. from the factory setting. To Adjust The Bake Temperature:	
1. Press Bake Pad.	BAKE
Select any temperature above 500°F. by pressing the + Pad.	B:
3. Immediately Press and Hold Bake Pad until "00" or previously entered temperature is displayed. Output Description:	BAKE B:111 00
4. Press the + or - Pad to change the oven temperature +35° or -35° in 5° steps.	B:00 35 +
Press Clear / Off pad to return to normal operation.	CLEAR OFF

Clean Operation:

- 1. Touch CLEAN pad
 - · --- CLEAN TIME flashes in display.
- 2. Press + or pad.
 - CLEAN TIME and 3^{HR}: 00 will be displayed and door will lock.

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

When clean cycle is complete and oven has cooled door will unlock.



ERCIIC Control System:

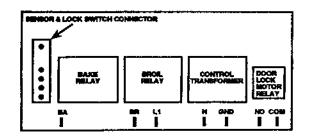
The control system is made up of the following components: Single line break control, key panel assembly, sensor and sensor circuit and lock motor assembly and circuit.

Control:

The control contains the bake and broil relays, control transformer, lock motor relay, sensor & lock motor connector along with a series of 1/4" terminals for connecting power to the control and heating units.

Control Voltages:

Softifor Voltages:		
Terminals	Voltage and Mode of	
	Operation	
L1 - N	120 VAC all the time	
L1 - BA	240 VAC when oven is not	
L1 - BR	calling for heat (Bake &	
	Broil Relay contacts open)	
C-N	120 VAC all the time	
NO - C	120 VAC when locking or	
	unlocking	

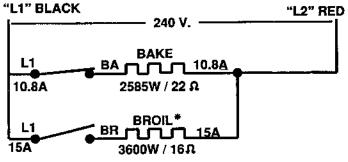


NOTE: A cooking or cleaning mode of operation must be selected before the relay contacts will operate.

Voltage must be present across terminals L1 to N for the control to operate.

Oven Circuits:

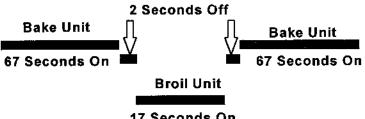
BAKE & TIME BAKE



APPROXIMATELY 25% ON-TIME IN BAKE. * Bake and Broil units cannot be on at same time. BAKE ONLY during (pre-heat) cycle.

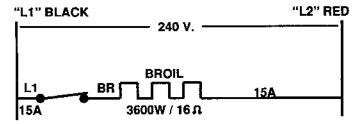
Bake Mode

Sequence Cycling of Bake & Broil Units After Initial Preheat Cycle

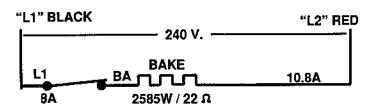


17 Seconds On

BROIL & CLEAN- (FIRST 30 MINS. OR 750°F)



BALANCE OF CLEAN CYCLE



Key Panel:

The key panel is connected to the control by a ribbon connector. The control will sound a tone when any of the pads are depressed except for the + / - pads.

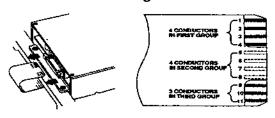
To help isolate a problem to either the control or key panel, depress each pad on the key panel and observe the following:

- Bake, Broil, Clean, Timer, Clock, Stop Time, and Cook Time Modes - Audible tone plus display showing mode of operation selected.
- Clear / Off Audible tone and display shows time of day.
- +/-Pads No audible tone. Can only be used after another function pad has been selected.

If some of the pads work and some don't, the problem is probably with the key panel. To verify that the key panel is the problem check the connector for proper insertion of the ribbon cable and perform the Ohm Test. If the ohmmeter reads ∞ Ω when depressing the pad or shows some resistance without depressing the pad the key panel is bad.

Ohmmeter Test:

Set ohmmeter on scale that will read approximately 500Ω . Connect leads to ribbon cable as indicated in chart for each function. Depress function pad. Meter should read less than ∞ Ω if the switch contact is working.



FUNCTION	CONDUCTORS	OHMS
DOWN ARROW	1 TO 2	0 TO 150
UP ARROW	1 TO 3	0 TO 150
BROIL	4 TO 5	0 TO 80
CLEAN	4 TO 6	0 TO 80
BAKE	4 TO 9	0 TO 80
COOKTIME	8TO 5	0 TO 150
STOP TIME	8 TO 6	0 TO 150
CLOCK	8TO 7	0 TO 150
TIMER	8 TO 9	0 TO 150
CLEAR/OFF	10 TO 11	0 TO 150

Oven Sensor and Sensor Circuit:

The control monitors the oven temperature through the oven temperature sensor. The sensor on these models is located on the rear oven wall just right of center just below the broil unit.

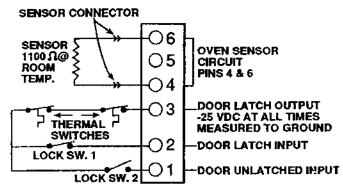
Oven Sensor and Door Switch Ohmmeter Test: (See "Motorized Door Lock Operation" for door switch function explanation.)

Disconnect power to range. Make resistance measurement from side of sensor & lock switch connector with exposed terminals.

Circuit	Terminals	Ohms
Oven Sensor	4 to 6	*1100 @ Room. Temp. 2600 @ Clean Temp.
Door Unlatched	3 to 1	0
Door Latched	3 to 2	0

* If abnormal reading is observed, remove sensor from oven and check at disconnect block.

SENSOR AND LOCK SWITCH CONNECTOR



ERC FAILURE CODES

FAILURE CODE	MEANING	CORRECTION	
-F1- -F7-	Stuck Key	Determine if problem is with the Key Panel or the Control by: 1. Pushing CLEAR / OFF pad 2. Disconnecting Ribbon Cable from control and waiting at least 32 seconds see if Code reoccurs. If code reoccurs, problem is in the Control. If code does not reoccur the problem is with the key panel.	
-F2-	Oven Over Temperature Exceeded 590° with door in unlocked position or 990° with door locked Remember: ERC measures resis- tance of sensor circuit, not actual oven temp. During Clean Operation	 If actual over temperature condition did occurred: Look for welded relay contacts. If over temperature condition did not occur: Look for a high resistance connection or any other cause of high resistance in the sensor circuit. Open thermal switch(self - resetting) located on floor of component compartment. Switch is normally closed and will open if area overheats due to inoperative cooling fan. Check Fan Operation. Both Lock Sw. #1 and #2 closed at same time. 	
-F3- -F4-	Open Sensor Circuit or Shorted Sensor Circuit	 Measure Sensor Circuit Resistance at Sensor / Lock Switch connector plug at ERC (should read approx. 1100Ω @ room temp.). Measure lead to lead and each lead to chassis ground. Measure resistance directly across sensor (pull sensor leads into oven approx. 10" and cut leads at crimp connection and check sensor resistance). Both sensor leads shorted to ground. Cut or pinched sensor harness wire. Loss of contact within sensor harness connector at back of oven or ERC. If Circuit Appears Normal: (approx. 1100Ω) Reinstall sensor disconnect plug on ERC and measure sen sor resistance from connector pin solder joints on back of ERC circuit board. If circuit is open problem is in the connector plug. Remove terminals from connector block and bend them to re store contact pressure. 	
-F8- -FF-	Component failure within ERC affecting temperature processing circuits	Replace Control	
-F9-	Problem with Door lock circuit such as pinched wire between ERC & door lock switch (lock switch # 1).	Check wiring and test operation of switch	

NOTE: Connections can be intermittent due to a corrosive build up between the connection to the terminals, by being bent by the insertion of a probe, ETC.

Electro - Mechanical Controls (Standard Oven)

The standard oven circuit uses a selector switch and thermostat to control the oven functions (both L1 and L2 contacts or open in the "OFF" mode.

Oven Selector Switch:

The selector switch is used to the complete or open the circuit paths to the elements, for the mode of operation selected (Bake, Time Bake, Broil, or 0ff). The selector switch completes both legs (L1 & L2) to the bake or broil elements for the mode selected. The broil unit also functions at 120 Volts during the bake mode for top heat.

STANDARD OVEN SELECTOR SWITCH CONTACTS OPERATION

CONTACTS	OFF	BAKE	BROIL
L1 to A		Х	
L1 to B			X
L2 to C		Х	X
N to B		Х	·
"X" DENOTES CLOSED CONTACT			

Oven Thermostat:

The internal construction of the thermostat is separated into two separate sets of contacts that are opened and closed simultaneously by expansion and contraction of the oil filled capillary. One set of contacts supplies "L1" to the Bake circuit and the other set supplies "L1" to the Broil Circuit. "L2" and "N" are supplied to the elements by the selector switch contacts.

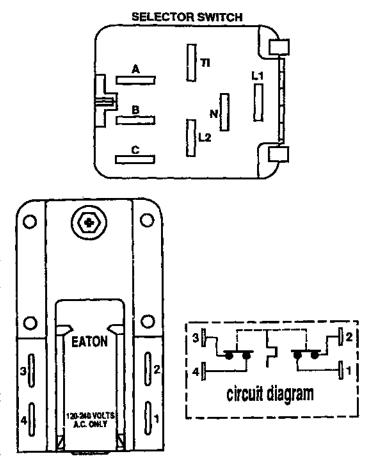
Temperature Calibration:

The oven temperature is calibrated by adjusting the thermostat knob. **DO NOT** make any adjustments to the thermostat itself.

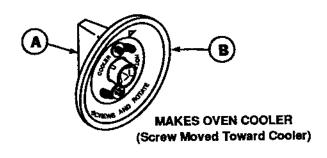
IMPORTANT: Before making any temperature adjustments, be sure the oven thermostat capillary bulb is properly positioned in its mounting clips. If the capillary bulb is out of position and contacts oven wall calibration will be incorrect. An unusually dirty capillary bulb will also affect thermostat calibration.

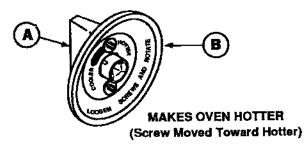
To Adjust 0ven Temperature:

- 1. Pull Thermostat knob off.
- Loosen two screws on back of knob and rotate the knob skirt in the desired direction to either raise or lower the oven temperature.
- Tighten screws and re-install knob.



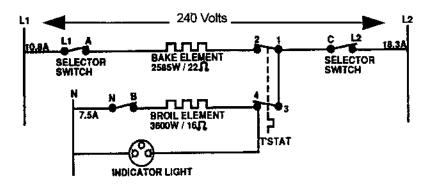
NOTE: Ovens with standard lower oven must be removed from installation to replace Thermostat.





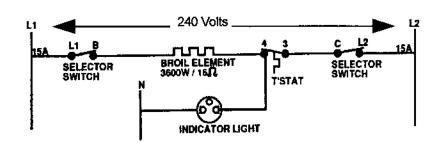
30" Double Electric Wall Ovens ("V1" Series)

BAKE CIRCUIT



STANDARD OVEN CIRCUITS

BROIL CIRCUIT

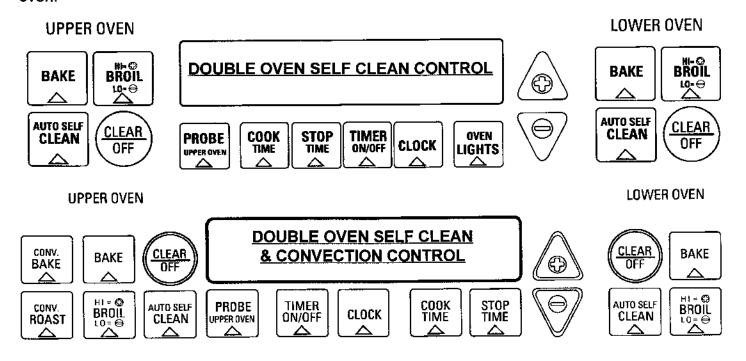


Double Oven Self Clean & Convection Controls:

Two versions of the control exists for the 30" Self Clean Double Wall Oven Exist.

Version No. 1 - Contains all the features of the ERCII Control for both upper and lower ovens plus and oven light switch and temperature probe for the upper oven.

Version No. 2 - Same as version no. 1 plus the convection bake and roast features for the upper oven.



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



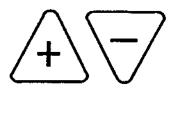
- 1. Touch Clock pad
- 2. Press + / pad to set time of day.
- 3. Press clock pad again to lock numbers in or they will automatically lock in after one minute.

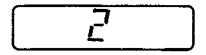
To Set Timer:

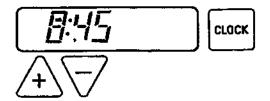
The Timer does not control any oven operations. Maximum Timer setting 9 hours and 55 minutes.

- 1. Touch Timer pad
- 2. Press + / 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 OO. Press timer pad or clear off pad to return to time of day.







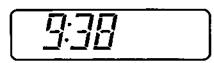




DISPLAY CHANGED TO SECONDS



TIMER TIMED OUT



DISPLAY RETURNEDTO TIME OF DAY

End Of Cycle Tone:

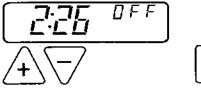
At the "END" of a cycle the control will "BEEP" 3 times followed by a signal tone every six seconds until canceled.

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 + / - pads along with STOP TIME pad for approximately 2 seconds. The word "OFF will appear in display and then disappear. Anytime a oven function pad is pressed the word "OFF" will appear in display. Repeat above procedure to unlock control.



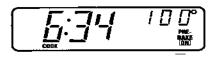




Bake Operation:

- 1. Touch Bake Pad.
 - Control will "BEEP", ____ ° and SET Bake will appear in Display.
- 2. Press + / Pad.
 - Previous bake temperature will be displayed.
 - At initial power up or after power failure 170°F will be displayed.
- 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
- Press + or 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 + / 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 + / 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 + pad for HI (550°F) or pad for LO (450°F) Broil.
 - · LO or HI and "ON" will be displayed.

To Clean:

- 1. Touch CLEAN pad
 - · SET CLEAN TIME in display.
- 2. Press + / pad.
 - CLEAN and 3^{HR}: 00 will be displayed and door will lock.

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

3. When the word lock disappears from the display the door will unlock.

PROBE





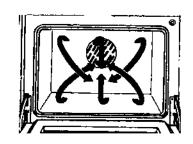


Bake Temperature Calibration:

The bake temperature can be adjusted by ± 35° F. from the factory setting. To Adjust The Bake Temperature:		
1. Press BAKE pad.	BAKE	
2. Select any temperature above 500° F. by pressing the + pad.	B: 11 15 25 3 4	
 Immediately Press and Hold BAKE pad until "00" or previously entered temperature is dis- played. 	SAKE III	
4. Press the + or - pad to change the oven temperature +35° or -35° in 5° steps.	<u>35</u>	
Press CLEAR / OFF pad to return to normal operation.	CLEAR	

Convection Oven:

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 is 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.

To Convection Bake:

- Place the food in the oven making sure pans do not touch.
- 2. Touch Convection Bake Pad.
 - SET —° and C0NV BAKE will appear in Display.
- 3. Touch + or 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 + or -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.

To Convection Roast:

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

Convection Roast

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

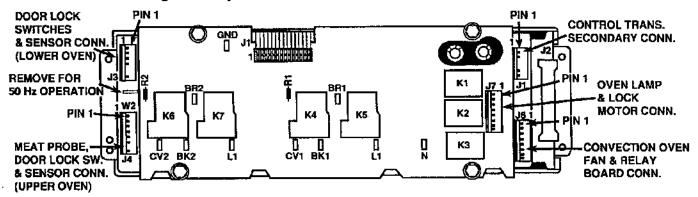


Oven Control System:

The oven control system consists of Key Panel Assembly, Relay and Control Board Assembly, Control Transformer, Sensor, Sensor Circuit, Lock Motor and Lock Circuit.

Control:

The Oven Control is made up of the smart board and relay board mounted in a housing. The Relay Board consists of 7 relays, (controls the operation of the bake & broil elements, oven lights and lock motors), a series of ¼" terminals, Control Transformer Connector and Sensor, Meat Probe and Lock switch Connector along with Key Panel Ribbon Connector.



NOTE: ON CONVECTION MODELS - Convection Connector (J6) must be properly aligned (Pin 1 to Pin 1) to avoid damage to control.

Control Voltages:

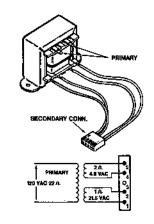
Connector / Terminal	Voltage
UI	PPER OVEN
L1 to N	120 VAC all the time
L1 to BK1*** L1 to BR1***	240VAC when oven is not calling for heat
* CV1 to N	120 Volts anytime bake is not on
Upper Oven Lock Motor Connector J7 Pin 1 to N	120 VAC when motor is locking or unlocking
**Oven Light Relay Conn. J7 Pin 7 to N	Oven Light is on when relay contacts are closed or Oven Door open

Connector / Terminal	Voltage	
LOWER OVEN		
L1 to N	120 VAC all the time	
L1 to BK2*** L1 to BR2***	240VAC when oven is not calling for heat	
* CV2 to N	120 Volts anytime bake is not on	
Lower Oven Lock Motor Connector J7 Pin 3 to N	120 VAC when motor is locking or unlocking	

^{*} Used only on models with convection feature ** Operates both upper and lower oven lights

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.

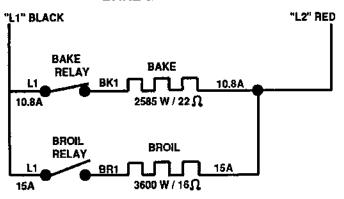


^{***}NOTE: If 0 or 120VAC is read, press CLEAR / OFF and recheck.

UPPER OVEN CIRCUITS

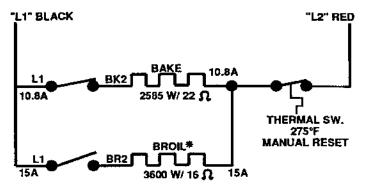
LOWER OVEN CIRCUITS

BAKE & TIME BAKE



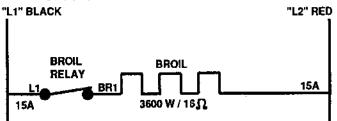
* APPROXIMATELY 25% ON TIME IN BAKE. BAKE & BROIL relays cannot be on at same time. BAKE ONLY during first (pre-heat) cycle.

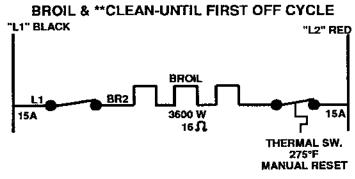
BAKE & TIME BAKE



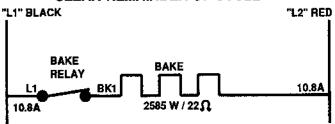
* APPROXIMATELY 25% ON TIME IN BAKE. BAKE Bake & Broil Relays cannot be on at same time. & BROIL

BROIL & CLEAN-UNTIL FIRST OFF CYCLE

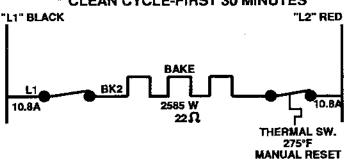




CLEAN-REMAINDER OF CYCLE







Oven Sensor and Sensor Circuit:

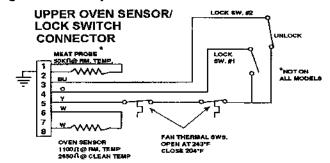
The control monitors the oven temperature through the oven temperature sensor. The sensor on these models is located on the rear oven wall just right of center just below the broil unit.

Oven Sensor & Door Switch Ohmmeter Test:

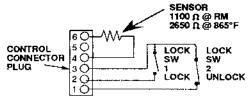
(See "Motorized Door Lock Operation" for door switch function explanation.)

Disconnect power to range. Make resistance measurement from side of sensor & lock switch connector with exposed terminals.

CIRCUIT	TERMINALS		OHMS
	UPPER OVEN	LOWER OVEN	
Oven Sensor	6 to 8	4 to 5	1100 @ Rm Temp 2650 @ 865°F.
Door Uniatched	3 to 5	1 to 3	0 U
Door Latched	4 to 5	2 to 3	0 U



LOWER OVEN SENSOR/LOCK SW. CONNECTOR



30" Double Electric Wall Ovens ("V1" Series)

Key Panel:

The key panel is connected to the control by a ribbon connector. The control will sound a tone when any of the pads are depressed except for the + / - pads.

To help isolate a problem to either the control or key panel, depress each pad on the key panel and observe the following:

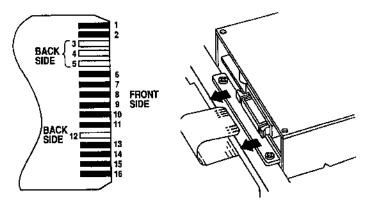
- Bake, Broil, Convection Bake, Convection Roast, Clean, Timer, Clock, Stop Time, and Cook Time Modes - Audible tone plus display showing mode of operation selected.
- Clear / Off Audible tone and display shows time of day.
- Probe Audible tone if probe has been plugged in and probe pad is depressed.
- Oven Light When oven light pad is deepressed the only sound will be the relay operation.
- + / Pads No audible tone. Can only be used after another function pad has been selected.

If some of the pads work and some don't, the problem is probably with the key panel. To verify that the key panel is the problem check the connector for proper insertion of the ribbon cable and perform the Ohm Test. If the ohmmeter reads $\varpi~\Omega$ when depressing the pad or shows some resistance without depressing the pad the key panel is bad.

Ohmmeter Test:

Set ohmmeter on scale that will read approximately 500W. Connect leads to ribbon cable as indicated in chart for each function. Depress function pad. Meter should read less than $\infty \Omega$ if the switch contact is working.

UPPER OVEN		LOWER OVEN		
FUNCTION	CONDUCTORS	FUNCTION	CONDUCTORS	
BAKE	3-8	BAKE	3-11	
BROIL	4-8	BROIL	4-11	
CLEAN	5-8	CLEAN	5-11	
CLEAR/OFF	1-12	CLEAR/OFF	1-13	
PROBE	3-10			
CONV. BAKE	6-8			
CONV. ROAST	7-8	1		
COMMON FUNC	TIONS			
FUNCTION	CONDUCTORS	FUNCTION	CONDUCTORS	
TIMER	3-9	OVEN LIGHT	5-10	
CLOCK	4-9	DOWN ARROW	16-15	
STOP TIME	5-9	UP ARROW 16-14		
COOK TIME	6-9	† · ··	- "	



Motorized Door Lock:

The motorized door lock assembly is located on top right side of oven just below the control on upper oven and behind the vent trim for lower ovens. The assembly consists of a lock motor cam and switch assembly, lock hook, and mounting plate.

Motorized Door Lock Operation:

The lock motor is energized when the control is set for Clean and Clean Time selected. The lock relay contacts will close and complete the circuit that supplies the voltage (120VAC) to the lock motor. The motor turns the cam that pulls the hook into the lock position (Hook enters slot in door to prevent the door from being opened).

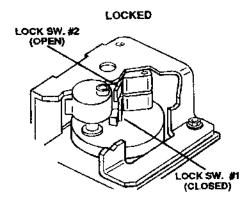
NOTE: Display of Control will flash "DOOR" if the door switch is in the "C" to "NC" position.

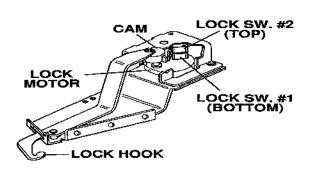
The word "LOCK" will flash on and off in the display while the lock motor is in motion. When the door is locked the word "LOCK" remains illuminated in the display.

<u>Cam</u> - The cam on the motor performs two functions:

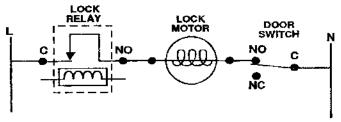
- Positions the lock hook in the door to prevent opening during clean operation.
- Operates the two lock switches which tells the the control if the door is locked and ready for clean operation.

Note: When door is either being locked or unlocked both switches 1 & 2 will be in the open position.

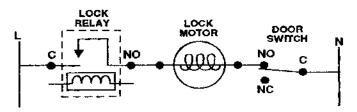


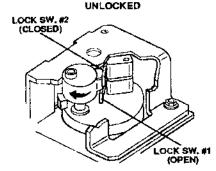


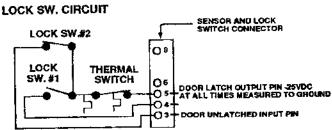
DOOR LOCKING / OR UNLOCKING



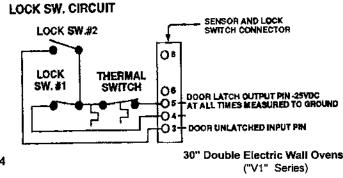
ALL OTHER MODES WITH DOOR CLOSED





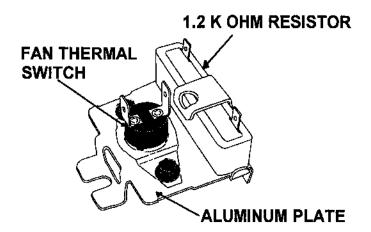


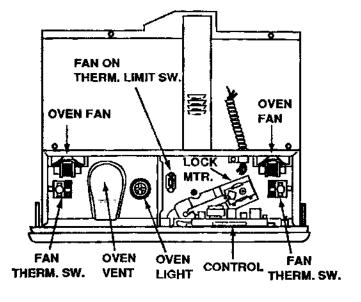
NOTE: Lower Oven lock circuit same as upper oven except for the two thermal switches.



Upper Oven Fan Thermal Switches:

Two fan thermal switch assembles are located on the floor of the component compartment (one in front of each fan motor). The assemblies consist of a thermal limit switch, resistor and an aluminum plate. If one of the fans fails to operate or perform correctly, the resistor will heat the plate and open the limit switch and turn the oven off.





Fan On Thermal Limit Switch;

The fan switch is a resetable type located on the floor of the component compartment. The switch will turn the fan on in any mode of operation when it detects a temperature above 133°F. The fan will turn off once it has cooled below 108°F.

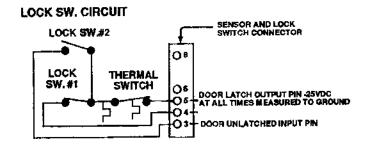
The two 1.2K Ω resistors are wired parallel with the two fan motors. The fan operation keeps the resistors from heating up the aluminum plate and opening one of the fan thermal switches.

The fan thermal switches are wired in with the lock motor switches.

The Fan Thermal Switches opens at 243°F and closes when temperatures cool below 204°F.

If the fan thermal switch opens during:

- 1 Oven Temperature Below 600°F.
 - a. Bake or Broil the heating element will cycle "OFF", the lock motor will run and the word lock will appear in display along with the cooking function and temperature. "ON" will disappear from display.
 - If the thermal switch closes while the lock motor is in the unlocking phase of operation the unit will resume cooking.
 - If the thermal switch closes while the lock motor is in the locking phase of operation the program will be cancelled and return to time of day.
 - b. Clean Mode Program is cancelled when thermal switch opens.



2 Oven Temperature Above 600°F

Any mode of operation control will go to F-2 failure code. When this condition exists check the fan operation (look for obstructions), inspect oven installation (make sure grill areas are not blocked), oven insulation and lock circuit.

Lower Oven Component Access:

The lower oven latch assembly, thermal oven switch, and fan switch can be accessed by removing the vent extension.

To Remove Vent Trim:

- 1. DISCONNECT POWER, and remove upper oven door.
- 2. Remove two screws on top of vent trim extension just below hinge arms.
- Remove three screws from bottom side of trim and lift off.

Lower Oven Fan Thermal Switch:

The fan thermal switch is located near the lock motor assembly. The switch closes and turns on the lower oven fan (located between the 2 ovens) at 133°F and turns off the fan when when it detects temperatures below 120°F.

Lower Oven Thermal Limit Switch:

The thermal limit switch is located beside the fan switch and opens at 275°F. The switch is a manual reset type. If the switch opens determine cause: Fan not working, oven not insulated properly etc.

Lower Oven Fan:

The fan is located on a partition between the upper and lower oven. Oven must be removed from installation and separated to access fan.

Convection Bake Element & Fan Assembly:

The convection bake element and fan assembly are located on the back wall of the oven liner behind the panel with the screen in the center.

To Access Convection Bake Element:

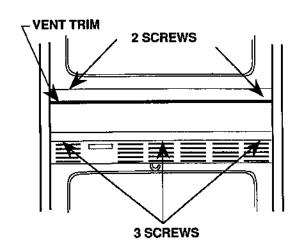
- DISCONNECT POWER TO THE RANGE, remove oven door and oven racks.
- Remove four screws mounting panel (2 on each side and pull forward.

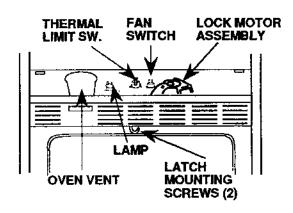
To Remove Convection Bake Element::

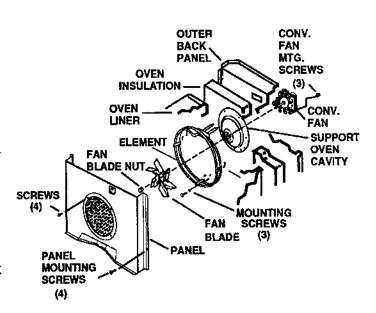
Remove three screws mounting element to back wall and pull forward and disconnect wires.

To Service Fan:

Fan blade can be replaced from inside oven. Oven must be removed from installation to access Convection Fan Motor.



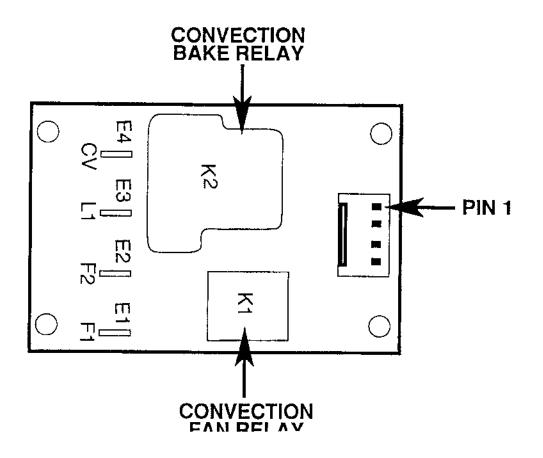


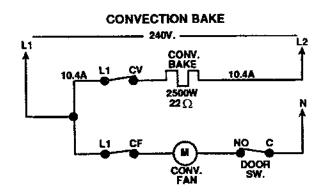


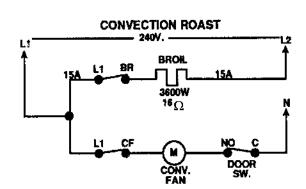
Convection Fan & Relay Board:

The convection fan and relay board is located on the center partition in the upper oven control compartment.

NOTE: Always make sure that the four pin connector is properly aligned (Pin 1 to Pin 1) to avoid damaging the control.







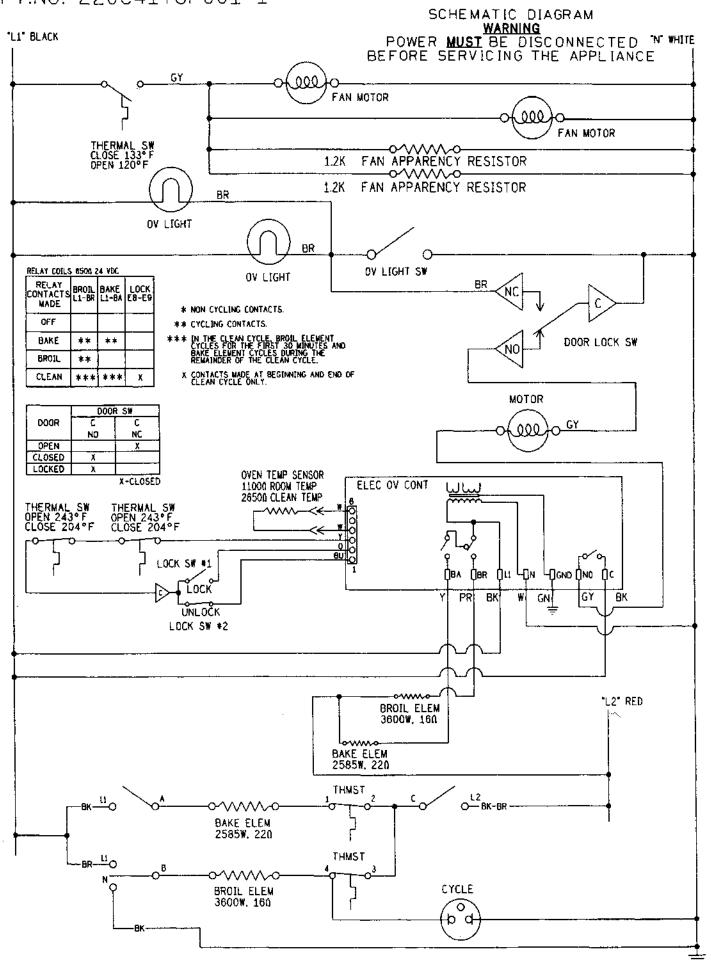
ERC FAILURE CODES

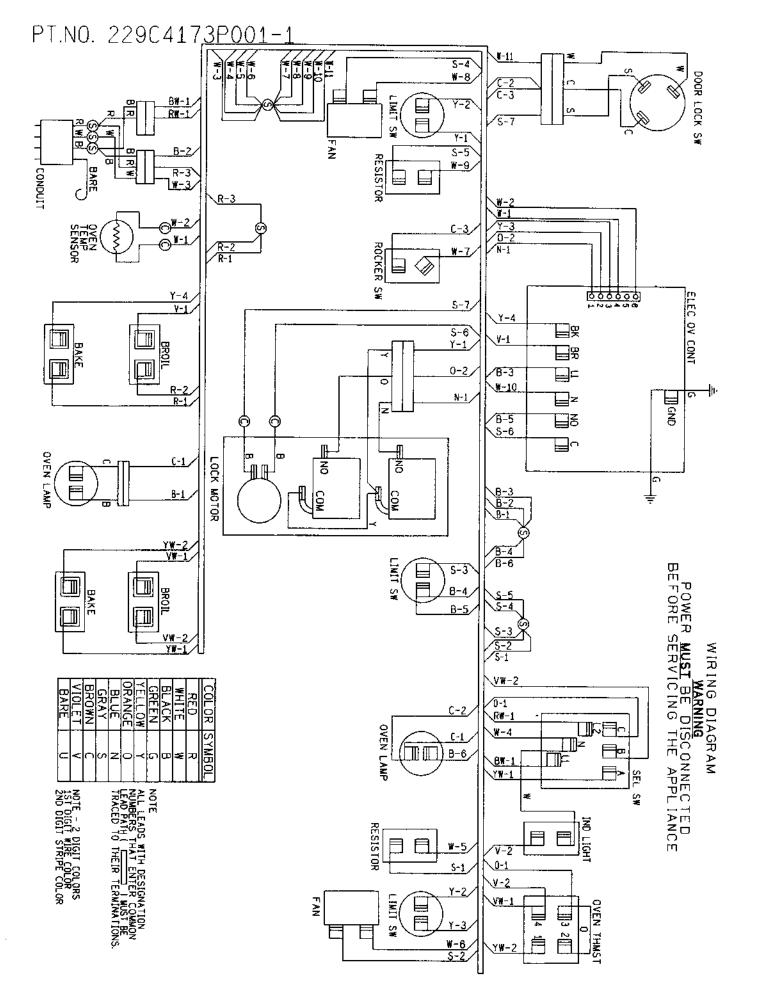
FAILURE CODE	MEANING	CORRECTION			
-F1- -F7-	Stuck Key	Determine if problem is with the Key Panel or the Control by: 1. Pushing CLEAR / OFF pad 2. Disconnecting Ribbon Cable from control and waiting at least 32 seconds see if Code reoccurs. If code reoccurs, problem is in the Control. If code does not reoccur the problem is with the key panel.			
-F2-	Oven Over Temperature Exceeded 624° with door in unlocked position or 928° with door locked Remember: ERC measures resistance of sensor circuit, not actual oven temp. During Clean Operation	If actual over temperature condition did occurred: Look for welded relay contacts. If over temperature condition did not occur: Look for a high resistance connection or any other cause of high resistance in the sensor circuit. Open thermal switch(self - resetting) located on floor of component compartment. Switch is normally closed and will open if area overheats due to inoperative cooling fan. Check Fan Operation. Both Lock Sw. #1 and #2 closed at same time.			
-F3- -F4-	Open Sensor Circuit or Shorted Sensor Circuit	 Measure Sensor Circuit Resistance at Sensor / Lock Switch connector plug at ERC (should read approx. 1100W @ room temp.). Measure lead to lead and each lead to chassis ground. Measure resistance directly across sensor (pull sensor leads into oven approx. 10" and cut leads at crimp connection and check sensor resistance). Both sensor leads shorted to ground. Cut or pinched sensor harness wire. Loss of contact within sensor harness connector at back of oven or ERC. If Circuit Appears Normal: (approx. 1100W) Reinstall sensor disconnect plug on ERC and measure sen sor resistance from connector pin solder joints on back of ERC circuit board. If circuit is open problem is in the connector plug. Remove terminals from connector block and bend them to re store contact pressure. 			
-F8- -FF-	Component failure within ERC affecting temperature processing circuits	Replace Control			
-F9-	Problem with Door lock circuit such as pinched wire between ERC & door lock switch (lock switch # 1).	Check wiring and test operation of switch			
-Fd-	Shorted Meat Probe	Make the folowing checks: Make sure J4 Plug is plugged in correct direction and connected to ERC. Check wiring and probe receptacle for short.			

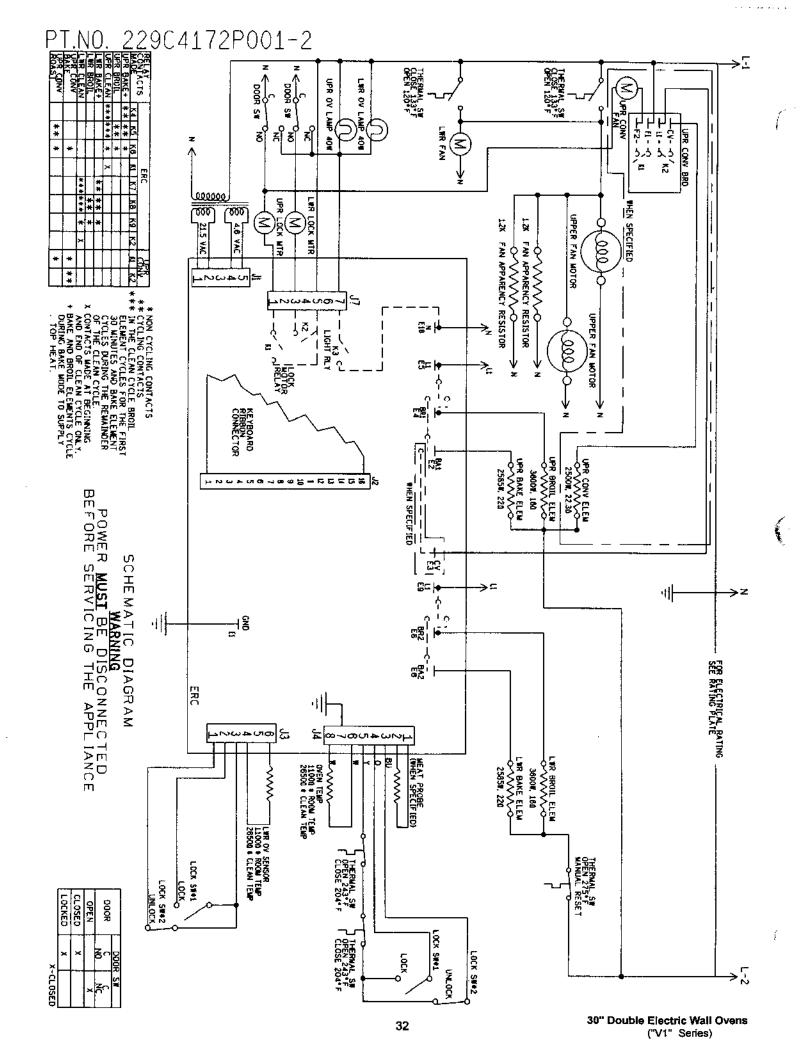
NOTE: Connections can be intermittent due to a corrosive build up between the connection to the terminals, by being bent by the insertion of a probe, ETC.

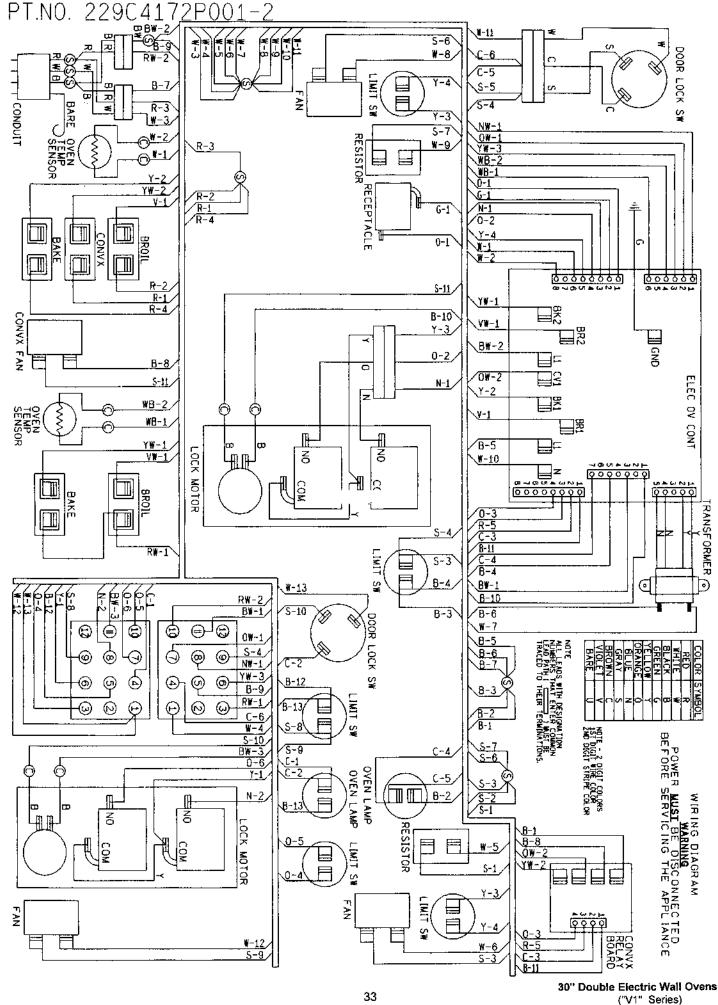
"V1" Series Schematic / Wiring Diagrams

Model Nos.	<u>Page No.</u>
JTP26GV1	30 & 31
JTP27WV1	30 & 31
JTP44GV1	32 & 33
JTP45WV1	32 & 33
JTP54GV1	32 & 33
JTP55WV1	32 & 33
JTP56AV1	32 &33









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GE "V2" Series, Kenmore and Monogram 30" Double Wall Ovens

The "V1" double wall ovens covered in the front of this manual along with the 30" single wall ovens covered in Technician Manual (Pub No. 31-20105) were changed to "V2" series in the 2nd qtr. of 95 with the introduction of some engineering improvements.

The Kenmore and Monogram lines were also introduced in the 2nd qtr. 95 incorporating the latest changes.

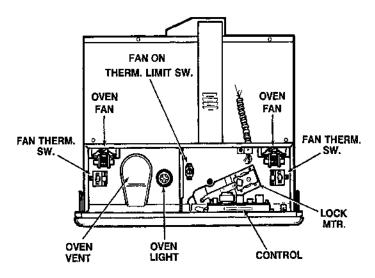
The Model line up and control type is as follows:

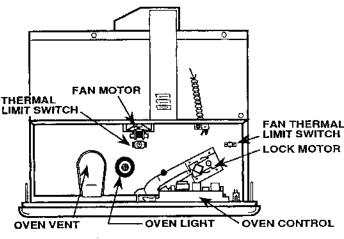
MODEL No.	BRAND	CONTROL TYPE			
JTP13GV2 JTP14WV2	GE GE	ERCIIC SELF CLEAN CONTROL			
41055591 41059591	KENMORE KENMORE				
JTP16GV2 JTP17WV2 JTP18AV2 ZET736GV1 ZET737WV1	GE PROFILE GE PROFILE GE PROFILE MONOGRAM MONOGRAM	ERC SINGLE OVEN SELF CLEAN \ CONVECTION CONTROL WITH TEMPERATURE PROBE FEATURE			
JTP26GV2 JTP27WV2	GE GE	ERCIIC UPPER OVEN SELF CLEAN CONTROL LOWER OVEN STANDARD SELECT SWITCH & T'STAT			
JTP44GV2 JTP45WV2 41155590 41159590	GE GE KENMORE KENMORE	ERC DOUBLE OVEN SELF CLEAN CONTROL WITH TEMPERATURE PROBE FEATURE IN UPPER OVEN (TEMPERTAURE PROBE NOT USED ON KENMORE LINE)			
JTP54GV2 JTP55WV2 JTP56AV2	GE PROFILE GE PROFILE GE PROFILE	ERC DOUBLE OVEN SELF CLEAN CONTROL WITH UPPER OVEN CONVECTION AND TEMPERATURE FEATURE			
ZET756GV1 ZET757WV1	MONOGRAM MONOGRAM	ERC DOUBLE OVEN SELF CLEAN & CONVECTION CONTROL WITH TEMPERATURE PROBE IN UPPER OVEN			

The primary change between the "V1" series and the "V2" series was the elimination of one of the fans in the control compartment along with the two resistor and thermal cutout assemblies. This section will concentrate only on the design changes.

Upper Oven Control Compartment:

The access to the component compartment is the same as on previous models. The two views below shows the difference in components and their locations:





30" Single & "V1" series Double Wall Ovens Component Location

Primary Differences:

- 2 Fan Assembles
- · 2 Fan Thermal Limit Switch Assemblies
- · Upper Oven Lock Switch Circuit
- Fan On Switch Calibration
- Center Fan Partition

"V2" Series (Single & Double Wall Ovens), Kenmore & Monogram Component Location

Primary Differences:

- · Single Fan Assemble
- Single Thermal Limit Switch
- Upper Oven Lock Switch Circuit
- Fan On Switch Calibration

UPPER OVEN FAN ASSEMBLY:

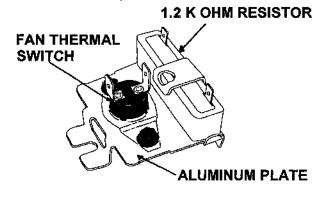
Original design required the use of two fan assemblies to comly with agency requirements

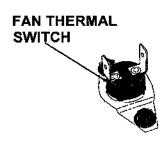
Single upper oven fan provides for quiter operation. Larger Component area and elimination of center partition help to accomplish this task.

Upper Oven Fan Thermal Switches:

The original design utilized two fan thermal limit assemblies consisting of a thermal limit switch, resistor and aluminum plate. They were located on the floor of the component compartment (one in front of each fan).

The "V2" series designs will use a single thermal limit switch located on the floor of the component compartment in front of the fan motor.





Upper Oven Fan Thermal Switches Circuits:

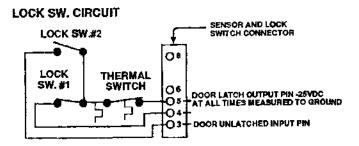
The two 1.2K Ω resistors are wired parallel with the two fan motors. The fan operation keeps the resistors from heating up the aluminum plate and opening one of the fan thermal switches.

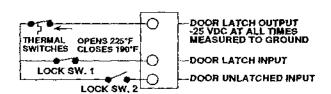
The fan thermal switches are wired in with the lock motor switches.

The Fan Thermal Switches opens at 243°F and closes when temperatures cool below 204°F.

The single thermal limit switch is wired in series with the lock motor switches.

The switch opens when it detects a temperature above 225°F and closes when the temperature is below 190°F.





If the fan thermal switch opens during:

- 1 Oven Temperature Below 600°F.
 - a. Bake or Broil the heating element will cycle "OFF", the lock motor will run and the word lock will appear in display along with the cooking function and temperature. "ON" will disappear from display.
 - If the thermal switch closes while the lock motor is in the unlocking phase of operation the unit will resume cooking.
 - If the thermal switch closes while the lock motor is in the locking phase of operation the program will be cancelled and return to time of day.
 - b. Clean Mode Program is cancelled when thermal switch opens.
- 2 Oven Temperature Above 600°F

Any mode of operation control will go to F-2 failure code. When this condition exists check the fan operation (look for obstructions), inspect oven installation (make sure grill areas are not blocked), oven insulation and lock circuit.

Upper Oven Fan On Thermal Limit Switch:

The fan switch is a resetable type located on the middle of the floor of the component compartment. The switch will turn the fan on in any mode of operation when it detects a temperature above 133°F. The fan will turn off once it has cooled below 108°F.

The switch has been moved to a new location on the right side of the component compartment beside the lock motor assembly. The switch calibration has been change to close at 145°F. and open at 108°F.

Note: The lower oven fan switch has been also changed to the same limits as the upper oven.

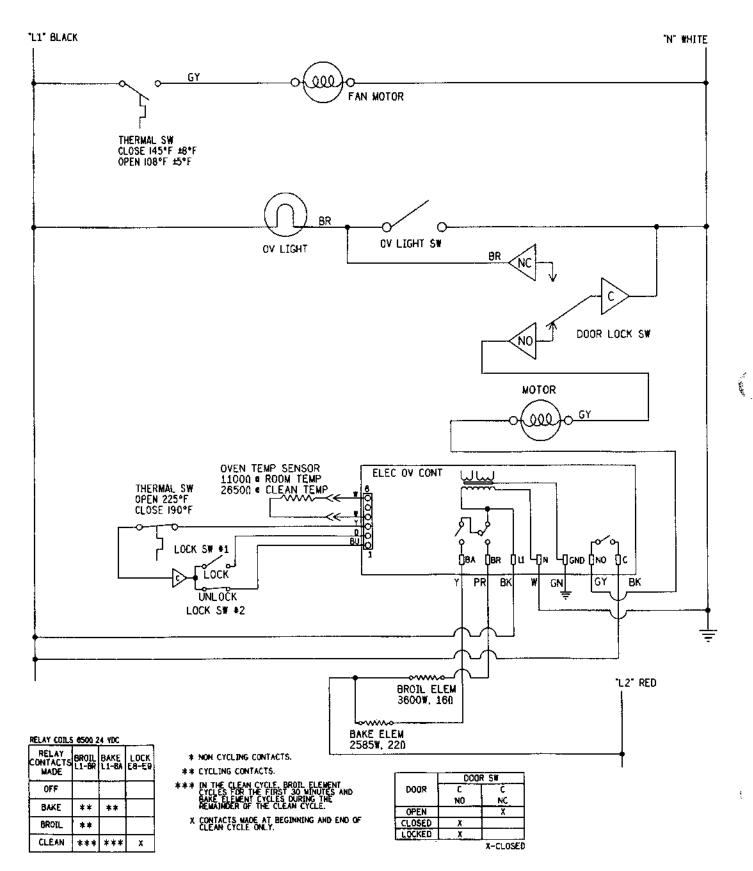
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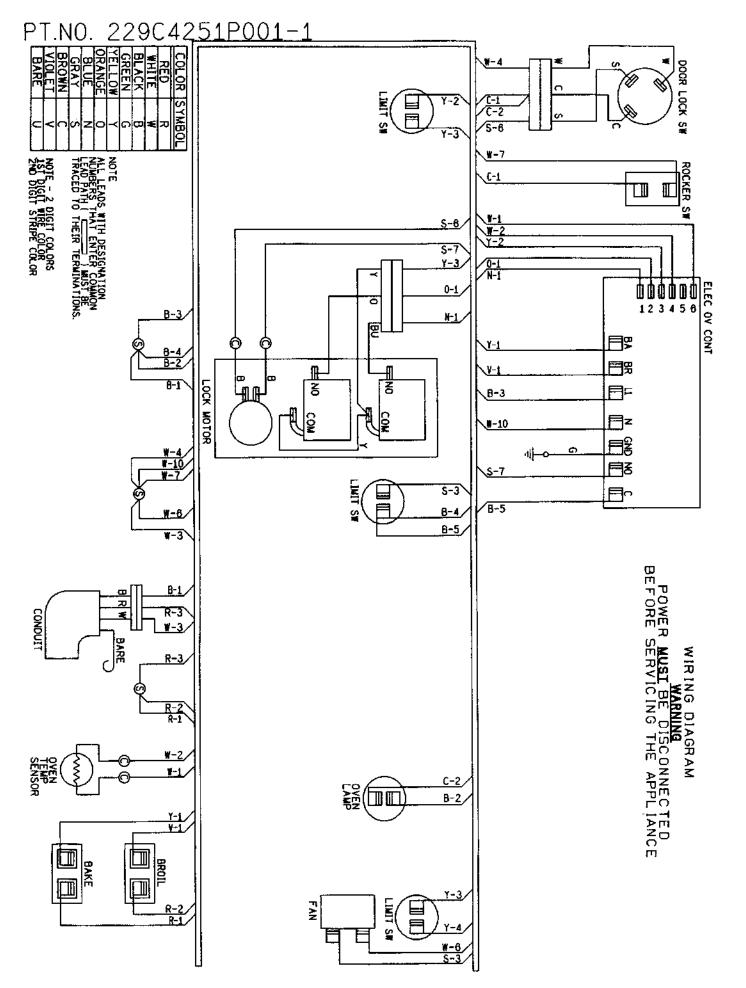
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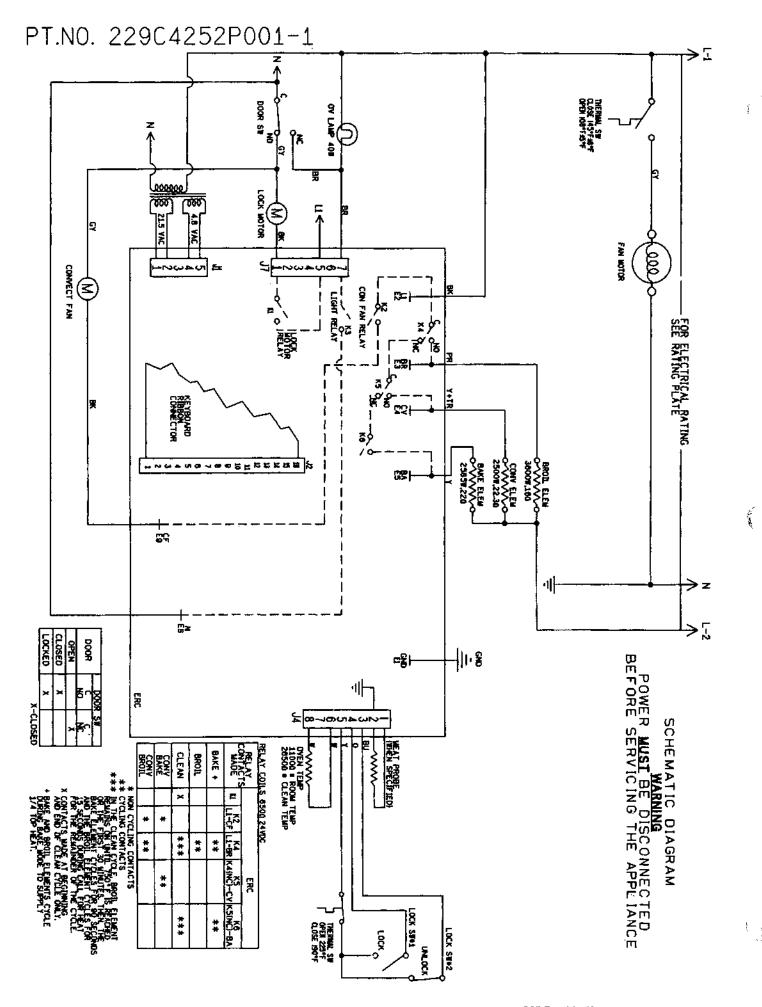
"V2" Series, Kenmore & Monogram Schematic / Wiring Diagrams

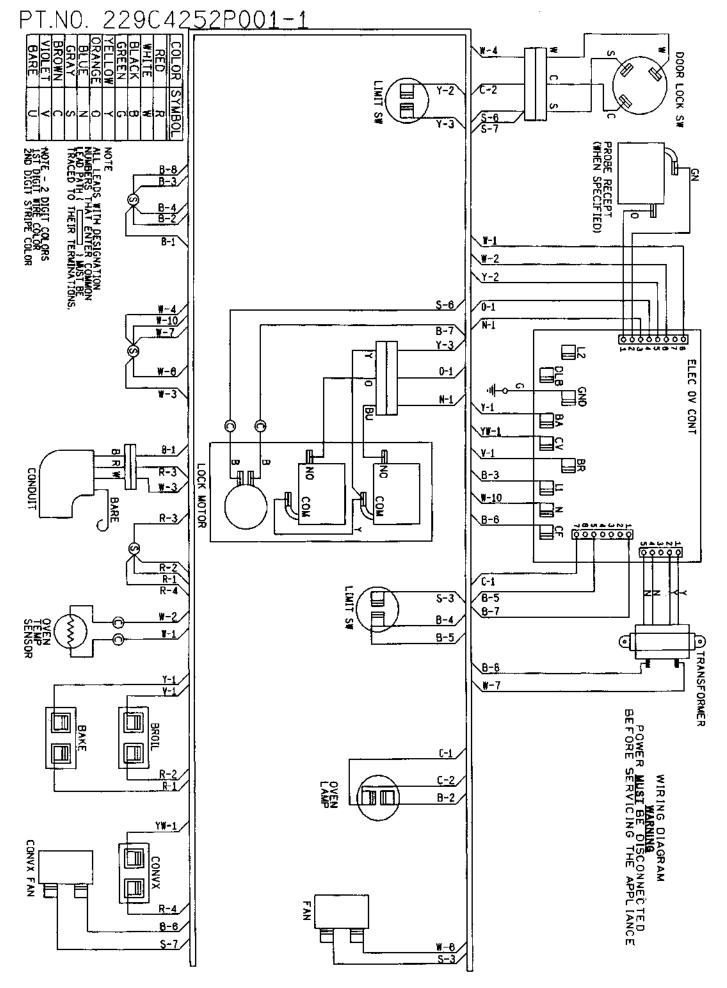
Model Nos.	<u>Page No.</u>
JTP13GV2	40 & 41
JTP14WV2	
41055591	
41059591	
JTP16GV2	42 & 43
JTP17WV2	
JTP18AV2	
ZET736GV1	
ZET737WV1	
JTP26GV2	44 & 45
JTP27WV2	
JTP44GV2	46 & 47
JTP45WV2	
JTP54GV2	•
JTP55WV2	
JTP56AV2	
41155590	
41159590	
ZET756GV1	48 & 49
ZET757WV1	

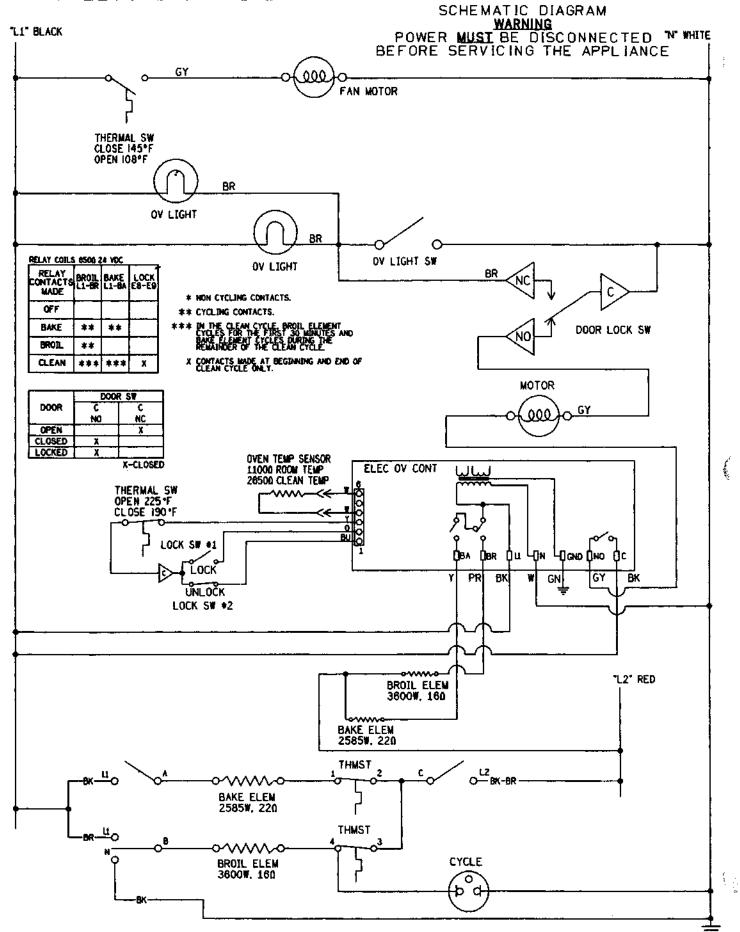
SCHEMATIC DIAGRAM WARNING POWER MUST BE DISCONNECTED BEFORE SERVICING THE APPLIANCE

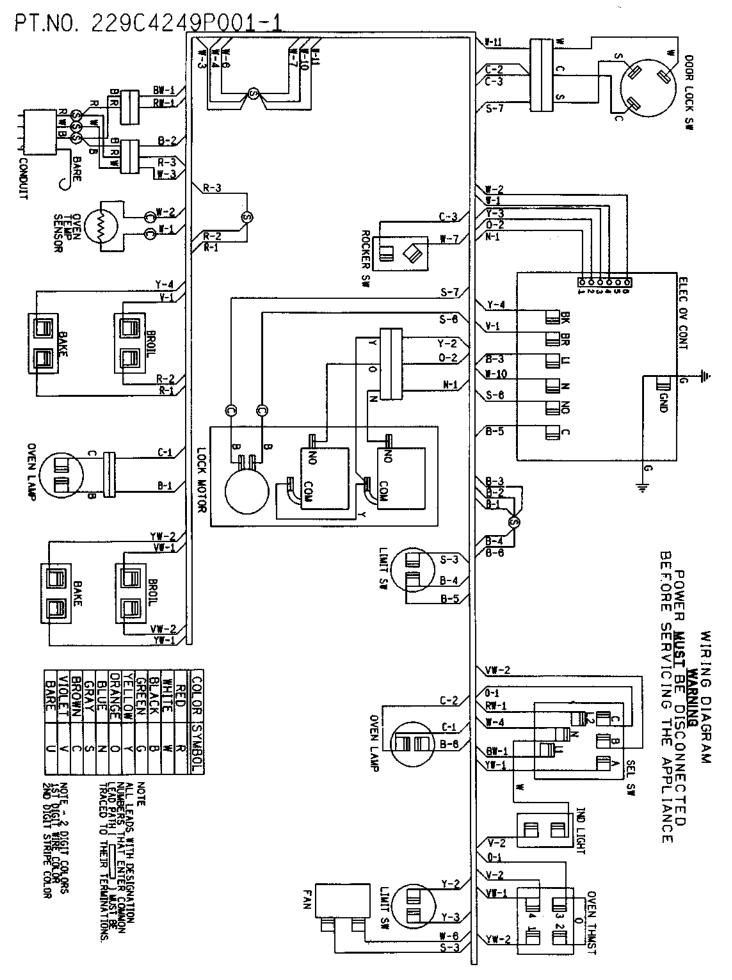


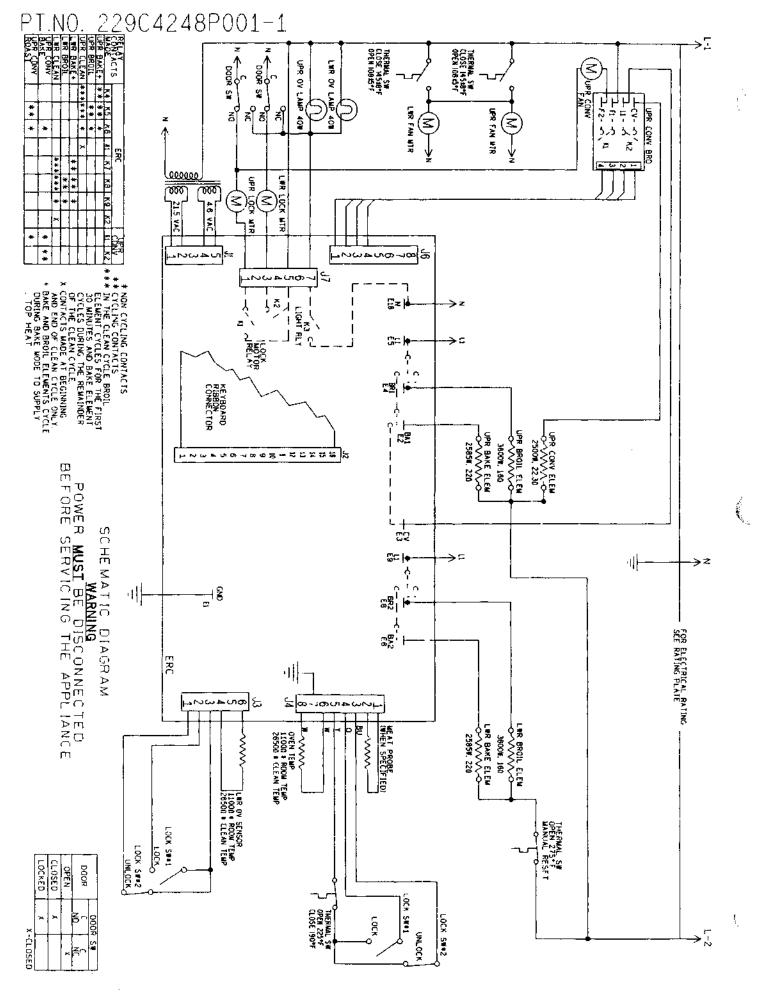


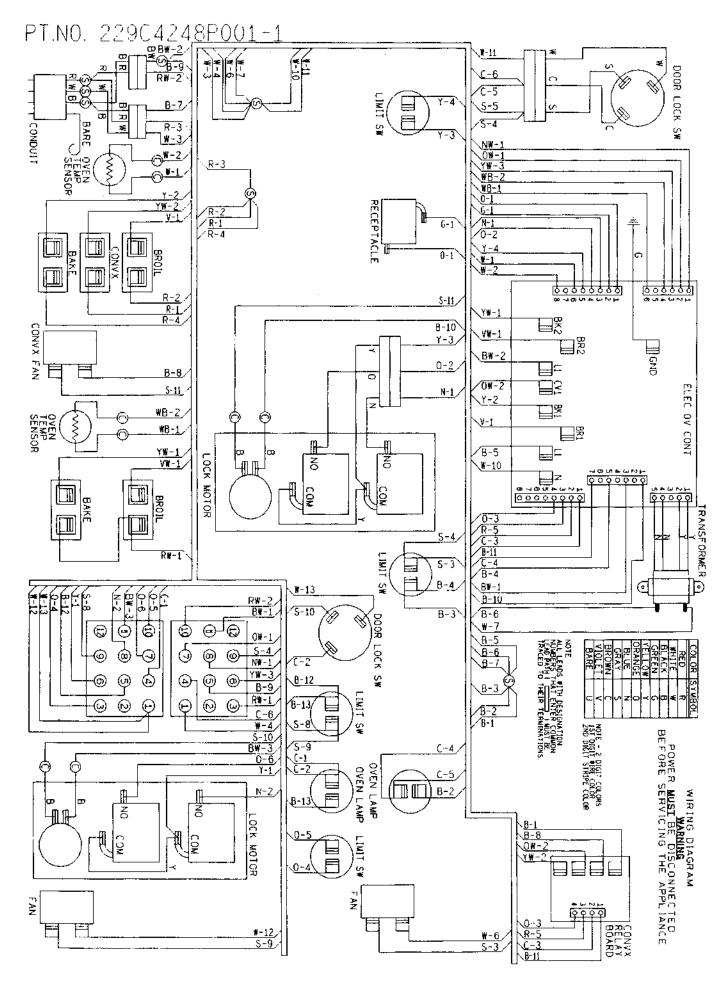


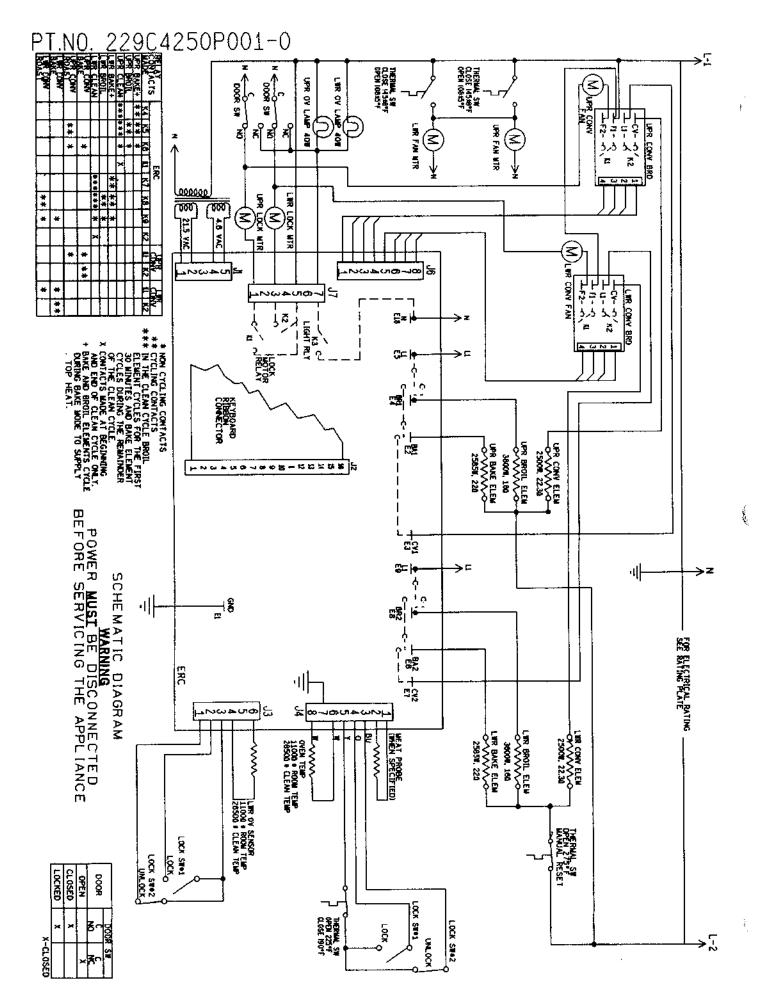


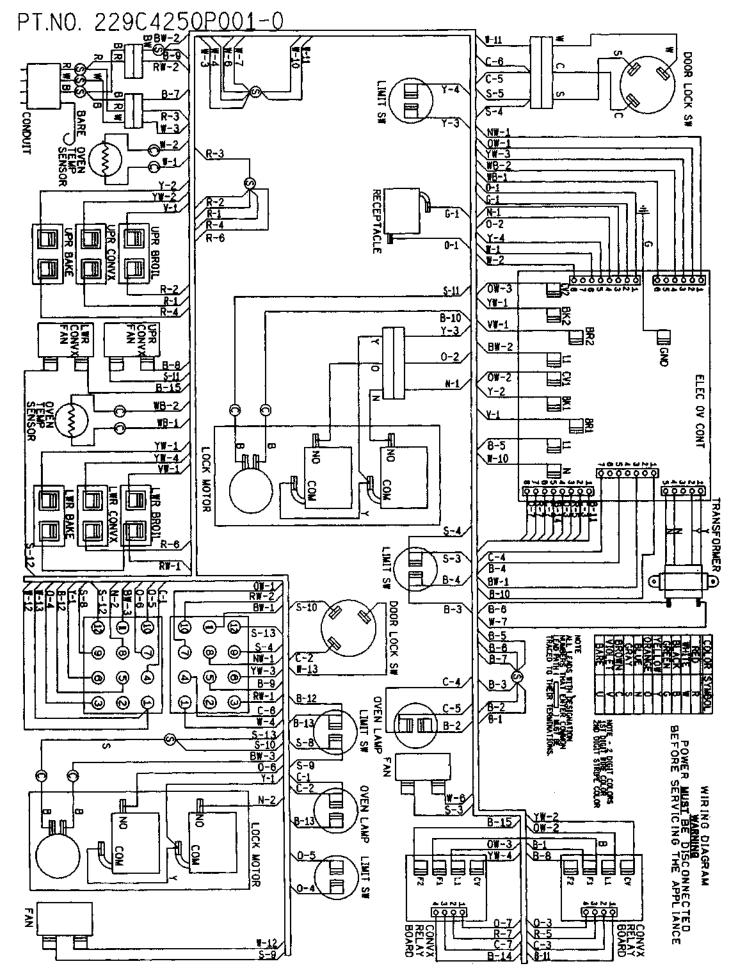












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