

SERVICE NOTE BOOK

**SELF-CLEAN DUAL FUAL RANGES and SELF-CLEAN
ELECTRIC WALL OVENS**



VIKING RANGE CORPORATION®

VIKING RANGE CORPORATION, P. O. DRAWER 956, GREENWOOD, MS.38930 USA

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**VDSC / DUAL FUEL SELF-CLEAN RANGE
 VESO SINGLE ELECTRIC SELF-CLEAN WALL OVEN
 VEDO DOUBLE ELECTRIC SELF-CLEAN WALL OVEN**

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IMPORTANT INFORMATION

The information contained in this manual is intended for use by a qualified service technician who is familiar with the application of all safety procedures required in the repair of any gas or electric appliance, and who is equipped with the proper tools and testing instruments.

Repairs covered in this manual and made by unqualified persons can result in hazards developing due to improper assembly or adjustment.

Inexperienced persons making such repairs subject themselves to the risk of injury or electrical shock which can be serious or even fatal.

IMPORTANT NOTE TO CUSTOMER

If you perform service on your own Viking product, you must assume responsibility of personal injury or property damage which may result.

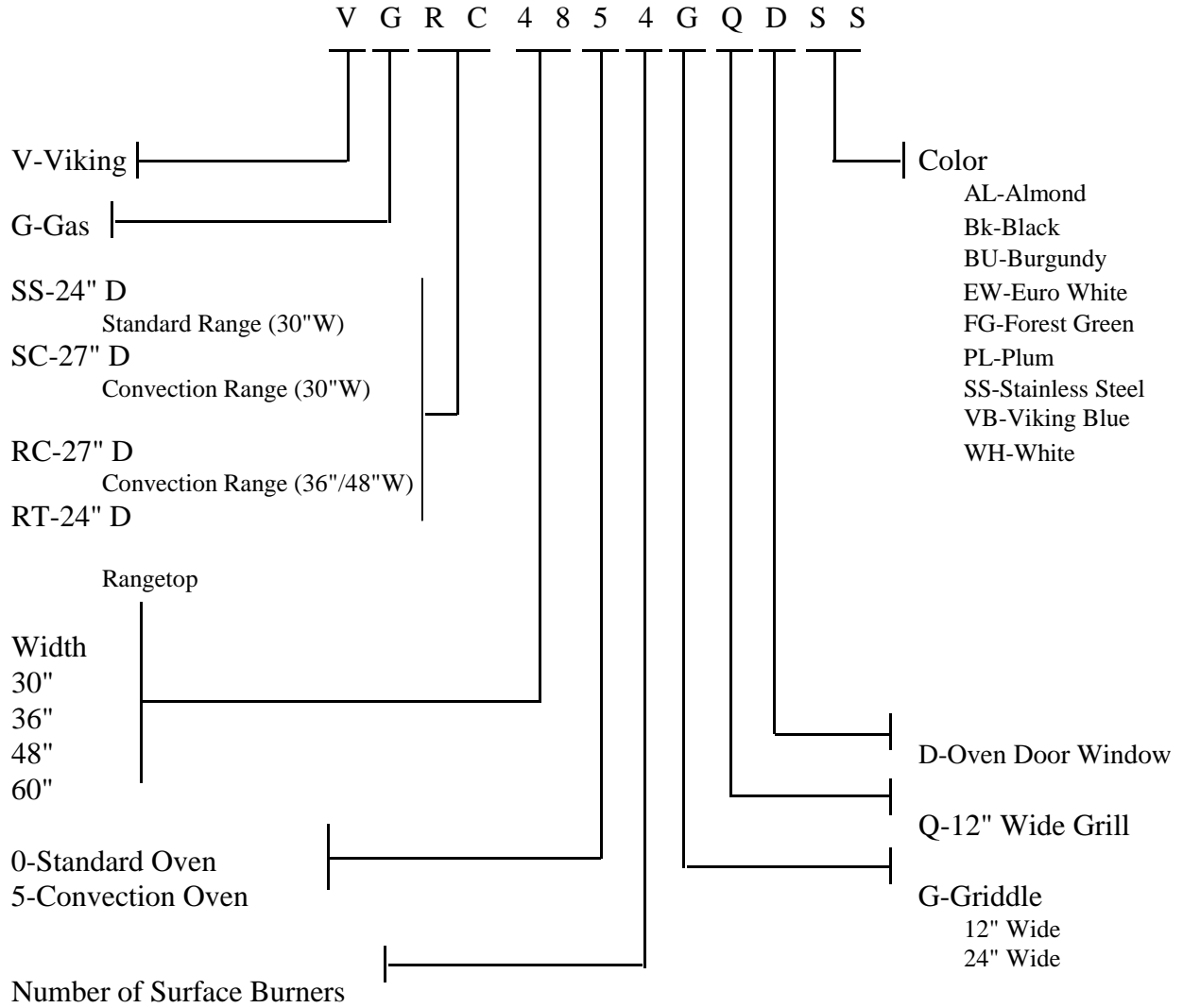
Viking will not be responsible for injury or property damage arising from service performed by other than Viking Factory Authorized Service Agencies.

In order to locate a Viking Factory Authorized Service Agency, please consult the dealer from whom you purchased this product. You may also write to:

Viking Preferred Service
P.O. Drawer 956
Greenwood, Ms. 38930

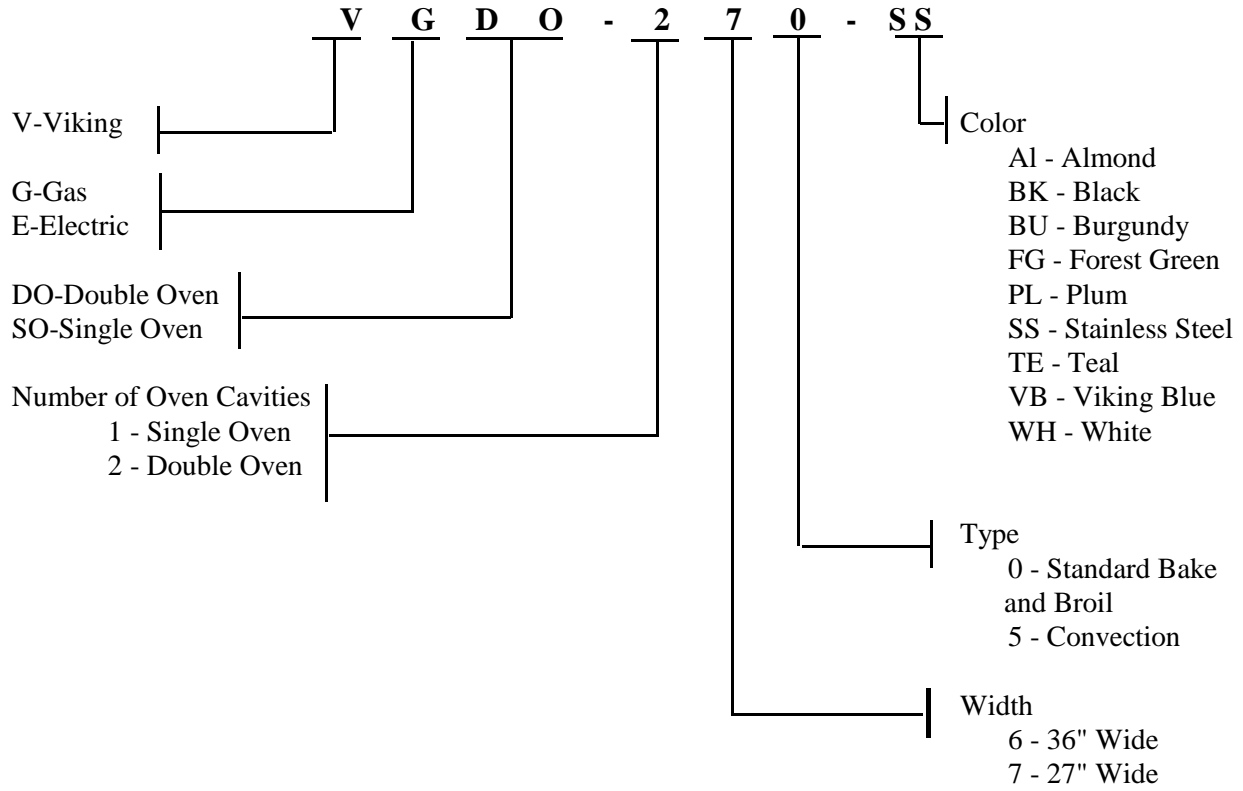
NEW VIKING MODEL NUMBERS

RANGES AND RANGETOPS



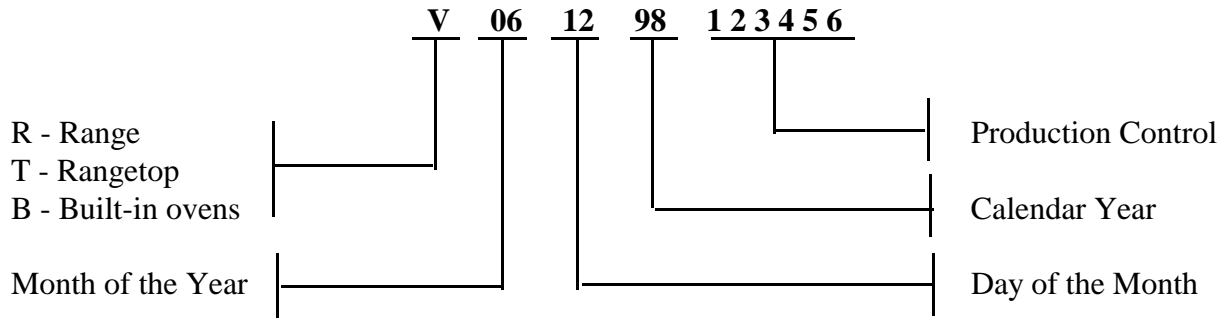
VIKING RANGE MODEL NUMBERS

BUILT-IN OVENS

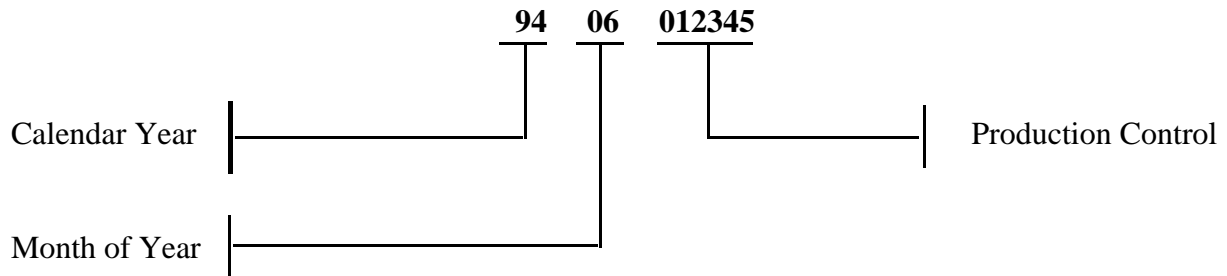


VIKING SERIAL NUMBER LOGIC

RANGES and WALL OVENS



27" Wide Self-clean Ovens



VIKING RANGE CORPORATION
PRODUCT WARRANTY
COOKING PRODUCTS

FREE STANDING GAS RANGES

- * 90 DAYS-GLASS, PAINTED, PORCELAIN AND DECORATIVE ITEMS
- * 1 YEAR FULL WARRANTY-COMPONENTS AND ACCESSORIES
- * 5 YEAR LIMITED WARRANTY-SURFACE BURNER, GRIDDLE TUBULAR BURNER, GRILL TUBULAR BURNER (PART ONLY)
- 10 YEAR LIMITED WARRANTY-ANY PORCELAIN OVEN OR PORCELAIN INNER DOOR WHICH **RUSTS THROUGH**

DUAL FUEL RANGES

- * 90 DAYS-GLASS, PAINTED, PORCELAIN AND DECORATIVE ITEMS
- * 1 YEAR FULL WARRANTY-COMPONENTS AND ACCESSORIES
- * 5 YEAR LIMITED WARRANTY-SURFACE BURNER, GRIDDLE TUBULAR BURNER, GRILL TUBULAR BURNER, BAKE ELEMENT, BROIL ELEMENT, OR CONVECTION COOK ELEMENT (PART ONLY)
- * 10 YEAR LIMITED WARRANTY-ANY PORCELAIN OVEN OR PORCELAIN INNER DOOR PANEL WHICH **RUSTS THROUGH**

ELECTRIC RANGES

- * 90 DAYS-GLASS, PAINTED, PORCELAIN AND DECORATIVE ITEMS
- * 1 YEAR FULL WARRANTY-COMPONENTS AND ACCESSORIES
- * 5 YEAR-ANY HALOGEN ELEMENT, BAKE ELEMENT, BROIL ELEMENT, OR CONVECTION COOK ELEMENT (PART ONLY)
- * 10 YEAR LIMITED WARRANTY-ANY PORCELAIN OVEN OR PORCELAIN INNER DOOR PANEL WHICH **RUSTS THROUGH**

GAS RANGETOPS

- * 90 DAYS -GLASS, PAINTED, PORCELAIN AND DECORATIVE ITEMS
- * 1 YEAR FULL WARRANTY-COMPONENTS AND ACCESSORIES
- * 5 YEAR LIMITED WARRANTY-SURFACE BURNERS, GRIDDLE TUBULAR BURNER, GRILL TUBULAR BURNER (PART ONLY)

ELECTRIC RANGETOP

- * 90 DAYS-GLASS, PAINTED, PORCELAIN AND DECORATIVE ITEMS
- * 1 YEAR FULL WARRANTY-COMPONENTS AND ACCESSORIES
- * 5 YEAR-ANY HALOGEN ELEMENT, BAKE ELEMENT, BROIL ELEMENT, OR CONVECTION COOK ELEMENT (PART ONLY)

GAS WALL OVENS

- * 90 DAYS-GLASS, PAINTED, PORCELAIN AND DECORATIVE ITEMS
- * 1 YEAR FULL WARRANTY-COMPONENTS AND ACCESSORIES

- * 5 YEARS-OVEN TUBULAR BURNER (PART ONLY)
- * 10 YEAR LIMITED WARRANTY-ANY PORCELAIN OVEN OR PORCELAIN INNER DOOR PANEL WHICH **RUSTS THROUGH**

ELECTRIC WALL OVENS

- * 90 DAYS-GLASS, PAINTED, PORCELAIN AND DECORATIVE ITEMS
- * 1 YEAR FULL WARRANTY-COMPONENTS AND ACCESSORIES
- * 5 YEARS LIMITED WARRANTY-OVEN BAKE, BROIL, OR CONVECTION HEATING ELEMENTS
- * 10 YEAR LIMITED WARRANTY-ANY PORCELAIN OR PORCELAIN INNER DOOR PANEL WHICH **RUSTS THROUGH**

WARMING DRAWERS

- * 90 DAYS-PAINTED AND DECORATIVE ITEMS
- * 1 YEAR FULL WARRANTY-COMPONENTS AND ACCESSORIES
- * 5 YEAR LIMITED WARRANTY-HEATING ELEMENT

VENTILATION PRODUCTS

- * 90 DAYS-PAINTED AND DECORATIVE ITEMS
- * 1 YEAR FULL WARRANTY-COMPONENTS AND ACCESSORIES
- * 2 YEAR LIMITED WARRANTY-BLOWER MOTOR OR EXTERIOR VENTILATOR MOTOR

KITCHEN CLEAN-UP

DISHWASHER

- * 90 DAYS-PAINTED OR DECORATIVE ITEMS
- * 1 YEAR FULL WARRANTY-COMPONENTS AND ACCESSORIES
- * 5 YEAR LIMITED WARRANTY-MOTOR/PUMP AND WATER DISTRIBUTION SYSTEM COMPONENTS
 - * CIRCULATION PUMP
 - * DRAIN MOTOR/PUMP
 - * FILL VALVE
 - * LOWER WASH ARM
 - * TUBE TO UPPER WASH ARM
 - * UPPER WASH ARM
- * 25 YEAR LIMITED WARRANTY-STAINLESS STEEL TANK OR INNER DOOR LINER WHICH DEVELOPS A WATER LEAK

TRASH COMPACTORS

- * 90 DAYS-PAINTED OR DECORATIVE ITEMS
- * 1 YEAR FULL WARRANTY-COMPONENTS AND ACCESSORIES
- * 5 YEAR LIMITED WARRANTY-DRIVE SYSTEM MOTOR

DISPOSERS

- * VCFW 1020 AND VBFW
- * 7 YEAR FULL WARRANTY
- * VCHW 1000 AND VBHW 1030
- * 5 YEAR FULL WARRANTY

PRODUCT WARRANTY (CONTINUED)

REFRIGERATION PRODUCTS

REFRIGERATION

- * 90 DAYS-PAINTED OR DECORATIVE ITEMS
- * 2 YEARS FULL WARRANTY
- * 6 YEARS FULL WARRANTY ON SEALED SYSTEM COMPONENTS
 - * COMPRESSOR
 - * CONDENSER
 - * DRYER/STRAINER
 - * EVAPORATOR
 - * CONNECTING TUBING
- * 12 YEAR LIMITED WARRANTY-SEALED SYSTEM COMPONENT (PARTS ONLY)
 - * COMPRESSOR
 - * CONDENSER
 - * DRYER/STRAINER
 - * EVAPORATOR
 - * CONNECTING TUBING

ICE MAKER

- * 90 DAYS-PAINTED OF DECORATIVE ITEMS\
- * 2 YEAR FULL WARRANTY
- * 6 YEAR FULL WARRANTY ON SEALED SYSTEM COMPONENT
 - * COMPRESSOR
 - * CONDENSER
 - * DRYER/STRAINER
 - * EVAPORATOR
 - * CONNECTING TUBING
- * 12 YEAR LIMITED WARRANTY-SEALED SYSTEM COMPONENT (PART ONLY)
 - * COMPRESSOR
 - * CONDENSER
 - * DRYER/STRAINER
 - * EVAPORATOR
 - * CONNECTING TUBING

WINE COOLER

- * 90 DAYS-PAINTED OR DECORATIVE ITEMS
- * 2 YEAR FULL WARRANTY
- * 6 YEAR FULL WARRANTY ON SEALED SYSTEM COMPONENT
 - * COMPRESSOR
 - * CONDENSER
 - * DRYER/STRAINER
 - * EVAPORATOR
 - * CONNECTING TUBING
- * 12 YEAR LIMITED WARRANTY-SEALED SYSTEM COMPONENT (PART ONLY)
 - * COMPRESSOR
 - * CONDENSER
 - * DRYER/STRAINER
 - * EVAPORATOR
 - * CONNECTING TUBING

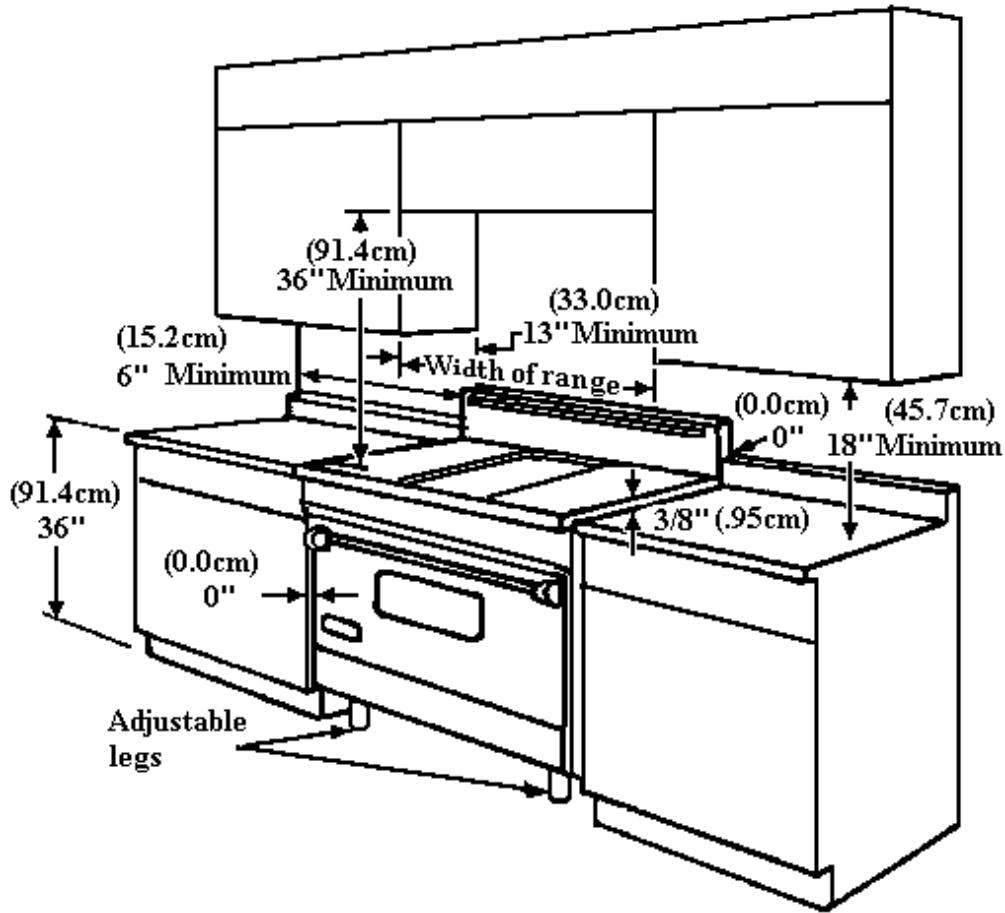
OUTDOOR PRODUCTS

GAS GRILLS

- * 90 DAY-PAINTED, PORCELAIN, AND DECORATIVE ITEMS
- * 1 YEAR FULL WARRANTY
- * 5 YEAR LIMITED WARRANTY-CAST IRON BURNER ASSEMBLIES, INFRARED ROTISSERIE BURNERS, AND PORCELAIN GRILL GRATES
- * LIFETIME WARRANTY-STAINLESS STEEL PART WHICH **RUST THROUGH**

PROXIMITY TO SIDE CABINET INSTALLATION

1. Range / Range tops may be installed directly adjacent to existing 36" high base cabinets. **IMPORTANT**-the top grate support **MUST** be 3/8" above the adjacent base cabinet countertop. This may be accomplished by raising the unit, (using the adjustment spindles on the range legs) or (using shims for the range top).
2. The range / range top **CANNOT** be installed directly adjacent to sidewalls, tall cabinets, tall appliances, or other side vertical surfaces above 36" high. There must be a minimum of 6" side clearance from the range to such combustible surfaces above the 36" counter height.
3. Within the 6" side clearance to combustible vertical surfaces above 36", the maximum wall cabinet depth must be 13" and wall cabinets within this 6" side clearance must be 18" above the 36" high countertop.
4. Wall cabinets above the range / range top must be a minimum of 36" above the cooking surface for the full width of the range / range top.



	30" W Models	36" W Models	48" W Models	60" W Models
Overall Width	29 7/8" (75.9cm)	35 7/8" (91.1cm)	47 7/8" (121.6cm)	59 1/2" (151.1cm)

BUILT-IN ELECTRIC 30" WALL

ELECTRICAL REQUIREMENTS

Description	30" Wide Single Oven	30" Wide Double Oven
Electrical Requirements	4-wire with ground, 240-208/120 VAC/60 Hz, 40 amp electrical connection. Unit is equipped with No. 10 ground wire in conduit. Should be fused separately.	
Maximum Amp Usage	240V - 18.9 amps 208V - 14.2 amps	240V - 31.8 amps 208V - 23.9 amps
Broil Rating	240V Maxi Broil 8 pass 3000 watts Mini Broil 4 pass 1250 watts	208V 2250 watts 940 watts
Baking Rating	240V - 2935 watts	208V - 2205 watts
Convection Cook Rating	240V - 2200 watts	208V - 1650 watt

ELECTRICAL CONNECTIONS

1. With the oven positioned in front of the cabinet opening, connect the wire leads extending from the conduit to the junction box, making sure the neutral (white) wire is connected to the appropriate terminal. Check your local code to see which of the following options below should be used in grounding the unit.

OPTION 1: Connect the neutral (white) wire and the grounding (green) wire with the incoming neutral (white) power supply line.

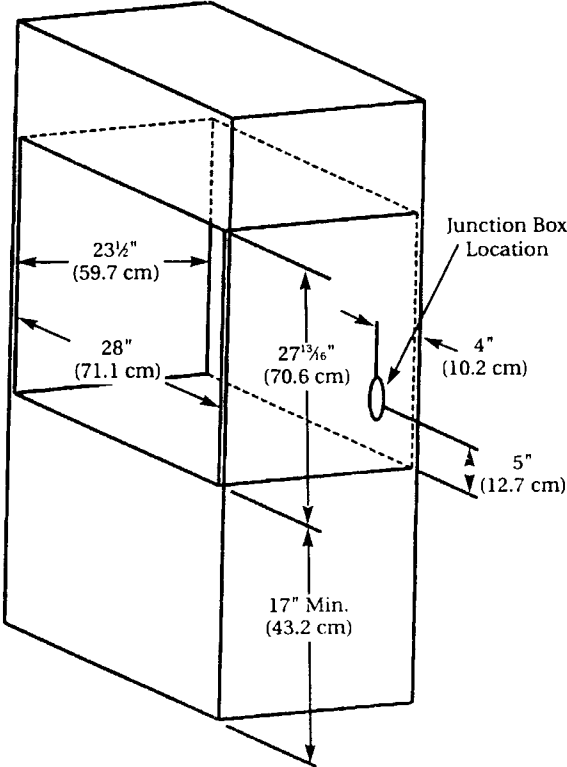
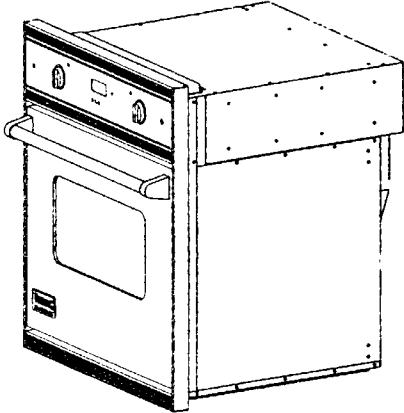
OPTION 2: If the junction box is grounded, untwist the grounding (green) wire and attach to the junction box. Attach the neutral (white) wire to the neutral (white) power supply line.

OPTION 3: Untwist the grounding (green) wire and attach it to a suitable ground. Attach neutral (white) wire to the incoming neutral (white) power supply line.

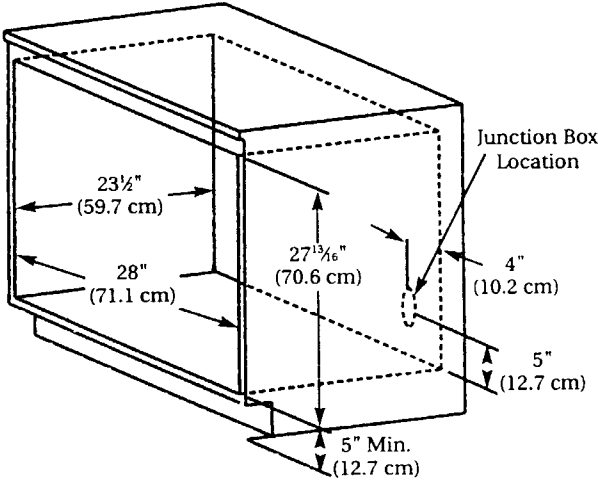
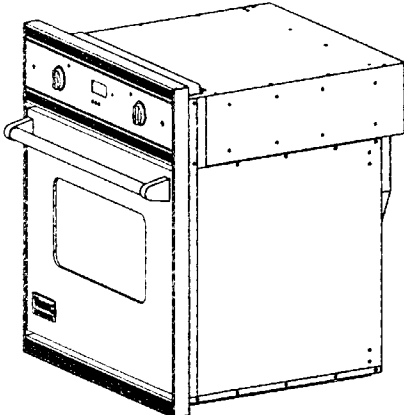
DO NOT USE AN EXTENSION CORD WITH THIS APPLIANCE. SUCH USE MAY RESULT IN A FIRE, ELECTRICAL SHOCK OR OTHER PERSONAL INJURY.

CABINET CUTOUT DIMENSIONS

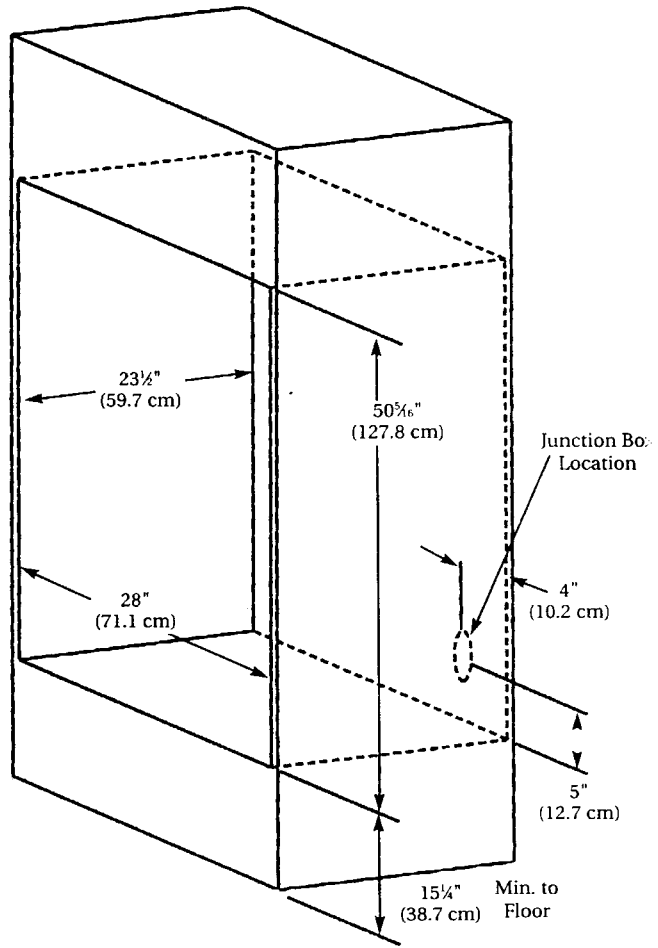
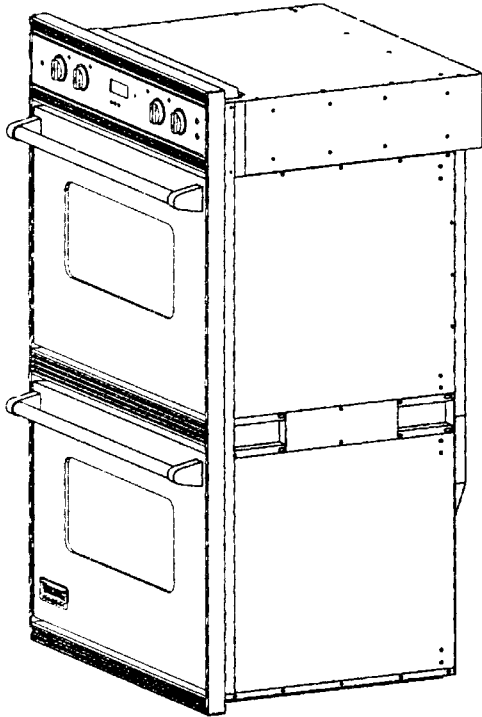
Single (in wall)



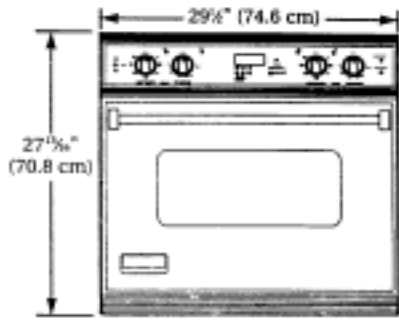
Single (under cabinet)



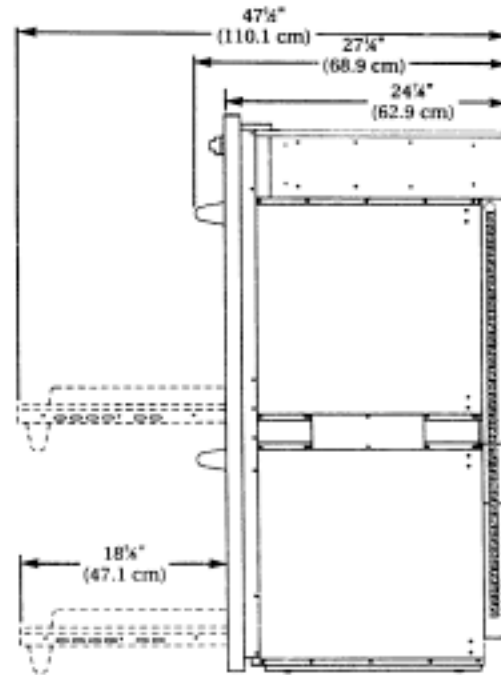
Double (in wall)



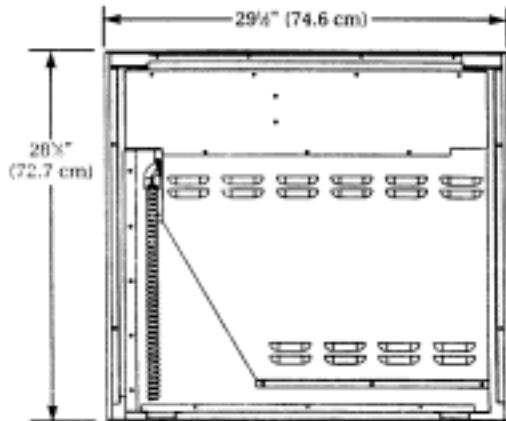
Front (Single Oven)



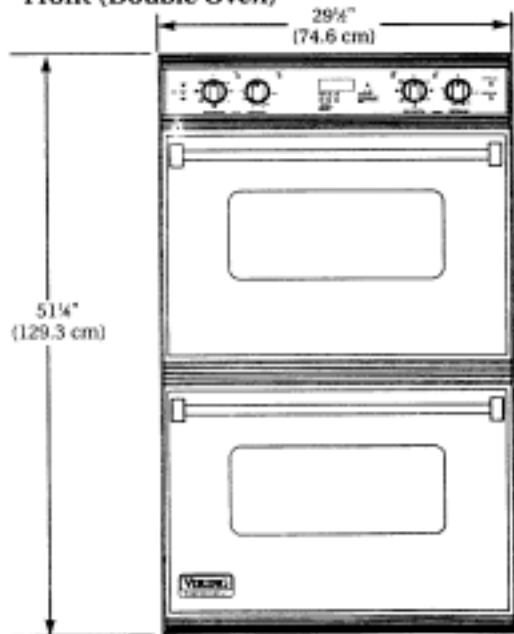
Side (Single and Double oven)



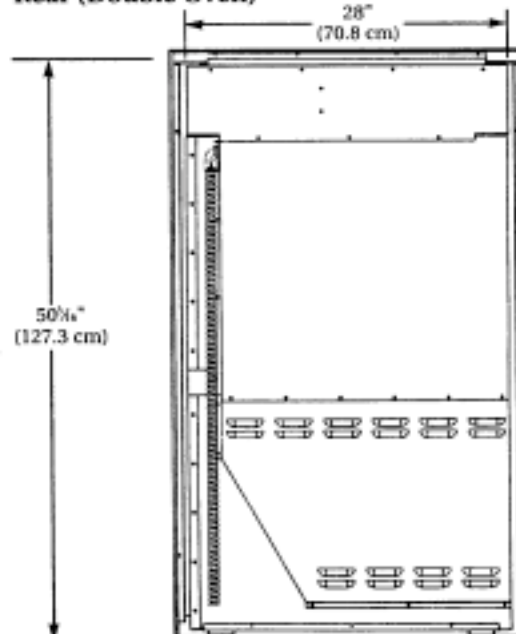
Rear (Single Oven)



Front (Double Oven)



Rear (Double Oven)



COMPONENTS

(WITH COLOR CODED WIRES)

DOOR LOCK CONTROL / TIMER

VDSC305-VDSC365-

VDSC485(RH)

VDSC485(LH)-VESC305-

VESO105 VEDO205

Function: The Door Lock Control / Timer is activated by the line voltage at the "SEL" (1) contact. Relay "RL1" (2) and "RL2" (3) close providing voltage to the Door Lock Motor. The Relays stay closed until 10 seconds after sensor #3 (4) receives a signal that the Door Lock is fully closed. Once this happens Relay "RL2" (3) opens to stop the Door Lock Motor. Relay "RL1" (1) stays closed providing voltage to the Auto Reset thermostat. Relays "RL3" and "RL4" close powering the Cooling Fan Motor and Cycle Relay. "RL3" and "RL4" will stay closed for 3 1/2 hours unless power is interrupted to sensor #3 (4) or SEL (1). In which case "RL3" and "RL4" will open, interrupting the clean cycle and Cooling Fan, and "RL2" (3) will close, opening the Door Lock. "RL2" (3) will stay closed until 2 seconds after sensor #4 (5) is powered.

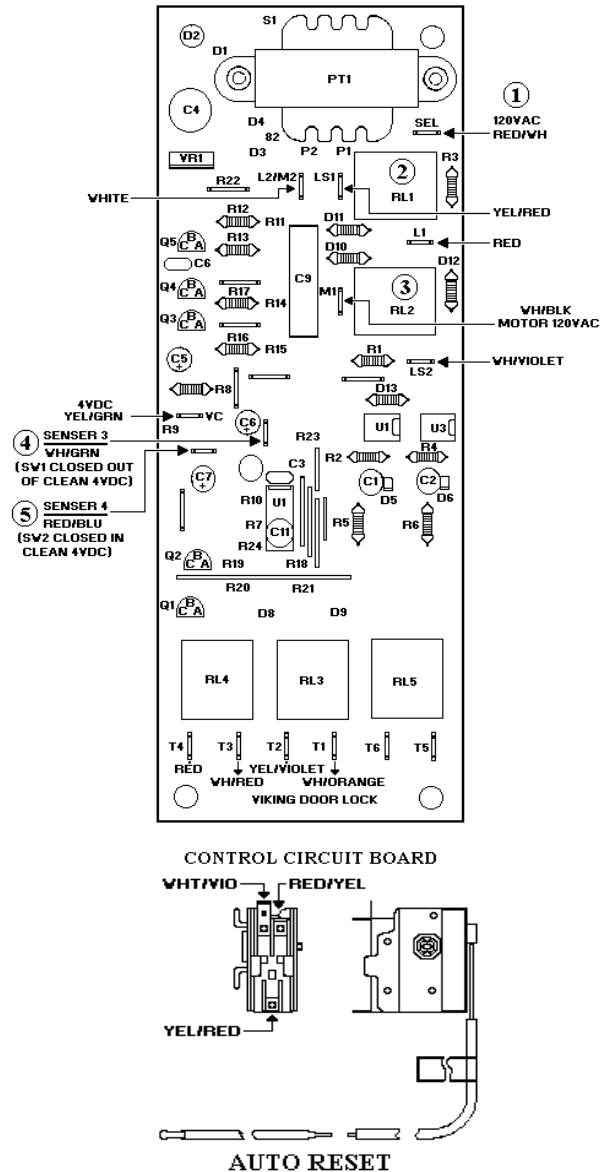
AUTO RESET SWITCH

VDSC305-VDSC365-VDSC485(RH)-

VDSC485(LH)-VESC305-VESO105-VEDO205

Function: The Auto Reset Switch is a single pole / double throw switch (thermostat) which is activated by a thermo-bulb and lever which is calibrated to 575* F plus / minus 25* F. **Clean door lock below 575* F.** The Door Lock Motor is energized through the Auto Reset Switch (thermostat) contacts 2 - 1. **Clean door lock above 575* F.** Auto Reset Switch (thermostat) switches to contacts 1 -3 turning on the Door Lock indicator Light and disables the Door Lock Motor circuit. **Final below 575* F.** Auto Reset Switch (thermostat) switches to contacts 1 -2, turning off the Door Lock Motor circuit through door Lock Motor / Timer Relay LS2 - M1. Door Lock Motor operates until 2 seconds after sensor 4 is signaled by VC that the Door Lock switch SW1 has been closed mechanically by the door lock bolt. The Door Lock / Timer

switches LS2 - M1 and LS1-L1 open and the timer

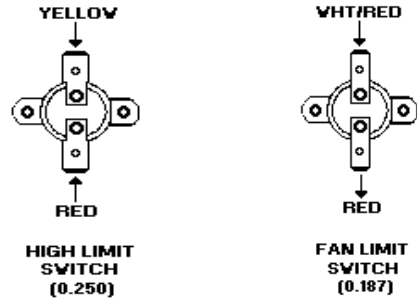


COMPONENTS (Con't)

HIGH LIMIT SWITCH

VDSC305-VDSC365-VDSC485(RH)
VDSC485(LH)-VESC305-VESO105-VEDO205

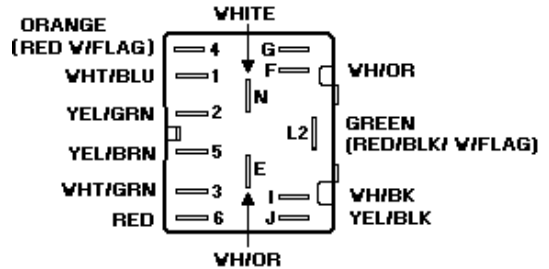
Function: The Switch has a ½ “ bi-metal disc. The two metals have different thermal coefficients of expansion which cause the disc to bow as it heats up. When it reaches the calibration temperature the disc snaps open, which opens the electrical contacts. The Switch opens when temperature reaches 275* F plus or minus 9*F and will close when temperatures are 248* F plus or minus 9*F.



COOLING FAN LIMIT SWITCH

VDSC305-VDSC365-VDSC485(RH)-
VDSC485(LH)-VESC305-VESO105-VEDO205

Function: The Switch has a ½ “ bi-metal disc. The two metals have different thermal coefficients of expansion which cause the disc to bow as it heats up. When it reaches the calibration temperature the disc snaps closed, which closes the electrical contacts. The Switch closes when temperatures reach 230* F plus or minus 9* F and will open when temperatures are below 203* F plus or minus 9*F.



SELECTOR SWITCH (8 POS)

SELECTOR SWITCH (8 POS) (PJ030001)
VDSC305-VDSC365-VDSC485(RH)-VESC305-
VESO105-VEDO205

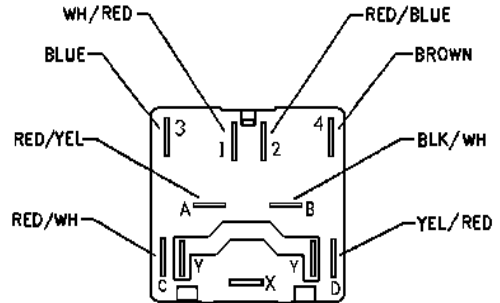
Function: Rotating the shaft twists a cam which moves one or more spring loaded levers, which make contact with a terminal closing the circuit.

SELECTOR SWITCH (PJ030009)

VDSC485(LH)

SELECTOR SWITCH (3 POS) (PJ030010)

VESO105-VEDO205

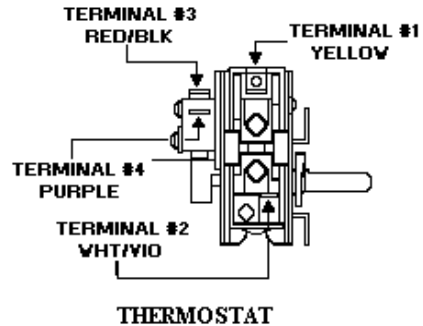


SELECTOR SWITCH (3 POS)

OVEN THERMOSTAT

VDSC305-VDSC365-VDSC485(RH)-
VDSC485(LH)-VESC305-VESO105-VEDO205

Function: As the shaft is rotated from the OFF position clockwise, an internal cam pushes a lever, which increases the temperature at which the thermostat cycles. Rotating the shaft 212* (angle *) switches an external (clean) Micro Switch to the closed position.



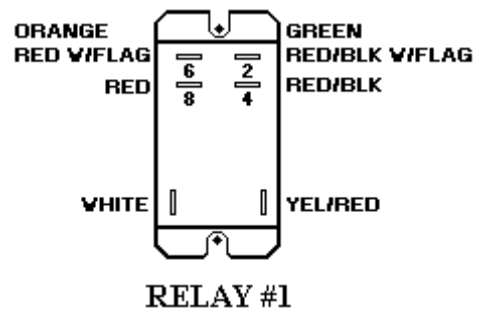
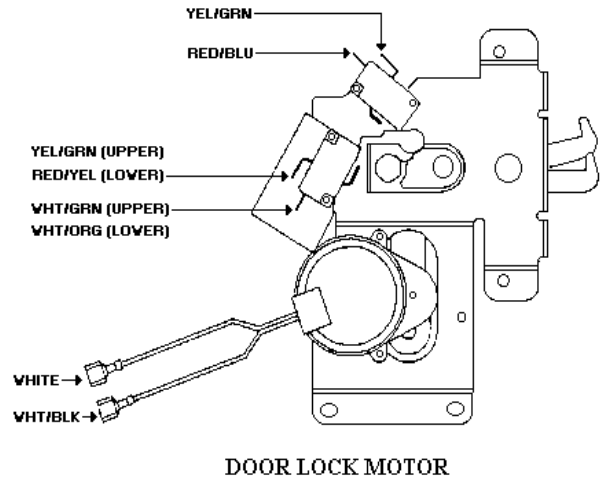
THERMOSTAT

COMPONENTS (Con't)

DOOR LOCK

VDSC305-VDSC365-VDSC485(RH)-VDSC485(LH)-
VESC305-VESO105-VEDO205

Function: When the Door Lock Motor is powered it turned a cam which pulls back a lever. As the lever moves back it allows a micro switch (SW1) to open. When the lever reaches the fully closed position it closes a double stacked micro switch (SW2 & SW3). **Door lock switch SW2** completes the circuit to sensor #3 on the Door Lock Control/timer board. After 10 seconds LS1-M1 opens, stopping the Door Lock motion. **Door Lock Switch #3** closes T1-T2 and T3-T4 energizing Power Relay #1 and the Cooling Fan. Closing Power Relay contacts supplies 240 VAC to both Broil Elements and 120 VAC to the Bake Element.



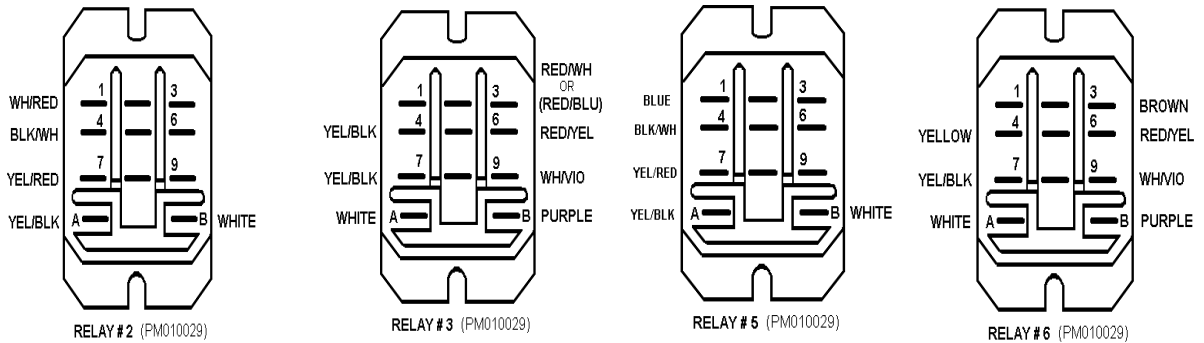
POWER RELAY #1 (PM010026)

VDSC305-VDSC365-VDSC485(RH)-
VDSC485(LH)-VESC305-VESO105-VEDO205

Function: Relay #1 (power) supplies power to the Bake and Broil Elements.

RELAY #2 - #3 - #5 - #6

VEDO205 (PM010020)



COMPONENTS (Con't)

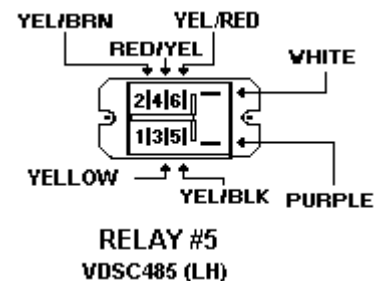
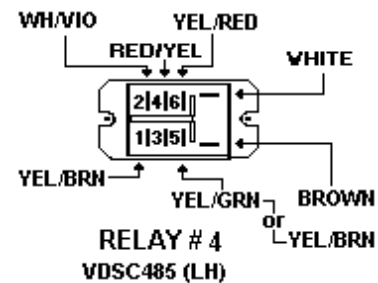
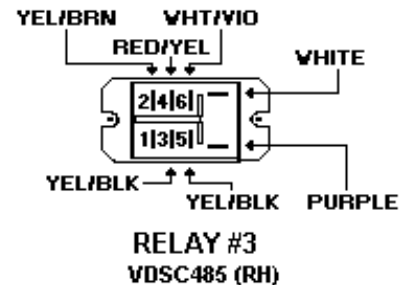
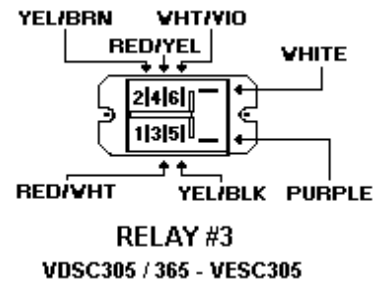
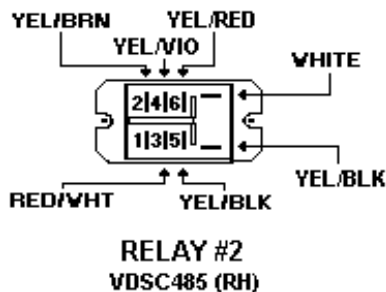
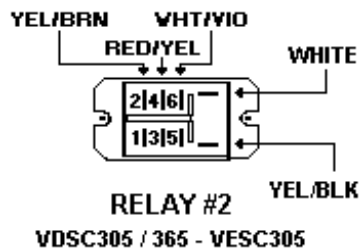
RELAY #2 - #3 - #5 (PM010025)

VDSC305-VDSC365-VESC305-VDSC485(RH)

Function: Setting the selector switch to clean closes the Heating Element circuits 4-F, 1-N, 2-L2, 3-L2 and Door Lock Module / Timer circuit J-6, energizing Relay #2. The thermostat cycling contacts 1 to 2 and the clean switch contacts 3 to 4 close energizing Relay #3. Relay #3 allows circuit J-6 to turn on the Clean Indicator Light and enable the Door Lock Module / Timer to close Relays LS1-L1 and LS2 - M1. This powers the Door Lock Motor until 10 seconds after Sensor 3 is signaled by VC that Door Lock Switch SW2 has been closed mechanically (along with SW3) by the Door Lock Bolt.

RELAY #4 (PM010025)

VDSC485(LH) --CVVSC305/365

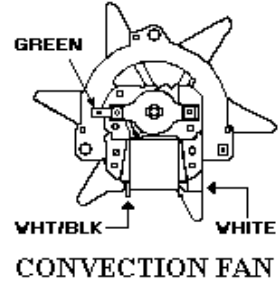


VDSC COMPONENTS (Con't)

CONVECTION FAN MOTOR

VDSC305-VCSC365-VCSC485(RH)-
VDSC485(LH)-VESC305-VESO105-VEDO205

Function: Provides an even flow of air in the oven cavity for more even baking.

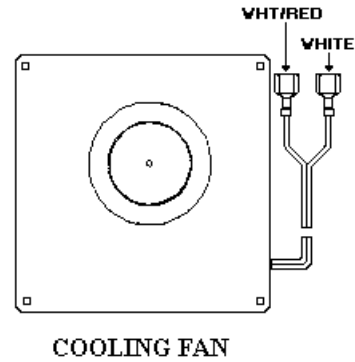


COOLING FAN MOTOR

VDSC305-VDSC365-VDSC485(RH)-
VDSC485(LH)

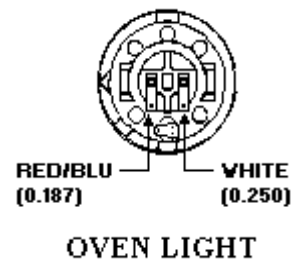
Function: Provides a continuous supply of cool air during self clean cycles to keep the Door Lock Motor and associated circuits cool.

COOLING FAN





OVEN LIGHT

Function: Provides interior oven light for viewing baking products.




VOLTAGE READINGS

MEASURED WITH DOOR OPEN

		
T4	107VAC	70VAC
T3	4VAC	16VAC
T2	4VAC	16VAC
T1	5VAC	1VAC

MEASURED WITH DOOR LOCKED

T4	80VAC	56VAC
T3	85VAC	56VAC
T2		90VAC 56VAC
T1	93VAC	56VAC

VC--4VDC

SENSOR 3--3VDC SW2 closed in self clean (Locked).

SENSOR 4--4VDC SW1 closed with clean lock open.

M1--120VAC lock motor supply voltage.
(31VAC in locked position)

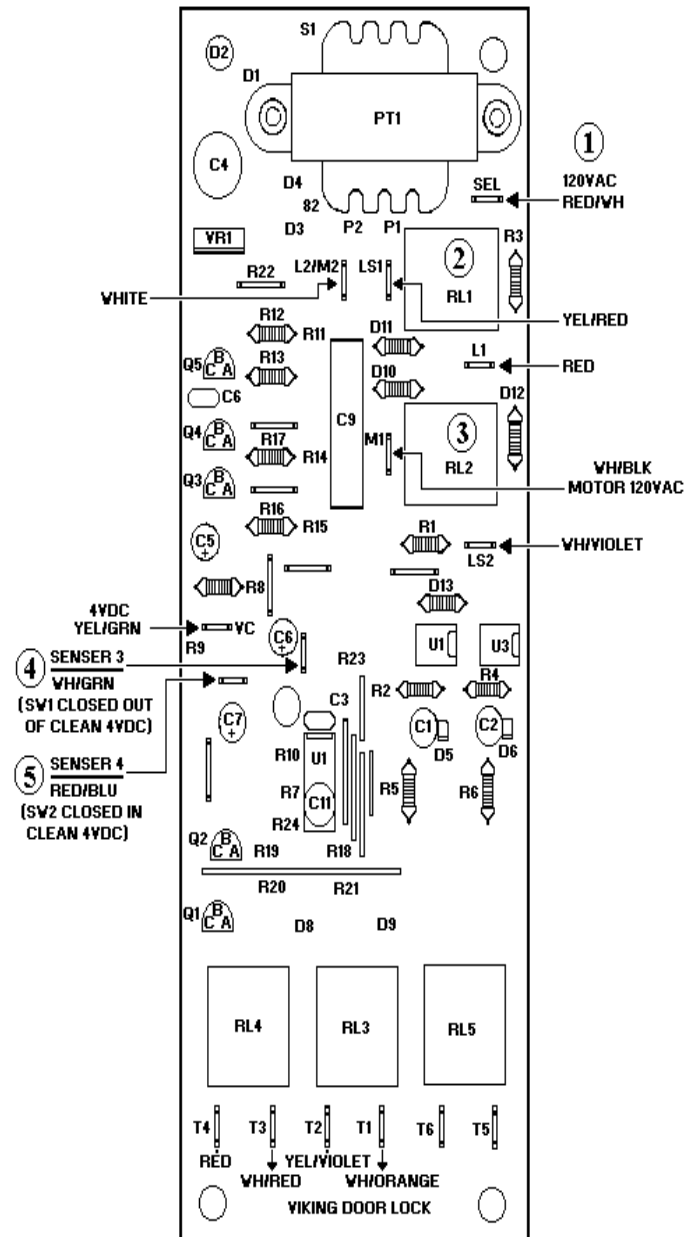
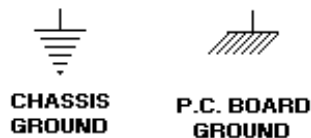
LS2--70VAC (unlocked)--**55VAC** (locked)

L1-- 70VAC (unlocked)--**56VAC** (locked)

L2/M2--16VAC(unlocked)--**32VAC** (locked)

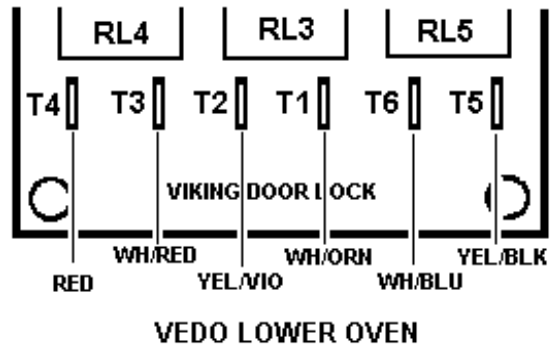
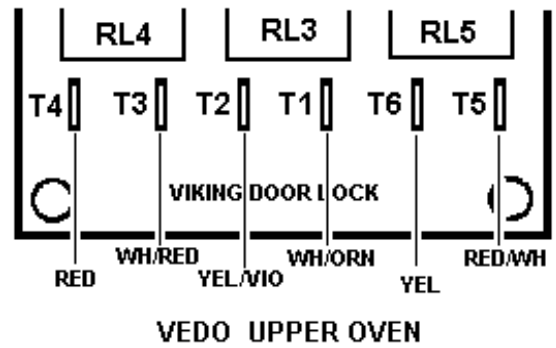
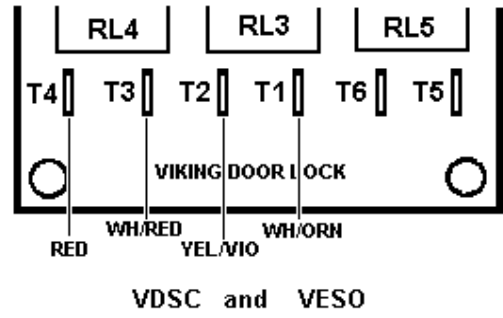
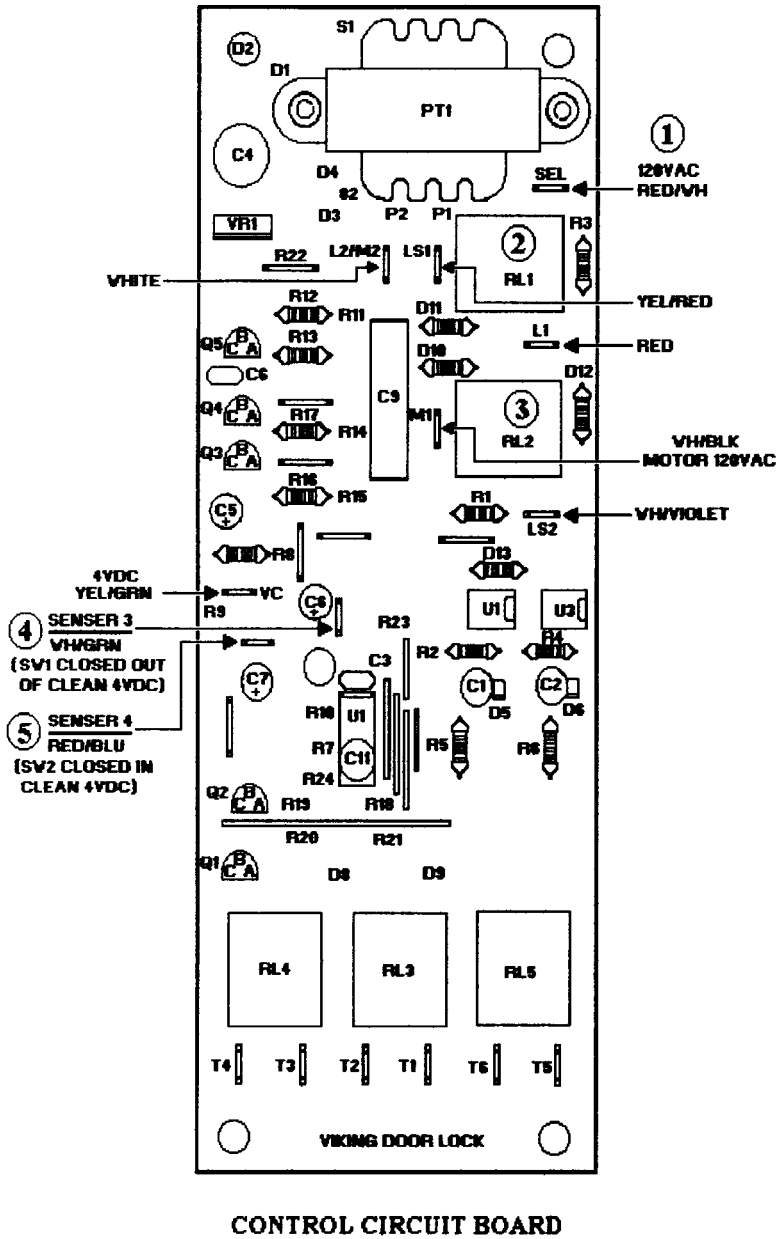
LS1--107VAC (locked or unlocked)

SEL--120VAC SUPPLY



CONTROL CIRCUIT BOARD

**PRINTED CIRCUIT BOARD WIRING
FOR RELAYS T4--T3--T2--T1--T6--T5**

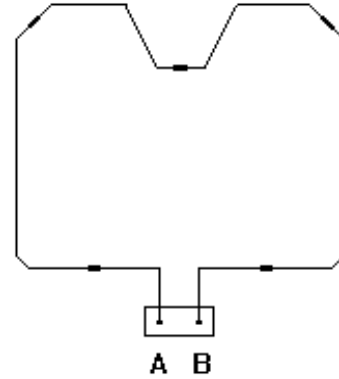


VOLTAGE and RESISTANCE READINGS

BAKE ELEMENT:

“A” to “B” 21.1 Ohms

“A” to “B” 240VAC during Bake and
Convection Bake.



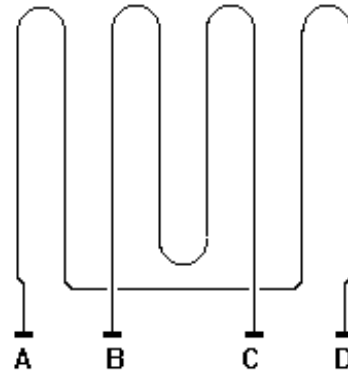
BROIL ELEMENT:

“A” to “D” (outside element) 32.6 Ohms

“A” to “D” 50VAC during Bake and
Convection Bake.
240VAC during Maxi Broil.
240VAC during Convection Broil
240VAC during Self-clean

“B” to “C” (inside element) 45.2 Ohms

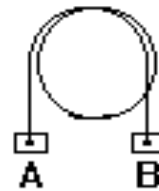
“B” to “C” 70VAC during Bake and Convection
Bake.
240VAC during Mini Broil
240VAC during Maxi Broil
240VAC during Convection Broil
240VAC during Self-clean



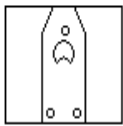
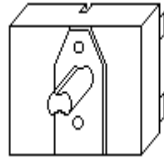
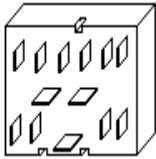
CONVECTION ELEMENT:

“A” to “B” 26 Ohms

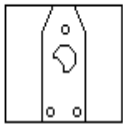
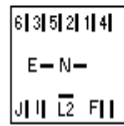
“A” to “B” 240VAC during Convection Cook



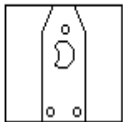
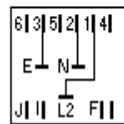
8 POSITION SELECTOR SWITCH
(With shaft position and internal connections)



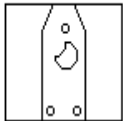
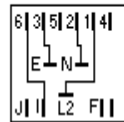
OFF



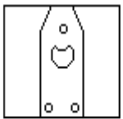
BAKE



CONVECTION
BAKE



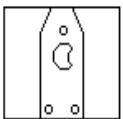
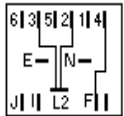
CONVECTION
COOK



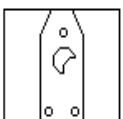
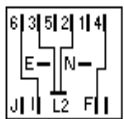
BROIL



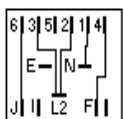
MAXI
BROIL



CONVECTION
BROIL



SELF
CLEAN



SELF CLEAN

Selector Switch closes Heating Element contacts 4-F, 1-N, 2-L2, 3-L2, and Door Lock Module / Timer contacts J-6 energizing Relay #1.

Thermostat Clean Position closes Thermostat cycling contacts 1-2 and normally open (N) - common (C) energizing Relay #3.

Relay # 3 turns on the Clean indicator Light and energizes Door Lock Module / Timer (PC Board) relays LS1-L1 and LS2-M1, also supplying 120VAC to SEL on the PC board

Relays LS1 and LS2 turns the Door Lock Motor on through the Auto Reset Thermostat contacts 2-1.

Door Lock Motor rotates opening SW1 and closing SW2 and SW3.

Door Lock Switch #2 completes the circuit to sensor #3 on the PC board. After 10 seconds LS1-M1 opens, stopping the Door Lock motion.

Door Lock Switch #3 closes T1-T2 and T3-T4 energizing Power Relay #1 and the Cooling Fan . Closing Power Relay #1's contacts supplies 240VAC to both Broil Elements and 120VAC to the Bake Element.

CLEAN DOOR LOCK ABOVE 575°F +/-25°F

Auto Reset Thermostat switches to contacts 1-3 turning on the Door Lock indicator Light and disables the Door Lock Motor circuit.

CLEAN TEMPERATURE (875°F) REACHED.

Door Lock Module / Timer opens T3 -T-4 and T1-T2 turning off the Cooling Fan, now powered by the Fan Limit Switch when needed, and opens the circuit to the Power Relay #1 disabling the Heating Elements.

FINAL BELOW 575°F +/-25°F

Auto Reset Thermostat switches to contacts 1-2, turning off the Door Lock Motor circuit through Door Lock Motor / Timer Relay LS2-M-1. Door Lock Motor operates until 2 seconds after sensor 4 is signaled by VC that the Door Lock /Timer switches LS2- M1 and LS1-L1 open and the Timer reset.

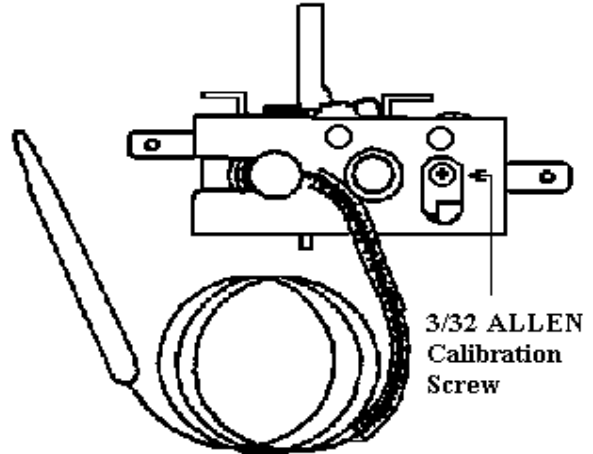
OVEN TEMPERATURE CALIBRATION

DUAL FUEL RANGES / ELECTRIC WALL OVENS

Electric oven calibration using the EATON thermostat. The adjustment screw is located on the bottom of the thermostat (3/32 Allen head screw). Each 1/4 turn is equal to approximately 35 degrees. **COUNTERCLOCKWISE** adjustment will **DECREASE** the temperature. **CLOCKWISE** adjustment will **INCREASE** the temperature.

If the oven temperature is off more than 50 degrees you should change the thermostat.

REMEMBER WHEN YOU CHANGE THE OVEN TEMPERATURE YOU ARE ALSO CHANGING THE SELF-CLEAN TEMPERATURE. (As a rule of thumb you should only calibrate the thermostat only to increase the oven temperature.)



- A. **Center Oven Temperature Check:** Before turning the oven on, check the thermostat sensor bulb position. It should be straight, no kinks and secured in the mounting clips.
- B. Place the oven rack in the center of the oven.
- C. Place the thermocouple lead in the center of the rack and close the door. Avoid touching metal with the thermocouple junction.
- D. Set the selector switch to “BAKE” and the temperature dial to 350*.

NOTE: Do not overshoot the 350* mark. When you go beyond 350*, return the control to the lowest setting and reset to 350*.

- E. Cycle the oven 5 times ; Average the 3rd, 4th, and 5th cycles. The temperature is acceptable if the average is 350* +/-25*.

TEMPERATURE: CONVENTIONAL OVEN

CYCLE	1	2	3	4	5	AVERAGE
HIGH	(XX)	(XX)	()	()	()	()
LOW	(XX)	(XX)	()	()	()	()

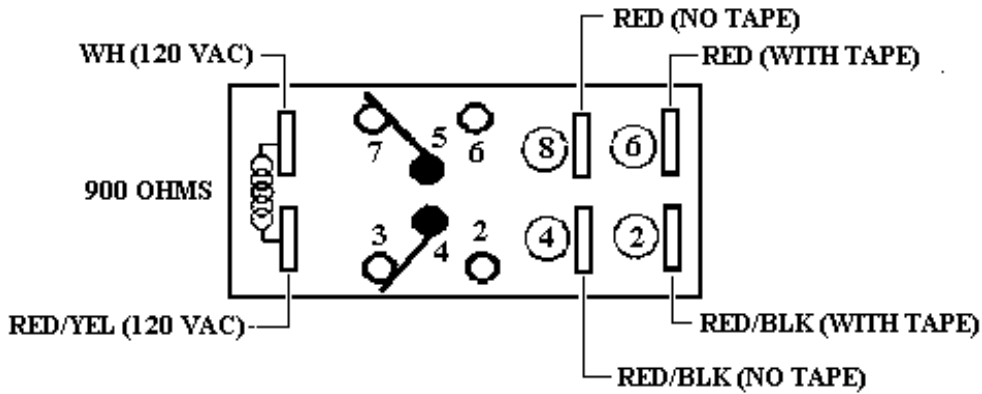
- F. For convection test lower the oven temperature to 325*. Preheat the oven with convection fan on.

TEMPERATURE; CONVECTION OVEN

CYCLE	1	2	3	AVERAGE
HIGH	(XX)	()	()	()
LOW	(XX)	()	()	()

- G. On conventional baking place pans in the center of the oven.
- H. On convection baking place pans on rack positions 2 and 4.
- I. Uneven temperatures left to right in the oven:
 1. Check air shutter adjustment: sharp blue flame, no yellow tipping.
 2. Check orifice hood adjustment.

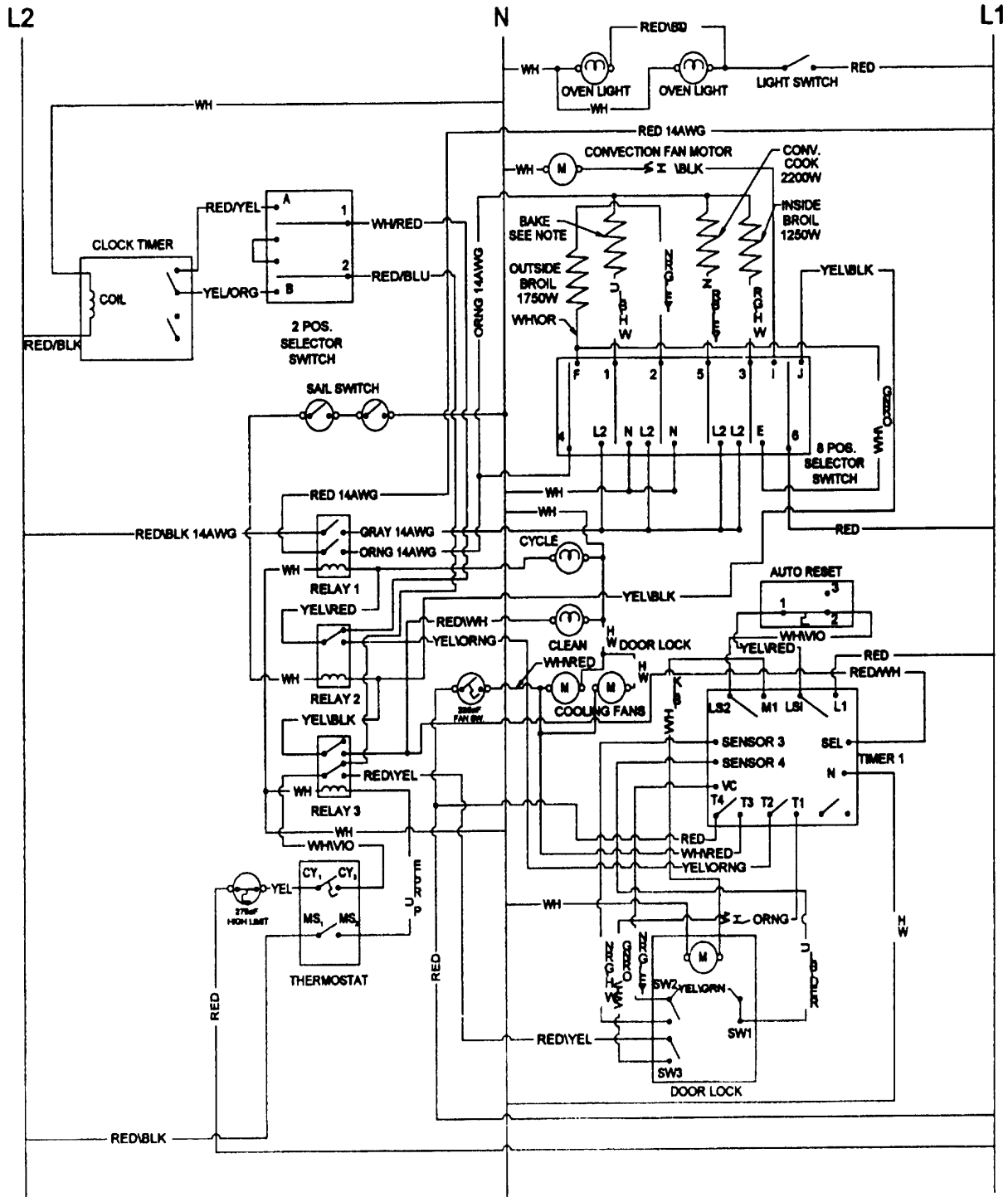
POWER RELAY (CURRENT) TEST
VDSC-VESO-VEDO Power relay



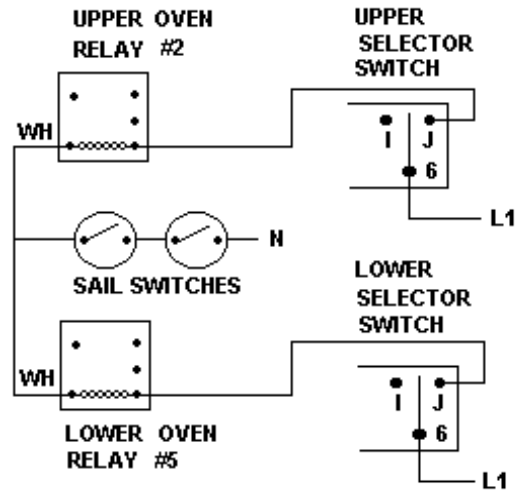
VOLTAGE SUPPLY - 235 VOLTS AC
CURRENT READINGS AT THE POWER RELAY

BAKE	#8	RED	11.8 Amps	#4	RED/BLK	10.4 Amps
	#6	RED	11.8 Amps	#2	RED/BLK	6.1 Amps
CONV BAKE	#8	RED	11.9 Amps	#4	RED/BLK	11.9 Amps
	#6	RED	10.5 Amps	#2	RED/BLK	11.4 Amps
CONV COOK	#8	RED	8.9 Amps	#4	RED/BLK	8.8 Amps
	#6	RED	9.0 Amps	#2	RED/BLK	8.9 Amps
MINI BROIL	#8	RED	5.1 Amps	#4	RED/BLK	5.0 Amps
	#6	RED	5.0 Amps	#2	RED/BLK	5.0 Amps
MAXI BROIL	#8	RED	12.0 Amps	#4	RED/BLK	12.0 Amps
	#6	RED	12.0 Amps	#2	RED/BLK	12.0 Amps
CONV BROIL	#8	RED	11.9 Amps	#4	RED/BLK	11.9 Amps
	#6	RED	11.9 Amps	#2	RED/BLK	11.9 Amps
SELF-CLEAN	#8	RED	17.1 Amps	#4	RED/BLK	17.1 Amps
	#6	RED	17.1 Amps	#2	RED/BLK	17.9 Amps

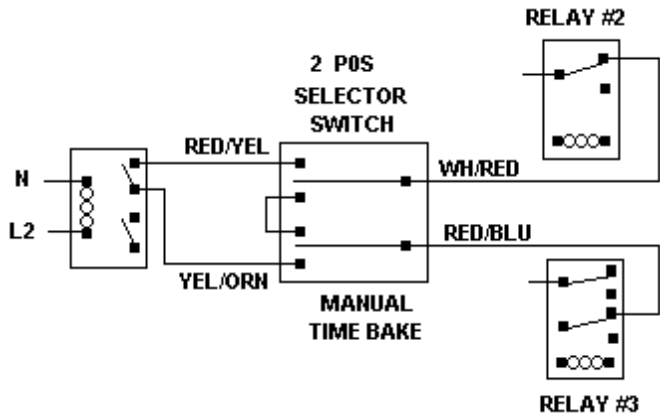
WIRING DIAGRAM
 BUILT-IN ELECTRIC 30" W. SINGLE OVEN
 (WIRING FOR DOUBLE, UPPER AND LOWER OVENS)
 (SEE WIRING CONNECTIONS BETWEEN UPPER AND LOWER OVENS ON PAGE #26)



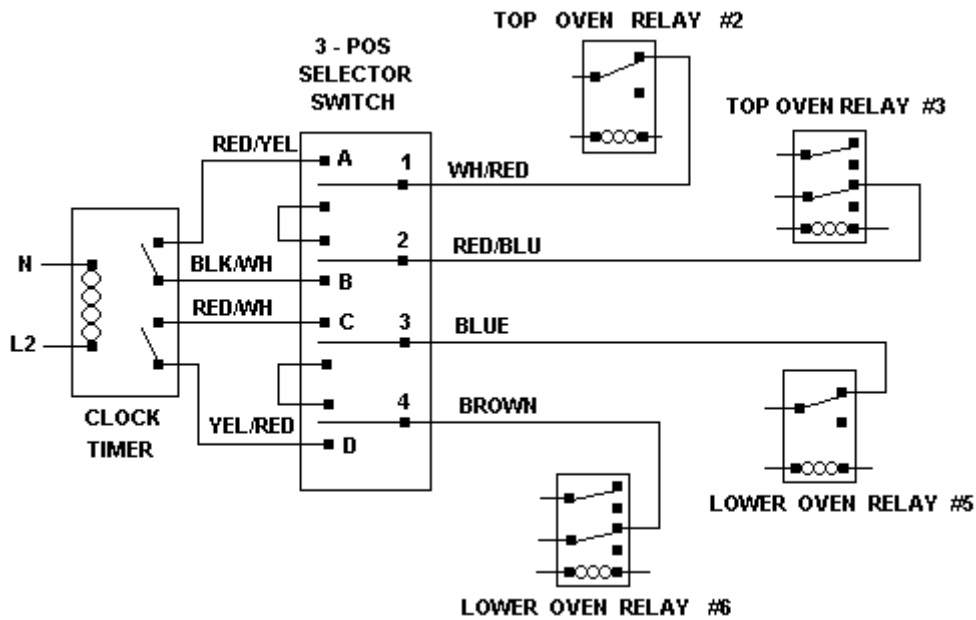
SAIL SWITCHES are energized during the self-clean cycle only. Power is from neutral (N) through relay #2 (single / upper oven) and relay #5 (lower oven) to the 8 - position selector switch contact "J" to contact "6" to line L1.



2-POSITION SELECTOR SWITCH on the VESO is used to select manual or timed bake.



3-POSITION SELECTOR SWITCH (below) on the VEDO is used to select upper or lower timed functions.

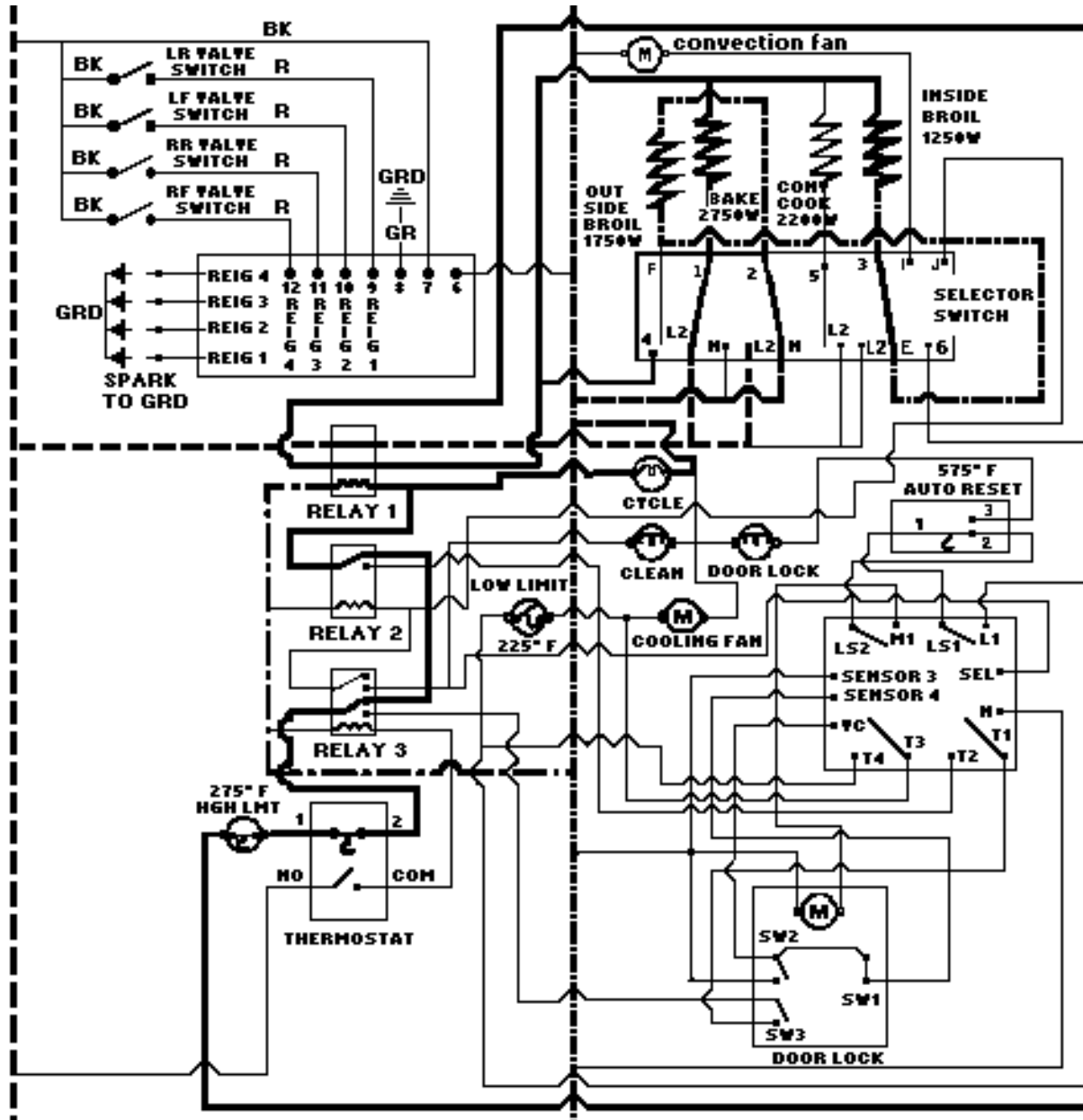


BAKE

L2 (BLK)

N (WH)

L1 (RED)

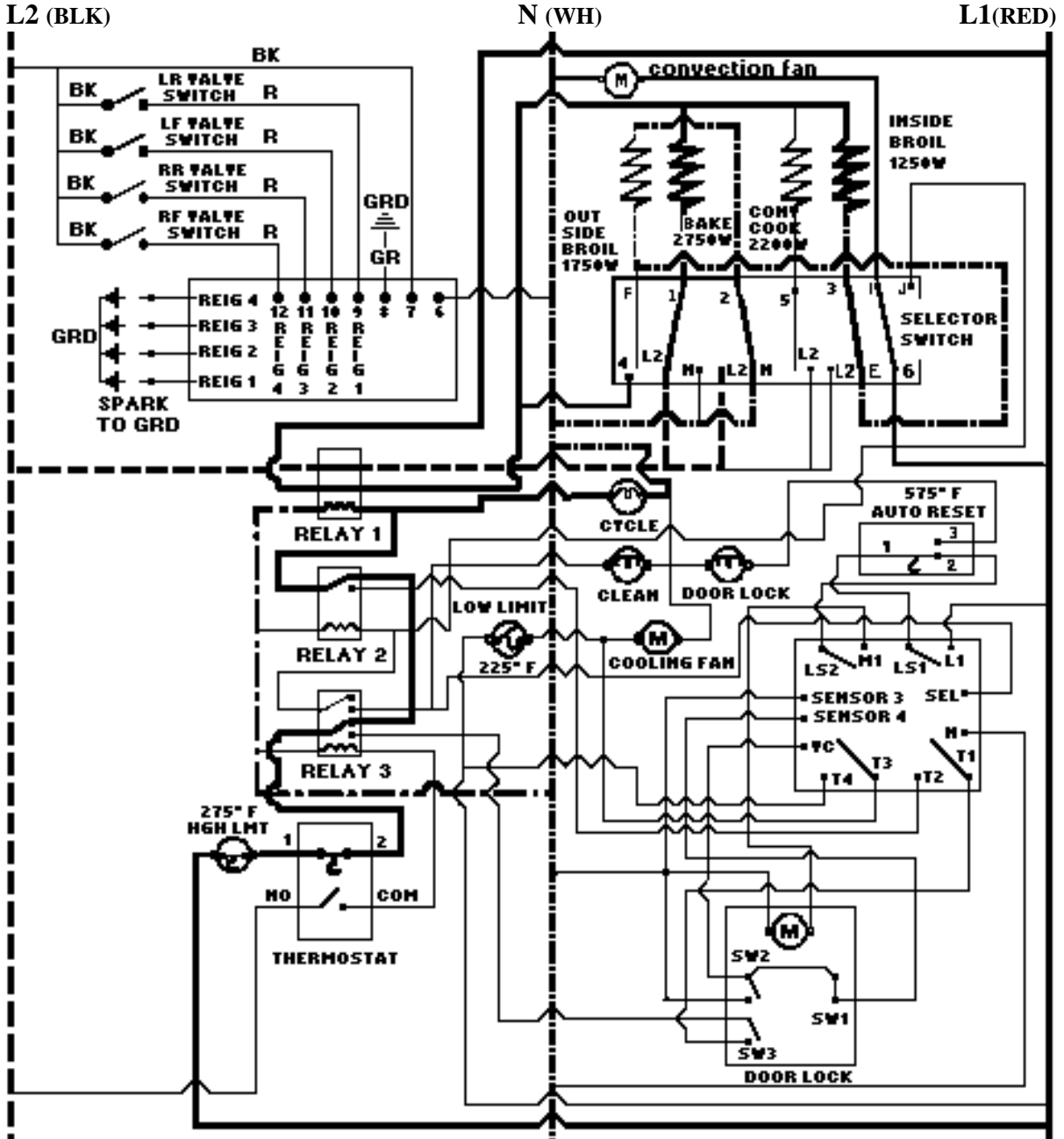


Selector Bake position closes Switches 1-L2, 2-N, and 3-E. The Thermostat closes Switches Cy1-Cy2, which cycles with the oven temperature powering Relay 1 and the Oven cycle light. When Relay 1 closes, it powers the Bake Element at 208v/240v, and with the Broil Element in series across a 120v circuit, it powers the inside Broil Element at 70v and the outside Broil Element at 50v.

Legend

- L1 (Red)
- L2 (Black)
- Neutral
- Sensors

CONVECTION BAKE



Selector Convection Bake position closes Switches 1-L2, 2-N, 3-E, and 6-1. 6-1 powers the Convection Fan through L-1 at 120v. The Thermostat closes Switches Cy1-Cy2, which cycles with the oven temperature powering Relay 1 and the Oven Cycle Light. When Relay 1 closes, it powers the Bake Element at 208v/240v, and with the Broil Element in series across a 120v circuit, it powers the inside Broil Element at 70v and the outside Broil Element at 50v.

Legend

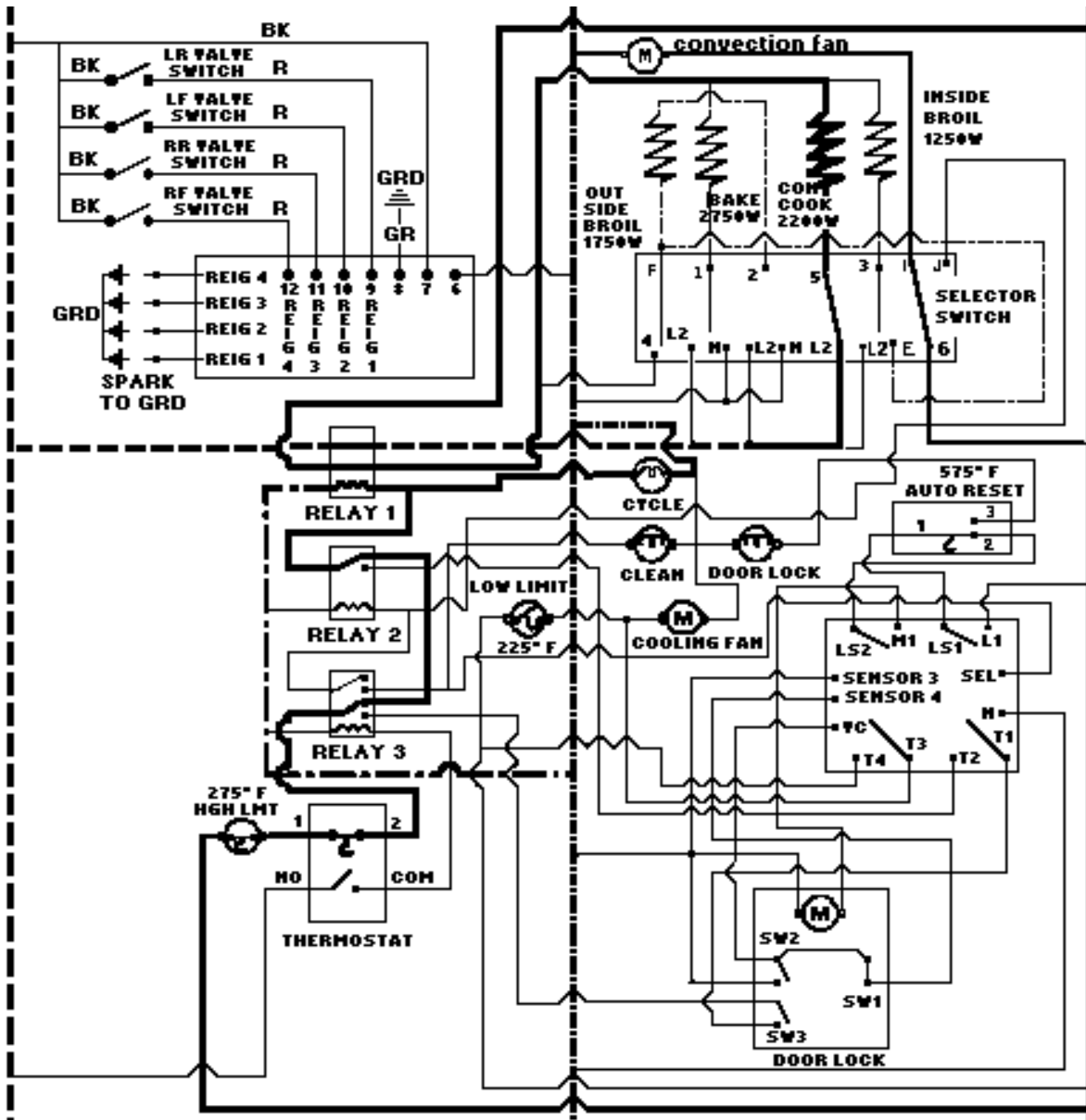
- L1 (Red)
- - - L2 (Black)
- Neutral
- · - · Sensors

CONVECTION COOK

L2 (BLK)

N (WH)

L1 (RED)



Selector Convection Cook position closes Switches 5-L2 and 6-1. 6-1 powers the Convection Fan through L1- at 120v. The Thermostat closes Switch Cy1-Cy2, which cycles with the Oven temperature, powering Relay #1 and the Oven Cycle Light. When Relay #1 closes, it powers the Convection Element at 208v/240v.

Legend

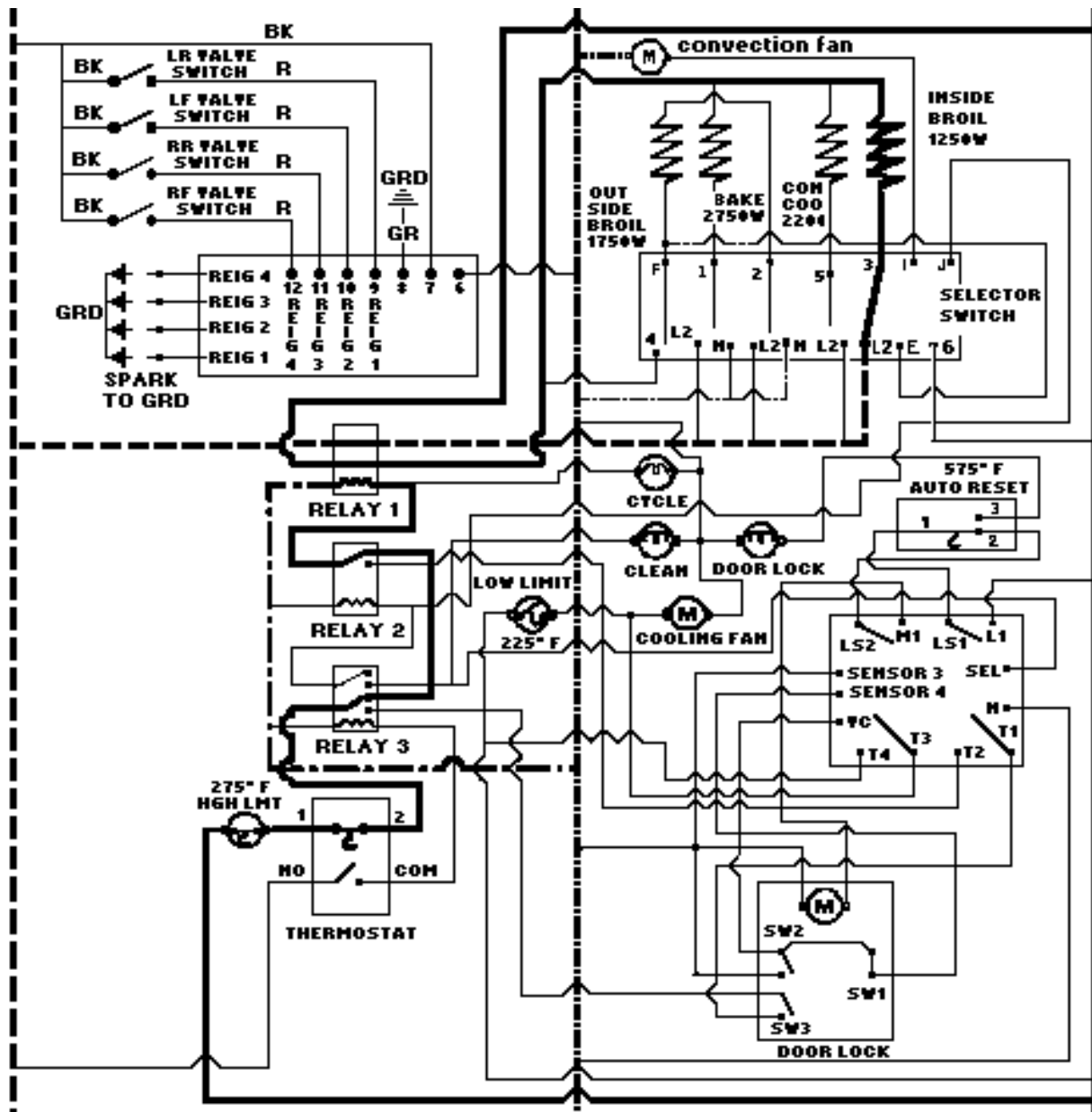
- L1 (Red)
- L2 (Black)
- Neutral
- Sensors

MINI BROIL

L2 (BLK)

N (WH)

L1 (RED)



Selector Mini Broil position closes Switches 3-L2. The Thermostat closes Switch Cy1-Cy2, powering Relay #1 and the Oven Cycle Light. When Relay #1 closes, it powers the inside Broil Element at 208v/240v.

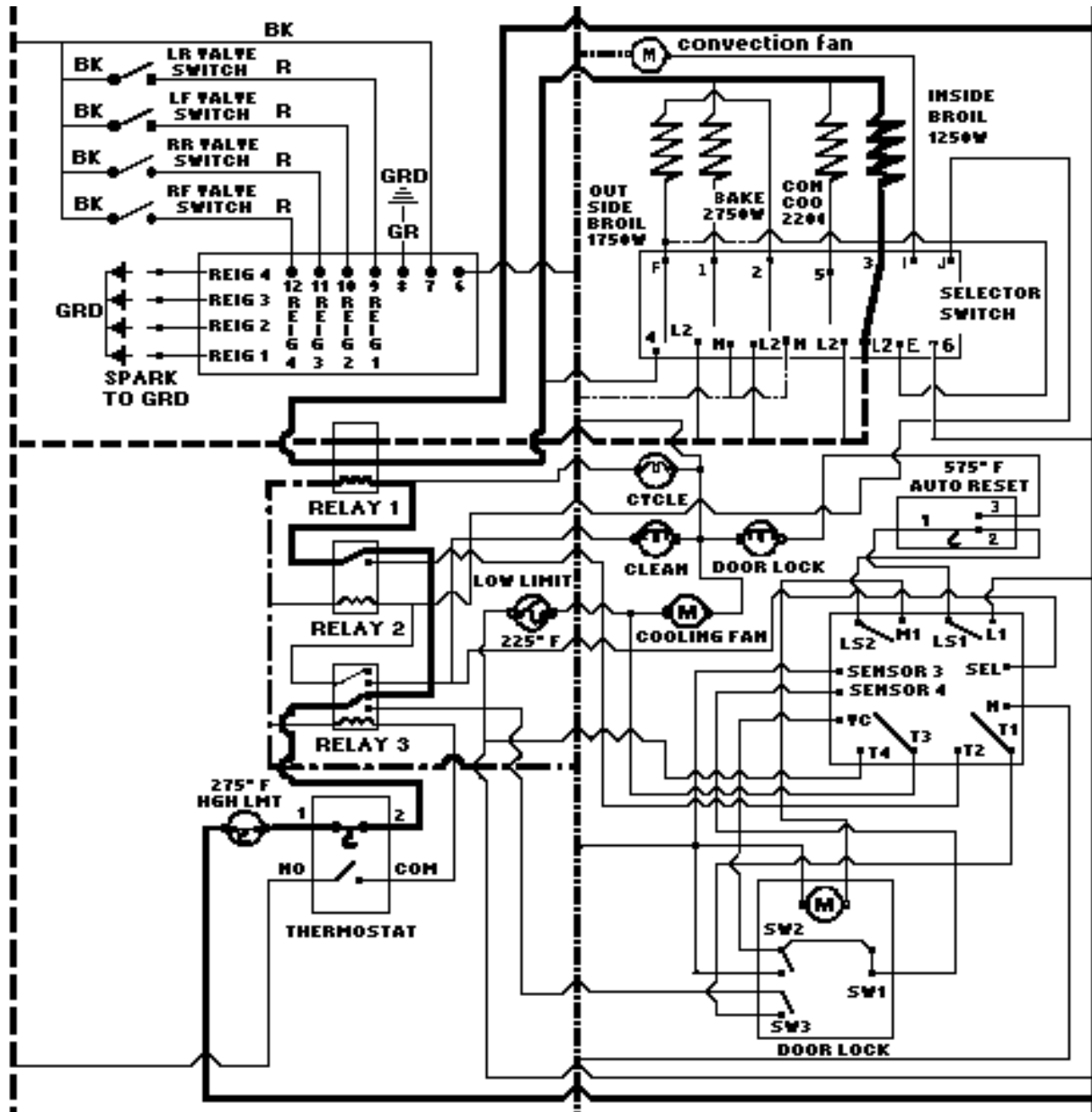
- Legend**
- L1 (Red)
 - L2 (Black)
 - Neutral
 - Sensors

MINI BROIL

L2 (BLK)

N (WH)

L1 (RED)



Selector Mini Broil position closes Switches 3-L2. The Thermostat closes Switch Cy1-Cy2, powering Relay #1 and the Oven Cycle Light. When Relay #1 closes, it powers the inside Broil Element at 208v/240v.

Legend

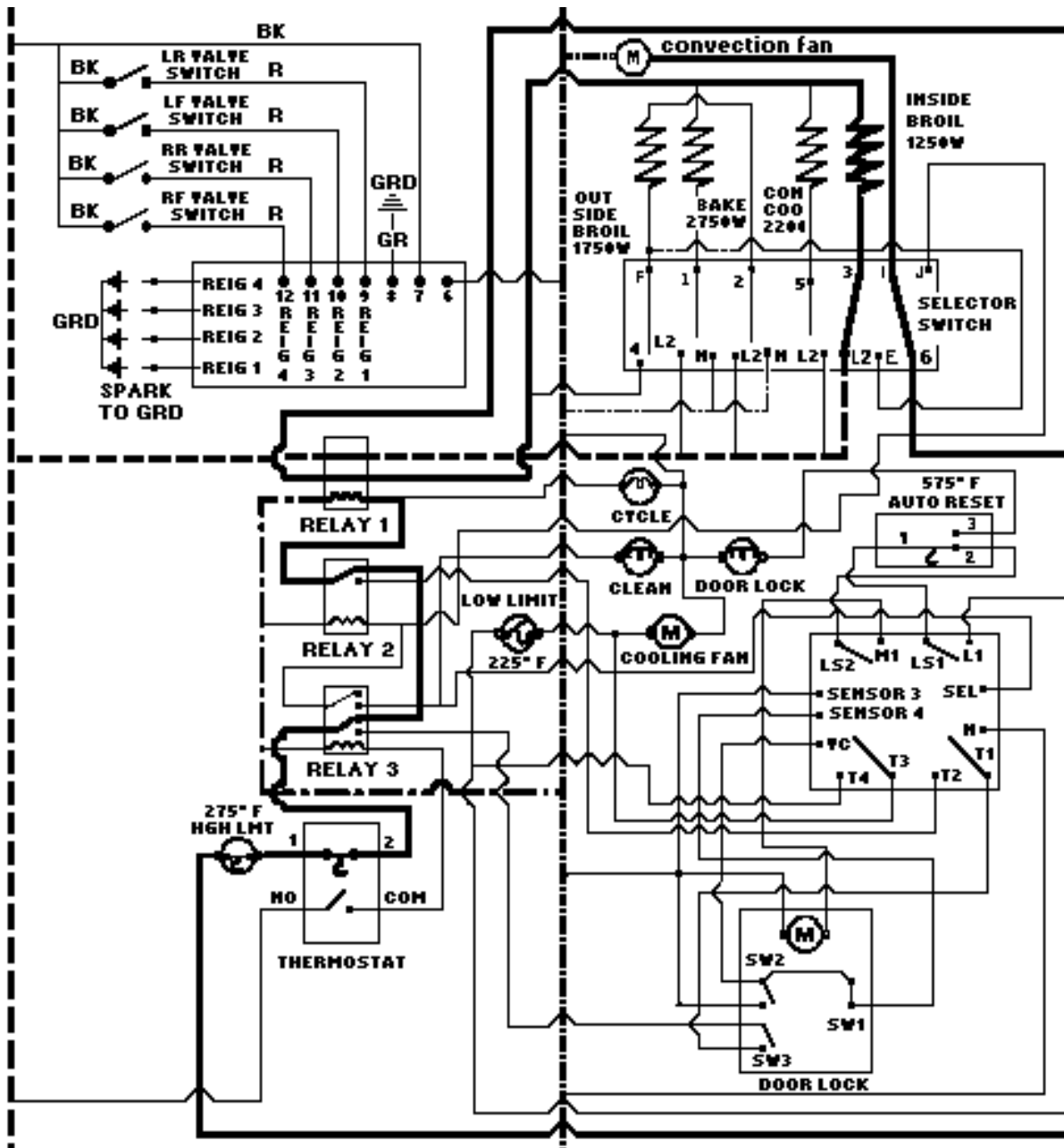
- L1 (Red)
- L2 (Black)
- Neutral
- Sensors

CONVECTION BROIL

L2 (BLK)

N (WH)

L1(RED)



Selector Convection Broil position closes Switches 4-F, 2-L2, 3-L2, and 6-1. 6-1 powers the Convection Fan through L1 at 120v. The Thermostat closes Switch Cy1-Cy2, which cycles the Oven temperature, powering Relay #1 and the Oven Cycle Light. When Relay # 2 closes it powers the inside Broil Element at 208v / 240v and the outside Broil Element at 208v / 240v.

Legend

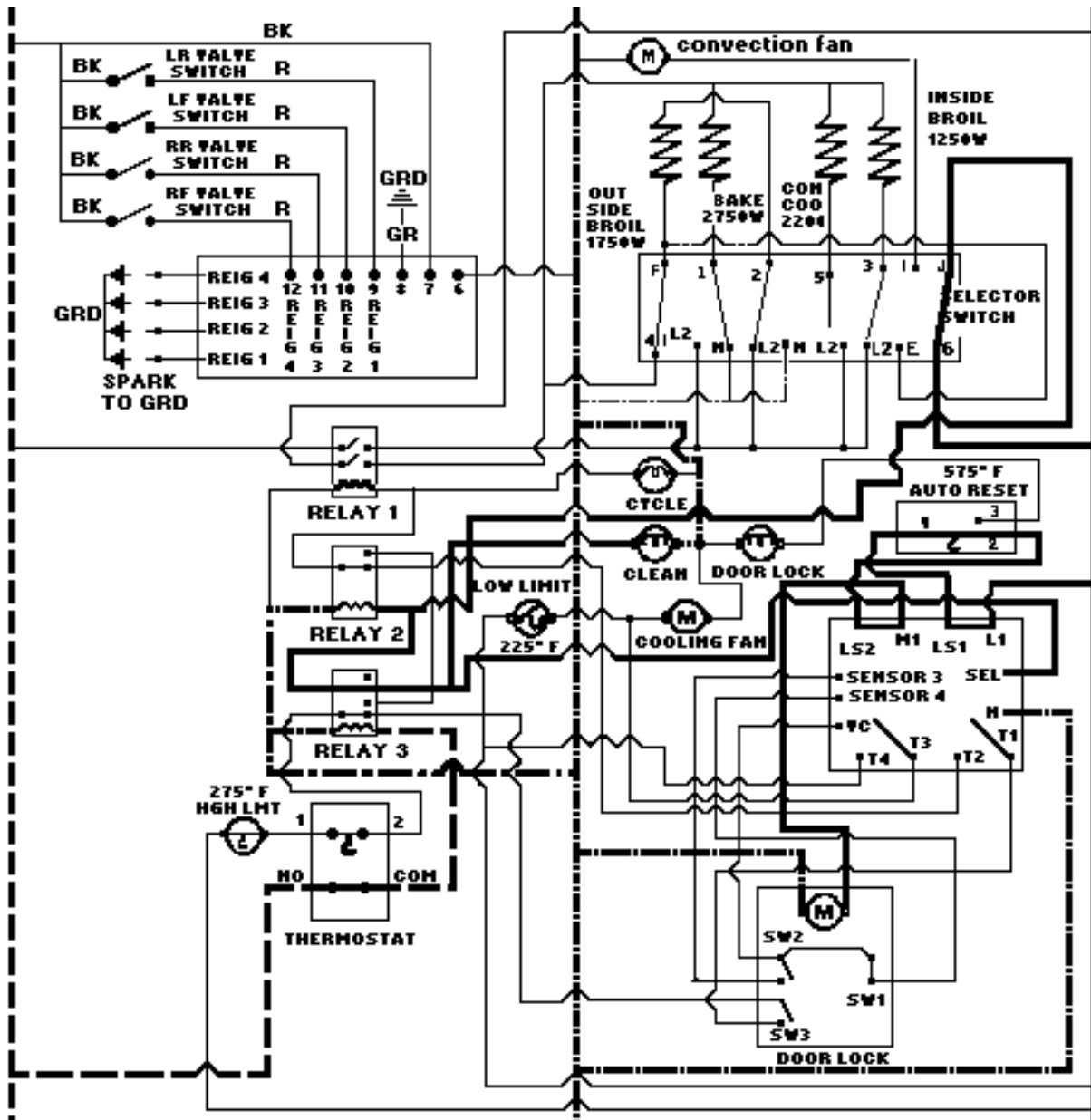
- L1 (Red)
- L2 (Black)
- Neutral
- Sensors

CLEAN INITIATE UNTIL DOOR LOCK

L2 (BLK)

N (WH)

L1 (RED)



Selector Clean position closes Heating Element circuits 4-F, 1-N, 2-L2, 3-L2 and Door Lock Module / Timer circuit J-6 switches Relay #2. Thermostat clean position closes the Cycle Switch and Thermostat Clean Switch, which switches Relay #3. Switching Relay #3 allows circuit J-6 to turn on the Clean Indicator Light and enable the Door Lock Module / Timer which closes Relays LS1-L1 and LS2-M1. This powers the Door Lock Motor until 10 seconds after Sensor #3 is signaled by VC that the Door Lock Switch SW2 has been closed mechanically (along with SW3) by the Door Lock Bolt.

Legend

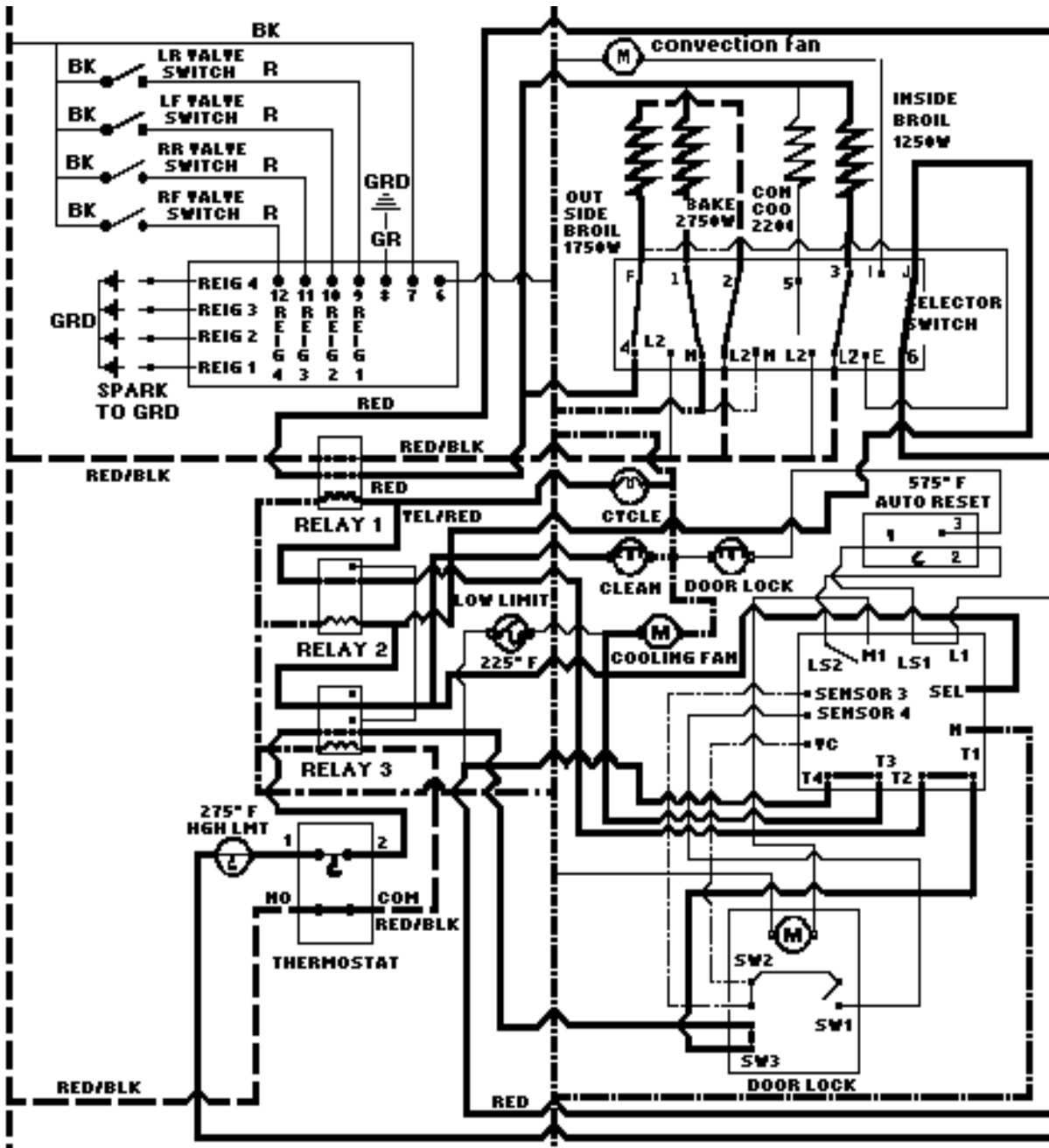
- L1 (Red)
- L2 (Black)
- Neutral
- Sensors

CLEAN DOOR LOCK BELOW 575° ± 25°

L2 (BLK)

N (WH)

L1 (RED)



10 seconds after the signal to Sensor #3, Switch LS2-M1 is opened, stopping the door lock motion and Switches T1-T2, and T3-T4 which switches Relay #1, powering the Cooling Fan, which closes Relay #1 powering the inside and outside Broil Elements to 208v /240v and the Bake Element to 120v.

Legend

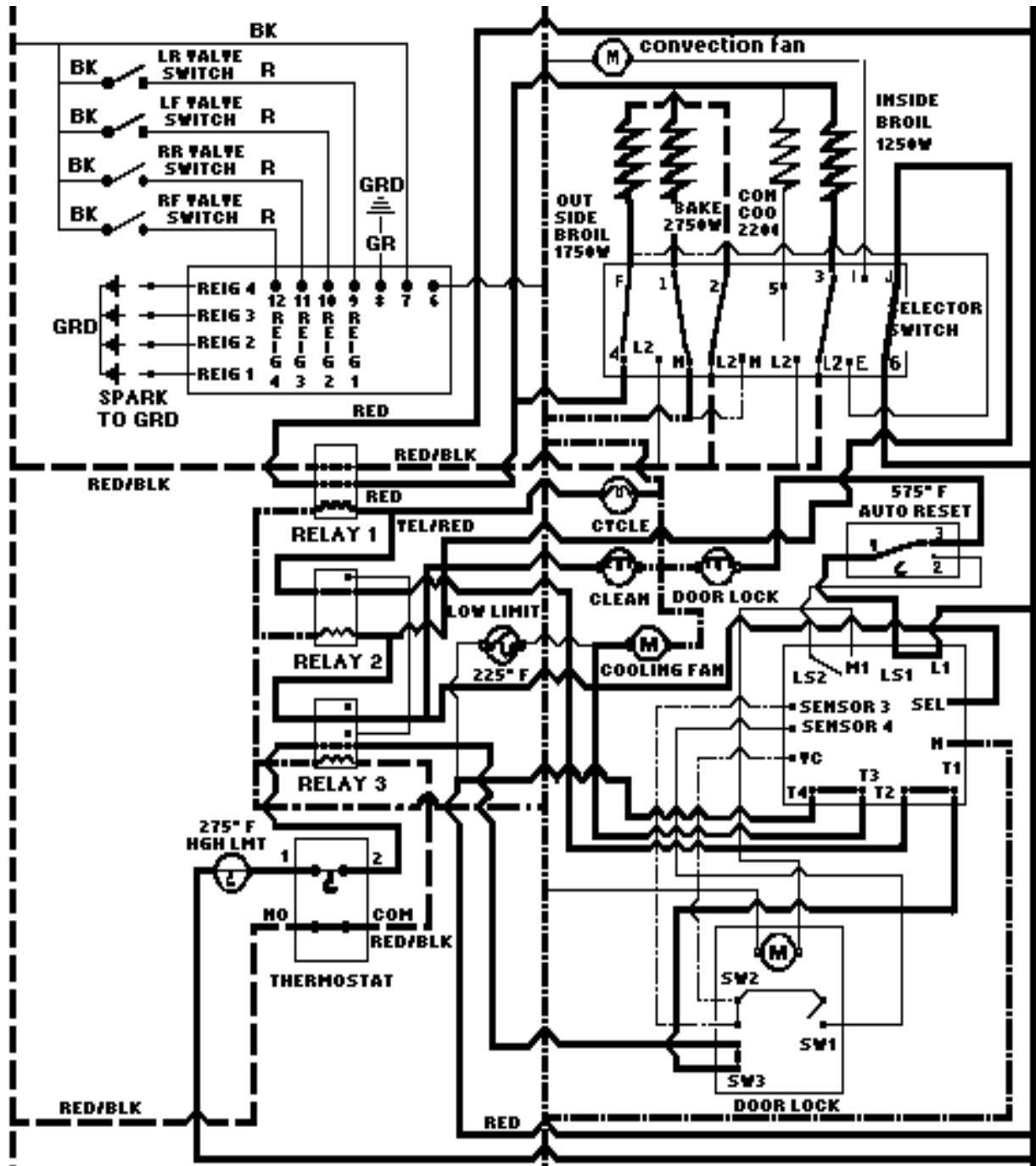
- L1 (Red)
- L2 (Black)
- Neutral
- Sensors

CLEAN DOOR LOCK ABOVE 575° ± 25°

L2 (BLK)

N (WH)

L1 (RED)



Auto Reset switches to 1-3 which turns Door Lock Indicator Light on and disables Door Lock Motor circuit.

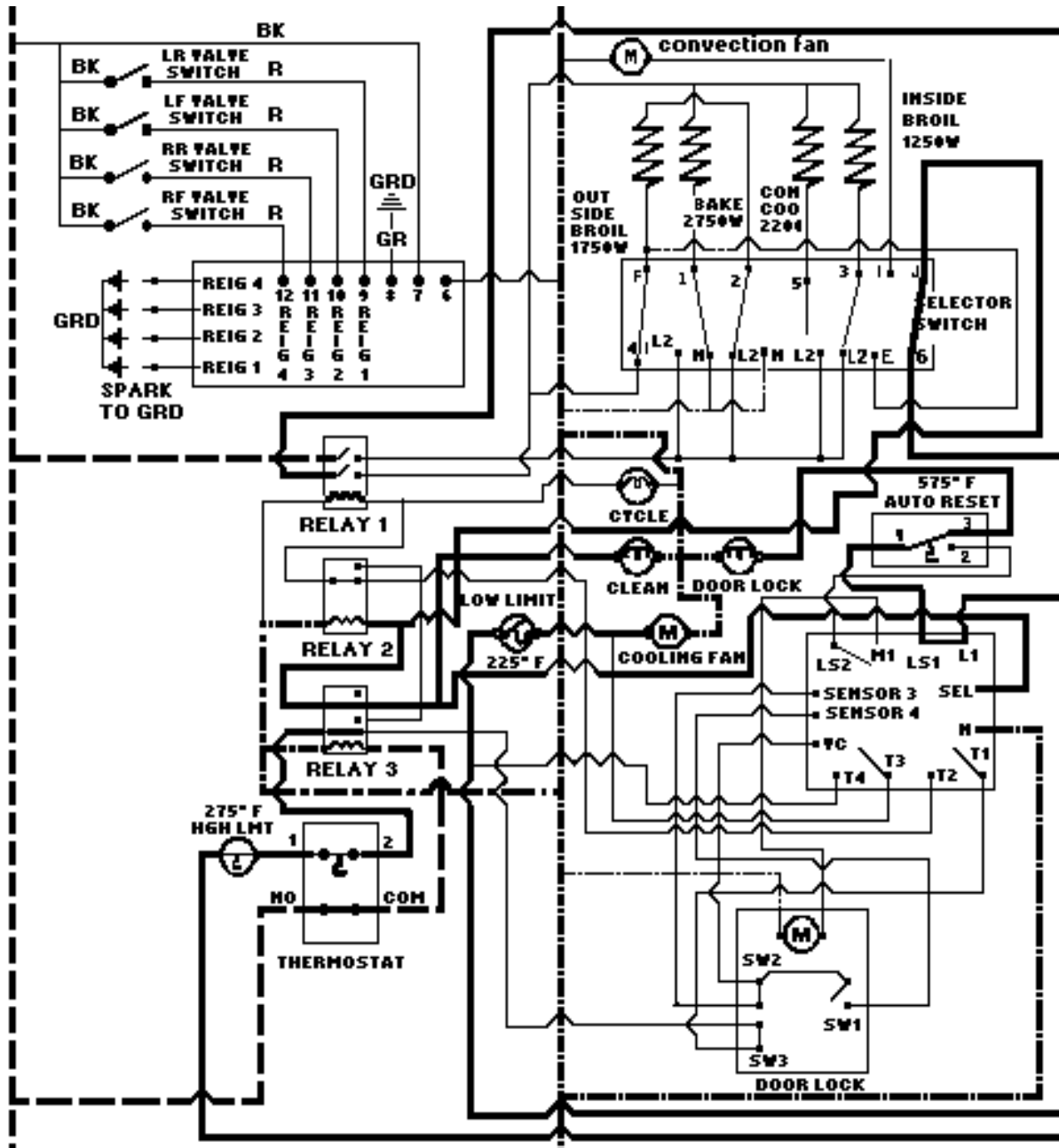
- Legend
- L1 (Red)
 - L2 (Black)
 - Neutral
 - Sensors

CLEAN FINISHED DOOR LOCK ABOVE $575^{\circ} \pm 25^{\circ}$

L2 (BLK)

N (WH)

L1 (RED)



Timer Switches T3-T4, T1-T2 open, turning off the Cooling Fan, which will then be powered at 120v by the Fan Limit Switch when needed, and opening the circuit to Relay #1 which disables the Heating Elements. Switch LS2-M1 closes to power the Door Lock Motor.

Legend

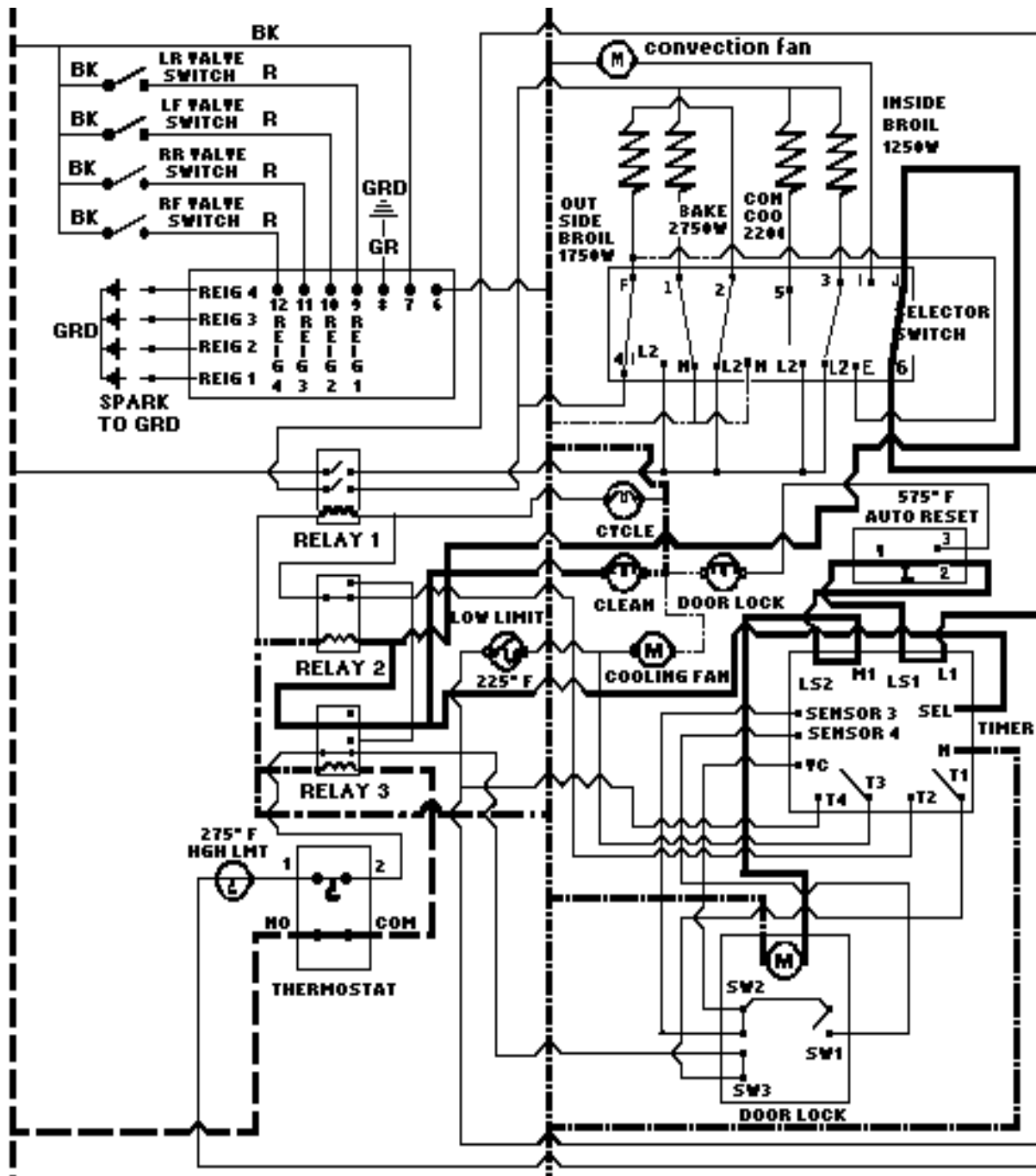
- L1 (Red)
- - - L2 (Black)
- Neutral
- · - · Sensors

CLEAN FINISHED DOOR LOCK BELOW 575° ± 25°

L2 (BLK)

N (WH)

L1 (RED)



Auto Reset Switches 1-2 closed allowing the Door Lock Motor to operate and turning the Door Lock Light off. The Door Lock Motor operates until 2 seconds after Sensor 4 is signaled by VC that the Door Lock SW1 has been closed mechanically by the Door Lock bolt. The Door Lock / Timer switches LS2-M1 and LS1-L1 open and the Timer resets.

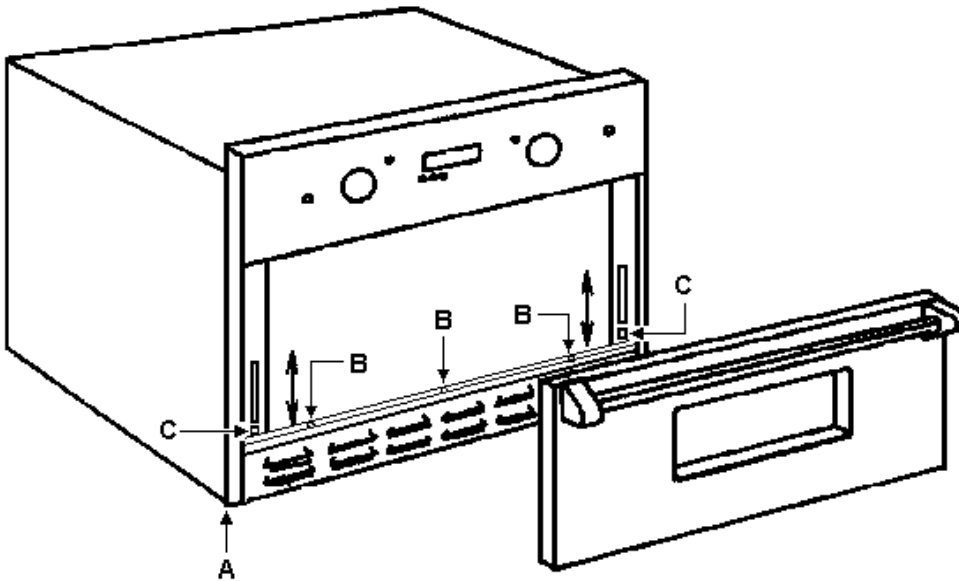
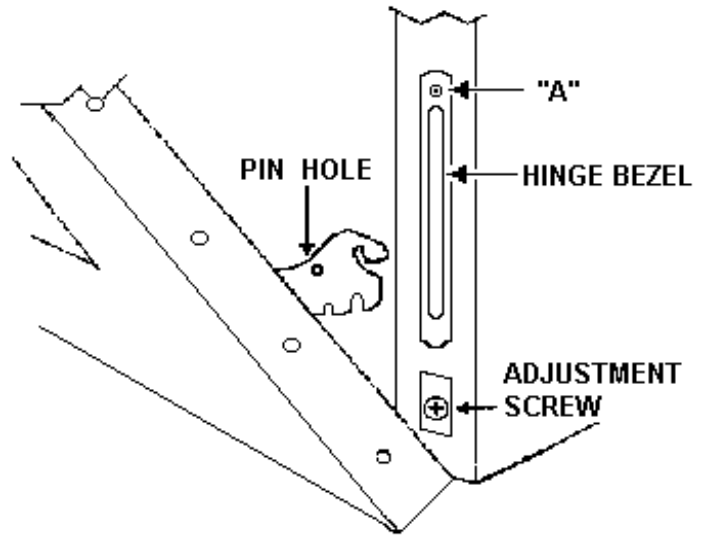
Legend

- L1 (Red)
- - - L2 (Black)
- Neutral
- Sensors

VESO / VEDO WALL OVENS DOOR REMOVAL / ADJUSTMENT

DOOR REMOVAL:

- Open door to the full open position.
- Place a pin in the pin hole.
- Close the door to the inserted pin.
- Remove screw "A".
- Lift the door and hinge bezel out of the door socket.
- Reverse the procedure to replace the door.



DOOR ADJUSTMENT:

- Remove the lower access panel:
- Remove 2 screws at the bottom of each side trim ("A").
- Remove the 3 screws beneath the door ("B").
- DOOR ADJUSTMENT SCREWS --"C"-- (TURN CLOCKWISE TO RAISE) (TURN COUNTERCLOCKWISE TO LOWER).

COMPONENT LAYOUT FOR ELECTRIC DOUBLE WALLOVEN

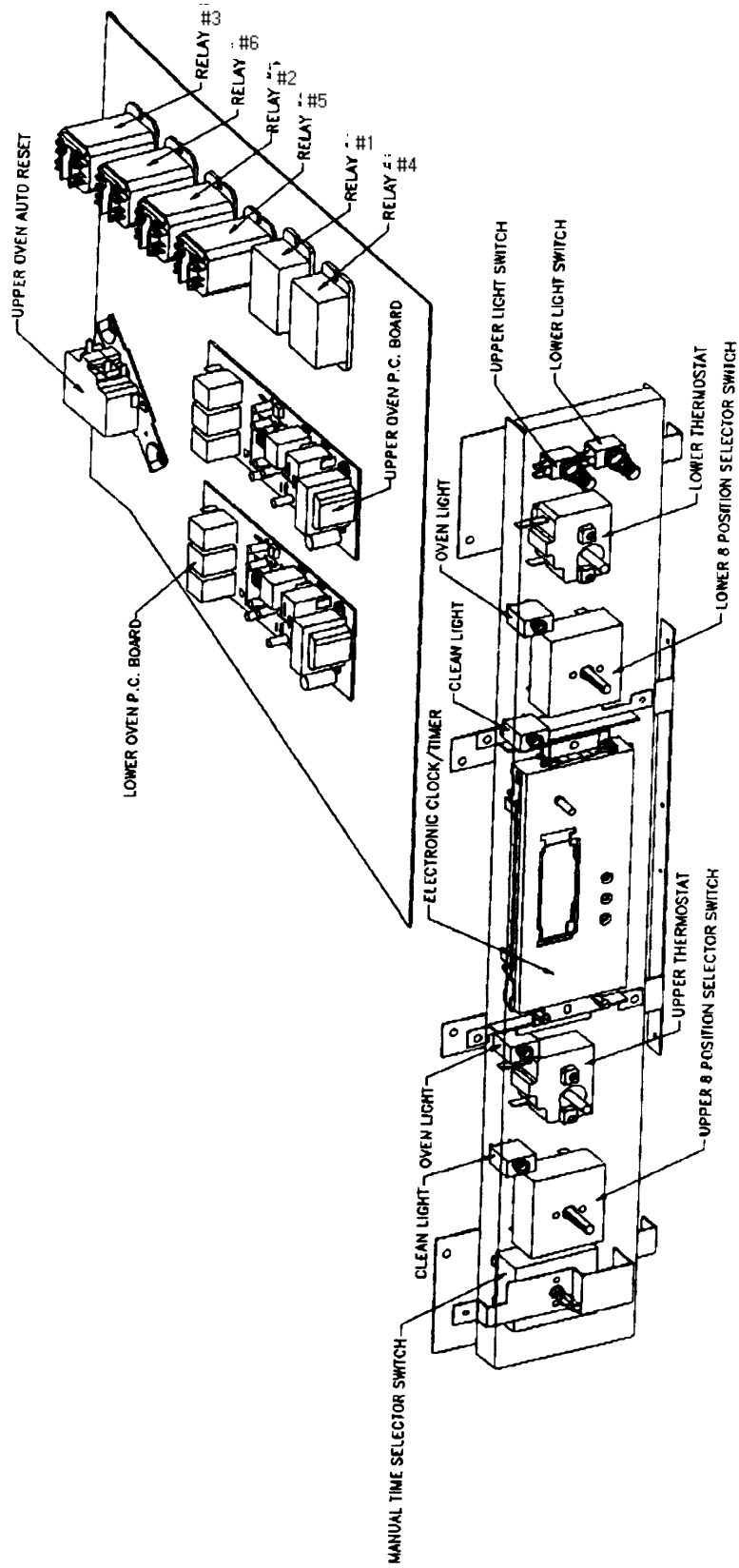
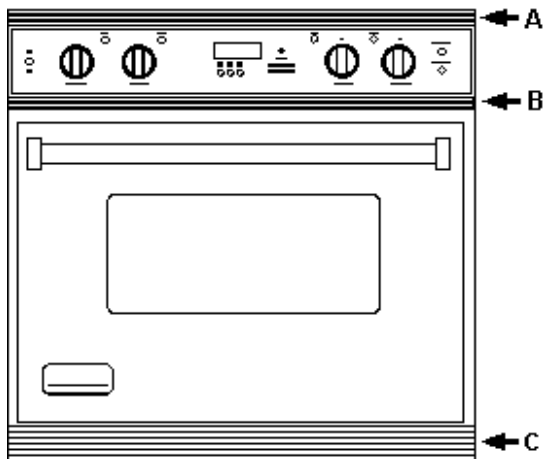


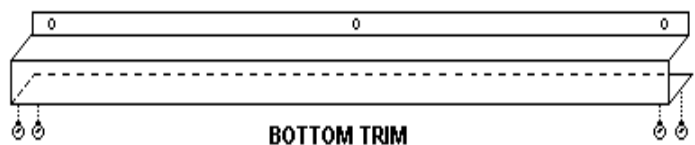
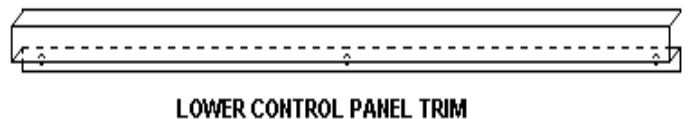
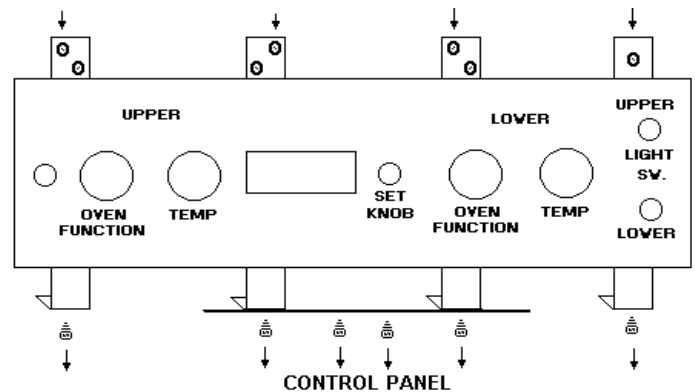
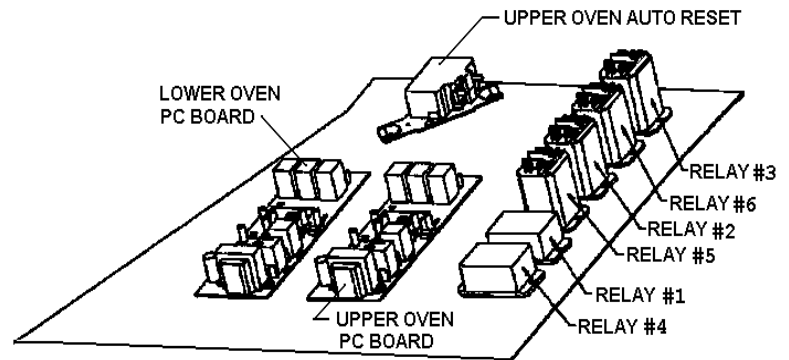
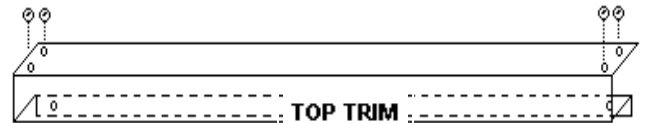
ILLUSTRATION # 1

VESO/VEDO COMPONENT ACCESS



To gain access to the electric and electronic components:

- Remove the **top trim** (A). Two screws at each corner attaching the top trim to the side trims and three screws along the bottom of the trim piece.
- Remove the **lower control panel trim** (B). Three screws along the bottom of the trim piece behind the oven door.
- Remove the **control panel**. Four screw at the top and six screws across the bottom (see drawing of the control panel). Pull the **control panel** carefully forward and tilt down. Being careful not to disconnect wires attached to the components on the reverse of the panel.
- The **component panel** is now accessible. Pull the **component panel** forward to release the panel from the slide.
- Lift the **component panel** up to service the upper oven **self cleaning latch** and components located on the latch mechanism.
- The **bottom trim** piece (C) is removed to make the vertical **door adjustment**. Remove the two screws from each corner attaching the **bottom trim** to the **side trim** pieces. Remove the three screws across the top of the trim piece located beneath the door.



VEDO 205

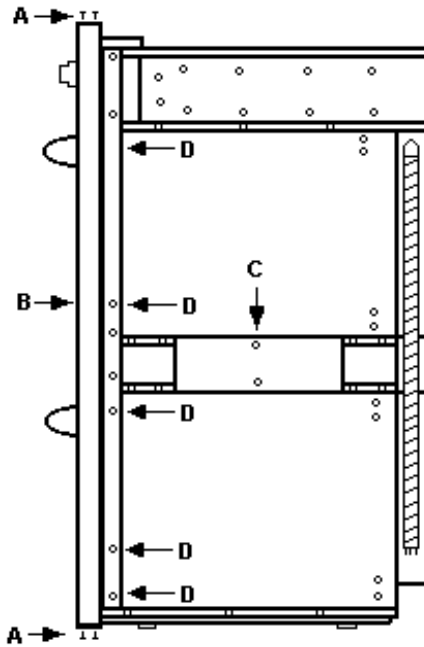


Illustration 1

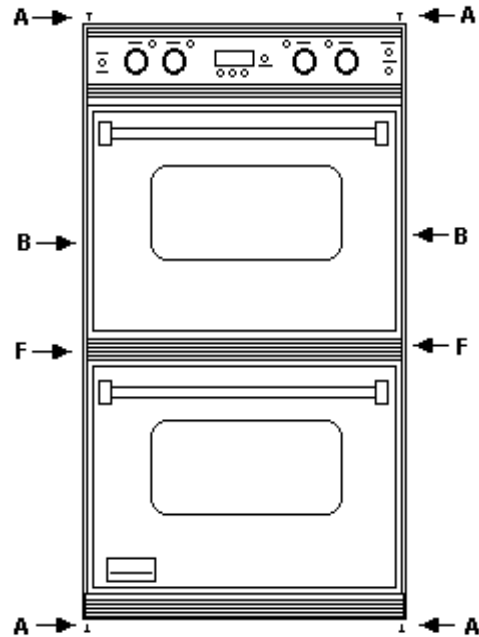


Illustration 2

LOWER SELF-CLEAN LATCH

The oven will have to be removed from the wall to service the lower self-clean latch and the components located on the latch mechanism.

- Remove the oven doors to lighten the load.
- Remove the side trim pieces “B” by removing the top and lower screws marked “A” and the screws along the side marked “D” on (Ill. #1).
- Remove the center trim “F” (Ill. #2).
- Remove the brackets “C”, one on each side of the oven.
- Tilt the upper oven back, hinging on the rear screws “E” (Ill #3).

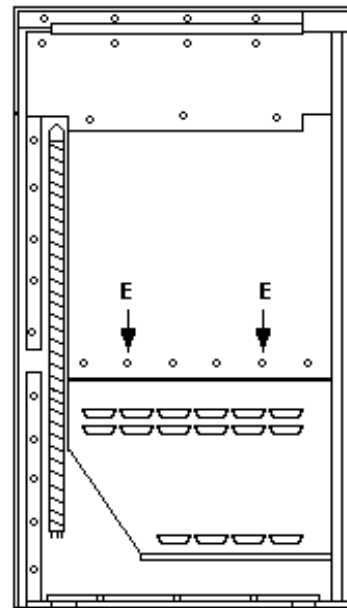
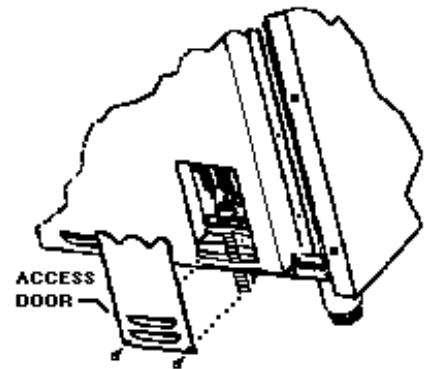


ILLUSTRATION 3

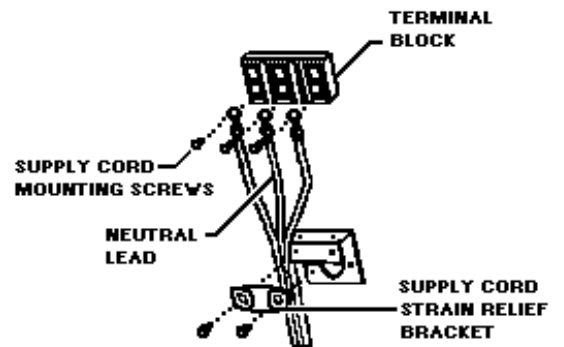
ELECTRICAL CONNECTION

Use a 3 - wire power supply cord kit rated for 30 amps - 125/250 volts for Models VDSC and VERT or 50 amps - 240 volts for Model VESC with closed loop terminals and marked for use with ranges. Where local codes do not permit grounding through neutral, use a 4 - wire power supply cord. The cord or conduit must be secured to the range with the strain relief bracket. The electrical connection is made at the terminal block, which is located behind the access door on the back of the range.



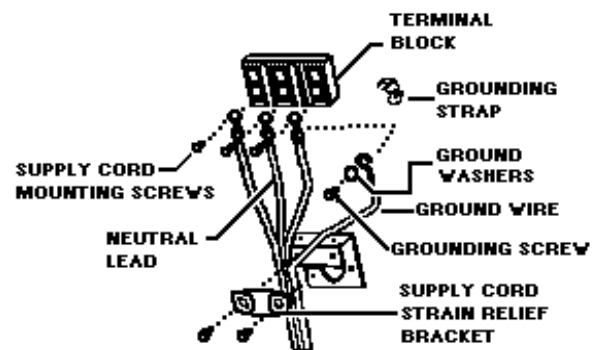
3 - Wire Power Supply Cord

1. Remove access door.
2. Remove supply cord strain relief bracket and 3 supply cord mounting screws on the terminal block.
3. Feed supply cord up through the hole in the bottom of range back.
4. Attach the line #1 (red) and line #2 (black) leads to the outside terminals and the neutral wire (white) to the center terminal on the terminal block.
5. Reattach supply cord strain relief bracket over supply cord, pushing supply cord up toward terminal block to relieve strain before tightening.
6. Reattach access door.



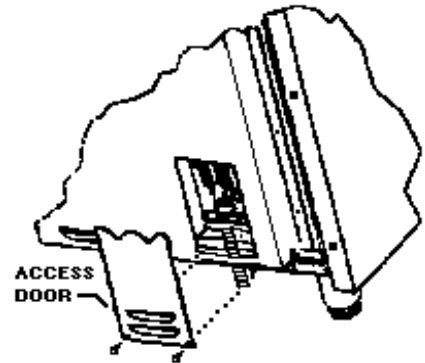
4 - Wire Power Supply Cord

1. Remove access door.
2. Remove supply cord strain relief bracket and 3 supply cord mounting screws on the terminal block.
3. Remove grounding screw; cut-off and discard ground strap.
4. Feed supply cord up through hole in the bottom of the range back.
5. Attach the ground lead (green) with the ground screw that was removed in step #3.
6. Attach the line #1 (red) and line #2 (black) leads to the outside terminals and the neutral wire (white) to the center terminal on the terminal block..
7. Reattach supply cord strain relief bracket over supply cord, pushing supply cord up towards terminal block to relieve strain before tightening.
8. Reattach access door.



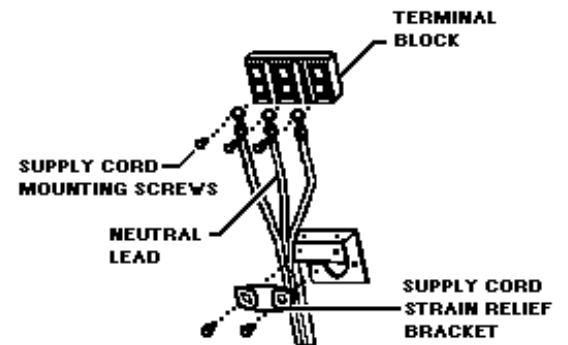
ELECTRICAL CONNECTIONS WITH CONDUIT

Use ½" trade size conduit with a conduit clamp, 12 AWG /600 volt copper conductor colored red for line # 1 and black for line # 2 and 14 AWG /600 volt copper conductor colored white for neutral with closed loop terminals marked for use with ranges. Where local codes do not permit grounding through neutral, use a green 12 AWG copper conductor as directed in the 4 - wire connector directions. The conduit must be secured to the range with the strain relief bracket. The electrical connection is made at the terminal block which is located behind the access door on the back of the range.



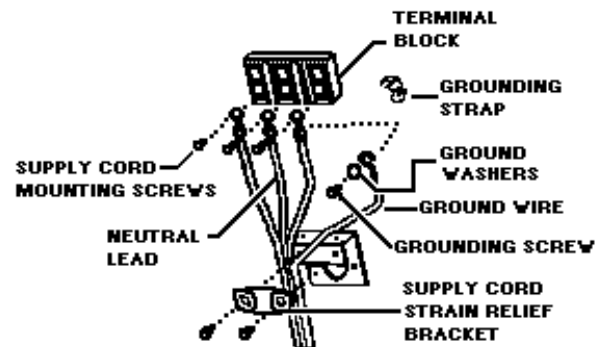
3 - Wire Power Connection

1. Remove access door.
2. Remove strain relief mounting angle and reattach as shown.
3. Feed ½" trade size conduit through the hole in the bottom of the range back and secure to the strain relief bracket with a conduit clamp.
4. Feed line #1 (red 12 AWG / 600v copper conductor), line #2 (black 12 AWG / 600v copper conductor), and neutral (white 14 AWG / 600v copper conductor) through conduit and attach closed loop terminals marked for use with ranges.
5. Remove 3 mounting screws and attach line #1 (red) to left terminal, line #2 (black) to the right terminal, and the neutral wire (white) to the center terminal.
6. Reattach the access door.



4 - Wire Power Connector

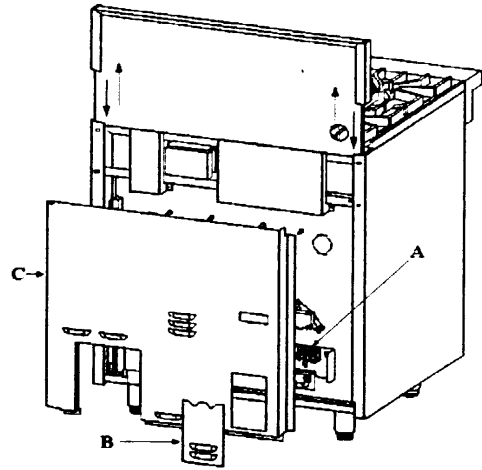
1. Remove access door.
2. Remove strain relief mounting angle and reattach as shown.
3. Feed 1½" trade size conduit through the hole in the bottom of the range back and secure to the strain relief bracket with a conduit clamp.
4. Feed line #1 (red 12 AWG / 600v copper conductor), line #2 (black 12 AWG / 600v copper conductor), neutral (white 14 AWG / 600v copper conductor), and a grounding wire (green 12 AWG copper conductor) through conduit and attach closed loop terminals marked for use with ranges. (Terminal is not required on grounding wire if used with ground washer).
5. Remove 3 mounting screws and green grounding screw. Cut-off and discard ground strap. Attach line #1 (red) to the left terminal, line #2 (black) to the right terminal, the neutral wire (white) to the center terminal and the copper ground wire to the green grounding screw using the ground washer.
6. Reattach the access door.



VDSC 305 BACK COVER ASSEMBLY

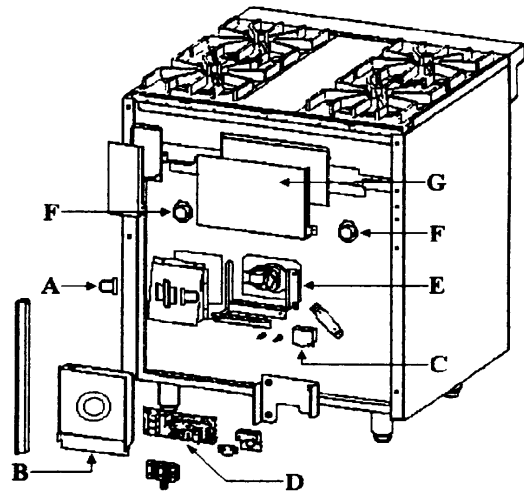
Remove the range from the cabinet and remove the back cover to service the electronic components for self clean.

- A. DISCONNECT THE VOLTAGE BEFORE REMOVING BACK COVER. (CAUTION 240 AC).
- B. A.C. Disconnect Cover.
- C. Back Cover



VDSC 305 REAR PANEL ASSEMBLY

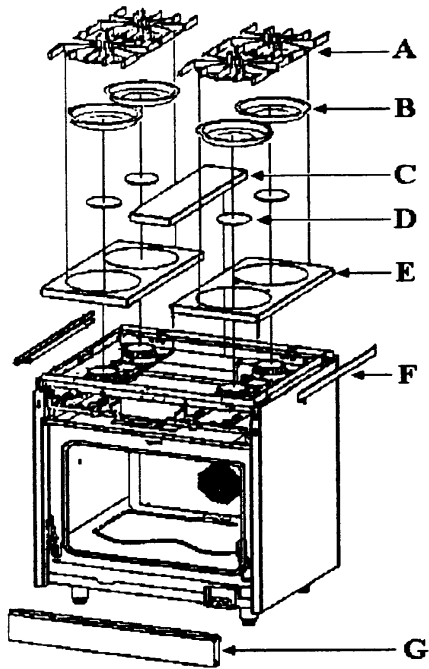
- A. Relay (2)
- B. Cooling Fan
- C. Auto Reset
- D. Self Clean / Timer
- E. Convection Motor (serviced from inside the oven cavity).
- F. Oven Lights
- G. Oven Flue



VDSC305 SELF CLEAN LOCK

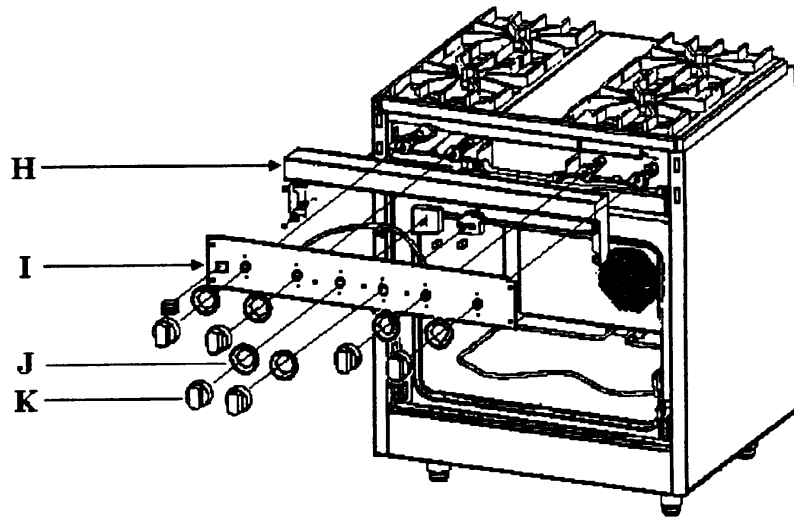
24

To replace the self clean lock mechanism you will need to remove:



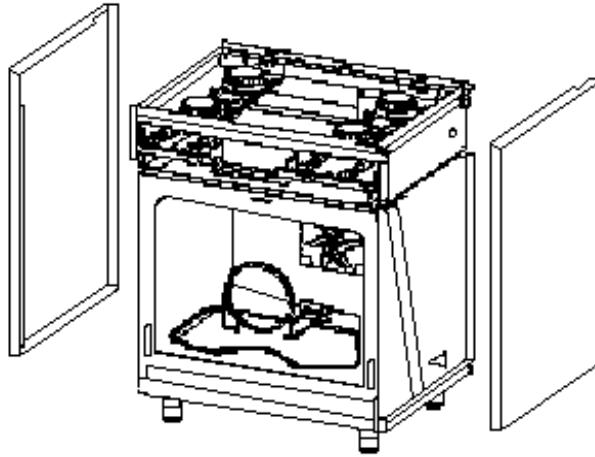
- A. Burner Grates
- B. Burner bowls
- C. Center Work Space
- D. Burner Caps
- E. Grate Supports
- F. Grate Support Trims
- G. Access Panel
- H. Landing Ledge
- I. Control Panel
- J. Knob Bezels
- K. Knobs

(Continued on next page)

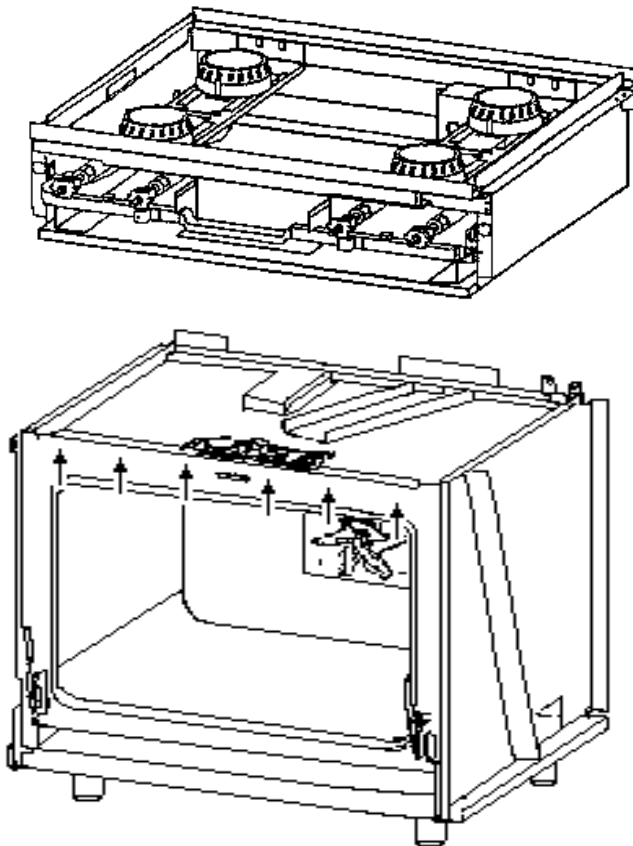


VDSC305 SELF-CLEAN LOCK (con't)

Remove both side panels and insulation



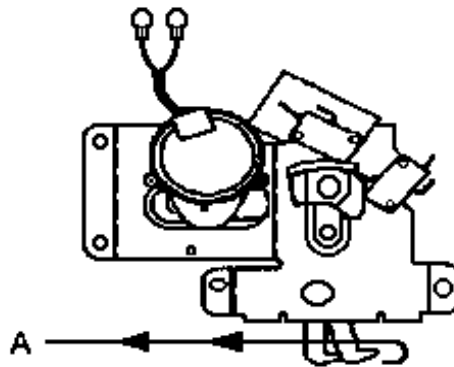
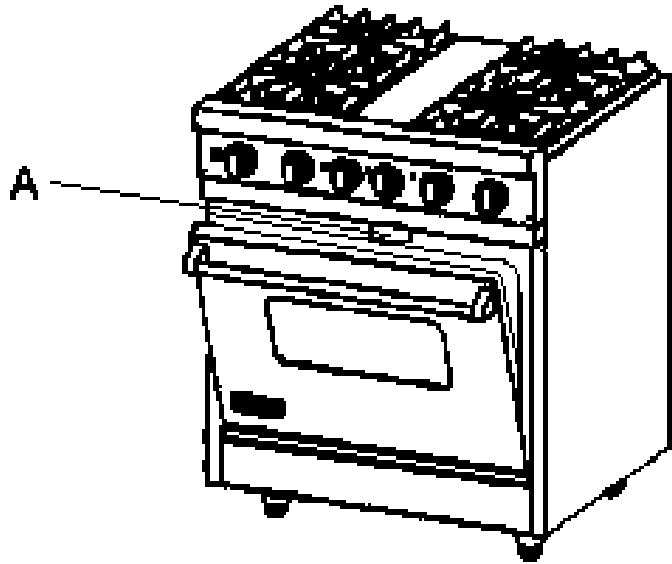
Remove the six(6) screws along the upper frame above the door that hold the burner box assembly to the oven body. Lift the front of the burner box high enough to gain access to the self-clean lock and associated components (High Limit Switch and Cooling Fan Switch.) Use a block, approximately 6" high, to hold the burner box in place while working on the lock.



VDSC “LOCKED” DOOR

In the unlikely event the door lock motor should fail in the “locked” position you will need:

1. To fashion a hook on the end of a 12” long stiff wire.
2. Insert the hook between the door and the front frame assembly at the top, see “A” illustration at the right. The hook on the wire should be to the right of the latch hook.
3. Engage the door latch hook with the wire hook and pull the latch hook to the left until the door is released, see illustration below.



VERT AND VESC (TOP)

TOP REMOVAL

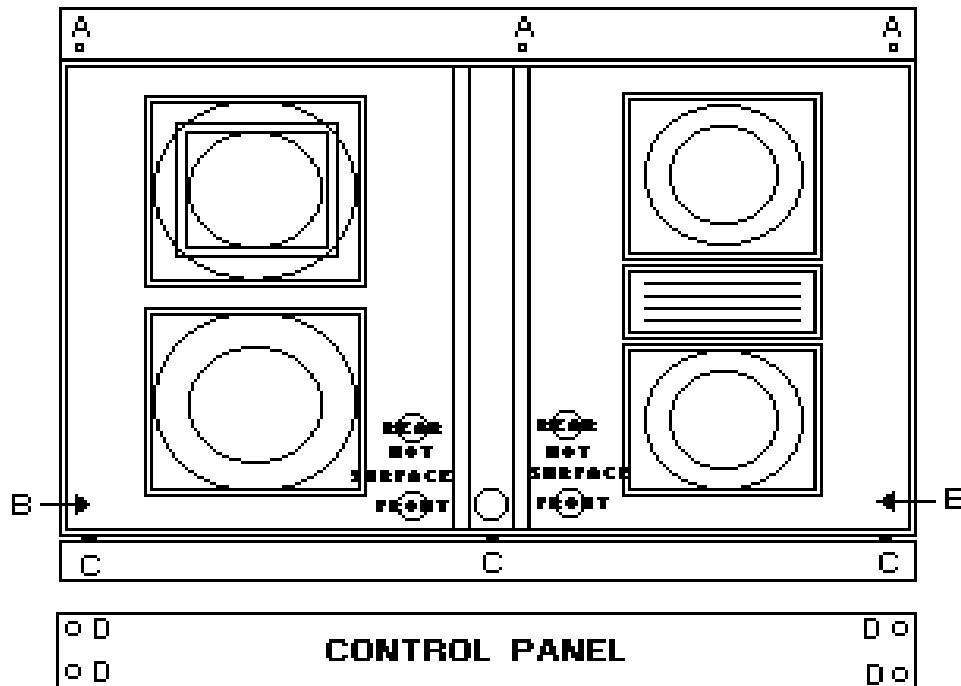


ILLUSTRATION "1"

1. To remove the smooth glass top:
 - (A) Pull the range (rangetop) forward to remove the screws holding the backguard in place.
 - (B) Remove the backguard.
 - (C) Remove the 3 screws "A" holding the top to the frame.
 - (D) Remove the 4 screws "D" and lower the control panel.
 - (E) Remove the 2 screws "B" beneath front corners.
 - (F) Remove the glass top.
 - (G) Restore the range (rangetop) by reversing procedures above.
2. To remove the landing ledge the above procedure will have to be followed in order to remove the 3 "C" screws on the back side of the landing ledge.

Left Rear (Dual Element) Burner

2400W / 1000W @ 240 vac 10A / 4.2A
 1800W / 750W @ 208 vac 8.7A / 3.6A

Left Front Burner

1500W @ 240 vac 6.3A
 1125W @ 208 vac 5.4A

Right Rear Burner

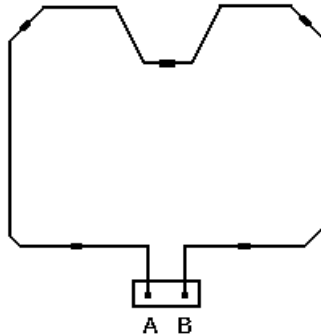
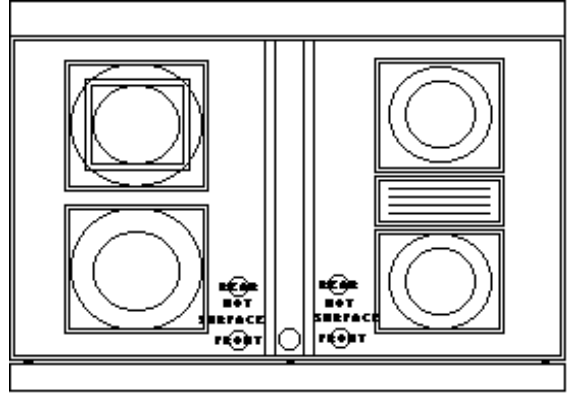
1800W @ 240 vac 7.5A
 1350W @ 208vac 6.5A

Bridge Heater

800W @ 240 vac 3.4A
 600W @ 208 vac 2.9A

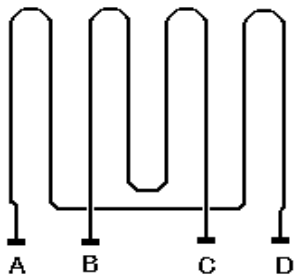
Right Front Burner

1800W @ 240 vac 7.5A
 1350W @ 208 vac 6.5A



Bake Element

“A” to “B” 21.1 ohms
 “A” to “B” 240 vac during bake and convection bake
 120 vac during self-clean
 2935W @ 240 vac 12.2 A
 2205W @ 208 vac 10.6A



Broil Element

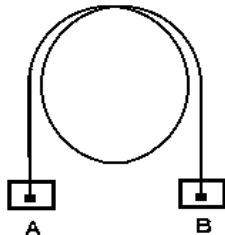
“A” to “D” (outside element) 32.6 ohms
 “A” to “D” 50 vac during bake and convection

bake

240 vac during maxi broil
 240 vac during convection broil
 240 vac during self-clean
 “B” to “C” (inside element) 32.6 ohms
 “B” to “C” 70 vac during bake and convection bake
 240 vac during mimi broil
 240 vac during maxi broil
 240 vac during convection broil

240 vac during self-clean

Maxi broil 3000W @ 240 vac 12.5A
 2255W @ 208 vac 10.8A
 Mini broil 1250W @ 240 vac 5.2A
 940W @ 208 vac 4.5A



Convection Element

“A” to “B” 26 ohms
 “A” to “B” 240 vac during convection cook
 2200W @ 240 vac 9.2A

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