



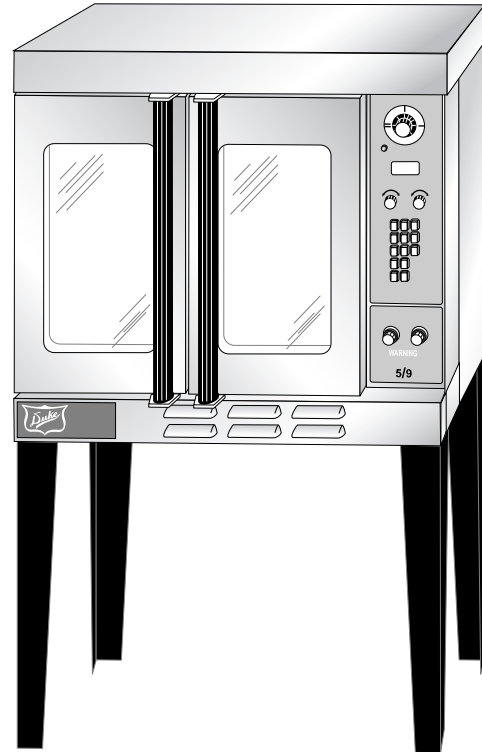
"Your Solutions Partner"

# SERVICE MANUAL

## ELECTRIC CONVECTION OVEN

### MODELS

5/9 THE OVEN  
5/9 SERIES OVENS  
6/13 THE OVEN  
E SERIES  
59-E3C  
59-E3P



**Please read this manual completely before attempting to  
install, operate or service this equipment**

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## **IMPORTANT WARNING AND SAFETY INFORMATION**

### **WARNING**

**READ THIS MANUAL THOROUGHLY BEFORE OPERATING, INSTALLING OR PERFORMING MAINTENANCE ON THE EQUIPMENT.**

### **WARNING**

**FAILURE TO FOLLOW INSTRUCTIONS IN THIS MANUAL CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH.**

### **WARNING**

**DO NOT USE OR STORE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.**

### **WARNING**

**DO NOT OPERATE THIS EQUIPMENT WITHOUT PROPERLY PLACING AND SECURING ALL COVER AND ACCESS PANELS.**

## **CAUTION**

Observe the following:

- Provide and maintain adequate minimum clearances from all walls and combustible materials.
- Provide and maintain adequate clearance for air openings.
- Keep the equipment area free and clear of combustible material.
- Operate equipment only on the type of electricity indicated on the specification plate.
- Retain this manual for future reference.

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## INTRODUCTION

### GENERAL

Illustrations used in this manual may show any model unless the information is specific to a particular model. All procedures are applicable to all models unless specifically indicated.

### INSTALLATION

For detailed installation instructions, refer to the Installation and Operation Manual.

### OPERATION

For specific operating instructions, refer to the Installation and Operation Manual.

### CLEANING

For specific cleaning instructions, refer to the Installation and Operation Manual.

### TOOLS

#### Standard

- Standard set of hand tools.
- VOM with A.C. current tester (Any quality VOM with a sensitivity of at least 20,000 ohms per volt can be used).
- Pyrometer

## ELECTRICAL SPECIFICATIONS

### 6/13 and “E” CONVECTION OVEN

TOTAL KW	VOLTS	1 PHASE	3 PHASE
10	208	53 Amps	31 amps
10	240	46 Amps	27 amps
10	220/380		20 amps
10	240/415		18 amps
10	480		14 amps

### 5/9 THE OVEN

TOTAL KW	VOLTS	1 PHASE	3 PHASE
10	208	53 Amps	31 amps
10	240	46 Amps	27 amps

### 5/9, 59-E3C, 59-53P OVENS

TOTAL KW	VOLTS	1 PHASE	3 PHASE
8	208	41 Amps	24 amps
8	240	36 Amps	21 amps

# COMPONENT REMOVAL AND REPLACEMENT

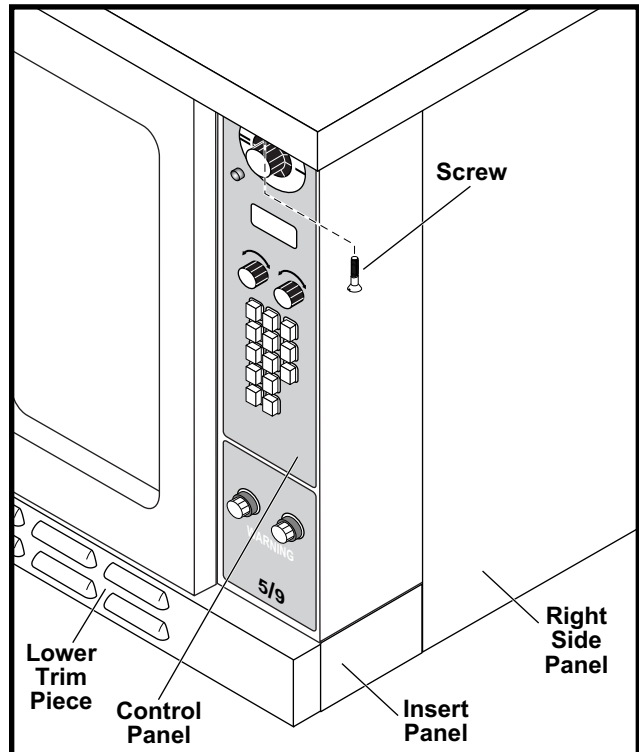
## Electrical LOCKOUT/TAGOUT Procedure

**WARNING: BEFORE PERFORMING ANY SERVICE THAT INVOLVES ELECTRICAL CONNECTION OR DISCONNECTION AND/OR EXPOSURE TO ELECTRICAL COMPONENTS, ALWAYS FOLLOW THE ELECTRICAL LOCKOUT/TAGOUT PROCEDURE. DISCONNECT ALL CIRCUITS. FAILURE TO COMPLY CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH.**

The Electrical LOCKOUT/TAGOUT Procedure is used to protect personnel working on an electrical appliance. Before performing any maintenance or service that requires exposure to electrical components, follow these steps:

1. In electrical box, place appliance circuit breaker into OFF position.
2. Place a lock or other device on electrical box cover to prevent someone from placing circuit breaker ON.
3. Place a tag on electrical box cover to indicate that appliance has been disconnected for service and power should not be restored until tag is removed by maintenance personnel.
4. Disconnect appliance power cord from electrical outlet.
5. Place a tag on the cord to indicate that unit has been disconnected for service and power should not be restored until tag is removed by maintenance personnel.

## RIGHT SIDE PANEL (OVENS WITH DUAL DOORS)



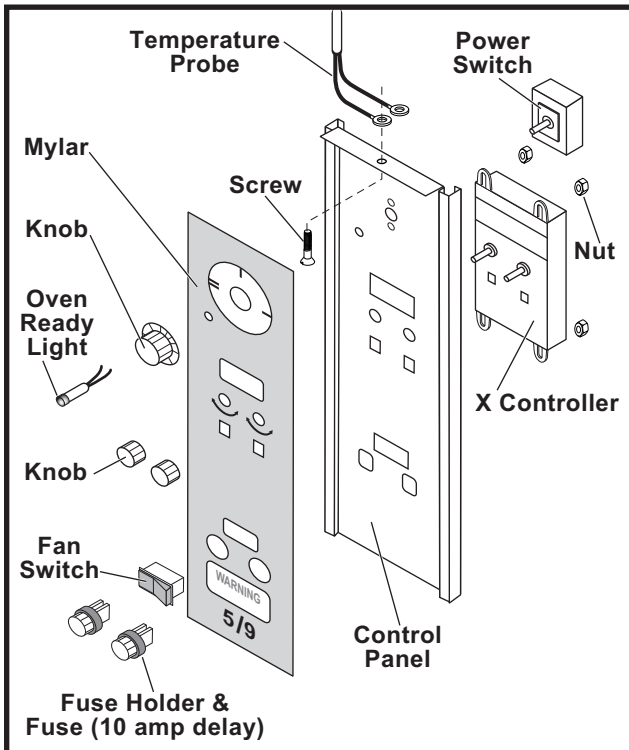
1. Remove the screw at the top of the Control Panel.
2. Rotate the panel down about 90° being careful not to damage wiring, RTD or Thermocouple tube.
3. Loosen the four screws that hold the front lower Trim Panel in place.
4. Slide the Trim Panel forward, and remove it.  
  
Before the large side panel can be removed the stainless steel insert panel behind the control compartment must first be removed.
5. Remove the two screws that hold the small stainless steel insert panel in place.
6. Slide the panel forward and out of the oven.
7. To remove the large side panel remove the six screws on the front and rear flanges of the panel.
8. Pull the panel free from bottom and remove it.

## X CONTROL PANEL ASSEMBLY

**WARNING:** DISCONNECT OVEN FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE.

### Component Access Procedure

Remove screw at top center of X Control Panel assembly and slide Control Panel out to allow access to Control Panel components.



### POWER Switch

1. Perform Component Access Procedure.
2. Loosen setscrews and remove knob from POWER Switch.
3. Tag and disconnect wires from POWER Switch.
4. Remove nut securing POWER Switch.
5. Remove POWER Switch from rear of panel.
6. Reverse procedure to install POWER Switch.

### X Controller

1. Perform Component Access Procedure.
2. Tag and disconnect wires from Controller.
3. Remove knobs from front of Control Panel.
4. Remove four nuts securing Controller to Control Panel.
5. Remove Controller from rear of Control Panel.
6. Reverse procedure to install a new Controller.

### OVEN READY Light

1. Perform Component Access Procedure.
2. Tag and disconnect wires to OVEN READY Light.
3. Remove OVEN READY Light from front of Control Panel.
4. Reverse procedure to install a new OVEN READY Light.

### Fan Switch

1. Perform Component Access Procedure.
2. Tag and disconnect wires from Fan Switch.
3. Remove Fan Switch from front of Control Panel.
4. Reverse procedure to install a new Fan Switch.

### Fuse and Fuse Holder

1. Perform Component Access Procedure.
2. Remove screw (1) to access back of Control Panel to replace Fuse Holder.
3. Tag and disconnect wires to Fuse Holder.
4. Remove nut securing Fuse Holder.
5. Remove Fuse Holder from front of Control Panel.
6. Reverse procedure to install Fuse Holder.

### LIGHT Switch

NOTE: LIGHT Switch is only on the 6/13 Oven.

1. Perform Component Access Procedure.
2. Tag and disconnect wires from LIGHT Switch.
3. Remove LIGHT Switch from front of Control Panel.
4. Reverse procedure to install a new LIGHT Switch.

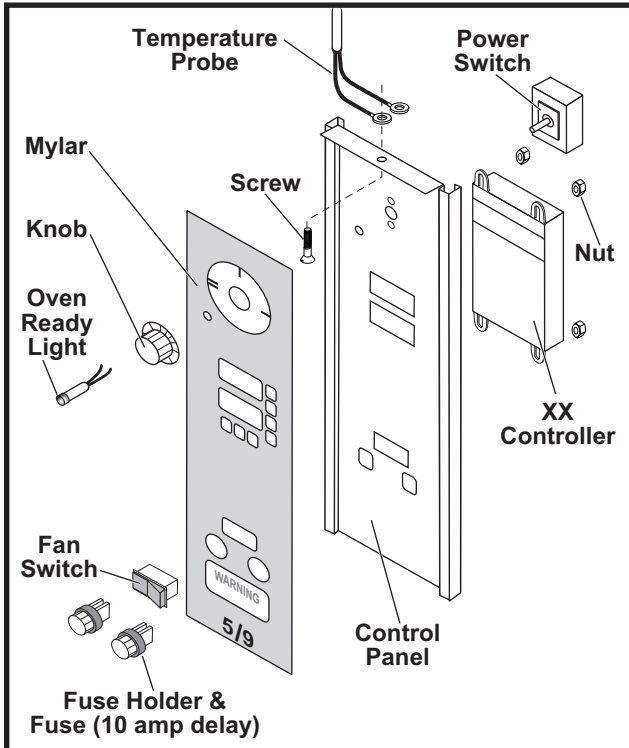


## XX CONTROL PANEL ASSEMBLY

**WARNING:** DISCONNECT OVEN FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE.

### Component Access Procedure

Remove screw at top center of XX Control Panel assembly and slide Control Panel out to allow access to Control Panel components.



### POWER Switch

1. Perform Component Access Procedure.
2. Loosen setscrews and remove knob from POWER Switch.
3. Tag and disconnect wires from POWER Switch..
4. Remove nut securing POWER Switch.
5. Remove POWER Switch from rear of Control Panel.
6. Reverse procedure to install POWER Switch.

### XX Controller

1. Perform Component Access Procedure
2. Tag and disconnect wires from Controller.
3. Remove knobs from front of Control Panel.
4. Remove nuts securing Controller to Control Panel.
5. Remove Controller from rear of Control Panel.
6. Reverse procedure to install Controller.

### OVEN READY Light

1. Perform Component Access Procedure.
2. Tag and disconnect wires to OVEN READY Light.
3. Remove OVEN READY Light from front of Control Panel.
4. Reverse procedure to install OVEN READY Light.

### Fan Switch

1. Perform Component Access Procedure.
2. Tag and disconnect wires from Fan Switch.
3. Remove Fan Switch from front of Control Panel.
4. Reverse procedure to install Fan Switch.

### LIGHT Switch

NOTE: LIGHT Switch is only on the 6/13 Oven.

1. Perform Component Access Procedure.
2. Tag and disconnect wires from LIGHT Switch.
3. Remove LIGHT Switch from front of Control Panel.
4. Reverse procedure to install LIGHT Switch.

### Fuse and Fuse Holder

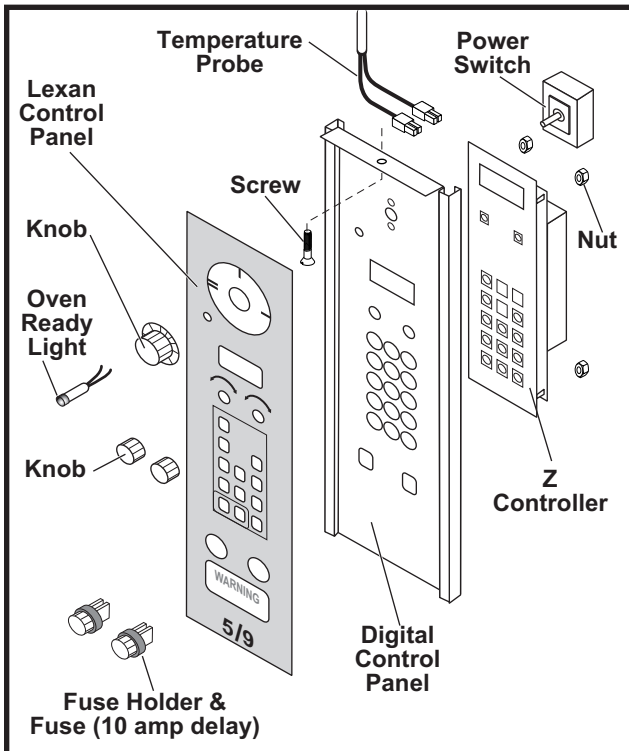
1. Remove Fuse Cap to replace Fuse.
2. Perform Component Access Procedure.
3. Tag and disconnect wires to Fuse Holder.
4. Remove nut securing Fuse Holder.
5. Remove Fuse Holder from front of Control Panel.
6. Reverse procedure to install a new Fuse Holder.

## Z CONTROL PANEL ASSEMBLY

**WARNING:** DISCONNECT OVEN FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE.

### Component Access Procedure

Remove screw at top center of Z Control Panel assembly and slide control panel out to allow access to Control Panel components.



### POWER Switch

1. Perform Component Access Procedure.
2. Loosen setscrew and remove knob from POWER Switch.
3. Tag and disconnect wires from POWER Switch.
4. Remove nut securing POWER Switch.
5. Reverse procedure to install POWER Switch.

### Z Controller

1. Perform Component Access Procedure.
2. Tag and disconnect wires from Controller.
3. Remove two knobs from front of Control Panel.
4. Remove four nuts securing Controller to Control Panel.
5. Remove Controller from rear of Control Panel.
6. Reverse procedure to install a new Controller.

### OVEN READY Light

1. Perform Component Access Procedure.
2. Tag and disconnect wires to OVEN READY Light.
3. Remove OVEN READY Light from front of panel.
4. Reverse procedure to install a new OVEN READY Light.

### Fuse and Fuse Holder Light

1. Remove Fuse Holder cap to replace Fuse.
2. Perform Component Access Procedure.
3. Tag and disconnect wires to Fuse Holder.
4. Remove nut securing Fuse Holder.
5. Remove Fuse Holder from front of Control Panel.
6. Reverse procedure to install a new Fuse Holder.

### LIGHT Switch

NOTE: LIGHT Switch is only on the 6/13 Oven.

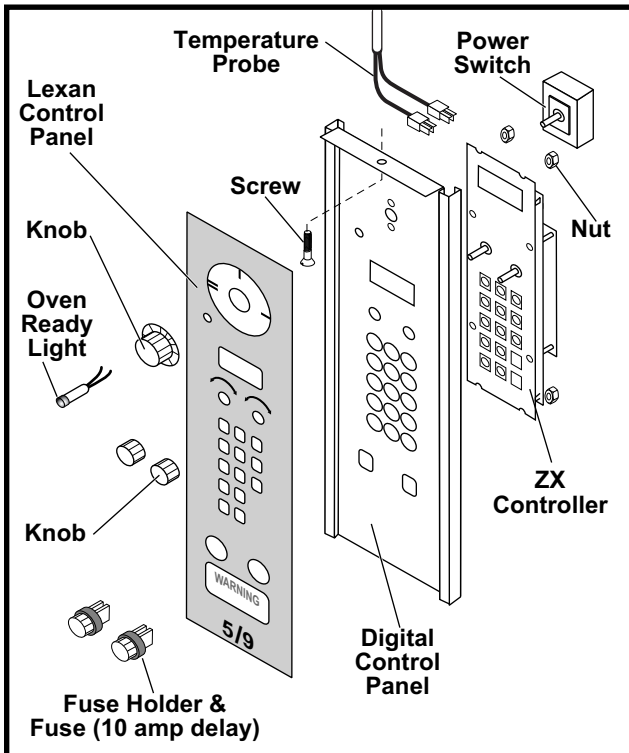
1. Perform Component Access procedure.
2. Tag and disconnect wires from LIGHT Switch.
3. Remove LIGHT Switch from front of Control Panel.
4. Reverse procedure to install a new LIGHT Switch.

## ZX CONTROL PANEL ASSEMBLY

**WARNING:** DISCONNECT OVEN FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE.

### Component Access Procedure

Remove screw at top center of ZX Control Panel assembly and slide control panel out to allow access to Control Panel components.



### POWER Switch

1. Perform Component Access Procedure.
2. Loosen set screw and remove knob from POWER Switch.
3. Tag and disconnect wires from POWER Switch, & tag wires.
4. Remove nut securing POWER Switch.
5. Reverse procedure to install a new POWER Switch.

### ZX Controller

1. Perform Component Access Procedure.
2. Tag and disconnect wires from ZX Controller, & tag wires.
3. Remove two knobs from front of Digital Control Panel.
4. Remove four nuts securing ZX Controller to back of Digital Control Panel.
5. Remove Controller from rear of Digital Control Panel.
6. Reverse procedure to install ZX Controller.

### OVEN READY Light

1. Perform Component Access Procedure.
2. Tag and disconnect wires to OVEN READY Light.
3. Remove OVEN READY Light from front of Digital Control Panel.
4. Reverse procedure to install a new OVEN READY Light.

### LIGHT Switch

NOTE: LIGHT Switch is only on the 6/13 Oven.

1. Perform Component Access Procedure.
2. Tag and disconnect wires from LIGHT Switch.
3. Remove LIGHT Switch from front of Digital Control Panel.
4. Reverse procedure to install a new LIGHT Switch.

### Fuse and Fuse Holder Light

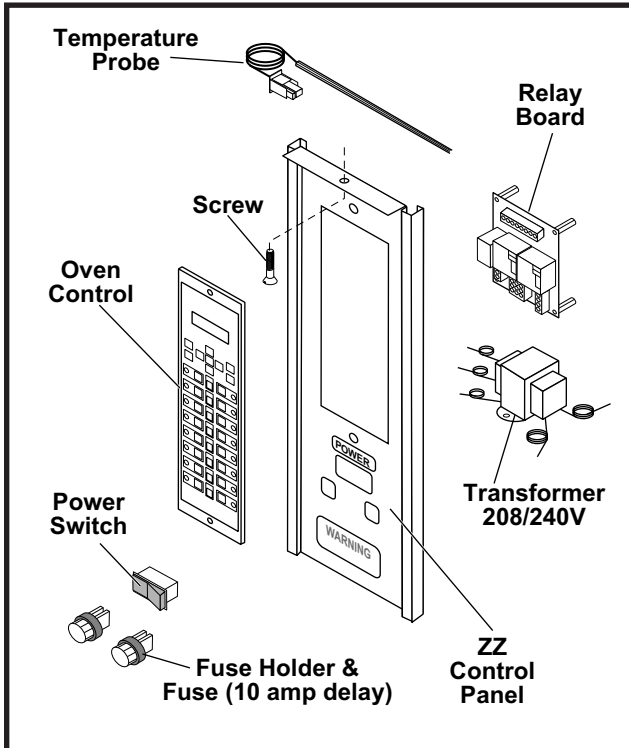
1. Remove Fuse Holder Cap to replace Fuse.
2. Perform Component Access Procedure.
3. Tag and disconnect wires to Fuse Holder.
4. Remove nut securing Fuse Holder.
5. Remove Fuse Holder from front of Digital Control Panel.
6. Reverse procedure to install a new Fuse Holder.

## ZZ CONTROL PANEL ASSEMBLY

**WARNING:** DISCONNECT OVEN FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE.

### Component Access Procedure

Remove screw at top center of ZZ Control Panel assembly and slide Control Panel assembly out to allow access to Control Panel components.



## ZZ Oven Control

1. Perform Component Access Procedure.
2. Tag and disconnect wires from ZZ Oven Control.
3. Remove two screws securing ZZ Oven Control to Control Panel and remove Oven Control.
4. Reverse procedure to install a new ZZ Oven Control.

## Fuse and Fuse Holder Light

1. Remove Fuse Holder Cap to replace Fuse.
2. Perform Component Access Procedure.
3. Tag and disconnect wires to Fuse Holder.
4. Remove nut securing Fuse Holder.
5. Remove Fuse Holder from front of Control Panel.
6. Reverse procedure to install a new Fuse Holder.

## POWER Switch

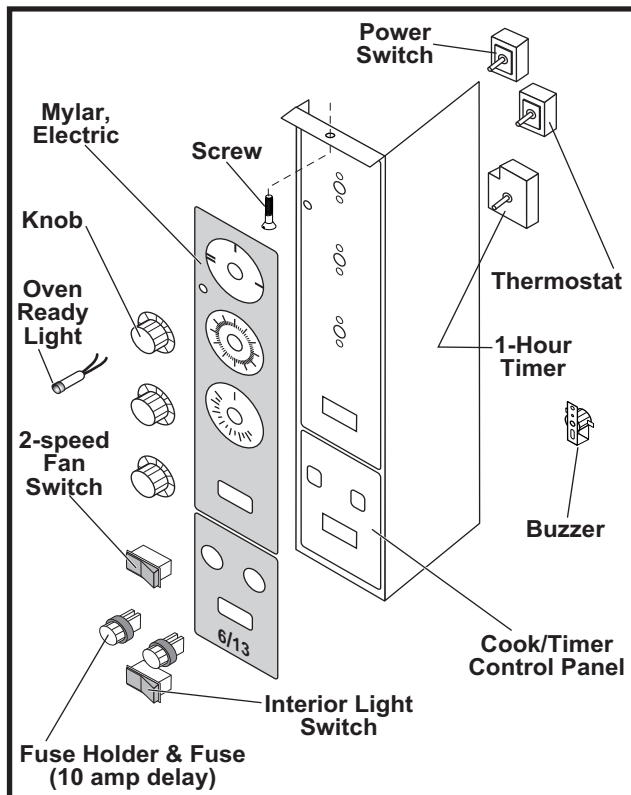
1. Perform Component Access Procedure.
2. Tag and disconnect wires from POWER Switch.
3. Disengage POWER Switch from retainer and remove through front of Control Panel.
4. Reverse procedure to install a new POWER Switch.

## 6/13 & 5/9 V CONTROLLER ASSEMBLY & "E" SERIES-ELECTRO MECHANICAL CONTROLLER ASSEMBLY

**WARNING:** DISCONNECT OVEN FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE.

### Component Access Procedure

Remove screw at top center of Control Panel assembly and slide Control Panel assembly out to allow access to Control Panel components.



### POWER Switch

1. Perform Component Access Procedure.
2. Loosen set screws and remove knob from POWER Switch.
3. Tag and disconnect wires from POWER Switch.
4. Remove nut securing POWER Switch and remove POWER Switch.
5. Reverse procedure to install POWER Switch.

### TEMPERATURE Control

Refer to THERMOSTAT in this section.

### 1 - Hour TIMER

1. Perform Component Access Procedure.
2. Loosen set screw and remove 1 - Hour TIMER.
3. Remove nut securing 1 - Hour TIMER and remove timer.
4. Reverse procedure to install 1 - Hour TIMER.

### OVEN READY Light

1. Perform Component Access Procedure.
2. Tag and disconnect wires to OVEN READY Light.
3. Remove OVEN READY Light from front of Control Panel.
4. Reverse procedure to install OVEN READY Light.

### Fan Switch

1. Perform Component Access Procedure.
2. Tag and disconnect wires from Fan Switch.
3. Remove Fan Switch from front of Control Panel.
4. Reverse procedure to install Fan Switch.

### LIGHT Switch

NOTE: LIGHT Switch is only on the 6/13 Oven.

1. Perform Component Access Procedure.
2. Tag and disconnect wires from LIGHT Switch.
3. Remove LIGHT Switch from front of Control Panel.
4. Reverse procedure to install LIGHT Switch.

### Fuse and Fuse Holder Light

1. Remove Fuse Holder Cap to replace Fuse.
2. Perform Component Access Procedure.
3. Tag and disconnect wires to Fuse Holder.
4. Remove nut securing Fuse Holder.
5. Remove Fuse Holder from front of Control Panel.
6. Reverse procedure to install Fuse Holder.

### Buzzer

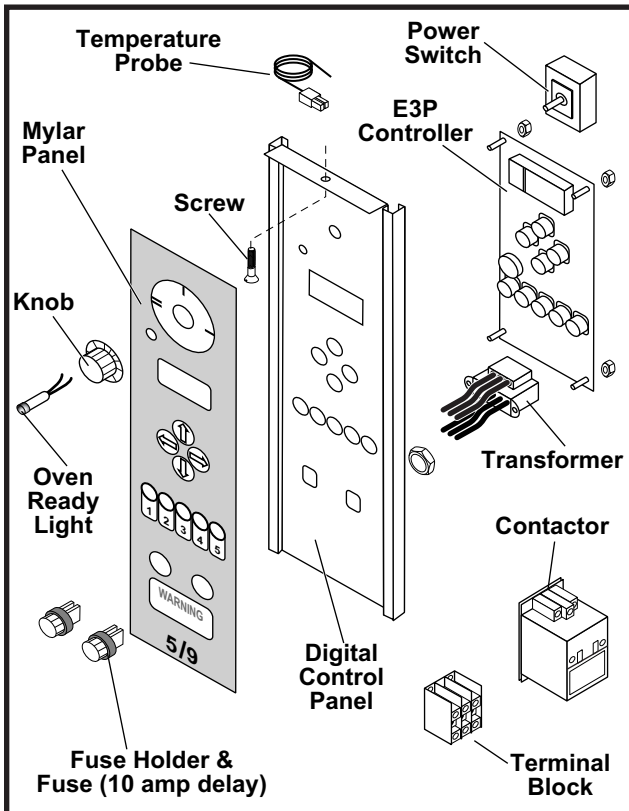
1. Perform Component Access Procedure.
2. Tag and disconnect wires from Buzzer.
3. Remove screw securing Buzzer to back of Control Panel and remove Buzzer.
4. Reverse procedure to install Buzzer.

## 59-E3P OVEN CONTROLS

**WARNING:** DISCONNECT OVEN FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE.

### Component Access Procedure

Remove screw at top center of 59-E3P Control Panel assembly and slide Control Panel assembly out to allow access to Control Panel components.



### POWER Switch

1. Perform Component Access Procedure.
2. Loosen set screws and remove knob from POWER Switch.
3. Tag and disconnect wires from POWER Switch.
4. Remove nut securing POWER Switch and remove POWER Switch.
5. Reverse procedure to install a new POWER Switch.

### Controller

1. Perform Component Access Procedure.
2. Tag and disconnect wires from Controller.
3. Remove nuts securing Controller to Control Panel.
4. Remove Controller from rear of Control Panel.
5. Reverse procedure to install a new Controller.

### OVEN READY Light

1. Perform Component Access procedure.
2. Tag and disconnect wires to OVEN READY Light.
3. Remove OVEN READY Light from front of panel.
4. Reverse procedure to install a new OVEN READY Light.

NOTE: Transformer, Contactor, and Terminal Block are mounted on a panel behind the Oven Control.

### Fuse and Fuse Holder Light

1. Remove Fuse Holder Cap to replace Fuse.
2. Perform Component Access Procedure.
3. Tag and disconnect wires to Fuse Holder.
4. Remove nut securing Fuse Holder.
5. Remove Fuse Holder from front of Control Panel.
6. Reverse procedure to install a new Fuse Holder.

### Transformer

Refer to TRANSFORMER in this section.

### Contactor

1. Perform Component Access Procedure.
2. Tag and disconnect wires to Contactor.
3. Remove four nuts and remove Contactor.
4. Reverse procedure to install a new Contactor.

### Terminal Block

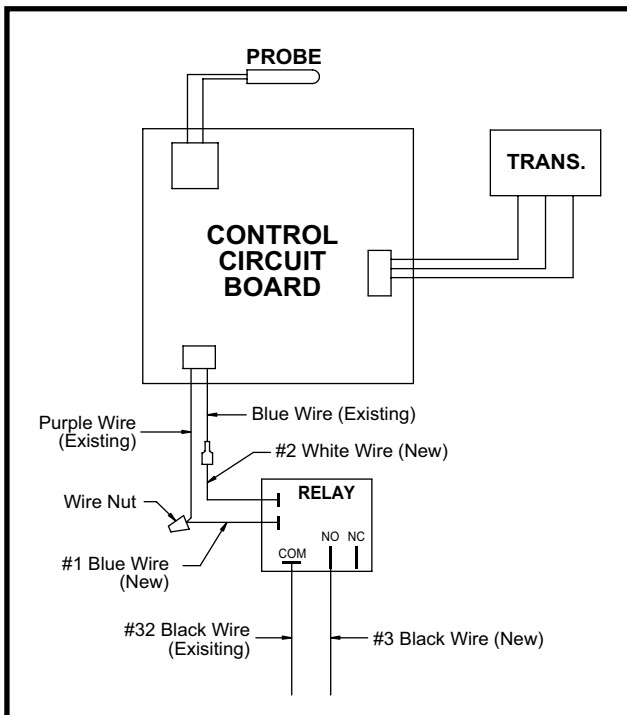
1. Perform Component Access Procedure.
2. Tag and disconnect wires to Terminal Block.
3. Remove four nuts and remove Terminal Block.
4. Reverse procedure to install a new Terminal Block.

## CONTROL CIRCUIT BOARD REPLACEMENT

**WARNING:** DISCONNECT OVEN FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE.

The Control Circuit Board is used only in 5/9 convection ovens used by Popeye's Chicken or Churches Chicken.

1. Remove screw at top center of Control Panel assembly and slide Control Panel out to allow access to the Control Circuit Board.
2. Remove the two and four wire connectors from the Control Circuit Board.
3. Remove the Probe connector from the Control Circuit Board.
4. Remove the defective Control Circuit Board.
5. Install the replacement Control Circuit Board.
6. Attach the two and four wire connectors.
7. Attach the Probe connector.
8. Mount the Relay to the Control Panel below the Control Circuit Board. **DO NOT MOUNT THE RELAY ON THE CONTROL CIRCUIT BOARD.**
9. Attach the new wires #1, #2 and #3 to the relay, refer to the figure above for details.
10. Remove the wire nut that secures the 3 black and 1 purple wire, separate the purple wire from the bundle.
11. Referring to the figure above connect the #3 black wire from the relay to the bundle black wires that contained the purple wire removed in the previous step and reattach the wire nut.
12. Referring to the figure above connect the purple wire removed in step 10 to the blue wire and attach a wire nut.
13. Referring to the figure above disconnect the #32 black wire from the blue wire.
14. Connect the #32 black wire to the common terminal on the relay.
15. Connect the #2 white wire to the blue wire coming from the relay and attach a wire nut.
16. Close the Control Panel and reattach its mounting screw.
17. Proceed to the Control Circuit Board Jumper Setting Instructions.



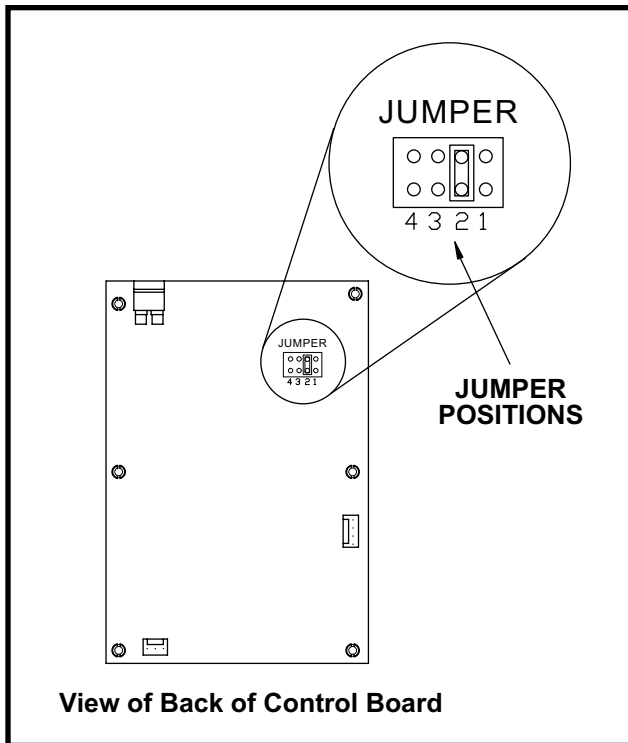
## CONTROL CIRCUIT BOARD JUMPER SETTINGS

The Control Circuit Board is shipped with the jumper in position 3. Position 1 loads Churches Chicken's default settings. Position 2 loads Popeye's Chicken's default settings.

### Single Menu Jumper Setting (Churches or Popeye's)

1. Turn the power off to the unit.
2. Remove screw at top center of Control Panel assembly and slide Control Panel out to allow access to the Control Circuit Board.
3. Place the jumper in the #3 position, see the diagram below.





4. Reattach the Control Panel.
5. Turn the oven on and check the parameter settings.
6. Refer to the Operation & Installation Manual for programming instructions.

#### Seven Menu Jumper Settings (Popeye's Chicken only)

1. Turn the power off to the unit.
2. Remove screw at top center of Control Panel assembly and slide Control Panel out to allow access to the Control Circuit Board.
3. Place the jumper in the #4 position; see the diagram above for jumper location.
4. Reattach the Control Panel.
5. Turn the oven on and check for parameter settings.
6. Refer to the Operation & Installation Manual for programming instructions.

## MOTOR

The motor is attached to the right side of the oven in the following models:

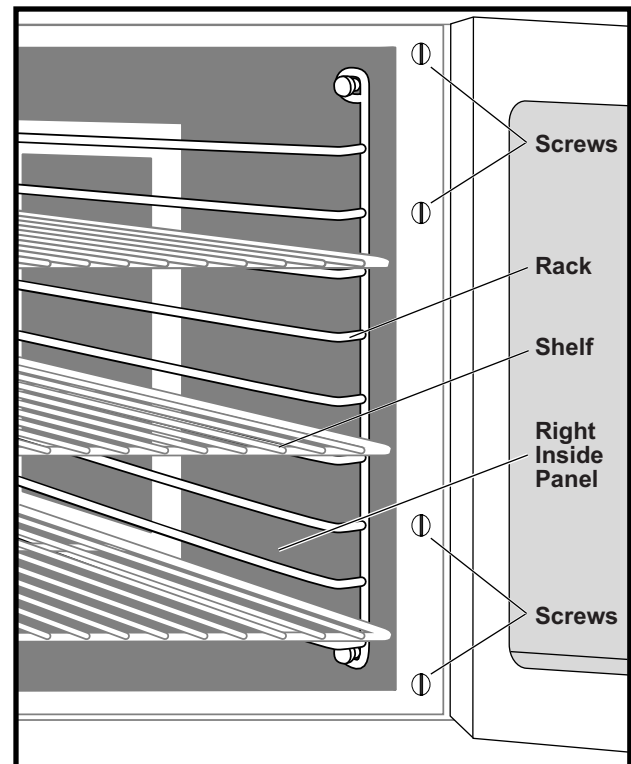
- 5/9 Series Oven
- 5/9 The Oven
- 59-E3C Oven
- 59-E3P Oven

The motor is attached to the back of the oven in the following models:

- 6/13 The Oven
- "E" Series Oven

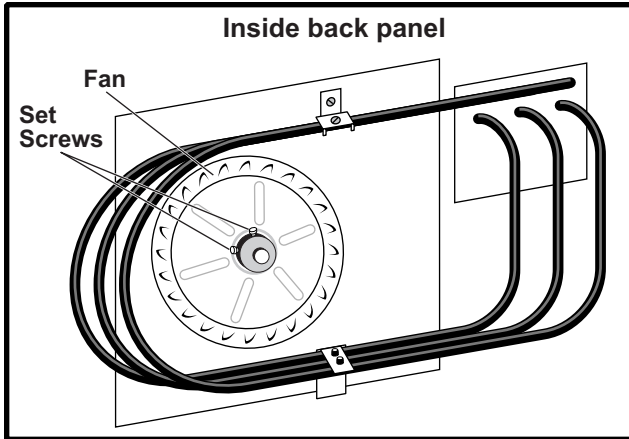
### Side Mounted Motor

**WARNING:** DISCONNECT OVEN FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE.

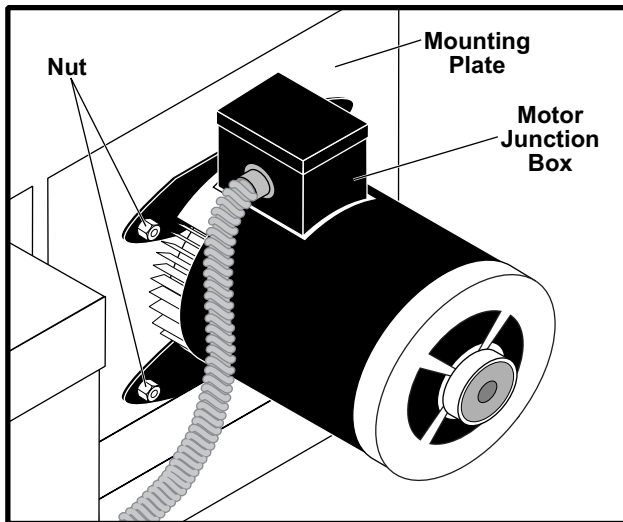


1. Open Oven Doors.
2. Remove shelves.
3. Remove two side racks.
4. Remove four screws attaching right inside panel and remove panel to gain access to Motor Terminals.





5. Inside the Oven, loosen setscrews on Blower (Fan) and remove Fan from Motor Shaft.
6. Remove right side access panel.
7. At right side of oven, label and disconnect motor wires at Motor Junction Box.

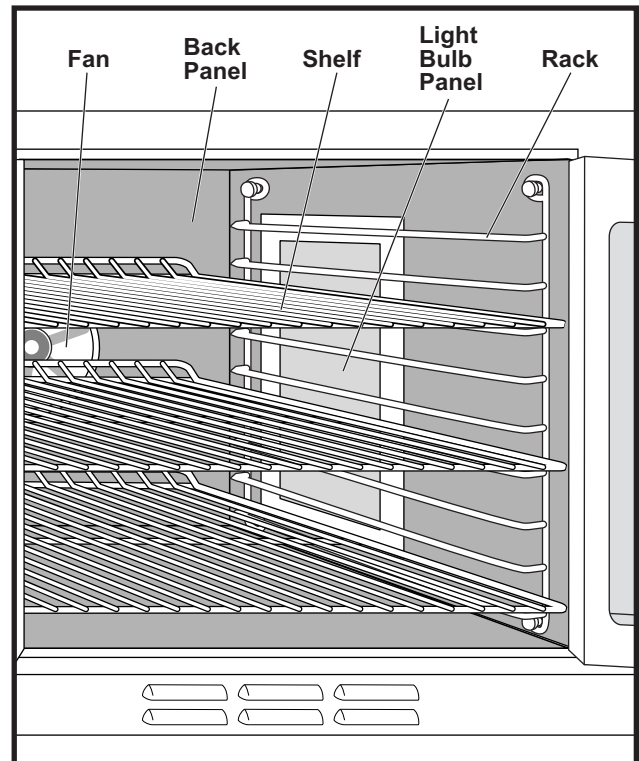


8. Remove four nuts securing Motor to Mounting Plate and remove Motor.
9. Reverse procedure to install Motor.

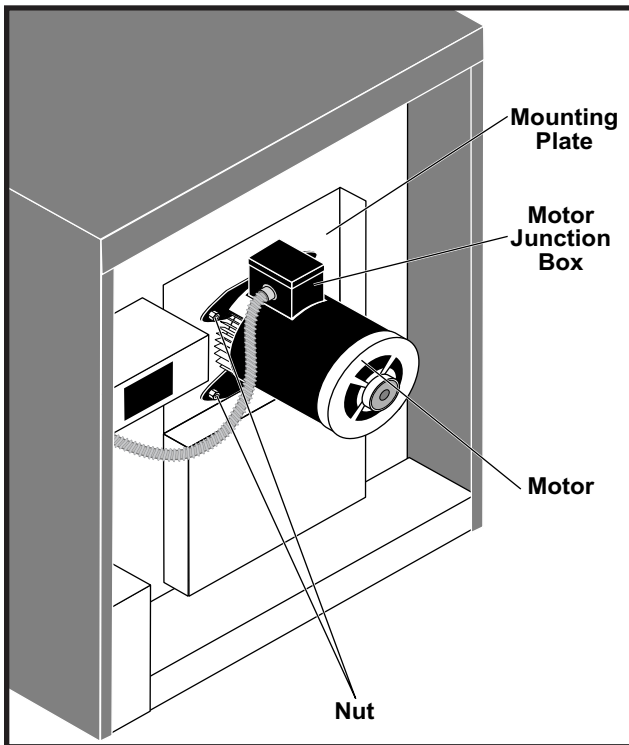
### Rear Mounted Motor

**WARNING:** DISCONNECT OVEN FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE.

1. Open Oven Doors.
2. Remove shelves.
3. Remove two side racks.
4. Remove four screws attaching back plate and remove back plate to access Motor.
5. Loosen setscrews on Blower (Fan) and remove Fan from Motor Shaft.



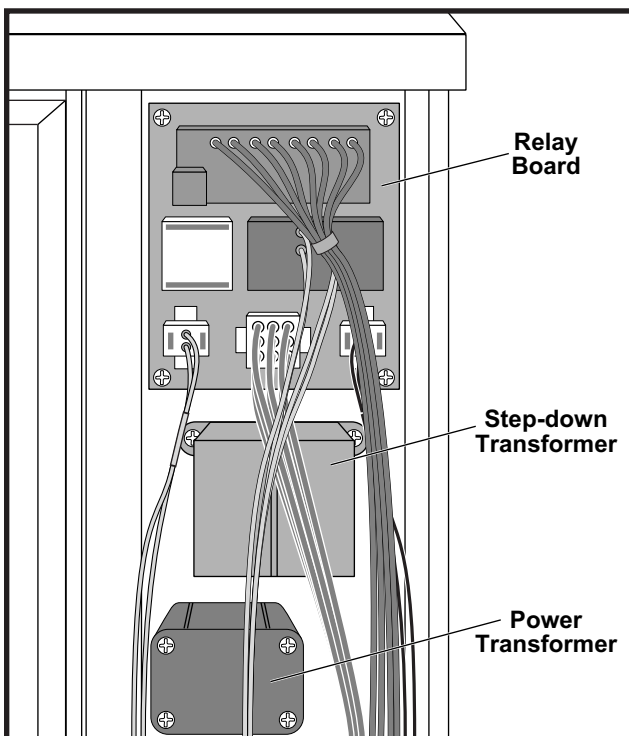
6. At rear of oven, label and disconnect Motor wires at Motor Junction Box.
7. Remove four nuts securing Motor to Mounting Plate and remove Motor.
8. Reverse procedure to install Motor.



### STEP-DOWN TRANSFORMER

**WARNING:** DISCONNECT OVEN FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE.

NOTE: Used on the 59-E3C and 59E3P oven. Transformer is located behind Control Panel.



1. Remove screw at top center of Control Panel assembly and slide Control Panel out to allow access to the Step-Down Transformer.
2. Label and disconnect wires from Step-Down Transformer.
3. Remove two screws securing Step-Down Transformer to panel and remove Step-Down Transformer.
4. Reverse procedure to install Step-Down Transformer.

### POWER TRANSFORMER

**WARNING:** DISCONNECT OVEN FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE.

NOTE: Used on ovens with the Model 59-ZZ controller or 5/9 ZZ Controller. Power Transformer is located behind Control Panel.

1. Remove screw at top center of Control Panel assembly and slide Control Panel out to allow access to The Power Transformer.
2. Label and disconnect wires from Power Transformer.
3. Remove four screws attaching Power Transformer to panel and remove Power Transformer.
4. Reverse procedure to install Power Transformer.

### 3-RELAY PRINTED CIRCUIT BOARD (Relay Board)

**WARNING:** DISCONNECT OVEN FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE.

NOTE: Used on ovens with the Model 59-ZZ Controller or 5/9 ZZ Controller. PCB is located behind Control Panel.

1. Remove screw at top center of Control Panel assembly and slide Control Panel out to allow access to the Relay Board.
2. Label and disconnect wires to Relay Board.
3. Remove four screws attaching Relay Board assembly and remove Relay Board.
4. Reverse procedure to install a new Relay Board.

## RTD PROBE

**WARNING:** DISCONNECT OVEN FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE.

The RTD Probe is located parallel to the oven door at the front of the oven cavity for the following ovens:

- 5/9 The Oven
- X Controller
- XX Controller
- Z and ZX Controller
- ZZ Controller

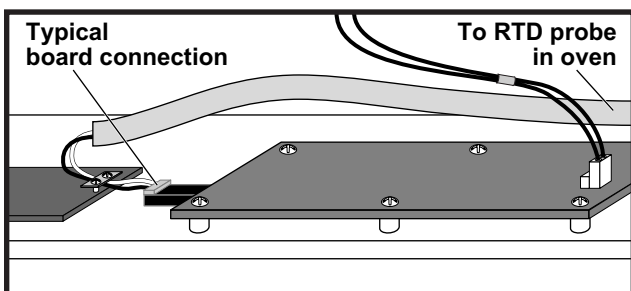
The RTD Probe is located at the top center of the right wall for the following ovens:

- 6/13 The Oven
- X Controller
- XX Controller
- Z and ZX Controller

The RTD Probe is mounted on the top right center wall for the following ovens:

- 59-E3C and 59-E3P ovens
- CCSI Controller

1. Remove screw at top center of Control Panel assembly and slide Control Panel out to allow access to the RTD Probe connection on the Relay Board.
2. Disconnect RTD Probe connector from Control Board.

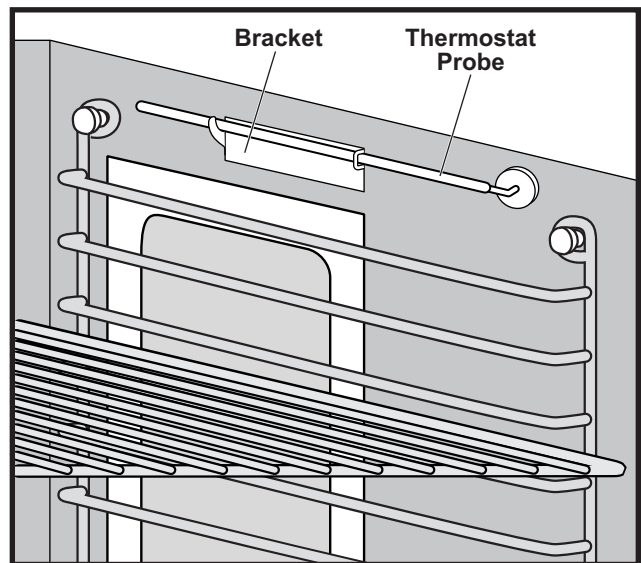


3. Remove RTD Probe from inside of the oven and pull connector through side of oven to remove.
4. Reverse procedure to install a new RTD Probe.

## THERMOSTAT

**WARNING:** DISCONNECT OVEN FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE.

The Thermostat is located on the V Controller and the Thermostat Probe is located in the upper right of oven. The Thermostat Probe provides temperature information back to the Thermostat. The capillary tube from the Thermostat to the Thermostat Probe is covered with a fiberglass sleeve.



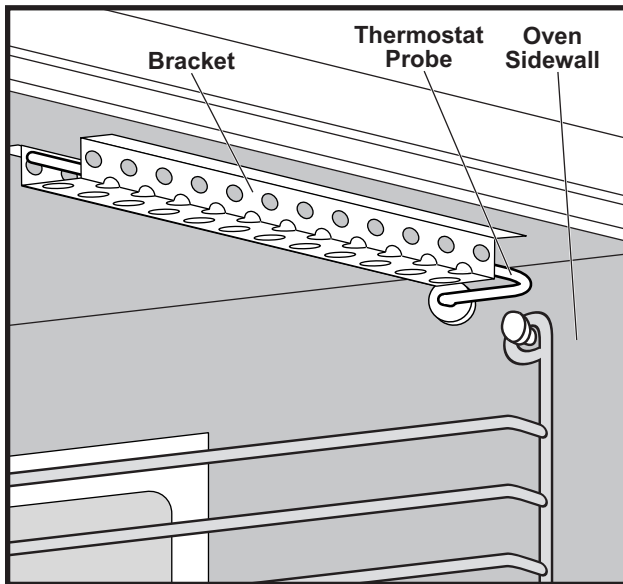
**NOTE:** When removing the Thermostat be careful not to bend the capillary tube at a sharp angle to prevent kinking.

1. Remove screw at top center of Control Panel assembly and slide Control Panel out to allow access to the Thermostat Probe capillary tube.
2. Open Oven Door and carefully remove Thermostat Probe from bracket at upper right side of the oven.
2. Pull Thermostat Probe through the oven sidewall.
3. Remove Thermostat knob from front of V Controller assembly.
4. Tag and disconnect wires from back of Thermostat.
5. Remove nut securing the Thermostat to front of V Controller assembly.
6. Pull Thermostat off rear of V Controller assembly.
7. Reverse procedure to install a new Thermostat. Be sure fiberglass insulation is on capillary tube to Thermostat Probe.

## KX THERMOSTAT

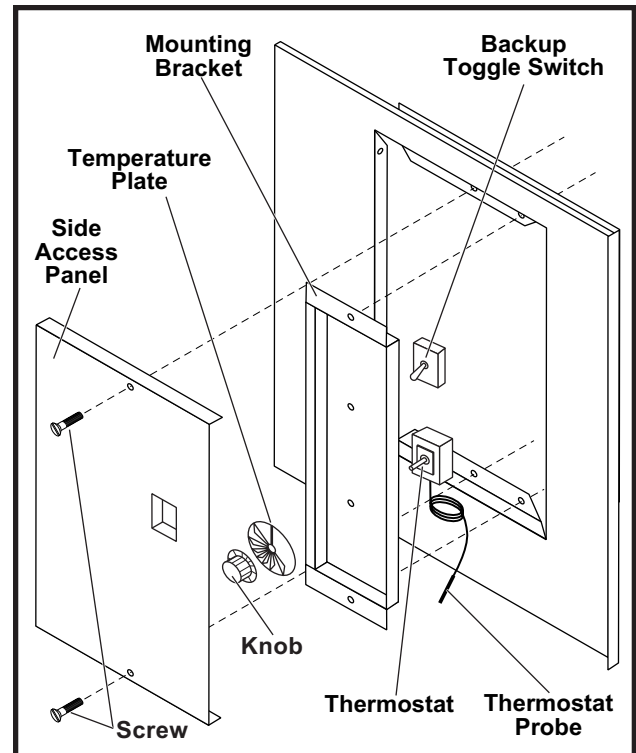
**WARNING:** DISCONNECT OVEN FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE.

The KX (Back up)Thermostat is used on the 59-E3C and 59-E3P Ovens as an Oven Backup Thermostat. This Thermostat is located behind the right access panel, next to the Motor. The Thermostat Probe is located inside the oven parallel to the Oven Door on the top of the open cavity.



**NOTE:** When removing the KX Thermostat be careful not to bend the capillary tube at a sharp angle to prevent kinking.

1. Open Oven Door and carefully remove Thermostat Probe from upper right front of the Oven.
2. Pull Thermostat Probe through the oven sidewall.
3. Remove two screws then remove side access panel.
4. Remove two screws and remove mounting bracket.



5. Tag and disconnect wires from KX Thermostat.
6. Remove knob from KX Thermostat.
7. Remove nut securing KX Thermostat,
8. Pull KX Thermostat off mounting bracket.
9. Reverse procedure to install a new KX Thermostat. Be sure fiberglass insulation is on capillary tube to Temperature Probe.

## BACKUP TOGGLE SWITCH

**WARNING:** DISCONNECT OVEN FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE.

1. Remove two screws then remove side access panel.
2. Remove two screws and remove mounting bracket.
3. Tag and disconnect wires to Backup Toggle Switch.
4. Remove nut securing Backup Toggle Switch.
5. Pull Backup Toggle Switch off mounting bracket.
6. Reverse procedure to install a new Backup Toggle Switch.

## ELEMENTS

The Elements are attached inside of the oven on the right side in the following models:

5/9 Series Oven	59-E3C Oven
5/9 The Oven	59-E3P Oven

The Elements are attached inside the oven on the back in the following models.

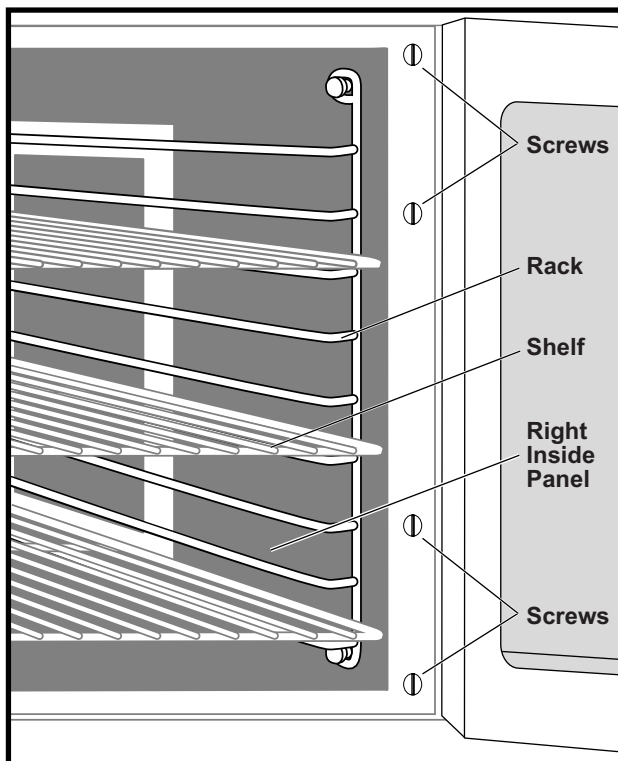
6/13 The Oven	"E" Series Oven
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For both the side and back mounted locations, the Elements consists of an inner Element, a center Element and an outer Element. When replacing Elements be sure to use the correct Element.

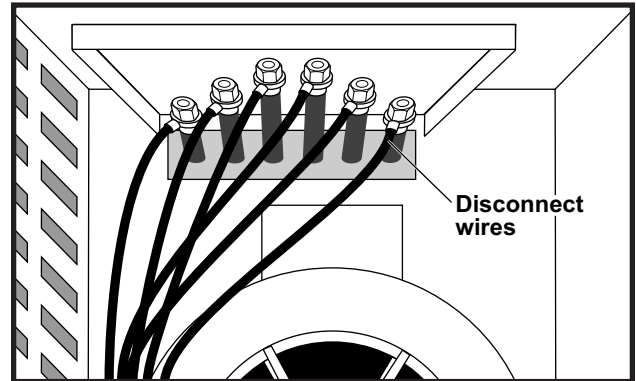
### Side Mounted Elements

**WARNING:** DISCONNECT OVEN FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE.

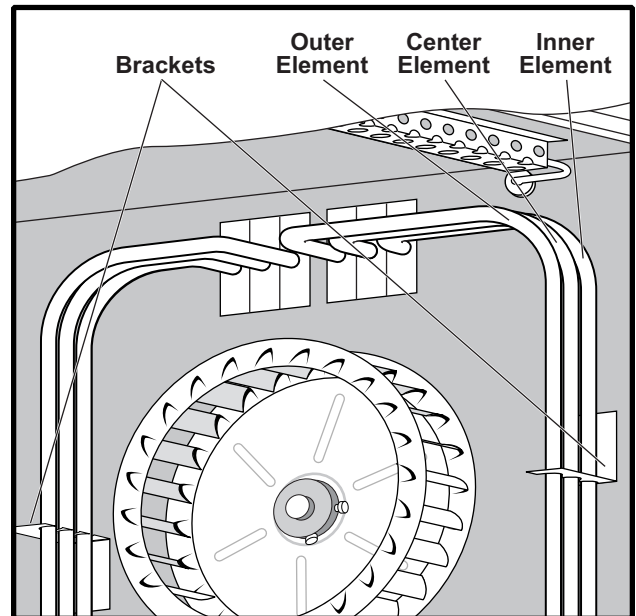
1. Inside oven, remove shelves and racks.
2. Remove four screws securing right side panel inside oven and remove panel. This allows access to the Blower and the Elements.



3. Remove right side panel as described in RIGHT SIDE PANEL REMOVAL to gain access to the Element connections.
4. Remove screws securing cover over heater wire terminals on right side of oven.
5. Tag and disconnect Element wires at the terminals.



6. Remove the four screws securing the terminal plate.
7. Open Oven Door.



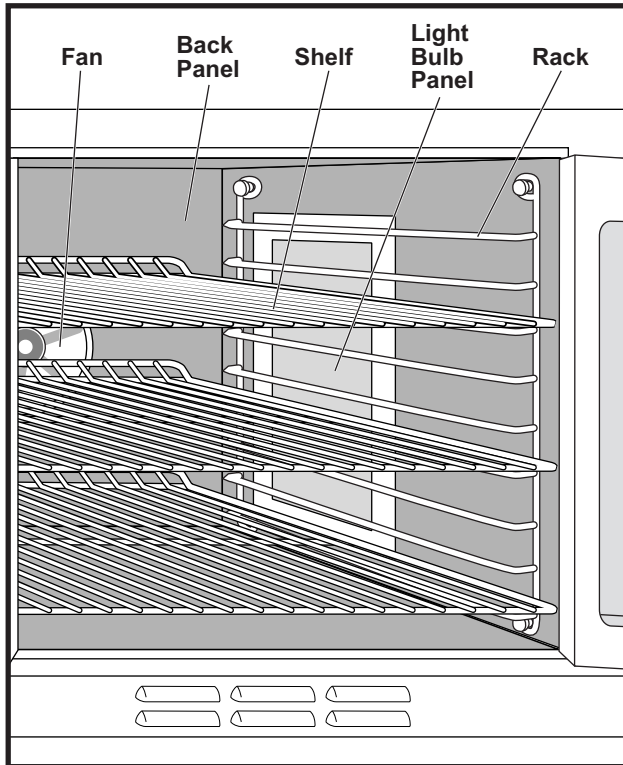
8. Remove the two brackets securing the Elements around the Blower.
9. Slide Element out through inside of oven.
10. Reverse procedure to install an Element.

NOTE: Element lead wires should be torqued to 30 inch pounds.

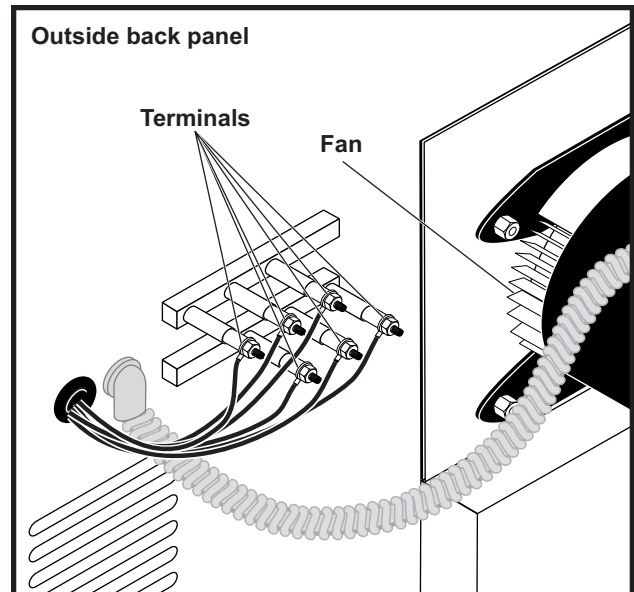
## Back Mounted Elements

**WARNING:** DISCONNECT OVEN FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE.

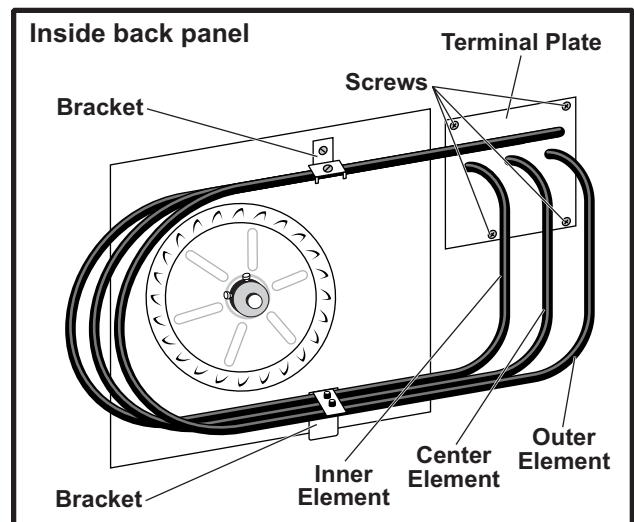
1. Inside oven, remove shelves and racks.
2. Remove four screws securing Back Panel inside oven and remove panel. This allows access to the Blower and the Elements.



3. Remove screws securing cover over heater wire terminals on back of oven on the upper left.
4. Tag and disconnect Element wires at the terminals.



5. Open oven door.
6. Remove the four screws securing the terminal plate to the oven interior.



7. Remove the two clamps securing the Elements around the Blower.
8. Slide Element assembly out through inside of oven.
9. Reverse procedure to install Elements.

NOTE: Element lead wires should be torqued to 30 inch pounds.

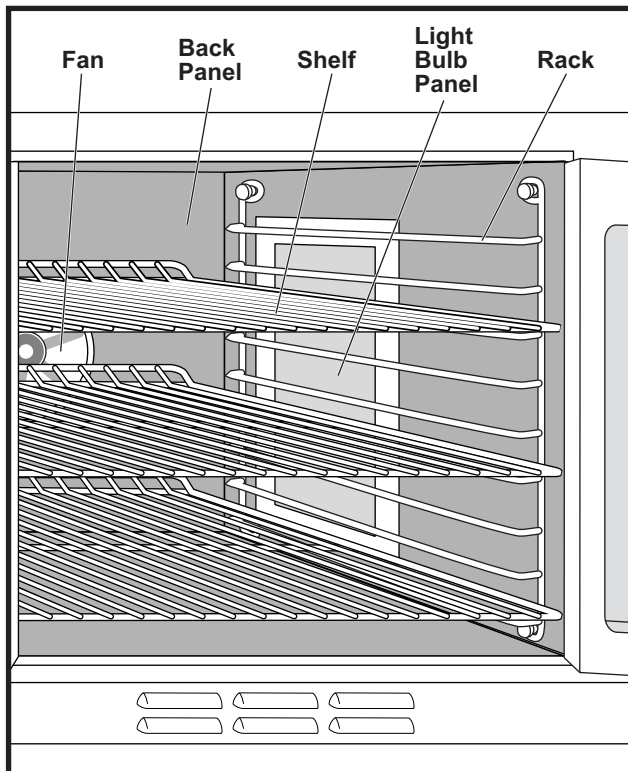


## OVEN LIGHTS

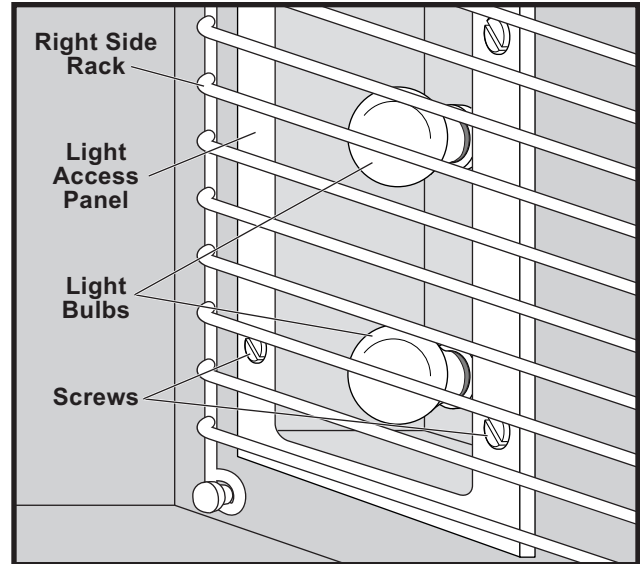
Oven lights are located on the right side of the oven. The light bulbs are replaced from inside the oven. The light sockets are replaced by removing the right side panel.

**WARNING:** DISCONNECT OVEN FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE.

1. Open Oven Door.
2. Remove shelves and right side rack to access Light Bulbs.



3. Remove four screws securing light bulb panel over light bulbs and remove the panel.
4. Remove the faulty light bulb.
5. Reverse procedure to install a new light bulb.



## DOORS

The doors on all ovens are constructed similarly, except the 6/13 oven has a turnbuckle assembly that causes both the left and the right doors to open together. The left hand doors are shown disassembled in the two illustrations.

**WARNING:** DISCONNECT OVEN FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE.

### Removal

1. Open oven door(s).
2. Remove Top Finish Piece.
3. Loosen setscrew on top and bottom Door Bearings.
4. Slide oven door off the hinges.
5. Reverse procedure to install Oven Door.

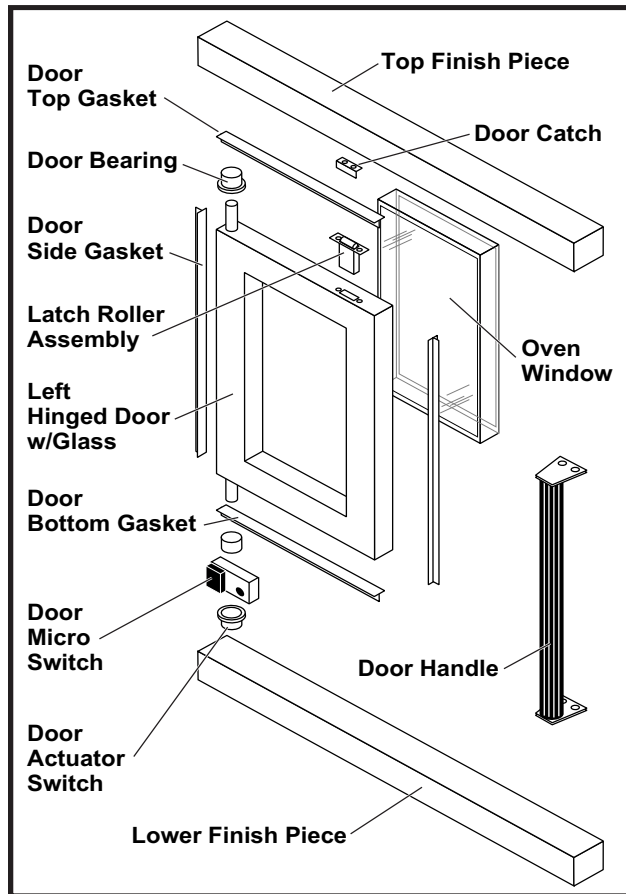
### Disassembly

The oven door can be disassembled as necessary to replace the handle, door glass, micro switch, bearing, roller latch, door catch, and gaskets. On the 6/13 Dual Door Ovens a turnbuckle assembly can also be replaced.

### Gasket Replacement

The Gaskets are not attached to the oven door. These gaskets are attached to the oven frame. The four gaskets can be individually replaced.

**NOTE:** There are four separate Gaskets for the top, bottom, and two sides. Each Gasket is replaced independently.



1. Open oven door.
2. Remove the screws securing the Gasket that is to be replaced.
3. Install new Gasket onto oven frame and secure in place with screws.
4. Close oven door and check that Gasket is properly sealing the door.
5. To check the gasket seal, place a dollar bill sized piece of paper against the gasket and close the door. Friction should be felt when removing the paper. Check all four sides of the door.
6. With oven in cool down cycle, feel along all four edges of the door for air leaks.

#### Roller Latch

1. Open oven door.
2. Remove two screws securing Roller Latch to top of oven door.
3. Lift Roller Latch out of oven door.
4. Reverse procedure to install Roller Latch.

#### Door Switch

**WARNING:** DISCONNECT OVEN FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE.

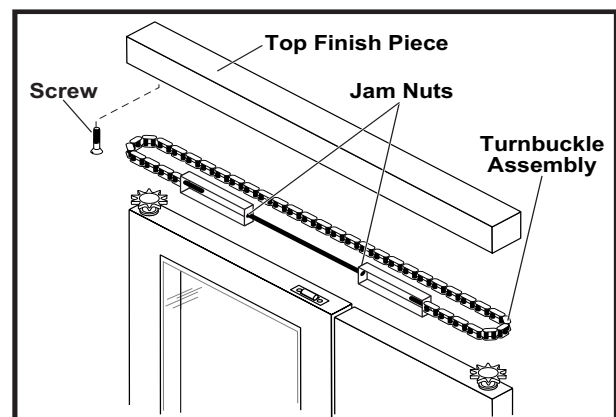
1. Remove Lower Finish Piece to access Door Switch.
2. Label and disconnect wires from the Door Switch.
3. Remove screws securing Door Switch to switch bracket and remove Door Switch.
4. Reverse procedure to install a new Door Switch.
5. Close oven door.
6. Adjust switch-operating cam as described in the SERVICE PROCEDURES section.

#### Door Handle

1. Open oven door.
2. Remove two screws at the top and two screws at the bottom, securing Door Handle to oven door.
3. Remove Door.
4. Reverse procedure to install Door Handle.

#### Turnbuckle Assembly (2-door 6/13 Series only)

1. Remove screws securing Top Finishing Piece to oven and remove Top Finish Piece.
2. Loosen Turnbuckles sufficiently to disengage Chain Drive from Door Sprockets.



3. Remove Turnbuckle Assembly.

**NOTE:** When installing a new Turnbuckle Assembly, be sure to center turnbuckles so that Oven Door can fully open and close.

4. Wrap new Turnbuckle Assembly around the Sprockets on the top of each door hinge.
5. Adjust Turnbuckles as described in the SERVICE PROCEDURES section.



## SERVICE PROCEDURES

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

### MAINTENANCE INSTRUCTIONS

These service procedure instructions are for the use of qualified service personnel only. Service by other than qualified personnel may result in damage to the oven and/or injury to the operator.

Qualified service personnel are those individuals, firms, companies or corporations which either in person or through an agent are engaged in and responsible for repair or servicing of commercial food preparation equipment, who are experienced in such work, familiar with all precautions required, and have complied with all requirements of state and local authorities having jurisdiction.

If you should require assistance in the selection of a qualified service agency, please contact the Duke Manufacturing Company Service Department at 800-735-3853.

### Oven Door Adjustment

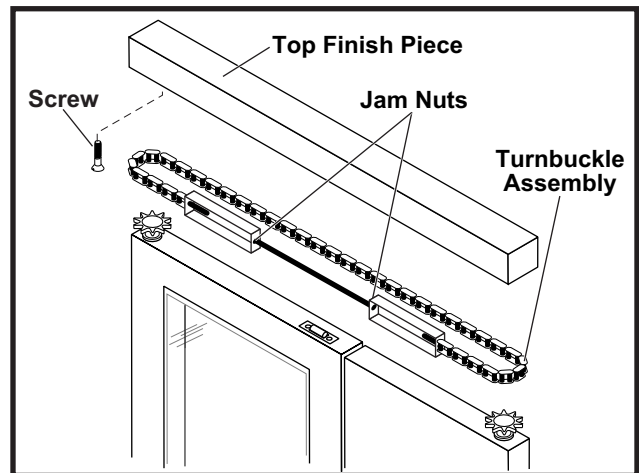
#### 6/13 Series Turnbuckle Adjustment

**CAUTION:** The Turnbuckles and Door Switch are located in a heated zone. Care should be taken to avoid burns.

All 6/13 Series, and E Series Convection Ovens (except model option Q) have doors that are inter-connected so they operate simultaneously by means of a Chain and Turnbuckle Assembly. The Oven Doors are properly adjusted and inspected before the oven leaves the factory. However, from time to time it may become necessary to readjust the Oven Doors after usage. If you find it necessary to adjust the Oven Doors for proper operation, the Chain and Turnbuckle Assembly is located behind the Top Finishing Pieces that is over

the Oven Doors. It is best to adjust Turnbuckles while the door is in an unlatched position.

1. Open Oven Doors.
2. Remove the Top Finish Piece over the Oven Door by removing the eight screws securing the Top Finishing Piece.
3. Loosen the jam nut on both Turnbuckles.



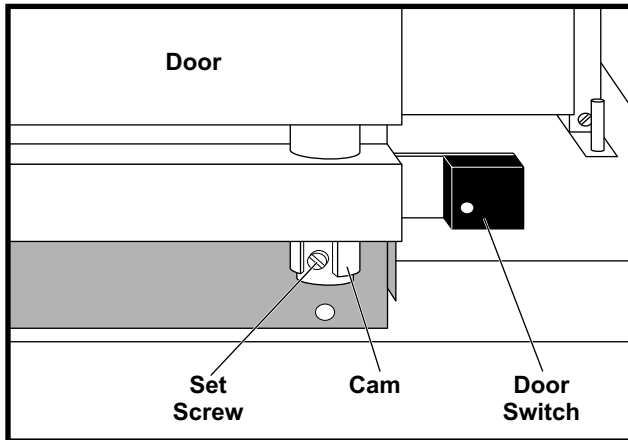
4. Make adjustments simultaneously to both Turnbuckles. Loosen one Turnbuckle and tighten the other.
5. Once the Oven Doors are operating properly, retighten the jam nuts so the Oven Doors will stay in adjustment. Test the Oven Doors to make certain they are in adjustment.
6. Install Top Finish Piece over the door.

#### Oven Door Switch Adjustment

The Oven Door Switch is located behind the Lower Trim Piece, on the right side. The door switch is activated by a cam, which is mounted to the door's hinge pin with a setscrew.

1. Open the oven doors fully.  
Remove the Lower Trim Piece by loosening the four screws located inside the door opening.
3. Position the oven doors so they are nearly closed but not latched.
4. To adjust the cam loosen the setscrew and turn the cam until you hear the switch click.

5. Tighten the setscrew in the cam. Test the door to make certain the switch will make contact with the doors closed.
6. Replace the Oven Trim Piece.



## OVEN DOOR SWITCH CHECK

**WARNING:** DISCONNECT OVEN FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE.

1. Open the oven doors fully.
2. Remove the Lower Trim Piece by loosening the four screws located inside the door opening.
3. Disconnect wire from the door switch and connect an ohmmeter across door contacts.
4. Check that with oven door open there is no continuity.
5. Close oven door until a click is heard and check switch contacts for continuity. Ohmmeter should indicate 0 Ohms.

## THERMOSTAT CALIBRATION

**NOTE:** Thermostat calibration is applicable only for the electro-mechanical controller V. It is not applicable to ovens with solid-state controls.

### Check Calibration

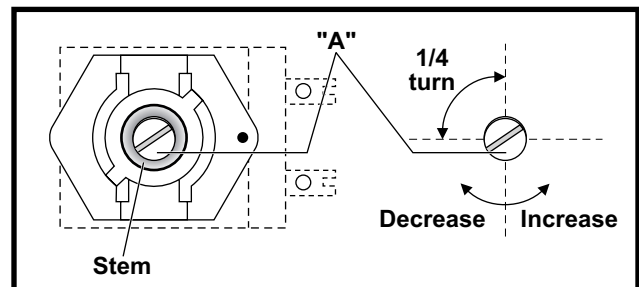
1. Turn the oven on by turning the POWER Switch to the COOK position.
2. Open the oven doors and place a pyrometer in the center of the middle oven rack. A reliable mercury-type thermometer can be substituted if a pyrometer is not available.

3. Turn the thermostat dial to 350°F (177°C). Allow the oven to preheat 1/2 hour. When the indicator light goes out, the thermostat has been satisfied. Check the pyrometer or thermometer to determine the internal oven temperature. If the reading on the pyrometer (or thermometer) is less than 15°F different from the setting of the Thermostat, no adjustment is needed. If this reading is more than 15°F, proceed with calibration procedure.

### To Calibrate the Thermostat

1. Remove the Thermostat knob by loosening the setscrew and pull the knob forward. Take care not to turn the Thermostat stem, which will change the setting.
2. With a very small screwdriver, turn the screw "A" located in the bottom of the hollow of the stem clockwise to lower the temperature or counterclockwise to raise the temperature. DO NOT allow the stem of the Thermostat to turn as you turn the screw.

**CAUTION:** Maximum turn of screw "A" is 1-1/2 turns - clockwise or counterclockwise.



3. Open the oven door and turn the POWER Switch to the COOL DOWN position. This will allow the oven fan to come on without the burners and cool off the oven. Allow the oven to cool to about 250°F (120°C).
4. Return the POWER Switch to the COOK position and repeat the previous steps until the oven Thermostat and the pyrometer (thermometer) reading agrees.
5. Replace the knob and tighten the setscrews. This Thermostat is a direct-acting (opens on temperature rise) device.

## ELEMENT

Check the Element by measuring the resistance between the two wires of the Element. To access the Element follow the procedure described in the ELEMENT REPLACEMENT SECTION.

Connect an ohmmeter across the Element leads and verify that the resistance is as follows:

### 6/13 and E Series ovens.

Operating Voltage	Element Part Number	Resistance
208	153102	12 ohms
240	153103	18 ohms
480	153104	70 ohms

### 5/9 ovens.

Operating Voltage	Element Part Number	Resistance
208	155076, 75 and 74	16 ohms
240	155079, 78 and 77	21 ohms

1. Replace Element if defective.

## RTD

Check the RTD by measuring the resistance between the two lead wires. To access the RTD, follow the procedure described in the RTD REPLACEMENT SECTION.

1. Tag and disconnect the RTD wires from the control board.
2. Connect an ohmmeter across the RTD leads and verify that the resistance is approximately 1000 ohms at ambient room temperature.
3. Replace RTD if defective.

## MOTOR CIRCUIT CHECK

The Motor should be operating the Fan any time the Heaters are turned on and the FAN Switch is in the ON position. The Blower should be turning counterclockwise.

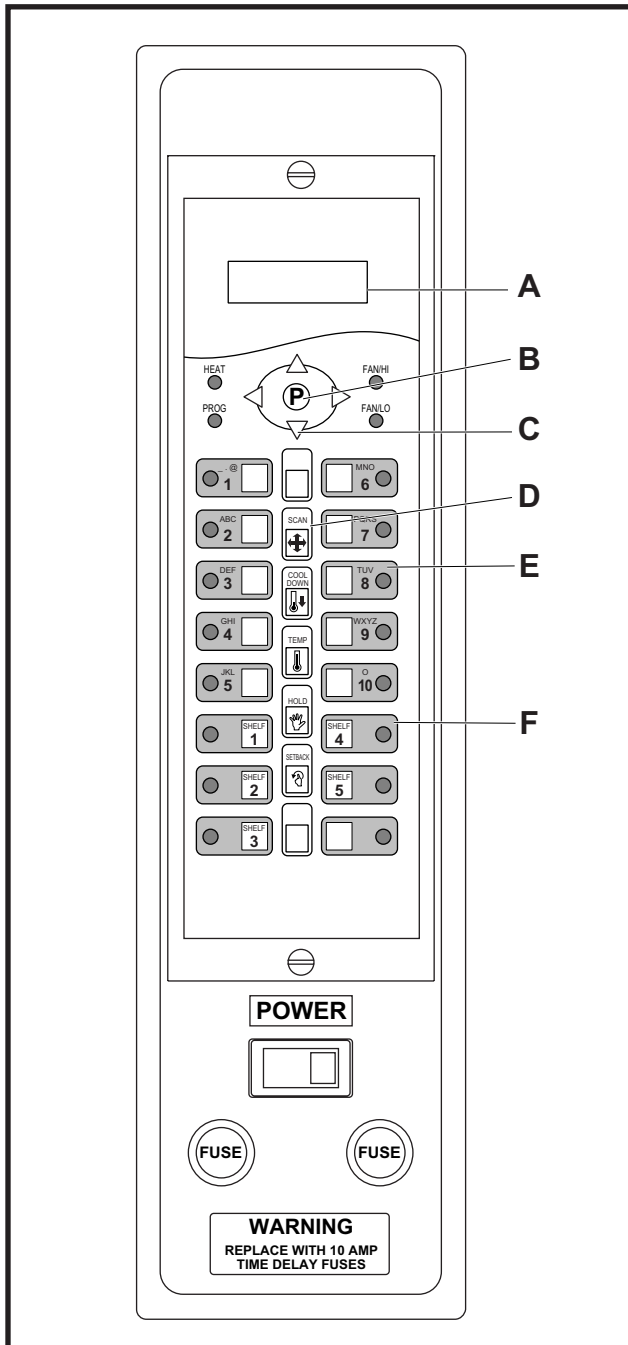
**WARNING:** DISCONNECT OVEN FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE.

1. Turn POWER Switch to OFF position and FAN Switch to OFF position.
2. Remove cover over Motor Junction Box.
3. Locate yellow/black wire connection and brown wire connection.
4. Connect voltmeter to these terminals.

**WARNING:** CIRCUIT IS ENERGIZED AFTER NEXT STEP.

5. Turn POWER Switch to COOK position.
6. Set FAN Switch to ON position.
7. Check voltmeter reading. Reading should be the same as input power source.
8. If no voltage is measured, check voltage at POWER Switch and at FAN Switch.
9. If voltage is present and Motor is not operating, replace Motor.
10. If Motor operates check direction of rotation.
11. Turn POWER Switch to OFF position.
12. Install cover over Motor Junction Box.

## ZZ CONTROLLER PROGRAMMING



**A: Display Panel**

**B: Programming Key or P Key**

**C: Up, Down, Right & Left Arrow Keys**

**D: Function Keys**

**E: Recipe Keys**

**F: Shelf Keys**

## System Programming

1. Press and hold the "P" (Programming Key) for three seconds.
2. PRODUCI CNf will be displayed, press the Down arrow key.
3. PRCGPI/.MMING will be displayed, press the "P" Key.
4. ENTER CODE will be displayed. Using the Recipe Keys, type 3228.
5. Then press the "P" key, SYSTEM will be displayed.
6. Press the "P" Key again, APPLIANCE TYPE will be displayed, then either ELECTRIC FULL, ELECTRIC HALF, GAS HALF or GAS FULL will be displayed.
7. To change the Appliance type, use the Left and Right arrow keys select the correct type.
8. Then press the "P" key, LANGUAGE will be displayed, then either ENGLISH or OTHER will be displayed.
9. Use the Right and Left arrow keys to toggle between the two language settings.
10. Then press the "P" key, TONE VOLUME will be displayed then, either the numbers 1 through 4 or NONE will be displayed.
11. To change the Tone setting use the Right or Left arrow keys to select the desired setting.
12. Press the "P" key, TEMPERATURE will be displayed then either F or C.
13. Use the Right or Left arrow keys to change the temperature setting.
14. Press the "P" key, HOLDTIME will be displayed with the current hold time (XX:XX)
15. To change the hold time, using the recipe keys type in the new hold time.
16. Press the "P" key HOLDTEMP will be displayed with the current hold temperature (XXXF or XXXC)
17. Using the recipe keys enter the new hold temperature setting.
18. Press the "P" key. HOLD DONE will be displayed with either AUTOMATIC or MANUAL displayed.

19. To change between automatic and manual use the Right or Left arrow keys.
20. Press the "P" key. HOLD FAN SPEED will be displayed then either HIGH or LOW.
21. To change the hold fan speed settings, use the Left or Right arrow keys.
22. Press the "P" key. SETBACK TIME will be displayed then the current setback time (XX:XX).
23. To change the Setback time, using the recipe keys enter the new setback time.
24. Press the "P" key. SETBACK TEMP will be displayed with the current setback temperature (XXXF or XXXC).
25. Using the recipe keys, type in the new setback temperature.
26. Press the "P" key. PREHEAT TIME will be displayed, then current preheat time (XX:XX).
27. To change the preheat time, enter the new preheat time using the recipe keys.
28. Press the "P" key. SYSTEM will be displayed.
29. To exit the system, press the Up arrow key and EXIT will be displayed.
30. Press the "P" key to exit the System Programming.

### Factory Programming

1. Press and hold the "P" key and hold it for three seconds. PRODUCT CNT will be displayed.
2. Press the Down Arrow key until PROGRAMMING is displayed.
3. Press the "P" key. ENTER CODE will be displayed.
4. Using the recipe keys, type 3228.
5. Press the "P" key. Display will show SYSTEM.
6. Press the down arrow key until FACTORY is displayed.
7. Press the "P" key. MAX PROG TEMP will be displayed, then either 550F or 500F.
8. Use the Right or Left arrow keys to change the setting to either 550F or 500F.
9. Press the "P" key. FAN SPEED TYPE will be displayed, then either 1 SPEED or 2 SPED.
10. To change the setting, use the Right or Left arrow keys.
11. Press the "P" key. FACTORY will be displayed.
12. To exit factory programming press the Up key twice or until EXIT is displayed.
13. Press the "P" key to exit.

## TROUBLESHOOTING CHARTS

### 6/13 V CONTROLLER AND E SERIES ELECTRO-MECHANICAL CONTROLLER

SYMPTOM	CAUSE	REMEDY
<b>Oven not heating, Fan not operating, and Lights not operating</b>	Oven not plugged into an operating power source Blown fuse POWER Switch not in the COOK position Shorted Door Switch	Plug oven into a power source with the proper rating. Replace fuse. Turn POWER Switch to the COOK position. Replace Door Switch & fuse.
<b>POWER Switch is in the COOK position but Oven not heating, Fan not operating</b>	Thermostat in OFF position Timer is in OFF position and will not allow a cook cycle	Rotate thermostat to select desired temperature. Rotate timer to desired time interval.
<b>Fan operating but Oven not heating</b>	POWER Switch in COOL DOWN position Defective Contactor	Rotate POWER Switch to the COOK position. Check for voltage at both the input and output side of Contactor. If not present at output, replace Contactor.
<b>Oven does not heat to selected temperature level</b>	Defective Heater assembly Defective Contactor Defective Thermostat	Replace Heater assembly. Replace Contactor. Replace Thermostat.
<b>FAN Switch does not change blower speed</b>	Defective FAN Switch Defective Motor	Replace FAN Switch. Replace Motor.
<b>Oven temperature continues to rise above selected temperature</b>	Defective Thermostat	Replace Thermostat.
<b>Lights do not operate</b>	Blown light bulbs Defective light socket Defective LIGHTS Switch	Bulbs are connected in series. Check both bulbs. Replace light socket. Replace LIGHTS Switch.

## 5/9 OVEN WITH ZZ CONTROLLER

Note: Troubleshooting is based on a properly programmed Controller.

SYMPTON	CAUSE	REMEDY
<b>Oven not heating, Fan not operating</b>	Oven not plugged into an operating power source Blown fuse POWER Switch not in the ON position Oven Door not closed Cam not activating door switch	Plug oven into a power source with the proper rating. Replace fuse. Turn POWER Switch to the ON position. Close Oven Door completely. Check for proper door switch operation.
<b>POWER Switch is in the COOK position but Oven not heating, Fan not operating</b>	Defective POWER Switch Defective Controller Defective Relay Interface Board Defective Transformer	Check and replace POWER Switch. Replace Controller. Replace Relay Interface Board. Check input and out voltage of Step-Down Transformer. Replace if input voltage present but no output voltage.
<b>Fan operating but Oven not heating</b>	Defective Contactor Defective Elements	Rotate POWER Switch to the COOK position. Check for voltage at both the input and output side of Contactor. If not present at output, replace Contactor.
<b>Oven does not heat to selected temperature level</b>	Defective Heater Element Defective Contactor Defective RTD Probe Defective Relay Interface Board	Replace Heater Element assembly. Replace Contactor. Replace RTD Probe. Replace Relay Interface Board.
<b>FAN Switch does not change blower speed</b>	Defective FAN Switch Defective Motor	Replace FAN Switch. Replace Motor.
<b>Oven temperature continues to rise above selected temperature</b>	Defective RTD Probe Defective Relay Interface Board	Replace RTD Probe. Replace Relay Interface Board.



## ALL SOLID STATE CONTROLLERS EXCEPT ZZ CONTROLLER

Note: Troubleshooting is based on a properly programmed Controller.

SYMPTON	CAUSE	REMEDY
<b>Oven not heating, Fan not operating</b>	Oven not plugged into an operating power source Blown fuse POWER Switch not in the COOK position Oven Door not closed Cam not activating Door Switch	Plug oven into a power source with the proper rating. Replace fuse. Turn POWER Switch to the COOK position. Close Oven Door completely. Check for proper Door Switch operation.
<b>POWER Switch is in the ON position but Oven not heating, Blower not operating</b>	Defective POWER Switch Defective Controller Defective Relay Interface Board Defective Transformer	Check and replace POWER Switch. Replace Controller. Replace Relay Interface Board. Check input and out voltage of Step-Down Transformer. Replace if input voltage present but no output voltage.
<b>Blower operating but Oven not heating</b>	Defective Contactor  Defective Elements	Check for voltage at both the input and output side of Contactor. If present at input but not present at output, replace Contactor. Replace Elements.
<b>Oven does not heat to selected temperature level</b>	Defective Heater Element Defective Contactor Defective RTD Probe Defective Relay Interface Board	Replace Element assembly. Replace Contactor. Replace RTD Probe. Replace Relay Interface Board.
<b>FAN Switch does not change blower speed</b>	Defective FAN Switch Defective Motor	Replace FAN Switch. Replace lower Motor.
<b>Oven temperature continues to rise above selected temperature</b>	Defective RTD Probe Defective Relay Interface Board	Replace RTD Probe. Replace Relay Interface Board.



## 5/9 CCSI CONTROL WITH BACKUP THERMOSTAT

Note: Troubleshooting is based on a properly programmed Controller.

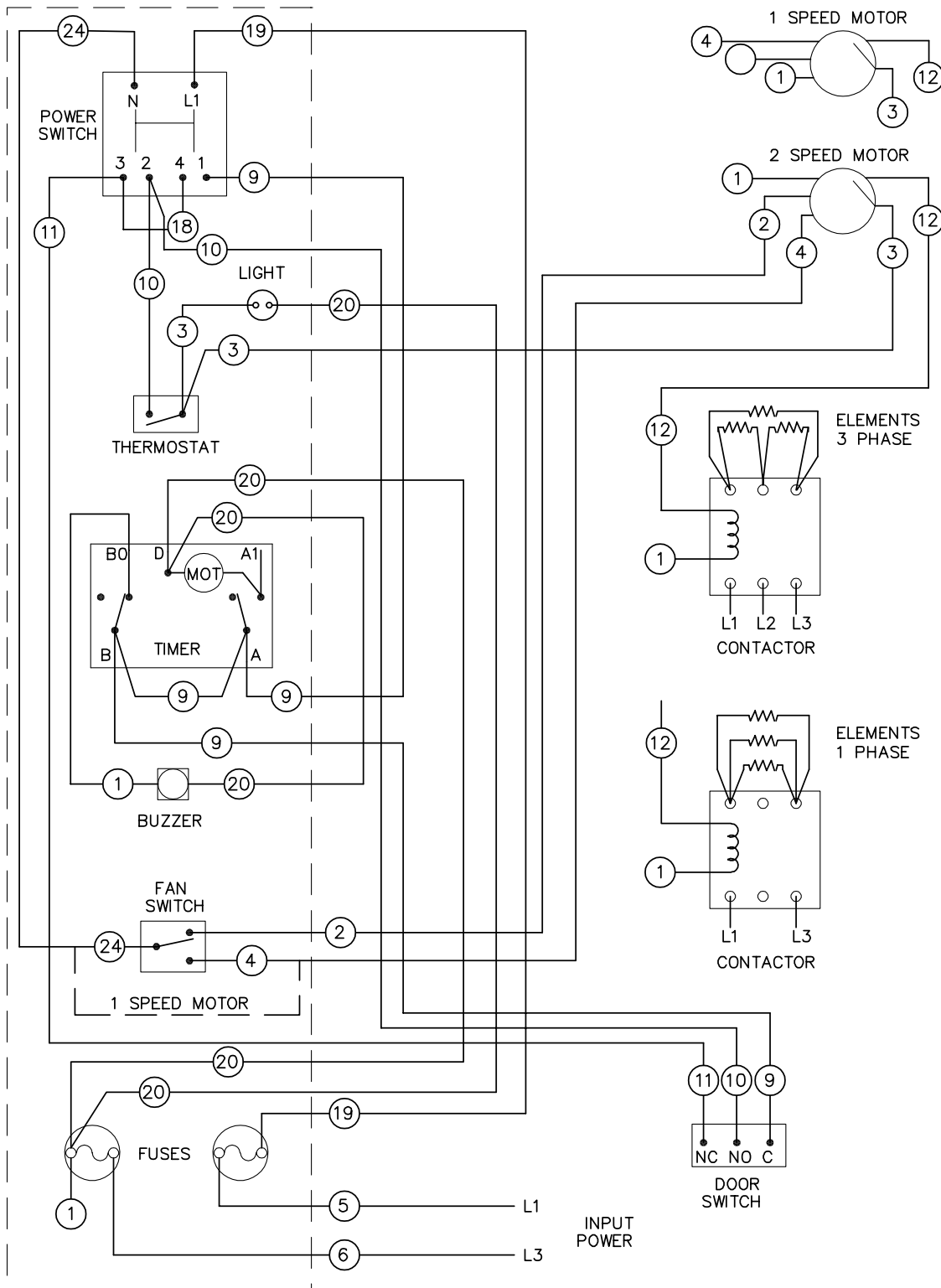
SYMPTON	CAUSE	REMEDY
<b>Oven not heating, Blower not operating, Oven Heating lamp is off</b>	Oven not plugged into an operating power source Blown fuse POWER Switch not in the ON position Oven Door not closed Cam not activating Door Switch	Plug oven into a power source with the proper rating. Replace fuse. Turn POWER Switch to the ON position. Close Oven Door completely. Check for proper Door Switch operation.
<b>POWER Switch is in the ON position but Oven not heating, Blower not operating</b>	Defective POWER Switch Defective Controller Defective Power Transformer Defective Step-Down Transformer	Check and replace POWER Switch. Replace Controller. Check for correct voltage at input and output of Power Transformer and replace if not correct. Check input and out voltage of Step-Down Transformer. Replace if input voltage present but no or incorrect output voltage.
<b>Blower operating but Oven not heating</b>	Defective Contactor Defective Elements	Check for voltage at both the input and output side of Contactor. If present at input but not present at output, replace Contactor. Replace Elements.
<b>Oven does not heat to selected temperature level</b>	Defective Element Defective Contactor Defective RTD Probe Defective Controller	Replace Element assembly. Replace Contactor. Replace RTD Probe. Replace Controller.
<b>Oven temperature continues to rise above selected temperature</b>	Defective RTD Probe Defective Controller	Replace RTD Probe. Replace Controller.

Probe failures can be indicated by the controller display.

If the oven shuts off and displays 9999, the probe has an open circuit and must be replaced.

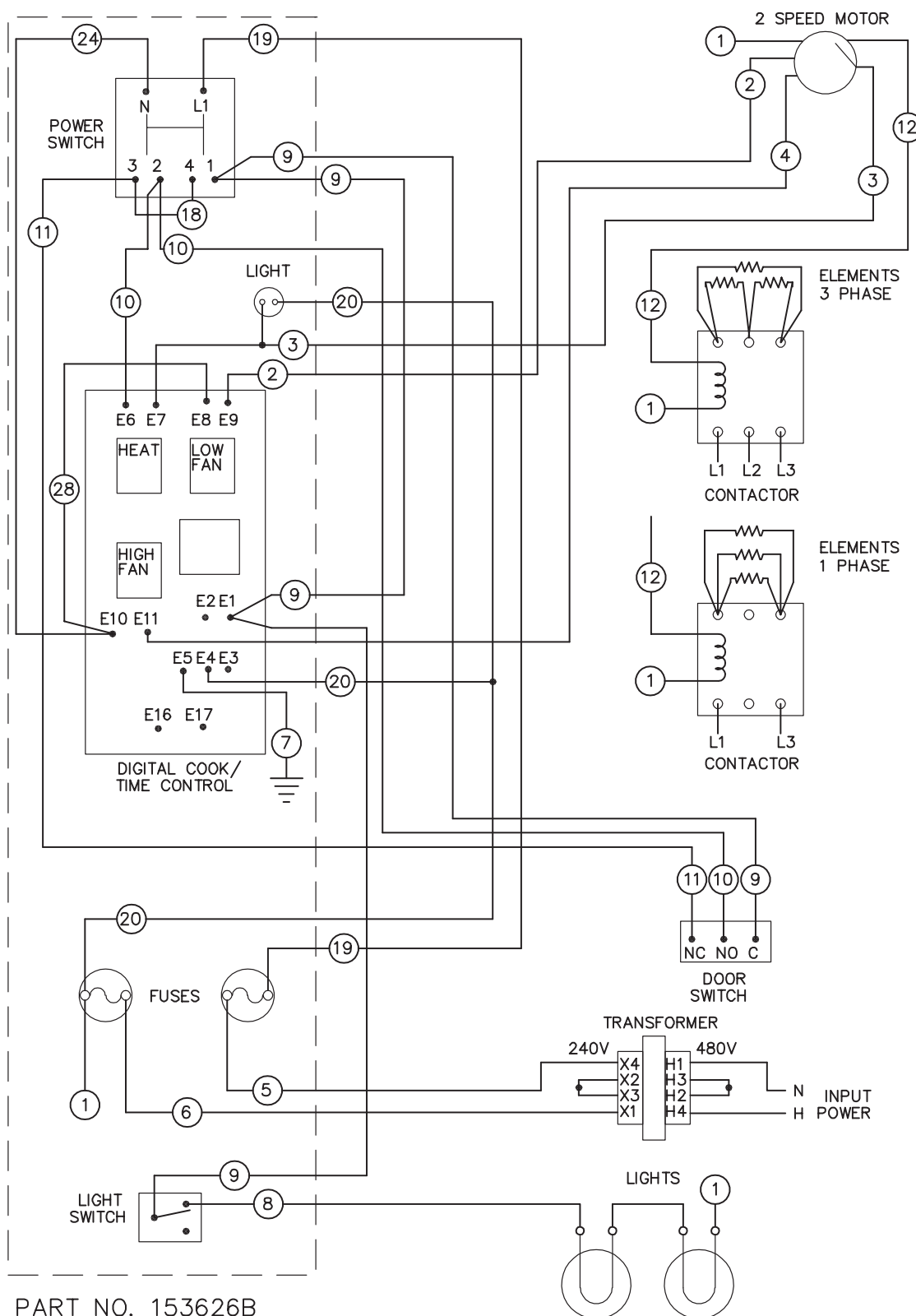
If the oven shuts off and displays 7777, the probe is shorted and must be replaced.

# **5/9 ELECTRIC CONVECTION OVEN** **“V” OPTION, 208/240 VAC. 50/60 HZ, 1PH OR 3PH**

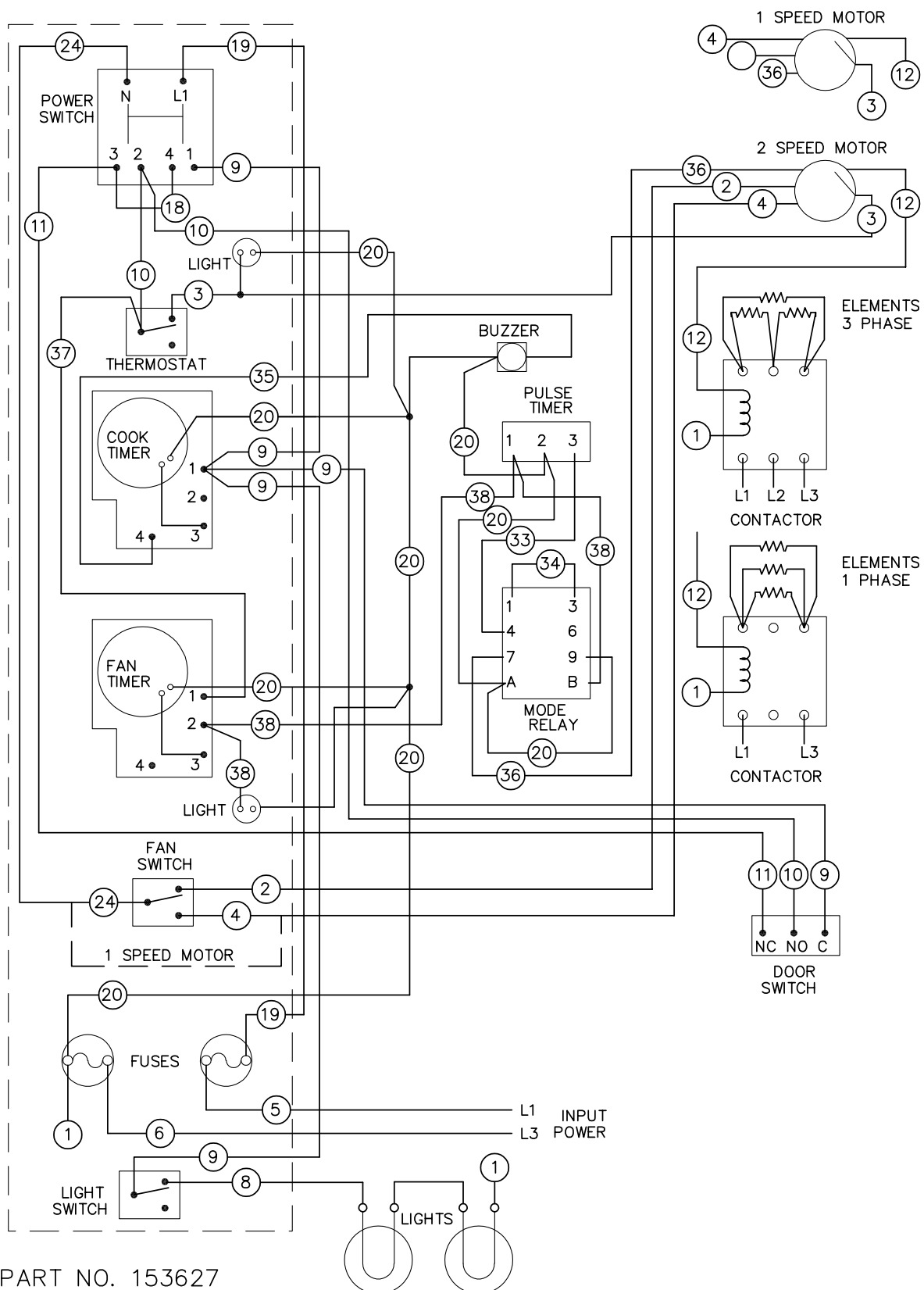


PART NO. 155500B

# **6/13 ELECTRIC CONVECTION OVEN** **“V” OPTION, 208/240 VAC. 50/60 HZ, 1PH OR 3PH**

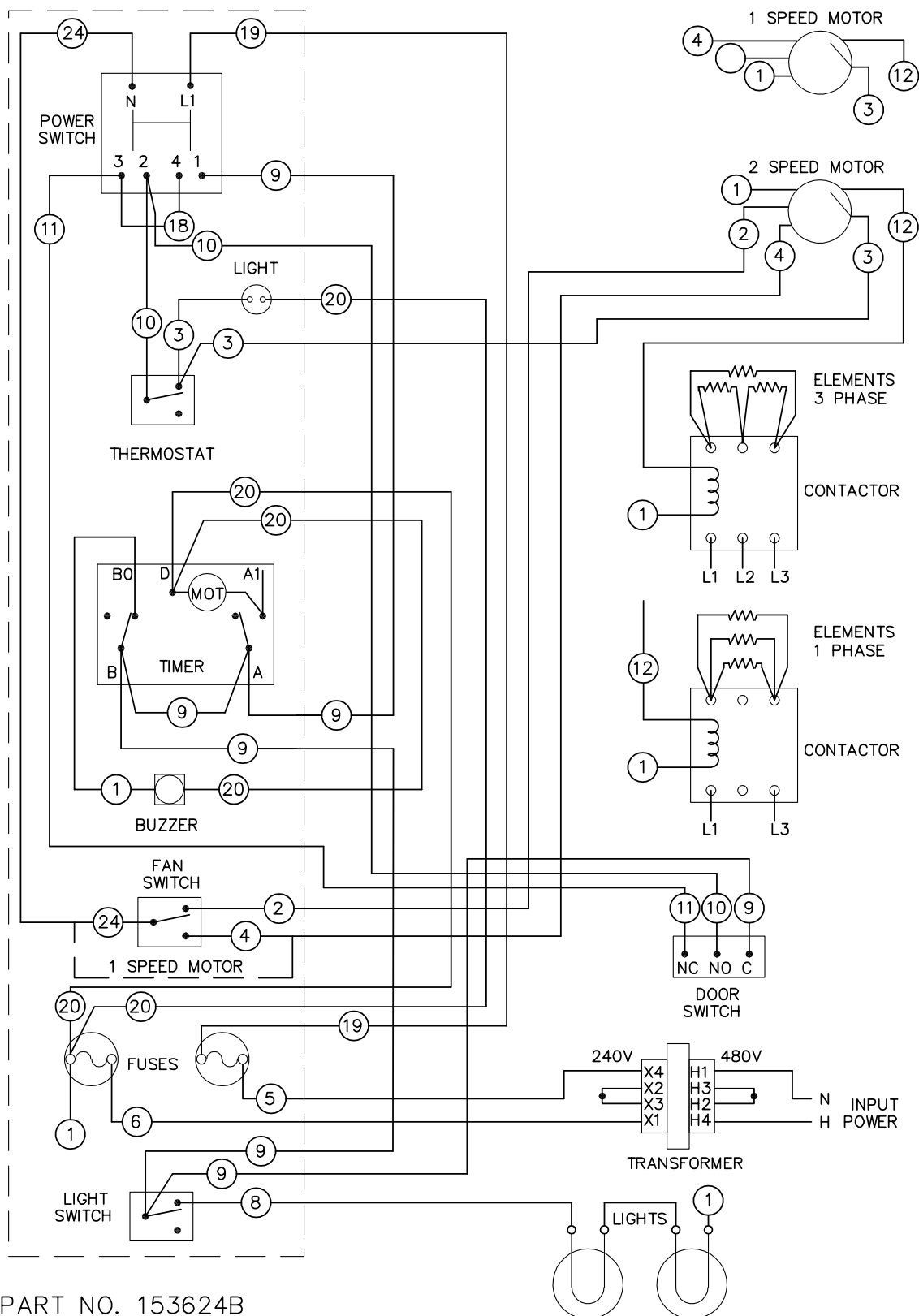


# **6/13 ELECTRIC CONVECTION OVEN** **“V” OPTION, PULSE PLUS 208/240 VAC. 50/60 HZ, 1PH OR 3PH**



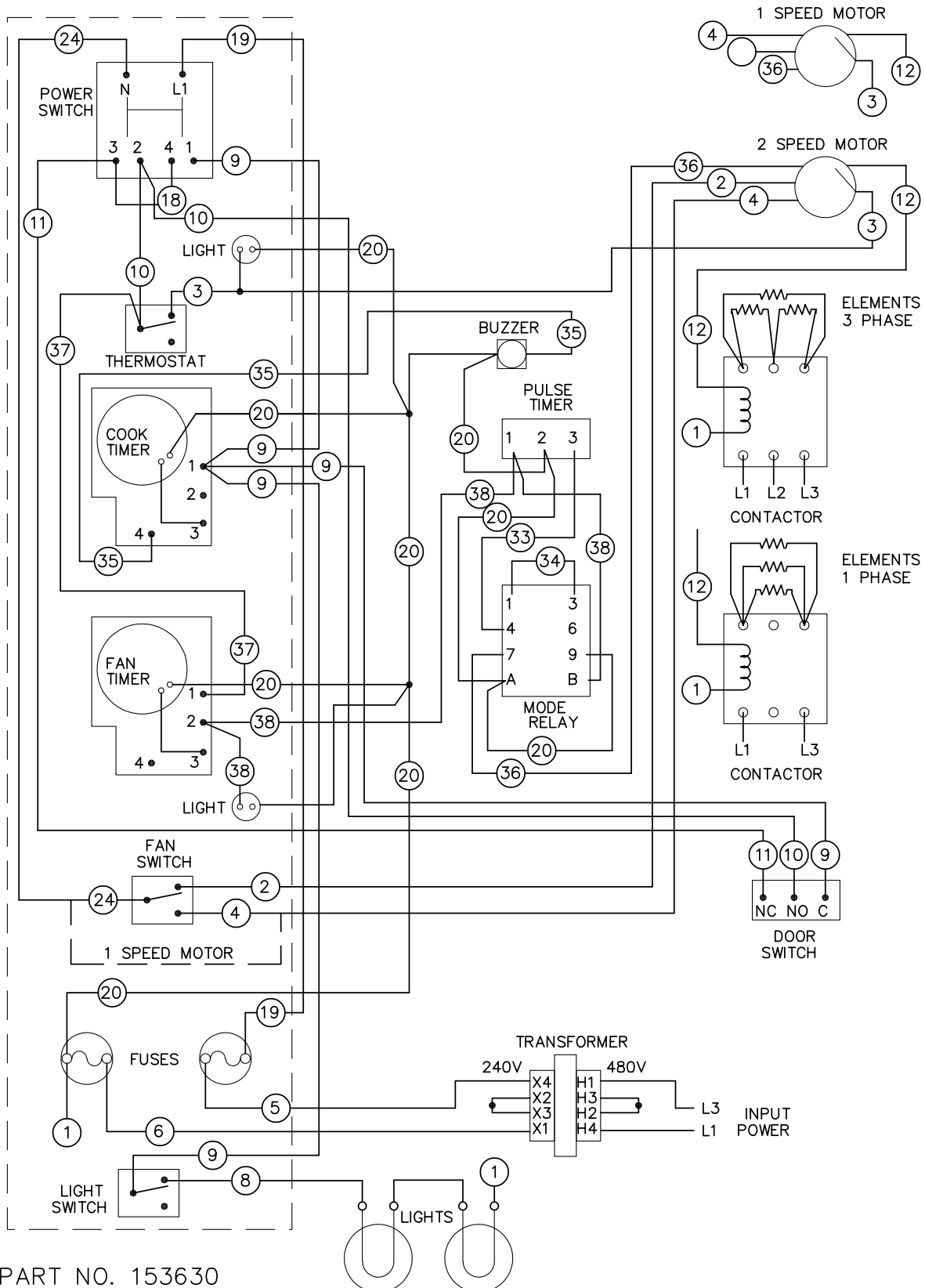
PART NO. 153627

# **6/13 ELECTRIC CONVECTION OVEN** **“V” OPTION, 480 VAC. 50/60 HZ, 1PH OR 3PH**

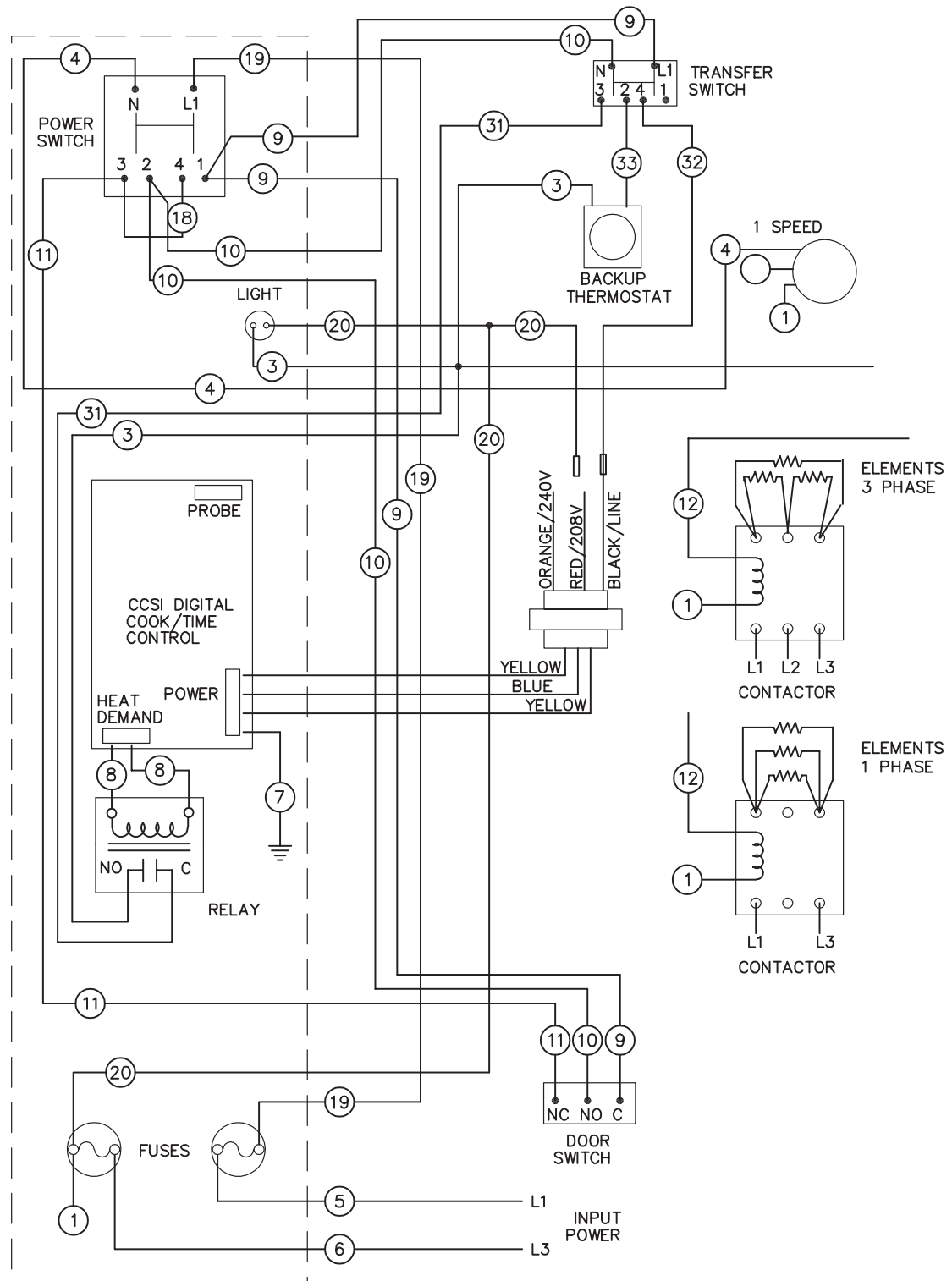


PART NO. 153624B

## 6/13 ELECTRIC CONVECTION OVEN “V” OPTION, PULSE PLUS 440/480 VAC. 50/60 HZ, 1PH OR 3 PH

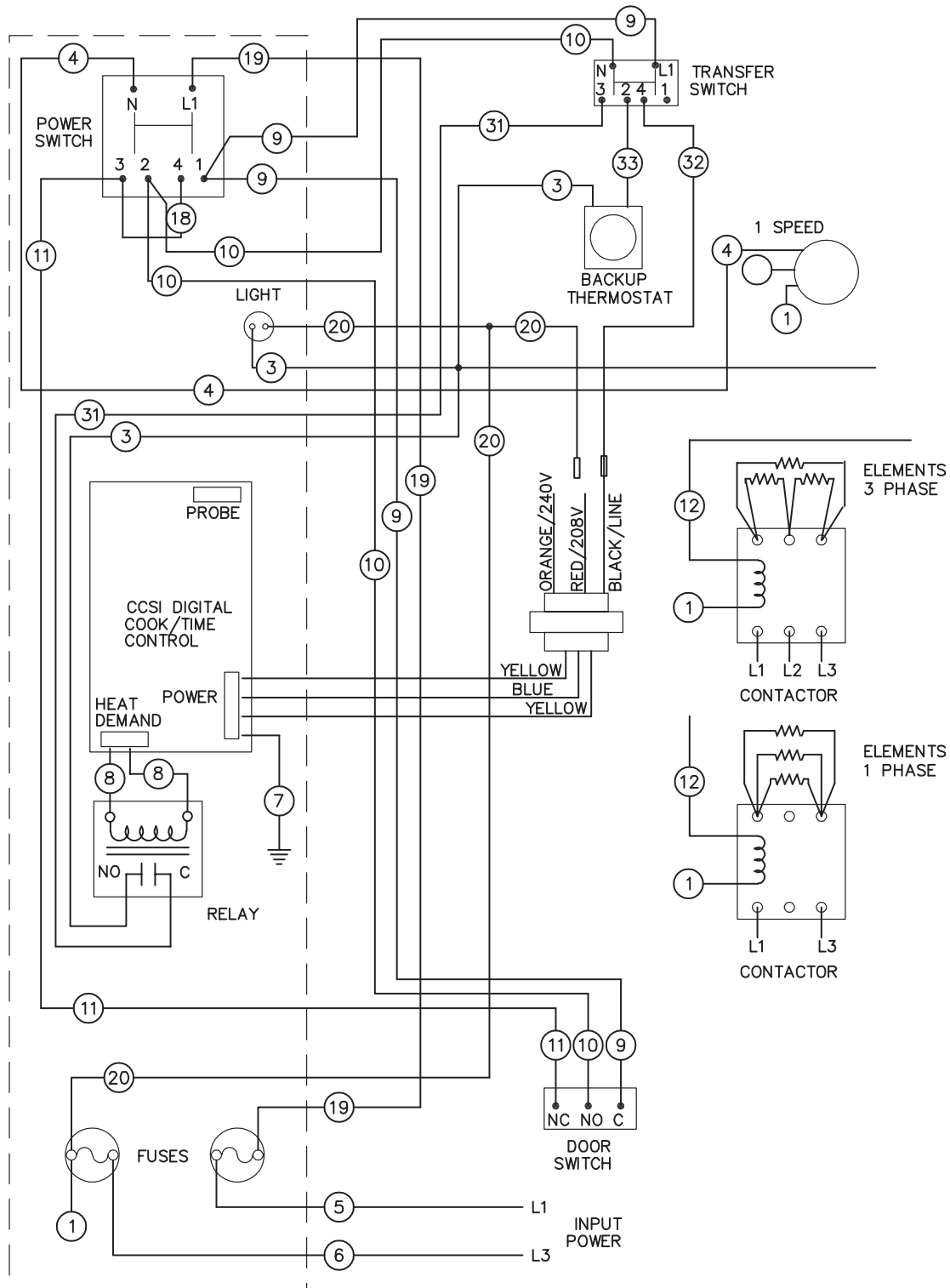


## 5/9 ELECTRIC CONVECTION OVEN "X" OPTION, 208/240 VAC. 50/60 HZ, 1PH OR 3PH



PART NO. 155504D

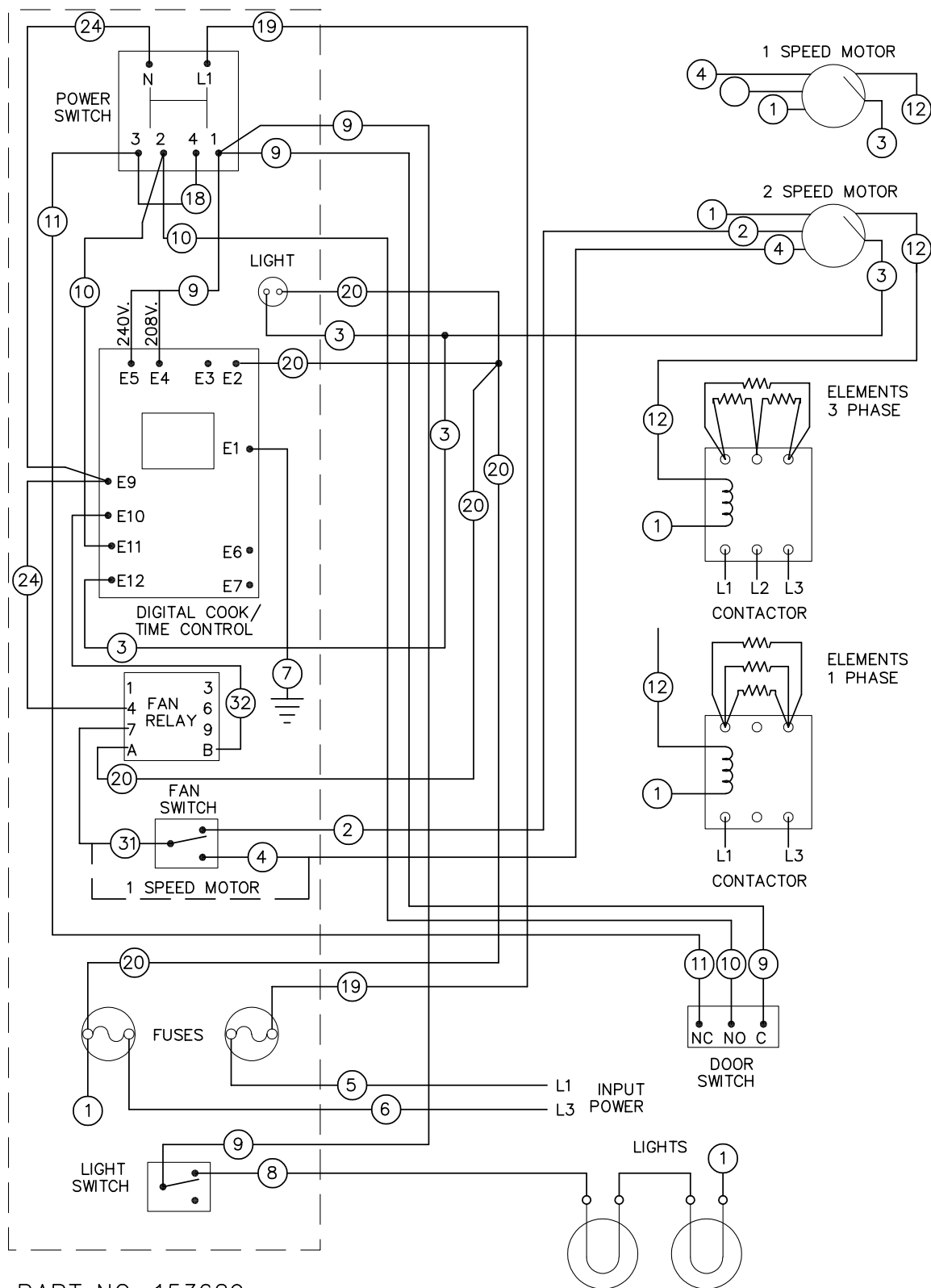
## 6/13 ELECTRIC CONVECTION OVEN "X" PULSE OPTION, 208/240 VAC. 50/60 HZ, 1PH OR 3PH



PART NO. 155504D

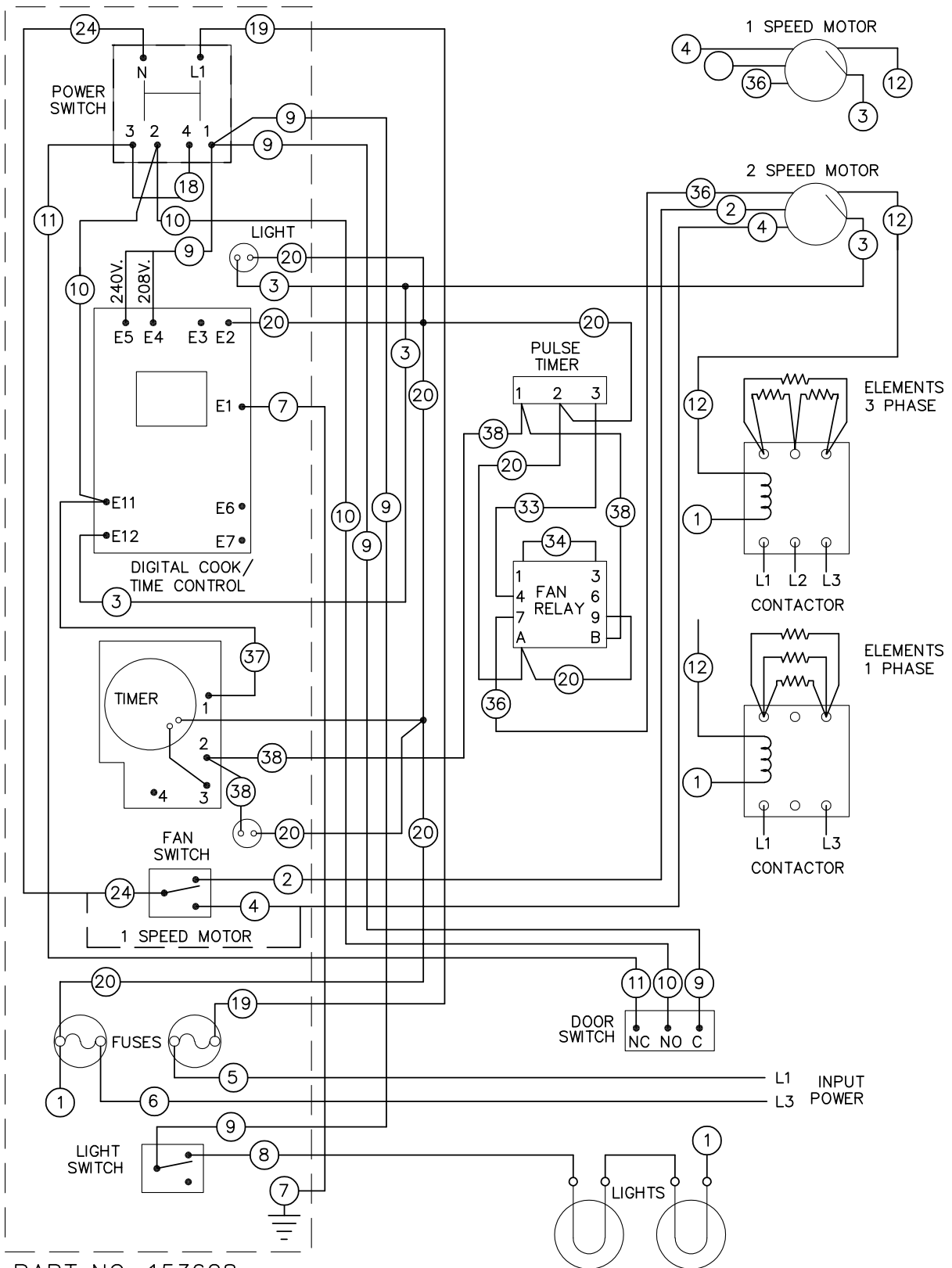


## 6/13 ELECTRIC CONVECTION OVEN "X" PULSE OPTION, 208/240 VAC. 50/60 HZ, 1PH OR 3 PH



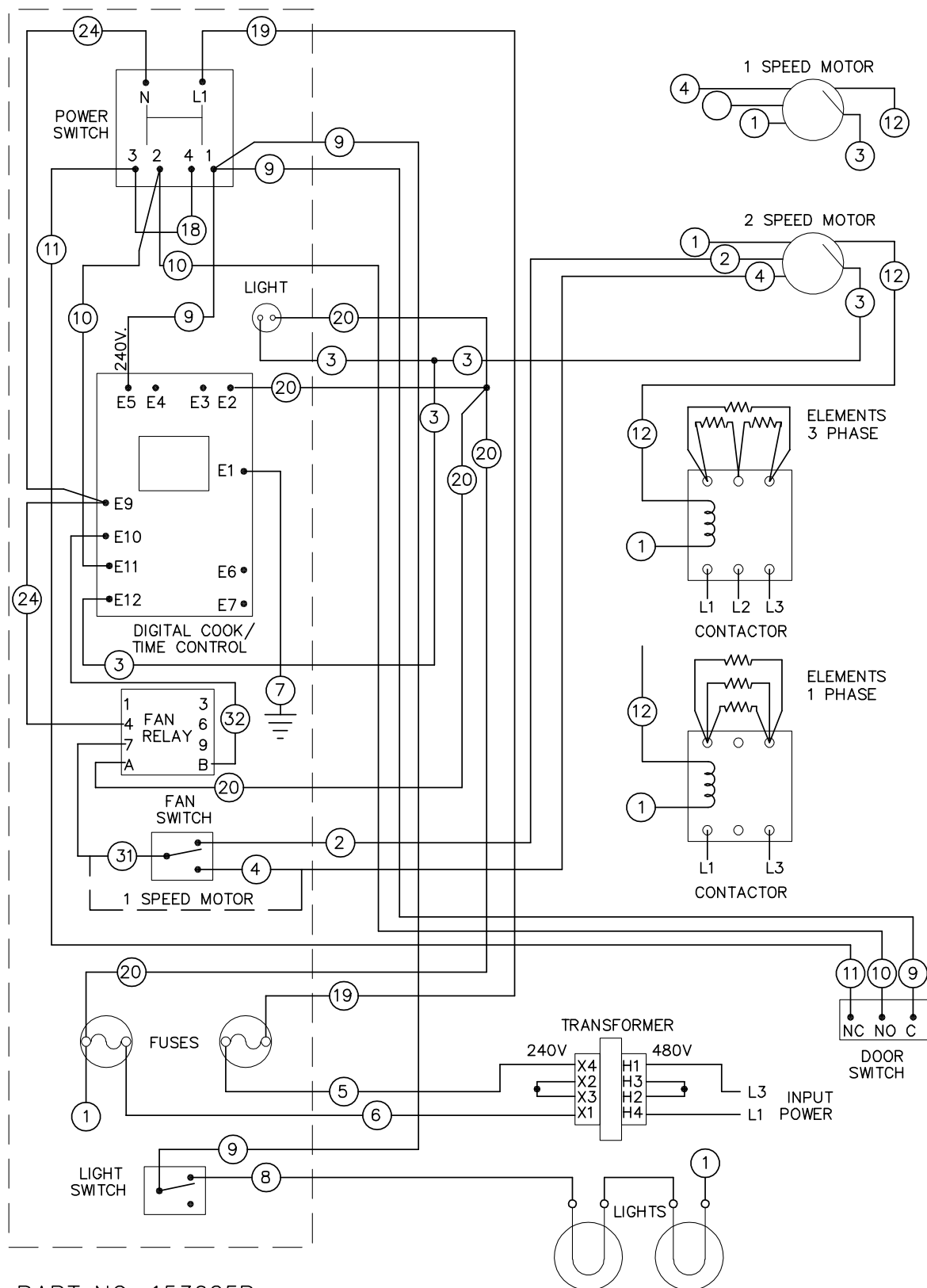
PART NO. 153629

# **6/13 ELECTRIC CONVECTION OVEN** **“X” PULSE PLUS OPTION, 208/240 VAC. 50/60 HZ, 1PH OR 3 PH**



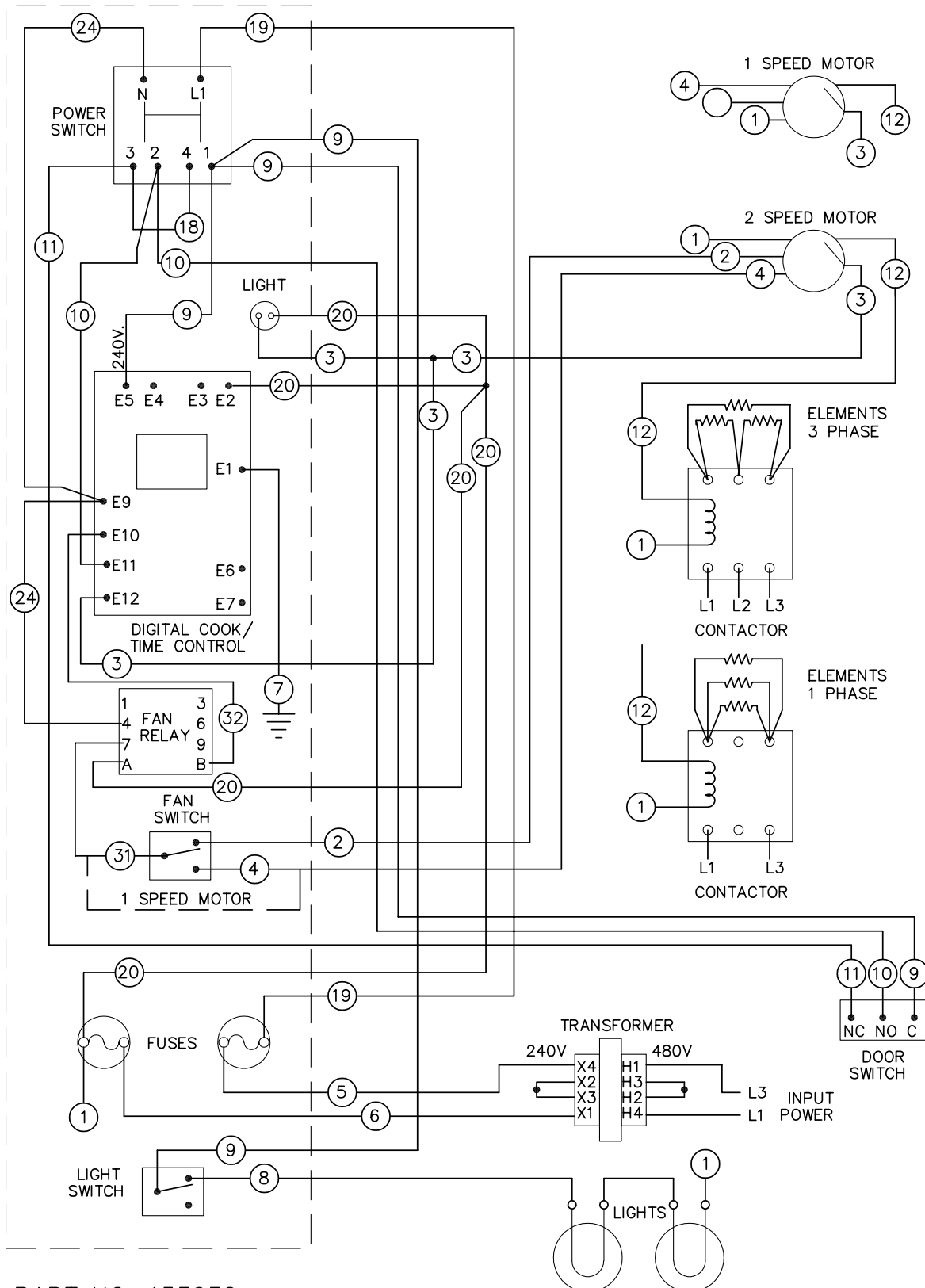
PART NO. 153628

# **S 6/13 ELECTRIC CONVECTION OVEN** **“X” OPTION, 440/480 VAC. 50/60 HZ, 1PH OR 3PH**



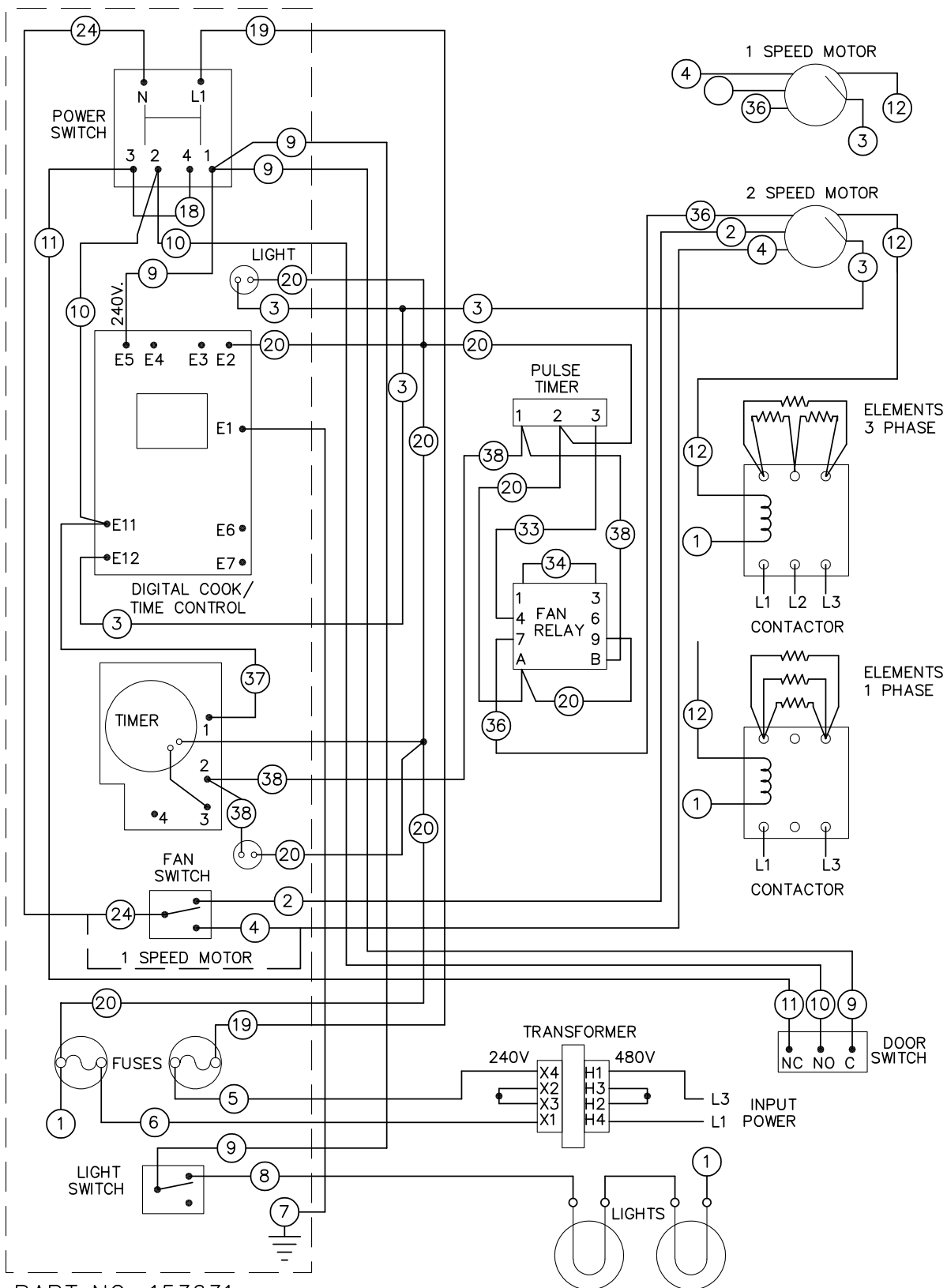
PART NO. 153625B

# **6/13 ELECTRIC CONVECTION OVEN** **"X" PULSE OPTION, 440/480 VAC. 50/60 HZ, 1PH OR 3 PH**



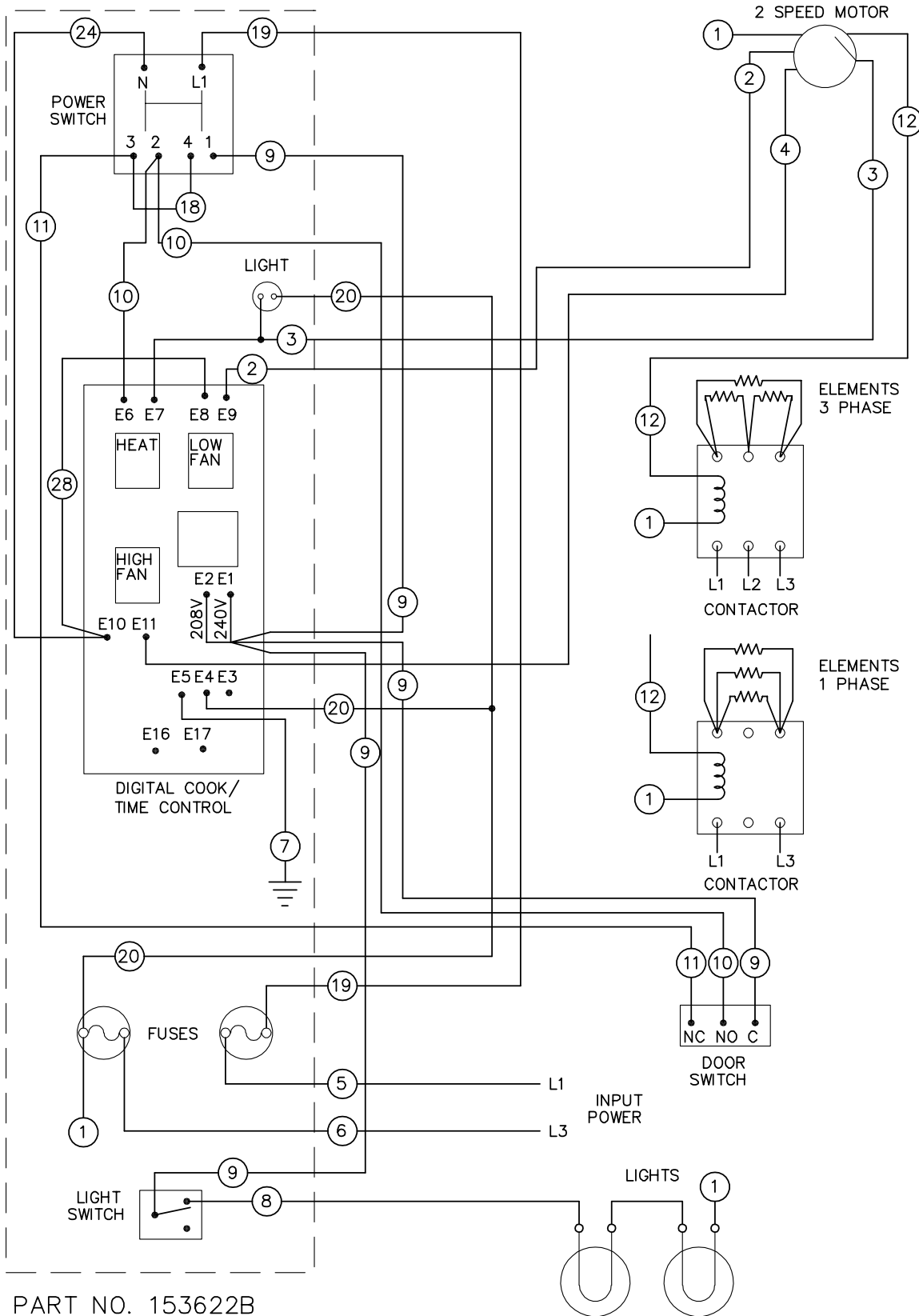
PART NO. 153632

# **6/13 ELECTRIC CONVECTION OVEN** **"X" PULSE PLUS OPTION, 440/480 VAC. 50/60 HZ, 1PH OR 3 PH**

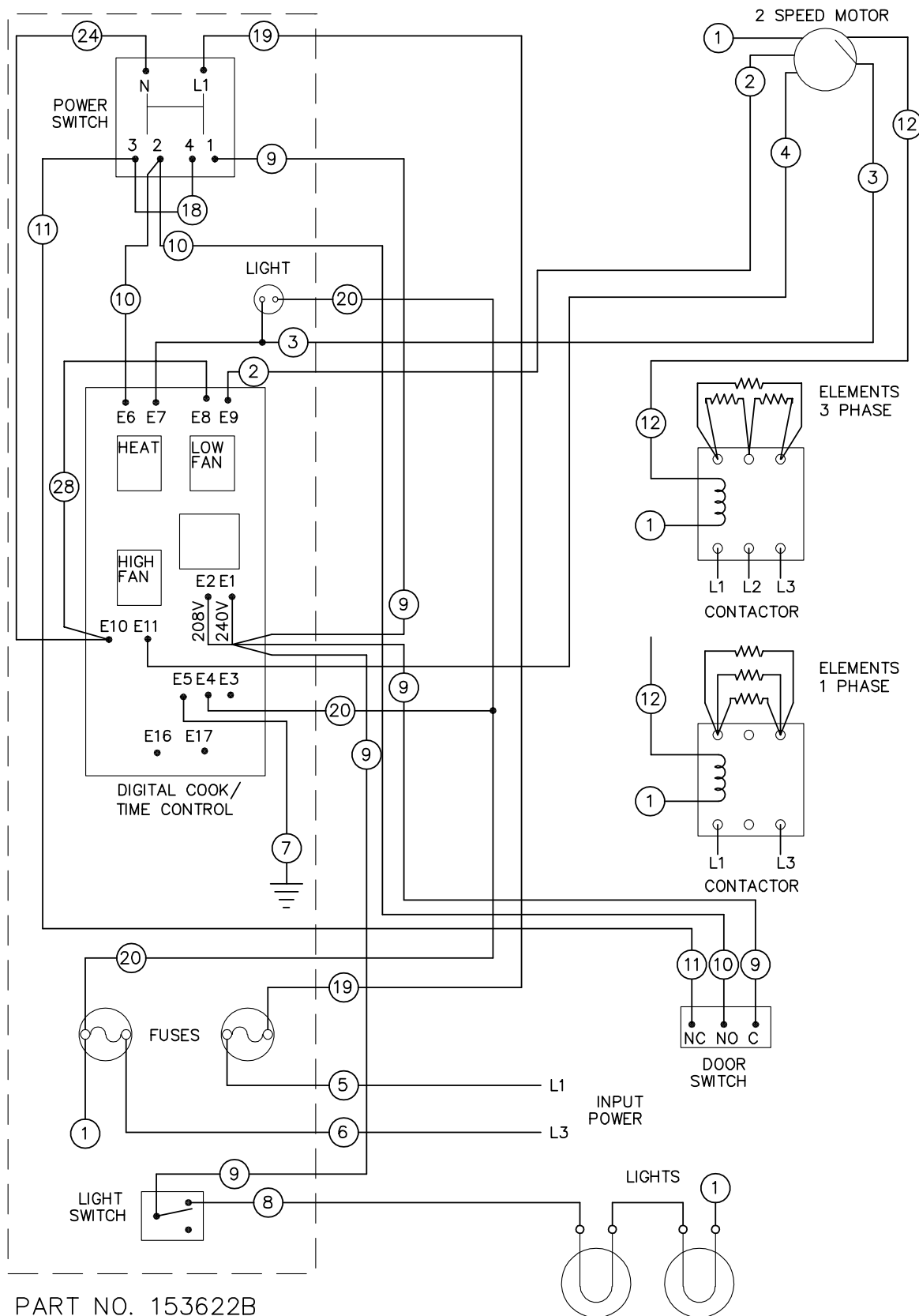


PART NO. 153631

# **5/9 ELECTRIC CONVECTION OVEN** **"Z & ZX" OPTION, 208/240 VAC. 50/60 HZ, 1PH OR 3PH.**

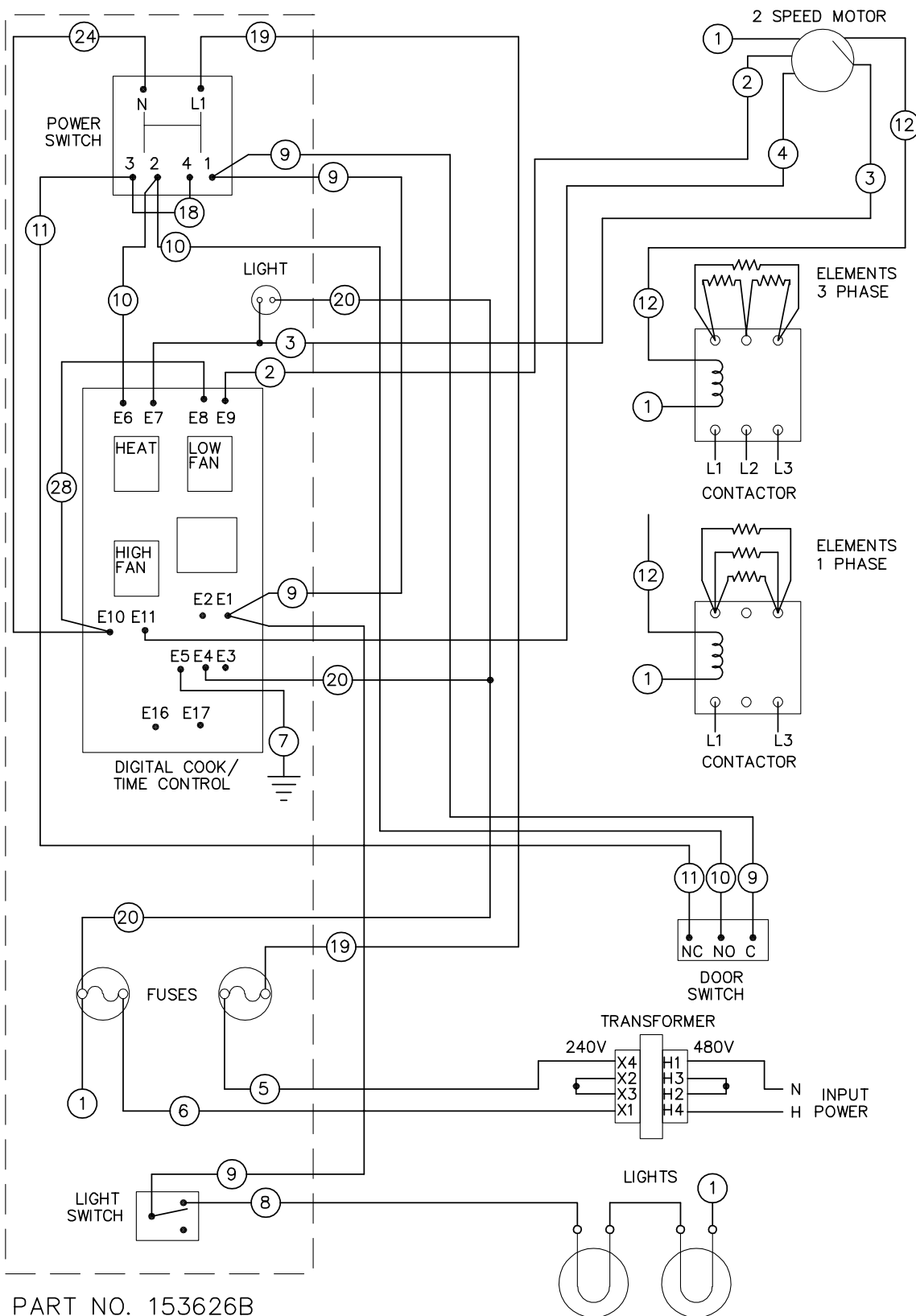


# **6/13 ELECTRIC CONVECTION OVEN** **“Z, ZX” OPTION, 208/240 VAC. 50/60 HZ, 1PH OR 3 PH**

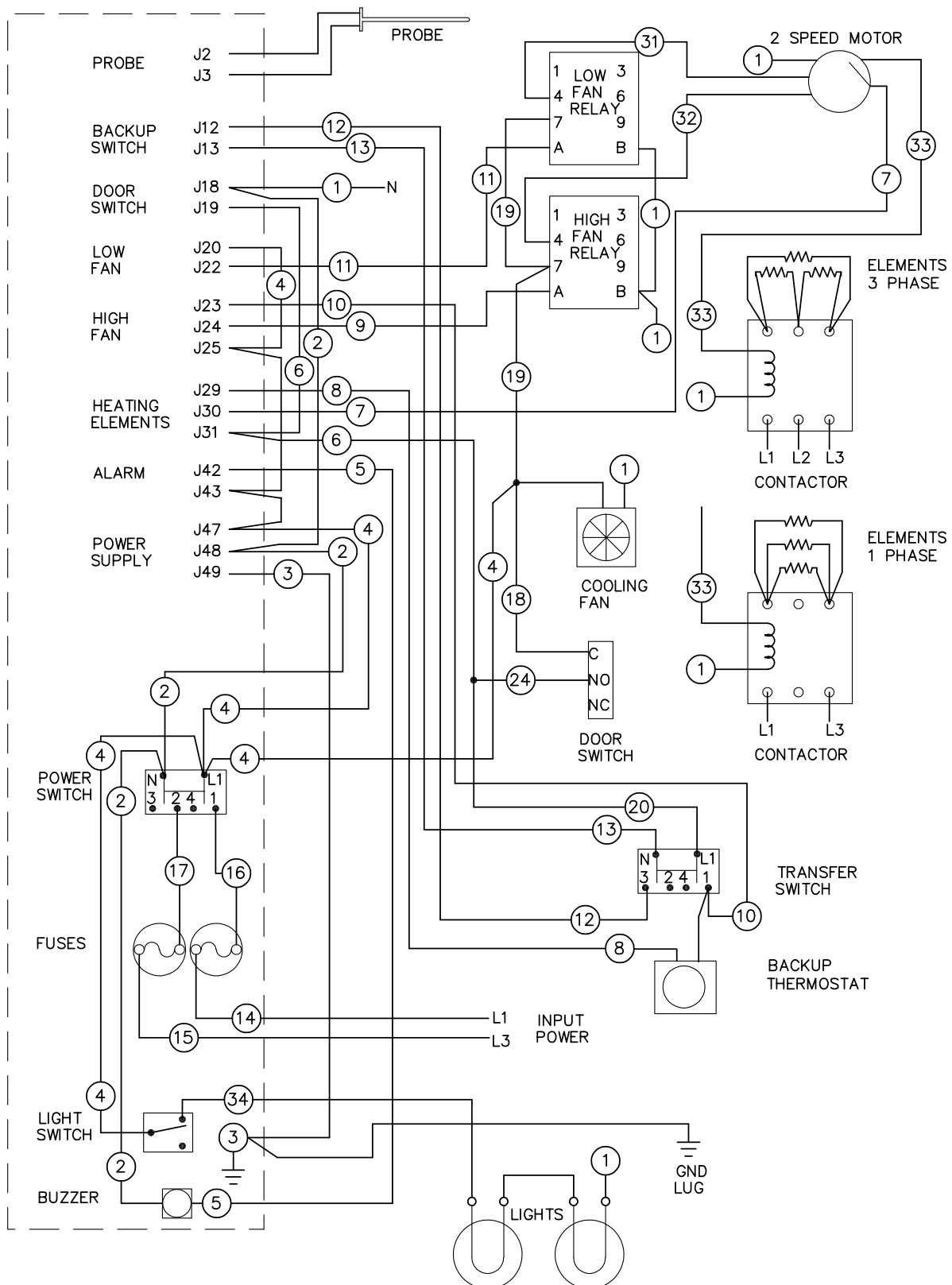




# **6/13 ELECTRIC CONVECTION OVEN** **"Z, ZX" OPTION, 480 VAC. 50/60 HZ, 1PH OR 3PH**

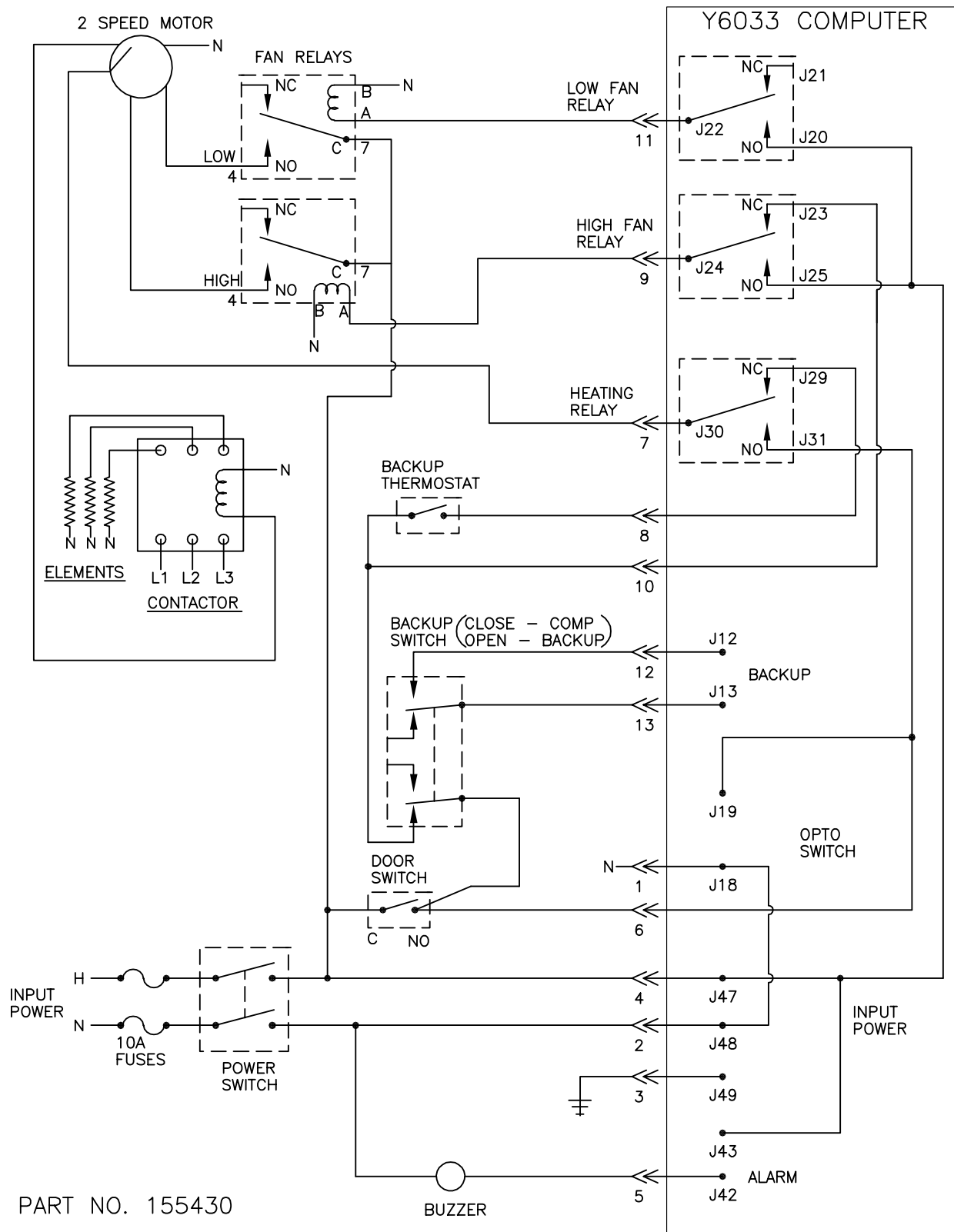


# **6/13 ELECTRIC CONVECTION OVEN** **"ZZ" OPTION, 208/240 VAC. 50/60 HZ, 1PH OR 3PH**



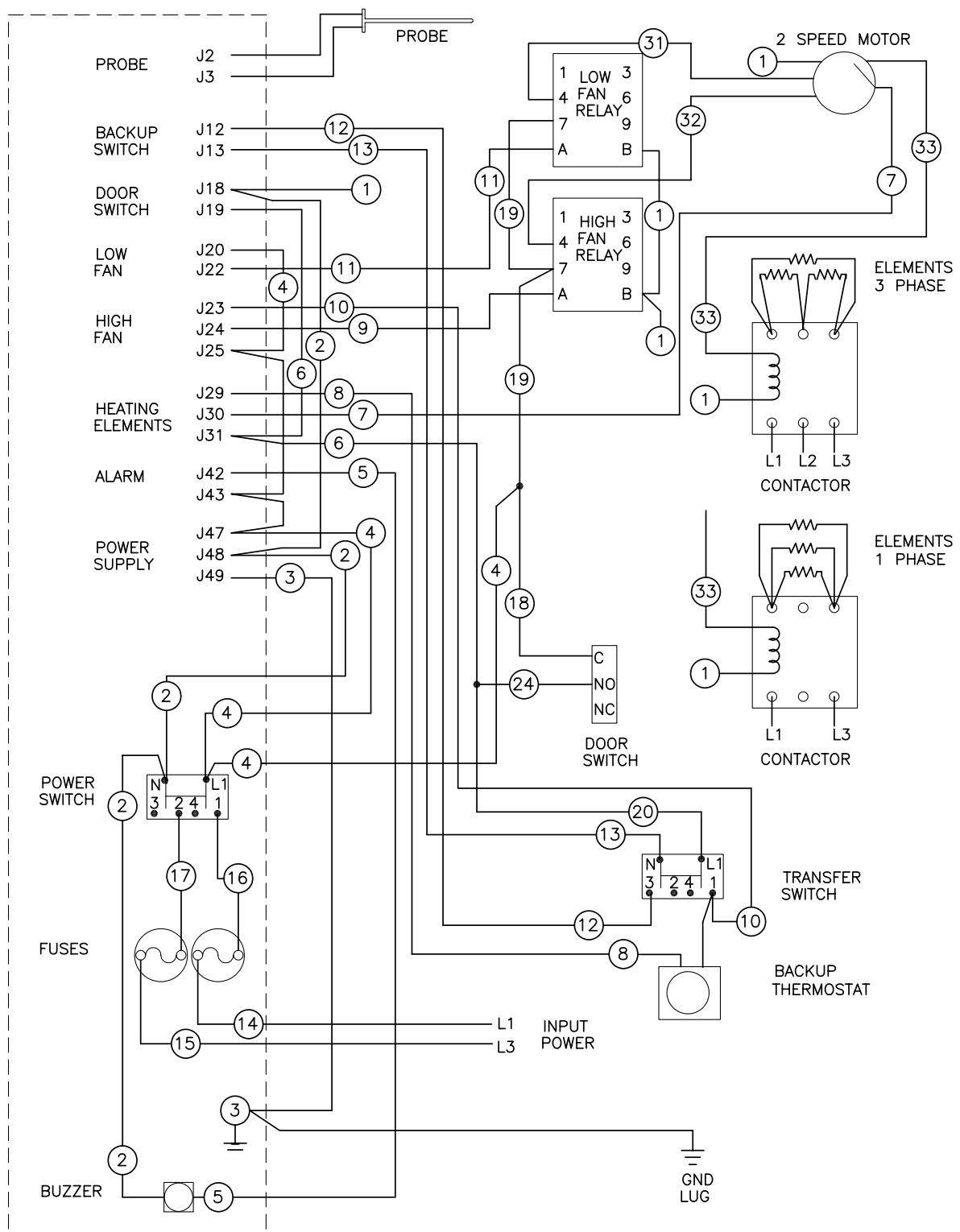
PART NO. 153623

# **5/9 & 6/13 ELECTRIC CONVECTION OVENS** **"ZZ" OPTION, 208/240 VAC. 50/60 HZ, 1PH OR 3PH.**



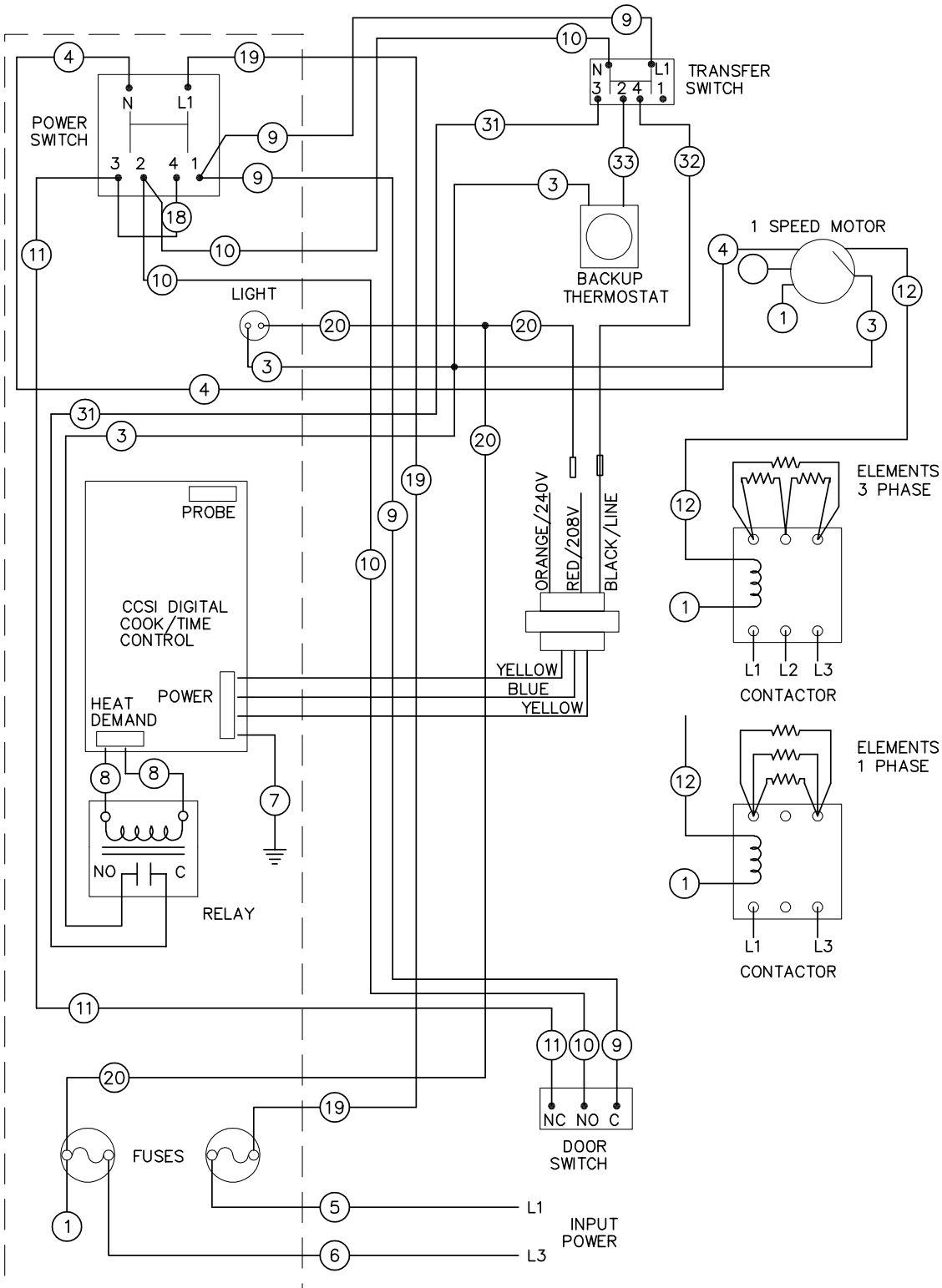
PART NO. 155430

## 5/9 ELECTRIC CONVECTION OVEN “ZZ” OPTION, 208/240 VAC. 50/60 HZ, 1PH OR 3PH



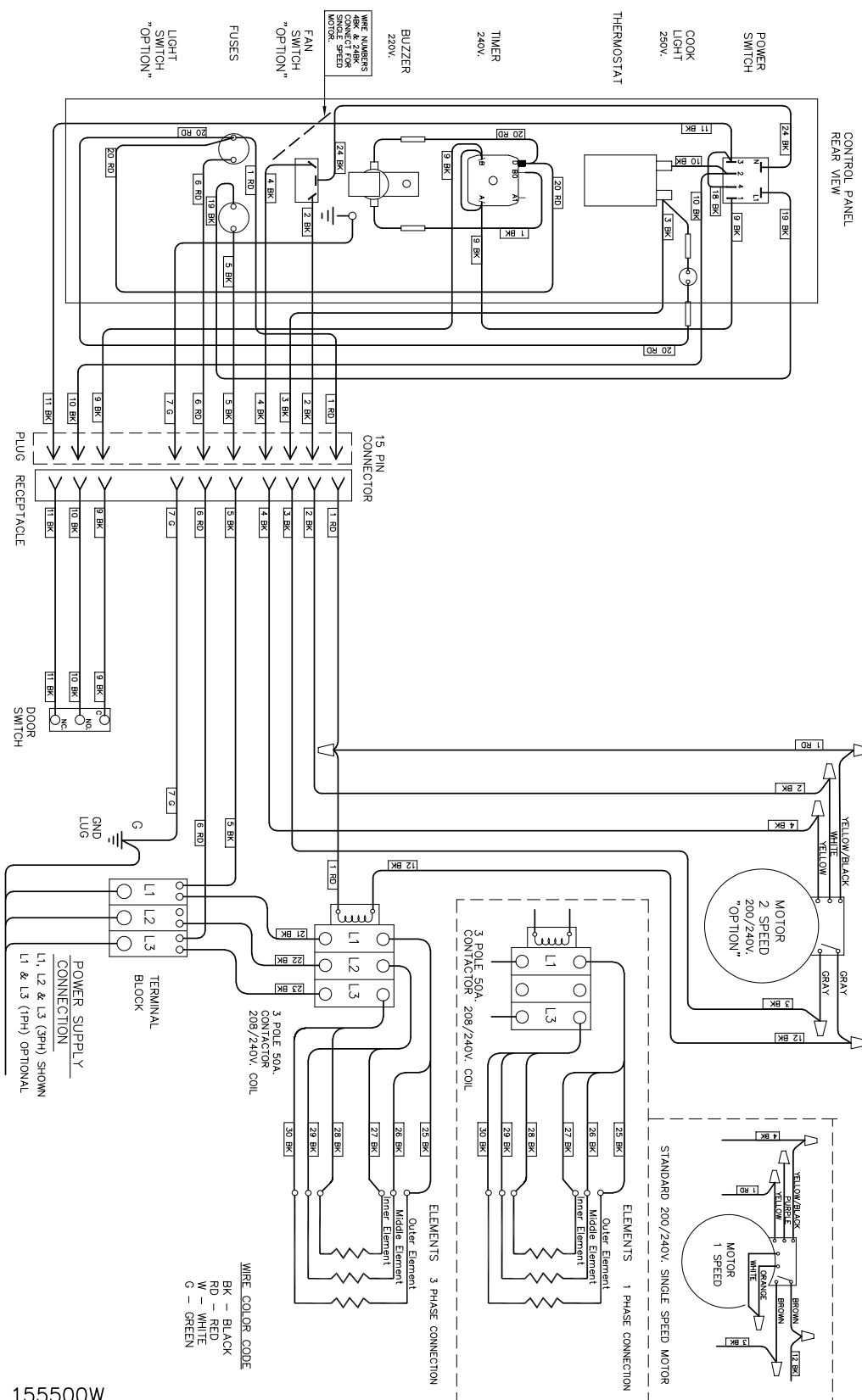
PART NO. 155503

**5/9 "CCSI" CONTROL W/BACKUP  
THERMOSTAT, 208/240 VAC. 50/60 HZ, 1PH OR 3PH**



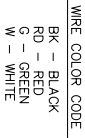
PART NO. 155504D

# 5/9 CONVECTION OVEN “V” 208/240 V



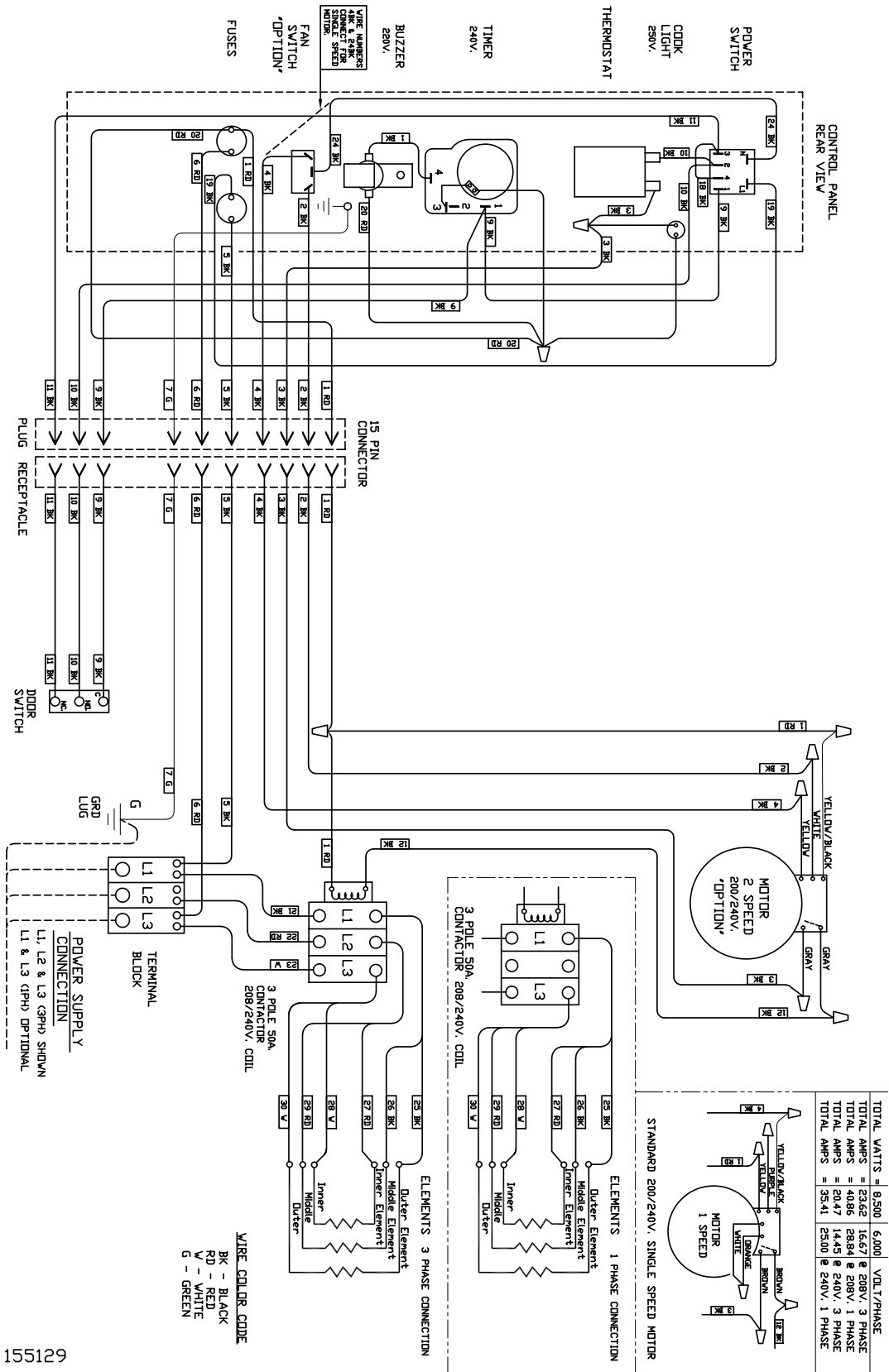
155500W

**“V” 208/240 V**



153621W

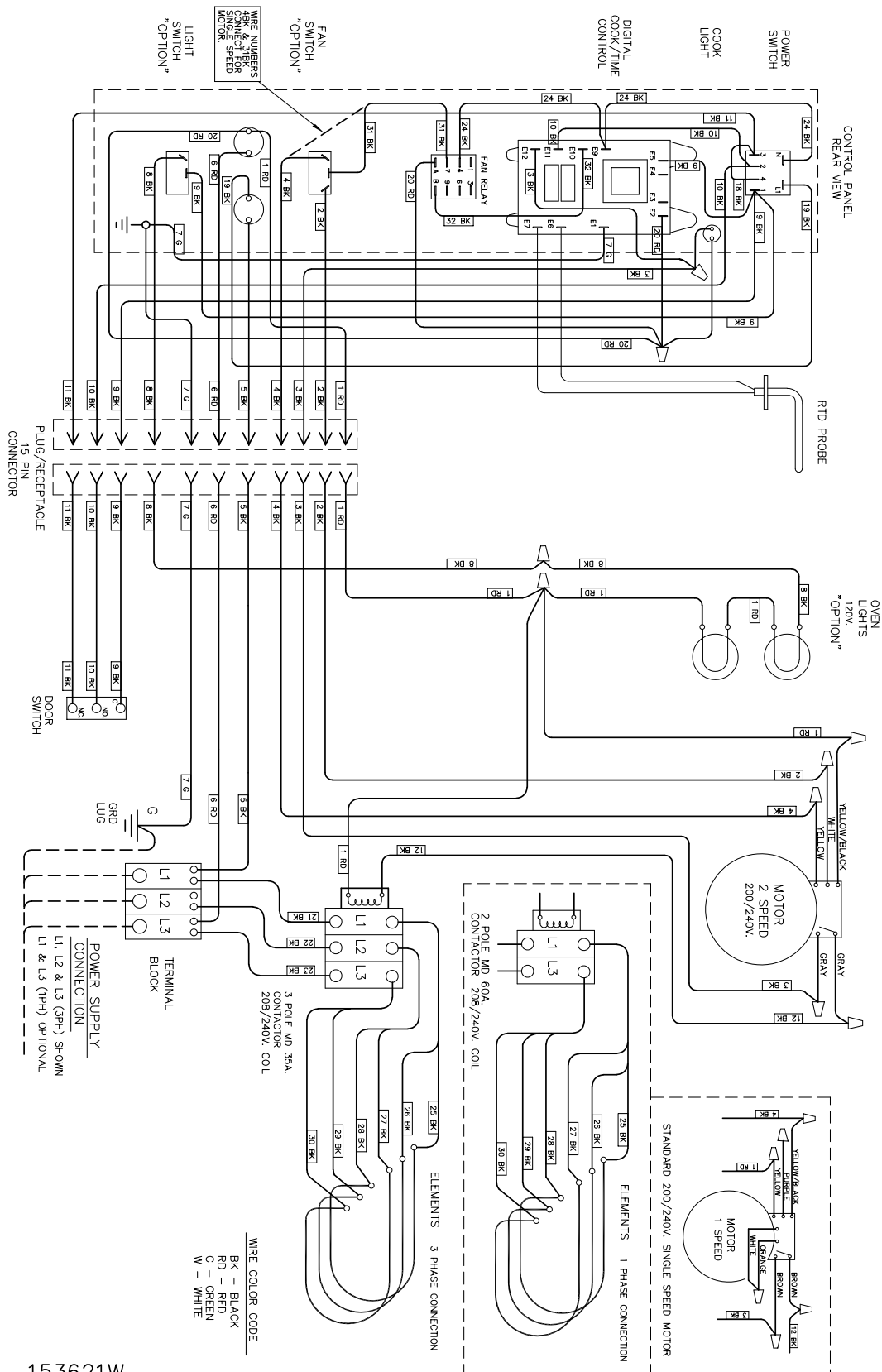
6/13 CONVECTION OVEN  
“V” OPTION 208/220 OR 230/240 VAC. 1PH OR 3PH



155129

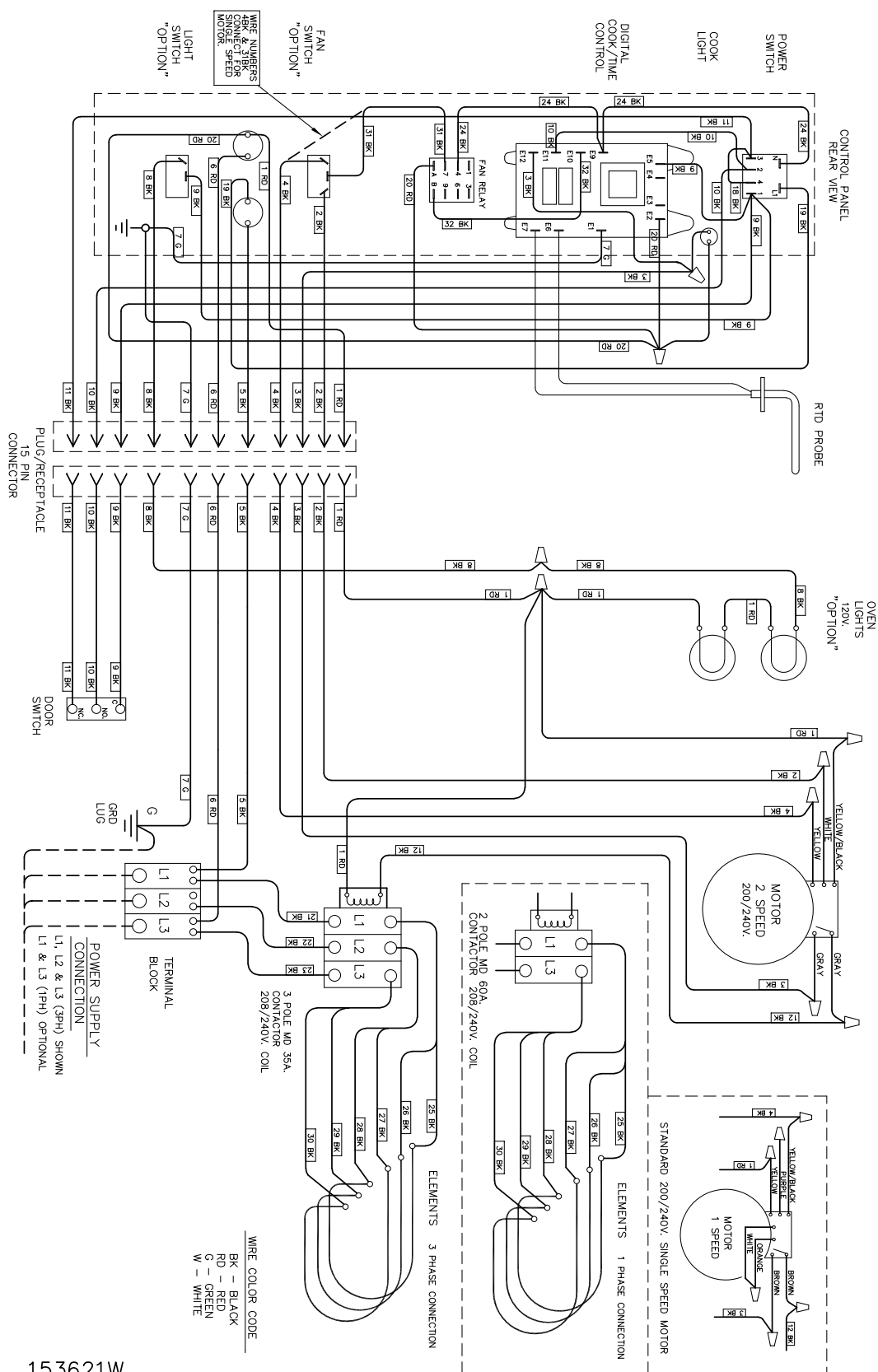


# 6/13 CONVECTION OVEN "V" PULSE PLUS 208/240 V



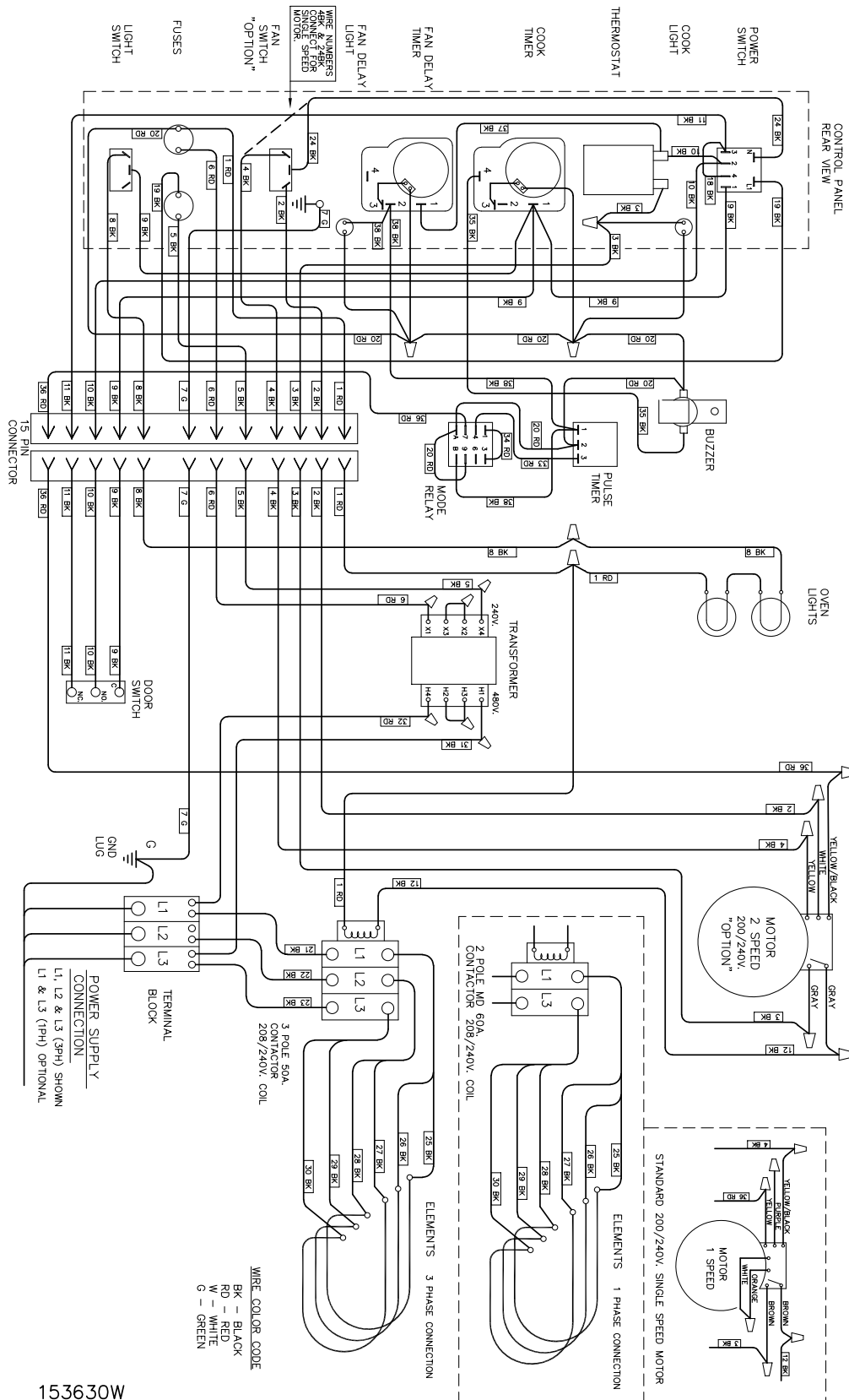
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# 6/13 CONVECTION OVEN “V” 440/480 V



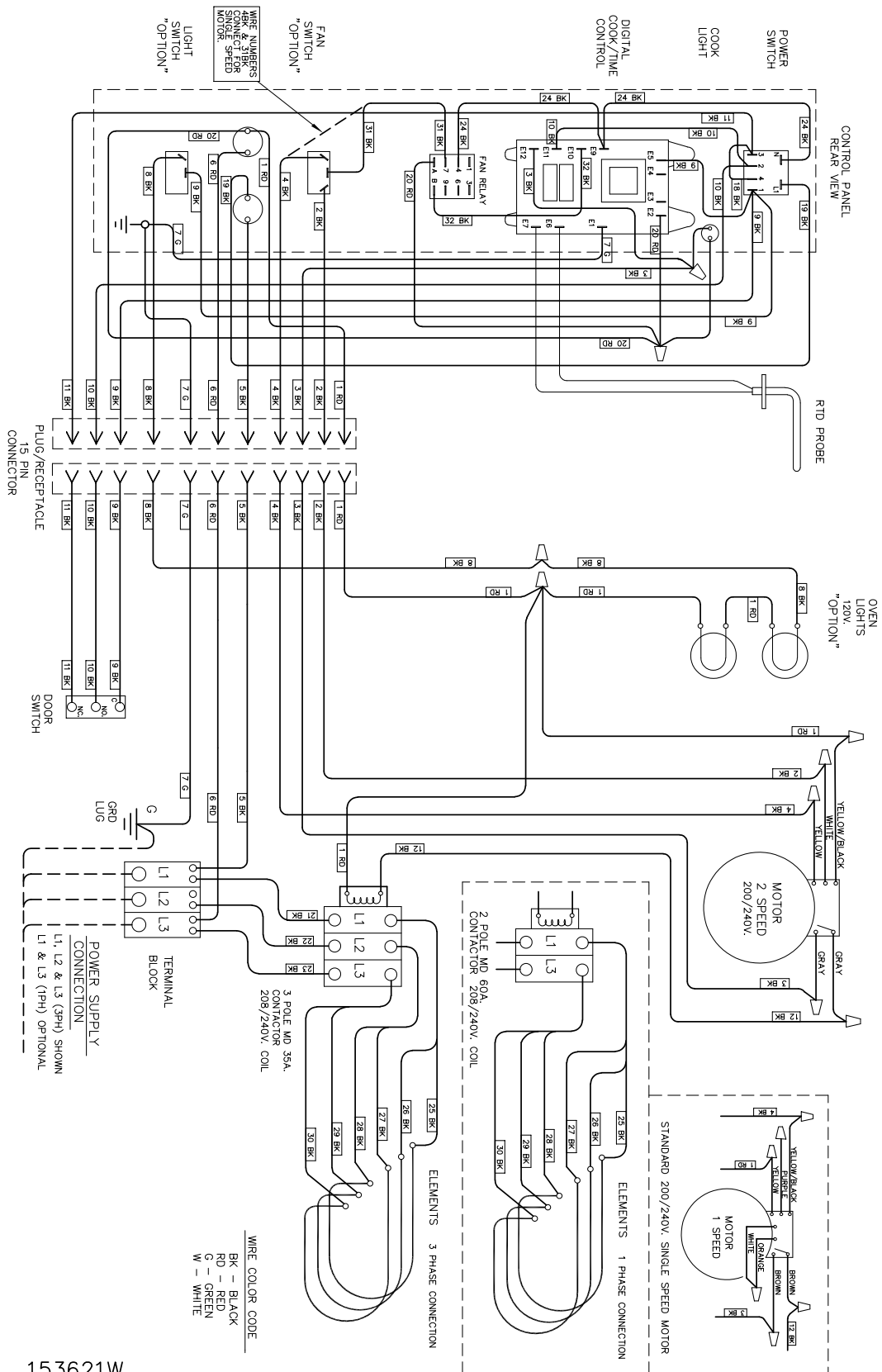
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# 6/13 CONVECTION OVEN "V" PULSE 440/480 V



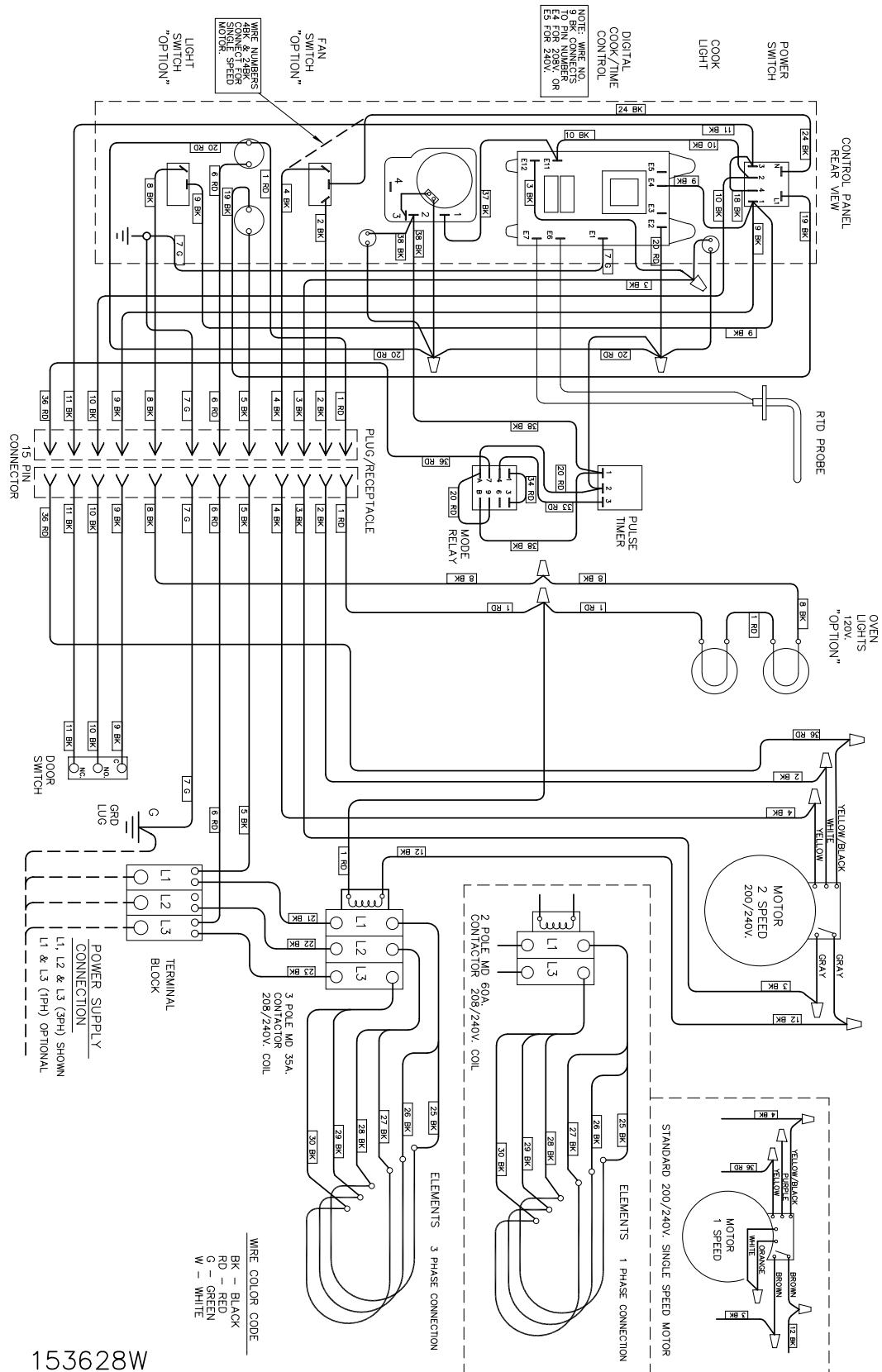
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# 6/13 CONVECTION OVEN "X" 208/240 V



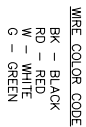
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# 6/13 CONVECTION OVEN "X" PULSE PLUS 208/240 V

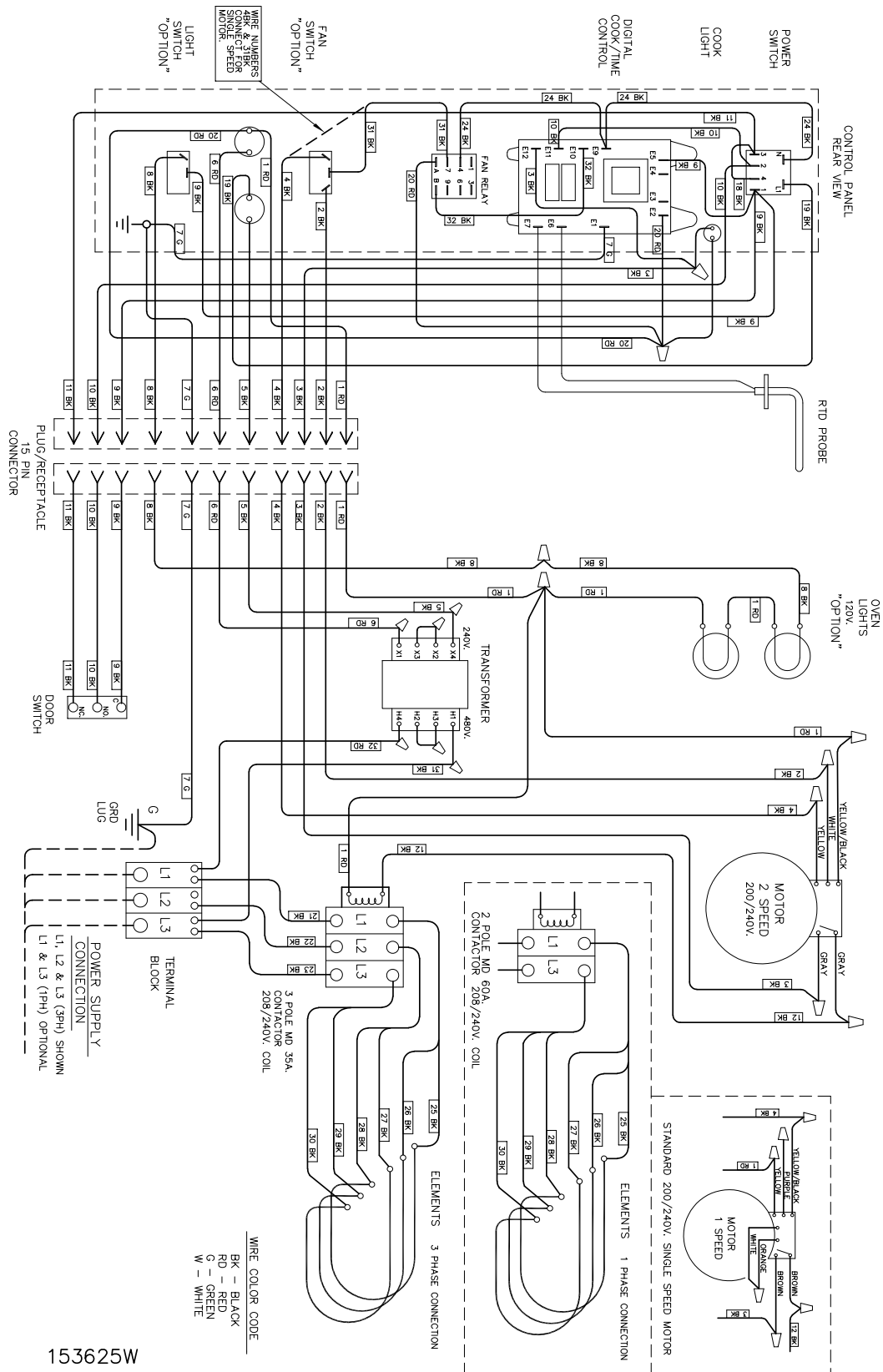


153628W

## 5/9 CONVECTION OVEN "X" COM6000, 208/240 V

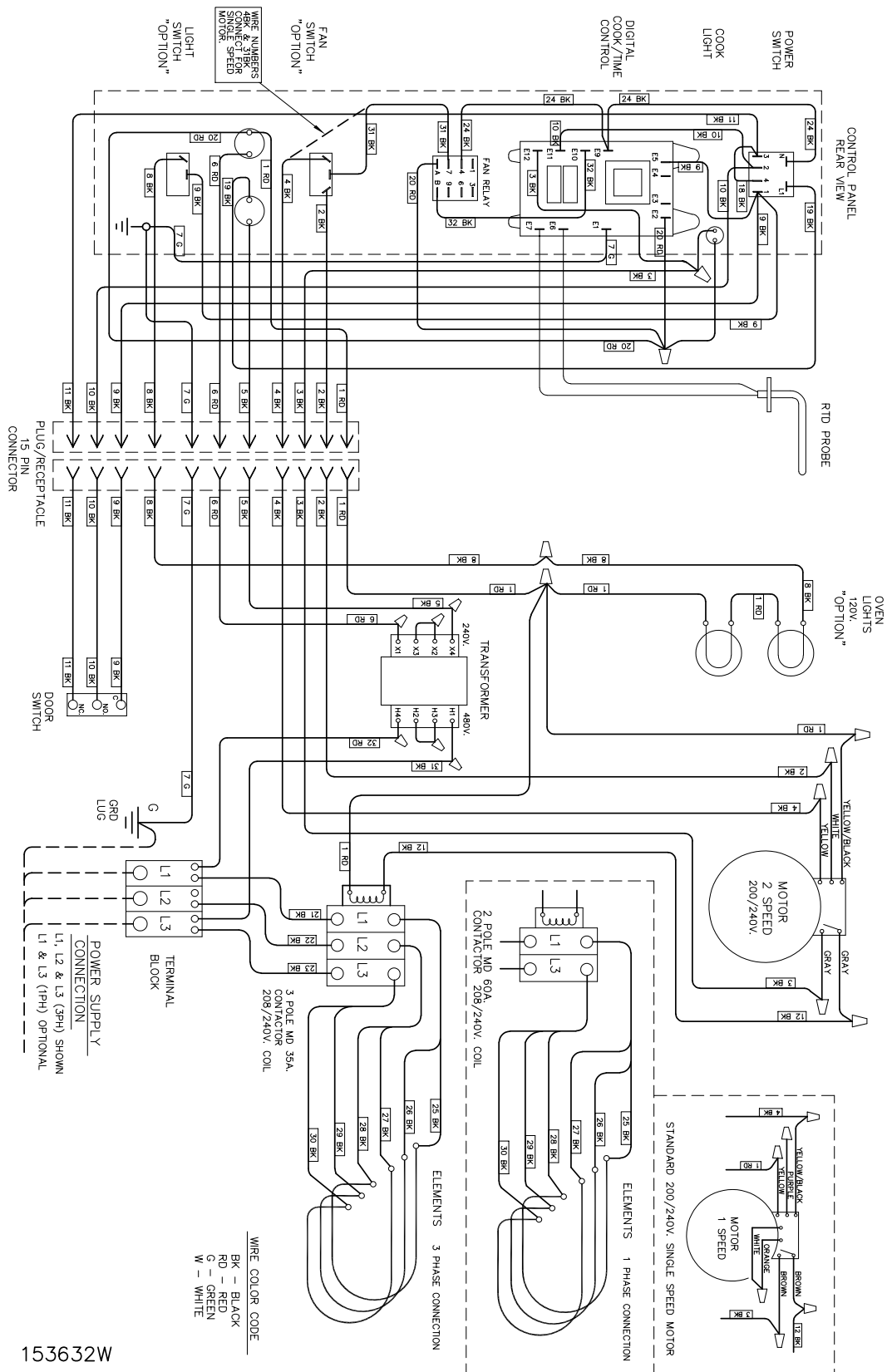


# 6/13 CONVECTION OVEN "X" 440/480 V



153625W

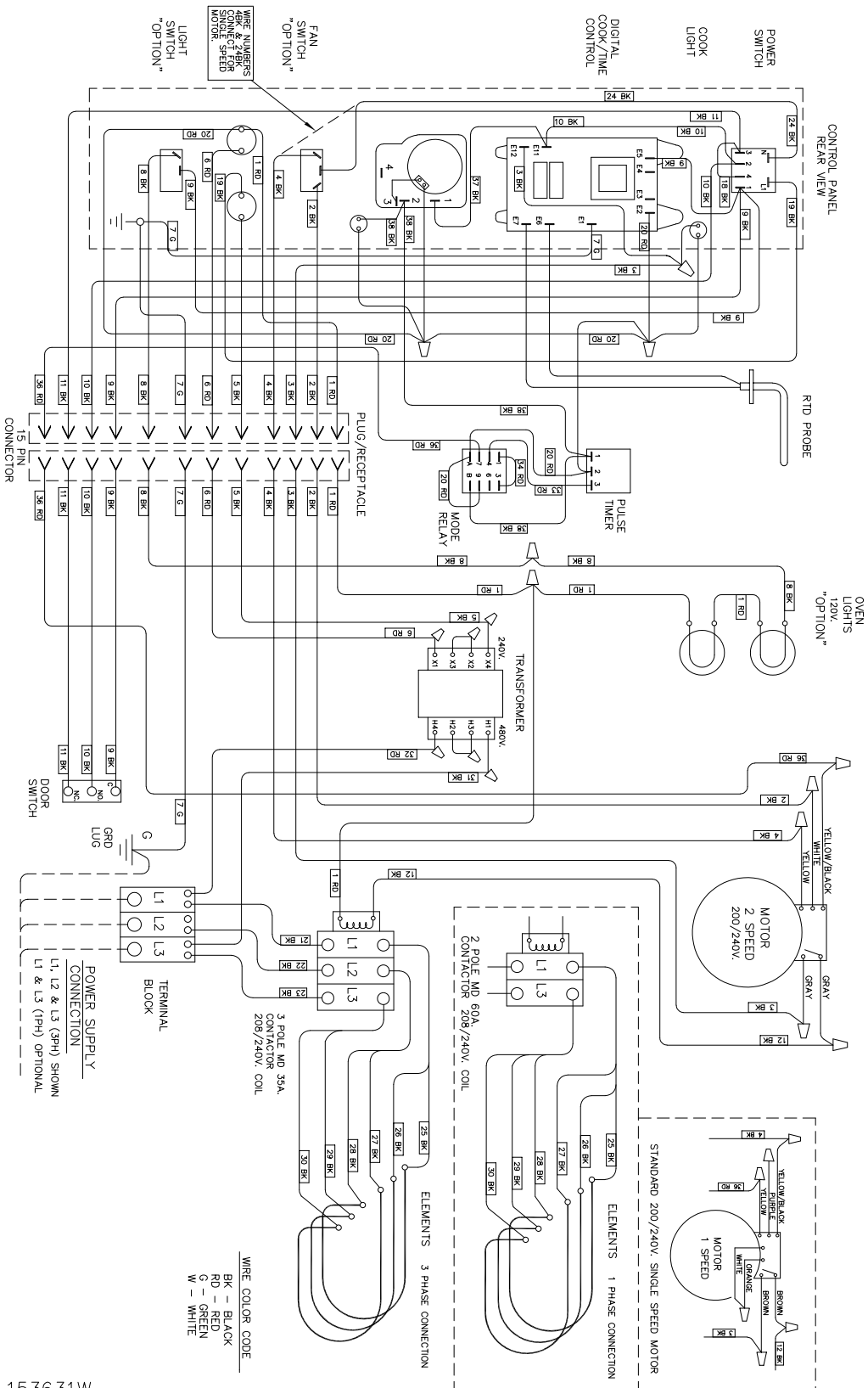
## 6/13 CONVECTION OVEN "X" PULSE 440/480 V



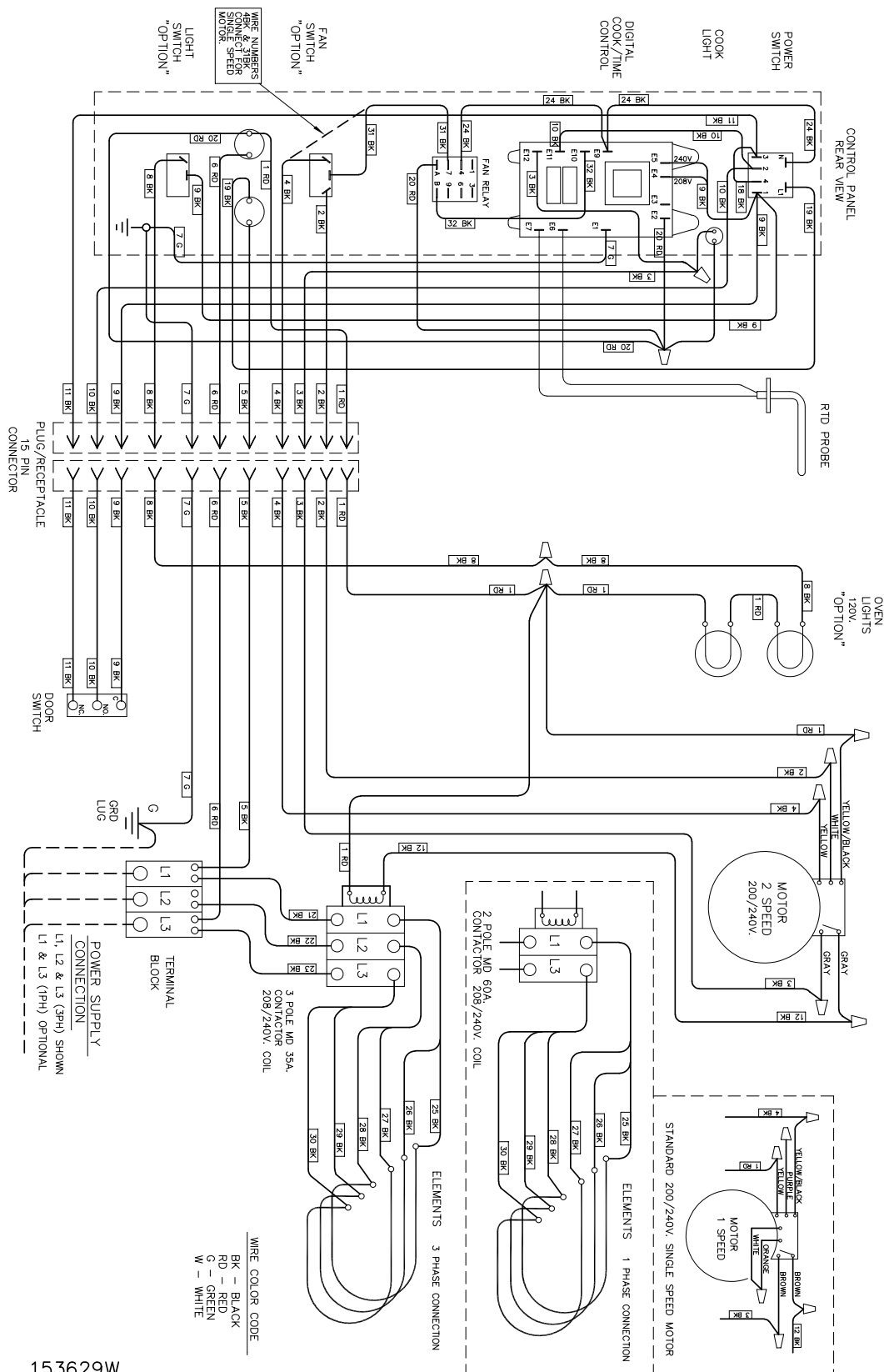
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## 6/13 CONVECTION OVEN “X” PULSE PLUS 440/480 V

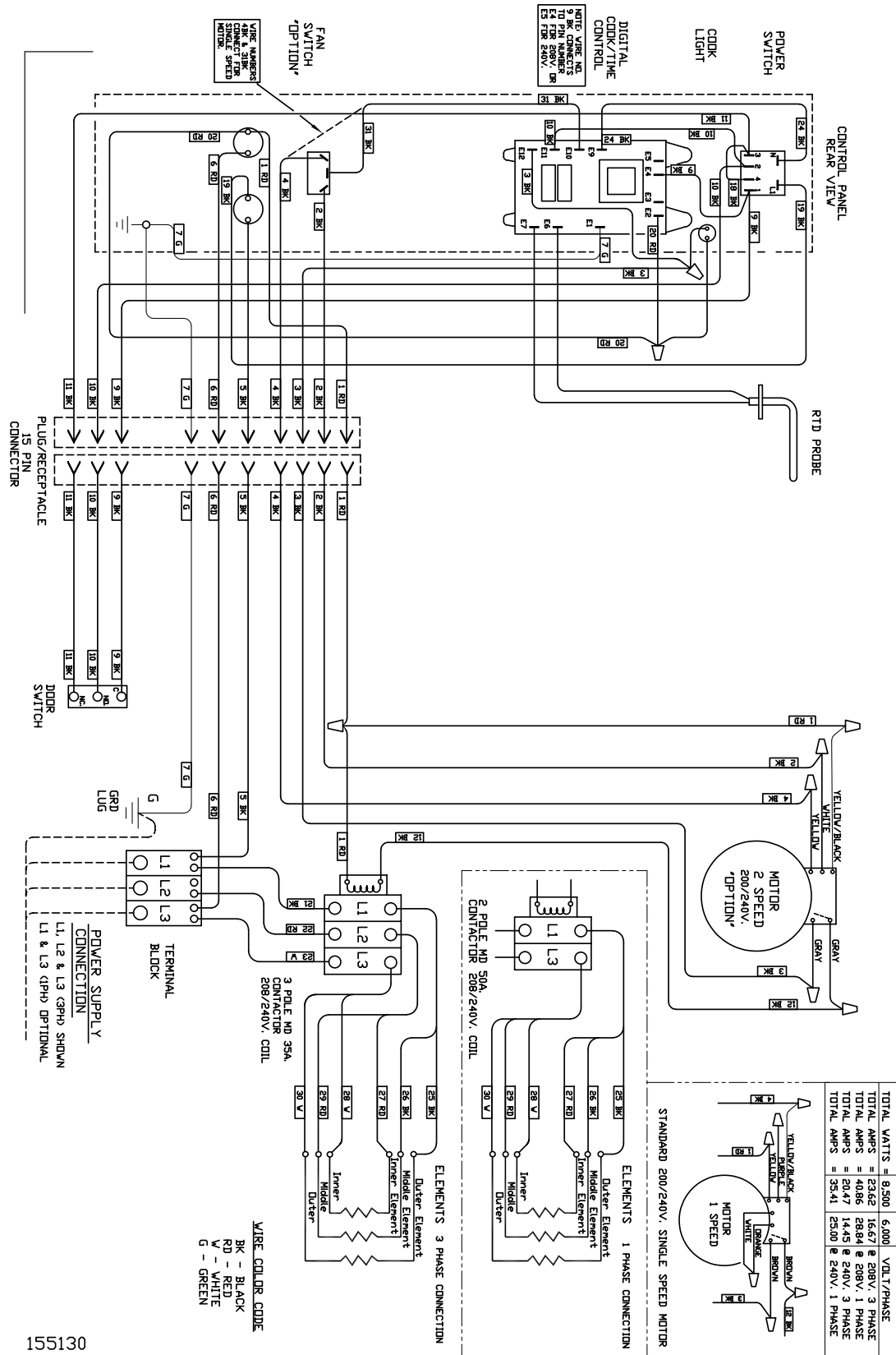


# 6/13 CONVECTION OVEN "X" PULSE PLUS 440/480 V

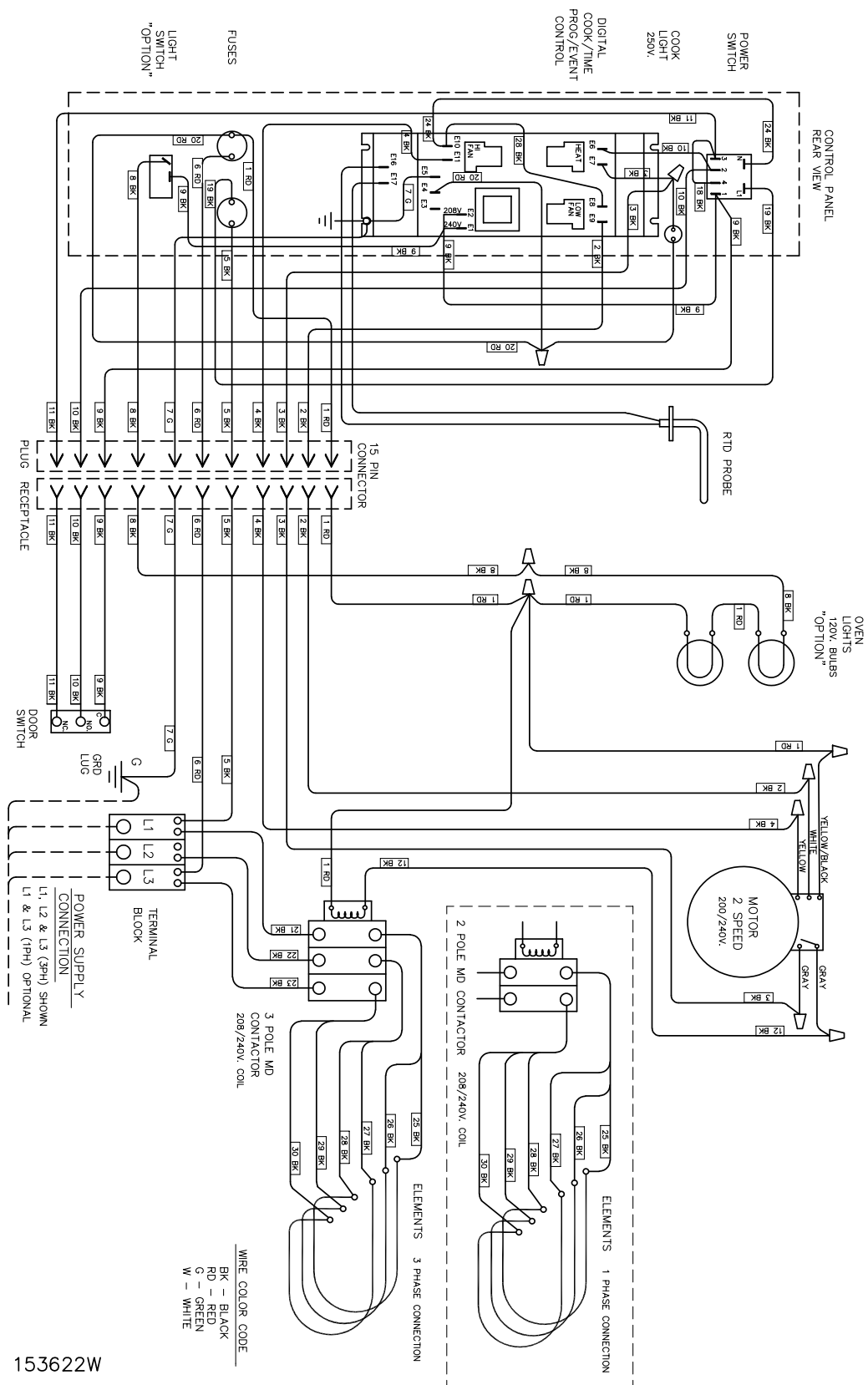


153629W

**6/13 CONVECTION OVEN**  
**“W” OPTION, COM6000, 208/240 VAC. 1PH OR 3PH**

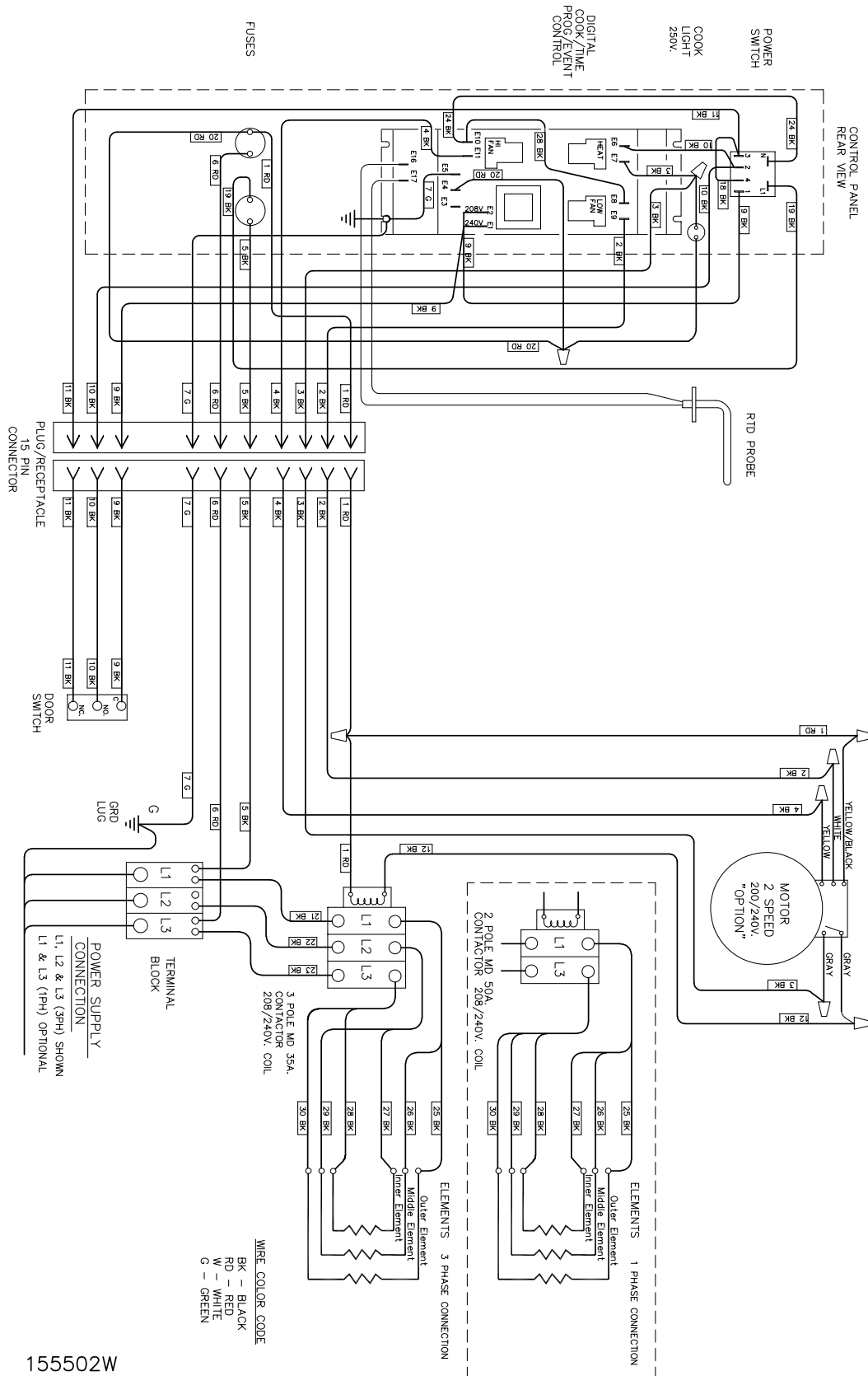


# 6/13 CONVECTION OVEN "Z" "ZX" 208/240 V



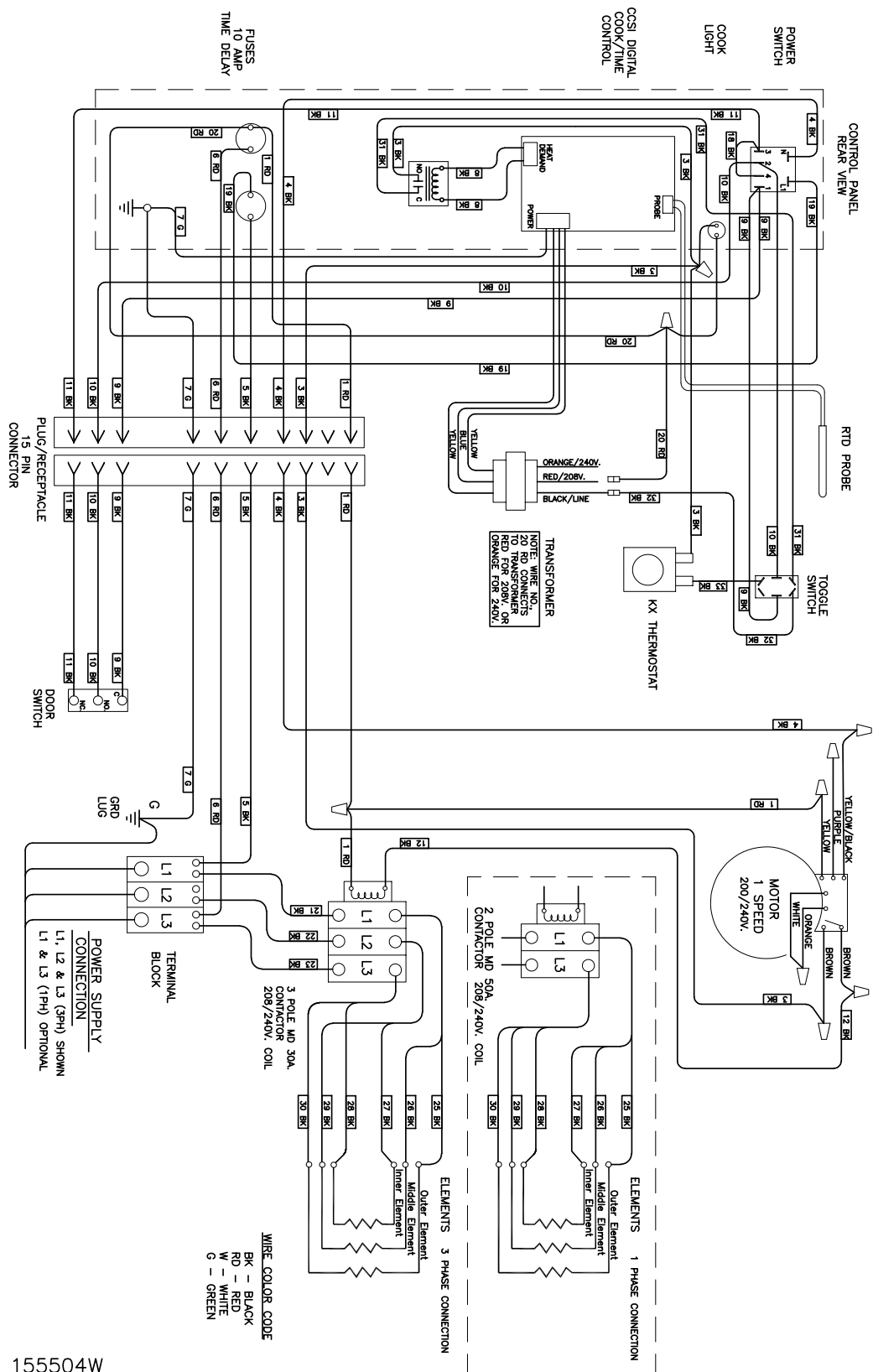
153622W

## 5/9 CONVECTION OVEN “Z” “ZX” 208/240 V



155502W

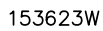
6/13 CONVECTION OVEN  
“Z” “ZX” 440/480 V



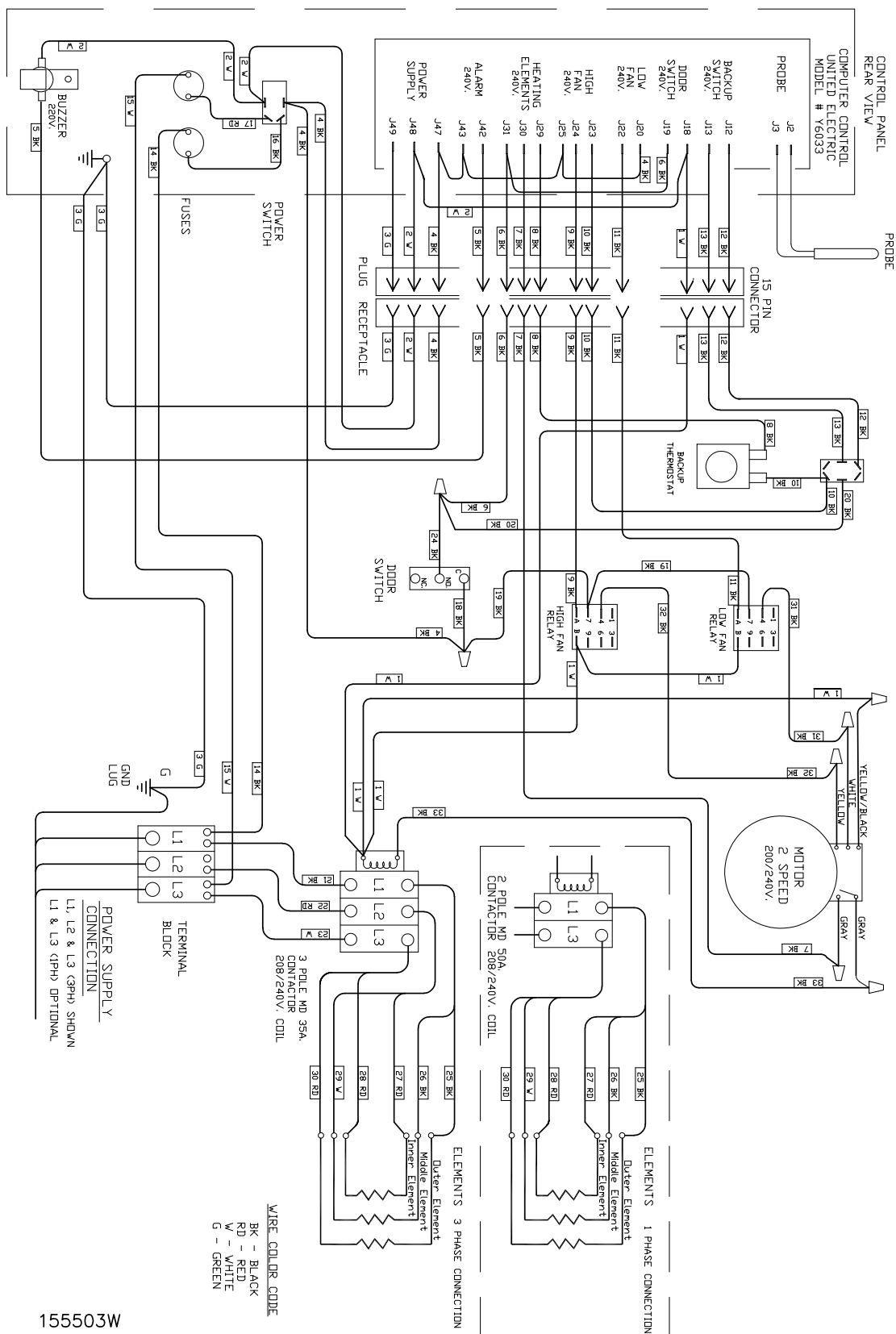
155504W

WIRE COLOR CODE

BK - BLACK  
RD - RED  
W - WHITE  
G - GREEN



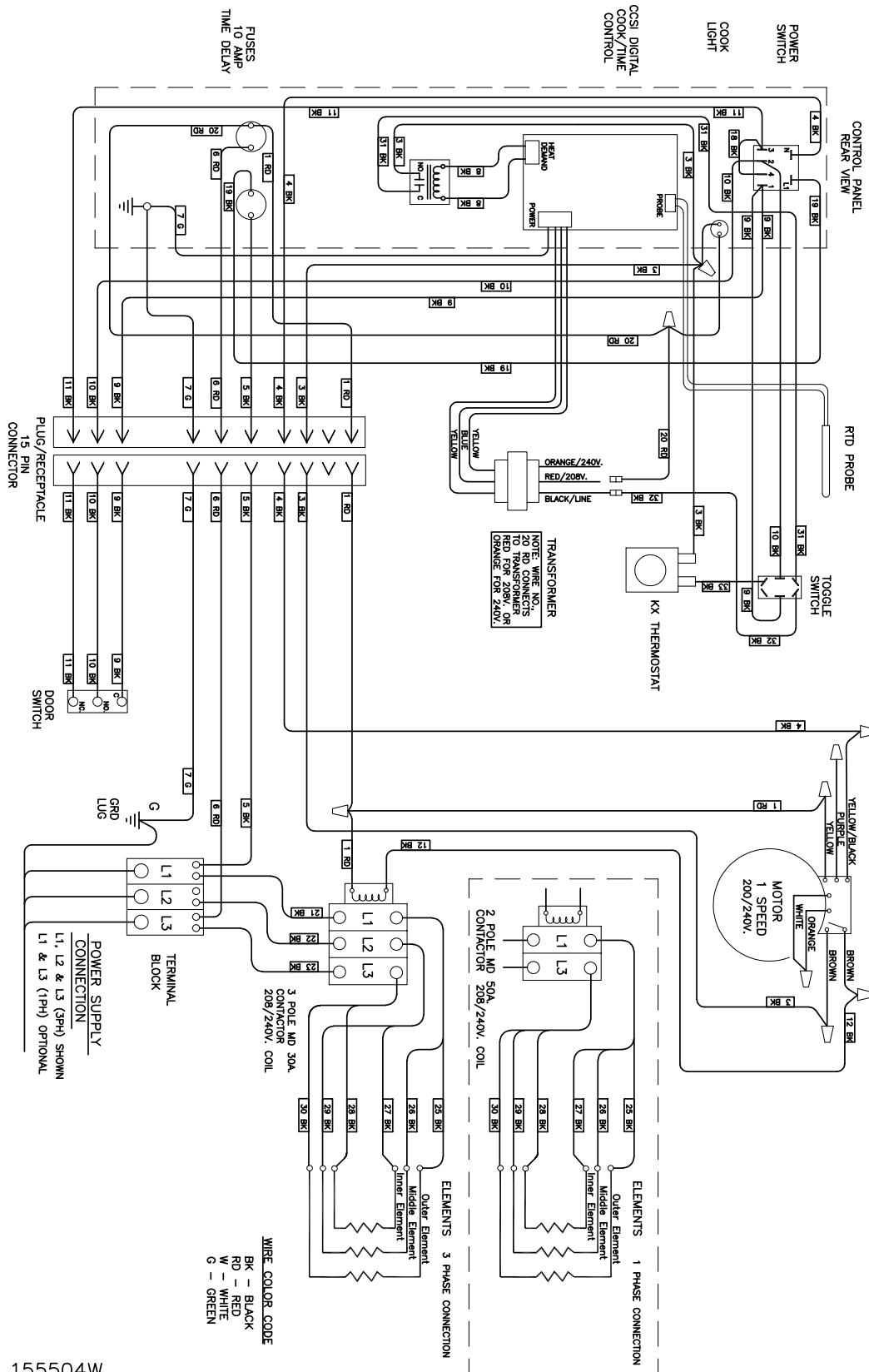
## 5/9 CONVECTION OVEN “ZZ” W/BACKUP 208/240 V



155503W



## 5/9 CONVECTION OVEN CCSI BACKUP TSTAT 208/240 V



155504W

## NOTES

## NOTES

## CUSTOMER ASSISTANCE

To aid in reporting this unit in case of loss or theft, please record below the model number and serial number located on the unit. We also suggest you record all the information listed and retain for future reference.

MODEL NUMBER _____	SERIAL NUMBER _____
DATE OF PURCHASE _____	
DEALER _____	TELEPHONE _____
SERVICER _____	TELEPHONE _____

### NORTH AMERICA & LATIN AMERICA

**Duke Manufacturing Company**  
 2305 N. Broadway  
 St. Louis, MO 63102  
 Phone: 314-231-1130  
 Toll Free: 1-800-735-3853  
 Fax: 314-231-5074

### UK & IRELAND

**Duke Mfg UK**  
 Duke House  
 Unit 10, Greendale Business Park  
 Woodbury Salterton  
 Exeter  
 Devon - UK EX5 1EW  
 Tel: 01395 234140  
 FAX: 01395 234154

### CONTINENTAL EUROPE

**EU Headquarter Office**  
 Duke Manufacturing C.R. s.r.o.  
 Prologis Park D1 West  
 Building 4  
 Zdebradska 92  
 Ricany-Jazlovice, 251 01  
 Czech Republic  
 Phone: 42 (0) 257-741-033  
 Fax: 42 (0) 257-741-039

### ASIA

**Asia Office**  
 Duke Food Service Equipment  
 Company Limited  
 1F, Building #17-2  
 658 Nong Jin Zhong Road  
 Shanghai 200335 China  
 Phone: 86 21 6876 9272  
 FAX: 86 21 33600628

### TO ACCESS INTERNET: [www.dukemfg.com](http://www.dukemfg.com)

Please provide the following information when you write or call: model number, serial number, date of purchase, your complete mailing address (including zip code), and description of the problem.



**"Your Solutions Partner"**

## **Duke Manufacturing Company**

**2305 N. Broadway  
St. Louis, MO 63102  
Phone: 314-231-1130  
Toll Free: 1-800-735-3853  
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www.dukemfg.com**

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Ricany-Jazlovice, 251 01  
Czech Republic  
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**Duke Mfg UK  
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Unit 10, Greendale Business Park  
Woodbury Salterton  
Exeter  
Devon - UK EX5 1EW  
Tel: 01395 234140  
FAX: 01395 234154**

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Company Limited  
1F, Building #17-2  
658 Nong Jin Zhong Road  
Shanghai 200335 China  
Phone: 86 21 6876 9272  
FAX: 86 21 33600628**

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