

Electrical Shock Hazard Disconnect power before servicing. Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

DIAGNOSTICS

Before servicing, perform the following checks:

- The most common cause for control failure is corrosion on connectors. Therefore, disconnecting and reconnecting wires will be necessary throughout test procedures.
- All tests/checks should be made with a VOM or DVM having a sensitivity of 20,000 ohms per volt DC or greater.
- Check all connections before replacing components, looking for broken or loose wires, failed terminals, or wires not pressed into connectors far enough.
- Resistance checks must be made with power cord unplugged from outlet, and with wiring harness or connectors disconnected.

PROBLEM: Bake Temperature Needs Adjustment

- Press BAKE pad for 5 seconds. The default temp. 0° or a previously entered offset temperature will show in the Temperature Display.
- 2. Select which oven is to be adjusted by pressing the UPPER OVEN or LOWER OVEN pad.
- **3.** Press the TEMP pad "up" arrow (→) **to increase** the temperature in 10°F or 5°C increments.

Press the TEMP pad "down" arrow (\overleftrightarrow) to decrease the temperature in 10°F or 5°C increments.

NOTE: Maximum offset temperature adjustment is $\pm 30^{\circ}$ F or $\pm 15^{\circ}$ C.

4. Press the START pad to save the temp. adjustment.

Fahrenheit (°F) to Celsius (°C) Conversion

The default is Fahrenheit (°F).

- Press the BROIL pad for 5 seconds. The temperature will be displayed in degrees Celsius indicated by the "C" in the temperature display.
- 2. To return the display to degrees Fahrenheit press the BROIL pad again for 5 seconds. "F" will show in the temperature display.

IMPORTANT

Electrostatic Discharge (ESD) Sensitive Electronics

ESD problems are present everywhere. ESD may damage or weaken the electronic control assembly. The new control assembly may appear to work well after repair is finished, but failure may occur at a later date due to ESD stress.

Use an anti-static wrist strap. Connect wrist strap to green ground connection point or unpainted metal in the appliance -OR-

Touch your finger repeatedly to a green ground connection point or unpainted metal in the appliance.

- Before removing the part from it's package, touch the anti-static bag to a green ground connection point or unpainted metal in the appliance.
- Avoid touching electronic parts or terminal contacts; handle electronic control assembly by edges only.
- When repackaging failed electronic control assembly in anti-static bag, observe above instructions.

Programming the Cavity Size

When replacing the electronic control, be sure to program the cavity size:

- Within 60 seconds of power up, press the following touchpads: LOWER OFF, UPPER OVEN, BAKE, TEMP DOWN, TIMER OFF, MINUTE DOWN, START, CLOCK, LIGHT.
- 2. Size is shown in display "ID 30".
- **3.** Press CLOCK pad until correct size is displayed.
- 4. Press CANCEL.
- **5.** Press and hold LOWER OFF pad for 5 seconds to verify programming.

NOTES:

- Always disconnect power before touching internal parts of the oven!
- Upon replacement, immediately return old electronic oven control using the mailing label supplied with each new control.
- For double ovens, the failure code is displayed on the side of the display that corresponds to the oven with faulty part (upper oven = left side of display).

FAILURE/ERROR DISPLAY CODES

FAULT Code	ERROR CODE	CODE Explanation	RECOMMENDED REPAIR PROCEDURE			
FO		Default F code - no failure	Will only be displayed if user presses and holds "UPPER OFF" key for 5 seconds and there is no pre-existing fault. Press CANCEL to clear display.			
F1	All E Codes	Electronic control malfunction	Replace control.			
	E0	Key held down too long, or key is shorted	1. Check keypad connector for firm connection.			
F2	E1	Keypad keytail not connected	 Press CANCEL. If error code returns after 60 seconds, replace keypad. Replace control. 			
	E5 E6	CANCEL key drive line open				
F3	E0	Temperature sensor opened				
	E1	Temperature sensor shorted	 Check sensor connection. Measure sensor resistance (1080Ω at 70°F [21°C]. Add 2Ω per degree If resistance is not valid, replace sensor. If sensor resistance and connections are good, then check for 			
	E2	Oven temp too high - over 575°F (301°C) in COOK mode				
	E3	Oven temp too high - over 950°F (510°C) in CLEAN mode	welded-closed relays on the control.			
F5	EO	Door is open, but latch is locked (condition exists when door switch is closed indicating an open door, and latch switch is closed indicating a locked door)	 Check the latch assembly: latch arm pivot joint, arm/solenoid connection, solenoid spring, and spring washer. Check the Latch Solenoid: Check for firm electrical connections. Disconnect the two wires from the solenoid and measure the resistance of 			
	E1	Self-clean latch will not lock	the solenoid. A small resistance (approx. 175 Ω) is normal. If the solenoid			
	E7	Self-clean latch will not unlock	3. Check the Latch Switch. Disconnect it and use a continuity tester: - Door latched = switch closed, continuity should read $\Omega\Omega$. - Door unlatched = switch open, continuity should read $\Omega\Omega$. 4. Check Door Open/Closed Switch. Disconnect it and use a continuity tester: - Door open = switch closed, continuity should read $\Omega\Omega$. - Door closed = switch open, continuity should read $\Omega\Omega$. - Door closed = switch open, continuity should read $\Omega\Omega$. 5. Check power and element connections.			

WIRE HARNESS SCHEMATIC

NOTES:

- When replacing the electronic control, be sure to program the cavity size. See "Programming the Cavity Size" on page 1.
- Dots indicate connections or splices.
- Circuit shown in STANDBY/OFF mode with oven door closed.





OVEN STRIP CIRCUITS

The following individual circuits are for use in diagnosis. Before starting diagnosis, check the line voltage and for blown fuses.

NOTES:

- Pin numbers and wire colors shown in parentheses () denote lower oven connections.
- Pins denoted as * see wire harness schematic on page 3 for routing configuration from relays to L1.



UPPER OVEN COMPONENTS



LOWER OVEN COMPONENTS



RELAY LOGIC UPPER AND LOWER OVEN

		_	,	,	,	
MODES	BAKE	BROIL & "B"	COMILS "BR"	OVIT	BLOW	
OFF	0	0	0	Ø	Ø	
PREHEAT-BAKE	+	+	0	Ø	Х	
BAKE 24", 27"	+	+	0	Ø	Х	
BAKE 30"	X	+	0	Ø	X	
BROIL 24"	0	+	0	Ø	X	
BROIL 27", 30"	0	X	0	Ø	X	
PREHEAT-CONV	X	+	Х	Ø	X	
CONV	+	+	Х	Ø	X	
PREHEAT-CLEAN	+	+	0	0	X	
CLEAN	X	+	0	0	Х	1

RELAY LOGIC KEY

- 0 OFF
- X ON
- +-CYCLING
- Ø ON OR OFF

OVEN SHUTDOWN THERMAL FUSE

The oven shutdown thermal fuse is located at the back of the oven. It will shut down the elements if the temperature at the back of the oven exceeds component limits.



Verify that the oven shutdown thermal fuse is OK.

To replace this thermal fuse, refer to chart at right for correct part number.

LOWER OVEN					
COMPONENTS	FRONT/REAR Serviceable	CHECK POINTS	RESULTS		
Door Switch	Front	P23-7 (BR/W) to P23-1 (TAN)	Door Open = Closed Circuit Door Closed = Open Circuit		
Door Lock Solenoid	Front	P25-3 (Y/W) to P25-4 (GY/W)	80 Ω to 100 Ω		
Oven Temperature Sensor	Front	Sensor P23-5 (V) to P23-6 (GN)	1080 Ω @ 70°F (21°C)		
Console Blower	Rear	P27-2 (GY) to Neutral (W)	10 Ω to 15 Ω		
Oven Shutdown Thermal Fuse	Rear	P26-2 (OR) or P26-4 (R) to Red Wire at Terminal Block	Closed Circuit		
Bake Element	Front	P26-4 (R) to Red Wire at Terminal Block	25 Ω to 30 Ω		
Broil Element	Front	P26-2 (OR) to Red Wire at Terminal Block	45 Ω to 55 Ω		
Latch Switch	Front	P23-8 (BU/W) to P23-1 (TAN)	Door Unlocked = Open Circuit Door Locked = Closed Circuit		

Thermal Fuse Part No.	Opening Temp. °F	Reclose Temp. °F	Marking (with Black Letters)
4452223	266°F ± 10°F		Pink/Wht Stripe
4451442	248°F+18°F to 248°F - 0°F		Yellow/Wht Stripe
4450934	338°F ± 11.7°F		Red
4450334	275°F ± 11.7°F	–31°F MAX	Orange/Wht Stripe
4450250	320°F ± 11.7°F	10.00	Blue
4450249	302°F ± 11.7°F		Green/Wht Stripe
8300802	$230^{\circ}F + 18^{\circ}F$ to $230^{\circ}F - 0^{\circ}F$		Blue/Wht Stripe

UPPER OVEN				
COMPONENTS	FRONT/REAR Serviceable	CHECK POINTS	RESULTS	
Door Switch	Front	P23-2 (BR) to P23-1 (TAN)	Door Open = Closed Circuit Door Closed = Open Circuit	
Door Lock Solenoid	Front	P25-1 (Y) to P25-2 (GY)	80 Ω to 100 Ω	
Oven Temperature Sensor	Front	Sensor P23-4 (V) to P23-6 (GN)	1080 Ω @ 70°F (21°C)	
Console Blower	Rear	P24-5 (GY) to Neutral (W)	10 Ω to 15 Ω	
Oven Shutdown Thermal Fuse	Rear	P18-4 (R) or P18-1 (R) to Red Wire at Terminal Block	Closed Circuit	
Bake Element	Front	P18-4 (R) to Red Wire at Terminal Block	25 Ω to 30 Ω	
Broil Element	Front	P18-1 (OR) to Red Wire at Terminal Block	45 Ω to 55 Ω	
Convection Fan Motor	Rear	P24-6 (OR) to Neutral (W)	8 Ω to 12 Ω	
Control Panel Thermal Fuse	Front	L1 (BK) to P24-3 (BK)	Closed Circuit	
Latch Switch	Front	P23-3 (BU) to P23-1 (TAN)	Door Unlocked = Open Circuit Door Locked = Closed Circuit	
Control Power	Front	Primary Winding P16-5 (R) to P16-7 (R)	75 Ω to 95 Ω	
Transformer		Secondary Winding P16-2 (BU) to P16-3 (BU)	2 Ω to 4 Ω	

MANUFACTURED UNDER ONE OR MORE OF THE FOLLOWING UNITED STATES PATENTS:

4,102,322 4,364,589 4,467,184 OTHER PATENTS PENDING