FOR SERVICE TECHNICIAN'S USE ONLY

Tech Sheet **Do not discard**

⚠ DANGER

Electrical Shock Hazard

Only authorized technicians should perform diagnostic voltage measurements.

After performing voltage measurements, disconnect power before servicing.

Failure to follow these instructions can result in death or electrical shock.

⚠ WARNING

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.

Voltage Measurement Safety Information

When performing live voltage measurements, you must do the following:

- **Verify the controls are in the off position so that the appliance does not start when energized.**
- **Allow enough space to perform the voltage measurements without obstructions.**
- **Keep other people a safe distance away from the appliance to prevent potential injury.**
- **Always use the proper testing equipment.**
- **After voltage measurements, always disconnect power before servicing.**

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 antistatic 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 its package, touch the antistatic 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 antistatic bag, observe above instructions.

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Diagnostics

Unplug oven or disconnect power before performing the following checks:

- A potential cause of a control not functioning is corrosion on connections. Observe connections and check for continuity with an ohmmeter.
- All tests/checks should be made with a VOM or DVM having a sensitivity of 20,000Ω 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. Damaged harness must be entirely replaced. Do not rework a harness.
- Resistance checks must be made with power cord unplugged from outlet, and with wiring harness or connectors disconnected.

To Enter Diagnostics Mode:

Before proceeding with any corrective action, perform the following steps to enter the Diagnostics Mode.

1. Enter Diagnostics Mode by pressing CANCEL>CANCEL>START.
2. If control does not enter Diagnostics, repeat Step 1.

Single Oven Models

After entering the Diagnostics Mode, the display will indicate the following:

- "Test On."
- Oven sensor temperature reading.
- The status of the latch and door switches as follows:

Two leftmost digits of clock display	Latch Switch	Door Switch
U0	Unlocked	Closed
U1	Unlocked	Open
L0	Locked	Closed
L1	Locked	Open

Double Oven Models

After entering the Diagnostics Mode, the display will indicate the following:

- Service indicator "SER."
- "Test On" will display in both the upper and lower displays.
- Oven sensor temperature readings for both the upper and lower ovens.
- The status of the latch and door switches as follows:

Two leftmost digits of clock display	Latch Switch	Door Switch
U0	Unlocked	Closed
U1	Unlocked	Open
L0	Locked	Closed
L1	Locked	Open

Diagnostics Mode

From the Test Mode Menu, it is possible to select one of these options:

Test Mode: Display temperature sensor readings and latch and door switch status (both ovens for double oven models). In Test Mode, it is possible to switch the relays on and off.

Usage Codes: Display usage history.

Relay Activation: Manually activate each relay.

Software Version: View the software version of the product.

Display Screen: View all of the ICONs available.

Control Reset: Reset the control.

Fault Display Reset: Delete displayed error codes.

Auto Test Mode: Run self test.

Engineering Mode: Display temperature sensor readings and latch and door switch status while running a cooking or self-clean mode.

Oven Temperature Calibration: Calibrate the oven temperature (both ovens for double oven models).

NOTE: The Oven Temperature Calibration is selected through the Settings Menu.

General Procedure: Usage Codes

1. Plug in oven or connect power.
2. Enter Diagnostics Mode by pressing CANCEL>CANCEL>START.
3. Press the 3 keypad until "Usage" appears in the display. Then press START. Press CANCEL anytime to exit.
4. Press the 3 keypad to step through the following time usage (time usage is indicated in the "Hours" display):

   Total oven usage

   Bake time usage

   Broil time usage

   Convection time usage

   Clean cycle usage
5. All usage times can be reset to "0" by pressing the START TIME or DELAY START keypad.
6. Press CANCEL to exit.

General Procedure: Engineering Mode

1. Plug in oven or connect power.
2. Enter Diagnostics Mode by pressing CANCEL>CANCEL>START.
3. Press the 3 keypad until "Engineering Mode" appears in the display. Then press START. Press CANCEL any time to exit.
4. Press the 3 keypad to turn the Engineering Mode On (press the 3 keypad a second time to turn the Engineering Mode Off).

   While in the Engineering Mode, it is possible to run the Cooking and Clean modes while checking the sensors status.

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5. The status of the latch and door switches are displayed as follows:

Two leftmost digits of clock display	Latch Switch	Door Switch
U0	Unlocked	Closed
U1	Unlocked	Open
L0	Locked	Closed
L1	Locked	Open

6. Press CANCEL to exit.

General Procedure: Oven Temperature Calibration

Single Oven Models - Temperature Calibration

1. Plug in oven or connect power.
2. Press SETTINGS until "TEMP CALIB" is displayed.
3. Press START. The current offset, if any, is displayed in a temperature range from -30°F (-18°C) to 30°F (18°C).
4. Press the 1 keypad to increase the temperature in 5°F (3°C) increments.
5. Press the 2 keypad to decrease the temperature in 5°F (3°C) increments.
6. Press START to activate the desired temperature.
   NOTE: If START is not pressed within 1 minute, the adjustment will be ignored.

Double Oven Models - Temperature Calibration

1. Plug in oven or connect power.
2. Press SETTINGS until "TEMP CALIB" is displayed.
3. Press START. The lower display will display the oven that is selected.
   NOTE: Press the 1 keypad to cycle between the upper and lower ovens.
4. After the upper or lower oven is selected, press START a second time. The current offset, if any, is displayed in a temperature range from -30°F (-18°C) to 30°F (18°C).
5. Press the 1 keypad to increase the temperature in 5°F (3°C) increments.
6. Press the 2 keypad to decrease the temperature in 5°F (3°C) increments.
7. Press START to activate the desired temperature.
   NOTE: If START is not pressed within 1 minute, the adjustment will be ignored.
8. Repeat steps 4 through 7 to program the remaining oven.

General Procedure: Relay Activation

1. Plug in oven or connect power.
2. Enter Diagnostics Mode.
3. The control will automatically enter the Test Mode. Press CANCEL at any time to exit.

Single Oven Models - Bake relay

1. Press BAKE. "b" will be displayed and, the bake relay will close.
2. Press BAKE a second time. "b" will no longer be displayed, and the bake relay will open.

Double Oven Models - Bake Relay

1. Press UPPER BAKE. "b" will be displayed in the upper display, and the bake relay will close.
2. Press UPPER BAKE a second time. "b" will no longer be displayed, and the bake relay will open.
3. Press LOWER BAKE. "b" will be displayed in the lower display, and the bake relay will close.
4. Press LOWER BAKE a second time. "b" will no longer be displayed, and the bake relay will open.

Single Oven Models - Broil Relay

1. Press BROIL. "r" will be displayed, and the broil relay will close.
2. Press BROIL a second time. "r" will no longer be displayed, and the broil relay will open.

Double Oven Models - Broil Relay

1. Press UPPER BROIL. "r" will be displayed in the upper display, and the broil relay will close.
2. Press UPPER BROIL a second time. "r" will no longer be displayed, and the broil relay will open.
3. Press LOWER BROIL. "r" will be displayed in the lower display, and the broil relay will close.
4. Press LOWER BROIL a second time. "r" will no longer be displayed, and the broil relay will open.

Single Oven Models - Convect Relay

1. Press CONVECT. "c" will be displayed, and the convect relay will close.
2. Press CONVECT a second time. "c" will no longer be displayed, and the convect relay will open.

Double Oven Models - Convect Relay

1. Press UPPER CONVECT. "c" will be displayed in the upper display, and the convect relay will close.
2. Press UPPER CONVECT a second time. "c" will no longer be displayed, and the convect relay will open.

Convection Fan Relay

1. Press the 7 keypad. "H" will be displayed, and the convection fan relay will close.
   NOTE: On double oven models, "H" will be displayed in the upper display.
2. Press 7 keypad a second time. "H" will no longer be displayed, and the convection fan relay will open.

Single Oven Models - Cooling Fan Relay

1. Press the 4 keypad. "CF" will be displayed, and the cooling fan relay will close.
2. Press the 4 keypad a second time. "CF" will no longer be displayed, and the cooling fan relay will open.

Double Oven Models - Cooling Fan Relay

1. Press the 4 keypad. "CF" will be displayed in the upper display, and the upper cooling fan relay will close.
2. Press the 4 keypad a second time. "CF" will no longer be displayed, and the upper cooling fan relay will open.
3. Press the 5 keypad. "CF" will be displayed in the lower display, and the lower cooling fan relay will close.
4. Press the 5 keypad a second time. "CF" will no longer be displayed, and the lower cooling fan relay will open.

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Double Oven Models - Latch Motor Relay

NOTE: Both oven doors must be closed to perform the following test.

1. Press the 1 keypad. The lock icon will start flashing and the relay will close. After latching, the upper display will change from "UO" to "LO," the icon will stop flashing, and the upper latch motor relay will open.
2. Press the 1 keypad a second time. The lock icon will start flashing and the relay will close. After unlatching, the upper display will change from "LO" to "UO" and, the upper latch motor relay will open.
3. Press the 2 keypad. The lock icon will start flashing and the relay will close. After latching, the lower display will change from "UO" to "LO," the icon will stop to flashing, and the lower latch motor relay will open.
4. Press the 2 keypad a second time. The lock icon will start flashing and the relay will close. After unlatching, the lower display will change from "LO" to "UO" and the lower latch motor relay will open.

Single Oven Models - Latch Motor Relay

1. Press the 1 keypad. The lock icon will start flashing, the display will change from "UO" to "LO," and the latch motor relay will close.
2. Press the 1 keypad a second time. The lock icon will turn off, the display will change from "LO" to "UO," and the latch motor relay will open.

General Procedure: Oven Light

1. Plug in oven or connect power.
2. Enter Diagnostics Mode by pressing CANCEL>CANCEL>START. The control will automatically enter the Test Mode. Press CANCEL at any time to exit.
3. Press OVEN LIGHT. "%" will be displayed next to the temperature display and the oven light will turn On.
4. Press OVEN LIGHT a second time. The "%" display and the oven light will turn Off.

   NOTE: The oven light will turn On if an oven door is opened.

General Procedure: Software Version

1. Plug in oven or connect power.
2. Enter Diagnostics Mode by pressing CANCEL>CANCEL>START.
3. Press the 3 keypad until "Version" appears on the display. Then press START. The software version of the control is displayed.
4. Press CANCEL to exit.

General Procedure: Control Reset

NOTE: Use this procedure to delete the "d" displayed after running Auto Test.

1. Plug in oven or connect power.
2. Enter Diagnostics Mode by pressing CANCEL>CANCEL>START.
3. Press the 3 keypad until "Control Reset" appears on display. Then press START.
4. Press START a second time to reset the control.
5. The control display will turn off momentarily and then "control reset" will be displayed.
6. Press CANCEL to exit.

General Procedure: Fault Display Reset

1. Plug in oven or connect power.
2. Enter Diagnostics Mode by pressing CANCEL>CANCEL>START.
3. Press the 3 keypad until "Faults" appears on display. Then press START.
4. Press the 3 keypad to view an error code.
5. Press START TIME or DELAY START to delete the error code.
6. Press the 3 keypad again to view the next error code stored in the control.
7. Press CANCEL to exit.
8. After clearing all errors from the list, turn the oven Off, then wait 10 seconds and turn the oven On.

General Procedure: Auto Test Mode

1. Plug in oven or connect power.
2. Enter Diagnostics Mode by pressing CANCEL>CANCEL>START.
3. Press the 3 keypad until "Auto test" appears on the display. Then press START. The self-test will start automatically.
4. When required, press all keys. You will hear an audible feedback for each key.
5. Press CANCEL twice to continue with self-test.
6. All relays will be tested and you will be prompted to verify if components are working:

   Press the 1 keypad for yes to indicate that the component is working.

   Press the 2 keypad for no to indicate that the component is not working.

   NOTE: If you press the 2 keypad to indicate that a component is not working, the control will display where to check to correct the problem.
7. After the latch motor is tested, you will be prompted to open and close the oven door. The display will be tested, and the control circuit board temperature will be displayed.
8. If the control board is good, a message will tell you that no faults were found and the control board is good.

   NOTE: Do not replace a good board.
9. If problems were detected during the test, the display will indicate how many failures and faults were found.

   Faults are related to the control.

   Failures are related to the electrical components and wiring harness connected to the control.
10. If problems were detected, the control will display where to check to correct the problem.
11. After all problems are displayed, Auto Test will end, and the display will return to the time of day.

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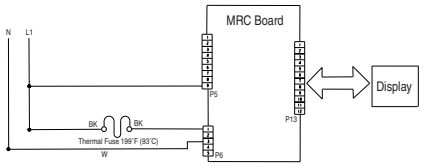
Failure/Error Display Codes

No Display - control is blank	**No Display - control is blank**

SUGGESTED CORRECTIVE ACTION PROCEDURE

1. Check for proper voltage input at P6-1 to P6-3 by completing the following steps.
2. Unplug oven or disconnect power.
3. Connect voltage measurement equipment to P6-1 and P6-3.
4. Plug in oven or reconnect power and measure voltage and confirm voltage reading is 120 VAC.
5. Unplug oven or disconnect power.
6. Check wiring from MRC board to terminal block.
7. Check the thermal fuse resistance. The resistance between pins P6-1 and P5-9 should be 0Ω.
8. Check the display cable connection at connector P13.
9. Replace all parts and panels before operating.
10. Plug in oven or reconnect power.
11. Verify operation is normal. Re-enter the Diagnostics Mode and complete checks.



FAILURE (Leftmost 2 Clock Digits)	ERROR (Rightmost 2 Clock Digits)	LIKELY FAILURE CONDITION
F1 Internal	**E0**	Internal error
	E1	
	E7	
	E9	

SUGGESTED CORRECTIVE ACTION PROCEDURE

NOTE: Cycle power (power Off, then wait 10 seconds before powering On) before starting any test. After powering On, wait 1 minute then verify that the failure appears again.

PROCEDURE: Before proceeding, press CANCEL>CANCEL>START to enter the Diagnostic Mode.

1. Enter the Fault Display Reset menu to verify the error code.
2. Unplug oven or disconnect power.
3. Replace the MRC board.
4. Replace all parts and panels before operating.
5. Plug in oven or reconnect power.
6. Observe for longer than 1 minute.
7. Verify operation is normal. Re-enter the Diagnostics Mode and complete checks.

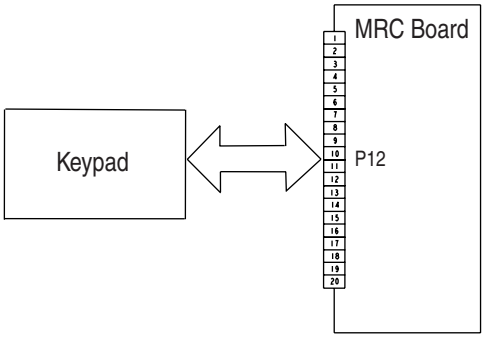
FAILURE (Leftmost 2 Clock Digits)	ERROR (Rightmost 2 Clock Digits)	LIKELY FAILURE CONDITION
F2 Keypad	**E0**	Keypad disconnected
	E1	Stuck key
	E2	Invalid keypad
	E3	Cancel key error

SUGGESTED CORRECTIVE ACTION PROCEDURE

NOTE: Cycle power (power Off, then wait 10 seconds before powering On) before starting any test. After powering On, wait 1 minute then verify that the failure appears again.

PROCEDURE: Before proceeding, press CANCEL>CANCEL>START to enter the Diagnostic Mode.

1. Enter the Fault Display Reset menu to verify the error code.
2. Unplug oven or disconnect power.
3. Check that connector (P12) firmly connects MRC board to the keypad. If it does, go to Step 4. If it does not, reconnect and go to Step 5.
4. Replace the keypad.
5. Replace all parts and panels before operating.
6. Plug in oven or reconnect power.
7. Observe for longer than 1 minute.
8. Verify operation is normal. Re-enter the Diagnostics Mode and complete checks.



F3 Sensors	**EO**	Main sensor open or shorted

SUGGESTED CORRECTIVE ACTION PROCEDURE

NOTE: Cycle power (power Off, then wait 10 seconds before powering On) before starting any test. After powering On, wait 1 minute then verify that the failure appears again.

PROCEDURE: Before proceeding, press CANCEL>CANCEL>START to enter the Diagnostic Mode.

1. Enter the Fault Display Reset menu to verify the error code.
2. Unplug oven or disconnect power.

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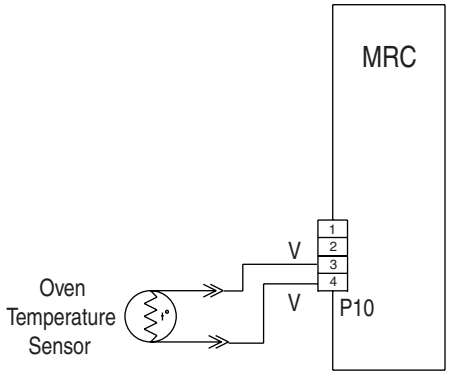
FAILURE (Leftmost 2 Clock Digits)	ERROR (Rightmost 2 Clock Digits)	LIKELY FAILURE CONDITION
F3 Sensors	**EO**	Main sensor open or shorted

SUGGESTED CORRECTIVE ACTION PROCEDURE

3. Disconnect connector P10 and measure the resistance between pins P10-3 and P10-4. It should be 1000 - 1200Ω at 77°F (25°C).
4. Check sensor for short to ground.

   If check on sensor is not correct, replace the cavity sensor (single) or upper cavity sensor (double).
5. Replace all parts and panels before operating.
6. Plug in oven or reconnect power.
7. Observe for longer than 1 minute.
8. Verify operation is normal. Re-enter the Diagnostics Mode and complete checks.



Oven Temperature Sensor
Single/Upper Double

F3 Sensors	**E1**	Main sensor open or shorted (lower cavity on double oven)

SUGGESTED CORRECTIVE ACTION PROCEDURE

NOTE: Cycle power (power Off, then wait 10 seconds before powering On) before starting any test. After powering On, wait 1 minute then verify that the failure appears again.

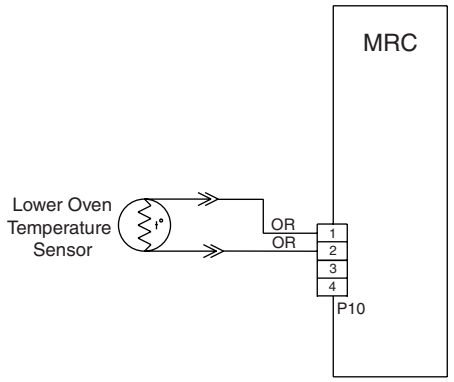
PROCEDURE: Before proceeding, press CANCEL>CANCEL>START to enter the Diagnostic Mode.

1. Enter the Fault Display Reset menu to verify the error code.
2. Unplug oven or disconnect power.
3. Disconnect connector P10 and measure the resistance between pins P10-1 and P10-2. It should be 1000 - 1200Ω at 77°F (25°C).
4. Check sensor for short to ground.

   If checks on sensor is not correct, replace the lower cavity sensor.

FAILURE (Leftmost 2 Clock Digits)	ERROR (Rightmost 2 Clock Digits)	LIKELY FAILURE CONDITION

5. Replace all parts and panels before operating.
6. Plug in oven or reconnect power.
7. Observe for longer than 1 minute.
8. Verify operation is normal. Re-enter the Diagnostics Mode and complete checks.



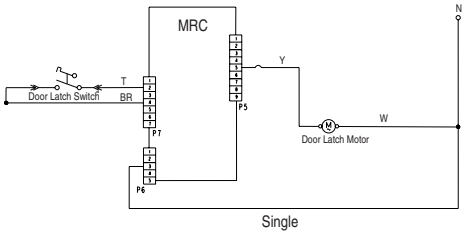
F5 Inputs	**E0**	Door and latch switches do not agree

SUGGESTED CORRECTIVE ACTION PROCEDURE

NOTE: Cycle power (power Off, then wait 10 seconds before powering On) before starting any test. After powering On, wait 1 minute then verify that the failure appears again.

PROCEDURE: Before proceeding, press CANCEL>CANCEL>START to enter the Diagnostic Mode.

1. Enter the Fault Display Reset menu to verify the error code.
2. With the door(s) closed, start the Test Mode and press the 1 keypad for a single oven and the upper door on a double oven. Press the 2 keypad for the lower door on a double oven. Wait 15 seconds minimum and verify that the door(s) latched. If status does not change, go to Step 3. If status changes, go to Step 8.
3. With the door latched, unplug oven or disconnect power.
4. If the single oven door or upper oven door on a double oven did not latch, check for continuity between pins P7-2 and P7-4. If there is no continuity, disconnect connector P5 from appliance manager and measure the resistance between pins P5-5 and P6-3. It should be 500 - 3000Ω at 77°F (25°C).



Single

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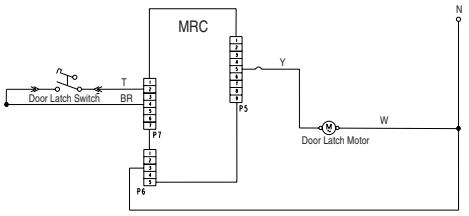
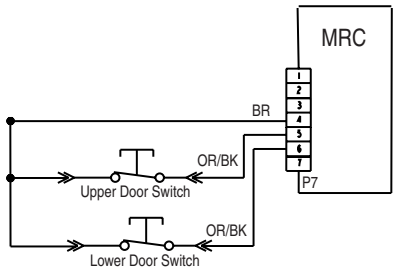
FAILURE (Leftmost 2 Clock Digits)	ERROR (Rightmost 2 Clock Digits)	LIKELY FAILURE CONDITION

5. If the lower door on a double oven did not latch, check for continuity between pins P7-3 and P7-4. If there is no continuity, disconnect connector P5 from appliance manager and measure the resistance between pins P5-6 and P6-3. It should be 500 - 3000Ω at 77°F (25°C).



Single

6. If the resistance check is outside the range, replace the affected door latch and verify that the error is gone.
7. Replace all parts and panels and plug in oven or reconnect power.
8. Press the 1 keypad to unlatch the single/double upper cavity and press the 2 keypad to unlatch the double lower cavity. Open and close the oven door and check door status on the screen. If status does not change, unplug oven or disconnect power.
9. Check for continuity with door open and closed at P7-4 to P7-5 (upper door). Door open = infinite resistance, door closed = zero resistance.



Double

10. Check for continuity with door open and closed at P7-4 to P7-6 (lower door). Door open = infinite resistance, door closed = zero resistance.
11. If either check is not correct, replace the affected door latch and verify that the error is gone.
12. If all checks were correct, replace appliance manager.
13. Replace all parts and panels before operating.
14. Plug in oven or reconnect power.
15. Observe for longer than 1 minute.
16. Verify operation is normal. Re-enter the Diagnostics Mode and complete checks.

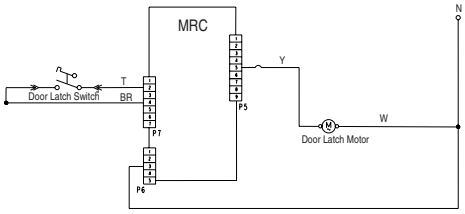
FAILURE (Leftmost 2 Clock Digits)	ERROR (Rightmost 2 Clock Digits)	LIKELY FAILURE CONDITION
F5	**E1**	Latch not operating

SUGGESTED CORRECTIVE ACTION PROCEDURE

NOTE: Cycle power (power Off, then wait 10 seconds before powering On) before starting any test. After powering On, wait 1 minute then verify that the failure appears again.

PROCEDURE: Before proceeding, press CANCEL>CANCEL>START to enter the Diagnostic Mode.

1. Enter the Fault Display Reset menu to verify the error code.
2. With the door(s) closed, start the Test Mode and press the 1 keypad for a single oven and the upper door on a double oven. Press the 2 keypad for the lower door on a double oven. Wait 15 seconds minimum and verify that the door(s) latched. If status does not change, go to Step 3. If status changes, go to Step 7.
3. With the door latched, unplug oven or disconnect power.
4. If the single oven door or upper door on a double oven did not latch, check for continuity between pins P7-2 and P7-4. If there is no continuity, disconnect connector P5 from appliance manager and measure the resistance between pins P5-5 and P6-3. It should be 500 - 3000Ω at 77°F (25°C).



Single

5. If the lower door on a double oven did not latch, check for continuity between pins P7-3 and P7-4. If there is no continuity, disconnect connector P5 from appliance manager and measure the resistance between pins P5-6 and P6-3. It should be 500 - 3000Ω at 77°F (25°C).
6. If the resistance check is outside the range, replace the affected door latch and verify that the error is gone.
7. If all checks were correct, unplug oven or disconnect power and replace appliance manager.
8. Replace all parts and panels before operating.
9. Plug in oven or reconnect power.
10. Observe for longer than 1 minute.
11. Verify operation is normal. Re-enter the Diagnostics Mode and complete checks.

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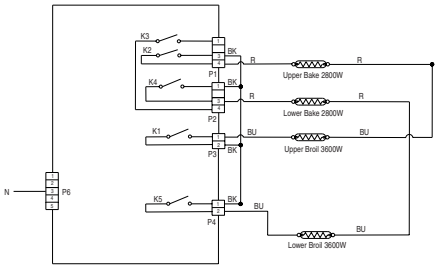
FAILURE (Leftmost 2 Clock Digits)	ERROR (Rightmost 2 Clock Digits)	LIKELY FAILURE CONDITION
F6	E1	Over temperature during cooking
	E2	Over temperature during cleaning

SUGGESTED CORRECTIVE ACTION PROCEDURE

NOTE: Cycle power (power Off, then wait 10 seconds before powering On) before starting any test. After powering On, wait 1 minute then verify that the failure appears again.

PROCEDURE: Before proceeding, press CANCEL>CANCEL>START to enter the Diagnostics Mode.

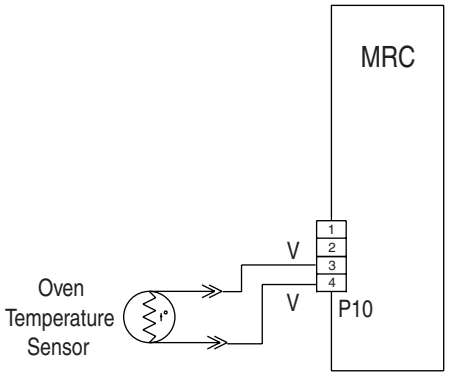
1. Enter the Fault Display Reset menu to verify the error code.
2. Unplug oven or disconnect power.
3. Check for elements shorted to ground P6-3 (N):
   - **a.** Convection element P1-1 (single oven models only)
   - **b.** Bake element P1-4 (single oven models only)
   - **c.** Broil element P3-1 (single oven models only)
   - **d.** Upper convection element P1-1 (double oven models only)
   - **e.** Upper bake element P1-4 (double oven models only)
   - **f.** Lower bake element P2-3 (double oven models only)
   - **g.** Upper broil element P3-1 (double oven models only)
   - **h.** Lower broil element P4-2 (double oven models only)2



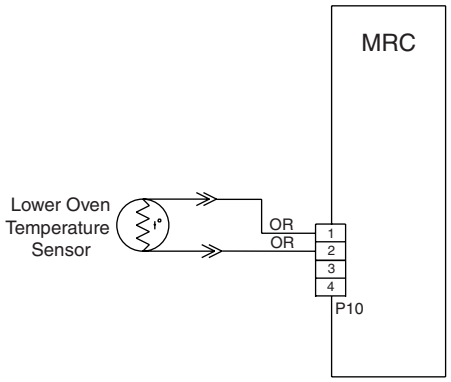
4. Check for shorted relays. Single oven models only, disconnect P1, P2 and P3 connectors and check for shorts between:
   - **a.** K3 relay P1-1 and P2-4
   - **b.** Bake relay P1-3 and P1-4
   - **c.** Broil relay P3-1 and P3-
5. Check for shorted relays. Double oven models only, disconnect P1, P2, P3, P4 and P5 connectors and check for shorts between:
   - **a.** Upper convection relay P1-1 and P2-4
   - **b.** Upper bake relay P1-3 and P1-4
   - **c.** Lower bake relay P2-1 and P2-3
   - **d.** Upper broil relay P3-1 and P3-2
   - **e.** Lower broil relay P4-1 and P4-2

FAILURE (Leftmost 2 Clock Digits)	ERROR (Rightmost 2 Clock Digits)	LIKELY FAILURE CONDITION

6. If there is a short to ground, the control is good. Look for element failures.
7. Disconnect connector P10 and measure the resistance between pins P10-3 and P10-4 (for single/double upper cavity) or between P10-1 and P10-2 (for double lower cavity). It should be 1000 - 1200Ω at 77°F (25°C).



Oven Temperature Sensor
Single/Upper Double

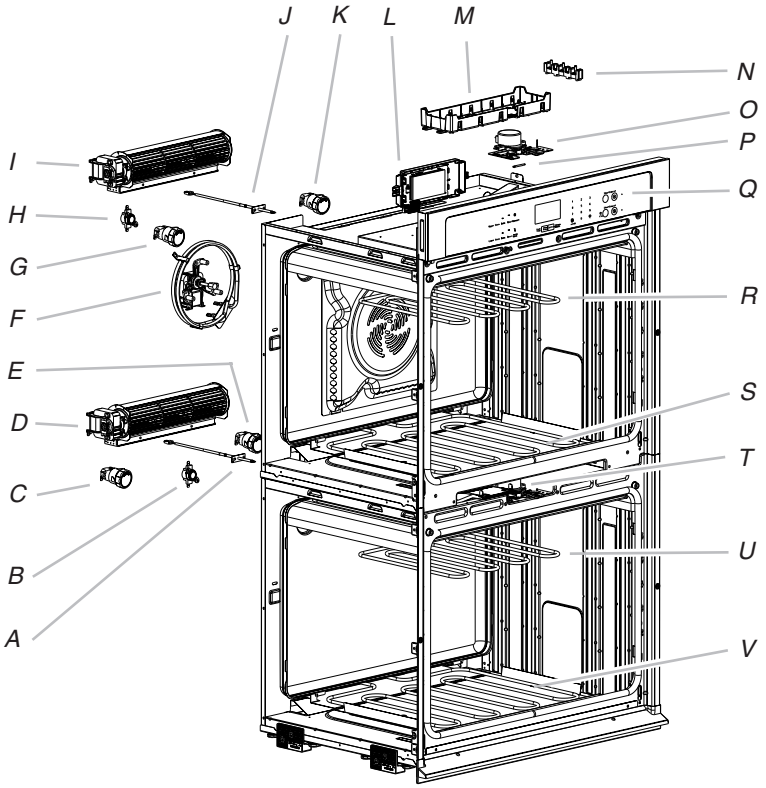


8. Check sensors for short to ground. If checks on sensors are not correct, replace the affected cavity sensor.
9. Replace all parts and panels before operating.
10. Plug in oven or reconnect power.
11. Observe for longer than 1 minute.
12. Verify operation is normal. Re-enter the Diagnostics Mode and complete checks.

FOR SERVICE TECHNICIAN'S USE ONLY

Oven Components

Component Locations



A. Oven temperature sensor
B. Thermal limiter
C. Light assembly
D. Blower
E. Light assembly
F. Convection assembly
G. Light assembly
H. Thermal limiter
I. Cooling fan
J. Oven temperature sensor
K. Light assembly
L. User interface
M. MRC control board
N. Terminal block
O. Door lock latch
P. Thermal fuse
Q. Keypad
R. Broil element
S. Bake element
T. Lower latch
U. Broil element
V. Bake element

NOTE: Upper cavity of double oven shown above is the same as for the single oven.

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Relay Logic - Upper and Lower Oven

Modes					Blower Logics		
Relay Logic	**Bake**	**Broil**	**Conv Ring**	**Conv Fan**	**Relay Logic**	**Upper Blower**	**Lower Blower**
Bake (Non-Convect cavity)	C	C	NA	NA	**Single oven cooking/self-cleaning**	O	NA
Bake (Convect cavity)	C	C	C	C	**Double - only upper cavity cooking/self-cleaning**	O	O
Broil	-	C	-	-	**Double - only lower cavity cooking/self-cleaning**	-	O
Keep Warm/Hold Warm	C	C	-	-	**Double - both cavities cooking**	O	O
Convect Bake	C	C	C	C			
Convect Broil	-	C	-	C			
Convect Roast	C	C	C	C			
Convect Meats	C	C	C	C			
Convect Baked Goods	C	C	C	C			
Convect Others	C	C	C	C			
Pyrolitic Self-Clean	C	C	-	-			

LEGEND			
Relay Off	**Relay Cycles**	**Relay On**	**Not Available**
-	C	O	NA

Component Testing Table - Single/Double Upper Oven

Use the following steps when measuring voltage:

1. Unplug oven or disconnect power.
2. Connect voltage measurement equipment to appropriate check points.
3. Plug in oven or reconnect power and confirm voltage reading.
4. Unplug oven or disconnect power after voltage measurement.

Single/Double Upper Oven Components	Top/Bottom/ Front/Rear/ Side Serviceable	Check points	Results - Resistance	Results - Voltage
MRC Electronic control	Top	P6-1 to P6-3		120V
Lights	Front	P5-4 to N (P6-3)	0Ω to 40Ω	120V Lights On
Latch switch	Front	P7-4 to P7-2	Short/Open circuit	
Door switch	Front	P7-4 to P7-5	Short/Open circuit	
Latch motor	Front	P5-5 to N (P6-3)	500Ω to 3000Ω	120V motor running
Oven temperature sensor	Front	P10-3 to P10-4	1075Ω at 68°F (20°C) 1151Ω at 140°F (40°C)	
Cooling fan	Rear	P5-7 to N (P6-3)	15.0Ω to 23.0Ω	120V motor running
Thermal fuse	Front	P6-1 to L1	Short /Open circuit	0V closed, N/A open
Thermal limiter	Rear	P11-2 to L2 (Red)	Short /Open circuit	0V closed, N/A open
Convection fan motor*	Rear	P5-1 to N (P6-3)	16.0Ω to 20.0Ω	120V motor running

FOR SERVICE TECHNICIAN'S USE ONLY

Single/Double Upper Oven Components	Top/Bottom/ Front/Rear/ Side Serviceable	Check points	Results - Resistance	Results - Voltage
Oven convection element*	Front	P1-1 to P11-1	21.2Ω to 24.2Ω	240V relay On/DLB On
Bake element	Rear	P1-4 to P11-1	19.0Ω to 21.6Ω	240V relay On/DLB On
Broil element	Front	P3-1 to P11-1	14.7Ω to 16.8Ω	240V relay On/DLB On

Component Testing Table - Double Lower Oven

Use the following steps when measuring voltage:

1. Unplug oven or disconnect power.
2. Connect voltage measurement equipment to appropriate check points.
3. Plug in oven or reconnect power and confirm voltage reading.
4. Unplug oven or disconnect power after voltage measurement.

Lower Oven Components	Top/Bottom/ Front/Rear/ Side Serviceable	Check points	Results - Resistance	Results - Voltage
Lights	Front	P5-4 to N (P6-3)		120V Lights On
Latch switch	Front	P7-4 to P7-3	Short/Open circuit	Door unlocked = 5VDC Door locked = 0VDC
Door switch	Front	P7-4 to P7-6	Short/Open circuit	Door unlocked = 5VDC Door locked = 0VDC
Latch motor	Front	P5-6 to N (P6-3)	500Ω to 3000Ω	120V motor running
Oven temperature sensor	Front	P10-1 to P10-2	1075Ω at 68°F (20°C) 1151Ω at 104°F (40°C)	
Cooling fan	Rear	P5-3 to N (P6-3)	15.0Ω to 23.0Ω	120V motor running
Thermal limiter	Rear	P15-2 to L2 (Red)	Short/Open circuit	0V closed, N/A open
Bake element	Rear	P2-3 to P15-1	19.0Ω to 21.0Ω	240V relay On/DLB On
Broil element	Front	P4-2 to P15-1	14.7Ω to 16.8Ω	240V relay On/DLB On

***NOTE:** Disconnect the harness from the board before performing measurements.

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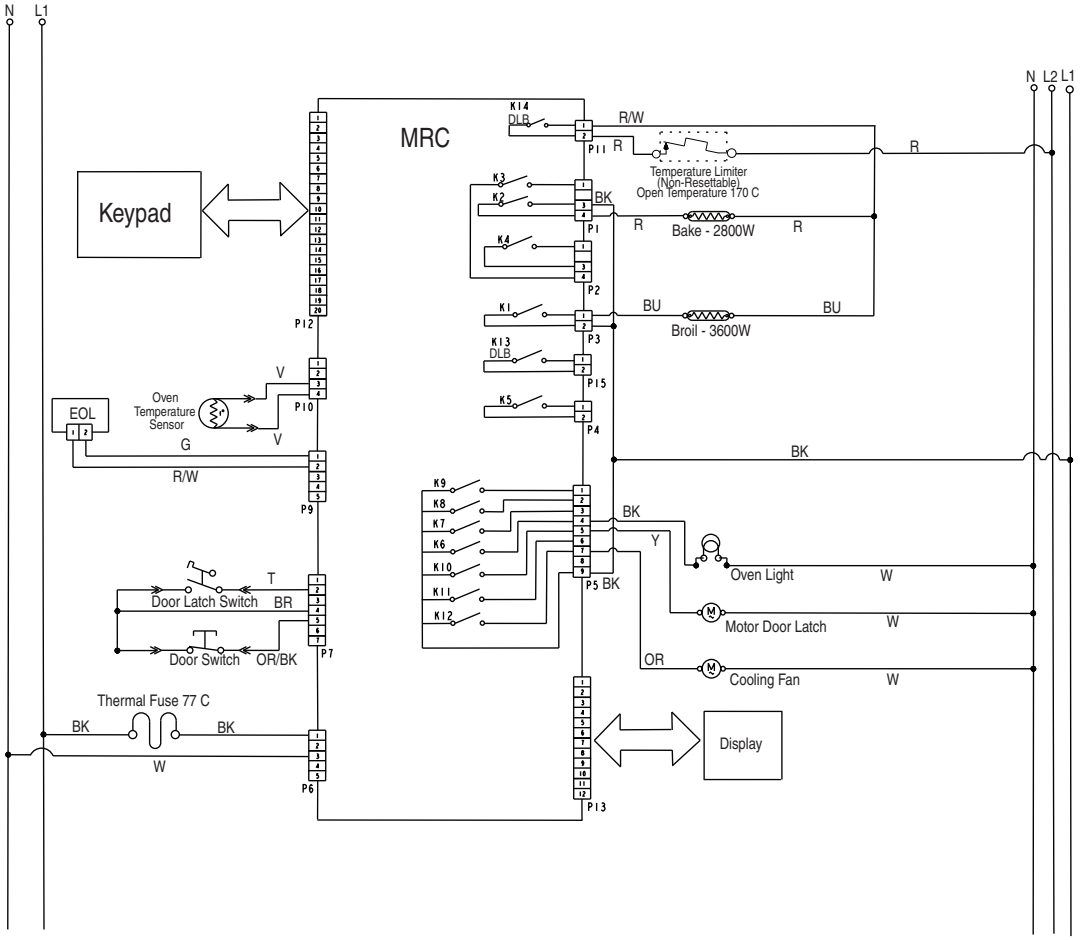
Wiring Diagrams

NOTES:

- When replacing the electronic control, be sure to program the model number. See "General Procedure: Model Select" in the "Diagnostics" section.
- Dots indicate connections or splices.
- Circuit shown in STANDBY/OFF mode with oven door closed.
- All voltages in the wiring diagrams are designated as 120/240 VAC. If oven is connected to 120/208 VAC, replace 240V with 208V.

Single Oven, Non-Convect Models



LEGEND

Ground (Chassis)	Plug With Female Connector	Receptacle With Male Connector	Light(s)	AC Drive Motor	Door Switch

Relay Contact	Heating Element	Enclosed Thermistor	Latch Switch	Thermal Fuse (Non-Resettable)	Temperature Limiter

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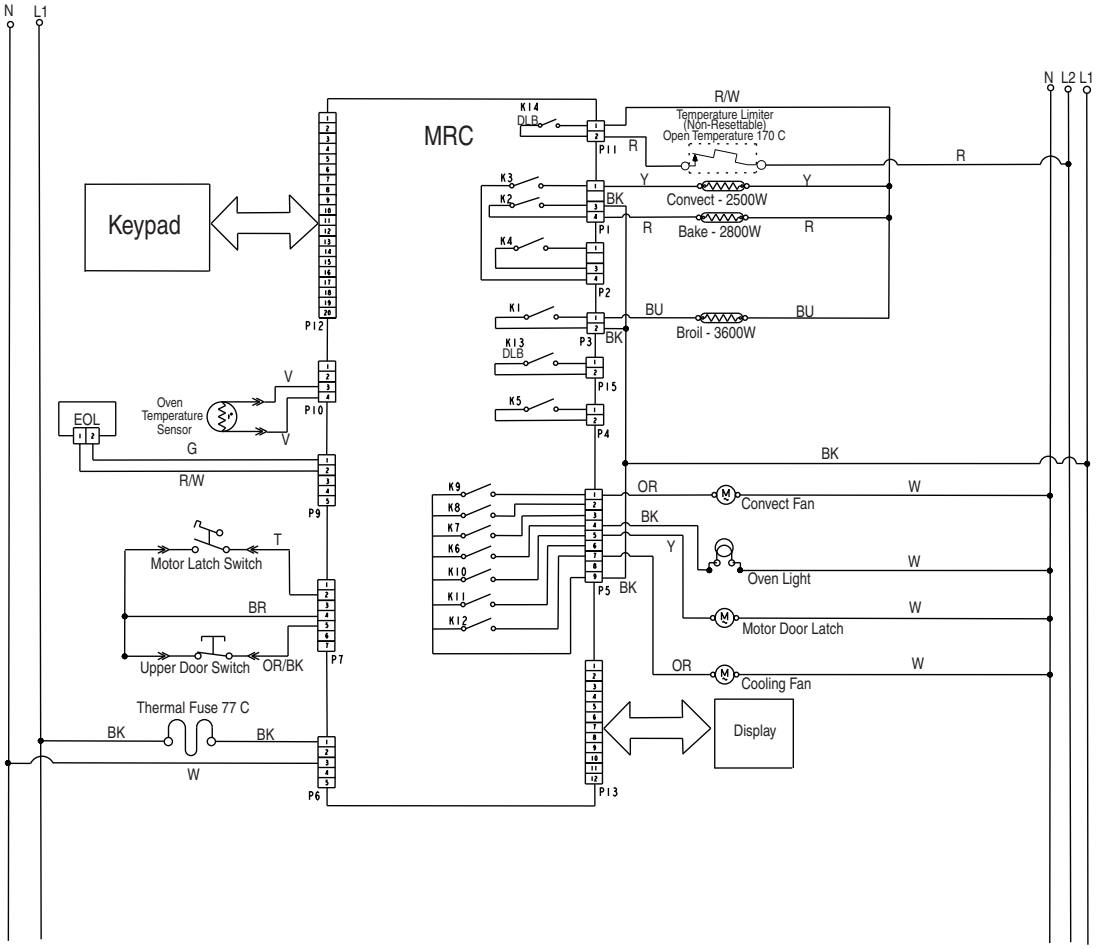
Single Oven, Convect Models



LEGEND

Ground (Chassis)	Plug With Female Connector	Receptacle With Male Connector	Light(s)	AC Drive Motor	Door Switch
Relay Contact	Heating Element	Enclosed Thermistor	Latch Switch	Thermal Fuse (Non-Resettable)	Temperature Limiter

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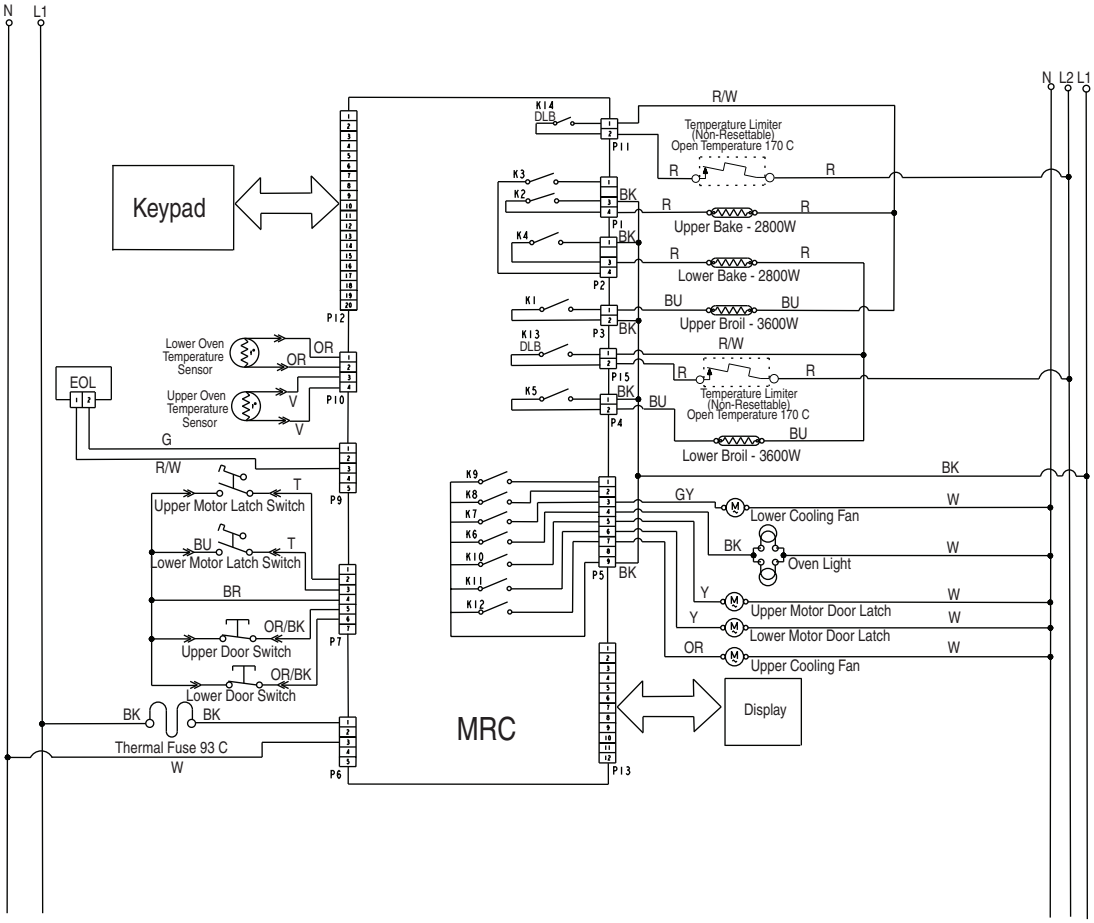
Double Oven, Non-Convect Models



LEGEND

Ground (Chassis)	Plug With Female Connector	Receptacle With Male Connector	Light(s)	AC Drive Motor	Door Switch
Relay Contact	Heating Element	Enclosed Thermistor	Latch Switch	Thermal Fuse (Non-Resettable)	Temperature Limiter

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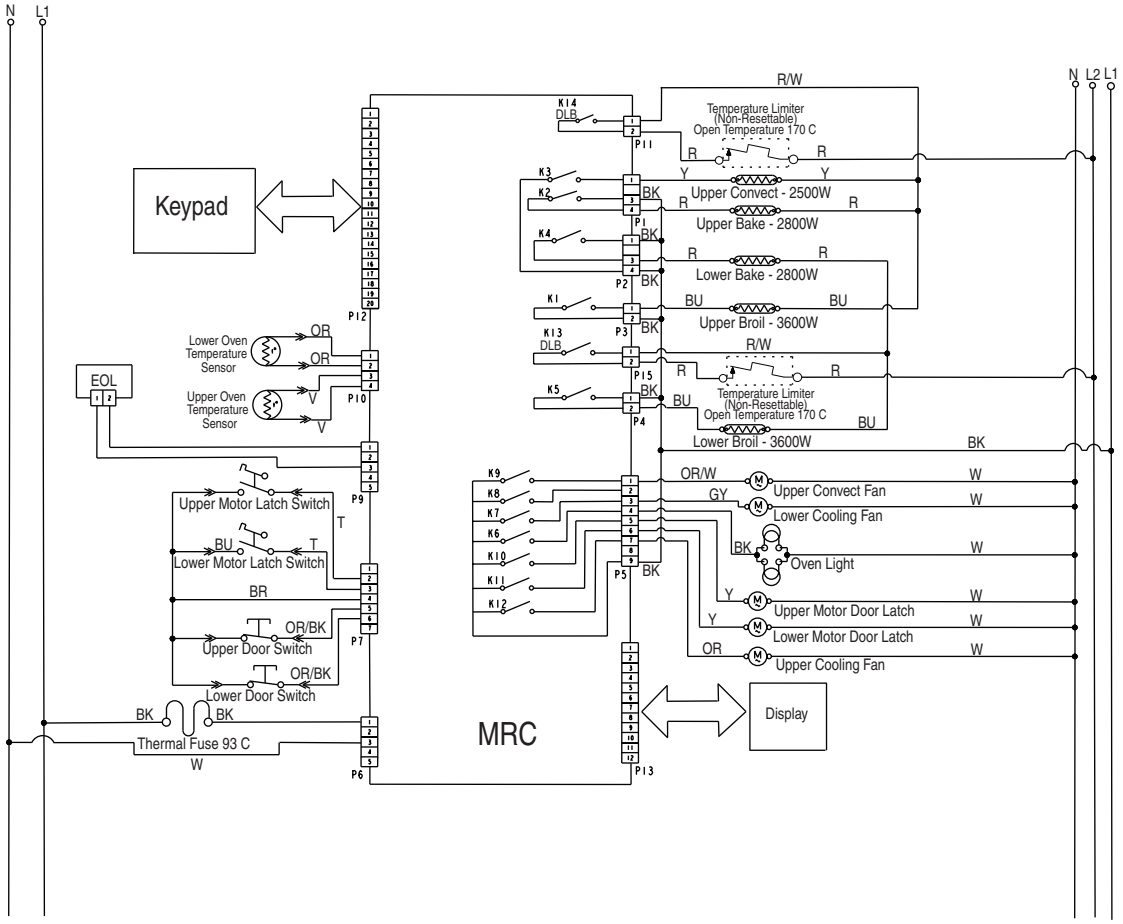
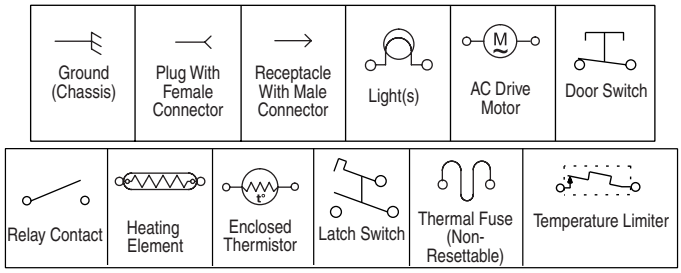
Double Oven, Convect Models



LEGEND



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4,852,544	5,321,229	5,491,314	5,808,278	5,924,857	6,035,848	6,201,222	6,394,081	6,663,009	6,734,403
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5,008,516	5,378,874	5,571,434	5,813,320	5,961,311	6,079,756	6,263,782	6,437,294	6,693,262	6,841,761
5,064,998	5,382,552	5,620,623	5,841,112	5,967,634	6,087,944	6,349,717	6,509,551	6,698,417	6,870,138
5,138,137	5,422,460	5,694,916	5,856,654	5,983,888	6,097,000	6,363,971	6,545,251	6,698,923	6,904,969
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5,175,413	5,438,180	5,756,970	5,910,265	6,017,211	6,163,017	6,392,204	6,614,006	6,722,356	6,935,330
5,185,047	5,441,036	5,767,488	5,918,589						

Other Patents Pending.

W10425193A

NOTE: This sheet contains important Technical Service Data.

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