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.
Diagnostics

**IMPORTANT:** Before powering MWO magnetron, be sure that a load, such as a cup of water, is present in the microwave oven cavity.

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 20,000 Ω 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.

**IMPORTANT:** Do not replace the control if there is no evidence of any failure.

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.
3. From the Diagnostic Menu, it is possible to select one of these options by pressing the numeric “3” or “6” keys.

**Status screen:** View the traditional oven cavity temperatures (both cavities for double ovens), door and latch switch status (both cavities for double ovens), and software version of AM, UI, EEPROM and serial number.

**Relay activation:** Manually activate each relay.

**Error codes:** View the failure history.

**Cavity size select:** Manually select the cavity size: 30” or 27” (76.2 cm or 68.6 cm).

**General Procedure: Error Codes**

**NOTE:** All failures are stored in the failure history. To check if the error code is still present, start a cooking function. Wait 1 minute to check if the error appears.

1. Plug in oven or connect power.
2. Enter Diagnostics Mode by pressing CANCEL>CANCEL>START.
3. Press the “3” or “6” number key to scroll to the Faults Screen and check the latest error code.
4. To clear error codes, press CLOCK/TOOLS to enter edit mode. Press START to accept the change.
5. If no failures are listed, the message “Good” will appear on the screen.
General Procedure: Software Version
For Engineering Only

General Procedure: Relay Activation
1. Plug in oven or connect power.
2. Enter Diagnostics Mode by pressing CANCEL>CANCEL>START.
3. Press the numeric “3” or “6” keys to scroll to the relay activation screen. Pressing the oven keys will activate/deactivate corresponding relay and display text as shown below.

<table>
<thead>
<tr>
<th>Key Press</th>
<th>Relay</th>
<th>Lower Text Line Display</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bake Key</td>
<td>Bake Relay</td>
<td>BAKE RELAY</td>
</tr>
<tr>
<td>Broil Key</td>
<td>Broil Relay</td>
<td>BROIL RELAY</td>
</tr>
<tr>
<td>Conv Bake</td>
<td>Conv Relay and Fan</td>
<td>CONV RING/FAN RELAY</td>
</tr>
<tr>
<td>Oven Light</td>
<td>Oven Light Relay</td>
<td>OVEN LIGHT RELAY</td>
</tr>
<tr>
<td>Cook Time (x1)</td>
<td>Low Speed Cooling Fan</td>
<td>COOLING FAN LOW</td>
</tr>
<tr>
<td>Cook Time (x2)</td>
<td>High Speed Cooling Fan</td>
<td>COOLING FAN HIGH</td>
</tr>
<tr>
<td>Clean Key</td>
<td>Latch/Unlatch Motor</td>
<td>LATCH ROTATING</td>
</tr>
</tbody>
</table>

Pressing the microwave keys will activate/deactivate corresponding relay and display text as shown below.

<table>
<thead>
<tr>
<th>Key Press</th>
<th>Relay</th>
<th>Lower Text Line Display</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cook Power</td>
<td>Microwave Relay On (Includes microwave and cooling fan relays)</td>
<td>Magnetron Relay</td>
</tr>
<tr>
<td>Cook Time</td>
<td>Cooling Fan</td>
<td>Cooling Fan Relay</td>
</tr>
<tr>
<td>Custom Reheat</td>
<td>Fan Lamp Relay On</td>
<td>Microwave Oven Light Relay</td>
</tr>
<tr>
<td>Crisp</td>
<td>Grill Relay On</td>
<td>Grill Relay</td>
</tr>
<tr>
<td>Easy Convect Conversion</td>
<td>Fan Convect Relay On</td>
<td>Convect Fan Relay</td>
</tr>
<tr>
<td>Soften/Melt</td>
<td>Convection Ring and Fan Relay On</td>
<td>Convection Ring Relay</td>
</tr>
<tr>
<td>Steam Cook</td>
<td>Turntable Relay On</td>
<td>Turntable Relay</td>
</tr>
</tbody>
</table>

General Procedure: Cavity Size Select
NOTE: This procedure is to be performed when the User Interface is replaced.
1. Plug in oven or connect power.
2. Enter Diagnostics Mode by pressing CANCEL>CANCEL>START.
3. Press the numeric “3” or “6” keys to scroll to cavity size select screen.
4. Press CLOCK/TOOLS, and then press the numeric “3” or “6” keys until the preferred cavity size is selected. Available cavity sizes are 30” or 27” (76.2 cm or 68.6 cm).
5. Press the START key to save.

General Procedure: Status Screen
1. Plug in oven or connect power.
2. Enter Diagnostics Mode by pressing CANCEL>CANCEL>START.
3. The following information will be displayed on the Status Screen.

Combination Status Screen:

<table>
<thead>
<tr>
<th>Display Message</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostics</td>
<td>Displays only once</td>
</tr>
<tr>
<td>UI 03.00.00</td>
<td>UI software version</td>
</tr>
<tr>
<td>AM1 03.00.00</td>
<td>Upper oven AM software version</td>
</tr>
<tr>
<td>HMI 01.00.00</td>
<td>HMI software version</td>
</tr>
<tr>
<td>EEKEO-246</td>
<td>UI EEPROM version (decimal)</td>
</tr>
<tr>
<td>MWO 54.34.67.98</td>
<td>MWO AM software version</td>
</tr>
<tr>
<td>SN D0123456789012</td>
<td>Product serial number</td>
</tr>
<tr>
<td>UI SN D123456789012</td>
<td>UI serial number</td>
</tr>
<tr>
<td>HMI SN D123456789012</td>
<td>Keypad serial number</td>
</tr>
<tr>
<td>AM1 SN D123456789012</td>
<td>Upper oven AM serial number</td>
</tr>
</tbody>
</table>

The display message will cycle through different information. Each message will stay on the display for 2 seconds. “Diagnostics” will display upon first entering the Diagnostics Mode but will not be shown again as the information cycles.
### FOR SERVICE TECHNICIAN’S USE ONLY

#### Failure/Error Display Codes

<table>
<thead>
<tr>
<th>No Display - control is blank</th>
<th>No Display - control is blank</th>
<th>Thermal Fuse, Copernicus Appliance Manager, User Interface</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SUGGESTED CORRECTIVE ACTION PROCEDURE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NOTE:</strong> Before starting any test, cycle power to the oven (power Off, wait 10 seconds, and then power On).</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PROCEDURE:</strong> Before proceeding, verify the error code by pressing CANCEL&gt;CANCEL&gt;START to enter the Diagnostics Mode, and then pressing the “3” or “6” key to scroll to the Faults screen.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NOTE:</strong> If other error codes are stored, troubleshoot those other error codes first.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PROCEDURE:</strong> Before proceeding, verify the error code by pressing CANCEL&gt;CANCEL&gt;START to enter the Diagnostics Mode, and then pressing the “3” or “6” key to scroll to the Faults screen.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>F1</th>
<th>E0</th>
<th>Oven user interface failure</th>
</tr>
</thead>
</table>

### SUGGESTED CORRECTIVE ACTION PROCEDURE

**NOTE:** Before starting any test, cycle power to the oven (power Off, wait 10 seconds, and then power On).

| PROCEDURE: Before proceeding, verify the error code by pressing CANCEL>CANCEL>START to enter the Diagnostics Mode, and then pressing the “3” or “6” key to scroll to the Faults screen. |
| **NOTE:** If other error codes are stored, troubleshoot those other error codes first. |
| **PROCEDURE:** Before proceeding, verify the error code by pressing CANCEL>CANCEL>START to enter the Diagnostics Mode, and then pressing the “3” or “6” key to scroll to the Faults screen. |

<table>
<thead>
<tr>
<th><strong>F1</strong></th>
<th><strong>E1</strong></th>
<th>Internal Oven AM Error</th>
</tr>
</thead>
</table>

### SUGGESTED CORRECTIVE ACTION PROCEDURE

**NOTE:** Before starting any test, cycle power to the oven (power Off, wait 10 seconds, and then power On).

| PROCEDURE: Before proceeding, verify the error code by pressing CANCEL>CANCEL>START to enter the Diagnostics Mode, and then pressing the “3” or “6” key to scroll to the Faults screen. |
| **NOTE:** If other error codes are stored, troubleshoot those other error codes first. |
| **PROCEDURE:** Before proceeding, verify the error code by pressing CANCEL>CANCEL>START to enter the Diagnostics Mode, and then pressing the “3” or “6” key to scroll to the Faults screen. |

<table>
<thead>
<tr>
<th><strong>F1</strong></th>
<th><strong>E1</strong></th>
<th>Internal Oven AM Error</th>
</tr>
</thead>
</table>

---

### Microwave Appliance Manager

1. Unplug oven or disconnect power.
2. Check wiring from main line to Copernicus Appliance Manager.
3. Check connection from wiring harness to User Interface (J4).
4. Check proper voltage input at J4-2 (GND) to J4-4 (14 VDC) on the User Interface by completing the following steps:
5. Connect voltage measurement equipment to J4-2 and J4-4 on User Interface.
6. Plug in oven or reconnect power.
7. Measure voltage and confirm voltage reading is 14 VDC. If voltage is correct, unplug oven or disconnect power and go to Step 8. If voltage is not correct, go to Step 8.
8. Unplug oven or disconnect power. Replace the Copernicus Appliance Manager.
9. Replace all parts and panels before operating.
10. Plug in oven or reconnect power.
11. Check for control board display. If still no display, unplug oven or disconnect power.
12. Replace UI.
13. Replace all parts and panels before operating.
14. Plug in oven or reconnect power. If the UI was replaced, follow the steps in the “General Procedure: Cavity Size Select” section if the UI was replaced.
15. Check wiring from User Interface to keypad.
16. Unplug oven or disconnect power.
17. Connect voltage measurement equipment to J1-5 and J1-1 on keypad.
18. Plug in oven or reconnect power.
19. Check for proper voltage input from J1-5 (GND) to J1-1 (5 VDC) on keypad. Measure voltage and confirm voltage reading is 5 VDC.
20. If it is not 5 VDC, unplug the oven or disconnect power.
21. Replace the keypad.
22. Replace all parts and panels before operating.
23. Plug in oven or reconnect power.
24. Verify operation is normal. Re-enter the Diagnostics Mode and erase error code(s).
FOR SERVICE TECHNICIAN’S USE ONLY

<table>
<thead>
<tr>
<th>FAILURE (Leftmost 2 Clock Digits)</th>
<th>ERROR (Rightmost 2 Clock Digits)</th>
<th>LIKELY FAILURE CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>E4</td>
<td>Microwave Oven Relay Error</td>
</tr>
</tbody>
</table>

**SUGGESTED CORRECTIVE ACTION PROCEDURE**

**NOTE:** Before starting any test, cycle power to the oven (power Off, wait 10 seconds, and the power On). After powering on, start a microwave cooking function. Wait 1 minute, and then verify that the failure appears again.

1. **Make sure that all interlock switches works properly:** when door is open, microwave light is On; when door is closed, microwave light is Off.
2. **Unplug oven or disconnect power.**
3. **Check the following on the Microwave Appliance Manager:**
   a. Wire connections to Relay 4903.
   b. Check if Relay 4903 is shorted. If so then go to Step 7.
4. **Replace all parts and panels before operating.**
5. **Plug in oven or reconnect power.**
6. **To check if the error code is still present,** start a cooking function in the microwave oven. Wait 1 minute to check if the error appears. If error remains, go to Step 7.
7. **Unplug oven or disconnect power and replace the Microwave Appliance Manager.**
8. **Replace all parts and panels before operating.**
9. **Plug in oven or reconnect power.**
10. **Verify operation is normal. Re-enter the Diagnostics Mode and erase error code(s).**

<table>
<thead>
<tr>
<th>FAILURE (Leftmost 2 Clock Digits)</th>
<th>ERROR (Rightmost 2 Clock Digits)</th>
<th>LIKELY FAILURE CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>E5</td>
<td>Microwave Inverter Error</td>
</tr>
</tbody>
</table>

**NOTE:** Before starting any test, cycle power to the oven (power Off, wait 10 seconds, and the power On). After powering on, start a microwave cooking function. Wait 1 minute, then verify that the failure appears again.

1. **Make sure that all interlock switches works properly:** when door is open, microwave light is On; when door is closed, microwave light is off.
2. **Unplug oven or disconnect power.**
3. **Check the following connections on Microwave Appliance Manager:**
   a. Relay 4903
   b. Connector P8
4. **Check the following connections on the Inverter board:**
   a. CN701
   b. CN702
   c. CN703
5. **If the door works properly and all connections are OK,** replace the Microwave Inverter Board.
6. **Replace all parts and panels before operating.**
7. **Plug in oven or reconnect power.**
8. **To check if the error code is still present,** start a cooking function in the microwave oven. Wait 1 minute to check if the error appears. If error remains, then go to Step 9.
9. **Unplug oven or disconnect power.**
10. **Replace the Magnetron.**
11. **Replace all parts and panels before operating.**
12. **Plug in oven or reconnect power.**
13. **To check if the error code is still present,** start a cooking function in the microwave oven. Wait 1 minute to check if the error appears. If error remains, go to Step 14.

<table>
<thead>
<tr>
<th>FAILURE (Leftmost 2 Clock Digits)</th>
<th>ERROR (Rightmost 2 Clock Digits)</th>
<th>LIKELY FAILURE CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>E6</td>
<td>Microwave Generation Error</td>
</tr>
</tbody>
</table>

**NOTE:** Before starting any test, cycle power to the oven (power Off, wait 10 seconds, and the power On). After powering on, start a microwave cooking function. Wait 1 minute, and then verify that the failure appears again.

1. **Make sure that all interlock switches works properly:** when door is open, microwave light is On; when door is closed, microwave light is off.
2. **Unplug oven or disconnect power.**
3. **Check the following connections on Microwave Appliance Manager:**
   a. Relay 4903
4. **If the door works properly and all connections are OK,** replace the Magnetron.
5. **Replace all parts and panels before operating.**
6. **Plug in oven or reconnect power.**
7. **To check if the error code is still present,** start a cooking function in the microwave oven. Wait 1 minute to check if the error appears. If error remains, then go to Step 9.
8. **Unplug oven or disconnect power and replace the Inverter Board.**
9. **Replace all parts and panels before operating.**
10. **Plug in oven or reconnect power.**
11. **To check if the error code is still present,** start a cooking function in the microwave oven. Wait 1 minute to check if the error appears. If error remains, go to Step 14.
12. **Unplug oven or disconnect power.**
13. **Replace the MW AM.**
14. **Replace all parts and panels before operating.**
15. **Plug in oven or reconnect power.**
16. **Verify operation is normal. Re-enter the Diagnostics Mode and erase error code(s).**

<table>
<thead>
<tr>
<th>Keypad</th>
<th>E0</th>
<th>Keypad disconnected</th>
</tr>
</thead>
<tbody>
<tr>
<td>F2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SUGGESTED CORRECTIVE ACTION PROCEDURE**

**NOTE:** Before starting any test, cycle power (unplug oven or disconnect power, then wait 10 seconds before powering On).

**PROCEDURE:** Before proceeding, verify the error code by pressing CANCEL>CANCEL>START to enter the Diagnostics Mode, and then pressing the “3” or “6” key to scroll to the Faults screen.

1. **Unplug oven or disconnect power.**
2. **Check that connector J1 firmly connects oven user interface to the keypad.** If it does, go to Step 3. If it does not, go to Step 6.
3. **Replace the keypad.**
4. **Replace all parts and panels before operating.**
5. **Go to Step 8.**
6. **Reconnect connector J1.**
7. **Replace all parts and panels before operating.**
FOR SERVICE TECHNICIAN’S USE ONLY

Table: Likely Failure Condition

### F3 Sensors

**Likely Failure Condition**

**Leftmost 2 Clock Digits** | **Rightmost 2 Clock Digits**
--- | ---
8. | Plug in oven or reconnect power. If the failure is gone, go to Step 10. If the failure is still present, unplug oven or disconnect power.

**PROCEDURE:**

1. Unplug oven or disconnect power.
2. Disconnect connector P3 from Copernicus Appliance Manager, and measure the resistance of the sensor. Test for 1000Ω to 1200Ω at 77°F (25°C). Check sensor for short to ground. If checks on sensor are not correct, replace sensor and repeat the checks.

3. Replace all parts and panels before operating.
4. Press CANCEL>CANCEL>START to enter the Diagnostic Mode Status Screen to check if cavity size selected is correct. If the value is approximately 50KΩ, If they are correct, replace the Copernicus Appliance Manager.

**PROCEDURE:**

1. Unplug oven or disconnect power.
2. Disconnect connector P22 from the Microwave Appliance Manager, and measure the resistance of the thermistor. It should be (approximately) 230KΩ at 77°F ± 10°F (25°C ± 10°C).
3. Check thermistor for short to ground.
4. If check on thermistor is not correct, replace the thermistor.
5. If thermistor check is correct, replace the Microwave Appliance Manager.
6. Replace all parts and panels before operating.
7. Plug in oven or reconnect power.
8. Verify operation is normal. Re-enter the Diagnostics Mode and erase error code(s).

### F4 Microwave Temperature

**Likely Failure Condition**

**Leftmost 2 Clock Digits** | **Rightmost 2 Clock Digits**
--- | ---
6. | Plug in the meat probe and check for short to ground or open. If checks on meat probe are not correct, replace the meat probe. At 77°F (25°C) the expected value is approximately 50KΩ. If they are correct, replace the Copernicus Appliance Manager.

**PROCEDURE:**

1. Unplug oven or disconnect power.
2. Check that the P22 connection of the Microwave Appliance Manager is firmly connected. If it is, go to Step 3. If it is not, reconnect and go to Step 5.
3. Disconnect connector P22 from the Microwave Appliance Manager, and measure the resistance of the thermistor. It should be (approximately) 230KΩ at 77°F ± 10°F (25°C ± 10°C).
4. Check thermistor for short to ground.
5. If check on thermistor is not correct, replace the thermistor.
6. If thermistor check is correct, replace the Microwave Appliance Manager.

**PROCEDURE:**

1. Unplug oven or disconnect power.
2. Check that the P21 connection of the Microwave Appliance Manager is firmly connected. If it is, go to Step 3. If it is not, reconnect and go to Step 5.
3. Disconnect connector P21 from the Microwave Appliance Manager, and measure the resistance of the thermistor. It should be (approximately) 10kΩ at 77°F ± 10°F (25°C ± 10°C).
4. Check thermistor for short to ground.
5. If check on thermistor is not correct, replace the thermistor.
6. If thermistor check is correct, replace the Microwave Appliance Manager.
FOR SERVICE TECHNICIAN’S USE ONLY

### SUGGESTED CORRECTIVE ACTION PROCEDURE

**NOTE:** Before starting any test, cycle power to the oven (power Off, wait 10 seconds, and power On). After powering on, start a microwave cooking function. Wait 1 minute, and then verify that the failure appears again.

1. Unplug oven or disconnect power.
2. Check the following:
   a. Cooling fan connection for any loose connectors.
   b. Oven Installation and make sure there is no air blockage.
3. Replace all parts and panels before operating.
4. Plug in oven or reconnect power.
5. To check if the cooling fan is stalled, start a cooking function in the microwave oven. Make sure the fan is running.
6. If it is not, unplug power or disconnect power, replace the fan and go to Step 9. Otherwise, go to Step 7.
7. Unplug oven or disconnect power.
8. Replace the Magnetron and the inverter board.
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 erase error code(s).

#### Inputs

- **F4**
  - EO
  - Microwave Oven
  - Humidity Sensor

#### Inputs

- **F4**
  - EO
  - Inverter Over

**NOTE:** Before starting any test, cycle power to the oven (power Off, wait 10 seconds, and power On). After powering on, start a microwave cooking function. Wait 1 minute, and then verify that the failure appears again.

1. Unplug oven or disconnect power.
2. Check the following:
   a. Cooling fan connection for any loose connectors.
   b. Oven Installation and make sure there is no air blockage.
3. Replace all parts and panels before operating.
4. Plug in oven or reconnect power.
5. To check if the cooling fan is stalled, start a cooking function in the microwave oven. Make sure the fan is running.
6. If it is not, unplug power or disconnect power, replace the fan and go to Step 9. Otherwise, go to Step 7.
7. Unplug oven or disconnect power.
8. Replace the Magnetron and the inverter board.
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 erase error code(s).

#### Inputs

- **F4**
  - EO
  - Door and latch switch do not agree

**NOTE:** Before starting any test, cycle power to the oven (unplug oven or disconnect power, and then wait 10 seconds before powering On). **PROCEDURE:** Before proceeding, verify the error code by pressing CANCEL>CANCEL>START to enter the Diagnostics Mode, and then pressing the “3” or “6” key to scroll to the Faults screen.

1. Enter manual diagnostic mode and select Relay Activation as described in “General Procedure: Relay Activation.” Press “Self Clean” key. Wait at least 15 seconds, and then check if latch status changes on screen. If status does not change, unplug oven or disconnect power and go to Step 2. If status changes, unplug oven or disconnect power and go to Step 5.
2. If the oven door did not unlatch, unplug connector P3 and check for continuity (on the latch wire) between P3-5 and P3-7.
3. Disconnect J8 connector from Copernicus Appliance Manager.

<table>
<thead>
<tr>
<th>FAILURE</th>
<th>ERROR</th>
<th>LIKELY FAILURE CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Leftmost 2 Clock Digits)</td>
<td>(Rightmost 2 Clock Digits)</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Replace all parts and panels before operating.</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Plug in oven or reconnect power.</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Verify operation is normal. Re-enter the Diagnostics Mode and erase error code(s).</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FAILURE</th>
<th>ERROR</th>
<th>LIKELY FAILURE CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Leftmost 2 Clock Digits)</td>
<td>(Rightmost 2 Clock Digits)</td>
<td></td>
</tr>
<tr>
<td>F4</td>
<td>E9</td>
<td>Inverter and Magnetron Over Temperature</td>
</tr>
</tbody>
</table>

**NOTE:** Before starting any test, cycle power to the oven (power Off, wait 10 seconds, and power On). After powering on, start a microwave cooking function. Wait 1 minute, and then verify that the failure appears again.

1. Unplug oven or disconnect power.
2. Check the following:
   a. Cooling fan connection for any loose connectors.
   b. Oven Installation and make sure there is no air blockage.
3. Replace all parts and panels before operating.
4. Plug in oven or reconnect power.
5. To check if the cooling fan is stalled, start a cooking function in the microwave oven. Make sure the fan is running.
6. If it is not, unplug power or disconnect power, replace the fan and go to Step 9. Otherwise, go to Step 7.
7. Unplug oven or disconnect power.
8. Replace the Magnetron and the inverter board.
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 erase error code(s).
**FOR SERVICE TECHNICIAN’S USE ONLY**

### SUGGESTED CORRECTIVE ACTION PROCEDURE

**NOTE:** Before starting any test, cycle power (unplug oven or disconnect power, and then wait 10 seconds before powering On).

**PROCEDURE:** Before proceeding, verify the error code by pressing CANCEL>CANCEL>START to enter the Diagnostics Mode, and then pressing the “3” or “6” key to scroll to the Faults screen.

1. Enter manual diagnostic mode and select Relay Activation as described in "General Procedure: Relay Activation." Press the “Self Clean” key. Wait at least 15 seconds, and then check if latch status changes on screen. If status does not change, go to Step 3.

2. If status changes, unplug oven or disconnect power. Go to Step 7.

3. If latch status on screen is “open,” unplug oven or disconnect power and check for loose harness connection between motor latch switch and P3-5 and P3-7.

4. Measure the resistance between connectors J8-2 and P5-1. It should be 500Ω to 3000Ω at 77°F (25°C).

5. If the resistance check is outside the range, replace the affected door latch assembly. Verify that the error is gone.

6. Replace all parts and panels.

7. Plug in oven or reconnect power.

8. Enter the manual diagnostic mode and check the door status on the screen by opening and closing the oven door.

9. If status does not change, unplug the oven or disconnect power.

10. Check for continuity with door open and closed at P3-5 to P3-6. Door open = infinite resistance. Door closed = zero resistance.

11. If continuity check is not correct, replace the door latch assembly. Verify that the error is gone.

12. If all checks were correct, replace Copernicus Appliance Manager.

13. Replace all parts and panels before operating.

14. Plug in oven or reconnect power.

15. Verify operation is normal. Re-enter the Diagnostics Mode and remove error code(s).

### SUGGESTED CORRECTIVE ACTION PROCEDURE

**NOTE:** Before starting any test, cycle power (unplug oven or disconnect power, and then wait 10 seconds before powering On).

**PROCEDURE:** Before proceeding, verify the error code by pressing CANCEL>CANCEL>START to enter the Diagnostics Mode, and then pressing the “3” or “6” key to scroll to the Faults screen.

1. Enter manual diagnostics mode and select Relay Activation as described in "General Procedure: Relay Activation." Press the “Self Clean” key. Wait at least 15 seconds, and then check if latch status changes on screen. If status does not change, go to Step 3.

2. If status changes, unplug oven or disconnect power. Go to Step 7.

3. If latch status on screen is “open,” unplug oven or disconnect power and check for loose harness connection between motor latch switch and P3-5 and P3-7.

4. Disconnect connector J8 from Copernicus Appliance Manager.

5. Measure the resistance between connectors J8-2 and P5-1. It should be 500Ω to 3000Ω at 77°F (25°C).

6. If the resistance check is outside the range, replace the door latch assembly. Verify that the error is gone.

7. If all checks were correct, replace Copernicus Appliance Manager.

8. Replace all parts and panels before operating.

9. Plug in oven or reconnect power.

10. Verify operation is normal. Re-enter the Diagnostics Mode and remove error code(s).

### SUGGESTED CORRECTIVE ACTION PROCEDURE

**NOTE:** Before starting any test, cycle power (unplug oven or disconnect power, and then wait 10 seconds before powering On).

**PROCEDURE:** Before proceeding, verify the error code by pressing CANCEL>CANCEL>START to enter the Diagnostics Mode, and then pressing the “3” or “6” key to scroll to the Faults screen.

1. Enter manual diagnostics mode and select Relay Activation as described in "General Procedure: Relay Activation." Press the “Self Clean” key. Wait at least 15 seconds, and then check if latch status changes on screen. If status does not change, go to Step 3.

2. If status changes, unplug oven or disconnect power. Go to Step 7.

3. If latch status on screen is “open,” unplug oven or disconnect power and check for loose harness connection between motor latch switch and P3-5 and P3-7.

4. Disconnect connector J8 from Copernicus Appliance Manager.

5. Measure the resistance between connectors J8-2 and P5-1. It should be 500Ω to 3000Ω at 77°F (25°C).

6. If the resistance check is outside the range, replace the door latch assembly. Verify that the error is gone.

7. If all checks were correct, replace Copernicus Appliance Manager.

8. Replace all parts and panels before operating.

9. Plug in oven or reconnect power.

10. Verify operation is normal. Re-enter the Diagnostics Mode and remove error code(s).
3. If there is a short to ground, the control is good. Look for element failures.

4. Check for shorted relays. Disconnect PX1 and PX4 connectors and check for shorts between:
   a. PX1-1 and PX1-2 (Bake relay)
   b. PX1-3 and PX1-4 (Convent relay)
   c. PX4-1 and PX4-2 (Broil relay)

5. If there is a shorted relay, replace the Copernicus Appliance Manager control. Go to Step 9.

6. If everything is correct, disconnect connector P3 from Copernicus Appliance Manager.

7. Measure the resistance of the oven sensor. It should be 1000Ω to 1200Ω at 77°F (25°C).

8. Check sensor for short to ground. If checks on sensor are not correct, replace sensor and repeat the checks.

9. Replace all parts and panels before operating.

10. Plug in oven or reconnect power.

11. Follow the steps in the “General Procedure: Cavity Size Select” section if the UI was replaced.

12. Verify operation is normal. Re-enter the Diagnostics Mode and remove error code(s).

SUGGESTED CORRECTIVE ACTION PROCEDURE

NOTE: Before starting any test, cycle power (unplug oven or disconnect power, then wait 10 seconds before powering On).

PROCEDURE: Before proceeding, verify the error code by pressing CANCEL>CANCEL>START to enter the Diagnostics Mode, then pressing the “3” or “6” key to scroll to the Faults screen.

1. Unplug oven or disconnect power.

2. Check continuity of wirings between P1 and J4.

3. Check for continuity between P1-1 and P1-2 (not valid for double lower AM).
**FOR SERVICE TECHNICIAN’S USE ONLY**

<table>
<thead>
<tr>
<th>FAILURE (Leftmost 2 Clock Digits)</th>
<th>ERROR (Rightmost 2 Clock Digits)</th>
<th>LIKELY FAILURE CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>F6</td>
<td>E4</td>
<td>User Interface/ Appliance Manager state status mismatch</td>
</tr>
</tbody>
</table>

**SUGGESTED CORRECTIVE ACTION PROCEDURE**

**NOTE:** Before starting any test, cycle power (unplug oven or disconnect power, and then wait 10 seconds before powering On).

**PROCEDURE:** Before proceeding, verify the error code by pressing CANCEL>CANCEL>START to enter the Diagnostics Mode, then pressing the “3” or “6” key to scroll to the Faults screen.

1. Unplug oven or disconnect power.
2. Access the electrical wiring from the house power supply to the oven.
3. Check house wiring to the product. Check to see if the neutral connection is switched with L1 or L2 (refer to the installation instructions for product wiring).
4. Replace any parts and panels before operating.
5. Plug in oven or reconnect power.
6. Verify operation is normal by run a cooking function. Re-enter the Diagnostics Mode and remove error code(s).
Microwave Oven Components

Component Locations

Upper Microwave Oven

A. Convect motor
B. Convect thermostat (behind cover)
C. Convect element
D. Line filter
E. Humidity sensor
F. Magnetron fan motor
G. Copernicus appliance manager (oven AM)
H. Secondary interlock switch
I. Turntable motor
J. Broil element
K. Microwave appliance manager (MWO AM)
L. Cavity halogen lamp
M. Primary interlock switch
N. Monitor interlock switch
O. Magnetron thermistor
P. Magnetron
Q. Power supply
R. Microwave inverter
S. Cavity temperature sensor
T. Grill thermostat
U. Cavity thermostat

Not shown: Monitor fuse, 20A line fuse

Lower Oven

A. User interface
B. Cooling fan
C. Oven temperature sensor
D. Convection assembly
E. Temperature limiter
F. Light assembly
G. Meat probe jack
H. Bake element
I. Broil element (hidden)
J. Light assembly
K. Door lock assembly
L. Keypad
## Cooling Fan Relay Logic

<table>
<thead>
<tr>
<th>Oven Cooking - Cold</th>
<th>Oven High Speed Blower</th>
<th>Oven Low Speed Blower</th>
<th>Microwave Blower</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-</td>
<td>O</td>
<td>-</td>
</tr>
<tr>
<td>Oven Cooking - Warm</td>
<td></td>
<td>O</td>
<td>-</td>
</tr>
<tr>
<td>Oven Cooking - Hot</td>
<td></td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Microwave Oven Cooking</td>
<td>-</td>
<td>-</td>
<td>O</td>
</tr>
<tr>
<td>Oven Self-Clean</td>
<td></td>
<td>O</td>
<td>-</td>
</tr>
<tr>
<td>Oven Cooking - Warm and MW Cooking*</td>
<td>-</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

*When the microwave is in Convection mode and the lower oven is cooking, the MW blower is On and the Oven High Speed Blower is On. Note that the blowers go Off below 212°F (100°C) after a cooking function.

### LEGEND

- **Cold**: Cavity Temperature is less than 212°F (100°C)
- **Warm**: Cavity Temperature is between 212°F and 599°F (100°C and 315°C)
- **Hot**: Cavity Temperature is greater than 599°F (315°C)

### Modes

<table>
<thead>
<tr>
<th>Relay Logic</th>
<th>Bake</th>
<th>Broil</th>
<th>Conv Ring</th>
<th>Conv Fan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bake (Non-Convect cavity)</td>
<td>C</td>
<td>C</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Bake (Convect cavity)</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Broil</td>
<td>-</td>
<td>O</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Bread Proof</td>
<td>C</td>
<td>C</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Convec Bake</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Convec Broil</td>
<td>-</td>
<td>O</td>
<td>-</td>
<td>C</td>
</tr>
<tr>
<td>Convec Roast</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Self-Clean</td>
<td>C</td>
<td>C</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### LEGEND

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

### Component Testing Chart - Oven

To properly check for voltage, complete the following steps:

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

<table>
<thead>
<tr>
<th>Component</th>
<th>Serviceable Side</th>
<th>Check Points Copernicus Appliance Manager</th>
<th>Results-Resistance</th>
<th>Results-Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lights</td>
<td>Front</td>
<td>P5-2 to N (J8-2)</td>
<td>0Ω to 40Ω</td>
<td>120V</td>
</tr>
<tr>
<td>Latch Switch</td>
<td>Front</td>
<td>P3-7 to P3-5</td>
<td>Open circuit</td>
<td></td>
</tr>
<tr>
<td>Door Switch</td>
<td>Front</td>
<td>P3-6 to P3-5</td>
<td>Closed circuit with oven door closed</td>
<td></td>
</tr>
<tr>
<td>Latch Motor</td>
<td>Front</td>
<td>P5-1 to N (J8-2)</td>
<td>50Ω0Ω to 3000Ω</td>
<td>120V motor running</td>
</tr>
<tr>
<td>Oven Temperature Sensor</td>
<td>Front</td>
<td>P3-1 to P3-2</td>
<td>1075Ω at 68°F (20°C)DLB</td>
<td></td>
</tr>
<tr>
<td>Meat Probe</td>
<td>Side</td>
<td>P3-3 to P3-4</td>
<td>9876Ω to 10075Ω</td>
<td></td>
</tr>
<tr>
<td>Blower Motor - High Speed</td>
<td>Rear</td>
<td>P5-5 to N (J8-2)</td>
<td>15Ω to 23Ω</td>
<td>120V motor running</td>
</tr>
<tr>
<td>Blower Motor - Low Speed</td>
<td>Rear</td>
<td>P5-4 to N (J8-2)</td>
<td>15Ω to 23Ω</td>
<td>120V motor running</td>
</tr>
<tr>
<td>Thermal Limiter</td>
<td>Rear</td>
<td>PX3-1 to L2 (Main Line)</td>
<td>Closed circuit</td>
<td>0V closed, N/A open</td>
</tr>
<tr>
<td>Thermal Fuse (only for single/double)</td>
<td>Front</td>
<td>J8-1 to L1 (P5-7)</td>
<td>Closed circuit</td>
<td>0V closed, N/A open</td>
</tr>
<tr>
<td>Convection Fan*</td>
<td>Rear</td>
<td>P5-3 to N (J8-2)</td>
<td>20Ω to 28Ω</td>
<td>120V motor running</td>
</tr>
<tr>
<td>Convection Element*</td>
<td>Front</td>
<td>PX1-3 to PX3-2</td>
<td>16.63Ω to 18.38Ω</td>
<td>240V Convection cycle operating</td>
</tr>
</tbody>
</table>
Component Testing Chart - Microwave

<table>
<thead>
<tr>
<th>Component</th>
<th>Serviceable Side</th>
<th>Procedure</th>
<th>Results - Resistance</th>
<th>Component Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appliance Manager</td>
<td>Top</td>
<td>Check wiring to MW microwave appliance manager:</td>
<td></td>
<td>J</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. Unplug the microwave oven or disconnect power.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Visually inspect connectors on the microwave appliance manager, P1, P2, P8, P21, P22, P23, P26, P354, P355 and the top connectors (relays 4903, 4904 and 4905) to see whether there are signs of overheating or failure due to loose wires, bad crimping, etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Replace all parts and panels before operating.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Plug in microwave oven or reconnect power.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cavity Thermostat</td>
<td>Top</td>
<td>1. Unplug microwave oven or disconnect power.</td>
<td>Normal = Continuity</td>
<td>T</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Remove wire leads.</td>
<td>Abnormal = Infinite</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Measure resistance.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Replace wire leads.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Replace all parts and panels before operating.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. Plug in microwave oven or reconnect power.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Component</td>
<td>Serviceable Side</td>
<td>Procedure</td>
<td>Results - Resistance</td>
<td>Component Location</td>
</tr>
<tr>
<td>-----------</td>
<td>------------------</td>
<td>-----------</td>
<td>---------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Magnetron Fan Motor</td>
<td>Top</td>
<td>1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure resistance (ohmmeter scale: Rx1) 4. Replace wire leads. 5. Replace all parts and panels before operating. 6. Plug in microwave oven or reconnect power.</td>
<td>Normal = 15Ω  Abnormal = Infinite</td>
<td>F</td>
</tr>
<tr>
<td>Turntable Motor</td>
<td>Bottom</td>
<td>1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure resistance (ohmmeter scale: Rx1) 4. Replace wire leads. 5. Replace all parts and panels before operating. 6. Plug in microwave oven or reconnect power.</td>
<td>Normal = approximately 25000Ω  Abnormal = Infinite</td>
<td>H</td>
</tr>
<tr>
<td>Monitor Fuse</td>
<td>Top</td>
<td>1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure resistance. 4. Replace wire leads. 5. Replace all parts and panels before operating. 6. Plug in microwave oven or reconnect power.</td>
<td>Normal = Continuity  Abnormal = Infinite</td>
<td>Not shown</td>
</tr>
<tr>
<td>MW Light Transformer</td>
<td>Top</td>
<td>1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure resistance (ohmmeter scale: Rx1) 4. Replace wire leads. 5. Replace all parts and panels before operating. 6. Plug in microwave oven or reconnect power.</td>
<td>Primary Winding = approximately 40Ω  Secondary Winding = approximately 0.4Ω</td>
<td>P</td>
</tr>
<tr>
<td>Line Fuse</td>
<td>Top</td>
<td>1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure resistance. 4. Replace wire leads. 5. Replace all parts and panels before operating. 6. Plug in microwave oven or reconnect power.</td>
<td>Normal = Continuity  Abnormal = Infinite</td>
<td>Not shown</td>
</tr>
<tr>
<td>Primary Interlock Switch</td>
<td>Top</td>
<td>Test 1: 1. Unplug microwave oven or disconnect power. 2. Disconnect the wires at the Primary Interlock Switch. 3. Check from the common terminal (brown wire) to the normally open terminal (yellow wire). 4. Reconnect the wires at the Primary Interlock Switch. 5. Replace all parts and panels before operating. 6. Plug in microwave oven or reconnect power. Test 2: 1. Unplug microwave oven or disconnect power. 2. Disconnect the wires at the Primary Interlock Switch. 3. Check from the common terminal (brown wire) to the normally closed terminal (blue wire). 4. Reconnect the wires at the Primary Interlock Switch. 5. Replace all parts and panels before operating. 6. Plug in microwave oven or reconnect power.</td>
<td>Test 1:  Door Open = Infinite  Door Closed = Continuity  Test 2:  Door Open = Continuity  Door Closed = Infinite</td>
<td>L</td>
</tr>
<tr>
<td>Secondary Interlock Switch</td>
<td>Top</td>
<td>1. Unplug microwave oven or disconnect power. 2. Disconnect the wires at the Secondary Interlock Switch. 3. Check from the common terminal (blue wire) to the normally open terminal (white wire). 4. Reconnect the wires at the Secondary Interlock Switch. 5. Replace all parts and panels before operating. 6. Plug in microwave oven or reconnect power.</td>
<td>Door Open = Continuity  Door Closed = Infinite</td>
<td>G</td>
</tr>
<tr>
<td>Component</td>
<td>Serviceable Side</td>
<td>Procedure</td>
<td>Results - Resistance</td>
<td>Component Location</td>
</tr>
<tr>
<td>--------------------</td>
<td>------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------</td>
<td>--------------------</td>
</tr>
</tbody>
</table>
| Monitor Interlock  | Top              | 1. Unplug microwave oven or disconnect power. 2. Disconnect the wires at the Monitor Interlock Switch. 3. Check from the common terminal (yellow wire) to the normally closed terminal (blue wire). 4. Reconnect the wires at the Monitor Interlock Switch. 5. Replace all parts and panels before operating. 6. Plug in microwave oven or reconnect power. | Door Open = Continuity  
Door Closed = Infinite    | M                  |
| Halogen Light      | Top              | 1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure resistance. 4. Replace wire leads. 5. Replace all parts and panels before operating. 6. Plug in microwave oven or reconnect power. | Normal = approximately 3Ω  
Abnormal = Infinite       | K                  |
| Inverter           | Top              | Check wiring to MW inverter: 1. Unplug the microwave oven or disconnect power. 2. Visually inspect 4 connectors on the MW inverter boards, CN701, CN702, CN703 and E701 to see whether there are signs of overheating or any signs of failure due to loose wires, bad crimping, etc. 3. Replace all parts and panels before operating. 4. Plug in microwave oven or reconnect power. | Q                          |                     |
| Magnetron          | Top              | 1. Unplug microwave oven or disconnect power. 2. Remove wire leads. Check that the seal is in good condition. 3. Measure resistance. 4. Replace wire leads. 5. Replace all parts and panels before operating. 6. Plug in microwave oven or reconnect power. | Filament Terminals  
Normal = <1Ω  
Filament to Chassis  
Normal = Infinite     | O                  |
| Line Filter        | Top              | 1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure resistance. 4. Replace wire leads. 5. Replace all parts and panels before operating. 6. Plug in microwave oven or reconnect power. | P31 to P32, P33 to P34  
Normal >/= to 300kΩ  
Abnormal </= to 100kΩ  
P31 to P34, P32 to P33  
Normal = 0Ω  
Abnormal >/= to 100kΩ | D                  |
| Humidity Sensor    | Top              | 1. Unplug microwave oven or disconnect power. 2. Remove the 3-pin connector from M/W Appliance Manager. 3. Measure resistance across pins 1 and 3 and across pins 2 and 3. 4. Replace the 3-pin connector from M/W Appliance Manager. 5. Replace all parts and panels before operating. 6. Plug in microwave oven or reconnect power. | Normal = approximately 2.8kΩ at 77°F +/- 10°F  
(25°C +/- 10°C)  
Abnormal = Infinite.   | E                  |
| Magnetron Thermistor|                 | 1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure resistance. 4. Replace wire leads. 5. Replace all parts and panels before operating. 6. Plug in microwave oven or reconnect power. | Normal = approximately 10kΩ at 77°F +/- 10°F  
(25°C +/- 10°C)  
Abnormal = Infinite.   | N                  |
<table>
<thead>
<tr>
<th>Component</th>
<th>Serviceable Side</th>
<th>Procedure</th>
<th>Results - Resistance</th>
<th>Component Location</th>
</tr>
</thead>
</table>
| Grill Thermostat | Top              | 1. Unplug microwave oven or disconnect power.  
2. Remove wire leads.  
3. Measure resistance.  
4. Replace wire leads.  
5. Replace all parts and panels before operating.  
6. Plug in microwave oven or reconnect power. | Normal = Continuity  
Abnormal = Infinite                                            | S                 |
| Convect Thermostat | Rear             | 1. Unplug microwave oven or disconnect power.  
2. Remove wire leads.  
3. Measure resistance.  
4. Replace wire leads.  
5. Replace all parts and panels before operating.  
6. Plug in microwave oven or reconnect power. | Normal = Continuity  
Abnormal = Infinite                                            | B                 |
| Broil Element   | Rear             | 1. Unplug microwave oven or disconnect power.  
2. Remove wire leads.  
3. Measure resistance.  
4. Replace wire leads.  
5. Replace all parts and panels before operating.  
6. Plug in microwave oven or reconnect power. | Normal = 9Ω  
Abnormal = Infinite                                               | I                 |
| Convect Element | Rear             | 1. Unplug microwave oven or disconnect power.  
2. Remove wire leads.  
3. Measure resistance.  
4. Replace wire leads.  
5. Replace all parts and panels before operating.  
6. Plug in microwave oven or reconnect power. | Normal = 12Ω  
Abnormal = Infinite                                               | C                 |
| Cavity Temp Sensor | Rear             | 1. Unplug microwave oven or disconnect power.  
2. Remove wire leads.  
3. Measure resistance.  
4. Replace wire leads.  
5. Replace all parts and panels before operating.  
6. Plug in microwave oven or reconnect power. | Normal = approximately  
230Ω at 77°F  
±10°F (25°C ±10°C)  
Abnormal = Infinite                                               | R                 |
| Convect Motor Rear | Rear             | 1. Unplug microwave oven or disconnect power.  
2. Remove wire leads.  
3. Measure resistance.  
4. Replace wire leads.  
5. Replace all parts and panels before operating.  
6. Plug in microwave oven or reconnect power. | Normal = 48Ω  
Abnormal = Infinite                                               | A                 |
NOTES:
■ End of line tester (EOL) is for manufacturing purposes only.
■ Dots indicate connections or splices.

Wiring Diagrams

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.

LEGEND

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground (Chassis)</td>
<td>Plug With Female Connector</td>
</tr>
<tr>
<td>Reciprocating Light</td>
<td>AC Drive Motor</td>
</tr>
<tr>
<td>Door Switch</td>
<td>Latch Switch</td>
</tr>
<tr>
<td>Heating Element</td>
<td>Relay Contacts</td>
</tr>
<tr>
<td>Temperature Limiter (Automatically Resettable)</td>
<td>Thermal Fuse (Non-resettable)</td>
</tr>
<tr>
<td>Enclosed Thermistor</td>
<td>Temperature Limiter (Non-resettable)</td>
</tr>
</tbody>
</table>