### SERVICE DATA SHEET

**Electric Range with ES 502I Electronic Oven Controls and Induction Smoothtop**

**NOTICE**: This service data sheet is intended for use by persons having electrical and mechanical training and with background of those subjects generally considered to be competent in the appliance industry, and as such is intended to be a guide for those who may need it. The user assumes full responsibility for any actions taken as a result of the information contained in this document.

#### ELECTRONIC OVEN CONTROL (EOC) RELAY BOARD

<table>
<thead>
<tr>
<th>Condition</th>
<th>Reason Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>201</td>
<td>F010</td>
<td>Oven temperature runaway: the cavity temperature has exceeded the allowed limit. Replace the oven relay board.</td>
</tr>
<tr>
<td>202</td>
<td>F011</td>
<td>Stuck key: a key has been detected has pressed continuously for 15 seconds or longer. Replace the bake control board.</td>
</tr>
<tr>
<td>203</td>
<td>F012</td>
<td>Oven relay board: the board has failed. Replace the oven relay board.</td>
</tr>
<tr>
<td>204</td>
<td>F013</td>
<td>Communication failure between the oven user interface board and the oven relay board. Replace both boards.</td>
</tr>
<tr>
<td>205</td>
<td>F014</td>
<td>Communication failure between the oven user interface board and the touch control glass panel. Replace both boards.</td>
</tr>
<tr>
<td>206</td>
<td>F015</td>
<td>Communication failure between the oven relay board and the touch control glass panel. Replace the oven relay board.</td>
</tr>
<tr>
<td>207</td>
<td>F016</td>
<td>Communication failure between the oven relay board and the touch micro. Replace the oven relay board.</td>
</tr>
<tr>
<td>208</td>
<td>F017</td>
<td>Communication failure between the oven relay board and the touch control glass panel. Replace both boards.</td>
</tr>
<tr>
<td>209</td>
<td>F018</td>
<td>Communication failure between the oven relay board and the touch control glass panel. Replace both boards.</td>
</tr>
<tr>
<td>210</td>
<td>F019</td>
<td>Communication failure between the oven relay board and the touch control glass panel. Replace both boards.</td>
</tr>
<tr>
<td>211</td>
<td>F020</td>
<td>Communication failure between the oven relay board and the touch control glass panel. Replace both boards.</td>
</tr>
<tr>
<td>212</td>
<td>F021</td>
<td>Communication failure between the oven relay board and the touch control glass panel. Replace both boards.</td>
</tr>
<tr>
<td>213</td>
<td>F022</td>
<td>Communication failure between the oven relay board and the touch control glass panel. Replace both boards.</td>
</tr>
<tr>
<td>214</td>
<td>F023</td>
<td>Communication failure between the oven relay board and the touch control glass panel. Replace both boards.</td>
</tr>
<tr>
<td>215</td>
<td>F024</td>
<td>Communication failure between the oven relay board and the touch control glass panel. Replace both boards.</td>
</tr>
<tr>
<td>216</td>
<td>F025</td>
<td>Communication failure between the oven relay board and the touch control glass panel. Replace both boards.</td>
</tr>
</tbody>
</table>

#### Parts Locations and Schematic Diagrams

**Electronic Oven Control**

- **Parts List**: Refer to the parts list included in the service data sheet for specific component information.
- **Schematic Diagrams**: Refer to the schematic diagrams included in the service data sheet for electrical connections and equipment locations.

#### Control Panel Operations

- **Lock-Out Feature**: If the control panel is locked, the display will show "LOCKED" and the oven will not operate. To unlock, press and hold the "Clear/Off" button for 3 seconds.
- **Self-Clean Mode**: The Self-Clean mode is used to clean the oven interior by heating it to a high temperature. To activate, press and hold the "Self-Clean" button for 3 seconds.

#### Technical Specifications

- **Power Ratings**: 120VAC, 60Hz, 6.0kW max.
- **Dimensions**: 30" wide x 24" deep x 30" high.

#### Diagrams

**Electronic Oven Control Schematic Diagram**

- **Diagram A**: Shows the layout of the oven control system, including the various components and their connections.
- **Diagram B**: Provides a detailed view of the oven relay board, including all the key components and their functions.

#### Trouble Shooting Guide

- **Problem 1**: No power to the oven. Check the power supply and fuse.
- **Problem 2**: The oven does not heat. Check the heating element and the oven relay board.

#### Parts List

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>12345</td>
<td>Oven relay board</td>
</tr>
<tr>
<td>67890</td>
<td>Control panel assembly</td>
</tr>
<tr>
<td>10112</td>
<td>Oven door gasket</td>
</tr>
</tbody>
</table>

#### Additional Information

- **Safety Precautions**: Always ensure that the oven is unplugged before servicing.
- **Maintenance Tips**: Regularly clean the oven interior to maintain its efficiency.

#### Tech Sheet Abbreviations and Terminology

- **EOC**: Electronic Oven Control
- **ESEC**: Electronic Surface Element Control
- **TST**: Touch Sensor Technology
- **MACS**: Microprocessor-Assisted Control System

#### Troubleshooting Tips

- **Step 1**: Check the power supply and fuse.
- **Step 2**: Check the heating element and the oven relay board.

#### External Resources

- **Wiring Diagram**: Available for download in the service data sheet.
- **Service Manual**: Contains comprehensive information for technical support.

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Electronic Surface Element Control System (ESEC) Error Code Descriptions

When a specific error condition occurs in the ESEC system, a code will be displayed in the electronic control panel as shown in the error notification in an induction system section.

For each Error Code there is a listing of the likely cause or failure condition, as well as suggested corrective actions to be taken. Always reset the unit and test power after correcting the error.

NOTE: If multiple changing error codes are displayed check for disconnected wires or cables.

E0-01 Internal error
1. Disconnect power, wait 30 seconds and reapply power. If fault returns upon power-up replace the hob user interface corresponding to the error.

E0-02 Keyboard configuration error
1. Verify the unit has the proper cooktop user interface board based on the model number and parts catalog. If the UI is incorrect or the issue persists, replace the cooktop user interface board indicated by the error code.

E0-03 Loss of communication between the power boards
1. Check the MACS connection (communication harness) between user interface board and induction power boards. If problem persists, check continuity of MACS harness between each control board. Replace harness if defective.

E0-04 Loss of communication between the hob user interfaces
3. If harness is good and problem persists, replace the hob user interface board indicated by the error code.

E0-05 Keyboard safety error
1. Disconnect power, wait 30 seconds and reapply power. If fault returns upon power-up replace the hob user interface corresponding to the error.

E0-06 HMICOMM_Q_ERROR
1. Disconnect power, wait 30 seconds and reapply power. If fault returns upon power-up replace the hob user interface corresponding to the error.

E0-25 Loss of communication between the power boards
1. Verify the unit has the proper cooktop user interface board based on the model number and parts catalog. If the UI is incorrect or the issue persists, replace the cooktop user interface board indicated by the error code.

E2-49 E1-57 MAINS (power supply) relay stuck on induction power board
2. Cycle power to appliance, wait 30 seconds before reconnecting power. If problem persists, replace the induction power board corresponding to the error code.

E2-57 E1-64 Cooling fan on the induction power board is blocked or failure check found inconsistent power currents between the drive circuit for the coils (IBGT) and the main power circuit.
2. Test continuity of motor windings. Replace motor if open.

E2-65 E1-73 E2-73 IGBT/Heatsink open or short
1. Cycle power to appliance, wait 30 seconds before reconnecting power. If problem persists, replace the induction power board corresponding to the error code.

E2-74 E1-75 E2-75 Failure check found too high temperature on induction IGBT/Heatsink
1. Cycle power to appliance, wait 30 seconds before reconnecting power. If problem persists, replace the induction power board corresponding to the error code.

Additional Failure Conditions

Symptom or Failure | Control Display | Possible Cause or Condition | Suggested Corrective Action
--- | --- | --- | ---
Pan does not heat up. Normal operation | Pan too small for proper pan detection and only works with specific pan. | Use larger pan or this pan on a smaller cooking zone. Refer to owners guide for proper pan selection. |
Pan not detected. Check whether the pots or pans are suitable for induction. | Use larger pan or this pan on a smaller cooking zone. Refer to owners guide for proper pan selection. |
Distance between surface unit and glass ceramic too large. Check whether the surface unit is properly positioned and touching the glass cooktop surface. | None | 1. Test cables and connections. 2. Membrane control panel defective. 3. Replace EOC. |
Endless temperature selection to induction. | Check whether there is a proper pan selected for induction. | None | 1. Test cables and connections. 2. Membrane control panel defective. 3. Replace EOC. |
Invalid button selected for use on control panel. | None | None | 1. Replace kitchen fuse. 2. Test individual button for functionality. |
Cooktop does not initialize after power switch off. | None | None | 1. Replace kitchen fuse. 2. Test individual button for functionality. |
Fan does not start. | None | None | 1. Fan fails to start, check continuity of motor windings. Replace motor if open. 2. Replace induction control assembly. |
Inadequate "hot plate" indicating that pan is too hot. | None | None | 1. Replace control panel. 2. Replace individual button for functionality. |
Temperature sensor not working correctly. | None | None | 1. Replace membrane tail connections between EOC and ESEC. Replace if defective or damaged. |
Loss of communication with the motorized lock. | None | None | 1. Verify membrane tail connections between EOC and ESEC. Replace if defective or damaged. |
Lighting the door. | None | None | 1. Verify membrane tail connections between EOC and ESEC. Replace if defective or damaged. |
Power switch not working correctly. | None | None | 1. Verify membrane tail connections between EOC and ESEC. Replace if defective or damaged. |
Temperature sensors not working correctly. | None | None | 1. Replace membrane tail connections between EOC and ESEC. Replace if defective or damaged. |
Door release switch not working correctly. | None | None | 1. Replace membrane tail connections between EOC and ESEC. Replace if defective or damaged. |
Control panel not working correctly. | None | None | 1. Replace membrane tail connections between EOC and ESEC. Replace if defective or damaged. |
Door lock not working correctly. | None | None | 1. Replace membrane tail connections between EOC and ESEC. Replace if defective or damaged. |