SERVICE DATA SHEET
Appliance with ES630 Electronic Oven Control

NOTICE: This service data sheet is intended for use by persons having electrical and mechanical training and a level of knowledge of these subjects generally considered acceptable in the appliance repair trade. The manufacturer cannot be responsible, nor assume any liability, for injury or damage of any kind arising from the use of this data sheet.

IMPORTANT NOTE: This unit includes an EOC (electronic oven control). This board is not field-repairable.

Safe Servicing Practices
To avoid the possibility of personal injury and/or property damage, it is important that safe servicing practices be observed. The following are some, but not all, examples of safe practices.

1. Do not attempt a product repair if you have any doubts as to your ability to complete it in a safe and satisfactory manner.
2. Before servicing or moving an appliance, remove power cord from electric outlet, trip circuit breaker to Off, or remove fuse.
3. Never interfere with the proper installation of any safety device.
4. Use only replacement parts specified for this appliance. Substitutions may not comply with safety standards set for home appliances.
5. Grounding: The standard color coding for safety ground wires is green or green with yellow stripes. Ground leads are not to be used as current carrying conductors. It is extremely important that the service technician reestablish all safety grounds prior to completion of service. Failure to do so will create a potential hazard.
6. Prior to returning the product to service, ensure that:
   - All electric connections are correct and secure.
   - All electrical leads are properly dressed and secured away from sharp edges, high-temperature components, and moving parts.
   - All uninsulated electrical terminals, connectors, heaters, etc. are adequately spaced away from all metal parts and panels.
   - All safety grounds (both internal and external) are correctly and securely reassembled.
   - All panels are properly and securely reassembled.

Oven Calibration
Set the electronic oven control for normal baking at 350°F. Allow oven to preheat to set temperature. Obtain an average oven temperature after a minimum of five cycles. Press the **STOP** key to end the Bake mode.

Temperature Adjustment
1. While in a non-cooking mode, press and hold the **Bake** key for 6 seconds.
2. The current calibration offset (temperature adjustment) should appear in the temperature display.
3. Use the number keys (0-9) to enter the desired amount of adjustments (up to 35°F).
4. Press the **Self Clean** key to change the sign of the adjustment to a (-), if necessary. A positive adjustment will not display a sign.
5. Once the desired adjustment (-35° to 35° F) has been entered, press the **Start** key to accept the change or the **Cancel** key to reject the change.

Note: Changing calibration affects all baking modes. The adjustments made will not change the self-cleaning temperature.

2-Speed Cooling Fan
The EOC controls the speed of the cooling fan. The cooling fan is activated at low speed during any cooking function and will remain on until the oven is cooled down. The high speed is activated during the broil (with open door) and during clean cycles only when the temperature is above approximately 575°F/302°C.

CIRCUIT ANALYSIS MATRIX

	On Relay Board							TRIAC Board		On Display Board		
	ELEMENTS			Door Motor J3-5	DLB L2 out P1	Cooling Fan Low J3-7	Cooling Fan High J3-8	Conv Fan P2-7	Oven Light P2-1	Door Switch P10-3	Rack Sensor Defeat P10-2	
	Bake P9	Broil P7	Conv. P11									
Bake	X	X	X*		X	X	X	X*				
Keep Warm	X				X	X						
Broil		X			X	X	X					
Conv. Bake	X	X	X		X	X	X	X**				
Conv. Roast	X	X	X		X	X	X	X				
Conv. Broil		X			X	X	X	X				
Clean	X	X			X	X	X					
Locking				X								
Locked												
Unlocking				X								
Unlocked												
Light										X		
Door Open										X		
Door Closed											X	
Bread Proof	X				X	X						
Rack sensor switch defeat												X
Relay will operate in this condition only						*Convection element and fan are used for the first rise in temperature						

MEAT PROBE TEMPERATURE VS RESISTANCE TABLE

Temperature	Probe Resistance
77 °F / 25°C	50.020 Kohm +/- 6%
122 °F / 50°C	18.020 Kohm +/- 5%
176 °F / 80°C	6.290 Kohm +/- 5%
212 °F / 100°C	3.400 Kohm +/- 5%

LOWER OVEN ANALYSIS MATRIX	On Relay Board	
	ELEMENTS	DLB L2 out (P2)
	Bake (P10)	
Bake	X	X
Keep Warm	X	X

RTD SCALE

Temperature °F (°C)	Resistance (ohms)
32 ± 1.9 (0 ± 1.0)	1000 ± 4.0
75 ± 2.5 (24 ± 1.3)	1091 ± 5.3
250 ± 4.4 (121 ± 2.4)	1453 ± 8.9
350 ± 5.4 (177 ± 3.0)	1654 ± 10.8
450 ± 6.9 (232 ± 3.8)	1852 ± 13.5
550 ± 8.2 (288 ± 4.5)	2047 ± 15.8
650 ± 9.6 (343 ± 5.3)	2237 ± 18.5
900 ± 13.6 (482 ±7.5)	2697 ± 24.4
Probe circuit to case ground	Open circuit/infinite resistance

ELECTRONIC OVEN CONTROL (EOC) FAULT CODE DESCRIPTIONS

Note: Generally speaking "F1X" implies a control failure, "F3X" an oven probe problem, and "F9X" a latch motor problem.

Code	Condition/Cause	Suggested Corrective Action
F10	Control has sensed a potential runaway oven condition. Control may have shorted relay, RTD sensor probe may have a gone bad.	Check RTD sensor probe and replace if necessary. If oven is overheating, disconnect power. If oven continues to overheat when power is reapplied, replace relay board and/or display board.
F11	Shorted Key: a key has been detected as pressed for a long period and will be considered a shorted key alarm and will terminate all oven activity.	1. Press any key to clear the error. 2. If fault returns, replace the keyboard (touch panel). 3. If the problem persists, replace the display board.
F13	Control's internal checksum may have become corrupted.	1. Press any key to clear the error. 2. Disconnect power, wait 30 seconds and reapply power. If fault returns upon power-up, replace display board.
F14	Misconnected keyboard cable	1. Verify connection between display board and touch panel (2 ribbon cables). Make sure the cables are well connected at both ends. 2. If the cables are good, replace the touch panel. 3. If the problem persists, replace the display board.
F15	Controller self check failed.	1. Verify if relay board receives 120VAC between J4 pin 1 and 3. 2. Verify the wiring between J2 on the relay board and P16 on the display board. 3. If wiring and 120VAC supply is good replace the display board. 4. If problem persists replace the relay board.
F20	The oven controller has detected a problem with the communication link to the surface element controller (ESEC).	1. Is the ESEC User Interface Board powered on (are the surface element displays showing something)? If not, that is the reason why the oven control cannot communicate with it (ESEC has no power). Check the 120VAC voltage going in to the ESEC power supply board located in the front console (connector P1) and the low voltage supply going from the power supply board (connector P2) to the ESEC UIB (connector P8). 2. Check connections between connector P2 on the oven controller and P9 on the ESEC UIB. This is the communication link. Verify for continuity. Refer to the wiring diagram. 3. If the above steps failed to solve the problem, replace the ESEC UIB. 4. If problem persists replace the oven controller.
F23	The controller failed to communicate with the oven lights control board.	1. Verify wiring between P2 on the display board and P2 on the oven lights control board. 2. If wiring is good, replace oven lights board. 3. If the problem persists, replace the display board.
F30	Open RTD sensor probe/ wiring problem. Note: EOC may initially display an "F10", thinking a runaway condition exists.	1. Check wiring in probe circuit for possible open condition. 2. Check RTD resistance at room temperature (compare to probe resistance chart). If resistance does not match the chart, replace the RTD sensor probe. 3. Let the oven cool down and restart the function. 4. If the problem persists, replace the display board.
F31	Shorted RTD sensor probe / wiring problem.	Note: F30 or F31 is displayed when oven is in active mode or an attempt to enter an active mode is made.
F43	The cooling fan speed, as read by the tachometer input of the EOC-display board, is abnormally too slow.	1. Determine first if the problem appears to be caused by a cooling fan not turning or turning slowly or by a problem with the sensing of the fan speed. Start a Bake and check during the first 15 seconds if the fan is turning (should feel air flowing through the vent above the upper oven door). 2. If the fan does not appear to be turning or turn slowly check the 120VAC at the fan. If 120VAC is present at the fan motor but the fan does not turn replace the fan motor. If 120VAC is not present at the fan motor when a Bake is started check the connection to the relay board (J3 pin 7) and Neutral: is there 120VAC on J3 pin 7? Does it reach the fan motor? Is the other terminal of the fan motor connected to Neutral? If the harness or relay board are faulty replace them. 3. If the fan appears to be normally turning but an F43 error code is generated, it means there is a problem with the reading of the fan speed sensor. Make sure the connection of the fan speed sensor is properly made (refer to wiring diagram), between the sensor on the fan and the EOC- display board. 4. For trouble-shooting purposes, it is possible to enter a test mode that will indicate on the display the reading of the fan speed in RPM: to enter the test mode, power-up the unit and within 30 seconds press and hold the upper oven Bake and Broil keys for 3 seconds (until you see all segments in the screen illuminated). Once in the test mode, pressing the upper oven Light key once will display the fan speed in RPM. In normal client mode the F43 error is generated for a fan speed below approximately 700 RPM.
F44	The cooling fan speed, as read by the tachometer input of the EOC- display board, is abnormally too fast.	1. Inspect the cooling fan. Does it appear to be turning normally (air flow, noise)? Verify the fan blade is well assembled. 2. Verify there is nothing blocking the air flow of the fan (that could make the fan turn faster). 3. Check the 120VAC voltage on the fan. A voltage higher than 120VAC + 10% could make it go too fast. 4. Make sure the connection of the fan speed sensor is properly made (refer to wiring diagram), between the sensor on the fan and the EOC- display board. 5. For trouble-shooting purposes, it is possible to enter a test mode that will indicate on the display the reading of the fan speed in RPM: to enter the test mode, power-up the unit and within 30 seconds press and hold the upper oven Bake and Broil keys for 3 seconds (until you see all segments in the screen illuminated). Once in the test mode, pressing the upper oven Light key once will display the fan speed in RPM. In normal client mode the F44 error is generated for a fan speed above approximately 2500 RPM. 6. If problem persists replace both the fan+sensor assembly and the EOC- display board.
F90	Door motor mechanism failure.	1. Press any key to clear the error. 2. If it does not eliminate the problem, turn off power for 30 seconds, then turn on power. 3. Check wiring of Lock Motor, Lock Switch and Door Switch circuits. 4. Unplug the lock motor from the board and apply power (L1) directly to the Lock Motor. If the motor does not rotate, replace Lock Motor Assembly. 5. Check Lock Switch for proper operation (do they open and close, check with ohmmeter). The Lock Motor may be powered as in above step to open and close Lock Switch. If the Lock Switch is defective, replace Motor Lock Assembly. 6. If all above steps fail to correct situation, replace the display board and/or the relay board in the event of a motor that does not rotate. 7. If all the above steps fail to correct the situation, replace the display board in the event of a motor that rotates endlessly.

IMPORTANT
DO NOT REMOVE THIS BAG OR DESTROY THE CONTENTS
WIRING DIAGRAMS AND SERVICE INFORMATION ENCLOSED
REPLACE CONTENTS IN BAG

RELAY BOARD

LOWER OVEN P8
BAKE P10
P12
DLB OUT P2
DLB IN
P4 P18
J1
P6
BAKE — K4 K6 K8
BLB — K2
K10 K12 K13 K15 K17
J4 NEUTRAL L1

J7 - HEAT CONTROL UPPER OVEN CONNECTS TO CONTROL P11

J5 - HEAT CONTROL LOWER OVEN CONNECTS TO CONTROL P9

J2 DC POWER CONNECTS TO CONTROL P16
GROUND
VLED (~+7 VDC)
VUR (~+15 VDC)
ZERO CROSS

J6 CONTROLS FAN, NIGHT LIGHT, AUX OUTUT CONNECTS TO CONTROL P13

K3 BROIL K5 BAKE K7 CONV K1 DLB
K9 K11 K14 K16 K18 K19 K20 K21
P5 L1_1

UPPER OVEN BROIL P7 BAKE P9 CONV P11 P3 P17 L2 IN L2 OUT P1
J3
NEUTRAL L1 MDL
COOLING FAN - LOW
COOLING FAN - HIGH
P13 P19 P15 P16 J8

OVEN CONTROL

P6 PROGRAMMING HEADER

COMMON
DOOR SWITCH
RACK SENSOR DEFEAT
MDL
P9 OUT CONNECTS TO J5
P10 SWITCH 1 OUT

P18 MEAT PROBE
P20 LOWER OVEN TEMP PROBE
P1 TEMP PROBE

P13 AUX OUT CONNECTS TO J6
P2 LIN COMM 1 CONNECTS TO TRIAC
P8 BACKLIGHT POWER CONNECTS TO POWER SUPPLY
P16 POWER IN CONNECTS TO J2
P11 LOWER OVEN OUT CONNECTS TO J7

USER INTERFACE BOARD (UIB)

P10 CONNECTS TO ESEC RELAY BOARD J3
P5 P6 P7
P10
P3
P5 CONNECTS TO ESEC RELAY BOARD J5
P6 CONNECTS TO ESEC RELAY BOARD J2
P7 CONNECTS TO POWER SUPPLY
P9 CONNECTS TO TRIAC
J2 J4 P9 J3

TRIAC BOARD

NEUTRAL L1
OVEN LAMP CONV FAN
P2
P1 CONNECTS TO CONTROL P2
PROGRAMMING HEADER
P1 P6

OVEN CIRCUIT

N
W-5
L1 L2
BK-9 R-9
RELAY BOARD
TIMER

CONVECTION FAN P-14 TRIAC P2
W14 7 6 5 BK-14
CONVECTION FAN P-14
W14
W-14
OVEN LAMPS HALOGEN T-14
W-14 P1
UIB P9
W-14 HALOGEN T-14
1 2 3 BL-22

P16
GRD
V-LED
V-UR
NOT USED
ZERO CROSS
J2 BK-22

P2
DATA
DATA
GRD
PWR
BL-22

P9
K14 K11 K9 K1 K7 K5 K3
NOT USED
WGL STMLS
J5 Y-22

P11
K4 K6 K8 K2 K10 K12 K13
J7 W-22

P13
K21 K19 K17 K16 K15 K17 K20
PWM REL
J6 R-22

DOOR SWITCH LATCH MOTOR
NC 6
NO 5
C 4
3
2
1
O-20
GY-20
BR/W-20
W-20
BK-14
O-20

W-14
BR/W-14
COOLING FAN LO W-14 BL-14
COOLING FAN HI W-14 Y-14

R-7 IN DLB OUT
P3 P1
THERMAL CIRCUIT BREAKER
0-7 0-7

P10
1
2 GY-20 RACK SENSOR DEFEAT
3 P-20 DOOR SWITCH GY-20
NO C
4
5 GY-20

K7 P11 PR-6 CONVECTION ELEMENT 0-6
BK-8 P5
K5 P9 Y-6 BAKE ELEMENT 0-6
K3 P7 BL-7 BROIL ELEMENT 0-7

P1
1 V-14 UPPER TEMPERATURE PROBE
2 V-14

J4
1
2
3 BK-14
DLB IN DLB OUT
P4 K2 P2 O/W-6 MINI OVEN Y-6
R-7
BK-7 K6 P10 Y-6 BAKE ELEMENT
R-14

P20
1 V-20 LOWER TEMPERATURE PROBE
2 V-20
3

P18
1 V/W-14 MEAT PROBE RECEPTACLE
2 V/W-14
3
4

TO A/A PAGE:2 J1-3

WIRE	GAUGE	TEMP.°C	CSA	UL
1	18	125	CL1251	3173
2	16	125	CL1251	3173
3	14	125	CL1251	3173
4	12	125	CL1251	3173
5	18	150	EXL-150	3321
6	16	150	EXL-150	3321
7	14	150	EXL-150	3321
8	12	150	EXL-150	3321
9	10	150	EXL-150	3321
10	18	200	SEW-1	3122
11	16	200	SEW-1	3122
14	20	150	EXL-150	3321
15	8	150	EXL-150	3321
16	8	60		
17	10	60		
18	10	200	SEW-1	3122
19	20	125	CL1251	3173
20	20	200	SEW-1	3122
22	22	200		10109
37	14	200		3512

R-1
R-19
P1 P1 P2 Y-21 P8
1 2 3 4 1 2 3 1 2 3 4 5
TRANSFORMER
W-14 W-19
POWER SUPPLY

P2
1 2 3 4 5 BL-21
UIB P7
1 2 3 4 5

LEGEND
BK-22 R-22
B6
CONNECTOR CAVITY

CONNECTOR
2 1
4 3 *SOME MODELS
*C

REV:
PAGE:1/2

NOTICE: This service data sheet is intended for use by persons having electrical and mechanical training and a level of knowledge of these subjects generally considered acceptable in the appliance repair trade. The manufacturer cannot be responsible, nor assume any liability, for injury or damage of any kind arising from the use of this data sheet.

IMPORTANT NOTE: This unit includes an ESEC (electronic surface element control). This board is not field-repairable.

Safe Servicing Practices
To avoid the possibility of personal injury and/or property damage, it is important that safe servicing practices be observed. The following are some, but not all, examples of safe practices.

1. Do not attempt a product repair if you have any doubts as to your ability to complete it in a safe and satisfactory manner.
2. Before servicing or moving an appliance, remove power cord from electric outlet, trip circuit breaker to Off, or remove fuse.
3. Never interfere with the proper installation of any safety device.
4. Use only replacement parts specified for this appliance. Substitutions may not comply with safety standards set for home appliances.
5. Grounding: The standard color coding for safety ground wires is green or green with yellow stripes. Ground leads are not to be used as current carrying conductors. It is extremely important that the service technician reestablish all safety grounds prior to completion of service. Failure to do so will create a potential hazard.
6. Prior to returning the product to service, ensure that:
   - All electric connections are correct and secure.
   - All electrical leads are properly dressed and secured away from sharp edges, high-temperature components, and moving parts.
   - All uninsulated electrical terminals, connectors, heaters, etc. are adequately spaced away from all metal parts and panels.
   - All safety grounds (both internal and external) are correctly and securely reassembled.
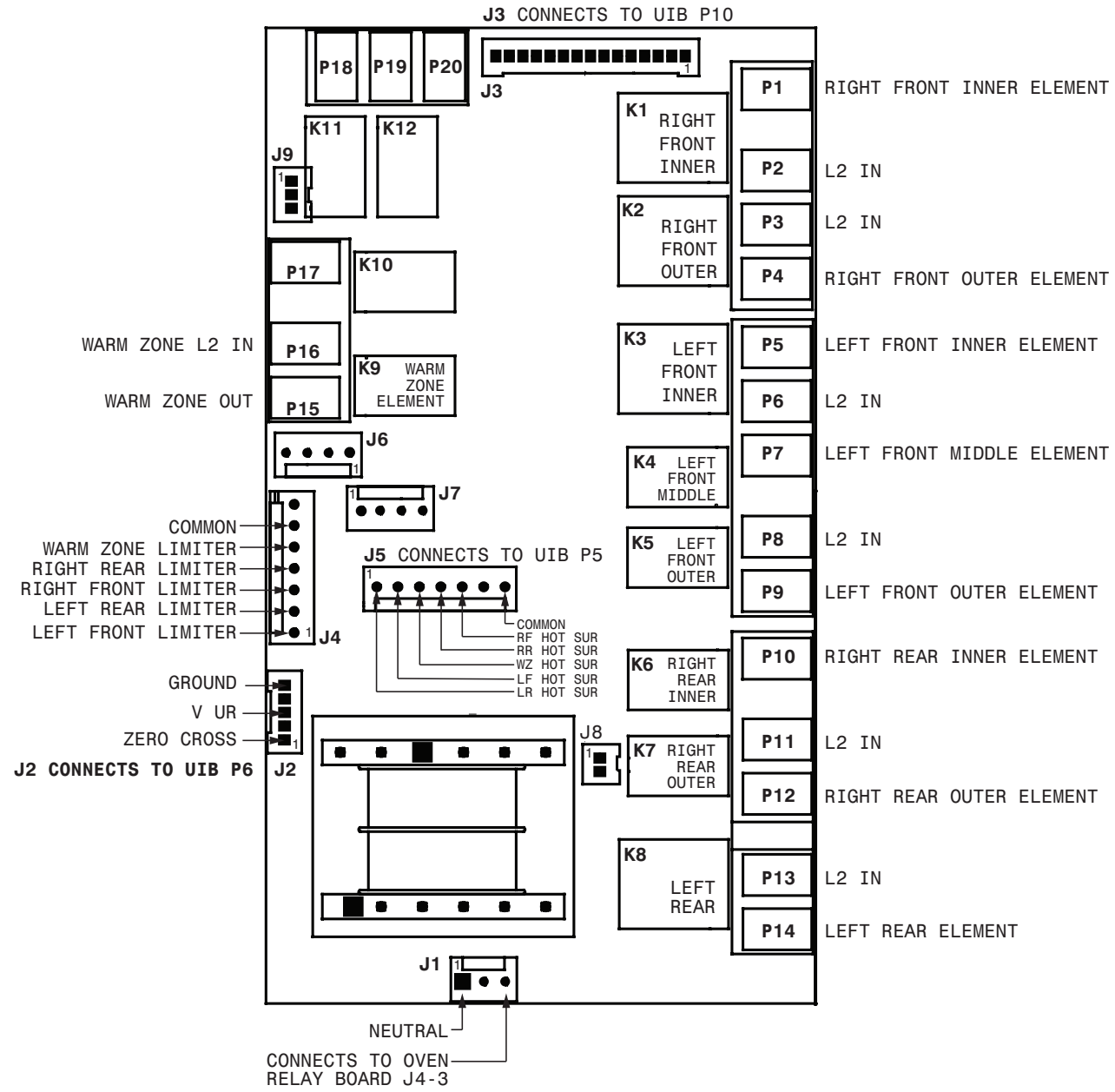   - All panels are properly and securely reassembled.

RTD SCALE	
Temperature °F (°C)	**Resistance (ohms)**
32 ± 1.9 (0 ± 1.0)	1000 ± 4.0
75 ± 2.5 (24 ± 1.3)	1091 ± 5.3
250 ± 4.4 (121 ± 2.4)	1453 ± 8.9
350 ± 5.4 (177 ± 3.0)	1654 ± 10.8
450 ± 6.9 (232 ± 3.8)	1852 ± 13.5
550 ± 8.2 (288 ± 4.5)	2047 ± 15.8
650 ± 9.6 (343 ± 5.3)	2237 ± 18.5
900 ± 13.6 (482 ±7.5)	2697 ± 24.4
Probe circuit to case ground	Open circuit/infinite resistance

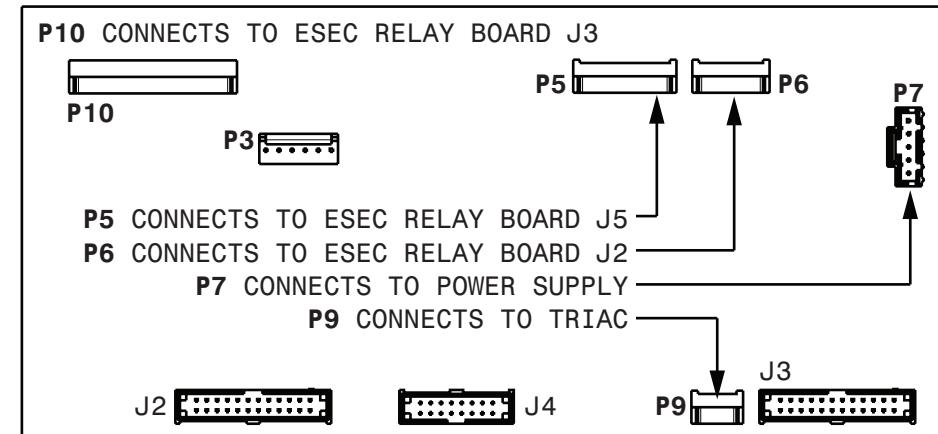| ELECTRONIC SURFACE ELEMENT CONTROL (ESEC) FAULT CODE DESCRIPTIONS		
Code	Condition/Cause	Suggested Corrective Action
E11	Shorted keypad	1. Disconnect power, wait 30 seconds and reapply power. 2. If fault returns upon power-up, replace user interface board (UIB). 3. If fault returns, replace glass touch panel.
E13	Bad EEPROM	1. Disconnect power, wait 30 seconds and reapply power. 2. If fault returns upon power-up, replace user interface board (UIB).
E14	Touch panel display tail missing	1. Check connection between UIB (connector J2, J3 & J4) and glass touch panel. 2. If connections are good, replace UIB. 3. If problem persists, replace touch panel.
E15	ESEC self-test failed, or thermal cutoff open	An E15 error code on the ESEC may indicate the User Interface Board is not receiving a synchronization signal from the ESEC relay board. 1. Check first if the ESEC relay board is receiving 120VAC correctly (J1 pin 1 and 3). 2. Check the wiring between connector J2 on the ESEC relay board and connector P6 on the UIB. 3. If AC power and wiring looks good and the problem is still there, replace the UIB. 4. If problem persists, replace the ESEC relay board.

p/n 807880708 EN (Rev A 15/02)

ELECTRONIC SURFACE ELEMENT CONTROL (ESEC) BOARD

J3 CONNECTS TO UIB P10

P18 P19 P20
J3

K11 K12
J9

K1 RIGHT FRONT INNER
P1 — RIGHT FRONT INNER ELEMENT
P2 — L2 IN

K2 RIGHT FRONT OUTER
P3 — L2 IN
P4 — RIGHT FRONT OUTER ELEMENT

P17 K10

P16 WARM ZONE L2 IN
K9 WARM ZONE ELEMENT
P15 WARM ZONE OUT

K3 LEFT FRONT INNER
P5 — LEFT FRONT INNER ELEMENT
P6 — L2 IN

K4 LEFT FRONT MIDDLE
P7 — LEFT FRONT MIDDLE ELEMENT

K5 LEFT FRONT OUTER
P8 — L2 IN
P9 — LEFT FRONT OUTER ELEMENT

J6

J7

J5 CONNECTS TO UIB P5

COMMON
WARM ZONE LIMITER
RIGHT REAR LIMITER
RIGHT FRONT LIMITER
LEFT REAR LIMITER
LEFT FRONT LIMITER
J4

COMMON
RF HOT SUR
RR HOT SUR
WZ HOT SUR
LF HOT SUR
LR HOT SUR

K6 RIGHT REAR INNER
P10 — RIGHT REAR INNER ELEMENT

K7 RIGHT REAR OUTER
P11 — L2 IN
P12 — RIGHT REAR OUTER ELEMENT

GROUND
V UR
ZERO CROSS
J2 CONNECTS TO UIB P6   J2

J8

K8 LEFT REAR
P13 — L2 IN
P14 — LEFT REAR ELEMENT

J1
NEUTRAL
CONNECTS TO OVEN
RELAY BOARD J4-3

USER INTERFACE BOARD (UIB)

P10 CONNECTS TO ESEC RELAY BOARD J3
P10

P3

P5 P6 P7

P5 CONNECTS TO ESEC RELAY BOARD J5
P6 CONNECTS TO ESEC RELAY BOARD J2
P7 CONNECTS TO POWER SUPPLY
P9 CONNECTS TO TRIAC

J2   J4   P9   J3

COOKTOP CIRCUIT

N   L2
W-5   R-8

L1
BK-8

ESEC 20 RELAY BOARD

W-14   J1-1
PAGE:1
FROM:J4-3   BK-14   J1-3

USER INTERFACE BOARD

J5   R-22   P5
1   R-22   1 LR HT SUR
2   R-22   LF HT SUR
3   R-22   CR HT SUR
4   R-22   RR HT SUR
5   R-22   RF HT SUR
            NOT USED
7   R-22   COM

BK-6 B11 BK-34 ELM R.F.1 BR/W-34 B1 BR/W-6 P1 K1 P2 R-6
BK-6 B11 BK-34 ELM R.F.2 PR-34   B1 PR-6   P4 K2 P3 R-6

BK-6 B15 BK-37 ELM L.F.1 O/BK-34 B7 O/BK-6 P5 K3 P6 R-6
BK-6 B15 BK-37 ELM L.F.2 PR/O-34 B8 PR/O-6 P7 K4 P8 R-6
                  ELM L.F.3 P-34   B9 P-6   P9 K5

J2   Y-22   P6
1   Y-22   1 GRD
3   Y-22   3 V_UR
            NOT USED
5   Y-22   5 ZERO CROSS

BK-6 B12 BK-34 ELM R.R.1 BL/BK-34 B3 BL/BK-6 P10 K6 P11 R-6
BK-6 B12 BK-34 ELM R.R.2 PR-34   B4 PR-6   P12 K7 P13 R-6

BK-6 B14 BK-34 ELM L.R. Y-34 B6 Y-6 P14 K8 P13 R-6

BK-6 B13 BK-34 ELM C.R. PR-34 B5 PR-6 P15 K9 P16 R-6

P17 K10

J3
1   BK-22
3   BK-22
4   BK-22
5   BK-22
6   BK-22
7   BK-22
8   BK-22
9   BK-22
10   BK-22
11   BK-22
12   BK-22

P10
1 PWM REL
  NOT USED
3 WIGGLER STIMULUS
4 K1
5 K2
6 K3
7 K4
8 K5
9 K6
10 K7
11 K8
12 K9

LIMITER H.S. LIM.
GY-20 LF GY/O-20 D1 GY/O-14   1
GY-20 LR GY-20   D2 GY-14   2
GY-20 RF W/BR-20 D3 W/BR-14   3   REL BD
GY-20 RR GY/BL-20 D4 GY/BL-14 4   J4
GY-20 CR GY/R-20 D5 GY/R-14   5
       GY-20   D6 GY-14   6

WIRE TABLE

WIRE	GAUGE	TEMP.°C	CSA	UL
1	18	125	CL1251	3173
2	16	125	CL1251	3173
3	14	125	CL1251	3173
4	12	125	CL1251	3173
5	18	150	EXL-150	3321
6	16	150	EXL-150	3321
7	14	150	EXL-150	3321
8	12	150	EXL-150	3321
9	10	150	EXL-150	3321
10	18	200	SEW-1	3122
11	16	200	SEW-1	3122
12	12	250		3252
13	16	250		3252
14	20	150	EXL-150	3321
15	8	150	EXL-150	3321
16	8	60		
17	6	60		
18	10	200	SEW-1	3122
19	20	125	CL1251	3173
20	20	200	SEW-1	3122
37	14	200		3512

CONNECTOR

F 1 2 3 4

D 1 2 3
   4 5 6

B 1 4 7 10 13
   2 5 8 11 14
   3 6 9 12 15

ELM 1
ELM 2
DUAL ELEMENT

ELM 1
ELM 2
ELM 3
TRIPLE ELEMENT
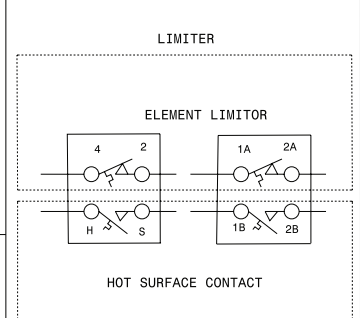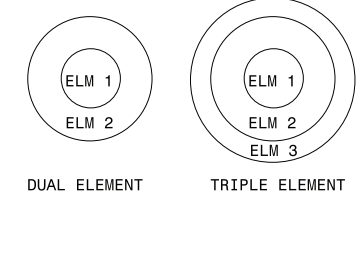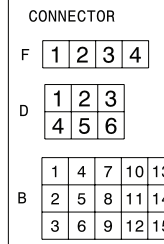
CAUTION: DISCONNECT POWER BEFORE SERVICING UNIT.
LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING CONTROLS.
WIRINGS ERRORS CAN CAUSE IMPROPER AND DANGEROUS OPERATION.
VERIFY PROPER OPERATION AFTER SERVICING.

LIMITER
ELEMENT LIMITOR
4 2   1A 2A
H S   1B 2B
HOT SURFACE CONTACT

REV:
PAGE:2/2