All About

Servicing

Service Tech Hand Book

FRIGIDAIRE™

White-Westinghouse

Gibson

Kelvinator

TAPPAN

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Safe Servicing Practices

Avoid personal injury and/or property damage by observing important Safe Servicing Practices. Following are some limited examples of safe practices:

1. DO NOT attempt a product repair if you have any doubts as to your ability to complete the repair in a safe and satisfactory manner.

2. Always Use The Correct Replacement Parts as indicated in the parts documentation. Substitutions may defeat compliance with Safety Standards Set For Home Appliances.

3. Before servicing or moving an appliance:
   - Remove power cord from the electrical outlet, trip circuit breaker to the OFF position, or remove fuse.

4. Never interfere with the proper operation of any safety device.

5. Use ONLY REPLACEMENT PARTS CATALOGED FOR THIS APPLIANCE. Substitutions may defeat compliance with Safety Standards Set For Home Appliances.

6. 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 hazard.

7. Prior to returning the product to service, ensure that:
   - All electrical connections are correct and secure.
   - All electrical leads are properly dressed and secured away from sharp edges, high-temperature components, and moving parts.
   - All non-insulated 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 connected.
   - All panels are properly and securely reassembled.

⚠ WARNING

This service manual 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. Electrolux home products cannot be responsible, nor assume any liability, for injury or damage of any kind arising from the use of this manual.

Section 1 Basic Information

This Manual has been prepared to provide Electrolux Service Personnel with Operation and Service Information for the proper service of Electrolux Appliances.

Table of Contents

Error Code	Description	Solution
E10/E11	Fill time too long	1. Is the incoming water flow normal? Yes, go to step (4). No, go to step (2). 2. Are the incoming water faucets turned on? No, turn water faucets on. Yes, go to step (3). 3. Is the incoming water pressure above (30) psi? No, have customer correct pressure problem. Yes, check for kinked or blocked incoming water hoses, clean incoming water screens. If problem still remains, replace the water inlet valve assembly. 4. Does the fill water continue to enter the washer? Yes, go to step (5) no, go to step (6). 5. Remove power from washer. Did the water fill stop? Yes, go to step (6). No, replace the inlet valve assembly. 6. For *Better* models, check the electronic pressure sensor. For *Good* models, check the pressure switch. Pressure sensor checks good. Go to step (7). Pressure sensor checks incorrect. Replace pressure sensor. 7. Replace the Main Control Board.
E13	Water leak in tub or air leak in air bell	1. Is the washer leaking water? Yes. Correct water leak. No. Go to step (2). 2. Is there a leak in the air bell system? Yes. Correct the leak problem. No. Go to step (3). 3. For *Better* models, check the electronic pressure sensor. For *Good* models, check the pressure switch. Defective. Replace pressure sensor(switch). Good. Go to step (4) 4. Replace the Main Control Board.
E14	Reed Switch	1. Is the dispenser drawer closed? No, close the drawer. Yes, go to step (2). 2. Remove the drawer and check the magnet. Magnet missing or defective, replace the magnet. Magnet good. Go to step (3). 3. Open the console and check the reed switch. Defective, replace the reed switch. Good, replace the Main Control Board.
E20/ E21/ E22	Water not pumping out fast enough	1. Check the drain hose for restrictions. Restriction, correct problem. No restriction, go to step (2). 2. Start the washer and check for 120VAC at the drain pump. Zero, replace the Main Control Board. 120VAC, remove the pump and check it for blockage. If blocked, remove the restriction, if not, replace the pump.
E23	Drain pump relay on board failed or wire off pump	Replace Main Control Board or repair wiring

Error Code	Description	Solution
E24	Drain pump relay on board failed or wire off pump	Replace Main Control Board or repair wiring
E25	Recirculation pump relay sense	1. Check wiring between Main Control Board and pump. If correct, go to step (2). 2. Check wiring between Main Control Board and recirculation board. If correct, go to step (3). 3. Check pump for open coil (resistance check). If correct, replace Main Control Board.
E26	Recirculation pump relay	1. Check wiring between Main Control Board and pump. If correct, go to step (2) 2. Check wiring between Main Control Board and recirculation board. If correct, go to step (3). 3. Check pump for open coil (resistance check). If correct, replace Main Control Board.
E31	*Better* models- pressure sensor not communicating with Main Control Board	Inspect the wiring between the pressure sensor and the Main Control Board. Defective wiring, correct wiring. Good wiring, replace the pressure sensor. If this does not correct the problem, replace the Main Control Board.
E32	Pressure sensor calibration problem	Inspect the wiring between the pressure sensor and the Main Control Board. Defective wiring, correct wiring. Good wiring, replace the pressure sensor. If this does not correct the problem, replace the Main Control Board.
E35	*Better* models- pressure sensor indicates water overfill	1. Is the water level above 4.5 inches? Yes, go to step (2). No, go to step (4). 2. Does the water enter the washer continuously? Yes, go to step (3). No, replace the Main Control Board. 3. Remove power from the washer. Does the water stop coming in? No, replace water valve assembly. Yes, check wiring to valve assembly for shorts. If wiring is good, replace the Main Control Board. 4. Replace the pressure sensor switch. Did this correct the problem? Yes, problem solved. No, replace the Main Control Board.
E36	Main Control Board problem	Replace Main Control Board.

Error Code	Description	Solution
E38	Air trap clogged	1. Is the water level above 4.5 inches? Yes, go to step (2). No, go to step (4). 2. Does the water enter the washer continuously? Yes, go to step (3). No, check air trap for clog. If not, replace the Main Control Board. 3. Remove power from the washer. Does the water stop coming in? No, replace the water valve assembly. Yes, check the wiring to valve assembly for shorts. If wiring is good, replace the Main Control Board. 4. Replace the pressure sensor switch. Did this correct the problem? Yes, problem solved. No, replace the Main Control Board.
E41	Main Control Board thinks the door switch is open	1. Is the loading door closed? No, close the door. Yes, go to step (2). 2. Disconnect the plug from J2 on the Main Control Board and check for continuity between the pins in the plug. Open, check the door strike. If good, replace the door switch assembly. Closed, replace the Main Control Board.
E42	Door remains locked after cycle is complete	Remove power from the washer. Wait one minute. Can you open the door? Yes, replace the Main Control Board. No, replace the door switch assembly. Note: you may have to break the door strike to do this.
E43	Main Control Board problem	Replace Main Control Board
E44	Main Control Board problem	Replace Main Control Board
E45	Main Control Board problem	Replace Main Control Board
E46	Main Control Board problem	Replace Main Control Board
E47	Board thinks the door PTC circuit is open in spin	Remove the door lock assembly and measure the resistance of the PTC. Shorted or open, defective door lock assembly. Reads around 1500 ohms, defective Main Control Board.
E48	Board thinks the door PTC circuit is closed	Refer to E47 solution
E49	Door incongruence between door line and door sense.	1. Is the loading door closed? No, close the door. Yes, go to step (2). 2. Can you hear the lock attempt to close? Yes, check the door strike. If good, replace the door switch. No, go to step (3) 3. Check the wire connection between door lock and Main Control Board. If good, replace the door lock. If problem is not corrected, replace the Main Control Board.

Error Code	Description	Solution
E52	Bad signal from tacho generator.	Disconnect the plug from the drive motor and measure the resistance of pins 4 and 5 in the motor. If reading is between 105 and 130 ohms, replace the Speed Control Board. If the meter reads outside 105 and 130 ohms, replace the motor.
E53	Low voltage to Speed Control Board.	Check the wiring between the Main Control Board and the Speed Control Board. If good, replace the Speed Control Board.
E54	Over speed.	1. Remove the belt from the motor and spin the motor pulley. Does the motor spin free? No, replace the motor. Yes, go to step (2) 2. Spin the tub pulley. Does the tub spin free? No, check the tub bearings. Yes, go to step (3). 3. Disconnect the plug from the drive motor and measure the resistance between pins 4 and 5 in the motor. If the meter reads other than between 105 and 130 ohms, replace the motor. If the reading is between 105 and 130 ohms, go to step (4). 4. Disconnect the plug from the motor and measure the resistance of the windings. (Pin 1 to 2, pin 1 to 3, pin 2 to 3) all readings should be between 3 and 6 ohms. If readings are correct, replace the Speed Control Board. If readings are incorrect, replace the motor.
E55	Motor overheating.	1. Remove the belt from the motor and spin the motor pulley. Does the motor spin free? No. Replace the motor. Yes. Go to step (2) 2. Spin the tub pulley. Does the tub spin free? No. Check the tub bearings. Yes. Go to step (3). 3. Disconnect the plug from the motor and measure the resistance of the windings (pin 1 to pin 2, pin 1 to pin 3, pin 2 to pin 3). All readings should be between 4 and 6 ohms. If the readings are correct, replace the Speed Control Board. If the readings are incorrect, replace the motor.
E56	High motor current	1. Remove the belt from the motor and spin the motor pulley. Does the motor spin free? No, replace the motor. Yes, go to step (3). 2. Spin the tub pulley. Does the tub spin free? No, check the tub bearings. Yes, go to step (3). 3. Disconnect the plug from the motor and measure the resistance of the windings (pin 1 to 2, pin 1 to 3, pin 2 to 3). All readings should be between 4 and 6 ohms. If readings are correct, replace the Speed Control Board. If readings are incorrect, replace the motor.

Error Code	Description	Solution
E57	High current on inverter	Refer to E56 solution
E58	High current on motor phase	Refer to E56 solution
E59	No tacho signal for 3 seconds	1. Remove the belt from the motor and spin the motor pulley. Does the motor spin free? No, replace the motor. Yes, go to step (3). 2. Spin the tub pulley. Does the tub spin free? No, check the tub bearings. Yes, go to step (3). 3. Disconnect the plug from the drive motor and measure the resistance between pins 4 and 5 in the motor. If the meter reads other than between 105 and 130 ohms, replace the motor. If the reading is between 105 and 130 ohms, go to step (4). 4. Disconnect the plug from the motor and measure the resistance of the windings (pin 1 to 2, pin 1 to 3, pin 2 to 3). All readings should be between 4 and 6 ohms. If readings are correct, replace the Speed Control Board. If readings are incorrect, replace the motor.
E4A	Door PTC sensing problem	1. Is the loading door closed? No, close the door. Yes, go to step (2). 2. Can you hear the lock attempt to close? Yes, check the door strike. If good, replace door switch. No, go to step (3). 3. Check the wire connection between the door lock and the Main Control Board. If good, go to step (4). 4. Place the unit into *Rinse/Spin* and remove any load from tub. Start the cycle. Does the water pump out? If not, check the drain hose for restrictions. Check the drain pump for 120VAC at pump. If no power at pump, check wiring. If correct, check for 120VAC at Main Control Board. If unit does pump out, does unit go into spin? If no, replace door lock. If problem continues, replace Main Control Board.
E5A	High temperature on heat sink caused by overloading	Replace the Speed Control Board.
E5B	High temperature on heat sink	Replace the Speed Control Board.
E5C	High temperature on heat sink	Replace the Speed Control Board.

Error Code	Description	Solution
E5D	Communication problem	Communication problem. Check the wiring between the Main Control Board and the Speed Control Board. Wiring bad, correct wiring problem. Wiring good, replace the Main Control Board. If the problem is not corrected, replace the Speed Control Board.
E5E	Communication problem	Refer to E5D solution
E5F	Communication problem	Refer to E5D solution
E66	Heating element relay failure.	1. Check the resistance of the heating element. It should be appoximately 14 ohms. 2. Check the resistance between the ground and both heater terminals. It should be open when heater terminals are disconnected. If the readings are incorrect, replace the heating element. If the readings are correct, replace the Main Control Board.
E67	Input voltage on microprocessor incorrect.	Replace the Main Control Board
E68	Current leakage to ground on heater or fuse opened.	1. Check the resistance of the heating element. It should be appoximately 14 ohms. 2. Check the resistance between the ground and both heater terminals. It should be open when heater terminals are disconnected. If the readings are incorrect, replace the heating element.
E70	The Main Control Board is not seeing the correct water supply- swap hot and cold hoses.	Swap hot and cold hoses
E71	Wash NTC failure- (tub heater)	Swap hot and cold hoses
E74	Wash temperature does not increase.	Place NTC in correct position
E75	*Better* models- water temperature sensor circuit.	Check the resistance of the NTC. Is it around 50k ohms? No, replace the water inlet valve assembly. Yes, replace the Main Control Board.
E76	*Better* models- NTC temperature for the cold water valve over the limits	Swap hot and cold hoses
E82	Console Control problem	Replace the Main Control Board
E83	Console Control problem	Replace the Main Control Board

Error Code	Description	Solution
E91 E92	User Interface to Main Control Board communication error	Communication problem. Check the wiring between the Main Control Board and the User Interface Board. Wiring bad, correct wiring problem. Wiring good, replace the User Interface Board. If the problem is not corrected, replace the Main Control Board.
E93	Console Control problem	Replace the Main Control Board
E94	Console Control problem	Replace the Main Control Board
E95	Communication error	Replace the Main Control Board
E97	Console Control problem	Replace the Main Control Board
E98	Console Control problem	Replace the Main Control Board
E9F	Communication protocol.	Communication problem. Check the wiring between the Main Control Board and the Speed Control Board. Wiring bad, correct wiring problem. Wiring good, replace the Main Control Board. If the problem is not corrected, replace the Speed Control Board.
EA1	Power supply frequency out of limits	Have the power company check the frequency and voltage of the incoming power. If correct, for error code E5C, replace the Speed Control Board. If correct, for error codes EA1, EA2, EA3, EA5 ,EAE, or EA5, replace the Main Control Board.
EA2	Power supply voltage too high	Have the power company check the frequency and voltage of the incoming power. If correct, for error code E5C, replace the Speed Control Board. If correct, for error codes EA1, EA2, EA3, EA5 ,EAE, or EA5, replace the Main Control Board.
EA3	Power supply voltage too low	Have the power company check the frequency and voltage of the incoming power. If correct, for error code E5C, replace the Speed Control Board. If correct, for error codes EA1, EA2, EA3, EA5 ,EAE, or EA5, replace the Main Control Board.
EA5	Main voltage sensing failure	Have the power company check the frequency and voltage of the incoming power. If correct, for error code E5C, replace the Speed Control Board. If correct, for error codes EA1, EA2, EA3, EA5 ,EAE, or EA5, replace the Main Control Board.
EAE	Line safe relay sensing failure	Have the power company check the frequency and voltage of the incoming power. If correct, for error code E5C, replace the Speed Control Board. If correct, for error codes EA1, EA2, EA3, EA5 ,EAE, or EA5, replace the Main Control Board.
EB1	Incoming power frequency out of limits	Have the power company check the frequency of the incoming power. If correct, replace the Main Control Board.

Error Code	Description	Solution
EB2	Incoming line voltage above 130VAC	Check voltage at the outlet. If below 130VAC, replace the Main Control Board.
EB3	Incoming line voltage below 90VAC	Check voltage at the outlet. If above 90VAC, replace the Main Control Board.
EBE	Console control problem	Replace the Main Control Board
EBF	Console control problem	Replace the Main Control Board
EF1	Clogged drain pump	Unclog the drain pump.
EF2	Too much soap	Advise the customer to reduce the amount of soap they are using.
EF5	NTC temperature for the hot water valve over the limits	Hot and cold water hoses switched. Swap hoses.
EF6	Control reset	Unplug the unit for 1 minute and plug back in. If problem is not corrected, replace Main Control Board.
EF8	Key stuck	Check all buttons. If correct, replace User Interface Board.
General Family Codes		
E00	No error code is stored	
E10	Fill time problem- too long to fill or air leak at dome or pressure switch	1. Is the incoming water flow normal? Yes, go to step (4). No, go to step (2). 2. Are the incoming water faucets turned on? No, turn water faucets on. Yes, go to step (3). 3. Is the incoming water pressure above (30) psi? No, have customer correct pressure problem. Yes, check for kinked or blocked incoming water hoses, clean incoming water screens. If problem still remains, replace the water inlet valve assembly. 4. Does the fill water continue to enter the washer? Yes, go to step (5) no, go to step (6). 5. Remove power from washer. Did the water fill stop? Yes, go to step (6). No, replace the inlet valve assembly. 6. For *Better* models, check the electronic pressure sensor. For *Good* models, check the pressure switch. Pressure sensor checks correct. Go to step (7). Pressure sensor checks incorrect, replace pressure sensor. 7. Replace the Main Control Board.

General Family Codes (continued)

Error Code	Description	Solution
E40	Door switch or Main Control Board problem	1. Is the loading door closed? No, close the door. Yes, go to step (2). 2. Disconnect the plug from J2 on the Main Control Board and check for continuity between the pins in the plug. Open, check the door strike. If good, replace the door switch assembly. Closed replace the Main Control Board.
E70	Hoses usually reversed	Swap hot and cold hoses.
F01	Internal control fault	Unplug machine for a few seconds then re-connect power. Select a wash cycle and start cycle. If F01 reappears, replace the Main Control Board as there is likely an internal problem in the board. If the cycle performs without displaying F01, the fault was temporary, no repair is required at this time.
F02	Water fill temperature problem	The problem could be in the temperature sensor or the inlet hoses may be reversed. In either case, the control will try to resolve the error and the washer will continue to run. Before testing the sensor, first check the wiring to make sure it is properly connected. To test the temperature sensor, unplug the washer and disconnect wiring to the sensor. Use an ohmmeter to measure the resistance of the sensor. A reading below about 3K ohm or above about 163K indicates the sensor may be bad and should be replaced.
F03	Water fill/ water level or drain pump problem	This type of fault could be temporary or permanent. If this fault occurs, the control will stop the washer and display F03. For the fill system, the problem could be the inlet water is turned off. To test the filling fault, run the washer with no load and check if the tub fills to the proper level. If the tub over fills or the water does not shut off, check the pressure switch wiring and the pressure tube connection to the air dome and pressure switch. If these check out, the problem could be in the pressure switch or water valve. If the tub fills correctly, run the washer in the *Drain/Spin* cycle to assure the pump operates and pumps out water. If the pump is not running, check the wiring connections. If the wiring is proper and seated, measure the voltage across pins 1 and 2 on the pump connector, it should be about 120VAC. If it is not, check the voltage between pin 3 of the 4-pin connector (JX) and pin 3 of the 8-pin connector (J11)(NEUTRAL). Voltage should measure about 120VAC.

General Family Codes (continued)

Error Code	Description	Solution
F04	Washer not advancing (max. time out) or Speed Control problem	This type of fault could be temporary or permanent. If this fault occurs, the control will stop the washer and display F04. To test this fault, select and start the *Heavy Duty* cycle with the *heavy soil/stain* option deactivated. The tub should be rotating and begin filling with water. If the tub is not turning, but is filling with water, wait about 30 seconds after the tub is full and confirm the washer is agitating. If the motor is running and the tub filled, let the washer run for at least 6 minutes while measuring the voltage between pin 1 of the 8-pin connector(J11) and pin 7 of the 7-pin connector(J6). The voltage should be below 50VAC when the timer advance is off and should measure at line voltage when the timer advance is on. Constantly monitor the volt meter throughout this 6 minute run time to be certain to observe the voltage change as "timer advance on" is only on for a short time and could be missed when it reverts to the lower voltage reading when timer advance is off.
F05	Stuck keypad or faulty connection at the Main Control Board	This type of fault could be temporary or permanent.Check the connection of the membrane tail to the Main Control Board for proper assembly.
DO/DR	Door open or door problem	Close the door or check door switch and wiring
DDO	Dispenser door open or dispenser door problem	Close dispenser door. Check reed switch operations.
San	Deep Clean (Sanitary Cycle)	
ERR	Error has been detected	
LOC	Control lock is activated	

Frigidaire Diagnostic Mode

* *Better* models have a digital readout display.
* *Good* models do not have a digital readout display.

The diagnostic test is performed by using the program knob. To start the test:

* On *non-digital* display models, turn the program knob to the start position, *Drain/Spin*.
* On *digital* display models, turn the program knob to the start position, *Touch Up*.

NOTE

If the model has a timer dial that can be Rotated 360°, turn the program knob to the start position, *Drain/Spin*.

* Press *Pause/Cancel* to turn off LED's.
* Within 5 seconds, press and hold the *Option* and *Pause/Cancel* buttons until LED's start sequentially chasing, then release buttons.

1. All the LED's will sequentially light. Pressing a button below a light cluster will light all the LED's in that cluster at one time to confirm functionality.
2. Turn the program knob (1) click clockwise from the start position. The hot water solenoid will activate and hot water should enter through the detergent compartment.
3. Turn the program knob (2) clicks from the start position. The bleach water solenoid will activate and cold water should enter through the bleach compartment.
4. Turn the program knob (3) clicks from the start position. The bleach and the wash water solenoids will activate and cold water should enter through the softener compartment.
5. Turn the program knob (4) clicks from the start position. The door lock solenoid will activate.
6. Turn the program knob (5) clicks from the start position. The door lock solenoid will deactivate and the loading door can be opened.
7. Turn the program knob (6) clicks from the start position. The washer will fill and tumble.
8. Turn the program knob (7) clicks from the start position. The washer will fill and spin (leakage test).
9. Turn the program knob (8) clicks from the start position. The drain pump and door lock solenoid will activate and the washer will operate in high spin. Safety warning: if power is removed during this test, the door can be opened. To prevent injury, do not put your hands inside when the tub is rotating.
10. Turn the program knob (9) clicks from the start position. The control will signal the last error code.

Quick Check

If there is no error displayed and the washer momentarily starts then turns back off:

1. Listen for a relay closure inside the Speed Control Board shortly after the *Start* key is pressed. If this happens, the motor control has power.
2. Check the 5-pin connector wiring between the Console Control and the Speed Control Board.

Frigidaire Diagnostic Mode (continued)

In the *Better* models line, the failure codes will appear in the display as an *E* followed by two numbers, a number and a letter, or two letters. The control will beep and the *door lock, wash, rinse, final spin* and *control* indicator lights will flash.

Example: *E14*. To stop the flashing, the customer may touch the *Pause/Cancel* button. The error code remains stored in the control but once the problem is corrected, it does not effect the operation of the washer. If the failure is something that the customer can correct (such as the water faucets being turned off), the washer will operate normally the next time it is started.

In the *Good* models line, the control signals the failure code by flashing the five indicator lights of *door lock, wash, rinse, final spin* and *control* for the first number or letter after the *E* and the start indicator light for the second number or letter after the *E*. When a failure occurs, the washer stops or pauses and the control beeps and flashes the five indicator lights to tell the customer that a failure has occurred. To stop the flashing and beeping, the customer may touch the *Pause/Cancel* button. The error code remains stored in the control but once the problem is corrected, it does not effect the operation of the washer. If the failure is something that the customer can correct (such as the water faucets being turned off), the washer will operate normally the next time it is started.

To Recall an Error Code

* Wake the washer by pressing any button.
* Wait 5 seconds.
* Press and hold the *Start* and *Pause/Cancel* buttons simultaneously.
* All LED's will go blank and after a few seconds the control will signal the stored code using audible beeps and blinking LED's. The control will repeatedly signal the code, as long as the *Start* and *Pause/Cancel* buttons are pressed. A two second pause between repeats affords you the ability to make accurate counts to identify the correct error codes.

NOTE

On a small number of washers with serial number prefix XC4, if the previous procedure does not preform as specified, follow the option below:

* Follow all previous steps but instead of pressing *Start* and *Pause/Cancel* buttons, press and hold *Options* and *Pause/Cancel* buttons.
* The control will pause for 2 seconds, then repeat the code as long as the two buttons are pressed and held.

A letter appearing in the code stands for a number higher than nine: A=10 B=11 C=12 D=13 E=14 F=15

Example code *F1*: the first digit would be 15 and the second would be 1. If this code would appear on a washer in the *Good* model line, the five indicator lights would blink fifteen times and the *Start* indicator light would blink once. Troubleshoot problem by using charts on the following pages.

Frigidaire Diagnostic Mode (continued)

Exiting Diagnostic Mode

There are two options for exiting the diagnostic test mode and returning the washer to normal operation:

a) Unplug the power cord, wait 5-8 seconds, then reconnect the power cord, or

b) Turn the program knob clockwise 2 or 3 clicks after the start position. Press *Options* and *Pause/Cancel* buttons simultaneously for a few seconds until wash cycle LED's appear.

If a situation arises where you cannot exit the diagnostic mode as described above and the bank of 5 LED's on the right end remain on regardless of program knob position, a combination of pushed buttons may have caused the control to enter a special factory test mode. Disconnect power to reset the control to return washer to normal operation if this occurs.

To Clear The Last Stored Error Codes

Place the control into diagnostic mode.

* Turn the program knob clockwise 9 clicks from the start position. The control will signal the last error code.
* Press and hold the *Options* and *Pause/Cancel* buttons for 3 seconds. The code will be cleared.
* Exit diagnostic mode to return the washer to normal operations.

Affinity Diagnostic Mode

* The diagnostic test is used to check individual component function only.

*Turn the program knob to the start position (far *left* cycle).
*Press the *Start/Pause* button to start the cycle and save it.
*Press the *Cancel* button to stop the cycle and turn off the LED's.
*Press the *Cancel* button again to turn on the LED's.
*Within 5 seconds, press and hold the *Options* and *Start/Cancel* buttons until LED's start flashing, then release buttons.

1. All the LED's will flash. Pressing a button below a light cluster will light all the LED's in that cluster at one time to confirm functionality.
2. Turn the program knob (1) click clockwise from the start position. The hot water solenoid will activate and hot water will enter through the detergent compartment.
3. Turn the program knob (2) clicks from the start position. The bleach water solenoid will activate and cold water should enter through the bleach compartment.
4. Turn the program knob (3) clicks from the start position. The bleach and the wash water solenoids will activate and cold water should enter through the softener compartment.
5. Turn the program knob (4) clicks from the start position. The door lock solenoid will deactivate and the loading door can be opened.
6. Turn the program knob (5) clicks from the start position. The washer will fill and tumble. Once tumbling has started, the boost heater (if so equiped) will turn on.
7. Turn the program knob (6) clicks from the start position. The drain pump and door lock solenoid will activate. To enable high spin, press the *Delay Start* button.

⚠ WARNING

If power is removed during this test, the door can be opened. To prevent injury, *do not* put your hands inside when the tub is rotating.

8. Turn the program knob (7) clicks from the start position. The control will signal the last error code.

Exiting Diagnostic Mode

*There are two options for exiting the diagnostic test mode and returning the washer to normal operation:

A) Unplug the power cord, wait 5-8 seconds, then reconnect the power cord or

B) Turn the program knob clockwise 2 or 3 clicks after the start position. Press *Options* and *Start/Pause* buttons simultaneously for a few seconds until wash cycle LED's appear.

If a situation arises where you cannot exit the diagnostic mode as described above and the bank of 5 LED's on the right end remain on regardless of program knob position, a combination of pushed buttons may have caused the control to enter a special factory test mode. Disconnect power to reset the control to return washer to normal operation if this occurs.

Affinity Diagnostic Mode (continued)

To Clear The Last Stored Error Codes

*Turn the program knob to the start position (far *left* cycle).
*Press the *Start/Pause* button to start the cycle and save it.
*Press the *Cancel* button to stop the cycle and turn off the LED's
*Press the *Cancel* button again to turn on the LED's.
*Within 5 seconds, press and hold the *Options* and *Start/Cancel* buttons until LED's start flashing, then release buttons.
*Turn the program knob clockwise 7 clicks from the start position. The control will signal the last error code.
*Press and hold the *Options* and *Pause/Cancel* buttons for 3 seconds. The code will be cleared.
*Exit diagnostic mode to return to normal operations.

To Recall an Error Code

1. Wake the washer by pressing any button.
2. Wait 5 seconds.
3. Press and hold the *Start/Pause* and *Cancel* buttons simultaneously.
   As long as the buttons are held, the failure code will appear in the display as an *E* followed by two numbers, a number and a letter or two letters. The control will beep.

Affinity Diagnostic Mode (newer models)

The diagnostic test is used to check individual component function only.

* Press the *Cancel* button to enter standby mode and enable diagnostic entry.
* Within 10 seconds after pressing *Cancel*, press any button (except the *Cancel* button) to wake up the control.
* Within 5 seconds of wake up, turn the selector knob to the far *left* cycle and press and hold the *Cancel* and *center* button under the display simultaneously for 3 seconds to enter the diagnostic mode.

NOTE

To save time at wake up, the Welcome screen can be bypassed by turning the selector knob.

1. Upon entering diagnostic mode, all lights should flash for 1 1/4" x 2" display models.
2. Turn the program knob (1) click clockwise from the start position. The hot water solenoid will activate and hot water should enter through the detergent compartment.
3. Turn the program knob (2) clicks from the start position. The bleach water solenoid will activate and cold water should enter through the bleach compartment.
4. Turn the program knob (3) clicks from the start position. The bleach and wash water solenoids will activate and cold water should enter through the softener compartment
5. Turn the program knob (4) clicks from the start position.The prewash solenoid will activate and cold water should enter through the prewash compartment.
6. Turn the program knob (5) clicks from the start position. The door lock solenoid will deactivate and the loading door can be opened. When the door is opened, the drum light should turn on, if so equipped.

Affinity Diagnostic Mode (newer models) (continued)

7. Turn the program knob (6) clicks from the start position. The door lock will activate and the washer will fill then tumble. Once tumbling has started, the boost heater will turn on.
8. Turn the program knob (7) clicks from the start position. This is a free position on models without recirculation pump. The recirculation pump and drum light will activate if so equipped.
9. Turn the program knob (8) clicks from the start position. The drain pump will activate draining out any water in the tub. To enable spin, press the *Delay Start* key.
10. Turn the program knob (9) clicks from the start position. The control will signal the last 5 error codes with *E00* meaning no error.
11. Turn the program knob (10) clicks from the start position. Latest software version will be shown.
12. If applicable, turn the program knob (11) clicks from the start position. This is a free position.

Exiting Diagnostic Mode

To return the washer to normal operations:

A) Unplug the power cord, wait 5-8 seconds, then reconnect the power cord or

B) Turn the program knob clockwise back to the start position. Press the *Cancel* and *center* button under the display until the LED's stop flashing.

To Clear The Last Stored Error Codes

* Press the *Cancel* button to enter standby mode and enable diagnostic entry.
* Within 10 seconds after pressing *Cancel*, press any button (except the *Cancel* button) to wake up the control.
* Within 5 seconds of wake up, turn the selector knob to the far *left* cycle and press and hold the *Cancel* and *center* button under the display simultaneously for 3 seconds to enter the diagnostic mode.

NOTE

To save time at wake up, the Welcome screen can be bypassed by turning the selector knob.

* Turn the program knob clockwise 9 turns (clicks) from the start position. The control will signal the last 5 error codes with *E00* meaning no error experienced.
* Press and hold the *center* key under the display and *Cancel* buttons simultaneously for 3 seconds. The code(s) will be cleared.
* Exit diagnostic mode to return to normal operations.

Factory Reset

On 1 1/4" x 2" display models, wake machine, push the *Spin Speed* and *Soil Selection* keys simultaneously and hold until you hear a beep. This is no more than 10 seconds.

Electrolux Diagnostic Mode

* Press the *Cancel* button to enter standby mode and enable diagnostic entry.
* Within 10 seconds after pressing *Cancel* , press any button to wake up the control.
* Within 5 seconds of wake up, turn the selector knob to the far *left* cycle and press and hold *Cancel* and far *left* button under the display simultaneously for 3 seconds to enter the diagnostic mode.

NOTE

To save time at wake up, the Welcome screen can be bypassed by turning the selector knob.

1. Upon entering diagnostic mode, all lights should flash for 1¼"x2" display models and all lights on for the 1¼" x 4 3/4" display models.
2. Turn the program knob (1) click clockwise from the start position. The hot water solenoid will activate and hot water should enter through the detergent compartment.
3. Turn the program knob (2) clicks from the start position. The bleach water solenoid will activate and cold water should enter through the bleach compartment.
4. Turn the program knob (3) clicks from the start position. The bleach and the wash water solenoids will activate and cold water should enter through the softener compartment.
5. Turn the program knob (4) clicks from the start position. The prewash solenoid will activate and cold water should enter through the prewash compartment.
6. Turn the program knob (5) clicks from the start position. The door lock solenoid will deactivate and the loading door can be opened. When the door is opened, the drum light should turn on.
7. Turn the program knob (6) clicks from the start position. The door lock will activate and the washer will fill then tumble. Once tumbling has started, the boost heater will turn on.
8. Turn the program knob (7) clicks from the start position. The drain pump will activate draining out any water in the tub and the washer will operate in high spin.
9. Turn the program knob (8) clicks from the start position. This is a free position.
10. Turn the program knob (9) clicks from the start position. The control will signal the last 5 error codes with *E00* being no error.
11. Turn the program knob (10) clicks from the start position. Latest software version will be shown.
12. If applicable, turn the program knob (11) clicks from the start position. This is a free position.

Exiting Diagnostic Mode

A) Unplug the power cord, wait 5-8 seconds, then reconnect the power cord or

B) Turn the program knob clockwise back to the start position. Press the *Cancel* and far *left* button under the display until the LED's stop flashing.

Electrolux Diagnostic Mode (continued)

Factory Reset

1) On 1¼" x 2" display models, wake machine, push the *Spin Speed* and *Soil Selection* keys simultaneously and hold until you hear a beep. This is no more than 10 seconds.

2) On 1¼" x 4 3/4" display models, scroll through the *Option* key until you get to the Preference Selection *(pref)*. Once there, push the *Select* key then scroll through this menu until you get to the Reset Selection and push the *Select* key. From here, you have the selection of the type of reset you wish to perform. Make your selection and push the *Select* key. The machine will turn off and when woken up, the part(s) of the program you wanted reset are now set back to factory settings.

Installation Cycle

Before entering the Installation Cycle (install cycle) make sure that all articles are out of the drum (the drum is empty).

1¼" x 2" display models:

1. Wake the washer up by pressing any button (except the *Cancel* button).
2. Rotate the cycle knob to the *Hand Wash* cycle.
3. Press the *Start/Pause* button, then the *Cancel* button.
4. Wake the unit up again, immediately and simultaneously press and hold the *My Favorites* and *Eco Friendly* buttons for 5 seconds. The display will show *install cycle* with the estimated time of cycle completion.
5. Press the *Start/Pause* button to begin the cycle. Installation Cycle will test for electronic issues, wiring issues and water flow issues. At cycle completion, the display will show *instal pass!* or prompt an action during the cycle such as *call service*, *no water* or *check hoses*. Correct the action and repeat the cycle for proper installation. Washer will exit the install cycle and return to normal operation the next time the knob is turned.

1¼" x 4 3/4" display models:

1. The machine will first wake up on setting up the unit to display *language selection*. Press *next* to display the install cycle. You can run it now if you choose. If you don't want to run it immediately, you can access the install cycle through the *pref menu* in the option window. Press the *Select* key once you scroll to the *pref selection*. Then scrolll through this menu until you get to the install cycle. Press the *Select* key then follow the instructions (remove all articles from the washer drum). You can also get to this cycle by performing a full reset of factory settings.

To Clear The Last Stored Error Codes

* Press the *Cancel* button to enter standby mode and enable diagnostic entry.
* Within 10 seconds after pressing *Cancel*, press any button to wake up the control.
* Within 5 seconds of wake up, turn the selector knob to the far *left* cycle and press and hold the *Cancel* and the far *left* button under the display simultaneously for 3 seconds to enter the diagnostic mode.

NOTE

To save time at wake up, the Welcome screen can be bypassed by turning the selector knob.

* Turn the program knob clockwise (9) clicks from the start position. The control will signal the last 5 error codes with *E00* meaning no error experienced.
* Press and hold the far *left* key under the display and *Cancel* buttons simultaneously for 3 seconds. The code(s) will be cleared.

Error Code	Description	Solution
E10	General EEPROM fault	Clear code, exit mode and start dryer. If problem persists, replace Main Control Board
E11	Checksum (internal processor check) error	Clear code, exit mode and start dryer. If problem persists, replace Main Control Board
E12	Non fatal reading or writing to the memory error	Clear code, exit mode and start dryer. If problem persists, replace Main Control Board
E24	Control NTC short circuit	Measure resistance of control thermistor. If reading is not 50k ohms (±10%), replace thermistor. If reading is within 50k ohms (±10%), check wiring between the thermistor and Main Control Board. If good, replace Main Control Board
E25	Control NTC open circuit	Measure resistance of control thermistor. If reading is not 50k ohms (±10%), replace thermistor. If reading is within 50k ohms (±10%), check wiring between the thermistor and Main Control Board. If good, replace Main Control Board
E31	Contact sensor frequency too high	Check the contact sensor and wiring. If no problems are found with contact sensor, replace Main Control Board.
E32	Contact sensor frequency too low	Check the contact sensor and wiring. If no problems are found with contact sensor, replace Main Control Board.
E42	Door sensing failure	Check door switch and wiring. If correct, replace Main Control Board.
E51	Motor relay failure	If motor runs continuously with power applied, check for short circuit across motor relay (RL2), or L1 applied to motor relay output (J3-1) with cycle stopped. If motor does not start when *Start* key is pressed, check for open circuit between L1 and motor relay connection (J3-2). If no wiring problems found, replace Main Control Board.
E52	Motor fault- motor stopped or not starting	Remove any load from dryer and check if drum turns freely by hand. Check L1 power supply voltage, motor windings, and motor thermal protector (if motor thermal protector has tripped, it may take up to 30 minutes to reset).
E53	Motor centripetal switch failure	Check wiring. Check if motor centripetal switches are stuck in open or closed positions. Replace motor. Replace Main Control Board.
E54	Motor sensing failure	Replace Main Control Board.

Error Code	Description	Solution
E61	Heater relay failure.	Check for short circuit across heater relay(s) (RL5, RL6, RL7) or L1 applied to heater relay output(s) (J5-2, J7-1, J7-3) with cycle stopped. Check for open circuit between L1 and heater relay connection(s) (J5-1, J5-3, J7-2). If no wiring problems are found, replace the Main Control Board.
E63	Heater to earth ground	Check heater coils and connections for short circuits to the cabinet. Replace heater and/or wiring and retest.
E64	Heater open circuit	Check heater coils and connections for open circuits. Replace heater and/or wiring and retest.
E65	High limit thermostat trip count too high	For electric model, check inlet thermal limiter for continuity. If thermal limiter is open, check for evidence of high temperature event and any resulting damage. If no further damage is evident, replace thermal limiter. If no problems are found with the thermal limiter, check exhaust vent system for air blockages. If no problems with vent restrictions, check/replace high limit thermostat, and retest.
E66	Thermal limiter open circuit	Check outlet thermal limiter for continuity. For gas model, also check inlet thermal limiter for continuity. If thermal limiter is open, check for evidence of high temperature event and any resulting damage. If no further damage is evident, replace thermal limiter and retest.
E67	Heaters sensing failure	Check heater and wiring. If correct, replace Main Control Board.
E68	Key(button) stuck fault	Enter function test mode and perform key test to determine which button is at fault. Free the key(button) and perform test again. If key stuck code still exist, replace Main Control Board
E71	Outlet control thermistor open circuit	Check resistance of outlet control thermistor, and check wiring for open circuit. Resistance should be between 4.9K ohms and 6.2K ohms at room temperature (68-77°f or 20-25°c). Replace outlet control thermistor and/or wiring and retest.
E72	Outlet control thermistor short circuit	Check resistance of outlet control thermistor, and check wiring for short circuit across thermistor connections. Resistance should be between 4.9K ohms and 6.2K ohms at room temperature (68-77°f or 20-25°c). Replace outlet control thermistor and/or wiring and retest.
E73	Inlet control thermistor open circuit	Check resistance of inlet control thermistor, and check wiring for open circuit. Resistance should be between 47k ohms and 66k ohms at room temperature (68-77°f or 20-25°c). Replace inlet control thermistor and/or wiring and retest.

Error Code	Description	Solution
E74	Inlet control thermistor short circuit	Check resistance of inlet control thermistor, and check wiring for short circuit across thermistor connections. Resistance should be between 47k ohms and 66k ohms at room temperature (68-77°f or 20-25°c). Replace inlet control thermistor and/or wiring and retest.
E91	Communication error	Check connections between Main Control Board and User Interface Board. If no wiring problems, replace Main Control Board or User Interface Board.
E92	Incompatible protocol	Check if correct User Interface Board and Main Control Board are installed. Replace appropriate hardware.
E93	Machine configuration checksum error	Check if correct User Interface Board and console are installed. Replace User Interface Board and/or console.
E94	Cycle configuration checksum error	Replace Main Control Board.
E97	Program mismatch	Replace Main Control Board.
EA1	Main supply frequency out of range	Check frequency of line voltage.
EA2	Voltage too high	Check amplitude of line voltage.
EA3	Voltage too low	Check amplitude of line voltage.
EA4	Improper home wiring	Check wiring at terminal block for L1-N-L2 wired incorrectly.
EA5	Main Voltage sensing failure	Replace Main Control Board.
EF1	Vent blocked	Check vent restrictions and resistance values of exhaust control thermistor and inlet control thermistor.
EF3	Max timeout timer	Check vent restriction, contact sensor, and resistance values of exhaust control thermistor and inlet control thermistor.
EF8	Key stuck	Check buttons for activation when pressed. Replace console or User Interface Board as appropriate.
E4A	Program timeout fault (max. time exceeded for that cycle)	Check for anything that would extend dry times such as: no heat, restricted vent, blower fan blade broken or loose, dryer installed in closet with solid door, bad connection in moisture sensor bar circuit or dirty bars- if dryer operates normally and code returns, replace Main Control Board
E5B	Heater fault- temperature reading of the control thermistor has not changed in a set amount of time	Check heater relay on Main Control Board, thermostats in heater circuit, heater, and control thermistor

Error Code	Description	Solution
E8C	Too many trips of the safety thermostat in a period of time	Check for blocked lint filter, blocked exhaust, air leaks around air duct, broken or clogged fan blades, worn or loose drum seals, and door seal
E9B	External EEPROM communication or data corruption	Replace User Interface Board.
E9E	Low or intermittent voltage to board	House wiring/ power supply problem
EAF	Watchdog reset	Clear code, exit mode and start dryer. If problem persists, replace Main Control Board

Frigidaire Diagnostic Mode

1. On *non-digital* readout display models, position the cycle selector knob to the 12 o'clock position.
   On *digital* readout display models, position the cycle selector knob to the *Normal* cycle option.
2. Press and hold the *Select* and *Pause/Cancel* buttons simultaneously for six seconds.
3. Immediately after, press and hold the *Start* and *Pause/Cancel* buttons simultaneously for 4 seconds. The control will enter test mode, the buzzer will sound 3 times and all LED's will rapidly flash.

After entering the test mode, the program knob can now be rotated to select the following tests:

*Rotate the knob clockwise from the start position:

1 Turn: drive motor runs; heat source is on. *Drying* LED is lit. *H* and the control thermistor reading will toggle back and forth in the display.

NOTE

For models that do not have a digital display, the *Dryness* LED's could be used to determine the control thermistor temperature Reading.

The number of flashes of the bottom three LED's will determine the value of the temperature as follows.

Example: *Normal* flashes 1 time (*Normal*= hundred's)
Less Dry flashes 2 times (*Less Dry*= ten's)
Damp flashes 6 times (*Damp*= one's)
temperature = 126°

2 Turns: drive motor runs; heat source is off. *Cool Down* LED is lit and *Af* (air fluff) is displayed.

3 Turns: drive motor runs; heat source is off. *Drying* and *Cool Down* LED's are lit and numbers appear in the display showing moisture sensor readings. Opening the door (press in on door switch plunger) and placing finger on both moisture sensor bars at the same time will make the numbers decrease. In controls that do not have a digital display, the *More Dry* LED should be on. Opening the door (press in on Door switch plunger) and placing a finger on both moisture sensor bars at the same time will make the *Damp* LED come on.

4 Turns: drive motor runs; heat source is off.

Key test:

A. When the *Temp* button is pressed, all the *Temp* LED's should light. If the *Temp* selector is a rotary knob, and the knob is rotated, there should be a key beep with each setting.

B. When the *Dryness* button is pressed, all the *Dryness* level LED's should light.

C. When the *Option* or *Select* button is pressed, all the option LED's should light.

D.When the *Start* button is pressed, all the cycle status LED's should light.

E. When the *Pause/Cancel* button is pressed, all the cycle status LED's should light.

5 Turns: drive motor runs; heat source is off. *Cool Down* LED is lit. Control thermistor reading is displayed.

6 Turns: drive motor runs; heat source is on. *Drying* LED is lit. Control thermistor reading is displayed.

Frigidaire Diagnostic Mode (continued)

Exiting Diagnostic Mode

To exit the test mode, press and hold the *Select* and *Pause/Cancel* buttons simultaneously for six seconds or disconnect power from dryer. Dryer will be reset for regular operations.

To Recall an Error Code

*On *non-digital* display models, rotate cycle selector knob to the 3 o'clock position.
*On *digital* readout display models, rotate the cycle selector knob clockwise (3) settings from the *Normal* cycle option.
*Press and hold the *Select* and *Pause/Cancel* buttons simultaneously for 6 seconds.
*Immediately after, press and hold the *Start* and *Pause/Cancel* buttons simultaneously for 4 seconds.
*On *digital* readout display models, rotate the timer knob (1) click counterclockwise. The error code will appear in the digital display.
*On *non-digital* display models, rotate the cycle selector knob to the 2 o'clock position. The four indicator lights of *drying, cool down, wrinkle rid (press saver),* and *clean lint filter* will flash the number of times for the first digit of the code and the *Start* indicator light will flash the number of times for the second digit. Take separate counts of each indicator light, then repeat to confirm, in order to be accurate in identifying the proper error code. The code is obtained by counting the number of times the lights flash.

Example: *E24*; the four indicator lights would flash twice indicating the 2 and the *Start* indicator light will flash four times indicating the 4. The four indicator lights and the *Start* indicator light start flashing at the same time. The control will pause for 2 seconds, then repeat the code.

NOTE

A letter appearing in the code stands for a number higher than 9. A= 10, B= 11, C= 12, D=13, E=14, and F=15.

Example code *E4A*: The first digit would be 4 and the second digit would be 10. If this code would appear on a washer in the *non-digital* readout display models, the four indicator lights would blink four times and the *Start* indicator light would blink 10 times.

To move on to the next code, press the *Options* button. To clear code, press the *Select* button. The code will be cleared when mode is exited.

Affinity Diagnostic Mode

*Press and hold *Select* and *Cancel* buttons simultaneously for 6 seconds to reset the control. The buzzer will sound 1 time and *res* will be shown briefly in the display.
*Immediately after, rotate cycle selector knob 5 turns counter-clockwise to the second position from the bottom. Press and hold the *Options* and *Cancel* buttons simultaneously for 2 seconds. The control will enter test mode, the buzzer will sound 3 times and all LED's will rapidly flash.
*After entering the test mode, the cycle selector knob can now be rotated to select the following test:
*Rotate the cycle selector knob clockwise from the starting position:

0 Turns: All LED's will flash.
1 Turn: Drive motor runs; heat source is on. *Drying* LED is lit. *H* and the control thermistor reading will toggle back in forth in the display.

2 Turns: Drive motor runs; heat source is off. *Cool Down* LED is lit and *AF* (air fluff) is displayed.

3 Turns: drive motor runs; heat source is off. *Drying* and *Cool Down* LED's are lit and numbers appear in the display showing moisture sensor readings. Opening the door (press in on door switch plunger) and placing finger on both moisture sense bars at the same time will make the numbers decrease. In controls that do not have a digit display, the *More Dry* LED should be on. Opening the door (press in on door switch plunger) and placing finger on both moisture sense bars at the same time will make the *Damp* LED come on.

4 Turns: Drive motor runs; heat source is off.

Key test:

A. When the *Temperature* key is pressed, all the temperature LED's should light.

B. When the *Dryness* key is pressed, all the *Dryness* level LED's should light.

C. When the *Options* or *Select* key is pressed, all the *Option* LED's should light.

D. When the *Start/Pause* key is pressed, all the cycle status LED's should light.

E. When the *Cancel* key is pressed, all the cycle status LED's should light.

5 Turns: Drive motor runs; heat source is off. *Cool Down* LED is lit. Control thermistor reading is displayed.

6 Turns: drive motor runs; heat source is on. *Drying* LED is lit. Control thermistor reading is displayed.

7-11 Turns: All LED's will flash.

Exiting Diagnostic Mode

*Press and hold the *Select* and *Cancel* buttons simultaneously for 6 seconds or, disconnect power from dryer. Dryer will be reset for regular operations.

To Recall an Error Code

*Press and hold *Select* and *Cancel* buttons simultaneously for 6 seconds to reset the control. The buzzer will sound 1 time and *res* will be shown briefly in the display.
*Immediately after, rotate cycle selector knob (5) turns counter-clockwise to the second position from the bottom. Press and hold the *Options* and *Cancel* buttons simultaneously for 6 seconds. The control will enter test mode, the buzzer will sound 3 times and all LED'S will rapidly flash.
*Rotate the cycle selector knob (2) turns counterclockwise. The error code will appear in the digit display.
*To move on to the next code, press the *Options* button.
*To clear an error code, press the *Select* button. Code will be cleared when mode is exited.
*To exit this mode, simultaneously press and hold the *Select* and *Cancel* buttons for 6 seconds.

Affinity Diagnostic Mode (newer models)

1. Press the *Cancel* button to enter standby mode and enable diagnostic entry.
2. Within 10 seconds after pressing *Cancel*, press any button (except for *Cancel*) to wake up the control.
3. Within 5 seconds of wake up, turn the selector knob to the far *left* cycle and press and hold the *Cancel* and the *center* button under the display simultaneously for 3 seconds to enter the diagnostic mode.

NOTE

To save time at wake up, the Welcome screen can be bypassed by turning the selector knob

4. Upon entering diagnostic mode, all lights should flash on and off.
5. The following steps can be cycled through by turning the selector knob clockwise:

Diagnostic Test Sequence:

Selector Position	Test/Activated Component Electric	Gas	Operator Check	LCD Row	LCD Digits
0	Lights/ buttons test				
1	Motor Counter Clockwise (CCW)		Check motor function. Look for drum rotation in counter-clockwise direction	Motor CCW	
2	Contact Sensor		Check moisture reading. Place fingers across contact sensor and look for digit display to change from *1111* to *8888*	Moist Bars	*1111* If contact sensor open circuit; *8888* if contact sensor short circuited
3	Motor Clockwise (CW)		Check motor function. Look for drum rotation in clockwise direction	Motor CW	
4	Lights/buttons Test + motor CW	Lights/buttons Test + motor CW+ igniter	Check all buttons and lights. Press all buttons and check for beep and button ID number in digit display. Check to see that all lights function.		Button ID Number
5	Motor CW + heater 1	Motor CW + heater	Check motor and heater function. Check outlet control thermistor value in digit display	HEAT1-NTC1	Outlet control thermistor value (Degrees F)

Diagnostic Test Sequence (continued):

Selector Position	Test/Activated Component Electric	Gas	Operator Check	LCD Row	LCD Digits
6	Motor CW + heater 1 + heater 2	Motor CW + heater	Check motor and heater function. Check inlet control thermistor value in digit display.	HEAT2-NTC2	Inlet control thermistor value (Degrees F)
7	Motor CW + heater 1 + heater 2 + heater 3	Motor CW + heater	Check motor and heater function. Check outlet control thermistor value in digit display.	HEAT3-NTC1	Outlet control thermistor value (Degrees F)
8	Motor CW		Check for mist.	Mist Value	
9	Error Code History Display		Check last 5 error codes displayed (see table above for error code definitions)		Error Code
10	Software Version		Software Version	Software Version	Software Version

Exiting Diagnostic Mode

A) Unplug the power cord, wait 5-8 seconds, then reconnect the power cord or,

B) Turn the program knob to the start position (lights/buttons test). Press the *Cancel* and *center* button under the display simultaneously for 6 seconds.

To Clear Stored Error Code

Press and hold the *center* key under the display and *Cancel* buttons simultaneously for 3 seconds while in diagnostic test mode.

Factory Reset

Press and hold the *Temperature* and *Dry Level* buttons simultaneously for 6 seconds. For models with *Temperature*, *Dry Level*, and *Dry Time* buttons, press and hold the *Dry Level* and *Dry Time* buttons simultaneously for 6 seconds.

Electrolux Diagnostic Mode

1. Press the *Cancel* button to enter standby mode and enable diagnostic entry.
2. Within 10 seconds after pressing *Cancel*, press any button to wake up the control.
3. Within 5 seconds of wake up, turn the selector knob to the far *left* cycle and press and hold the *Cancel* and the far *left* button under the display simultaneously for 3 seconds to enter the diagnostic mode.

NOTE

To save time at wake up, the Welcome screen can be bypassed by turning the selector knob.

4. Upon entering diagnostic mode, all lights should turn on.
5. The following steps can be cycled through by turning the selector knob clockwise.

Diagnostic Test Sequence:

Selector Position	Test/Activated Component Electric	Gas	Operator Check	LCD Row	LCD Digits
0	Lights/ buttons test				
1	Motor Counter Clockwise (CCW)		Check motor function. Look for drum rotation in counter-clockwise direction	Motor CCW	
2	Contact Sensor		Check moisture reading. Place fingers across contact sensor and look for digit display to change from *1111* to *8888*	Moist Bars	*1111* If contact sensor open circuit; *8888* if contact Sensor short circuited
3	Motor Clockwise (CW)		Check motor function. Look for drum rotation in clockwise direction	Motor CW	
4	Lights/buttons Test + motor CW	Lights/buttons Test + motor CW+ igniter	Check all buttons and lights. Press all buttons and check for beep and button ID number in digit display. Check to see that all lights function.		Button ID Number
5	Motor CW + heater 1	Motor CW + heater	Check motor and heater function. Check outlet control thermistor value in digit display	HEAT1-NTC1	Outlet Control thermistor value (Degrees F)

Diagnostic Test Sequence (continued):

Selector Position	Test/Activated Component Electric	Gas	Operator Check	LCD Row	LCD Digits
6	Motor CW + heater 1 + heater 2	Motor CW + heater	Check motor and heater function. Check inlet control thermistor value in digit display	HEAT2-NTC2	Inlet control thermistor value (Degrees F)
7	Motor CW + heater 1 + heater 2 + heater 3	Motor CW + heater	Check motor and heater function. Check outlet control thermistor value in digit display	HEAT3-NTC1	Outlet control thermistor value (Degrees F)
8	Motor CW		Check For Mist	Mist Value	
9	Error Code History Display		Check last 5 error codes displayed (see table above for error code definitions)		Error Code
10	Software Version		Software Version	Software Version	Software Version

Exiting Diagnostic Mode

A) Unplug the power cord, wait 5-8 seconds, then reconnect the power cord, or

B) Turn the program knob to the start position (lights/button test). Press the *Cancel* and far *left* button under the display simultaneously for 6 seconds.

To Clear Stored Error Code

Press and hold the far *left* button under the display and *Cancel* buttons simultaneously for 3 seconds.

Factory Reset

1. Turn cycle selector knob to any position other than *My Favorites*.
2. Press the *Up* arrow button until *set prefs* appears.
3. Press the *Select* button.
4. Press the *Up* arrow button until *reset* appears.
5. Press the *Select* button.
6. Press the *Menu* button under *All Settings*.

Electrolux Diagnostic Mode (continued)

Installation Cycle

1. Turn cycle selector knob to any position other than *My Favorites*.
2. Press the *Up* arrow button until *set prefs* appears.
3. Press the *Select* button.
4. Press the *Up* arrow button until *install cycle* appears.
5. Press the *Select* button.
6. Follow the on screen directions.

Error Code	Description	Solution
F1/F10	Runaway temperature	Check RTD sensor probe and replace if necessary. If oven is overheating, disconnect power. If oven continues to overheat when the power is reapplied, replace EOC. Severe overheating may require the entire oven to be replaced should damage be extensive
F11 F12 F13	Shorted keypad Bad micro identification Bad EEPROM identification/ checksum error	(F11, 12, & 13) disconnect power, wait 30 seconds and reapply power. If fault returns upon power-up, replace EOC
F14	Display tail missing/not connected	Check connection between Main Control Board and keypad. If correct, replace Main Control Baord. If problem persist, replace keypad.
F15/F19	Signal loss between Oven Relay Board and EOC.	1. Test the harness and connections from EOC connector P16 to Oven Relay Board J2. 2. Replace the Oven Relay Board. 3. Replace the EOC.
F20/F21	Communication failure between EOC and ESEC system	1. Test harness/connections P4 (EOC) and P11 (Surface Element Control Board). 2. If harness checks correct, failure can be caused by faulty UIB, Surface Element Control Board, or EOC. Check harness and connectors from the EOC to Mini Oven Control Board. Check for 15VDC to Mini Oven Control (red and gray wires). If harness and voltage are good replace Mini Oven Control. If fault returns replace EOC.
F23 F25	Communtication failure between the EOC and ESEC (electric models only)	1. Check harness connections between VSC Board and EOC. 2. Test for approximately 5VDC to VSC Board at P6 connector pins 1 and 6. If voltage is correct replace VSC Board. If voltage is incorrect replace EOC.
F26	Communication failure with Mini Oven Control	1. Test harness/connections P4 (EOC) and P11 (Surface Element Control Board). 2. If harness checks correct, failure can be caused by faulty UIB, Surface Element Control Board, or EOC. Check harness and connectors from the EOC to Mini Oven Control Board. Check for 15VDC to Mini Oven Control (red and gray wires). If harness and voltage are good replace Mini Oven Control. If fault returns replace EOC.
F30	Open probe connection	Check resistance at room temperature and compare to RTD sensor resistance chart. If resistance does not match the RTD chart replace RTD sensor probe. Check sensor wiring harness between EOC and sensor probe connector.

Error Code	Description	Solution
F31	Shorted probe connection	Check resistance at room temperature, if less than 500 ohms, replace RTD sensor probe. Check for shorted sensor probe harness between EOC and probe connector.
F40 F41	Cooktop lockout error	1. Check the wiring. 2. Replace the Cooktop Lockout Control Board. 3. Replace EOC
F42	EOC internal software configuration error	Usually this failure code would only appear if the EOC has been replaced with an incorrect version. Verify that the correct replacement part number has been installed.
F43	Microwave external cooling fan speed is abnormally slow	1. Check if the microwave external cooling fan (outside the microwave chassis) is turning. This fan is supposed to be active anytime the microwave is in use and expected to stay on a few minutes after the microwave cycle is complete. A fan not turning at all or a fan turning abnormally slow will trigger an F43 fault code. 2. If the fan is not turning or turns very slowly, check for 120VAC to the fan. If 120VAC is present and fan does not turn, replace the fan. If 120VAC is not present, check the wiring between Microwave Control Board(P16) and cooling fan. If correct, check for 120VAC at microwave control board. Is fan correctly connected between P15 and neutral? 3. If fan appears to turn normally, there is a problem between the fan speed sensor and Microwave Control Board. Check wiring between fan speed sensor and Microwave Control Board (P19). If correct, replace fan. If problem persists, replace Microwave Control Board.
F44	Microwave external cooling fan speed is abnormally fast	1. Visually inspect the external cooling fan. This fan is supposed to be active anytime the microwave is in use and expected to stay on a few minutes after the microwave cycle is complete. 2. Verify there is nothing blocking the air flow of the fan (which would make the fan turn faster). 3. Check for 120VAC at the fan. A voltage higher 120VAC +10 % could make speed of fan increase. 4. If fan appears to turn normally, there is a problem between the fan speed sensor and Microwave Control Board. Check wiring between fan speed sensor and Microwave Control Board (P19). If correct, replace fan. If problem persists, replace Microwave Control Board.

Error Code	Description	Solution
F60	EOC oven temperature higher than normal temperature detected on the EOC.	1. Verify proper assembly of backguard panel. Check for damaged or loose panels, brackets, endcaps, etc. 2. Check for blocked ventilation slots in control panel rear cover. 3. Inspect oven vent for proper assembly and air flow 4. Verify operation of cooling fan (if present).
F62/F63	Internal signal voltage error- display communication error	Disconnect power, wait 30 seconds and reapply power. If fault returns upon power-up, replace EOC.
F64	Time base failure- the EOC cannot determine if connected to 50 or 60hz power supply	Confirm that range is connected to power source (50hz or 60hz). Generators or other portable power supplies and solar grids, etc. may not provide proper power supply. If power source is correct, replace the EOC.
F65	Keyboard short circuit or internal EOC failure.	1. Test keyboard circuits using test matrix. Replace touch panel if defective. 2. If keyboard circuit checks correct, replace EOC.
F66	EOC internal power supply failure	Disconnect power, wait 30 seconds and reapply power. If fault returns upon power-up, replace EOC.
F68/F69	High voltage condition. L1 or L2 may be crossed with neutral on incoming power supply	1. Verify proper incoming line voltage and polarity of L1, L2, and neutral power supply connections at range terminal block. 2. If power supply voltage and polarity are correct, replace EOC.
F80	Communication error between the User Interface and the Microwave Control Board	1. Verify the Microwave Control Board has power (open microwave door, if light comes on Microwave Control Board has power). If no power to Microwave Control Board, check if external in-line fuse is open (fuse can be open due to over amperage or door switch issues). 2. If F80 error code was triggered while oven was hot it could be due to an open thermal cut-out in microwave. Verify nothing is blocking the air flow of cooling fans and that cooling fans are operating correctly. (Note: thermal cut-out will reset when unit cools down) 3. If Microwave Control Board has power, check wiring between the User Interface Board (J3) and the Microwave Control Board (connector D). If correct, replace User Interface Board. If problem persists, replace Microwave Control Board.

Error Code	Description	Solution
F90 F91 F92 F93 F94/F95	Maximum oven door unlock time exceeded	1. Check the wiring between EOC and lock motor micro switch. 2. Replace the motor door latch assembly. 3. Check for binding of the latch cam, lock motor rod and lock motor cam. 4. Check to see if lock motor coil is open. If open, replace lock motor assembly. 5. Lock motor continuously runs- if micro switch is open, replace lock motor assembly 6. (F92, 93, 94 and 95) check oven door light switch- if open, replace switch. 7. If all situations above do not solve problem, replace EOC.
F5 A0	Bad EEPROM checksum	1. Reset power supply to range. 2. Replace Power Board.
F5 00	Communication break between Power Board and UIB	1. Reset power supply to range. 2. Test ESEC wiring harness. Replace if defective 3. Replace UIB. 4. Replace EOC
F5 01	Communication break between Power Board and UIB	1. Reset power supply to range. 2. Test ESEC wiring harness. Replace if defective 3. Replace UIB. 4. Replace Power Board.
F5 02	UIB not communicating	1. Defective ESEC harness. Reseat connectors. Test harness and replace if defective. 2. Defective UIB? Replace UIB 3. Defective Power Board? Replace Power Board
F5 F0	Watchdog timer timed out- power board	1. Reset power supply to range. 2. Replace Power Board.
F5 FF	Watchdog timer timed out- UIB	1. Reset power supply to range. 2. Replace UIB
F7 10 F7 20 F7 30 F7 40	Potentiometer LF is open Potentiometer LR is open Potentiometer RR is open Potentiometer RF is open	1. Defective potentiometer. Test and replace if defective. 2. Replace UIB

Error Code	Description	Solution
F7 11 F7 21 F7 31 F7 41	Potentiometer LF is shorted Potentiometer LR is shorted Potentiometer RR is shorted Potentiometer RF is open	1. Defective potentiometer. Test and replace if defective. 2. Replace UIB 3. Check for moisture contamination in potentiometer.
F7 12 F7 22 F7 32 F7 42	Potentiometer LF is wrong value Potentiometer LR is wrong value Potentiometer RR is wrong value Potentiometer RF is wrong value	1. Wrong value potentiometer installed. Verify correct part. 2. Defective potentiometer. Test and replace if defective. 3. Check for moisture contamination in potentiometer. 4. Replace UIB.
E013	Bad EEPROM.	Replace ESEC-UIB.
E014	Loss of display tail #0. Loss of display tail #1. Loss of keyboard tail.	Check connection P1 on ESEC-UIB and P1 on ESEC Rotary Hi Board (RR). Check connection P2 on ESEC-UIB and P2 on ESEC Rotary Hi Board (RF). Check connection J2 on ESEC-UIB and J8 (RF)
E015	ESEC self test failed.	An E015 error code may indicate the ESEC-UIB is not receiving a synchronization signal from the ESEC-Relay Board. Check first if J2 pin-5 on the ESEC-Relay Board is wired to P4 pin-5 on the ESEC-UIB. If wiring is good and the problem is still there, replace the ESEC-UIB. If the problem persists, replace the ESEC-Relay Board.
Sb	Showroom mode	To deactivate showroom mode, remove power and reapply. Press *Cancel* to bypass programming clock. Within 60 seconds of reapplying power, press *Oven Light* key and *top oven Timer* key simultaneously.

RESISTANCE TEMPERATURE DETECTOR SCALE (RTD SENSOR)

TEMPERATURE(°F)	RESISTANCE (OHMS)
32 ± 1.9	1000 ± 4.0
75 ± 2.5	1091 ± 5.3
250 ± 4.4	1453 ± 8.9
350 ± 5.4	1654 ± 10.8
450 ± 6.9	1852 ± 13.5
550 ± 8.2	2047 ± 15.8
650 ± 8.2	2237 ± 18.5
900 ± 13.6	2697 ± 24.4

*PROBE CIRCUIT TO CASE GROUND = OPEN CIRCUIT/ INFINITE RESISTANCE

Oven Calibration

* Press and hold *Bake* (upper oven or lower oven depending on model) for 10 seconds.
* The current calibration offset (temperature adjustment) should appear in the temperature display.
* Use the number keys (*Up* and *Down* arrows depending on model) to enter the desired amount of adjustment. (Up to 35° and down to -35°)
* Press *Self Clean* to change the sign of the adjustment to a (-) if necessary. A positive adjustment will not display a sign.
* Once the desired adjustment (-35° to 35°f) has been entered, press the *Start* pad to accept the change or the *Cancel* key pad to reject the change.

On some models: to calibrate oven temperature, press *Bake*. Set temperature to 550°. Press and hold *Bake* for 10 seconds.

Error Code	Description	Solution
2 3	(-) Key sensor for cook place 3 (center) - center board (+) Key sensor for cook place 3 (center) - center board	1. Test flex cable between left board and center board. 2. Change center board. 3. Change left board.
4	(+) Key sensor for timer - right board	1. Test flex cable between boards. 2. Change right board. 3. Change center board (on 36” models only). 4. Change left board.
5	(Warm) key sensor for keep warm - left baord	Change left board.
6	(-) Key sensor for cook place 2 (right position) - left baord	Change left board.
7	(-) Key sensor for timer - right board	1. Test flex cable between boards. 2. Change right board. 3. Change center board (on 36” models only). 4. Change left board.
8	(Zone Power) key sensor for cook place 3 (center) - center board	1. Test flex cable between left board and center board. 2. Change center board. 3. Change left board.
10 11 12	(Zone Power) key sensor for cook place 4 (left position) - right board (-) Key sensor for cook place 4 (left position) - right board (+) Key sensor for cook place 5 (right position) - right board	1. Test flex cable between boards. 2. Change right board. 3. Change center board (on 36” models only). 4. Change left board.
13	(Zone power) key sensor for cook place 1 (left position) - left board	Change left board.
14 15 16	(+) Key sensor for cook place 4 (left position) - right board (-) Key sensor for cook place 5 (right position) - right board On/Off timer- right board	1) Test flex cable between boards. 2) Change right board. 3) Change center board (on 36” models only). 4) Change left board.

Error Code	Description	Solution
17 18	(Lock) key sensor for control lock (Size) key sensor for cook place 1 (left position) - left board	Change left board.
19	(Zone Power) key sensor for cook place 5 (right position) - right board	1. Test flex cable between boards. 2. Change right board. 3. Change center board (on 36” models only). 4. Change left board.
20 21 22 23 24 25	(+) Key sensor for cook place 2 (right position) - left board (Zone Power) key sensor for cook place 2 (right position) - left board (+) Key sensor for cook place 1 (left position) - left board (-) Key sensor for cook place 1 (left position) - left board (Main On/Off) key sensor for Main Power (Size) key sensor for cook place 2 (right position) - left board	Change left board.
30/70	AC input voltage too high at the 3 cook zones Induction Module	Verify AC input voltage at the cooktop input. Verify AC main input cables, screws and jumpers. Replace the Filter Board in the 3 zones Induction Module.
31	Internal generator error, sync in the 3 cook zones Induction Module/ left side cooking zones.	Test cables and connections on left side Generator Control Board (dual). Replace the Generator Control Board (LF/LR) in the 3 zones Induction Module
32/72	12VDC on the service section too low (Relay Board)	Check harness between Induction Module, Relay Board, and Main Control Board. If correct, replace Relay Board.

Error Code	Description	Solution
33/73	Improper voltage output from Filter Board in the 3 cook zone Induction Module.	Test all cables and connections on Filter Control Board in the 3 zones Induction Module. Replace the Filter Control Board in the 3 zones Induction Module. Replace Generator Control Boards in the 3 zones Induction Module.
34	Communication failure between Filter Board and Power Boards in the 3 cook zones Induction Module/ left side cooking zones.	Check cable between Filter Board (X12) and Generator Control Board (X10). Replace the Filter Control Board in the 3 zones Induction Module. Replace Generator Control Board in the 3 zones Induction Module.
35/75	AC input voltage too low in the 3 cook zones Induction Module.	Verify AC input voltage at the cooktop input. Verify AC main input cables, screws and jumpers. Replace the Filter Board in the 3 zones Induction Module.
36	LIN error communication touch control filter incorrect	Replace the Control Board (left board).
37	Heat sink temperature sensor break on Control Board (left board)	1. Verify cooktop ventilation is correct (airway and fan) 2. Verify if the cooktop is correctly assembled. 3. Change the Control Board (left board).
39	Touch: incorrect configuration	Press and hold (Warm) key, then press right front zone (Power) key until beep (keep holding Warm), then press left front(30” models) (Power) key or left rear(36” models) Power key until beep and configuration starts.
40	Touch: LIN error- no communications, shorted bus	1. Check the harness between Induction Module, Relay Board, and Control Board. 2. Change the Control Board (left board). 3. Change the Relay Board. 4. Replace the Filter Board on the Induction Module.

Error Code	Description	Solution
41	Relay check incorrect	Change Relay Board.
45	Incoming power supply low voltage.	Verify incoming power supply to cooktop.
51 52 53	Element temperature sensor break, cook place 1 (front left) Element temperature sensor break, cook place 2 (rear left) Element temperature sensor break, cook place 3 (center)	Check all safety thermostats
54 55	Element temperature sensor break, cook place 4 (rear right) Element temperature sensor break, cook place 5 (front right)	1. Verify element temperature sensor is correctly connected to the induction housing. 2. Replace element if the temperature sensor resistor value is not approximately 1000 ohms at room temperature.
60	Touch: general hardware error, keys.	Replace the Control Board (left board).
61 62 63	Heat sink temperature sensor break on relay board	1. Verify cooktop ventilation is correct (airway and fan) 2. Verify if the cooktop is correctly assembled. 3. Change the Relay Board.
64 65	Element temperature sensor too hot, place 4 (rear right) Element temperature sensor too hot, place 5 (front right)	1. Verify cooktop ventilation is correct (airway and fan) 2. Verify element temperature sensor is correctly connected to the Induction Module. 3. Replace element if the temperature sensor resistor value is not correct.
70	See error 30	See error 30
71	Internal generator error, sync (center cooking zone).	Test cables and connections on center Generator Control Board (single)
72	See error 32	See error 32
73	See error 33	See error 33

Error Code	Description	Solution
74	Internal generator error, communication (3 zones Induction Module)	Check cable between Filter Board (X13) and Generator Control Board (X10). Replace the Filter Control Board in the 3 zones Induction Module. Replace Generator Control Board in the 3 zones Induction Module.
75	See error 35	See error 35
76	Communication error in the 3 cook zones Induction Module for the center cooking zones.	Verify all communication cables between User Interface Board and both Induction Generator Modules. Replace the Filter Control Board in the 3 zones Induction Module. Replace Generator Control Board for the center cook zone in the 3 zones Induction Module.
77	Heat sink temperature sensor break in the 3 cook zones Induction Module for the center cooking zones.	Replace Generator Control Board for the center cook zone in the 3 zones Induction Module.
80	Flash/ ROM check fail (EEPROM data)	Replace Control Board (left board).
83	Shift register issue on right touch board	1. Verify the flex cable between boards. 2. Replace the right touch board. 3. Replace the middle touch board(36” models only) 4. Replace the Control Board (left board).
88	Shift register issue on middle touch board	1. Verify the flex cable between boards. 2. Replace the middle touch board. 3. Replace the Control Board (left board).
90	AC input voltage too high	Verify AC input voltage at the cooktop input. Verify AC main input cables, screws and jumpers. Replace the Filter Board on Induction Module.
91	Synchronous impulse (net zero crossover)- touch control must request a power level to detect this issue	Test cables and connections on Induction Module. Replace the Generator Control Board on the Induction Module.
92 93	12VDC on the service section too low (Induction Module) 5VDC overcurrent on the switched 5VDC on the service section	Test all cables and connections on Induction Module. Replace the Generator Boards on the Induction Module. Replace the Filter Board on Induction Module.
94	Sub LIN error communication filter service section incorrectly- this is an error detected between the Filter Board and the Power Boards	Verify cable between Filter Board (X58) and Generator Control Board (X10). Verify the heat sink thermal limiter resistor to be approximately 0 ohms. Replace Filter Control Board on the Induction Module. Replace Generator Control Board on the Induction Module.

Error Code	Description	Solution
95	Mains voltage signal invalidly phase 1, undervoltage or optocoupler defective- this is an indication that one phase is wrong. The other phase will still work.	Verify AC input voltage at the cooktop input. Verify AC main input cables, screws and jumpers. Verify the fuse resistance to be approximately 0 ohms on the Induction Module. Replace the Filter Board on the Induction Module.
96	LIN error communication touch control filter incorrectly	Replace the Control Board (left board). Replace the Filter Board on the Induction Module. Replace the Generator Control Board on the Induction Module.
97	Heat sink temperature sensor break	Replace the Generator Control Board on the Induction Module.
H	Temperature sensor defect	Test coil RTD for approximately 1k ohms at room temperature. Replace coil if resistance is correct. Replace Power Generator Control Board.

NOTE

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

Error Code	Description	Solution
E-03	If the warm, convection, preheat and broil do not reach over 217 of hex value within 3 minutes, it causes *E3* error and converts to cancel mode.	Test operation of convection heater and convection fan motor. Test convection heater thermal cutout.
E-11	Gas sensor- Open	1. Verify continuity of sensor harness and connections. 2. Replace gas sensor.
E-12	Gas sensor- Shorted	1. Verify continuity of sensor harness and connections. 2. Replace gas sensor.
E-13	Gas sensor T1 max time error- gas sensor did not obtain necessary information on time for sensor cook.	Recommended to replace gas sensor on the unit and verify.
E-21	Oven thermal sensor- Open	1. Verify continuity of sensor harness and connections. 2. Replace thermal sensor.
E-22	Oven thermal sensor- Shorted	1. Verify continuity of sensor harness and connections. 2. Replace thermal sensor.
E-23	Preheat preset temperature not reached within 30 minutes. Possibly due to heat loss around oven cavity.	Test convection heating element, convection heater thermal cutout, oven thermal sensor, and wiring connections. Inspect oven cavity outer casing and insulation.
E-24	Overheat during cooking- temp reached 500 °F.	Test temperature during cooking. 1. If temperature is correct, replace control. 2. If over heating, replace thermal sensor.
E-26	Failure to reach designated temperature.	Test convection heating element, convection heater thermal cutout, oven thermal sensor, and wiring connections. Inspect oven cavity outer casing and insulation.
SE/F3	Key short error.	Replace touch key pad

Error Code	Description	Solution
UO	Vent open	While in wash cycle, Main Control Board does not receive signal from vent assembly that vent plunger is closed. Plunger status is sensed with optical sensor in vent assembly. Check wiring between vent assembly and Main Control Board. If wiring correct, replace vent assembly. If error still exist, replace Main Control Board.
UF	Fan not running	While in drying cycle, Main Control Board not sensing vent fan motor rotation at correct speed. Check wiring between vent assembly and Main Control Board. If correct, replace vent assembly. If error still exist replace Main Control Board.
ER	Membrane switch failure	Main Control Board has detected a stuck key or a key pressed for more than one minute. Check connection from keypad to Main Control Board. If correct, replace keypad. If error still exist, replace Main Control Board. (Note: *washing, drying*, and *clean s* may appear in display when error code is present)
CE	Configuration error	Check wiring connections between keypad and Main Control Board. Check for correct parts installed. Replace parts accordingly.
CL	Close door- door switch open	Main Control Board not sensing door closed. Close door. Check door switches. Check wiring between door switches and Main Control Board. If wiring and switches are correct, replace Main Control Board.
dP	Drain pump	Displayed in relay test when drain pump is activated.
FL	Water valve is open	Displayed in relay test when water valve is activated.
HO	Heat delay	The control is delaying cycle to allow water temperature to rise to correct temperature in attempt to assure optimum performance.
hs	Hall sensor	The control has sensed an error with hall sensor in motor. Check wiring between motor and Main Control Board. If correct, replace motor. If error still exist, replace Main Control Board.
LO	Low rinse aid	Rinse aid level is low. Refill rinse aid dispenser.
PF	Power failure	A power failure has occurred. More than 10% of power has dropped to the unit. Check house wiring.
rA	Rinse aid	The control has sensed a problem with the reed switch in the dispenser. Refill the rinse aid dispenser. If error still exist, check wiring between dispenser and Main Control Board. If not corrected, replace dispenser assembly. If error still exist, replace Main Control Board.

Error Code	Description	Solution
RE	Rinse aid reed switch	Rinse aid reed switch in dispenser is closed.
RF	Rinse aid	Rinse aid reed switch in dispenser is open. Refill rinse aid dispenser. Replace dispenser assembly.
rt	Relay/ triac test	Relay test mode has been activated.
Sd	Detergent dispenser	Displayed in relay test mode when detergent dispenser is activated.
tu	Turbidity sensor	The Main Control Board has sensed a failure in the turbidity sensor. Check wiring. If wiring correct, replace turbidity sensor. If error still exist, replace Main Control Board.
UL	UL test mode	Displayed in relay test mode when UL test is activated.

Water Test Mode

To activate water test mode, press and hold *Start/Cancel* and heating option *(High-Temp Wash, Sanitize, Air Dry*, or *No Heat Dry*) (depending on model) for 3 seconds. To advance through test(s), press *Start/Cancel*. If component tested fails, error code will be displayed in digital display.

Test	Description	Components Energized And Being Monitored:
1	Fill and dispenser - 60 sec.	Water valve and dispenser energized - fan damper is monitored- *washing* and *sensing* LED should be lit
2	Fill - 27 sec.	Water valve energized - turbidity sensor is monitored - *washing* and *sensing* LED should be lit
3	Wash and heat - 45 sec.	Circulation motor and heater energized - hall sensor is monitored- *washing* and *sensing* LED should be lit
4	Pause - 0.4 Sec.	Heater energized - *washing, sensing*, and *rinse* LED should be lit
5	Wash and heat - 75 sec.	Circulation motor and heater energized - *rinse* LED should be lit
6	Wash, heat, and dispenser - 60 sec.	Circulation motor, heater, and dispenser energized - *rinse* LED should be lit - thermistor is monitored
7	Drain - 90 sec.	Drain motor and fan unit energized - fan speed is monitored
8	Dry - 90 sec.	Drain motor and fan unit energized - rinse aid level is monitored - *drying* LED should be lit
TOTAL TIME:	447 Sec.	*Sanitized* and *clean* LED should be lit

Electrolux Dishwasher

Error Code	Description	Solution
E01	Leak detected	Water detected in base. Repair leak. Retest.
E02	Thermistor/turbidity sensor failure	Thermistor/Turbidity sensor failure. Check wiring. If correct, replace turbidity sensor. If error still exist, replace Main Control Board.
E03	Wash motor	Wash motor or wash motor hall sensor failure. Check for suds in tub. Check for syphoning or no fill conditions. Check wiring between motor and Main Control Board. If correct, replace wash motor. If error still exist, replace Main Control Board.
E04	Drying damper	Drying damper not operating correctly. Check wiring between Main Control Board and upper fan. If correct, replace upper fan.
E05	Upper fan	When in the dry cycle, the control does not receive the proper speed feedback from the upper fan. Replace upper fan.
E06	Lower fan	When in the dry cycle, the control does not receive the proper speed feedback from the lower fan. Replace lower fan.
E07	Drain valve	While in drain cycle, Main Control Board did not receive proper signal from drain valve. Check wiring between Main Control Board and drain valve. If correct, replace drain valve. If error still exist, replace Main Control Board.
E08	Tactile/switch failure-uib	Control has detected a stuck or shorted key on User Interface Board. Check wiring between Main Control Board and User Interface Board. If correct, replace User Interface Board. If error still exist, replace Main Control Board.
E09	Communication error	Communication failure between Main Control Board and User Interface Board. Check wiring between Main Control Board and User Interface Board. If correct, replace User Interface Board. If error still exist, replace Main Control Board.
E10	Main control board relay error	Failure in Main Control Board relay. Replace Main Control Board.
E11	Drain valve	Main Control Board timed out before receiving status of drain valve. Check wiring between Main Control Board and drain valve. If correct, replace drain valve. If error still exist, replace Main Control Board.
E12	Drain valve	Drain valve is open or running when it should be closed or off. Replace drain valve.
E13	System failure	Lost control state of the machine. Replace Main Control Board.

Relay Test Mode (models EWDW6505)

For EWDW6505 models, to enable the relay test mode perform the following steps in sequence:

1. If a wash cycle is running, press *Start/Cancel* key to cancel operation and allow to drain.
2. Press *Select Options*.
3. Press and hold *Set* for a minimum of 5 seconds to reset the dishwasher.
4. Simultaneously press and hold the *Delay Time* and *Wash Cycles** keys until water serv is displayed.
5. Press < to switch to relay test mode and then press *Set* key to enable.
6. Use < > keys to cycle through the component menu.
7. Once the desired component is selected, press *Set* key to toggle between on and off (the door must be closed to energize the component).

*The *Wash Cycles* option may not be visible. Once the *Delay Time* is pressed, *Wash Cycles* will be visible.

Component	Description
W PUMP	Wash pump
2900 RPM-3300 RPM	Set wash pump speed - wash pump must be on prior to selecting
W VALVE	Toggle the water valve
D PUMP	Toggle the drain pump
D VALVE	Automatically cycle between opened and closed and then switches off.
F LAMP	Turn on the floor light (on select models).
DIAG LED	Cycle through the diagnostic LED's located on the Main Control Board.
FAN 2	Toggle fan operation. Apply power to lower fan, wait 4 seconds and then apply power to the upper fan and damper.
HEATER	Toggle the heater. Unit must have water to toggle heater.

Exit Relay Test Mode

1. Press *Start/Cancel* to turn off all components.
2. Press and hold *Set* key for a minimum of 5 seconds to reset the dishwasher.

Relay Test Mode (models EIDW6105 and EIDW6305)

For EIDW6105 and EIDW6305 models, perform the following steps:

1. If a wash cycle is running, press *Start/Cancel* key to cancel operations and allow to drain.
2. Press and hold the *Hi Temp* key for a minimum of 5 seconds to reset the dishwasher.
3. Simultaneously press and hold *Start/Cancel* and *Heavy* key for a minimum of 2 seconds.
4. Press *Rinse* key to select relay test mode.
5. Press *Start/Cancel* key to enable outputs to components while in relay test mode.

*The door must be closed to energize component outputs. While in relay test mode, pressing the following keys will toggle the components between on and off.

Key To Toggle Component On And Off	Description
FAVORITE	Heater (Unit must have water before toggling on the heater)
AUTO	Wash Pump
HEAVY	Water Valve
NORMAL	Drain Motor
QUICK	Drain Valve (Automatically cycle between opened and closed)
RINSE	Clean light (where applicable)
SANITIZE	Lower fan, 3 second delay and then upper fan and damper
AIR DRY	Dispenser

Exit Relay Test Mode

1. Press *Start/Cancel* key to disable relay test outputs.
2. Press and hold the *Hi Temp* key for a minimum of 5 seconds to reset the dishwasher.

French Door And Iceman Error Codes

Error Code	Description	Solution
OP or 2	Freezer sensor open (in freezer display)	Check wiring between thermistor and board. If correct, replace thermistor.
SH or 3	Freezer sensor shorted (in freezer display)	Check wiring between thermistor and board. If correct, replace thermistor.
OP or 2	Fresh food sensor open (in fresh food display)	Check wiring between thermistor and board. If correct, replace thermistor.
SH or 3	Fresh food sensor shorted (in fresh food display)	Check wiring between thermistor and board. If correct, replace thermistor.
SY EF	Evaporator fan circuit failure	Check wiring between evaporator fan and Main Control Board. Check for 12VDC to fan between red and brown wires. Check for variant voltage (depending on high or low speed) between yellow and brown. If correct replace evaporator fan. If error code still exist, replace Main Control Board.
SY CE	Communication Error at power up	Check wiring between Main Control Board and User Interface Board. Replace User Interface Board. If problem still exist, replace Main Control Board.
SY CF	Communication Failure after power up	Check wiring between Main Control Board and User Interface Board. Replace User Interface Board. If problem still exist, replace Main Control Board.
dF	No defrost circuit	Check wiring between defrost circuit and Main Control Board. If correct, replace Main Control Board.

Temperature Resistance Chart For NTC Thermistors

Frenchdoor And Side By Side Models

TEMPERATURE	OHMS	TEMPERATURE	OHMS
-10	117,240	32	32,566
-9	113,460	33	31,658
-8	109,814	34	30,778
-7	106,298	35	29,926
-6	102,908	36	29,100
-5	99,637	37	28,300
-4	96,481	38	27,524
-3	93,436	39	26,773
-2	90,498	40	26,044
-1	87,662	41	25,338
0	84,925	42	24,653
1	82,283	43	23,989
2	79,732	44	23,346
3	77,268	45	22,721
4	74,890	46	22,116
5	72,592	47	21,528
6	70,373	48	20,958
7	68,229	49	20,405
8	66,158	50	19,869
9	64,156	51	19,348
10	62,222	52	18,843
11	60,352	53	18,352
12	58,545	54	17,876
13	56,798	55	17,414
14	55,109	56	16,965
15	53,476	57	16,529
16	51,897	58	16,106
17	50,369	59	15,695
18	48,892	60	15,296
19	47,462	61	14,909
20	46,076	62	14,532
21	44,741	63	14,166
22	43,447	64	13,811
23	42,193	65	13,465
24	40,981	66	13,130
25	39,806	67	12,803
26	38,670	68	12,486
27	37,569	69	12,178
28	36,503	70	11,878
29	35,471	71	11,587
30	34,472	72	11,304
31	33,504		

Fresh Food Icemaker Diagnostic

Ice Maker Test Mode Activation:

Press and hold fresh food (+) and freezer (+) for 6 seconds, or 10 seconds if not depressed at the same time. *48C* or *40C* (depending on model) should be displayed in right window. (Frigidaire models, use *Up* and *Down* arrows instead of + or – respectively)

Test Number	Description	Resolution
40C	Mold Heater Failure	1= Good; 2 or 3= Bad; Er= Error
41C	Harvest Heater Failure	1= Good; 2 or 3= Bad; Er= Error
42C	Bail Arm Switch Failure	1= Good; 2 or 3= Bad; Er= Error
43C	Harvest Motor Stuck in Fill Position	1= Good; 2 or 3= Bad; Er= Error
44C	Harvest Motor Stuck in Freeze Position	1= Good; 2 or 3= Bad; Er= Error
45C	Harvest Motor Stuck in Intermediate Position	1= Good; 2 or 3= Bad; Er= Error
46C	Both Position Switches are Activated	1= Good; 2 or 3= Bad; Er= Error
47C	Freeze Switch is Shorted/Frozen	1= Good; 2 or 3= Bad; Er= Error
48C	Freezer recovery mode: freezer recovery mode is activated whenever the temperature rises 8-10° above the set point of the freezer and will not exit recovery mode until temperature in freezer is within 4-6° from the set point(depending on model). While in recovery, ice maker will be off.	1= Ok; *FR*= recovery mode for more than 24 hrs.
49C	Electronic Expansion Valve(EEV) test	On= Open; Off= Closed- to activate press the *On/Off* key
50C	Communication test between Ice Maker Control Board and Main Control Board	1= Good; Er= Error
51C	Th1- mold thermistor test	1= Good; OP= Open; Er= Error
52C	Th3- EEV thermistor test	1= Good; OP= Open; Er= Error
54C	Mold heater test	Press *On/Off* key to activate mold heater
56C	Finger evaporator heater test	Press *On/Off* key to activate finger heater; if mold is in the left position, mold will rotate to the right.

Fresh Food Icemaker Diagnostic (continued)

Test Number	Description	Resolution
55C	Water fill test	Press *On/Off* key to activate test; mold will rotate right to left- catch water in cup on right. 3-4 Oz. Fill for 4 seconds.
57C	Evaporator fan test	Press *On/Off* key to activate evaporator fan
58C	Ice level switch test	Lift on ice maker bail arm to deactivate switch; alarm will sound. (If mold is on the right side, camming of motor will cause bail arm to deactivate switch as well).
59C	Fill limit switch test	Top right switch. Activate switch manually or rotate mold to right to activate.
60C	Freezer limit switch test	Top left switch. Activate switch manually or rotate mold to the left to activate.
61C	Evaporator heater (cap tube heater) test	Press *On/Off* key to activate heater(s).
62C	Electronic Expansion Valve (EEV) test	Press *On/Off* key to activate EEV. Test will run for 120 seconds. Th3 will check for accurate temperature drop. *p*= pass; *f*= fail (if *f*, check wiring to th3 thermistor and secure thermistor to underside of suction line- remove electrical coil from EEV. Check for moisture inside coil and on top of valve plunger. Remove electrical connector from coil. Check for moisture inside of connector. Re-connect connector and tighten clip that holds coil to valve by pressing clip toward center of valve. Re-install coil. Retest)
63C	Mold motor test	Press *On/Off* to activate motor. Mold will rotate left to right to assure proper switch activation and deactivation.
64	Software version	Software version will be displayed in left (freezer) window

To deactivate ice maker test mode, press and hold fresh food (+) or (*Up* arrow on Frigidaire models only) for 5 seconds

Manual Defrost Activation:

Press and hold fresh food (+) and (-) (*Up* and *Down* arrows on Frigidaire models only) simultaneously for 5 seconds. *D* and *F* should be displayed.

Temperature Resistance Chart For NTC Thermistors

Ice Maker (Fresh Food Compartment)

TEMPERATURE	OHMS	TEMPERATURE	OHMS
-10	83.883	32	27.7
-9	81.562	33	27.039
-8	79.318	34	26.383
-7	77.153	35	25.75
-6	75.042	36	25.13
-5	73.02	37	24.53
-4	71.02	38	23.95
-3	69.081	39	23.383
-2	67.164	40	22.834
-1	65.337	41	22.29
0	63.549	42	21.773
1	61.821	43	21.262
2	60.153	44	20.773
3	58.2	45	20.293
4	56.969	46	19.827
5	55.43	47	19.37
6	53.974	48	18.92
7	52.534	49	18.492
8	51.157	50	18.07
9	49.81	51	17.664
10	48.51	52	17.262
11	47.25	53	16.873
12	46.017	54	16.493
13	44.837	55	16.127
14	43.67	56	15.767
15	42.553	57	15.411
16	41.449	58	15.073
17	40.393	59	14.74
18	39.36	60	14.418
19	38.36	61	14.099
20	37.39	62	13.793
21	36.44	63	13.494
22	35.53	64	13.206
23	34.63	65	12.923
24	33.78	66	12.646
25	32.938	67	12.377
26	32.127	68	12.11
27	31.333	69	11.854
28	30.567	70	11.601
29	29.823	71	11.357
30	29.096	72	11.117
31	28.394		

Electrolux and Iceman Service Test Mode

Service Test Mode Activation:

Press and hold freezer (+) and (-) (*Up* and *Down* arrows on Frigidaire models) simultaneously for 6 seconds, or 10 seconds if not pressed at the same time. Lights will shut off, then all LED's will come back on.

Test Number	Description	Resolution
28	Dispenser paddle test	Press dispenser paddle. Left window will display *On* when paddle is depressed and *Off* when paddle is released.
1	Standard compressor test (only on models with standard compressor)	Press *On/Off* key to activate test and turn on compressor
2	Defrost heater test	Press On/Off key to activate defrost heater
3	Fresh food lighting test	Press *On/Off* key to turn on fresh food lighting.
8	Dispenser water valve test	Press *On/Off* key to turn water valve on or off to dispenser
9	Freezer lighting test	Press *On/Off* key to activate freezer lighting
10	Auger motor test	Press *On/Off* key to activate auger motor. Opening fresh food or freezer door (depending on model) should stop auger rotation.
11	Cube/crush solenoid test	Press *On/Off* key to activate cube/crush solenoid.
12	VCC condensor fan test	Press *On/Off* key to activate condenser fan.
41	Perfect temp drawer test	Press *On/Off* key to activate perfect temp drawer.
38	VCC compressor test (on VCC models only)	Press *On/Off* key to activate compressor.
15	Evaporator fan test	Press *On/Off* key to activate evaporator fan motor.
22	Damper test	Press *On/Off* key to activate damper. *Op* should display when damper is open and *cl* should display when damper is closed.
36	Ice door test	Press *On/Off* key to activate ice door solenoid. When door is open, display should display *Op*. When door is closed, display should display *cl*. Activate manually or by *On/Off* key.
23	Fresh food door switch test	Open fresh food door(s), display will display *Op*. Close fresh food door(s), display should display *cl*.
24	Freezer door switch test	Open freezer door, display will display *Op*. Close freezer door, display should display *cl*.

Electrolux and Iceman Service Test Mode (continued)

Test Number	Description	Resolution
26	Defrost limit switch test (defrost bi-metal)	When bi-metal is open, display should display *Op*. When bi-metal is closed, display should display *cl*.
29	Fresh food thermistor test	OP= Open; *Er*= Error; fresh food temperature should be displayed
30	Freezer thermistor test	OP= Open; *Er*= Error; freezer temperature should be displayed
33	Ambient temperature test	OP= Open; *Er*= Error; ambient temperature should be displayed
0-	Software version	Software version should be displayed.

*Press *On/Off* key to activate and deactivate test mode. While in service test mode, you must turn off each component that is turned on if you do not want component to stay activated.*

To deactivate test mode, press and hold fresh food (+) or (*Up* arrow Frigidaire models) for 5 seconds.

Manual Defrost Activation:

Press and hold fresh food (+) and (-) (*Up* and *Down* arrows on Frigidaire models only) simultaneously for 5 seconds. D and F should be displayed.

Frigidaire Side by Side Error Codes

Error Code	Description	Resolution
EF	Evaporator fan failure	Check wiring between evaporator fan and Main Control Board. Check for 12VDC to fan between red and brown wires. Check for variant voltage (depending on high or low speed) between yellow and brown. If correct replace evaporator fan. If error code still exist, replace Main Control Board.
2 In fresh food window	Fresh food thermistor open	Check wiring between fresh food thermistor and Main Control Board. If correct, replace thermistor. If problem still exist, replace Main Control Board.
3 In fresh food window	Fresh food thermistor shorted	Check wiring between fresh food thermistor and Main Control Board. If correct, replace thermistor. If problem still exist, replace Main Control Board.
2 In freezer window	Freezer thermistor open	Check wiring between freezer thermistor and Main Control Board. If correct, replace thermistor. If problem still exist, replace Main Control Board.
3 In freezer window	Freezer thermistor shorted	Check wiring between freezer thermistor and Main Control Board. If correct, replace thermistor. If problem still exist, replace Main Control Board.
4 In fresh food window	Damper failure	Check wiring between damper and Main Control Board. If correct, replace damper. If problem still exist, replace Main Control Board.

Defrost Activation Mode

Brand / Series	Activation Sequence
Electrolux S/S	Hold Fresh Food (+) And (-) For 6 Seconds. Df shows in display.
French Door	Hold Fresh Food (+) And (-) For 6 Seconds. Df shows in display.
Ice Man	Hold Fresh Food (+) And (-) For 6 Seconds. Df shows in display.
Frigidaire S/S Manual Control	Push light switch 5 times within 6 seconds.
Frigidaire S/S Electronic Control	Hold freezer *Up* (+) while pushing fresh food *Down* (-) 5 times in 6 seconds. (Up and Down arrows on Frigidaire models instead of + and - respectively)

Freezer Defrost Mode

Brand / Series	Activation Sequence
Icon 32”	Turn control to 2 and hold *Up* (+) and *Down* (-) buttons 5 seconds.
Freezer With Control On Evaporator Cover	Turn control to 2 and hold *Up* (+) and *Down* (-) buttons 5 seconds.
Deluxe Control (Half Moon Shaped Control)	Press and hold *Quick Freeze* and *Alarm Reset* for 5 seconds or Press and hold micro switch on Main Control Board.
Vertical Control Board On Door	Select 0, then press *Down* key 4 times within 5 seconds. Press *Down* key 4 times within 5 seconds to exit.
Square Control Board On Door	Press and hold *Fast Freeze* and *Mute Sounds* for 5 seconds.
Rectangle Horizontal Control Board On Door	Press and hold *Extreme Freeze* and *Alarm Reset* for 5 seconds.

Freezer Defrost Mode

Error Code	Description	Solution
E or E1	Thermistor error	
E2	Key stuck	Replace Main Control Board.
HI	High temperature in freezer compartment	
CE	Communication failure	Check wiring between the Main Control Board and the User Interface Board. If correct, replace the Main Control Board. If problem still exists, replace the User Interface Board.
E5	Showroom mode	
E7	Stuck key or fail safe mode initiated	Replace Main Control Board. Check for thermistor failure.
S or E8	Shorted thermistor	Check the thermistor for shorts and wiring between Main Control Board to thermistor. If correct, replace thermistor.
O or E9	Open thermistor	Check the thermistor for an open circuit and wiring between Main Control Board to thermistor. If correct, replace thermistor
-	Thermistor operating correctly	

DIAGNOSTIC MODE

(19 CUFT ALL FREEZER AND REFRIGERATOR MODELS)

To initiate diagnostics mode, press and hold *Control Lock* for 3 seconds or until *lo* is displayed for 1 second. With the control locked, press and hold *Up* (+) and *Down* (-) keys simultaneously for 5 seconds. The control will display the following in 2-second intervals. The system will then wait for load testing for 10 seconds. If load testing is performed, a 10-second wait cycle is re-established after each key press. This is followed by defrost cycle time adjust mode. After exiting diagnostic mode the control will also exit control lock mode.

*Three (3) short confirmation tones sound.
*Left digit displays *8*, right digit is blank.
*Left digit is blank, right digit displays *8*.
*(-), *°C*, *°F*, *hrs, door ajar,* and *power fail* LED's are illuminated.
**Hi temp, duration, replace air filter*, and *control lock* LED's are illuminated.
*Displays ID (model ID) with tone.
*Displays model ID.
*Displays 5F (software version) with tone.
*Displays software version number.
*Door switch status with tone (*D0* or *DC*).
*Thermistor status with tone (*T0* for open, *TC* for closed, or -- for good thermistor).
*Tone and enters load test mode for 10 seconds:

1. Press down (∨) key. Displays *he* and turns on the heater.
2. Press up (∧) key. Displays *cp* and turns on the compressor.
3. Press *Temp Mode* key. Displays *la* and illuminates cabinet lamp.

*Enters defrost cycle time adjust mode. Default is 12 hours. Time can be adjusted for 8, 10 , or 12 hours by using *Up* (∧) / *Down* (∨) keys. The compressor run time will also be adjusted.

*Diagnostics mode exits at end of 10-second load test mode.

DIAGNOSTIC MODE

(21CUFT, 17CUFT, AND 14 CUFT ALL FREEZER MODELS)

To initiate diagnostic mode, set the temperature to 0 F, then press and hold the *Up* (+) and *Down* (-) keys simultaneously for 3 seconds. *88* will be displayed and a confirmation tone will sound.

*Press the *Up* (+) key to display the model number. Once you have displayed the model ID, press and hold the *Up* (+) and *Fast Freeze* keys for 3 or more seconds to select the option to change the model ID. Change the model ID by pressing *Up* (+) or *Down* (-) keys. Save the model ID by pressing *Mute Sounds* button.

Model Description:	Model ID:
C20, C25,U21F	0
U20F, U17F	1
C14F, U14F	2

*Press the *Fast Freeze* key to display the production software for the model. (The limitation is 00-99 production software versions per model. The minus and 2 digit version number -xx is displayed.

*Press the *Down* (-) key to display the door switch status. If the door switch is open, the letter *d0* is displayed. If the door switch is close, the letter *dc* is displayed.

*Press the *Mute Sounds* key to display the thermistor status. If the thermistor is operating properly, -- will be displayed. If the thermistor is open, the letter *t0* will be displayed. If the thermistor is shorted, *ts* will be displayed. The thermistor status is not updated in showroom mode. -- Is always displayed.

*Press the *Fast Freeze* key while in software version is displayed to reset all EEPROM values to the factory defaults. The model ID will not be affected. The user interface will exit diagnostics mode and automatically restart in normal power up operations.

Exiting Diagnostic Mode

Press and hold the *Up* (+) and *Down* (-) keys simultaneously for 3 seconds or more. The buzzer will beep at the end of 3 seconds.

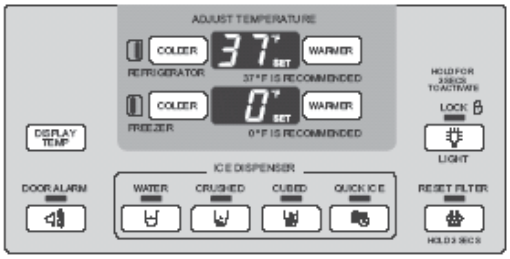
Diagnostic

(Electrolux 42” built in refrigerator)

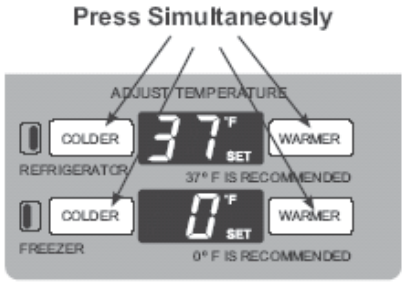
Service Diagnostics

Diagnostic Mode

1. To enter the diagnostic mode, the temperature display must be lit up. If the temperature display is not lit, press any pad on the overlay.



2. Press the 2 **COLDER** and 2 **WARMER** pads simultaneously for three seconds. The **FREEZER** and **REFRIGERATOR** displays will change to **0 0**.



3. To select a test mode:

   a. Enter a numeric value (see ***Test Mode Char***t) on the **FREEZER** display using the **COLDER** or **WARMER** pad.

Note: The **COLDER** pad decreases the numeric value. The **WARMER** pad increases the numeric value.

   b. Enter a numeric value (see ***Test Mode Char***t) on the **REFRIGERATOR** display using the **COLDER** or **WARMER** pad.

4. Once the displays indicate a test mode, press any pad on the temperature board overlay, other than the **COLDER** or **WARMER** pads, to enter that mode.

Note: A test mode must be selected within 30 seconds of entering the diagnostic mode or it will time out, normal refrigerator operation will resume, and the displays will turn off. Once a test mode is selected, the display will flash to confirm the mode selected.

5. At the end of a test session, to exit the diagnostic mode, do one of the following:
   - Enter **1** on the **FREEZER** display and **5** on the **REFRIGERATOR** display. Press any pad other than the **COLDER** or **WARMER** pads to e xecute a system restart.
   - Enter **1** on the **FREEZER** display and **6** on the **REFRIGERATOR** display. Press any pad other than the **COLDER** or **WARMER** pads to exit the service diagnostic test mode.
   - Recycle power to the unit through the main switch. As a cautionary measure, the system will automatically time out of the diagnostic mode after 15 minutes of inactivity. In the diagnostics mode, the unit can be tested under different conditions.

Diagnostic

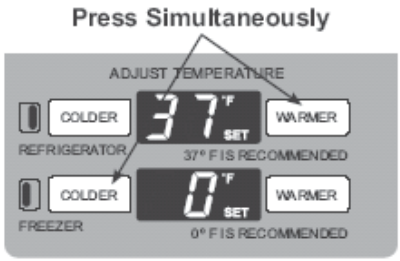
(Electrolux 42” built in refrigerator) (continued)

Test Mode Chart

FZ Display	FF Display	Mode	Comments
0	1	Showroom Mode	See Note #1.
0	2	Do Not Use	
0	3	Do Not Use	
0	4	Do Not Use	
0	5	Do Not Use	
0	6	HMI Self-Test	See Note #2.
0	7	Control and Sensor Self-Test	See Note #3.
0	8	Do Not Use	
0	9	Dispenser Recess Heater Test	Turn the dispenser heater ON for 30 seconds.
1	0	Do Not Use	
1	1	**Do Not Use**	Each fan will run for 5 seconds.
1	2	100% RunTime	See Note #4.
1	3	Do Not Use	
1	4	Toggle the State of Defrost	See Note #5.
1	5	Refrigerator Reset	Causes a system reset except for defrost.
1	6	Test Mode Exit	Exit test mode.
1	7	Do Not Use	
1	8	Do Not Use	

Note #1 (Showroom Mode)
In the showroom mode, the compressor and fans do not operate. The fresh food and freezer lights operate as normal (ON when door is opened). The dispenser and dispenser display operate as normal. Temperature set points can be changed. Press the **DISPLAY TEMP** pad to display the actual cabinet temperature. To exit the showroom mode, cycle power OFF or enter test mode **1 5** to reset the unit.

Note: The showroom mode can also be entered outside of the service mode by simultaneously pressing the **COLDER** pad on the **FREEZER** display and the **WARMER** pad on the **REFRIGERATOR** display for 3 seconds (the display must be lit before pressing the pads).



Note #2 (HMI Self-Test)
Once the HMI self-test is started, all of the LEDs and seven segment LEDs will illuminate. The **COLDER** pad turns off the seven segment LEDs and the **WARMER** pad turns off the **SET** LED for both the **FREEZER** and **REFRIGERATOR** displays.

When all the available LEDs have been turned off for that specifi c temperature board, the **COLDER** and **WARMER** pads on the **REFRIGERATOR** display must be held simultaneously for 3 seconds to exit the HMI self-test. This can be done any time during the test.

Note #3 (Control and Sensor System Self-Test)

Diagnostic

(Electrolux 42” built in refrigerator) (continued)

This test does a check on all thermistors, fans, and defrost circuits. The thermistor test will display pass, open or shorted. The fan and defrost tests will display pass or fail. Once this test is invoked, the test mode will stop flashing and the numbers from 1 to 10 (corresponding to the chart below) will appear on the HMI display.

1	FZ Room Sensor	6	FZ Fan Error
2	FZ Defrost Sensor	7	FF Fan Error
3	FF Room Sensor	8	Condenser Fan Error
4	FF Defrost Sensor	9	FZ Defrost Error
5	Ambient Sensor	10	FF Defrost Error

For each test, the HM
P = Pass
F = Fail
O = Open Thermistor Circuit
S = Short Thermistor Circuit

The control will display a **O** if the thermistor value is greater than 149.2K &! (-58°F (-50°C)). The control will display a **S** if the thermistor value is less than 1.34K &! (149°F (65°C)).

Note #4 (100% Run Time)

This test runs the sealed system 100% of the time and will automatically time out after 1 hour. Cycle power OFF or enter test mode **1 5** to reset and exit this mode.

Note: The 3-way valve position during 100% run time depends on the fresh food temperature. If the fresh food temperature is satisfied, the 3-way valve opens to the freezer evaporator only. If it is not satisfi ed, the valve opens to the fresh food evaporator and refrigerant flows through both evaporators.

Note #5 (Toggle the State of Defrost)

Any time a pad on the temperature board (other than the **COLDER** and **WARMER** pads) is pressed, the status of the defrost heaters will toggle in the following sequence:

1. Fresh food heater ON.

2. Fresh food and freezer heaters ON.

3. Fresh food and freezer heaters OFF.

Pressing the pad a fourth time will cycle through the sequence again. During the sequence, heater current can be measured.

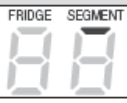
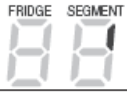
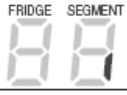
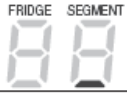
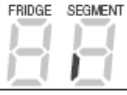
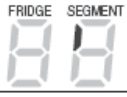
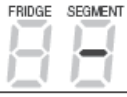
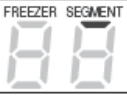
• Fresh food heater - approximately 1.2 amps when measured at the CN01 connector black wire.

• Fresh food and freezer heaters - approximately 4 amps when measured at the CN01 connector black wire.

Diagnostic

(Electrolux 42” built in refrigerator) (continued)

Details of Self-Diagnosis Light Display by Position

No	Items	DISPLAY LED	Trouble shooting	Remarks
1	I/M-SENSOR		I/M Sensor Housing slip-out, Contact Failure,Wire Cut, Wire Short,Defective I/M-Sensor.	Displaying a defect when the I/M-Sensor temp is over +65 ℃ or below -50 ℃.
2	R-SENSOR		Sensor Housing slip-out from the R-Room,Contact Failure,Wire Cut,Wire Short,Defective R-Sensor.	Displaying a defect when the R-Sensor temp is over +65 ℃ or below -50 ℃.
3	R-Defrost Sensor		Defrost Sensor Housing slip-out from the evaporator of R-Room, Contact Failure,Wire Cut, Wire Short,Defective Sensor.	Displaying a defect when the R-Defrost Sensor temp is over +65 ℃ or below -50 ℃.
4	R-FAN ERROR		Errors in operation of R-FAN Motor,Contact failure of feedback signal wire,no motor wire.	Displaying a defect when F.G signals generated during operation of FAN-Motor are not input.
5	I/M Function Error		Ejection restoration and horizontal position failure more than 3 times.	
6	Fresh-Sensor		Fresh-Sensor Housing slip-out,Contact Failure, Wire Cut,Wire Short, Defective Fresh-Sensor.	Displaying a defect when the Fresh- Sensor temp is over +65 ℃. or below -50 ℃.
7	R-Defrost Error		R-Heater Housing slip-out,Contact Failure,Wire Cut, Wire Short,Defective R-Heater,Defective Defrost Temp Fuse.	Displaying a defect when the R-Defrost completes automatically in 50 minutes.
8	Ambient Temperature Sensor		Ambient Temperature Sensor Housing slip-out, Contact Failure,Wire Cut, Wire Short,Defective Ambient Temperature Sensor.	Displaying a defect when the Ambient Temperature Sensor temp is over +65 ℃ or below -50 ℃.
9	F-SENSOR		Sensor Housing slip-out from the F-Room,Contact Failure,Wire Cut,Wire Short,Defective F-Sensor.	Displaying a defect when the F-Sensor temp is over +65 ℃ or below -50 ℃.
10	F-Defrost Sensor		F-Defrost Sensor slip-out from the evaporator of the F-Room,Contact Failure, Wire Cut,Wire Short, Defective Sensor.	Displaying a defect when the temp sensing of the F-Defrost Sensor is over +6 5 ℃ or below -50 ℃
11	F-FAN ERROR		Errors in operation of F-FAN Motor,Contact failure of feedback signal line,no motor wire,etc.	Displaying a defect when the F .G signals generated during operation of FAN-Motor are not input.
12	C-FAN ERROR		Errors in operation of C- FAN Motor,Contact failure of feedback signal line,no motor wire.	Displaying a defect when the F .G signals generated during operation of FAN-Motor are not input.
13	F-Defrost Error		F-Heater Housing slip-out, contact failure,wire cut,wire short,Defective F-Heater,Defective Defrost Temp Fuse.	Displaying a defect when F-Defrost completes automatically in 50 minutes.
14	MAIN_LOAD ERROR		Defective Main PCB Pattern and MICOM	Displaying a defect when errors occur between main MICOM and load MICOM
15	MAIN_PANEL ERROR		Defective PCB,Housingslip-out,Contact Failure, Wire Cut,Wire Short, Defective MICOM.	Displaying a defect when errors occur between main MICOM and panel MICOM
16	Uart Communication Error (PLC)		Communication error with PLC modem	When it is not connected with PLC modem
			Note) PLC Communication modem will be applied optionally. So even if the appliance which does not apply PLC displays this error digit, It is not defect.	

Wine Cooler, Beverage Center Error Codes

Error Code	Description	Solution
P2	Primary sensor open	Check wiring to primary sensor. If correct, replace sensor.
P3	Primary sensor shorted	Check wiring to primary sensor. If correct, replace sensor.
E2	Evaporator sensor open	Check wiring to evaporator sensor. If correct, replace sensor
E3	Evaporator sensor shorted	Check wiring to evaporator sensor. If correct, replace sensor.
CL	Communication error	Check wiring between the User Interface and the Main Control Board. If correct, replace User Interface. If error still exist, replace Main Control Board.
UI	Incorrect user interface	Check if correct User Interface and Main Control Board have been installed. Replace the User Interface or Main Control Board accordingly.

Diagnostic Mode

To enter the service mode, press and hold the *Vacation Mode* key, while pressing the *On/Off* key 3 times in 5 seconds. Temperature digit display will show (1). Each press of the left hand temperature *Up* (+) or the left hand temperature *Down* (-) key will step through the service tests, (1) through (6). Press the *Mute Sounds* button to access the test selected. Once the test is accessed the display will show ° and each press of the temperature *Up* (+) key will cycle forward through the test features (a-e) and display the test information in the display. Each press of the temperature *Down* (-) key will cycle back through the test features. Pressing the *Mute Sounds* key will exit from the test and display the current service test number.

Test Number	Description
1	Firmware version: displays firmware version User Interface and Main Control Board.
2	Evaporator fan: toggles the evaporator fan(s) on and off.
3	Primary sensor: will display: P1= Normal P2= Open P3= Shorted
4	Evaporator sensor: will display: E1= Normal E2= Open E3= Shorted
5	Compressor: toggles the compressor on and off.
6	LED display test: illuminates display LED's
7	Exit service mode: hold left temperature Up (+) key for 5 seconds to exit service mode.

Sabbath Mode

Press and hold the *Vacation Mode* key for 5 seconds. The temperature display will show SB. While in Sabbath mode, the alarm lights will illuminate, but will not be accompanied by audible tones.

Air Conditioner Error Codes

Error Code	Description	Solution
AS	Ambient Thermistor error	Check wiring between Main Control Board and Thermistor. If correct, replace Thermistor. If error still exists, replace Main Control Board.
ES	Evaporator Thermistor error	Check wiring between Main Control Board and Thermistor. If correct, replace Thermistor. If error still exists, replace Main Control Board.
HS	Heater Thermistor error	Check wiring between Main Control Board and Thermistor. If correct, replace Thermistor. If error still exists, replace Main Control Board.