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Built-in Hobs

**INDUCTION PUREHOB
Back lighted Zone**

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1 - INTRODUCTION

1.1 - PURPOSE OF THIS MANUAL

The purpose of this Manual is to provide information of new Induction Built-in Hobs "PUREHOB" with "RAVEN" User Interface and with the addition of information from the Service Manual for 599729030 to perform troubleshooting.

1.2 - WARNINGS



- **All work with open appliances must be done with the mains supply disconnected.**
- **Work on electrical equipment should only be carried out by qualified personnel.**
- **Before working on a device, check the efficiency of the system casing using appropriate equipment. As an example, refer to the indications described / illustrated in the portal Electrolux Learning Gateway (<http://electrolux.edvantage.net>).**

After the work, carry out electrical safety tests and ensure that the all safety devices are working properly.

- **In the case of manipulation / replacement of the PCB, use the ESD kit (Code 405 50 63-95/4) to prevent electrostatic discharge damage the circuit board see SB No. 599 72 08-09**

2 - GENERAL INFORMATION

In the PUREHOB, when this is turned off can be seen only the symbol of ignition (see example Fig. 1).



Fig. 1

The controls and the centre of cooking zones are illuminated when the hob is switch on (see example Fig. 2).



Fig. 2

3 - PRODUCT DESCRIPTION (example)

Heater type: Induction
Heater system: "Cheetah"
Interface: "Raven" interface
Glass ceramic: "Eurokera KeraBlack plus"
Total Power (max): 7400W
Power each zone: 2300W level 14; 3200W level P
Voltage range: 220 - 240V 50/60Hz
Platform concept: "Promise"

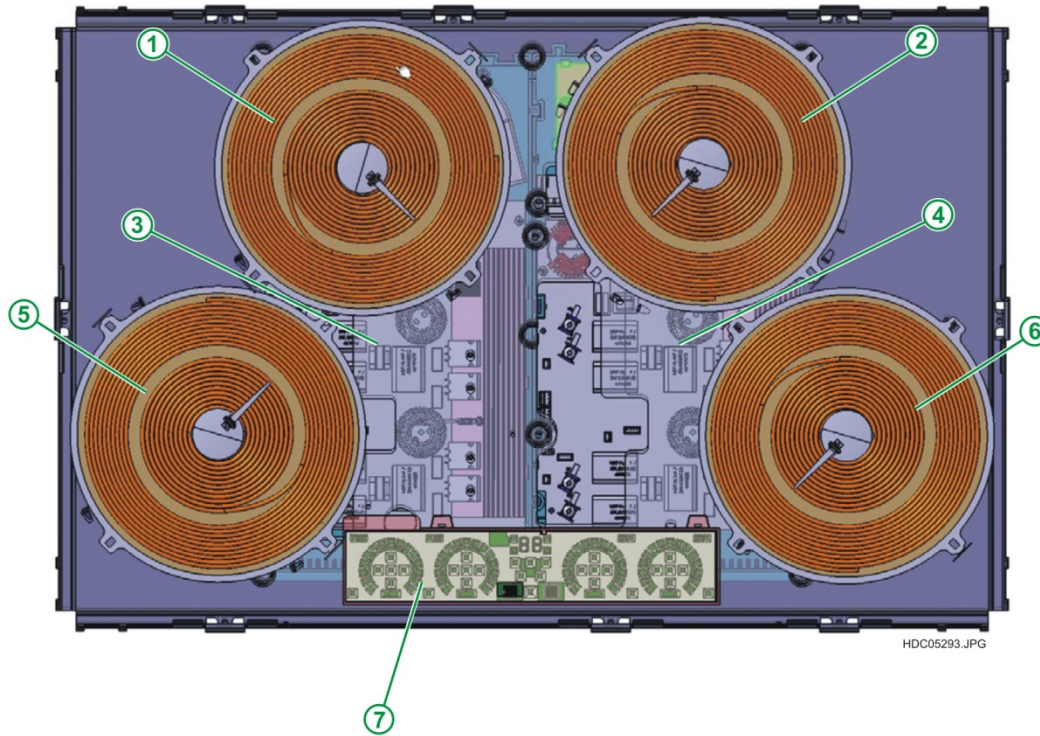


Fig. 3

- 1 - COIL INDUCTION REAR LEFT WITH LIGHTING
- 2 - COIL INDUCTION REAR RIGHT WITH LIGHTING
- 3 - LEFT INDUCTION "CHEETAH" MODULE
- 4 - RIGHT INDUCTION "CHEETAH" MODULE
- 5 - COIL INDUCTION FRONT LEFT WITH LIGHTING
- 6 - COIL INDUCTION FRONT RIGHT WITH LIGHTING
- 7 - "RAVEN" USER INTERFACE WITH LIGHTING

4 - CHANGES TO STANDARD "CHEETAH" SYSTEM

4.1 - INDUCTION MODULE

Hardware: Standard "Maxima"
Software: New power software >=84; new control software >=29

4.2 - INDUCTION COILS

New induction coils with ceramic plate for light distribution

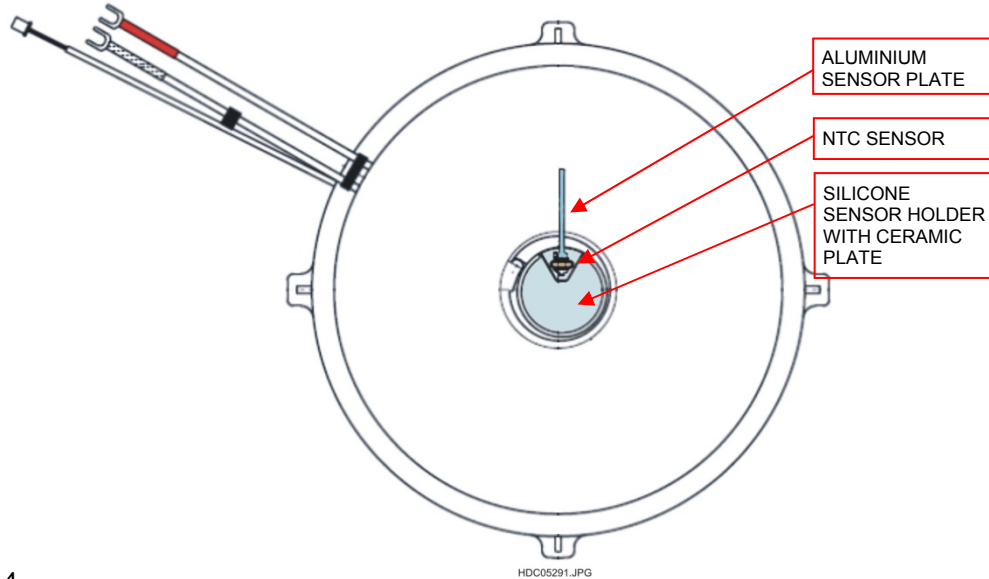


Fig. 4

4.3 - LED (Light Emitting Diode) ILLUMINATION

LED with cable positioned below each of the zones.

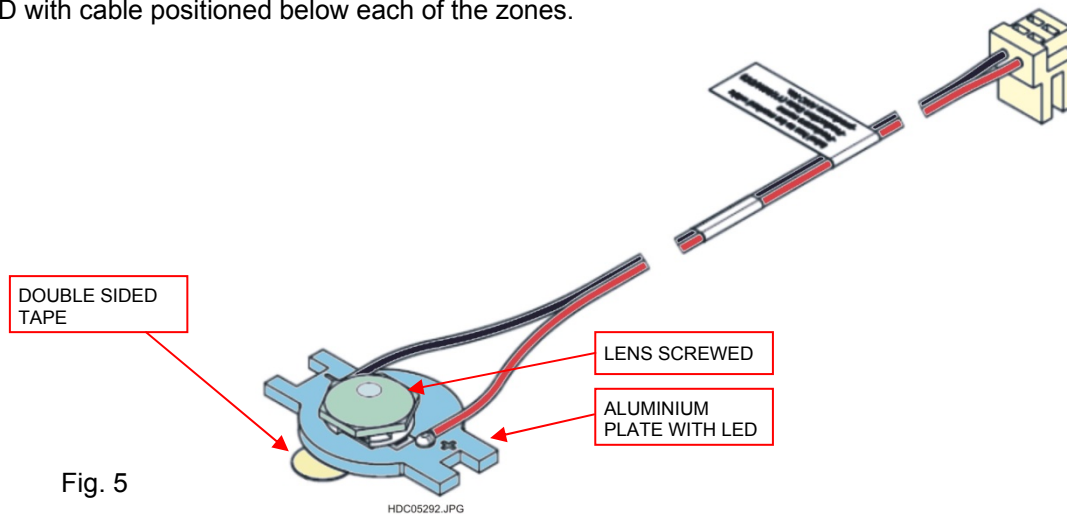


Fig. 5

4.4 - ILLUMINATION CONTROL ZONE PCB

The control board areas that is for powering the LEDs for illumination of the cooking zones is fixed to the housing of the module induction right under the user interface (see Fig. 10).

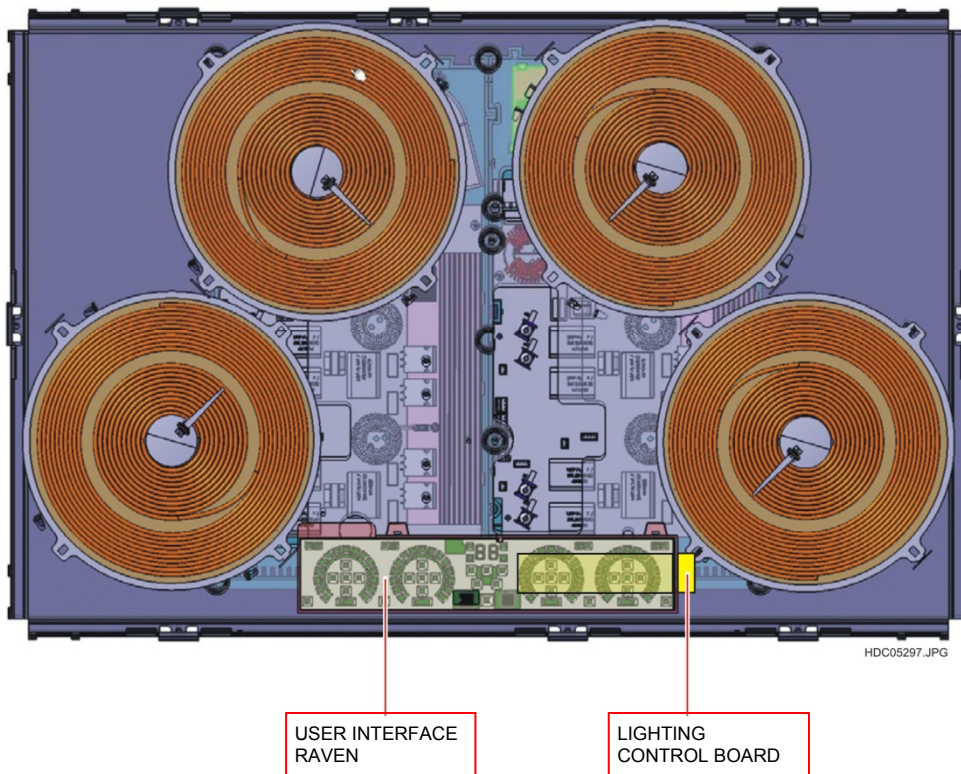


Fig. 6

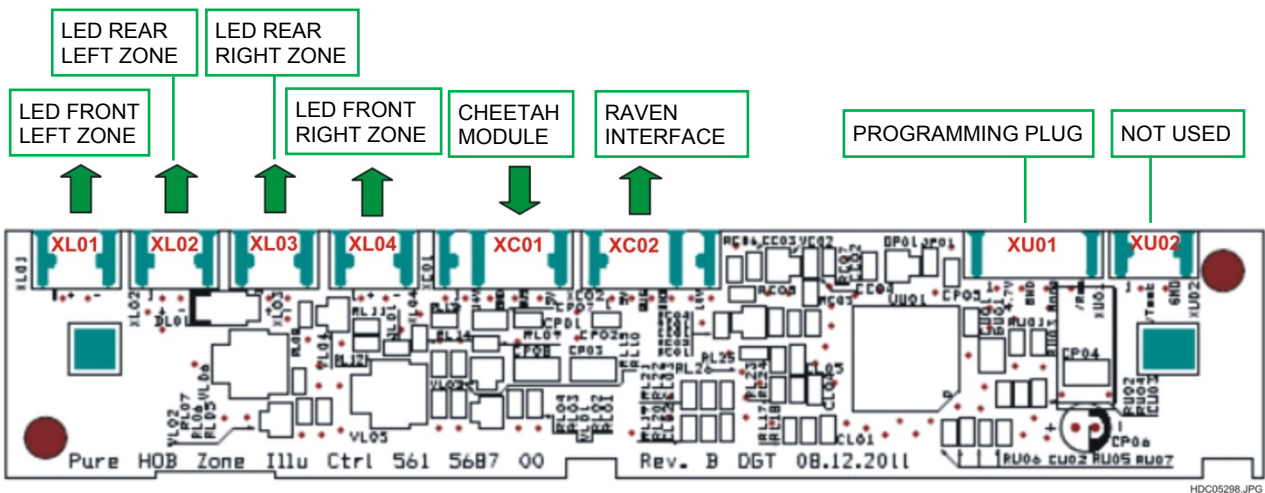


Fig. 7

5 - REPLACEMENT COMPONENTS

5.1 - OPEN APPLIANCE

Open the appliance with tools for the Promise hob concept. You will find the following setup of the hob.

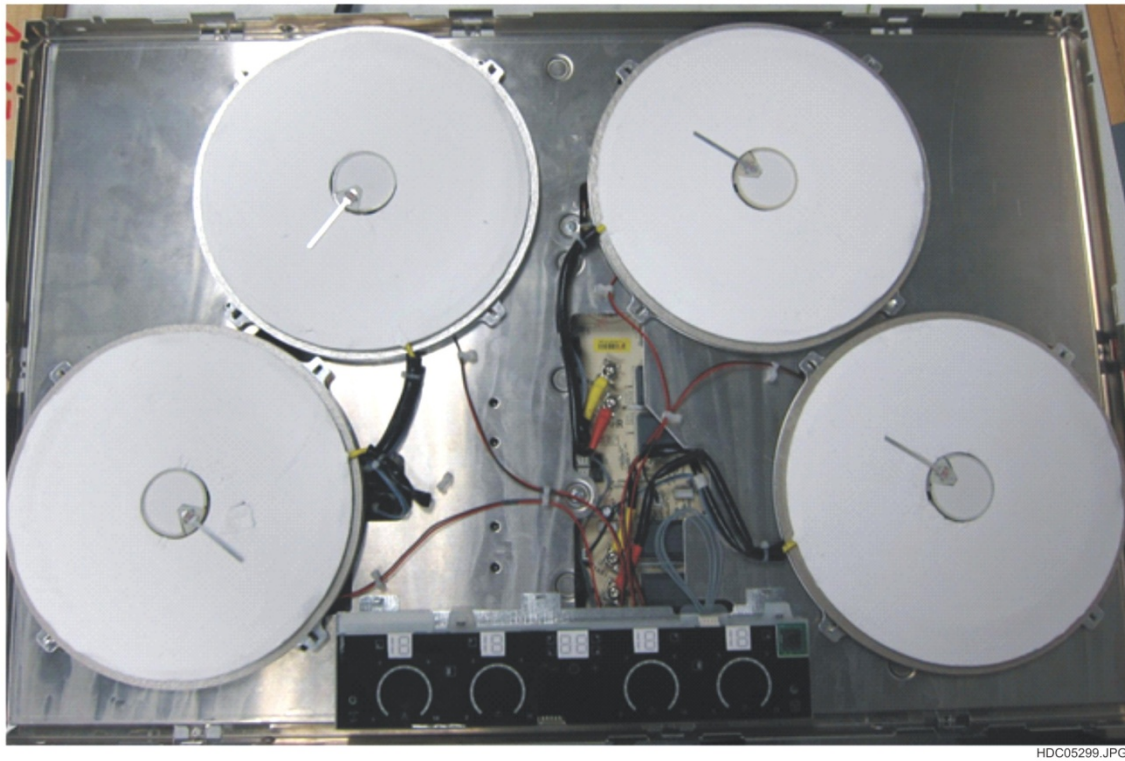


Fig. 8

5.2 - REMOVAL / REPLACEMENT INDUCTION COILS

If the coil is defect (E4 / no power but "F" in the display) remove the complete coil with sensor and disconnect it from the power module.

E4 – Error: When the sensor is out of range ($<15^{\circ}\text{C}$ or $>253^{\circ}\text{C}$), short-cut or broken, the E4 Error is displayed in the interface.

If the E4 disappears the zone could be out of temperature range or the connection is not sure. Check if the connectors are applied in the right way.

Lighted areas in the zone marking. In the centre of the zone a silicone part with ceramic plate is used to spread the light from the LED. When the Ceramic is missing or broken the light is brighter / spots in parts of the zone illumination.

Make sure that the aluminium sensor plate is in line to one coil fixation (see example in Fig. 11). If not turn the silicone part on the lower side of the coil. If this is not the case the sensor area may be visible by a different brightness.

5.3 - REMOVAL / REPLACEMENT LEDS

When the zone illumination is defect no LED is active due to the connection in series.

To detect the defect component do following check

1. Disconnect LED from Control board.
2. Check with a Multimeter / Diode test mode the function each LED.
3. Remove defect LED: take a wide blade screw driver and lift the LED from the coil carrier. Remove the rest of gluing tapes.
4. Place new LED: remove protection foil of gluing tape and press the LED lens with the finger on the coil carrier. Do not use a tool, it may damage the part.

5.4 - REMOVAL / REPLACEMENT "CHEETAH" MODULES / ZONE CONTROLS BOARD

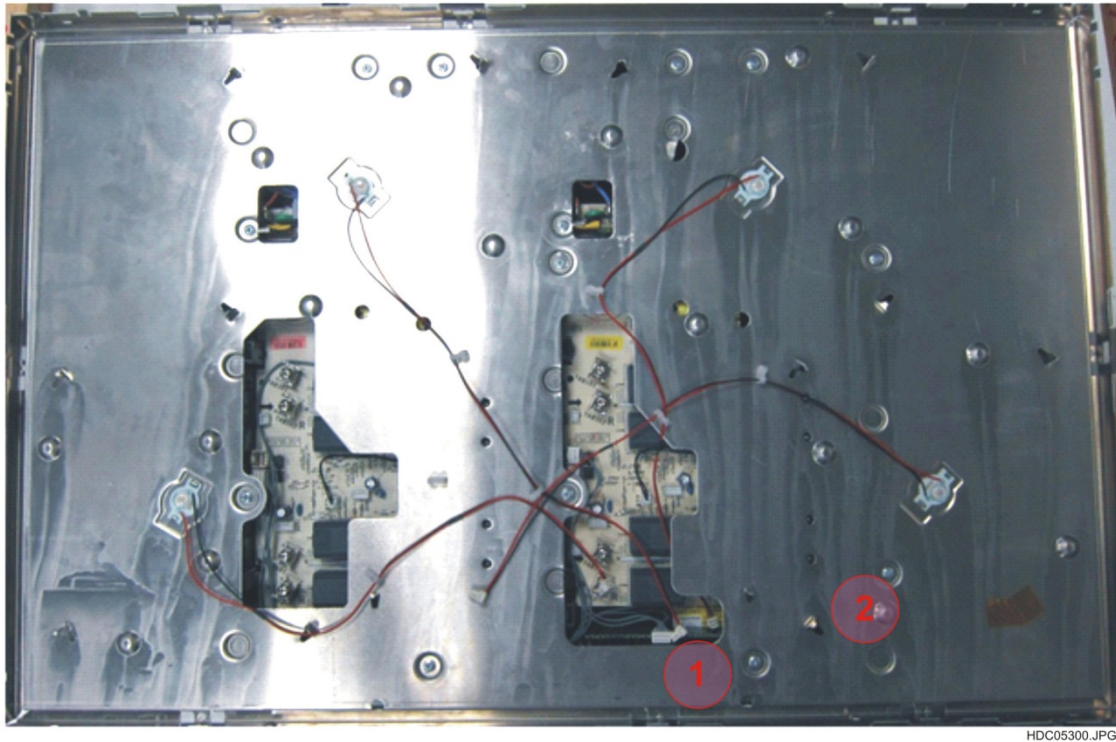


Fig. 9

1. Disconnect all LEDs from the Control-board, do **not** remove the LEDs.
2. Remove the 13 screws to remove the coil carrier.

5.5 - REMOVAL / REPLACEMENT CONTROL BOARD / "CHEETAH" MODULE

To remove the Cheetah electronic see also Service Manual 599729030.

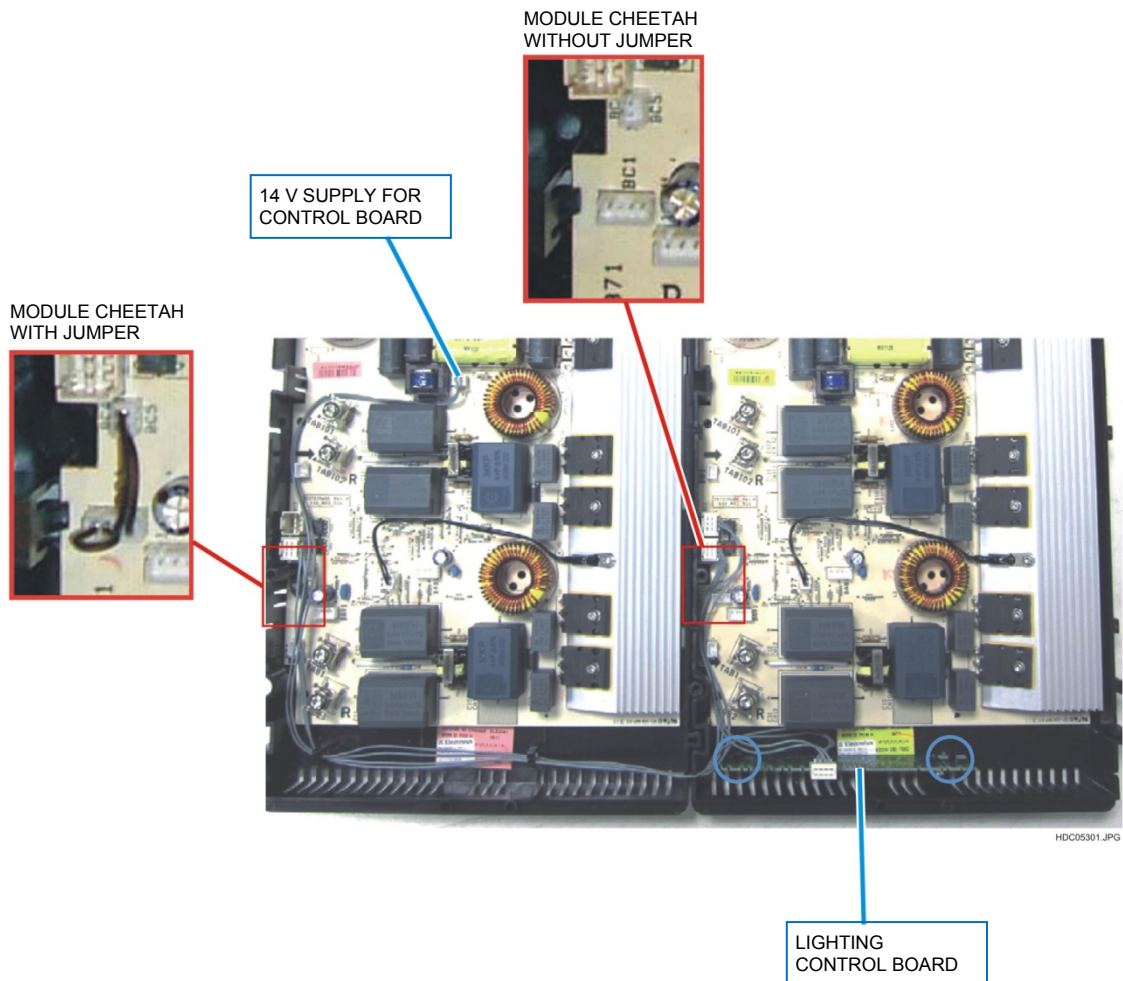


Fig. 10

To remove the Control board use a screw driver to widen the hooks.

Bus wiring:

- standard bus connection left – right power board
- 14V / 5V bus connection

ATTENTION: Make sure that the connector for 14V and the Jumper are set on the same board. If this is not the case the all electronics may get defect!!

6 - FAILURE CODES & FAILURE DETECTION

We report a summary of error codes with about the "PUREHOB" for troubleshooting complete and explanation of error codes Refer to Service Manual **599729030**.

ERROR CODE	DESCRIPTION
E0	Wrong configuration for Induction module.
E1	Wrong configuration for User Interface.
E2	Zone illumination detected errors.
E3	Over or under voltage detected.
E4	Coil sensor out of range.
E5	Zone illumination Control PCB communication timeout.
E6	Induction module detected errors.
E7	Fan is not working proper.
E8	Communication problems Bus / electrical connections.
E9	User Interface touch system defect.

6.1 - ERROR CODES SPECIFIC FOR "PUREHOB"

The complete description and troubleshooting is provided in SM 599729030, here we present only the extraction of specific codes for "PUREHOB".

FAULT DESCRIPTION	DISPLAY	POSSIBLE ROOT CAUSE	TROUBLESHOOTING
Alarm display in the User interface.	„E2“	Zone Illumination Control module has an fault detected on the LED's or 14VDC supply is missing.	<ol style="list-style-type: none"> 1) Check if 14V plug BC1 from left power board1 is connected. Then also the backlight of the Raven zone rings are not working in ON state. 2) Check the connection of the LED's at the zone illumination control module (XL01- XL04) 3) Check each LED open / short circuit and its wiring. With some types of multimeter is also possible to directly test the LED. Normally, the LEDs are connected in series, namely: 14V power supply – front left - rear left - rear right - front right, means the first one not operating is normally the defect and no other lights. (see also Chapter 7.1) 4) See E5 5) Exchange the Zone Illumination Control module.
	„E5“	Communication timeout detected by user interface for Zone Illumination Control module	<p>Disconnect the appliance from the mains for 30 sec. If alarm still occurs</p> <ol style="list-style-type: none"> 1) Check wiring between the zone illumination control board and the User interface or short circuit in RAS2.5 plug, if necessary exchange. 2) Exchange zone control module. 3) if above without success, exchange User interface.

7 - FAILURE DETECTION

For the detection of faults, refer to SM 599729030.

7.1 - ZONE ILLUMINATION NOT WORKING

The complete description and troubleshooting is provided in SM 599729030, below we present information specific to "PUREHOB".

If zone illuminations not working:

- Interface shows "E2" when hob is switched on
- LEDs are connected in line (one defect → no LED on).
- The defect LED is displayed with a "E" in the level display. Its that LED which is connected to the connector on the control boards.
- For detecting the defect LEDs use a Multimeter in Diode test.
- Do following check: disconnect each LED from Control board and measure with the diode test mode of a Multimeter. The voltage is ~ 1,6V. Depending on the Multimeter the LED is emitting a dimming light.
- If all LEDs checked and OK → exchange the zone control board.

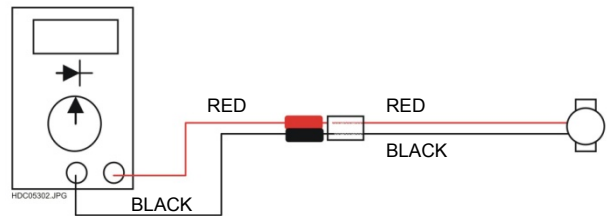


Fig. 11

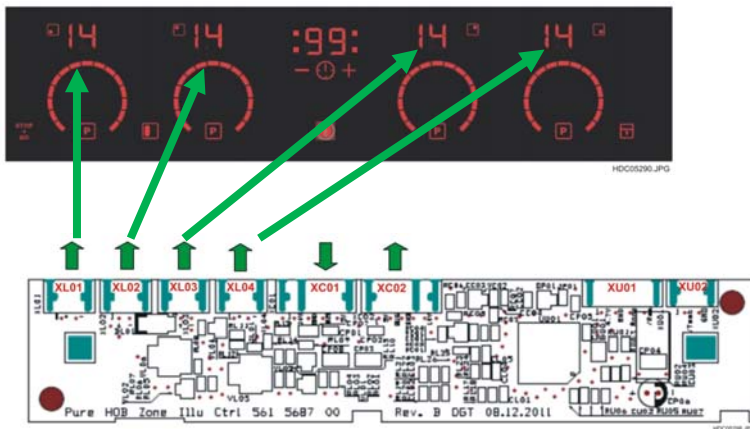


Fig. 12

Please note that the LEDs on XL01 .. 04 connectors could need not to be in the order of the zones. E.g. LED for rear left zone is on connector XL01. Therefore that the LEDs are connected in series the connector position is equal.

8 - WIRING DIAGRAM AND CIRCUIT DIAGRAM

Example of wiring diagram

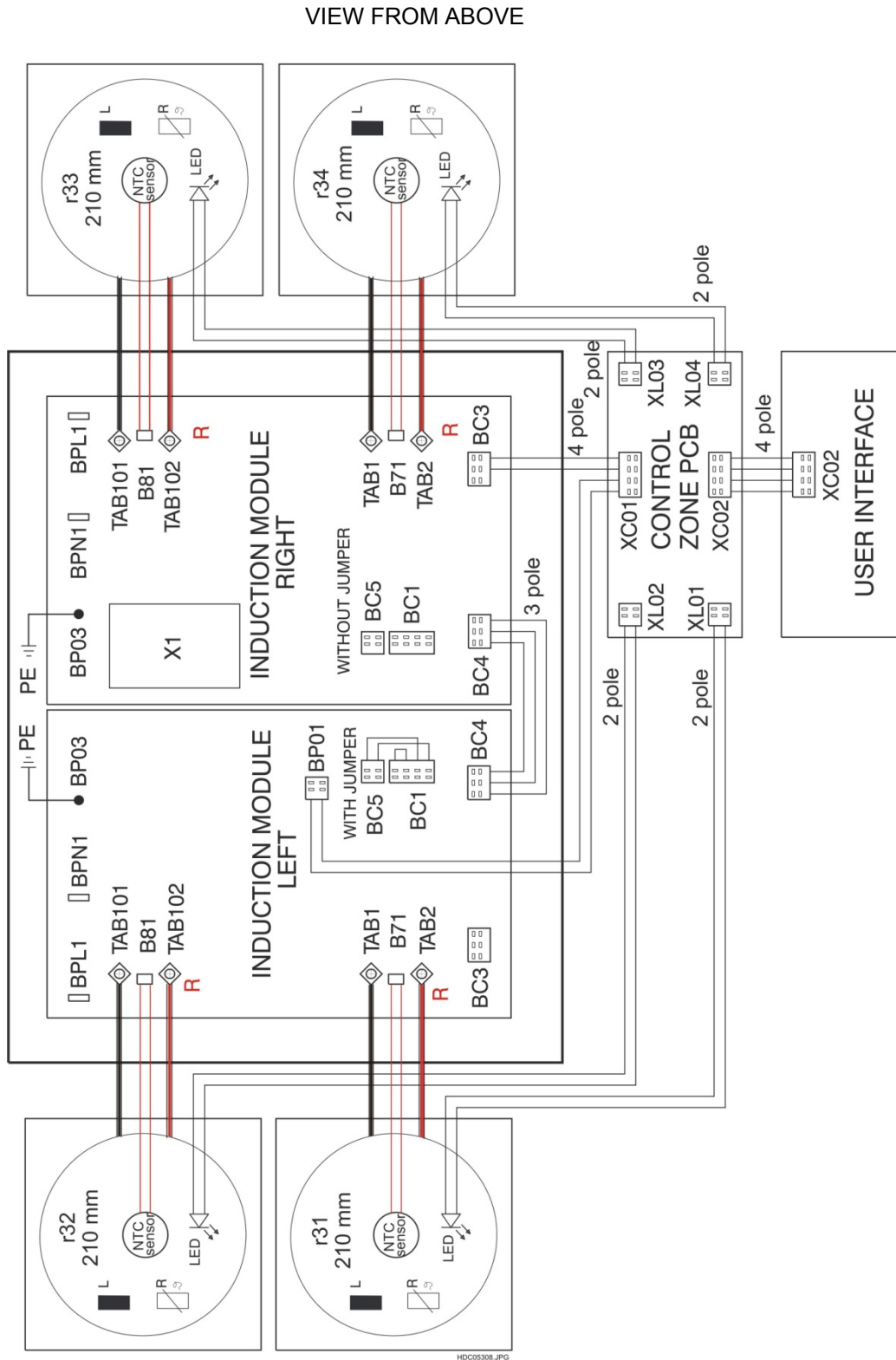


Fig. 13

Example of circuit diagram

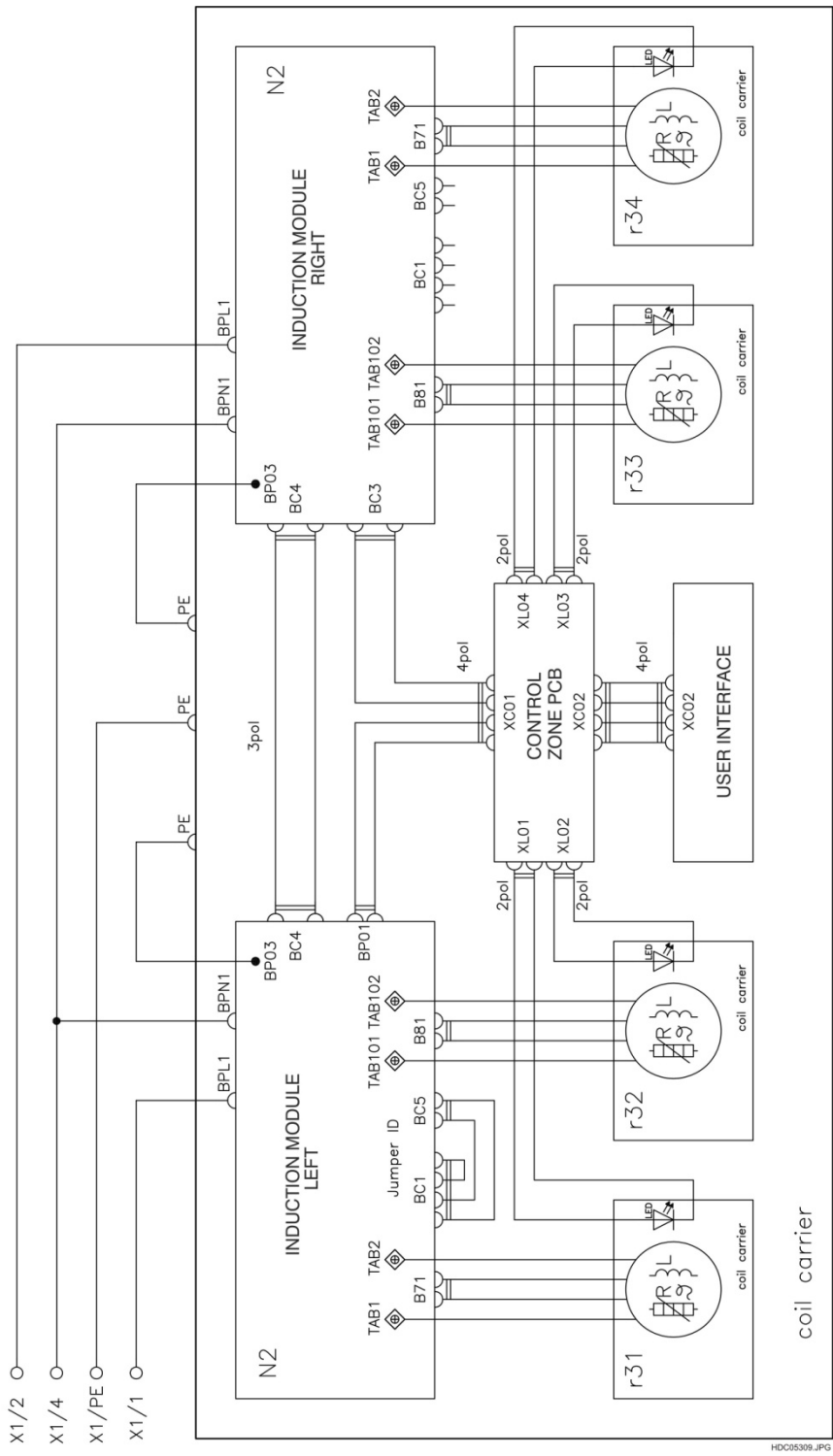


Fig. 14

8.1 - LEGEND OF DIAGRAMS

Reference	Description	Reference	Description
a1	switch 7-step front left	h9	lamp overheating
a2	switch 7-step rear left	h10	analogical timer
a3	switch 7-step rear right	h11	electronic timer
a4	switch 7-step front right	h12	6-push electronic timer
a7	heating mode selector main oven	h20	timer primary code hob
a7t (a7.1)	heating mode selector top oven	h30	residual lamp
a8	LTC (Low Temp. Cooking) switch	h40	display board
a15	touch electronic switch warning zone	h52	display oven
a31	energy regulator front left	K	clutch
a32	energy regulator rear left	K1	relay
a33	energy regulator rear right	k1	LTC (Low Temp. Cooking) relay
a34	energy regulator front right	KS	switch child safety
a61	touch electronic switch front left	KS1	rotary hob plate front left
a62	touch electronic switch rear left	KS2	rotary hob plate rear left
a73	touch electronic switch rear right	KS3	rotary hob plate rear right
a84	touch electronic switch front right	KS4	rotary hob plate front right
A1	actuator exhaust	M1	hob connector 14-pole 1+2
A2	actuator desteam	M2	hob connector 14-pole 3+4
b3	socket meat probe	M3	connector 11-pole
BOF	mode selector function	M4	connector 7-pole
BOT	mode selector temperature	M5	connector 3-pole
c1	capacitor 1,5 µF for oven lamp 40W	m1	fan hot air main oven
c2	capacitor 1,5 µF for oven lamp 25W	m1t	fan hot air top oven
c4	interference filter	m2	fan cooling
D	hob connector 12-pole	m3	transformer halogen lamp
DS	door switch	m4	transformer timer
e1	door lock pyro	m5	transformer electronic
e11	distributor plate pot detection	m6	motor stirrer
E	hob connector 8-pole	m8	transformer high voltage
F	hob connector 21-pole	m12	turnspit motor
f1	thermostat temp -regulator main oven	m13	ignition coil gas
f1t (f1.1)	thermostat temp -regulator top oven	m20	cooling fan, L3
f2	safety term. limiter main oven	N1	electronic power board
f2t (f2.1)	safety term. limiter top oven	N2	module of induction
f3.1	thermostat steam generator 170°	N3	User interface
f3.2	thermostat steam generator 120°	N4	connector board
f5	thermostat cooling fan delay main oven	N5	PSU light bar (power supply unit)
f5t	thermostat cooling fan delay top oven	N6	light bar
f6	thermostat fast run cooling fan pyro	N7	electronic Smart
f7	sensor to magnetron	N8	touch input
f8	safety temp limiter bottom main oven	PE2	ground point bottom sheet f-oven
f9	LTC (Low Temp. Cooking) thermostat	PE3	ground point front frame left
f11	thermostat unlock pyro main oven	PE4	ground point front frame right
f11t	thermostat unlock pyro top oven	PE5	ground point bowl support front
f12	thermal switch cooling fan delay off (contact)	PE6	ground point bowl support rear
f15	2. safety temp. limiter oven	PE7	ground point hob frame
f16	thermostat overheating warning	PE8	ground point cavity main (only gas cooker)
f17	temperature sensor steam	PE1/b	ground point component plate main
f19	rack thermostat	PE1/bt	ground point component plate top
f21	safety temp. limiter grill	Q1	quick start module top oven
f22	safety temp. limiter fryer	r5	heating element steam generator
f31	residual contact front left	r6	top heating/grill combination
f32	residual contact rear left	r7	top heating element main oven
f33	residual contact rear right	r7 (r7.1)	top heating element top oven
f34	residual contact front right	r8	bottom heating element main oven
G1, G2	spark generator	r8t (r8.1)	bottom heating element top oven
G5	magnetron	r11	fat and smell filter
h1	lamp working	r12	thermal switch cooling fan delay off (heating)
h1t (h1.1)	lamp working top oven	r14	grill heating element main oven
h1.4	lamp working cooking zone front left	r14t (r14.1)	grill heating element top oven
h1.5	lamp working cooking zone rear left	r15	warming zone
h1.6	lamp working cooking zone rear right	r16	ring heating element main oven
h1.7	lamp working cooking zone front right	r16t	ring heating element top oven
h3	lamp heating main oven	r19	heating drawer
h3t (h3.1)	lamp heating top oven	r20	resistor cooling fan
h4	oven lamp main oven	r21	heater grill
h4t	oven lamp top oven	r22	heater fryer
h4.1	oven lamp side main oven	r27	resistor oven lamp
h4.6	lamp halogen	r27.1	resistor oven lamp side
h5	oven lamp top oven	r31	cooking zone front left
h5.1	oven lamp side top oven	r32	cooking zone rear left
h7	meat probe display	r33	cooking zone rear right

Reference	Description	Reference	Description
r34	cooking zone front right	s23	sensor wok (middle)
r35	cooking zone middle	s31	ignition switch gas front left
s1	sensor pot detection front left	s32	ignition switch gas rear left
s2	sensor pot detection rear left	s33	ignition switch gas rear right
s3	sensor pot detection rear right	s34	ignition switch gas front right
s4	sensor pot detection front right	TR	telescopic runner switch main oven
s11	micro switch gas / electric	TRt	telescopic runner switch top oven
s12	micro switch grill / fryer	X1	main terminal
s13	micro switch grill socket	X10	tandem pin shells 6-pol.
s14	micro switch sensor	X11	tandem pin shells 8-pol.
s19	switch drawer	X12	connector hob
s21	sensor grill	x20	frame connector, L3
s22	sensor fryer		

9 - REVISIONS:

Revision	Date	Description	Author	Approved by - on
00	06/2012	Document Creation	FV	