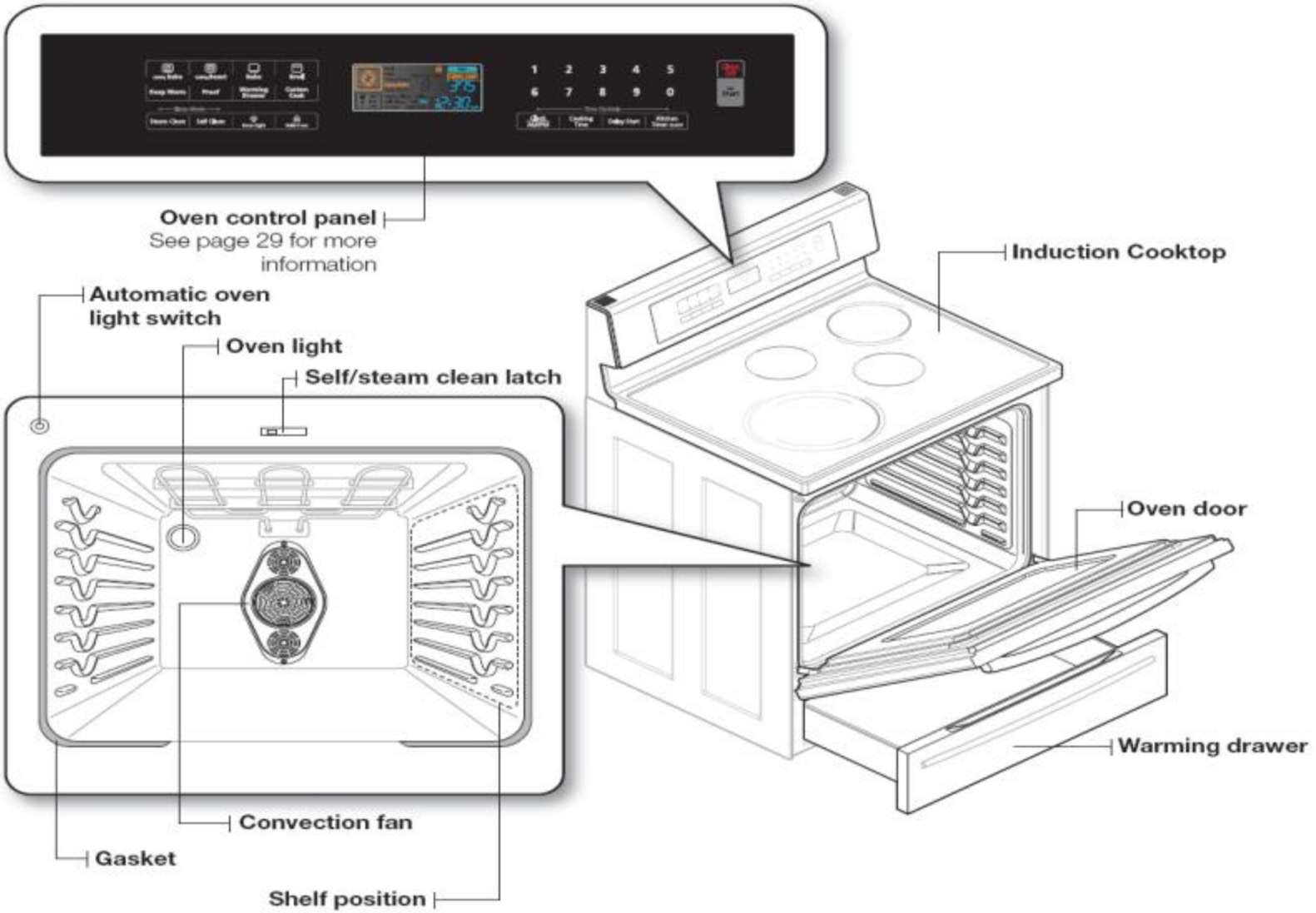
Heated and Induction Cook Top Range

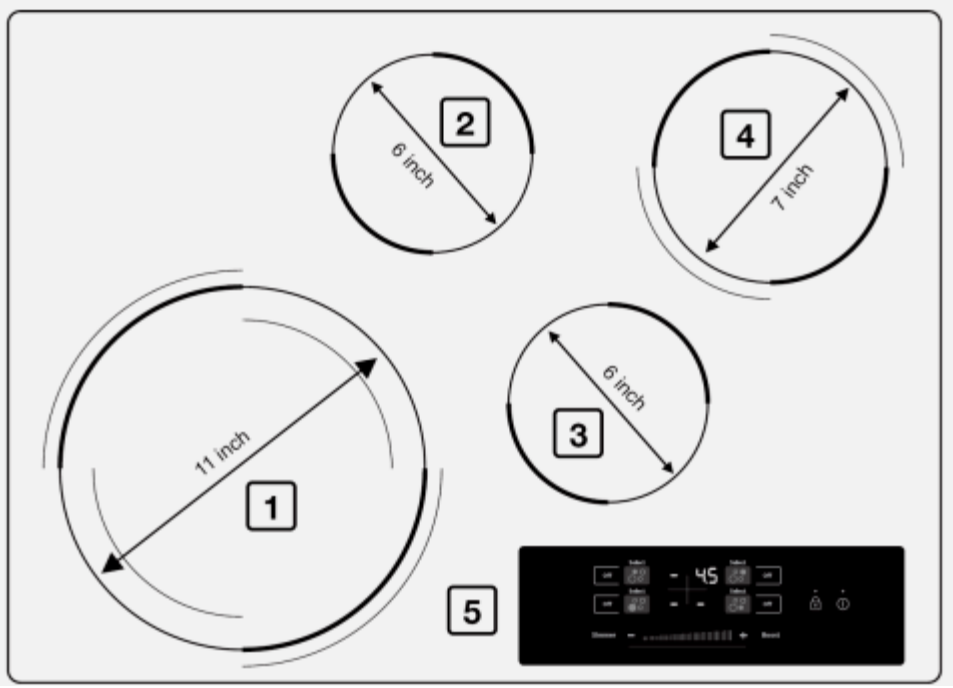
New Appearance Design

- Large Capacity
- Self clean and Steam clean
- Touch control
- Induction Cook Top

Oven Features



Induction Cook Top Control Panel

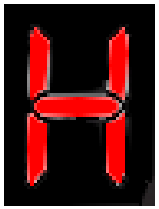


1- 11” element: Left front

2- 6” element: Center rear

3- 6” element: Center front

4- 7” element: Right rear



5- Hot surface indicator
- Comes on when the unit is turned on or hot to the touch.
- Stays on even after the unit is turned off.
- Glows until the unit is cooled to approximately 120°F.

5- Pan Detection Error
- Comes on if there is no cookware detected
- Comes on if the cookware is too small for the selected Inductor Coil
- Comes on if the cookware is not centered on the Inductor Coil

Range Type Comparison

Model	Ceramic Cook Top (FTQ387)	Induction Cook Top (FTQ307)
Color Appearance	Stainless	Stainless
APPROXIMATE DIMENSIONS (H x D x W)	47 $^{1}/_{16}$" x 25 $^{31}/_{32}$" x 29 $^{29}/_{32}$"	47 $^{1}/_{16}$" x 25 $^{31}/_{32}$" x 29 $^{29}/_{32}$"
CAPACITY (Oven Capacity)	5.9 Cu.ft	5.9 Cu.ft
Cooking Technology	Traditional	Traditional
Element Type	5 Ribbon Heating Element	Induction Coils
Hidden Bake Oven Interior	Yes	Yes
Oven Type / Cleaning	Convection / Self-Cleaning + Steam Cleaning	Convection / Self-Cleaning + Steam Cleaning
Oven Controls	Touch Glass, 2-Color LED Display	Touch Glass, 2-Color LED Display
Style	Smooth top	Smooth top
Glass Ceramic Cook Top	Black Pattern on Black Glass	Black Pattern on Black Glass
Convection Bake	Multi/Single Rack Bake	Multi/Single Rack Bake
Convection Roast	Yes	Yes
Oven Racks	3 Rack Flat	3 Rack Flat
6" Heating Element	2 Ribbon (1,200 watts)	2 Working coil (2,000/1,400 watts)
7” Heating Element	1 Ribbon (3,000 watt)	1 Working coil (2,800/2,000 watts)
11” Heating Element	1 Ribbon (3,000 watts)	1 Working coil (3,700/2,400 watts)
Warming Zone	1-6" Ribbon (100 watt)	NO

Range Type Comparison

Model	Ceramic Cook Top (FTQ387)	Induction Cook Top (FTQ307)
FEATURES		
Auto Self-Clean	Yes	Yes
Automatic Self-Clean Oven Door Lock	Yes	Yes
Control Lock Capability	Yes	Yes
Control Lockout	Yes	Yes
Convection Conversion	Yes	Yes
C° or F° Programmable	Yes	Yes
Delay Bake Option (Time Bake)	Yes	Yes
Delay Clean Option	Yes	Yes
Electronic Clock & Kitchen Timer	Yes	Yes
Infinite Heat Controls	Yes	Yes
Proof Mode	Yes	Yes
Keypad Controls	Yes	Yes
Warm Mode	Yes	Yes
Warming Drawer Features	Yes	Yes
Heating Element "ON" Indicator Light	Yes	Yes
Hot Surface Indicator Lights	1, Cook Top	Yes

Range Type Comparison

Model	Ceramic Cook Top (FTQ387)	Induction Cook Top (FTQ307)
Oven "ON" Light	Auto	Auto
Oven Interior Light	Yes	Yes
Control Location	Backsplash	Backsplash
Removable Full-Width Drawer	Yes - Warming Drawer	Yes - Warming Drawer
WEIGHTS & DIMENSIONS		
Approximate Shipping Weight	220 lb	236 lb
Cabinet Width	30 "	30 "
Net Weight (lbs.)	194 lb Including Accessory	211 lb Including Accessory
Overall Depth	25 $^{31}/_{32}$"	25 $^{31}/_{32}$"
Overall Height	47 $^{1}/_{16}$"	47 $^{1}/_{16}$"
Overall Width	29 $^{29}/_{32}$"	29 $^{29}/_{32}$"
Oven Interior Dimensions (W x H x D) (in.)	25" x 20 $^{25}/_{32}$" x 18 $^{15}/_{16}$"	25" x 20 $^{25}/_{32}$" x 18 $^{15}/_{16}$"
POWER / RATINGS		
kW Rating at 208V	9.3	8.6
kW Rating at 240V	12.7	11.5
ACCESSORIES		
Cook Top Cleaning Cream & Sponge	Included	Included

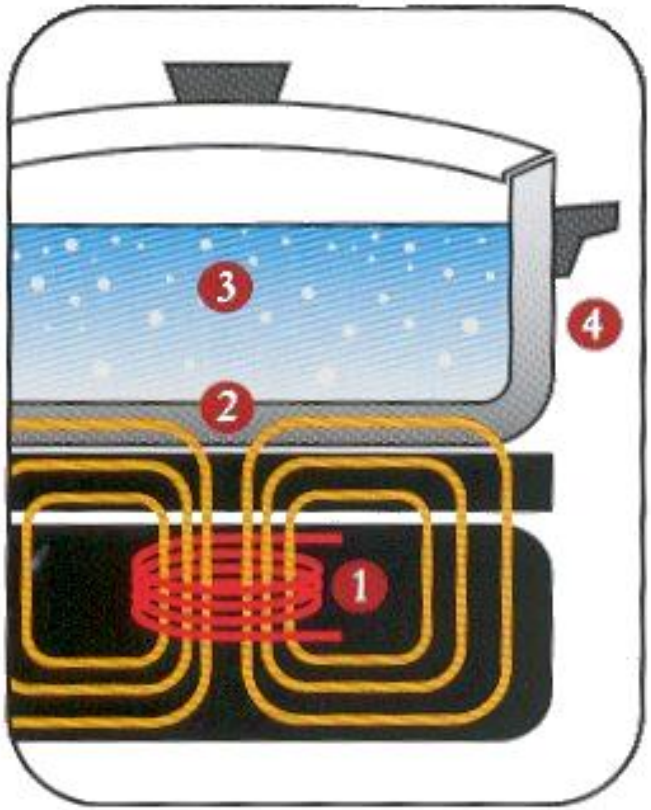
Induction is more energy efficient

What Is Induction Cooking?

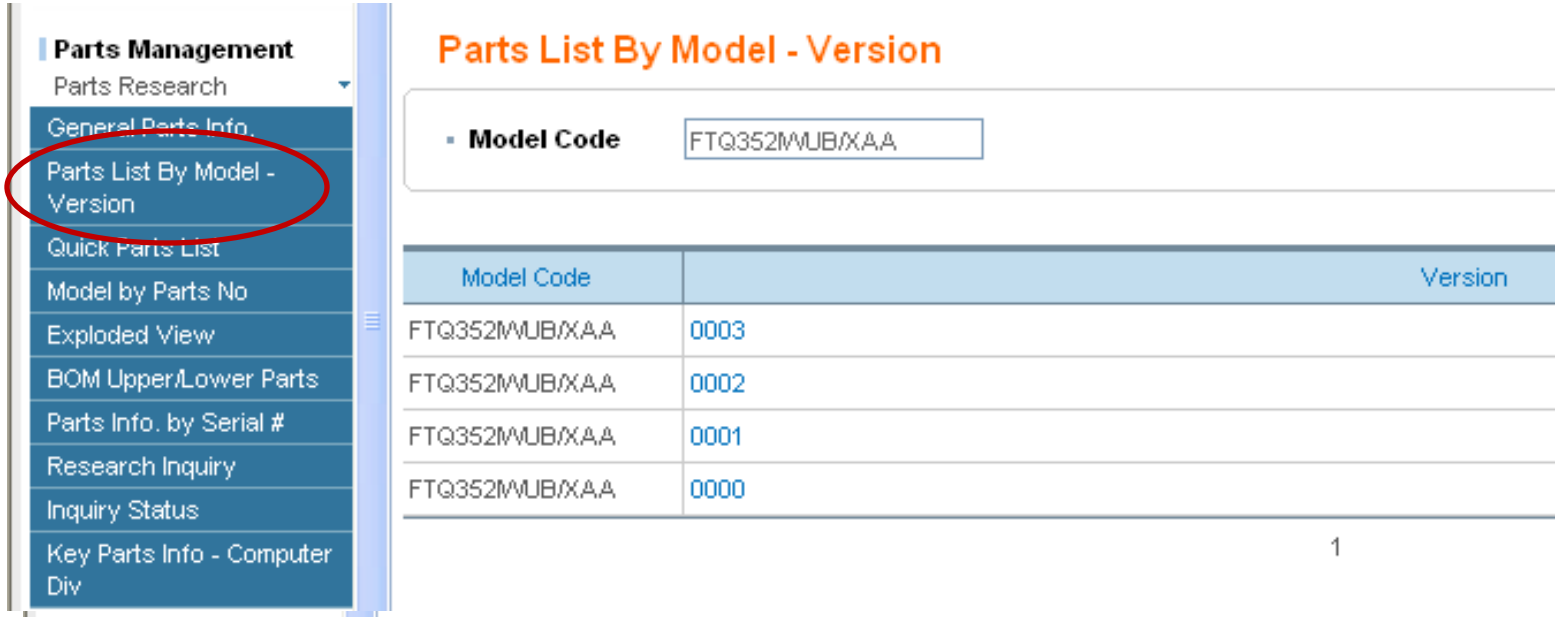
Put simply, an induction-cooking element is a powerful, high-frequency electromagnet, with the electromagnetic field generated by sophisticated electronics driving the "element" under the unit's ceramic surface. When a good-sized piece of magnetic material, such as a cast-iron skillet, is placed in the magnetic field of the element, the field transfers ("induces") energy into the metal of the skillet. That transferred energy causes the metal of the skillet to become hot. By controlling the strength of the electromagnetic field, the amount of heat being generated in the skillet and can be controlled and changed *instantaneously*.

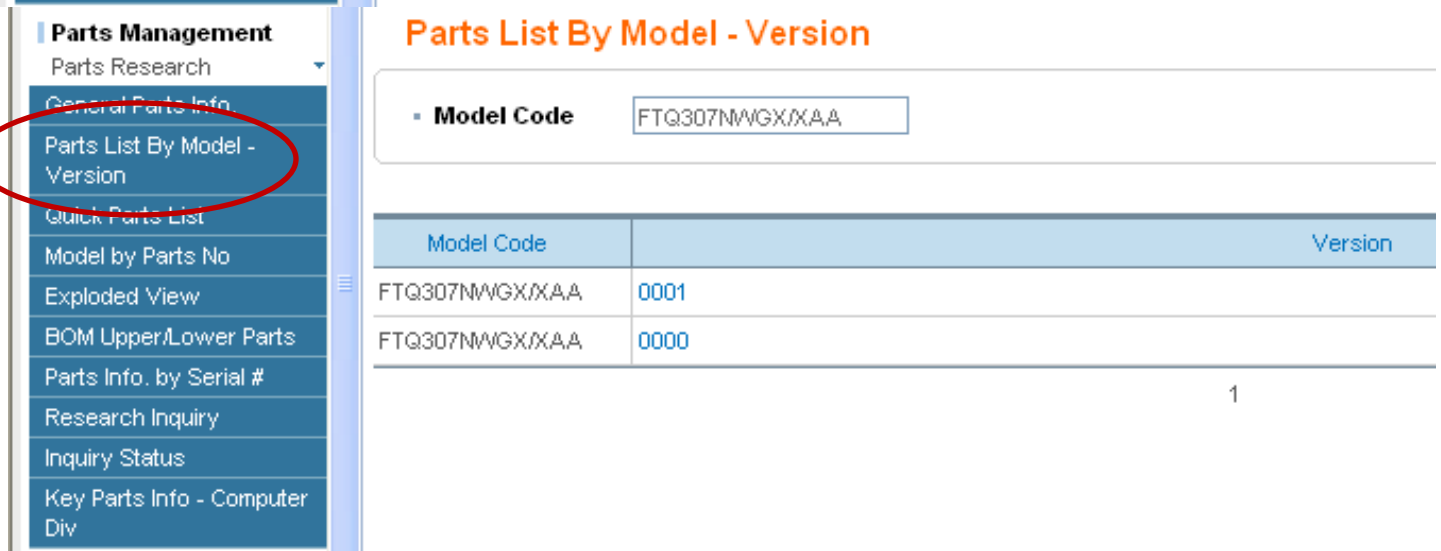
How Induction Cooking Works

1. The element's electronics power a coil that produces a high-frequency electromagnetic field.
2. The field penetrates the metal of the ferrous (magnetic-material) cooking vessel and sets up a circulating electric current, which generates heat.
3. The heat generated *in the cooking vessel* is transferred to the vessel's contents.



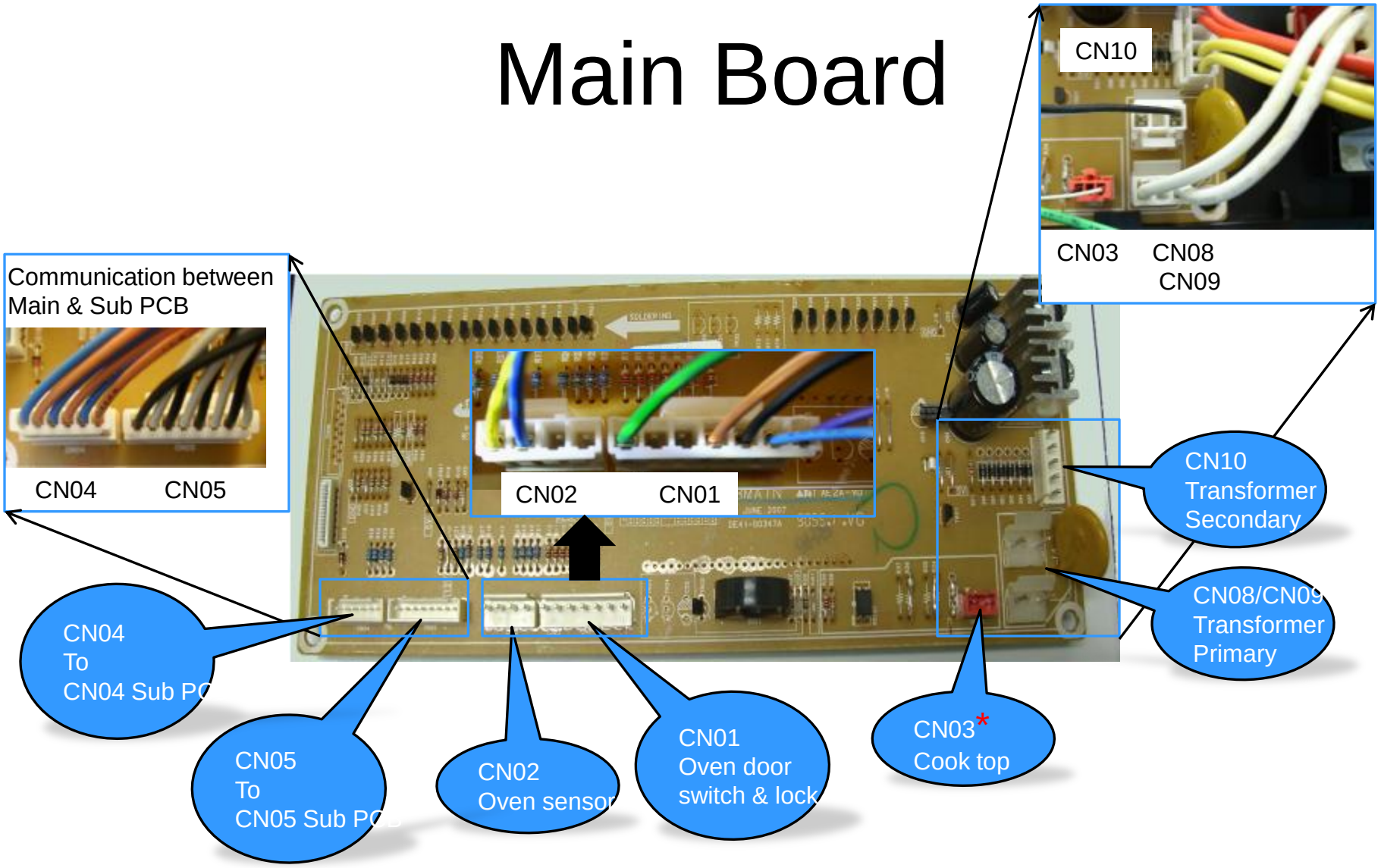
Many Ranges now have Version changes, this must be checked before troubleshooting or ordering parts.





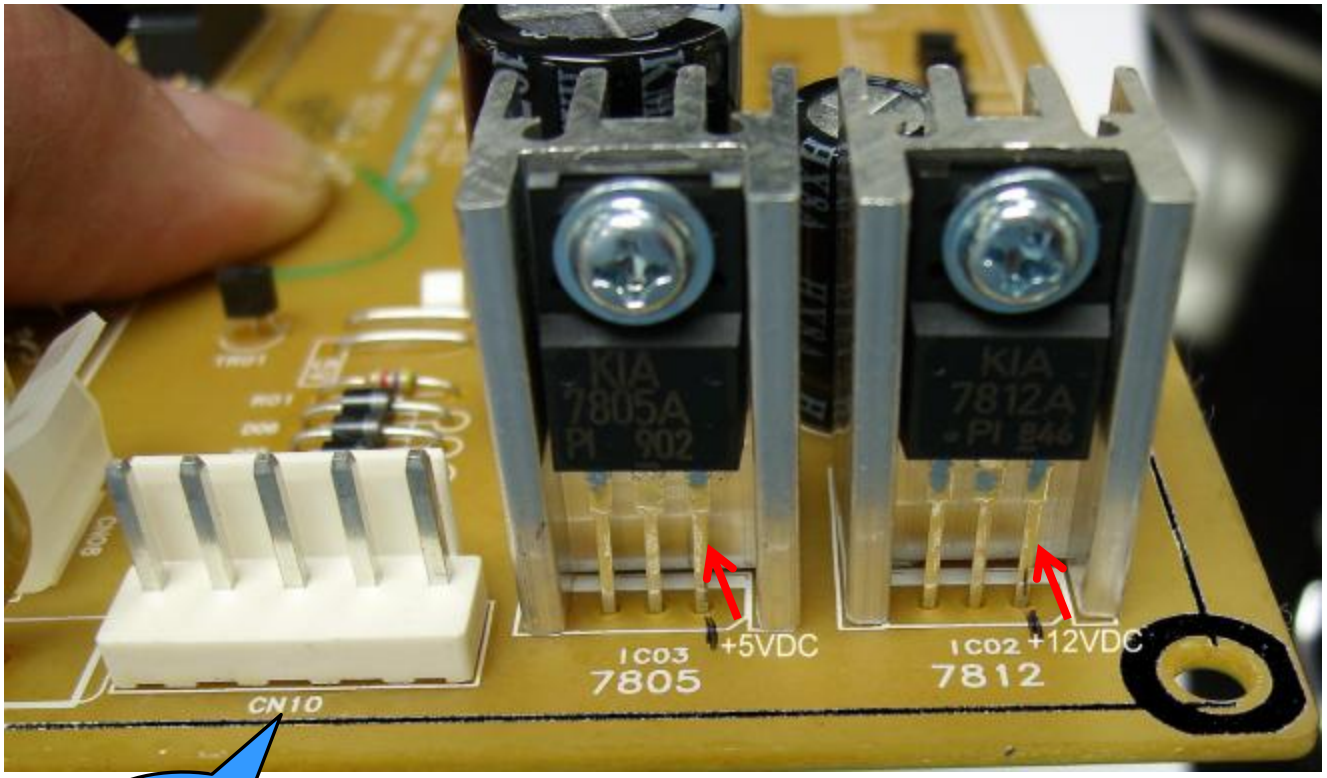
Controls

Main Board



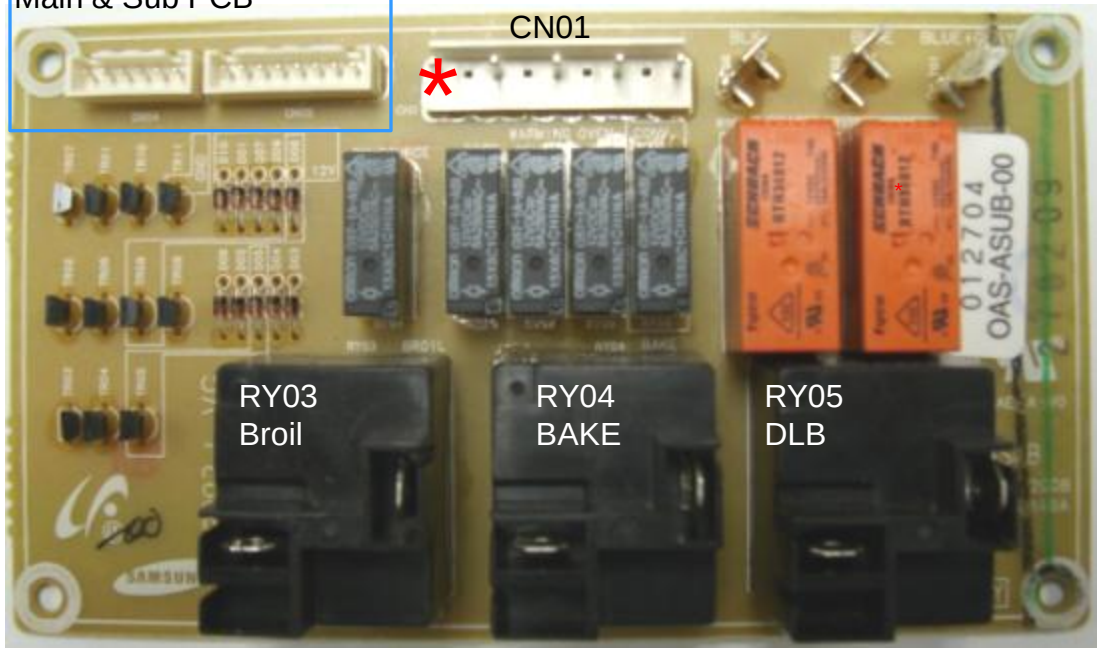
*CN03 Stops the self-cleaning function when the induction cook top is turned on.

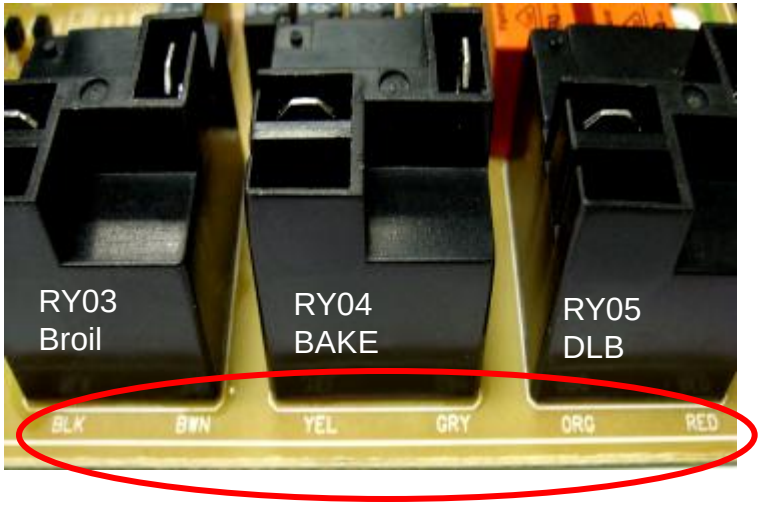
Main Board Connections



Sub Board Connections & Relay Functions

CN04/CN05
Communication between
Main & Sub PCB





Observe the color code stamped on the board as the terminals can be interchanged

DLB Relay – Double Line Break Relay

* CN01 controls the door switch, cook top warming center, oven lamp and convection fan.

Induction Range Sub Board Connections & Relay Functions

T03 Warming Drawer Out (Black)

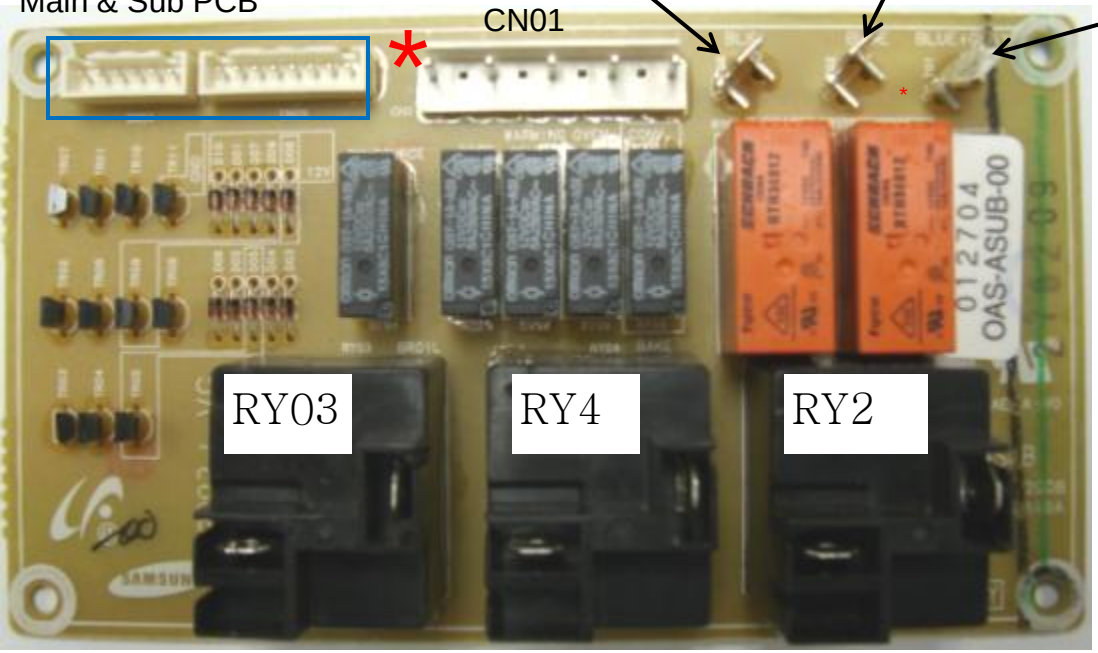
T02 Convection Heater Out (Blue)

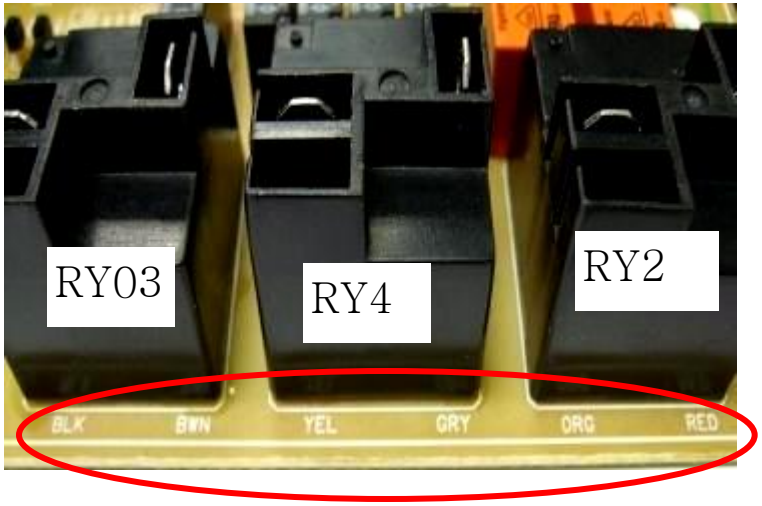
T01 L1 120vac Supply for Warming Drawer & Convection Heater Relays (Black/Gray)

CN04/CN05
Communication between Main & Sub PCB

CN01

*





Observe the color code stamped on the board as the terminals can be interchanged

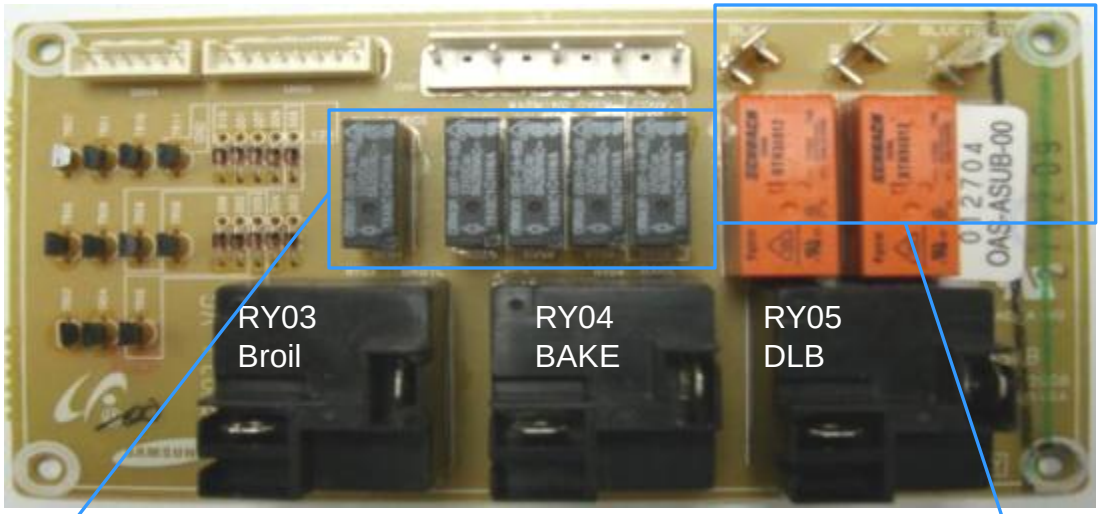
Broil Relay Brown ~ Black

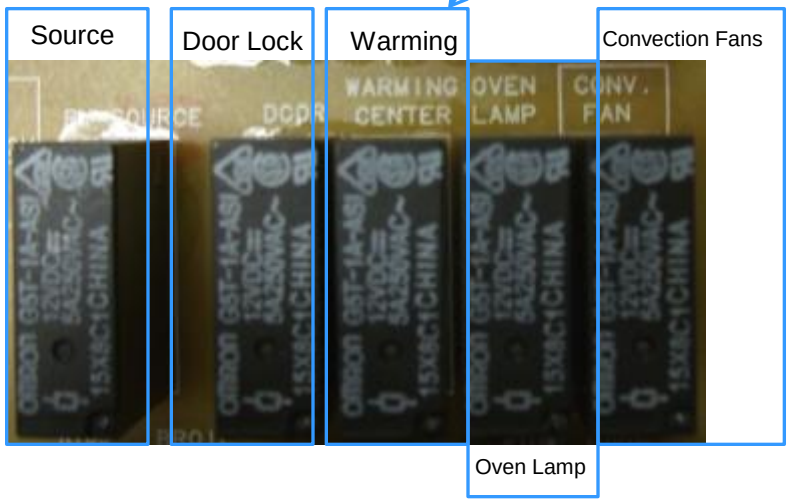
Bake Relay Gray ~ Yellow

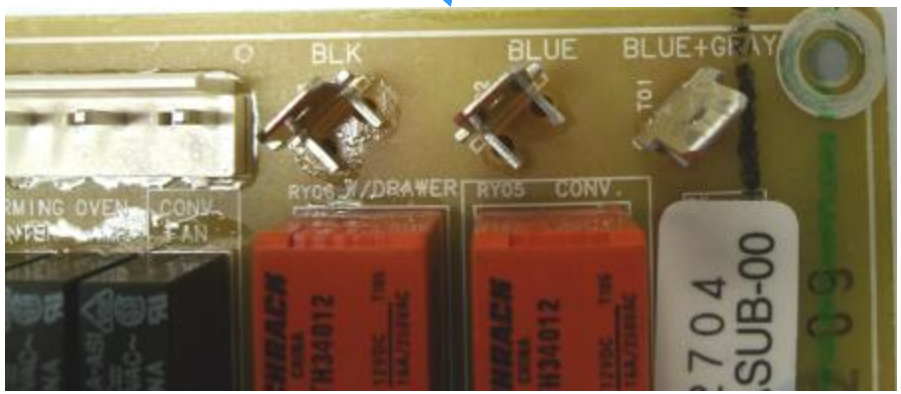
Double Line Break Relay Red ~ Orange

* CN01 controls the lock motor, door plunger switch, cook top warming center, oven lamp and convection fan.

Sub Board Connections & Relay Functions







Electric Range Component Values

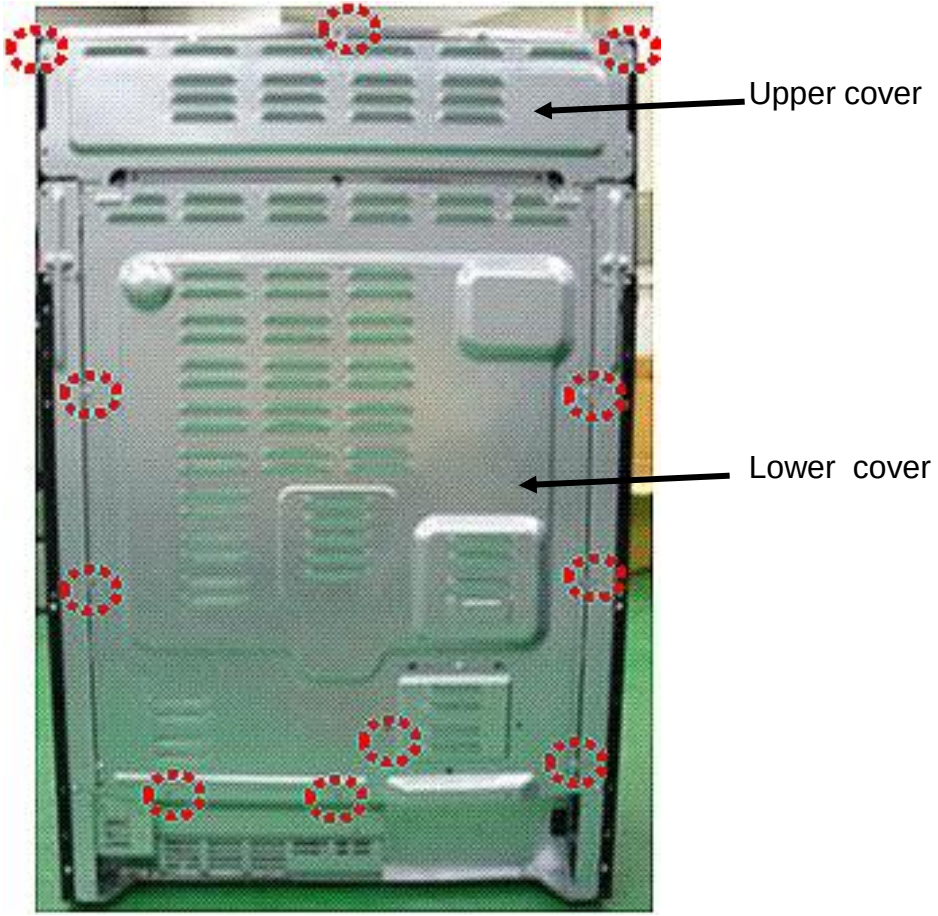
Electric Range Components							
Burner Elements				**Oven Elements**			
Component	Voltage	Wattage	Ω @ Room Temp	Component	Voltage	Wattage	Ω @ Room Temp
LR	240vac	1200	45Ω~50Ω	Broil	240vac	3400 W	16 ~ 18Ω
RR	240vac	1200	45Ω~50Ω	Bake	240vac	2400 W	23 ~ 25Ω
LF	240vac	2500	21Ω~25Ω	Broil	240vac	3800 W	13 ~ 16Ω
RF or LF Dual	240vac	1200/2500	45Ω~55Ω/23Ω	Bake	240vac	3000 W	26 ~ 30Ω
RF Triple	240vac	1100/2200/3000	53Ω/26Ω/19Ω	Convect	240vac	800 W	70 ~ 73Ω
RC Warm	240vac	100	570Ω~580Ω	Warm Dr	120vac	600 W	22 ~ 25Ω
Induction Elements				**Oven Temp Sensor Resistance Chart**			
Component	Voltage	Wattage	Ω @ Room Temp	Degree ºF	Ω	Degree ºF	Ω
LR	240vac	6”-1400/2000	0.01~1Ω	0	932.12	104	1151.38
RR	240vac	7”-1800/2600	0.01~1Ω	14	961.86	113	1170.17
LF	240vac	11”-2400/3700	0.01~1Ω	23	980.95	122	1188.93
RF	240vac	6”-1400/2000	0.01~1Ω	32	1000	212	1374.93
Components				41	1019.02	302	1558.01
Door Lock Mtr	120vac		1750 ~ 1850Ω	50	1038.02	392	1738.06
Conv Fan	120vac		20 ~ 30Ω	59	1056.99	482	1915.39
Sub Fan	120vac		85 ~ 100Ω	68	1075.92	572	2089.69
Cooling Fan	120vac		29.7Ω	77	1094.83	662	2261.07
Low Voltage Transformer	120vac	(Wht)	75 ~ 80Ω	86	1113.71	752	2429.52
	13.5vac	(Red)	1.8~2.2Ω	95	1132.56	842	2595.05
	8vac	(Yel)	0.8~1.2Ω			932	2757.65

Cook Top Disassembly

Disassembly

UPPER & LOWER REAR COVER REMOVAL

1. Turn off the electrical supply going to the range.
2. Pull the range away from the wall so that you can access the rear panel.
3. Remove upper and lower main rear cover screws and remove covers

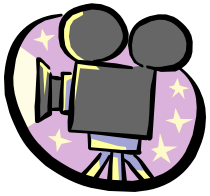


Disassembly

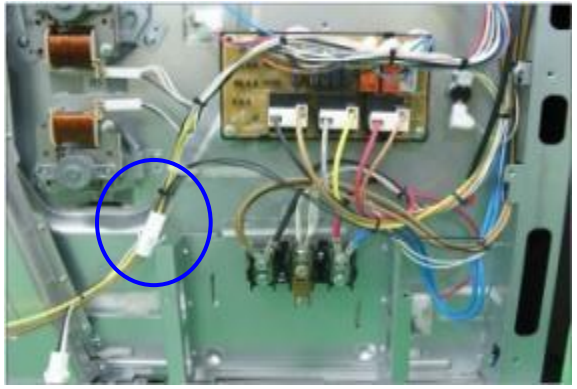
INDUCTION COOK TOP REMOVAL

CERAMIC GLASS COOK TOP REMOVAL

1. Unplug the cord or disconnect power
2. Open oven door and remove the 3 screws located at the front of the cook-top, then close the door.



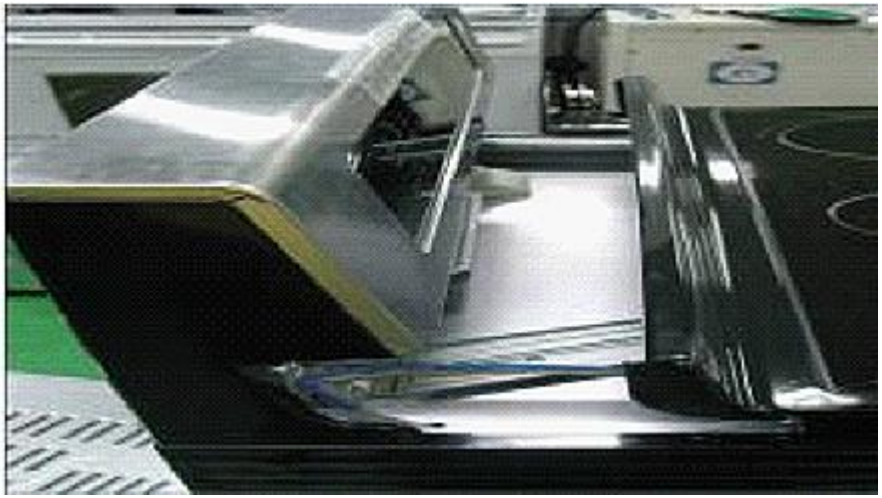
3. Unplug all connectors that attach to the cook top
4. Unscrew 3 connecting screws on the terminal block and disconnect 2 wires from AC fan motor and main PCB.

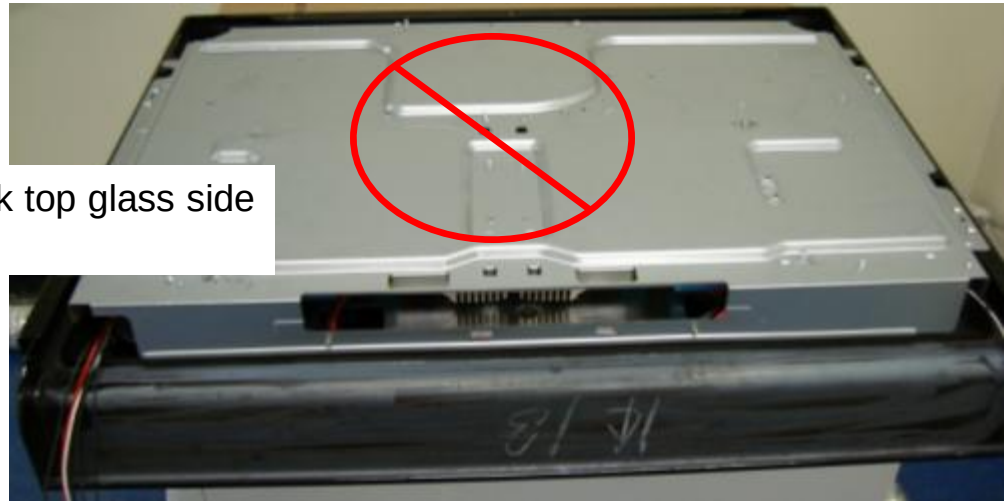


Disassembly

INDUCTION COOK TOP REMOVAL

5. Slightly lift up and pull up the cook-top out. Make sure all connectors have been unplugged.

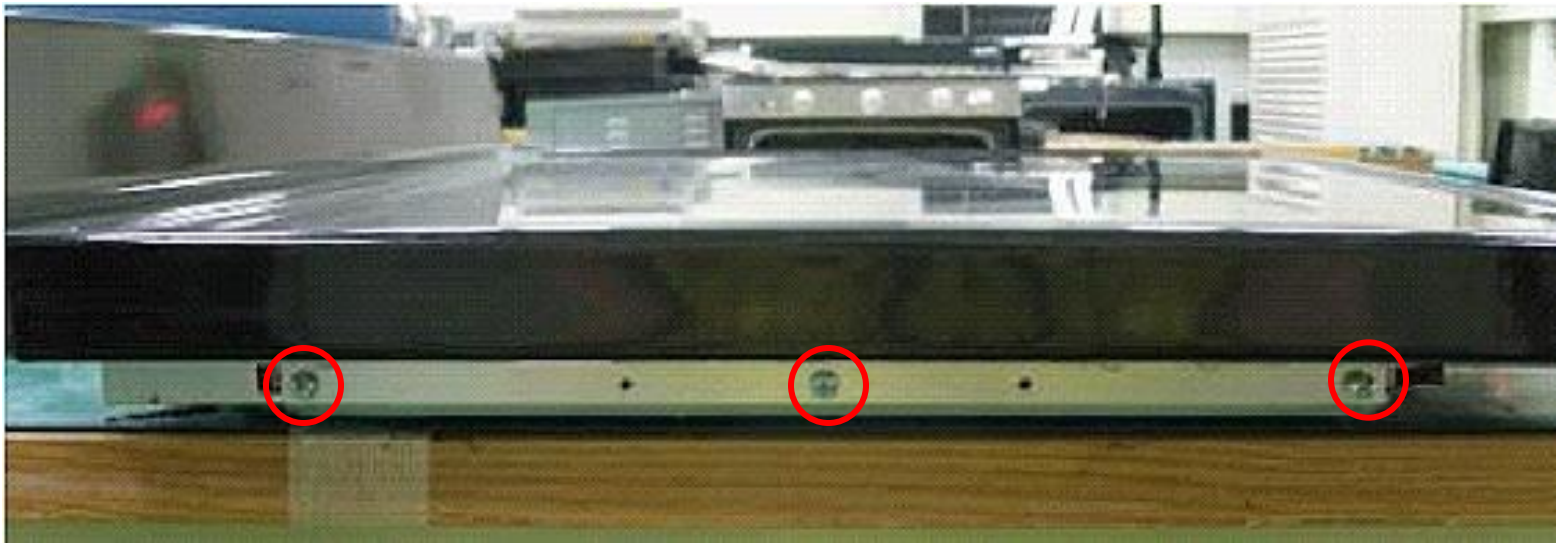


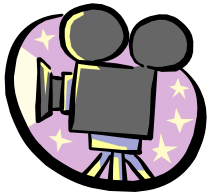


Do not place the cook top glass side down to disassemble

Disassembly

INDUCTION COILS

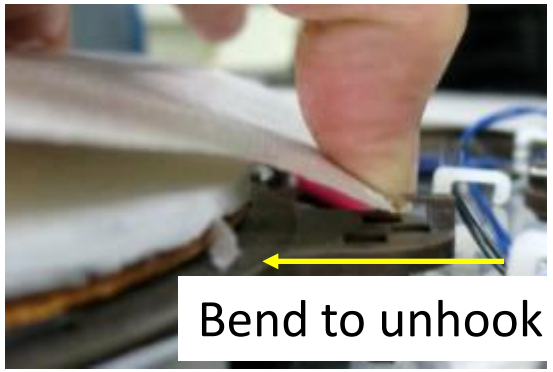


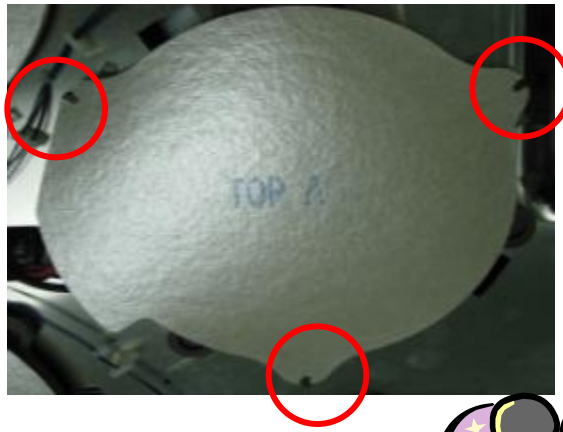


With the cook top facing up, remove 6 screws, 3 from each side, and carefully lift the glass top

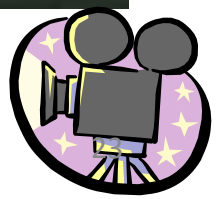
Disassembly

INDUCTION COILS



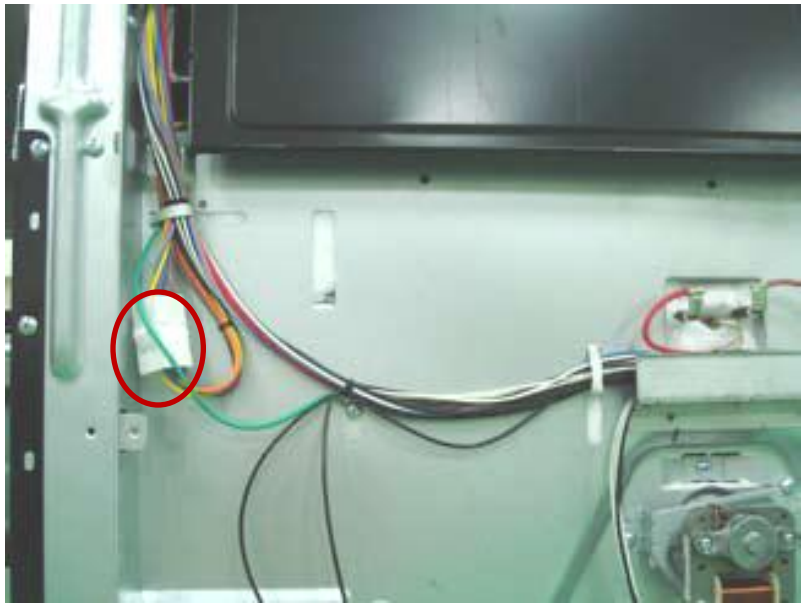


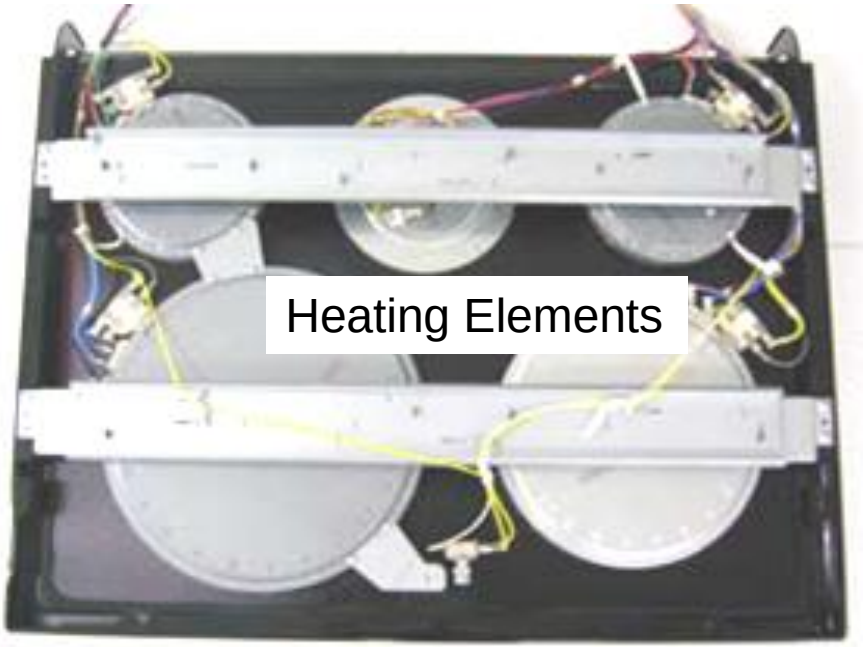
1. Bend the coil cover slightly to unhook.
2. Lift up the coil cover and remove.




Sensor
TOP B

Heated Cook Top Disassembly

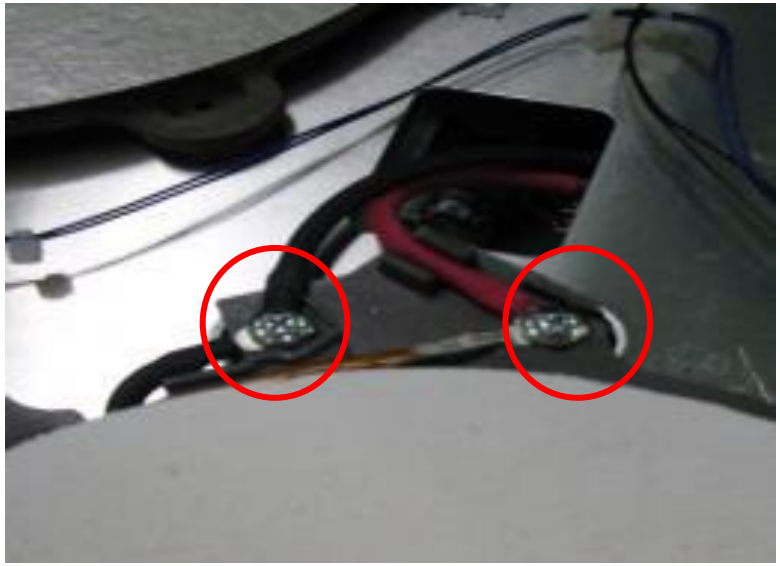




Early production, cook top Molex connector and ground wire are at the back.
Later production, cook top Molex connector is at back top, under the cook top and ground wire is still at the back.

Disassembly

INDUCTION COILS

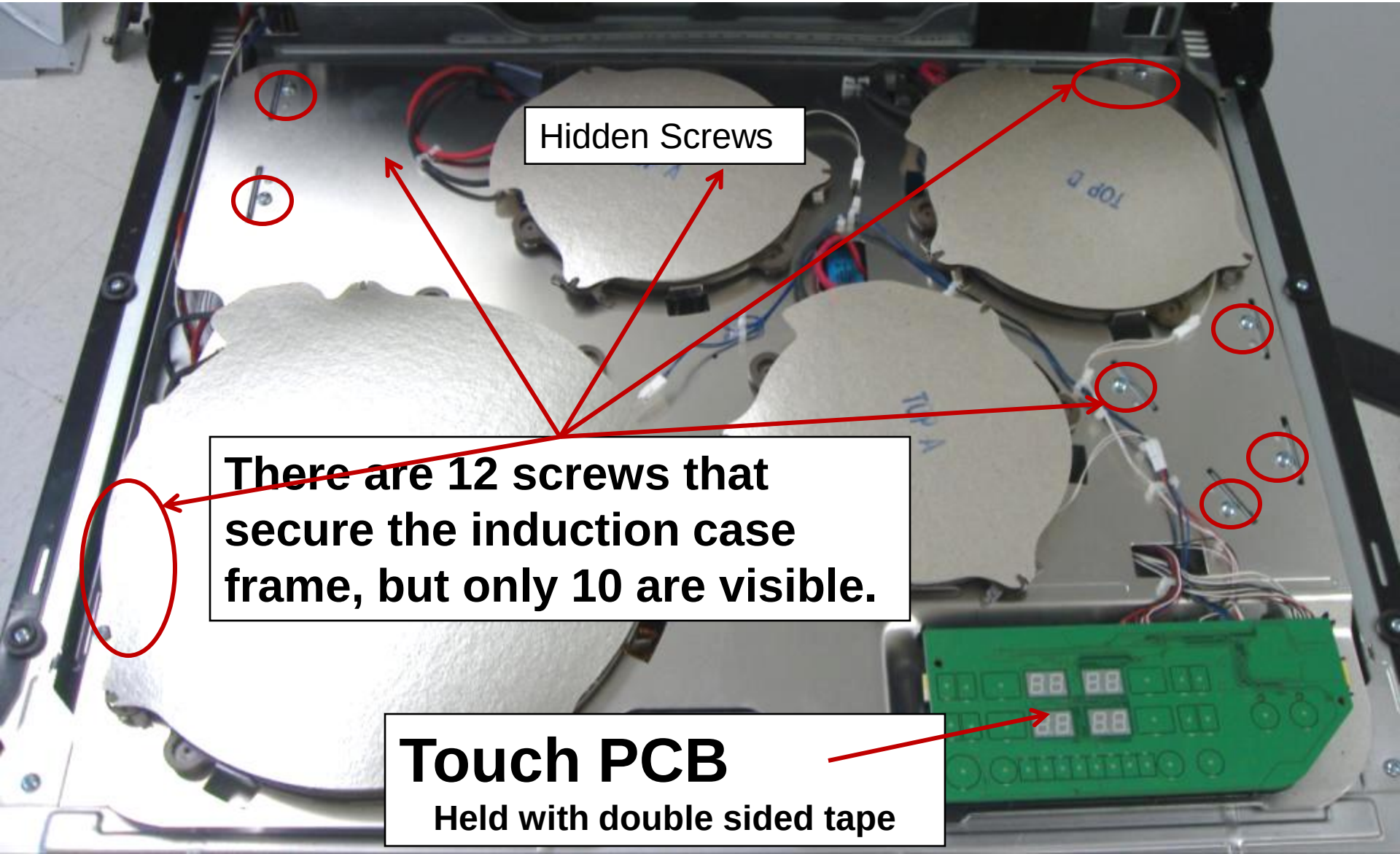


3. Disconnect power and sensor wires from the Working Coil assembly.
4. Carefully remove the Adiabatic heat pad.

CAUTION: the Adiabatic pad can be easily broken.

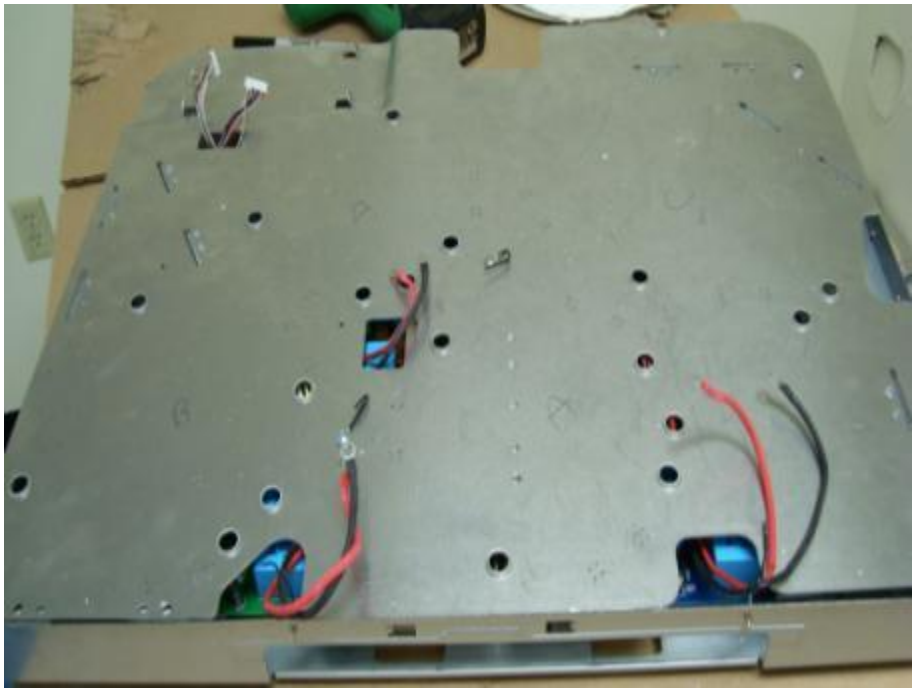
Remove screws to allow wires to pull through for burner top removal

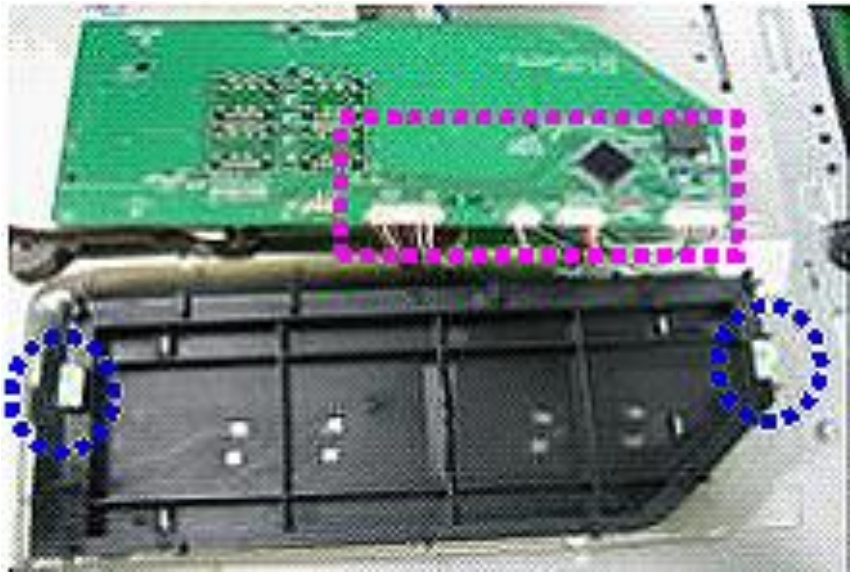
Induction Cook top removal



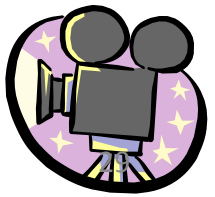
Disassembly

INDUCTION COIL BOARDS



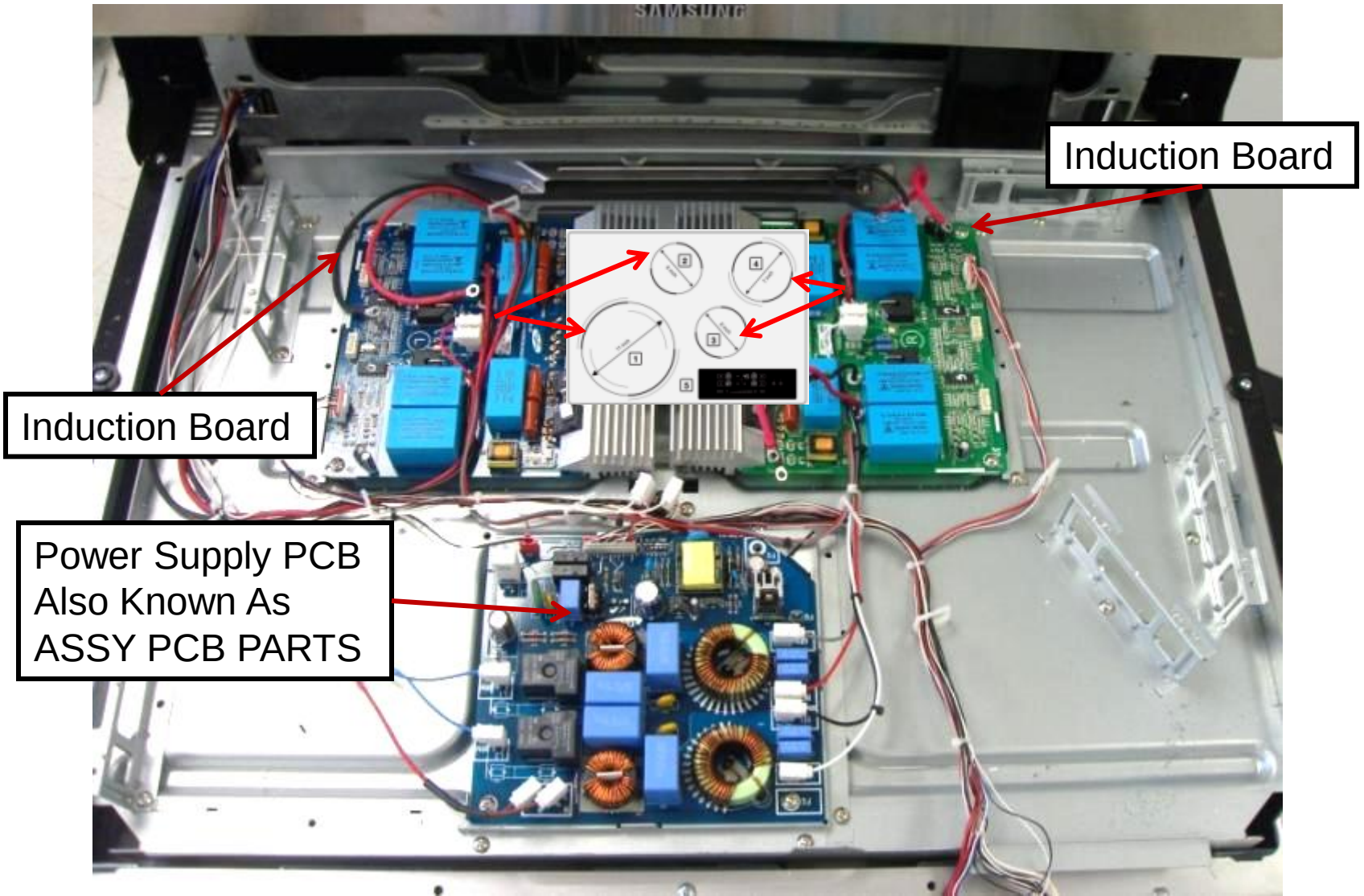


1. Remove 13 screws on the induction case.
2. Remove 8 screws of the power wires of the Induction Coils and remove coils.
3. Lift up the Touch PCB. (Touch PCB is attached with double sided tape.)
4. Disconnect all wires.
5. Lift up the induction case frame to expose the induction boards.



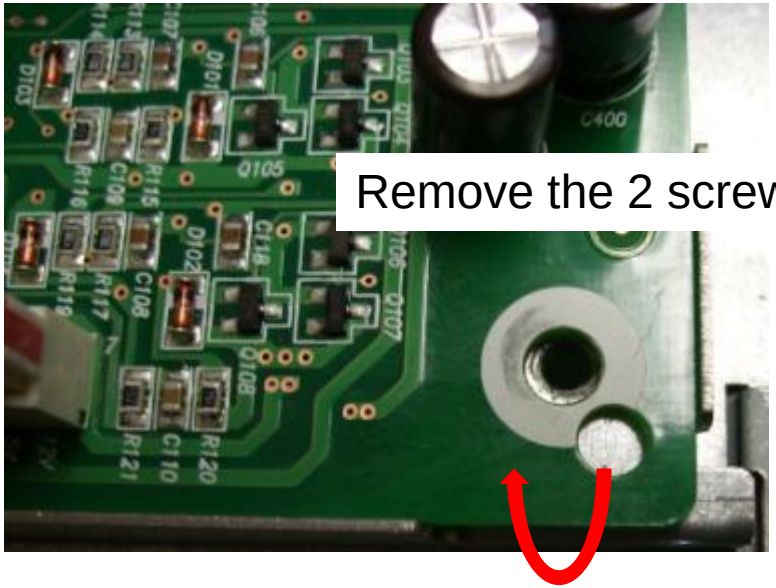
Disassembly

INDUCTION COIL BOARDS

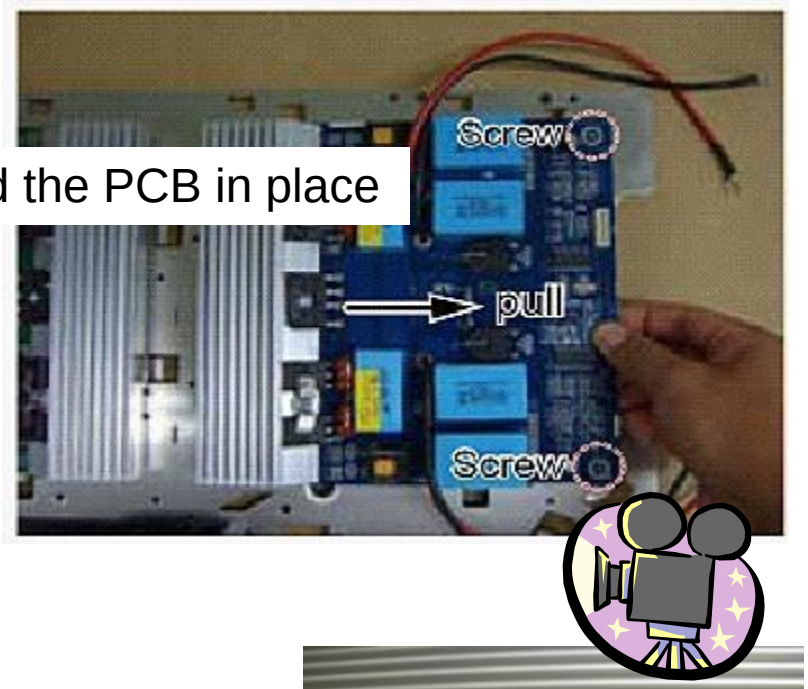


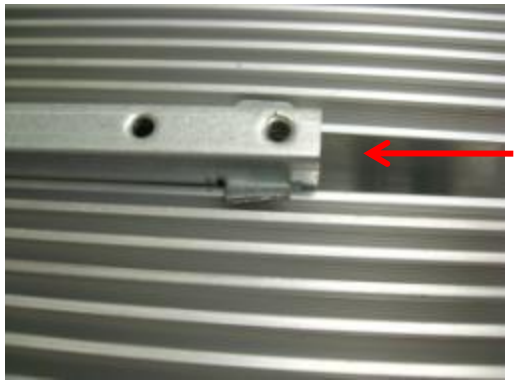
Disassembly

INDUCTION COIL BOARDS



Remove the 2 screws that hold the PCB in place





lift up to clear the heat sink holder and slide out

Cook Top Troubleshooting

Induction Coil Check

A check of each induction coil will indicate a resistance of ~.3 to .5 Ω

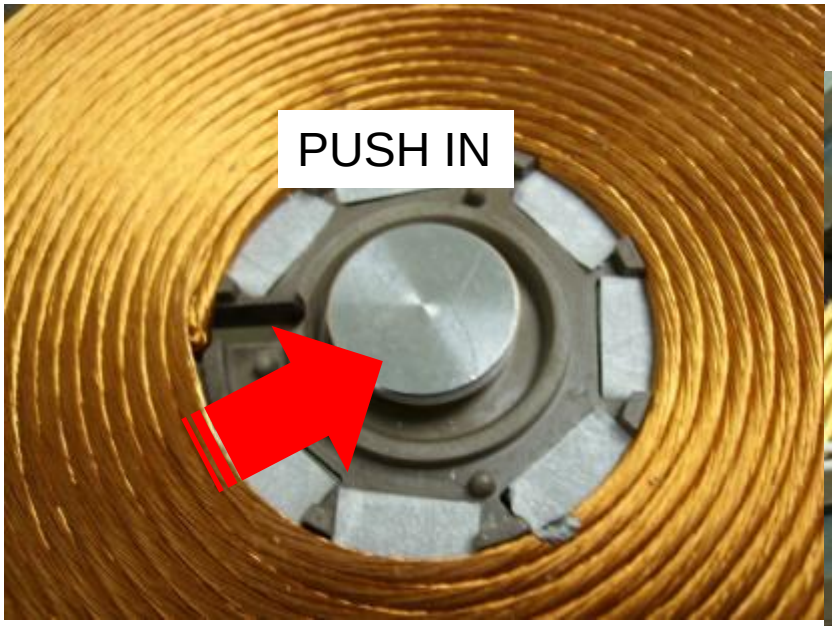
Disassembly

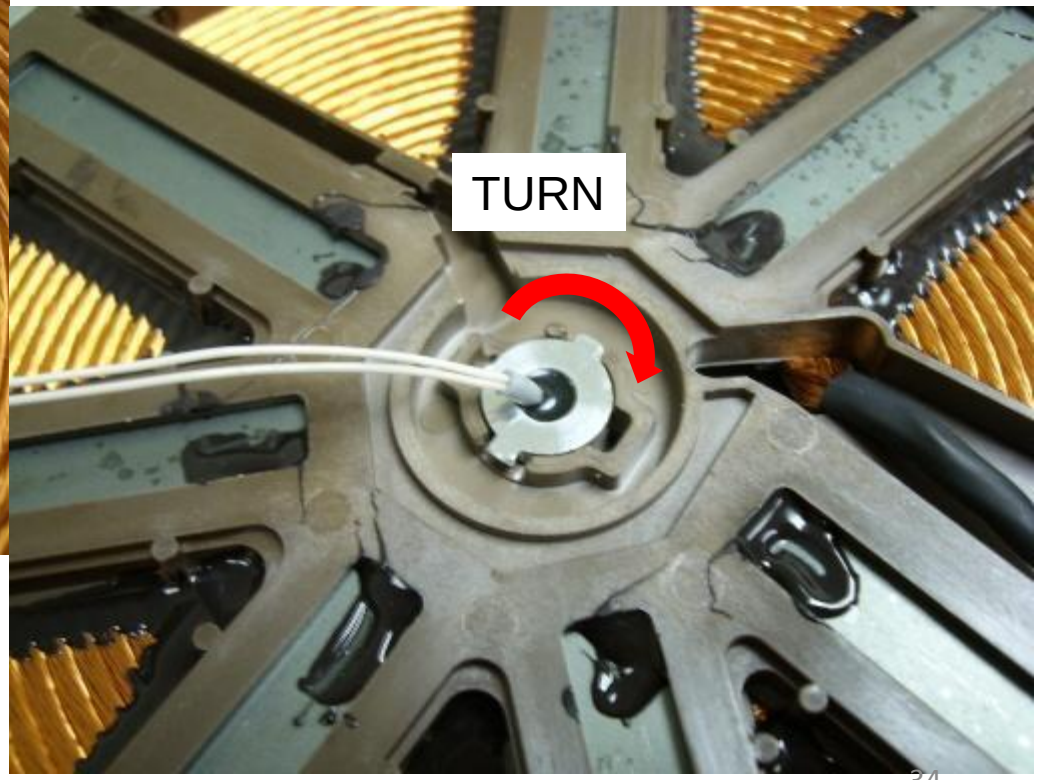
INDUCTION COIL (TOP) TEMPERATURE SENSOR

1.Turn the working coil over.

2. For the replacement of Sensor, push the sensor in from the top.

3. Rotate the Sensor 90º until it can be remove from the Coil.



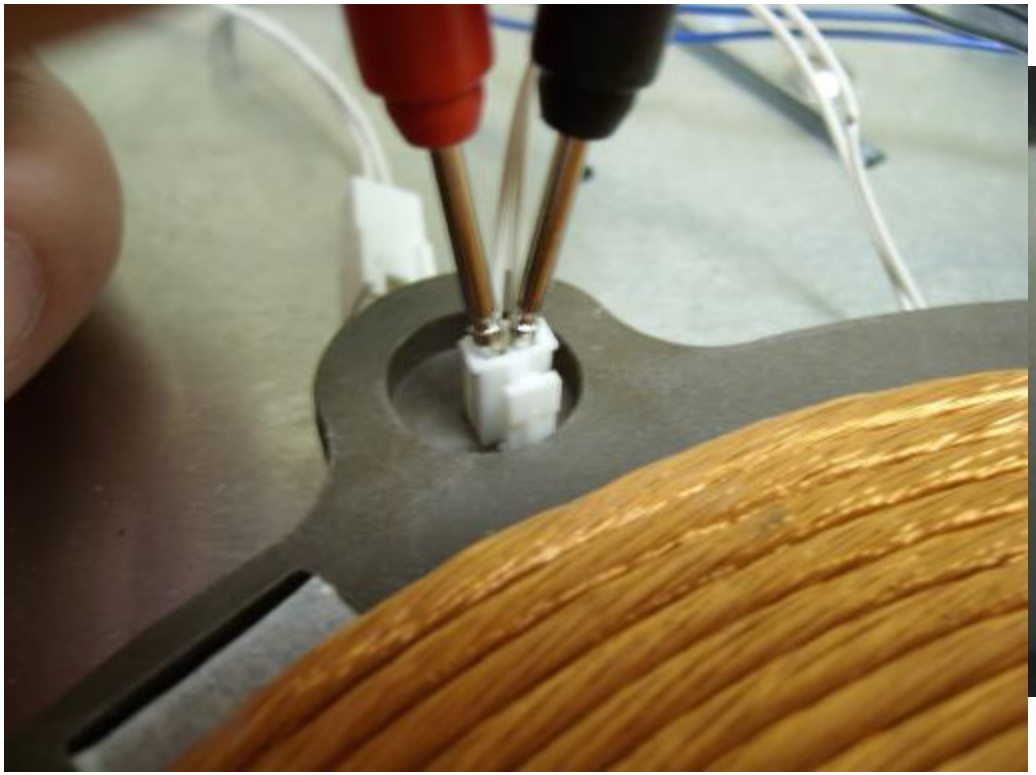


Induction Coil Temperature Sensor Error Codes

Top Sensor (to) Open Error (Top Sensor)
This error occurs when there is an open sensor, disconnected wires or a defective PCB.

Top Sensor (ts) Short Error (Top Sensor)
This error occurs when there is an shorted sensor, wires or a defective PCB

Induction Coil Temperature Sensor Check



Resistance at room temperature ~8370Ω

See chart on the next slide for temperature, resistance and voltage measurements

Induction Coil Temperature Sensor Temperature/Resistance/Voltage Chart

(Temp °F)	Resistance (Ω)	Input volt
-4	60879	4.919
34	22707	4.789
41	19085	4.751
50	15449	4.696
59	12583	4.632
68	10309	4.558
77	8494.5	4.473
86	7037.3	4.378
95	5860.4	4.271
104	4904.9	4.153
113	4124.9	4.024
122	3485	3.885
131	2957.5	3.737
140	2520.5	3.580
149	2157	3.416
158	1853.3	3.248
167	1598.4	3.076
176	1383.6	2.902
185	1202	2.729
194	1047.8	2.558
203	916.42	2.391
212	804.08	2.229
221	707.7	2.072
230	624.75	1.923
239	553.11	1.781
248	491.06	1.647
257	437.16	1.521
266	390.2	1.403
275	349.18	1.294
284	313.24	1.193
293	281.67	1.099
302	253.87	1.012

(Temp °F)	Resistance (Ω)	Input volt
311	229.33	0.933
320	207.62	0.860
329	188.37	0.793
338	171.25	0.731
347	156	0.675
356	142.38	0.623
365	130.2	0.576
374	119.29	0.533
383	109.48	0.493
392	100.65	0.457
401	92.7	0.424
410	85.51	0.394
419	79.01	0.366
428	73.12	0.341
437	67.77	0.317
446	62.9	0.296
455	58.47	0.276
464	54.43	0.258
473	50.74	0.241
482	47.36	0.226
491	44.26	0.212
500	41.42	0.199
509	38.81	0.187
518	36.41	0.176
527	34.2	0.165
536	32.16	0.156
545	30.28	0.147
554	28.54	0.139
563	26.92	0.131
572	25.43	0.124

Induction Board Error Codes

IGBT (Insulated gate bipolar transistor) (bo) Sensor Open (high resistance) Error (Inverter Board). This error occurs when there is an open sensor, disconnected wires or a defective PCB

IGBT (Insulated gate bipolar transistor) (bs) Sensor Short (low resistance) Error (Inverter Board). This error occurs when there is a shorted sensor, wires or a defective PCB

Oven and Warming Drawer Disassembly

Disassembly

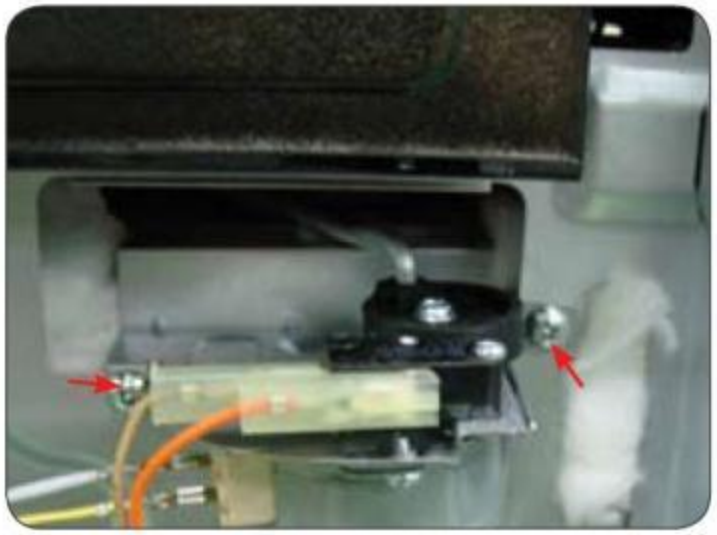
OVEN DOOR LATCH

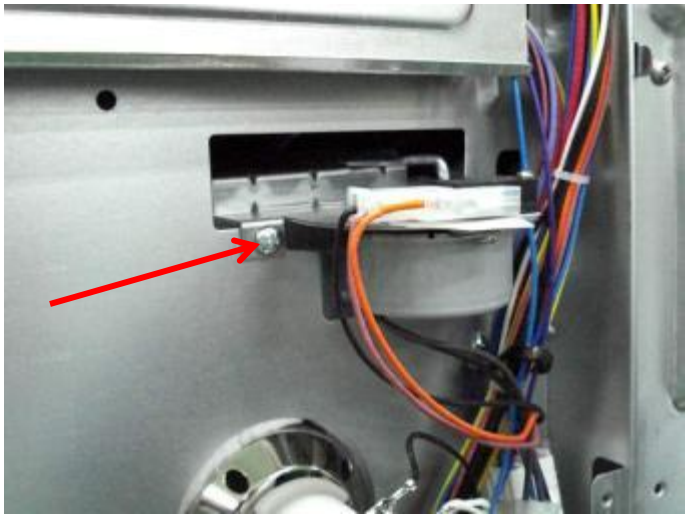
1. Turn off the electrical supply going to the range.
2. Open the oven door.
3. Remove the cook top

To remove the door latch:

a) Remove two screws from the front of cavity.

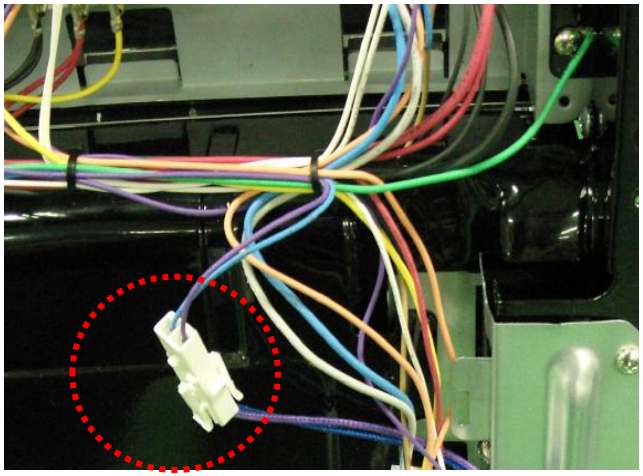
b) Remove two screws from Cover-Back Guard and remove latch-door.





Disassembly

OVEN DOOR LIGHT SWITCH

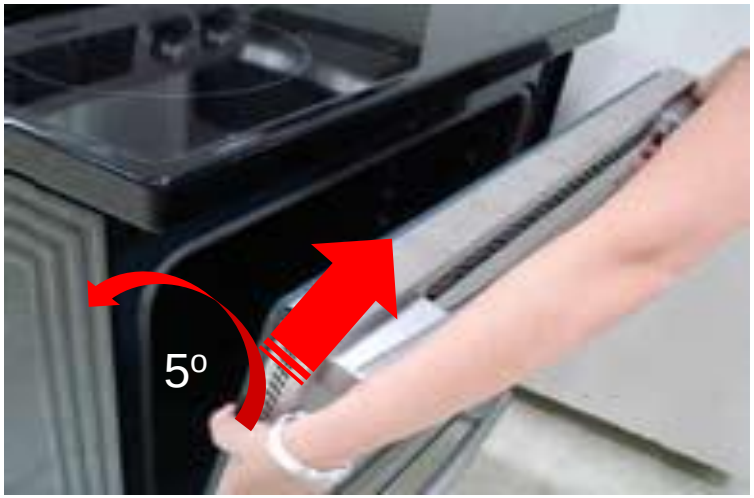


To Remove the oven door plunger switch

1. Remove the back cover
2. Remove the cook top
3. Release the wire harness connector.
4. Remove the Door Plunger Switch from the range.

Disassembly

REMOVING THE OVEN DOOR

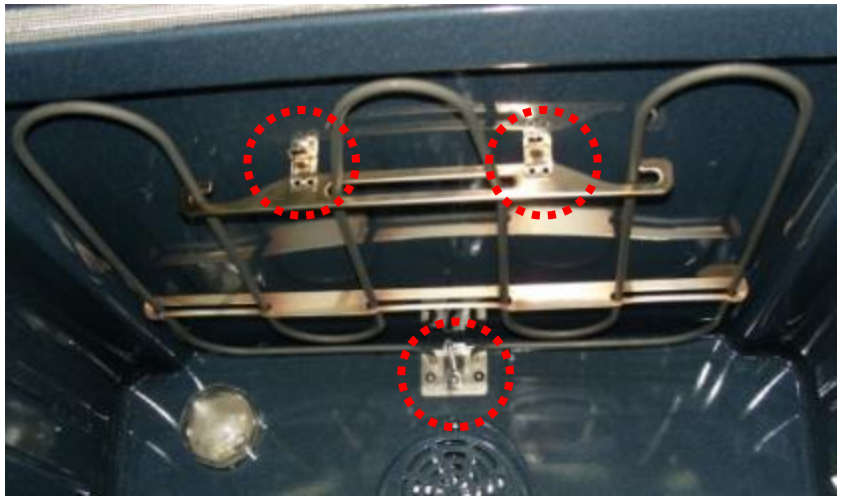


To remove the oven door:

1. Fully open the door
2. Pull the hinge locks on each side of the oven door downward
3. Firmly grasp both side of the door at the top.
4. Close door to the door removal position, which is approximately 5 degrees.
5. Lift door up and out until the hinge arm are clear of the slot.

Disassembly

BROILER HEATER



1. Turn off the electrical supply going to the range.

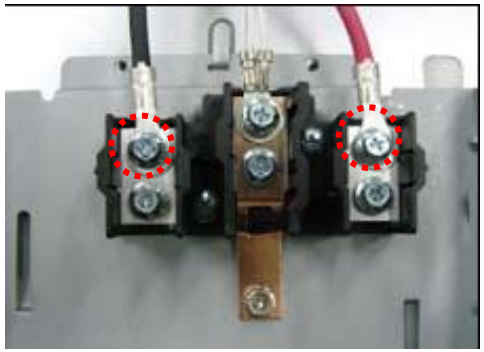
2. Open the oven door and remove the racks from inside the oven.

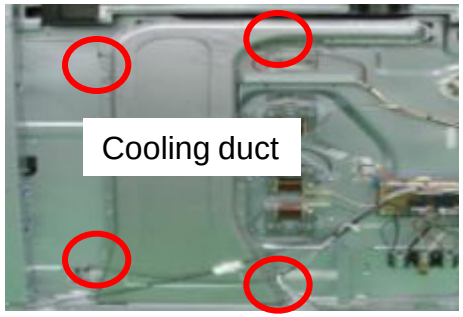
   a) Remove the Thermistor Sensor and 5 screws from the front and rear brackets.

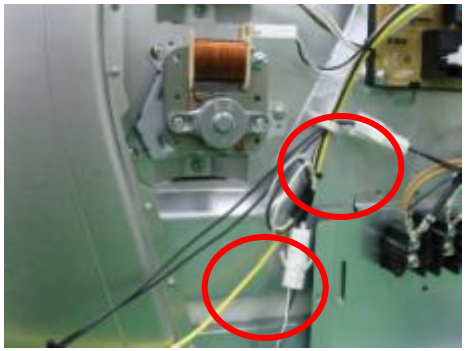
   b) Remove the back cover and disconnect 2 wires from Broil Heater and the wire from the Thermistor Sensor

Disassembly

BAKE HEATER







1. Unplug range or disconnect power.
2. Move the range so that you can access the rear of the unit.
3. Remove back covers.
4. Disconnect 2 wires of the warming drawer.
5. Remove Terminal Block and Access Cover Bracket
6. Remove the Induction board cooling duct by removing 4 screws
7. Cut the rear Adiabatic located on the lower side.
8. Carefully pull out Bake Heater. Reverse the process to install the new heater

Disassembly

OVEN LAMP/SOCKET

To replace bulb and bulb cover:

1. Disconnect the power.
2. Remove the oven door.
3. Turn the glass bulb cover in the back of the oven counterclockwise to remove.
4. Turn bulb counterclockwise to remove from socket.
5. Replace bulb and bulb cover by turning clockwise.

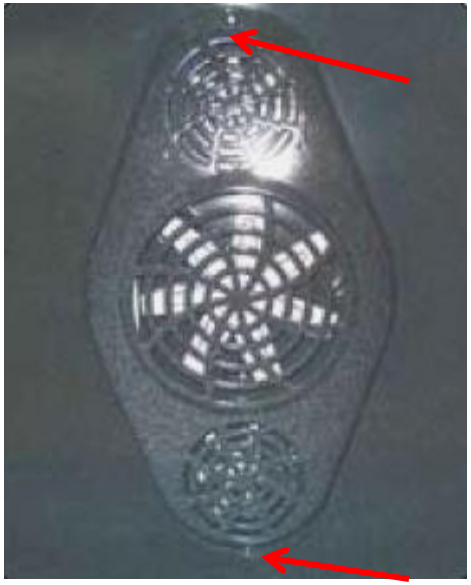


To replace the lamp socket:

6. Disconnect the wires from the socket terminals.
7. Use a screwdriver and bend the clips on the socket away from the edges of the liner hole (there are 6 clips on the socket), and pull the socket out of the liner. Push the socket out from the back of the unit.

Disassembly

CONVECTION HEATER



Remove the 2 screws that secure the convection fan cover

Remove the 2 screws that secure the convection heater

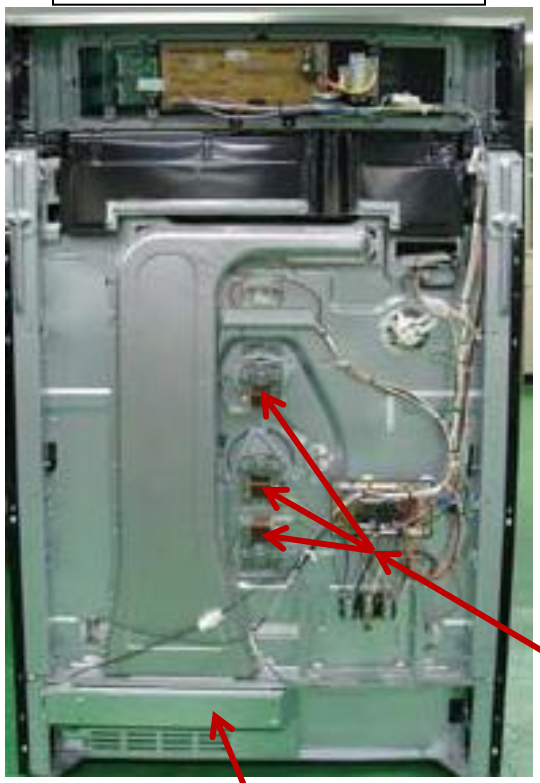
Remove the wires from the heater from the rear and remove the heating element from inside the oven

Most components must be accessed or changed by removal of rear cover

WARNING
Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

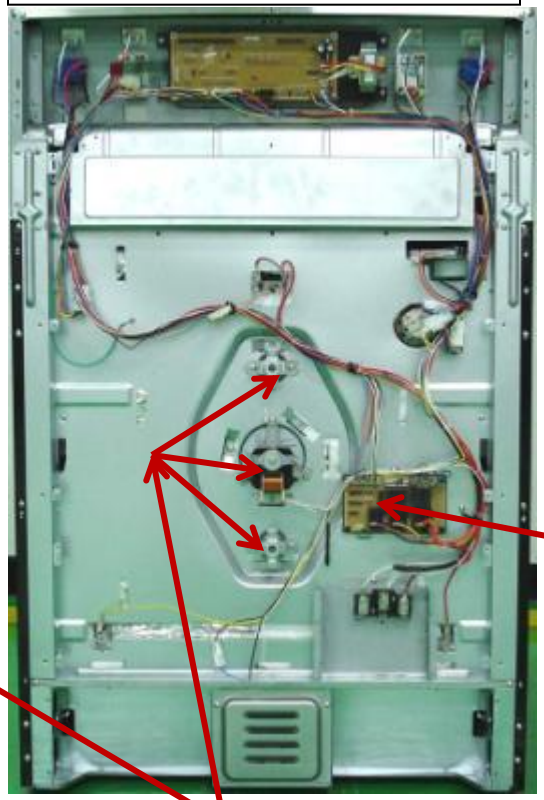
CAUTION
When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

Induction Range

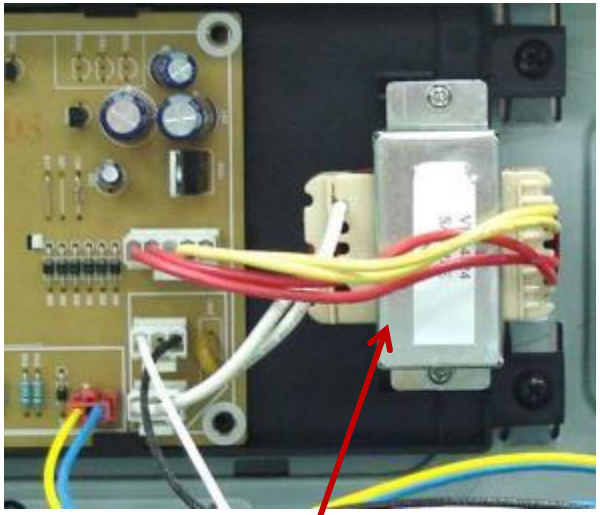


Induction Range Cooling Fan access

Conventional Range



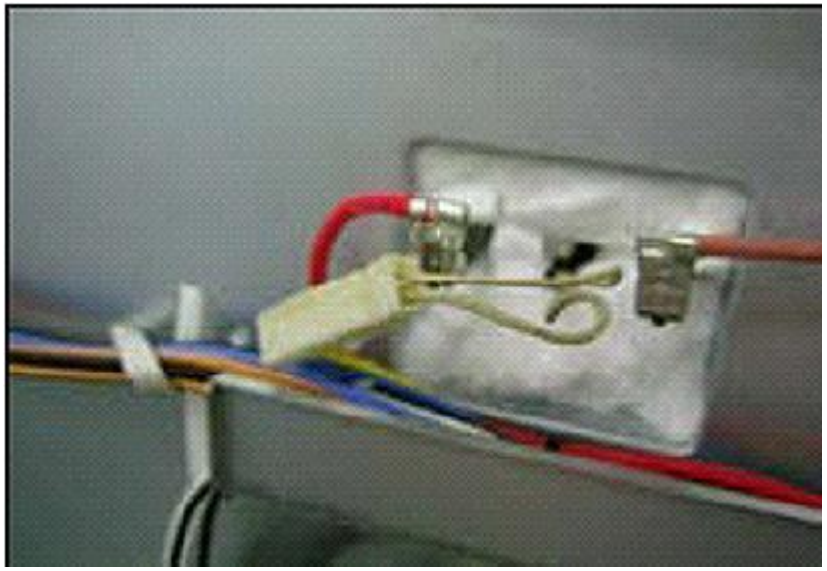
3 Fan Convection system



On some Models/Versions the Power Relay Board and Low Voltage Transformer are part of the Main PCB

Disassembly

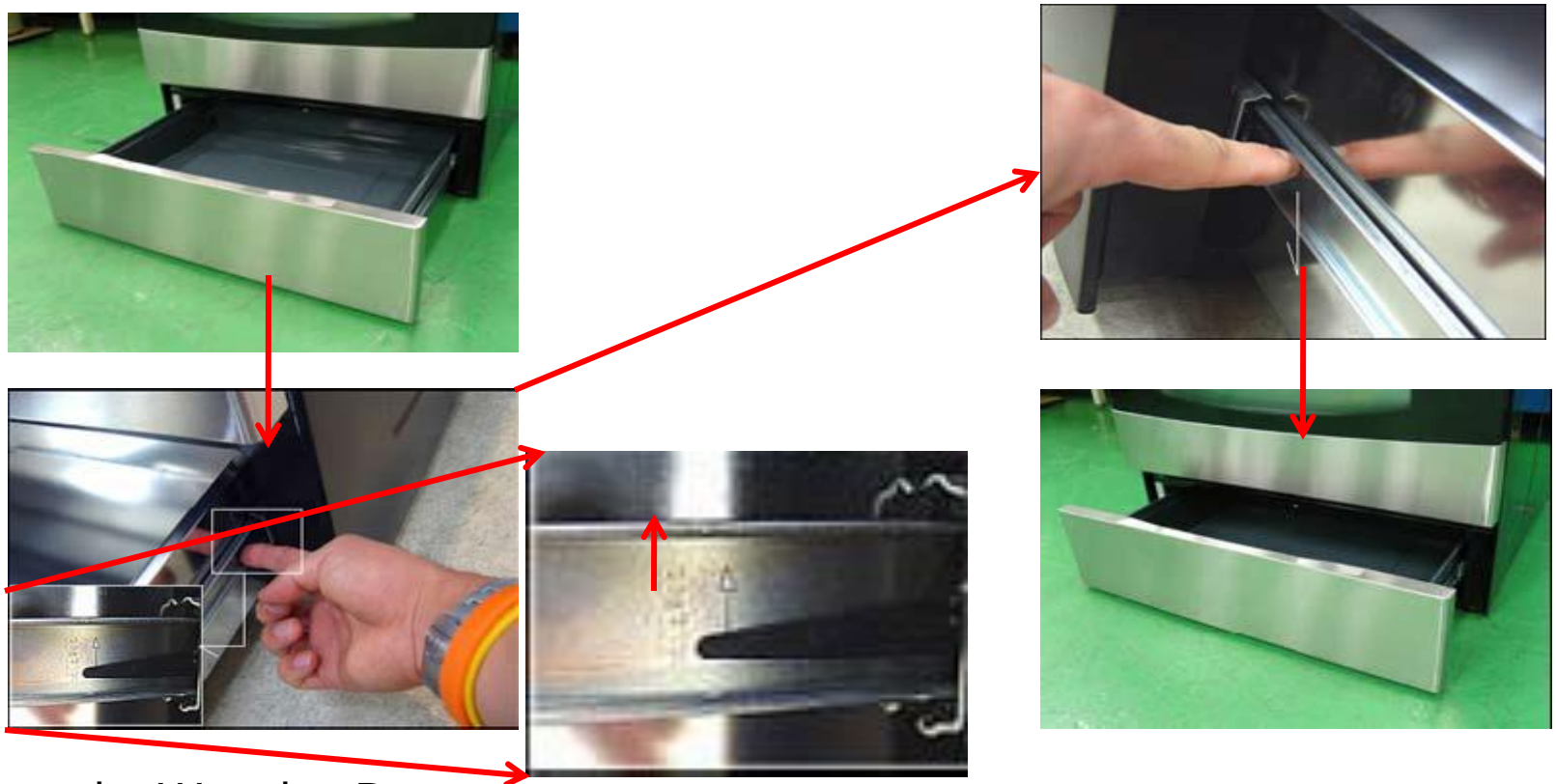
OVEN TEMPERATURE SENSOR



1. Turn off the electrical supply going to the range.
2. Remove oven door and racks from the oven.
3. Unscrew Thermistor Sensor.
4. Remove back cover and disconnect the wire from Thermistor Sensor.
5. Replace the Thermistor Sensor.

Disassembly

WARMING DRAWER REMOVAL

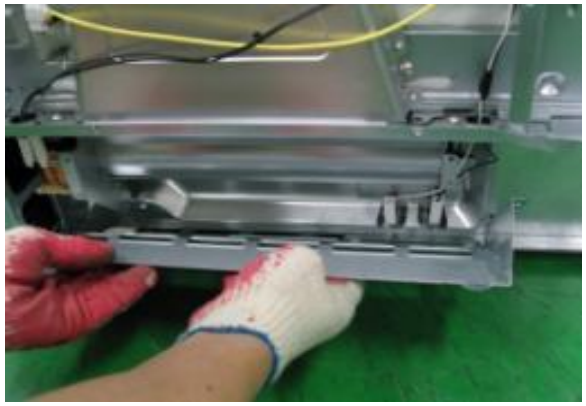


To remove the Warming Drawer:

1. Turn power OFF before removing the Warming Drawer.
2. Open the drawer to the fully opened position.
3. Locate the glide lever on each side of drawer, push down on the left glide lever and pull up on the right glide lever.
4. Pull out the warming drawer.

Disassembly

WARMING DRAWER HEATER

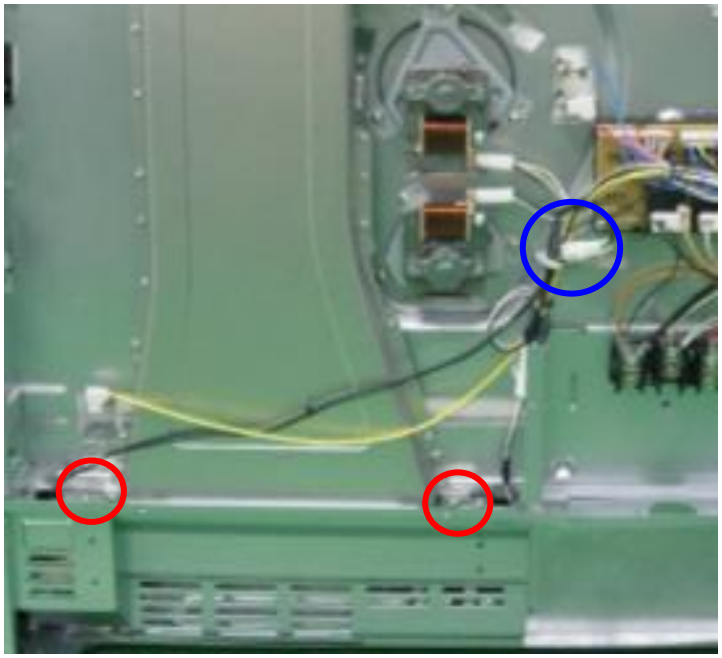


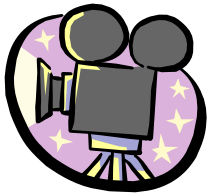
To remove Warning Drawer Heater:

1. Remove the 6 screws from Warming Heater bracket.
2. Remove Warming Heater cover and disconnect 2 wires.
3. Remove the screws the hold the heating element bracket to the frame
4. Pull out the Warming Drawer Heater.

Disassembly

INDUCTOR BOARD COOLING FAN





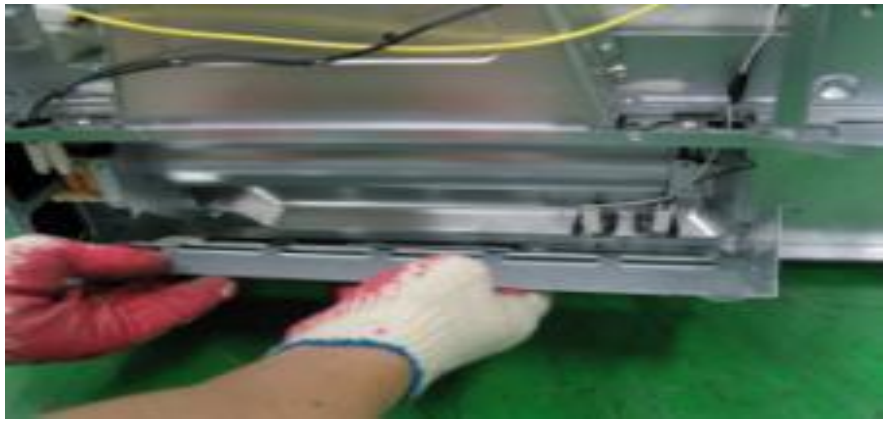
To remove the Inductor board AC Cooling Fan Motor:

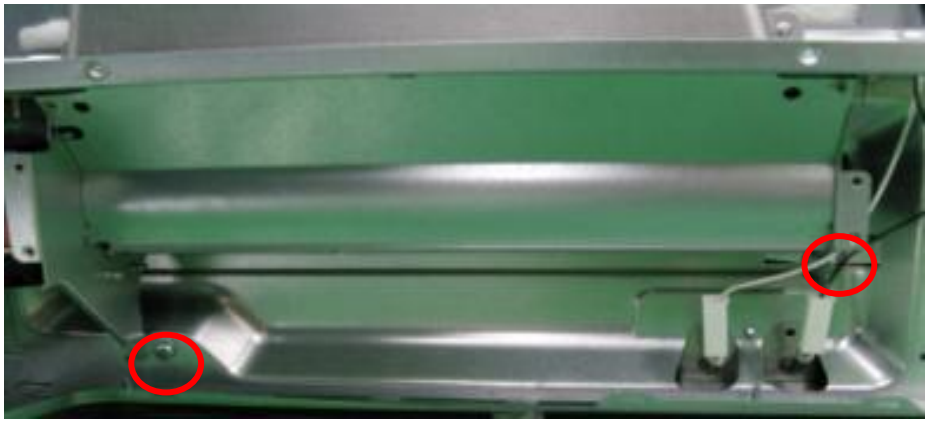
1. Unplug range or disconnect power.
2. Pull the range out of its mounting location so that you can access the rear of the unit.
3. Remove back covers.
4. Disconnect the motor wires and remove two screws.
5. Remove six screws from the Warming Heater bracket.

Disassembly

INDUCTOR BOARD COOLING FAN

6. Pull out the Warming Drawer bracket.
7. Remove two screws at the motor case housing.
8. Remove the cooling fan

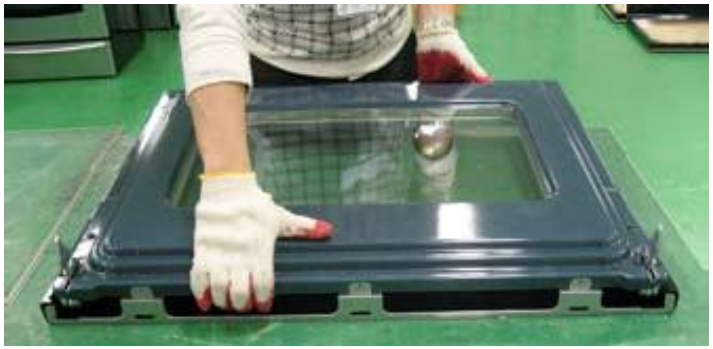




Disassembly

DOOR HANDLE AND INNER GLASS

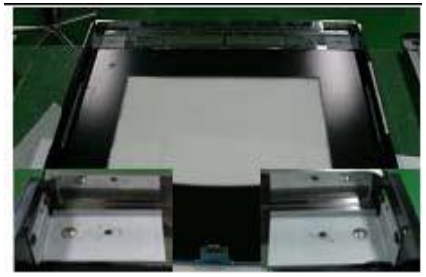
1. Remove the oven door from the range
2. Place the oven door on a padded work surface with the front glass facing down.
3. Remove 3 bottom screws from the door.
4. Remove 2 Handle-screws from the door.



5. Lift the door rear assembly off the front assembly and set it aside
6. Remove 2 spacers and 2 screws.

Disassembly

DOOR HANDLE AND INNER GLASS

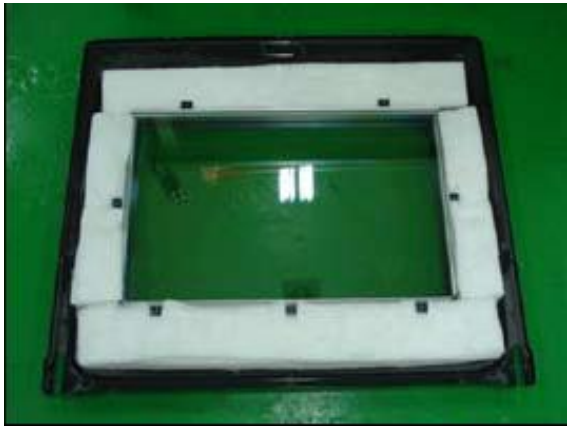


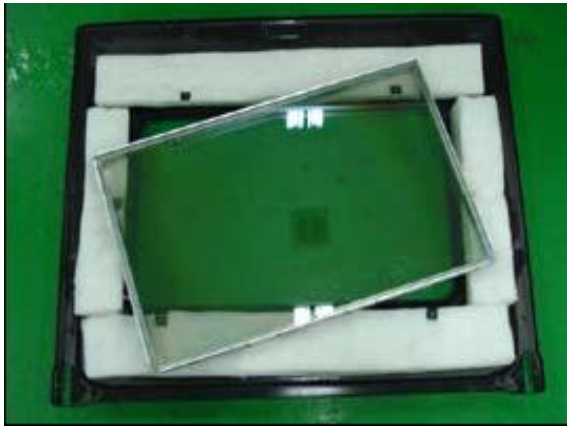
To remove the Door Handle
1. Remove 2 screws to remove the Door Handle

To remove Inner Glass
1. Remove 6 screws from rear side of door to remove the Door Hinge
2. Remove 4 screws to remove Inner Glass Sub Assembly
3. Remove 7 screws to remove the Door Baffle

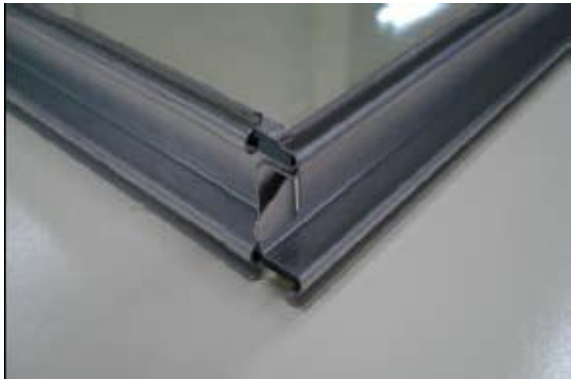
Disassembly

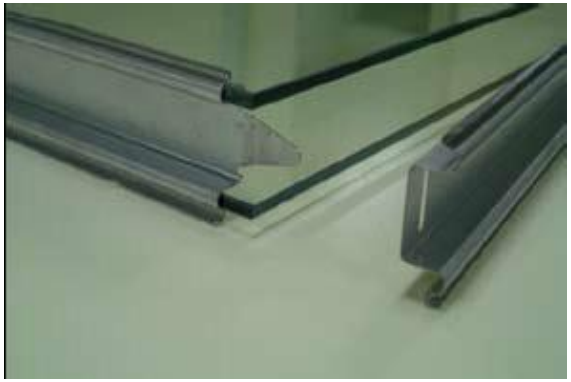
DOOR HANDLE AND INNER GLASS





4. Remove the Door Baffle and take out the Inner Glass assembly.

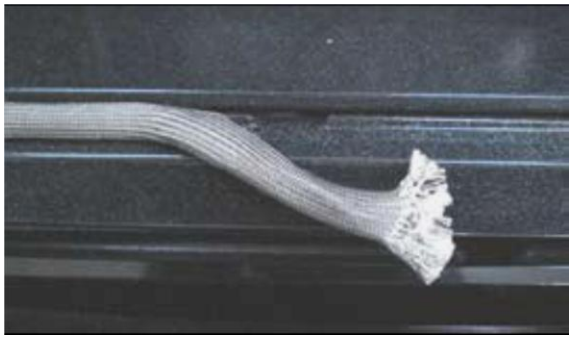




5. Unfold 2 flanges of the Frame Cover Inner Glass and take out the Inner Glass

Disassembly

DOOR GASKET



1. Open the oven door to its fully open position.
2. Pull the ends of the gasket out of the liner holes.
3. Pull the oven door gasket clips out of the holes until all of the clips are removed.

REASSEMBLY NOTE

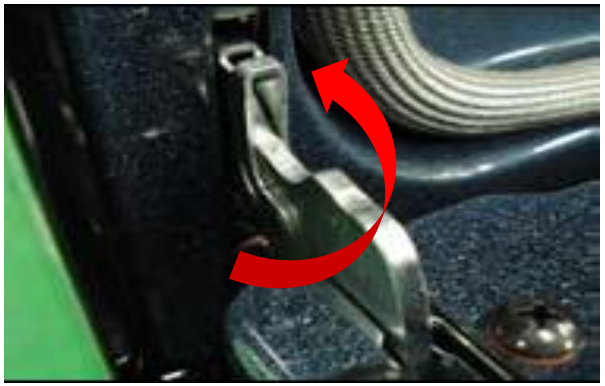
When you install the new gasket, make sure that all of the clips are seated in their liner holes, and that the ends of the gasket are pushed fully into their holes. Use the pointed end of a pencil to push the gasket ends into the holes.

Reassembly of the Oven Door

REPLACING THE OVEN DOOR

Push the door into the slots

Open the door fully



Push the lock up into place

To replace the door:

1. Firmly grasp both sides of the door at the top position and insert into slots.
2. Fully open the door. If the door will not fully open, it means that the indentation is not seated correctly in the bottom edge of the slot.
3. Push the hinge locks up to the locked position.
4. Close the oven door.

Oven and Warming Drawer Troubleshooting

Electric Range Fault Codes

Reading stored codes

Interpreting codes

Door Lock Error: Press and hold Cook Time & Delay Start for 3 seconds to test motor operation.

Samsung 'Electric Range' Diagnostic Code Quick Guide

Display Failure Codes	POWER LOSS CLEARS CODES 1)Press Clock AM/PM pad. 2) Press pad again, select AM. 3)Press # 1-2-3-4 pads. 4)Press Set/Start pad. 5)Press Custom Cook & # 0 pads simultaneously for 2 seconds. 6) error codes will display. 7) Press number 0 pad to review last 5 codes. 8) Press Clear/Off to exit.	
Failure Code	**Cause**	**Solution**
E27 E28	Oven sensor opened(over 2950Ω) Oven sensor shorted (Under 930Ω)	1. Disconnect power. Open the back cover. Disconnect sensor harness from control Measure sensor resistance :1080Ω at room temperature → If different value, replace oven sensor. 2. If there is not any problem with oven sensor, Please check whether there is a damaged terminal or wire on harness. 3. Check resistance of oven sensor connector on main PCB (Normal:2850Ω)
E-08 E-0A	Oven not heating error Oven over heating error	1. Disconnect power. Open the back cover. Disconnect sensor harness from control. Measure sensor resistance :1080Ω at the room temperature → If different value, replace oven sensor. 2. Check the broil, bake and convection heater. Check the resistance of each. 3. Check whether DLB of sub PCB, Broil, Bake and Convection heater relay are being activated 4. Check wiring harnesses between main PCB on sub PCB. 5. Check the resistance of oven sensor connector on main PCB. (Normal : 2850Ω)
SE	Shorted key	1. Check if cable of keypad has been inserted into connector of main PCB. 2. Check for short between main PCB and connector or keypad and cable. 3. If there is not a problem with connector on main PCB and cable of keypad, replace the main PCB.
E-OE	Door locking error	1. Disconnect power. Open the back cover. Check wiring harness connections between door lock switch and motor. 2. Check resistance of door lock motor ,1750~1850Ω at the room temperature. 3. With operating door lockout, measure voltage at door lock motor. (Normal Voltage : AC 120V) 4. Check whether door locking switch is operating properly.
LE	Low Voltage Error	It occurs when the DC 12V is dropped under 9V. It may occurs due to defects of PCB or wiring.
	Top Sensor (to) Open Error	This error occurs when there is an open sensor, disconnected wires or a defective PCB, may occur when the ambient temperature falls under 14° F.
	Top Sensor (ts) Short Error	This error occurs when there is an shorted sensor, wires or a defective PCB
	IGBT (Insulated gate bipolar transistor) (bo) Sensor Open (high resistance) Error (Inverter Board).	This error occurs when there is an open sensor, disconnected wires or a defective PCB, may occur when the ambient temperature falls under 14° F.
	IGBT (Insulated gate bipolar transistor) (bs) Sensor Short (low resistance) Error (Inverter Board).	This error occurs when there is a shorted sensor, wires or a defective PCB
	Over Temperature Error	It occurs when the temperature of the Top Sensor rises very highly.
	Pan Detection Error	It occurs when the cookware is unsuitable or too small or no cookware has been placed on the cooking zone.

Troubleshooting

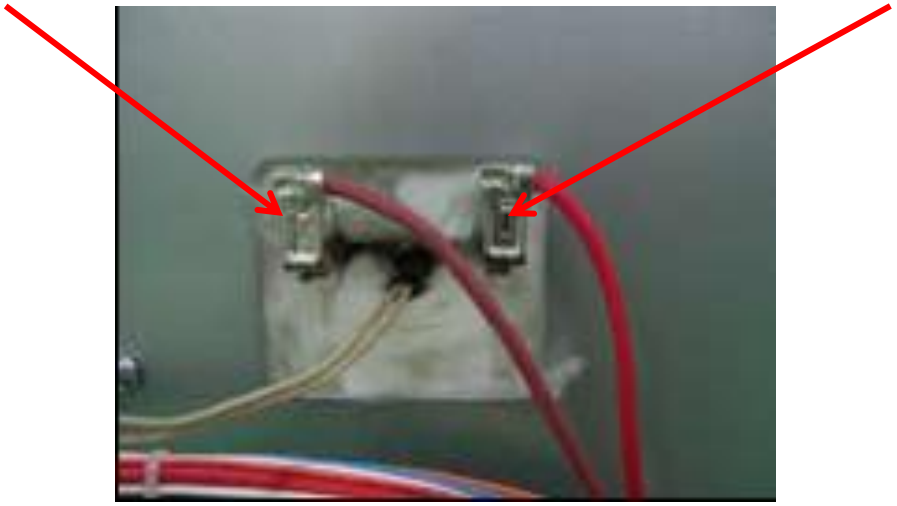
OVEN DOOR LATCH

• Measure the state of micro switch and motor after taking off harness from the heater. • Check whether the lock works normally by pressing **Cooking Time** and **Delay Start** at the same time for 3 seconds.	* Lock motor Resistance : 2500 ~ 2700Ω Voltage : 120V * Micro switch COM-NO • Replace or repair if harness is loose or disconnected.

Failure code	CAUSE	SOLUTION
E-0E	Door locking error	*Control lockout (press Cooking Time and Delay Start pads at the same time for 3 seconds.) When 1 minute elapsed, the range will display “E-0E” after the buzzer beeps 10 times if locking occurs continually, or if the door lock is not working during self-cleaning or steam is being operated.

Troubleshooting

BROILER HEATER



• Measure the resistance of the heater after removing the wiring harness from the heater. • Measure voltage at the heater's terminal after pressing broil function on the keypad.	* Approx : 13 ~ 16Ω (at the room temperature) * Terminal voltage of Broil heater : AC 240V * Replace or repair harness

Measuring the voltage at the heating element will only verify that the main board is outputting the voltage, not that the heater is working

Troubleshooting

BAKE HEATER

• Measure resistance of the heater after removing the wiring harness from heater. • Measure voltage at heater's terminal after pressing the bake function keypad. (Make sure that voltage is measured for more than 1 minute because the heater cycles on-off when working. Measuring a voltage merely verifies that the main PCB is working, not the heater.)	* Approx : 26 ~ 30Ω (at the room temperature) * Terminal voltage of bake heater : AC 240V * Replace or repair harness

Troubleshooting

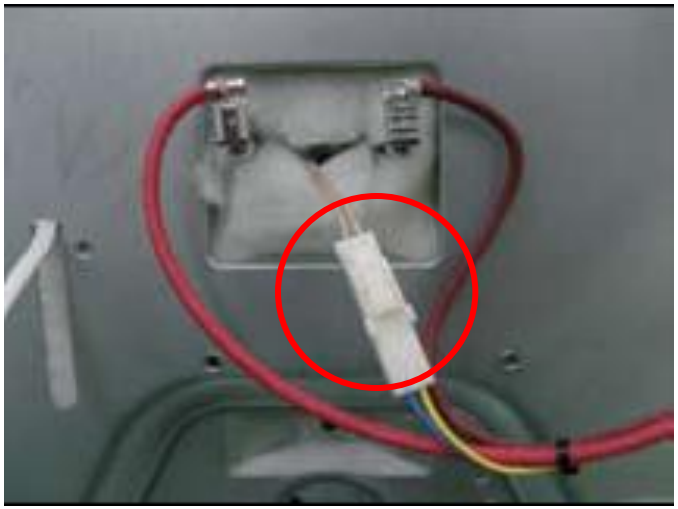
CONVECTION HEATER

• Measure the resistance of the heater at the terminal after removing the wires from the heater. • Measure the voltage at the heater's terminal after turning on the oven by pressing the convection bake function on the keypad. Make sure that voltage is measured for more than 1 minute because the heater cycles on-off when working.	• Approx : 70 ~ 73Ω • Terminal voltage of convection heater : AC 240V * Replace or repair harness * Replace or repair sub PCB

Measuring the voltage at the heating element will only verify that the main board is outputting the voltage, not that the heater is working

Troubleshooting

OVEN TEMPERATURE SENSOR



Failure code	CAUSE	SOLUTION
E-27	Oven sensor open (when it measures > ~2950Ω)	1. Disconnect power. Open the back covers. 2. Disconnect the sensor harness and measure the sensor resistance: ~1080Ω at room temperature 3. If there is no problem with the oven sensor, check whether there is a damaged connector or wire harness.
E-28	Oven sensor shorted. (when it measures < ~930Ω)	

Degree ºF	Resistance Ω
0	932.12
14	961.86
23	980.95
32	1000.00
41	1019.02
50	1038.02
59	1056.99
68	1075.92
77	1094.83
86	1113.71
95	1132.56
104	1151.38
113	1170.17
122	1188.93
212	1374.93
302	1558.01
392	1738.06
482	1915.39
572	2089.69
662	2261.07
752	2429.52
842	2595.05
932	2757.65
1000	2878.57

Troubleshooting

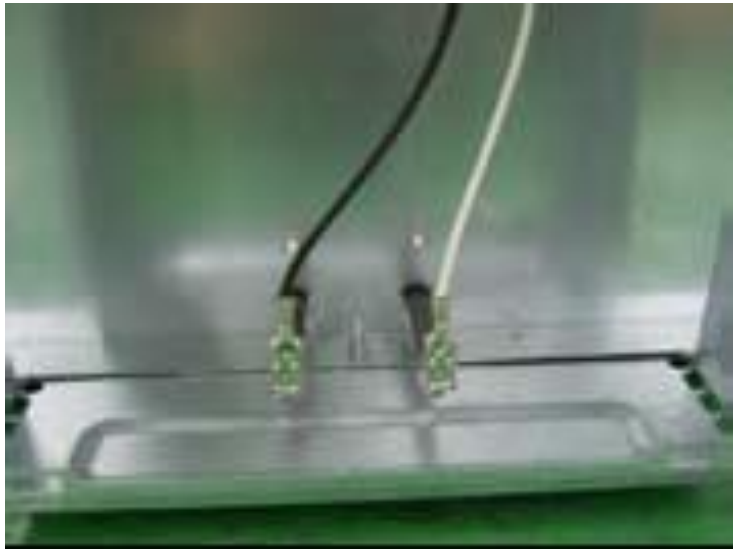
OVEN TEMPERATURE SENSOR

Temperature / Resistance Chart

The oven sensor is considered to be open if it measures > ~2950Ω
The oven sensor is considered to be shorted if it measures < ~930Ω

Troubleshooting

WARMING DRAWER HEATER



• Measure the resistance of the heating element after taking off harness from heater. • Measure the terminal voltage of heater after turning on the oven by pressing the warming drawer keypad.	* Approx : 22 ~ 25Ω (at the room temperature) * Terminal voltage of Drawer heater : AC 120V * Replace or repair harness * Replace or repair sub PCB

Measuring the voltage at the heating element will only verify that the main board is outputting the voltage, not that the heater is working

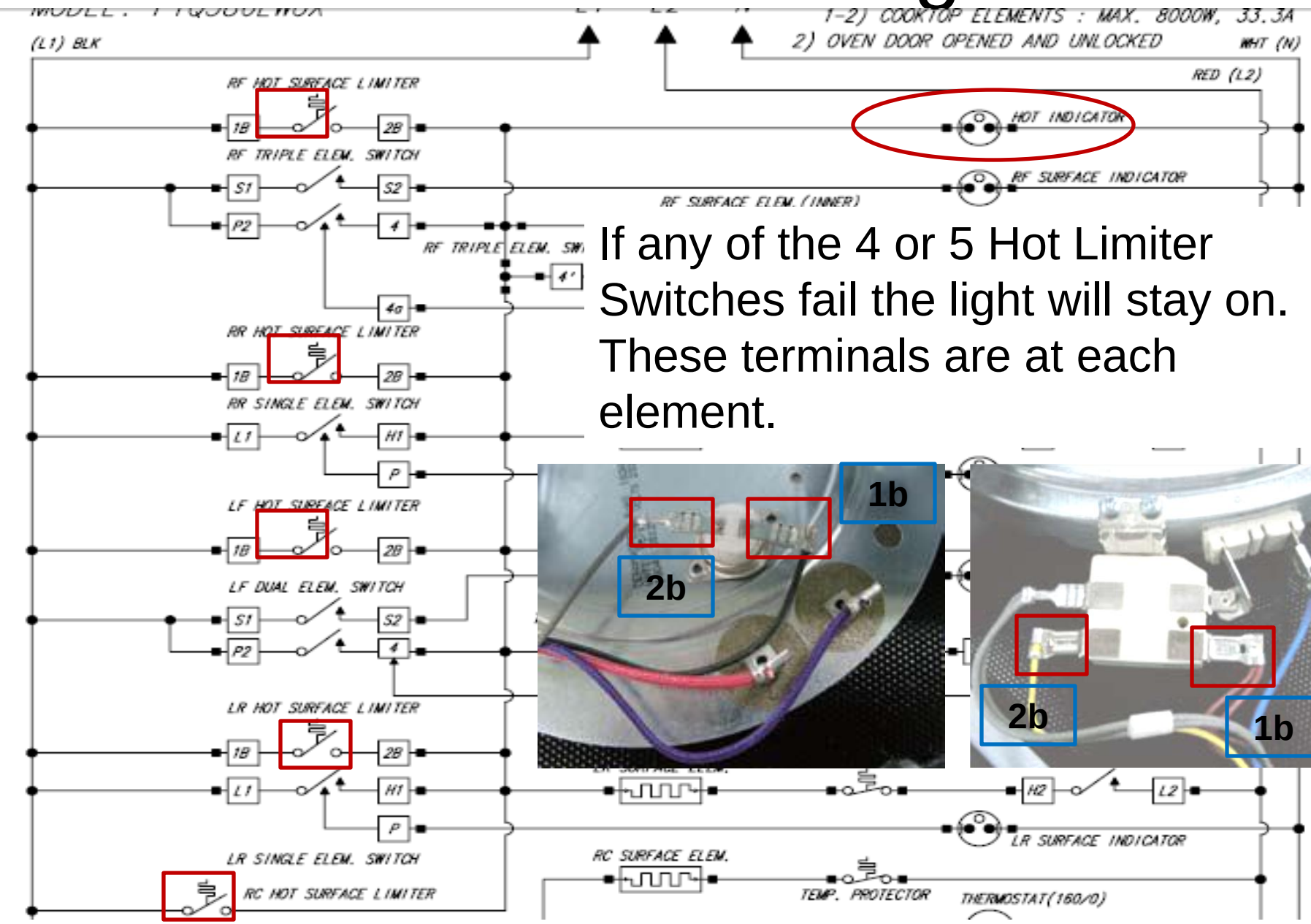
Troubleshooting

INDUCTOR BOARD COOLING FAN

Measure the resistance value of the AC Motor terminal after taking off harness from the Motor.
Measure the resistance and voltage at the Motor's terminal after the cook top has been operating.
Resistance : ~29.7Ω
Voltage : 120VAC

The motor will operate when the cook top is on or when the oven is in the self clean mode. Also if the temperature sensors detect the ceramic glass is too hot.

Hot Surface Light



If any of the 4 or 5 Hot Limiter Switches fail the light will stay on. These terminals are at each element.