

**HAIER 90cm
BUILT-IN
OVEN
SERVICE MANUAL**



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1. SAFETY WARNINGS

This part contains the safety instructions which are helpful to avoid the risks of personal injuries and material damages. The service manual includes the following symbols.



Important information or useful hints regarding usage.



Warning against the hazardous situations with regard to life and property.



Warning against electric shocks.



Warning against fire risk.



Warning against hot surfaces.

1.1 General Safety Warnings

- The appliance must be disconnected from the power sources during installation, maintenance and repair processes.
- The rear surface gets hot while the appliance is operating. Therefore, electrical connections must not contact the rear surface during installing the oven, as the connections may get harmed.
- Pay attention not to use damaged components that may cause malfunction in the appliance and to replace such items with the new ones.
- Pay attention not to use loose or revised cable terminals and to replace such items with the new ones.
- While replacing the live components, pay attention that there is no liquid or moisture that may cause malfunction present on the new part.
- Do not operate the appliance if the power cord / plug is defective.
- Do not extend the mains cord via addition, do not use extension cable under any circumstances due to the safety risks.
- Plug in the appliance to a grounded wall socket protected by a fuse complying with the values in the technical specifications.

1.2 Safety For Installation

- Check whether the floor where the installation will be made is flat. If the surface is uneven, request from the customer to tailor the surface flatness.
- The mains cord must not cross over the hot surfaces during installation. You may cause the appliance to short-circuit and a fire resulting from cable melting.
- Pay attention not to cut cables or use cut or defective cables and to replace such items with the new ones during installation.

1.3 Information To Be Provided To Consumer

- The appliance may be hot during operation. Do not touch the hot compartments, inner parts of the oven, heating components, etc. Do not place flammable items nearby as sides of the appliance will be hot during operation.
- Before using the appliance its time clock must be set. If not set, you appliance will not operate.

- In case of any power interruption, the time clock of the appliance must be re-set. As the latest settings are not stored in the processor memory in power interruptions. The time clock is restored to factory settings and displays the time as 12:00. The time must be set in accordance with the directives.
- Do not wash the appliance by spraying or pouring water on it. There is the risk of electric shock!
- Do not warm up the closed tin cans and glass jars on the appliance. The pressure generating may cause the jar to explode.
- Do not do cleaning while the appliance is operating.
- Do not perform any repair or modification on the appliance. However you may troubleshoot some problems indicated in the oven manual.
- Do not place the baking trays, plates or aluminum foil directly on the base of the appliance. The accumulated heat may harm the base of the appliance.
- Always use heat-resistant oven mitts while placing, taking out the meal, etc. in the oven.
- Do not use the appliance if the front door glass is removed or broken.
- Pay attention for children not to seat on the lid of the appliance when the lid is opened.
- Do not hang items such as cloth, towel, etc. on the oven handle.

THE IMAGES USED IN THE SERVICE MANUAL ARE ONLY FOR EXEMPLARY PURPOSES.

THE APPLIANCES SUPPLIED TO THE END USER (CUSTOMER) MAY DIFFER IN TERMS OF CONTENT AND APPEARANCE.

2. TECHNICAL TABLE FOR ELECTRICITY VALUES

APPLIANCE	90 cm BUILT-IN OVEN
LOWER HEATING ELEMENT	2000 W
UPPER HEATING ELEMENT	1500 W
GRILL HEATING ELEMENT	3250 W
TURBO HEATING ELEMENT (If available)	2x1250 W
LAMP	15-25 W
COOLING FAN	25 W
TURBO FAN	25 W
TURNSPIT	6 W
THERMOSTAT	40-240°C max

3. MOUNTING THE APPLIANCE / MOUNTING RULES / ADJUSTMENTS

3.1 CHECKING THE MOUNTING PLACE AND ENERGY SOURCES

3.1.1 Checking the Dimensions of the Mounting Place

Location where the appliance will be used must be determined before starting the installation procedures.

Appliance must not be installed in locations exposed to strong air currents.

Carry the appliance by at least 2 persons. Do not drag the appliance in order not to damage the floor.

Remove all transportation materials inside and outside the appliance. Remove all materials and documents inside the appliance.

Under-counter Installation

Cabinet must correspond to the dimensions mentioned in Figure 1.

There must be a free space at the rear side of the cabinet in line with the dimensions indicated in the Figure in order to attain sufficient ventilation.

Installing in a high cabinet

Cabinet must correspond to the dimensions mentioned in Figure 3.

There must be a free space at the top and bottom sections of the rear side of the cabinet in line with the dimensions indicated in the Figure in order to attain sufficient ventilation.

Conditions for Installation

Appliance dimensions are indicated in Figure 2.

Surfaces of the furniture where the appliance will be installed and the materials to be used in installation must be durable enough to stand a temperature of min. 100 °C.

Cabinet to be used for installation must be secured and bottom of the cabinet must be flat in order to prevent the appliance from tipping.

Floor of the cabinet must be able to carry minimum 60 kg.

If there is a drawer beneath the installation location, a shelf must be placed between the appliance and the drawer.

Placing and securing the oven

Insert the oven into the cabinet with at least two or more people.

Do not hold by the door handle or oven panel to carry or lift the oven. Use metal carrying handles located on both sides of the oven for this purpose.

Make sure that the frame of the oven is aligned properly with the front section of the furniture. Mains cord should not be trapped under the oven, squeezed between the oven and furniture or bend.

Secure the oven to the furniture with the screws supplied together with the appliance. Screws must be inserted and installed to the plastic elements located on the frame of the appliance. Do not tighten the screws excessively. Otherwise, screw seats may get worn.

Make sure that oven does not move after installation. There is the risk of tipping if the oven is not installed in accordance with installation instructions.

Electrical Connection

Location where the appliance will be installed must have proper electrical installation. Supply voltage must match the values indicated in appliance's rating plate.

Appliance connection must conform to the local and national power regulations.

Cut the supply power before starting appliance installation procedures. Do not connect the appliance to mains until the appliance installation is over.

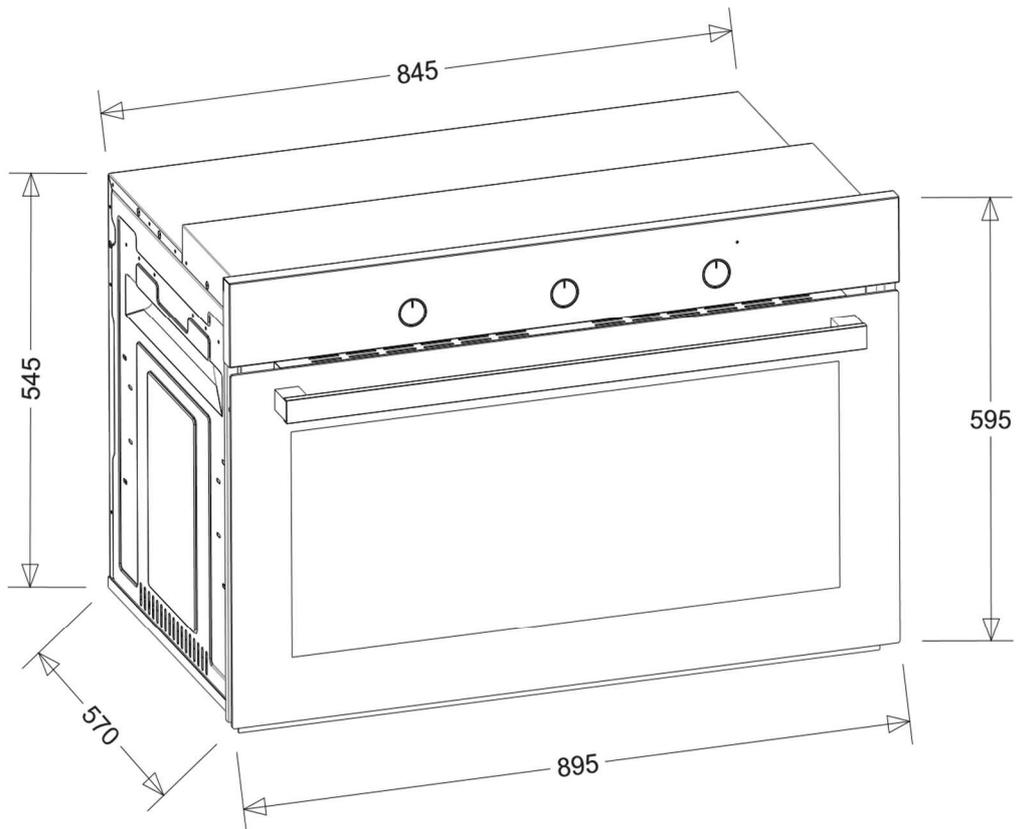


Figure 2

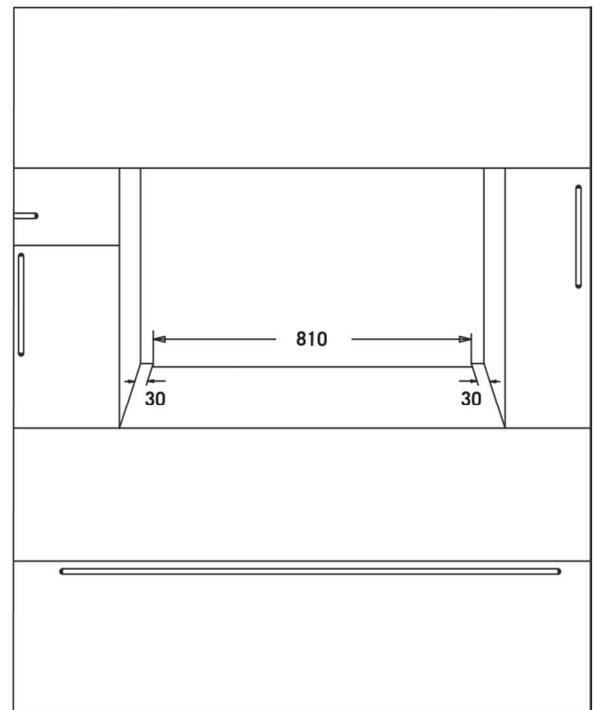
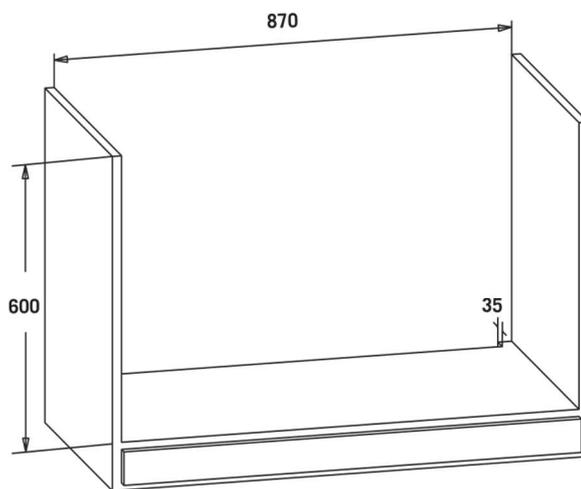


Figure 1

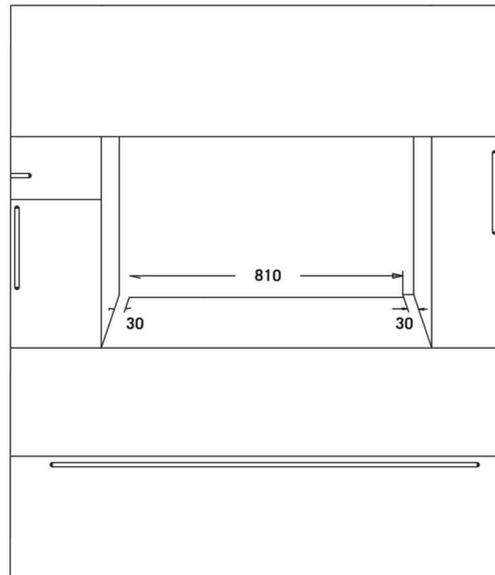
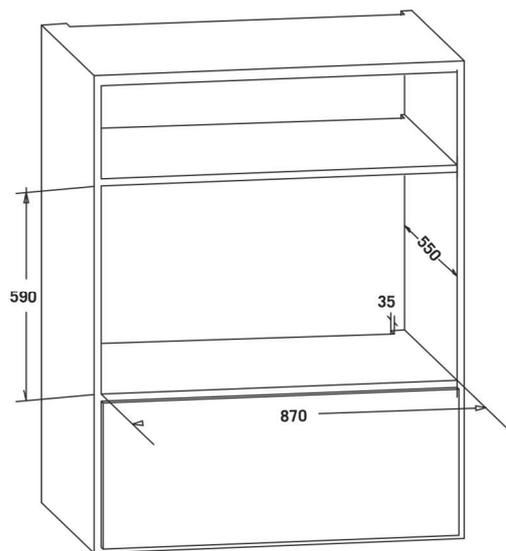


Figure 3

3.1.2 Checking the Electrical Installation

The following values regarding the appliance must be taken into consideration while checking the electrical installation for the appliance.



A measurement device called wattmeter is used to check the suitable installation for appliance.
 Plug the appliance in the wattmeter and plug the wattmeter in the wall-outlet.
 Set the oven thermostat to the maximum level.

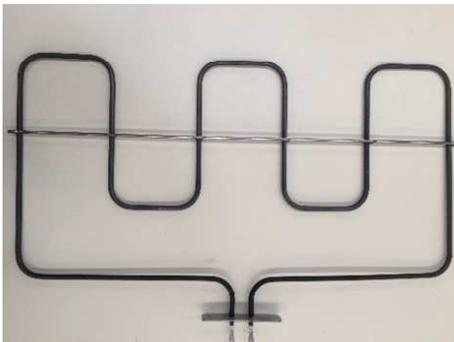
4. COMPONENT LIST / COMPONENT OPERATING PRINCIPLES

4.1 Grill Heating Element



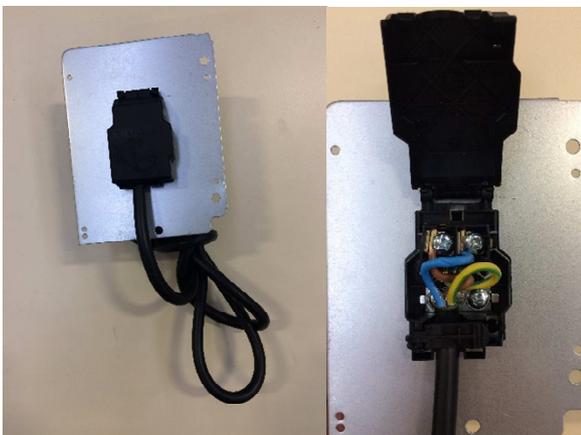
It is a heating element allows grilling in the electric oven operating with control knob. Controlled with a switch and thermostat beneath the control knob.

4.2 Lower Heating Element



It is a heating element controlled with a switch beneath the control knob and allows in-oven cooking in the electric ovens at any desired temperature with the help of a thermostat. It is located on the lower part of the oven chassis, between the chassis and base lower sheet.

4.3 Terminal



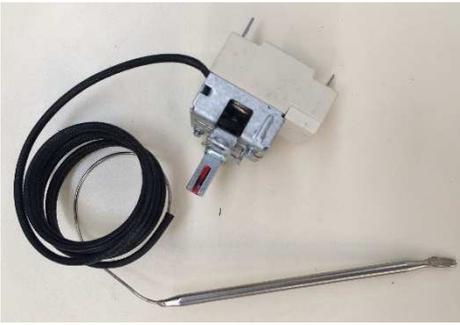
It is a connection component where the mains cord and in-oven cables are fitted. The cables to the in-oven components are distributed from the terminal.

4.4 Turbo Motor



Operates separately in defrosting mode on the turbo and multifunctional ovens. In the modes where operated with turbo resistance, it allows distributing the heat properly in the oven with the help of fan.

4.5 Electric Thermostat



It is an electric component set to operate the heating elements at any desired temperature when turned on through the linked control knob.

Senses the heat with a bulb inserted in the oven. The bulb enables turning on/off the switch located on the housing by dilating with the impact of heat, thermostat heating elements cool down since they are connected in series.

The temperatures on the knobs have been printed on depending on the thermostat used specific to the appliance by being determined under laboratory conditions. Using a thermostat at an incorrect value or attaching the bulb on a wrong place, dislocating the thermostat bulb changes in oven temperatures and leads unstable operation of the oven.

4.6 Oven Lamp



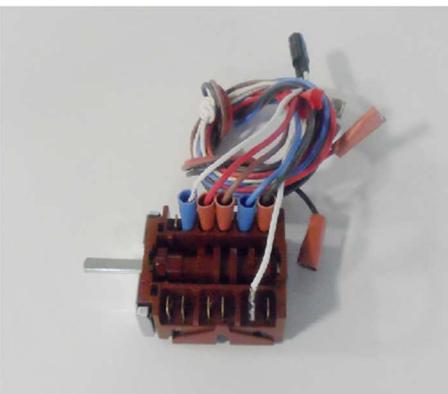
Controlled with the help of a switch linked to the control knob or a special button and illuminates the inner part of the oven chassis. Lamps can be in square and round forms.

4.7 Warning Lights



The warning lights are red and indicate that the thermostats or hotplates are in operating state. They are consisted of resistance and neon lamps. Their power consumption is low. They can operate in high temperatures and be manufactured in various colors thanks to color plastics fitted on their front sides.

4.8 Switch



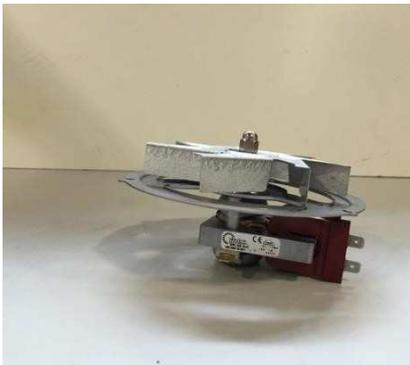
Enables operating the in-oven components such as hotplate, oven lamp, heating element, fan motor, chicken roasting motor optionally in the electric, turbo and multifunctional ovens. Linked to the control knobs, it operates with their move. The switches are available on various locations. Thermostat can be attached behind the switch on some models. They have been developed to circulate the phase and neutral between the determined levels and contacts. On each location, they render one or more contracts short or open circuit. It is the switch that sets the operation sequence of the heating elements.

4.9 Safety



The purpose of the safety thermostat is cut off the phase or neutral before the oven temperature exceeds a certain value when the thermostat on the oven is short-circuited or due to continuous operation of any heater resulting from a short circuit. Since the point where the thermal cutter fitted on the oven is taken as the reference, the safety thermostat is expected to switch off only under abnormal conditions but not under normal conditions.

4.10 Cooling Fan

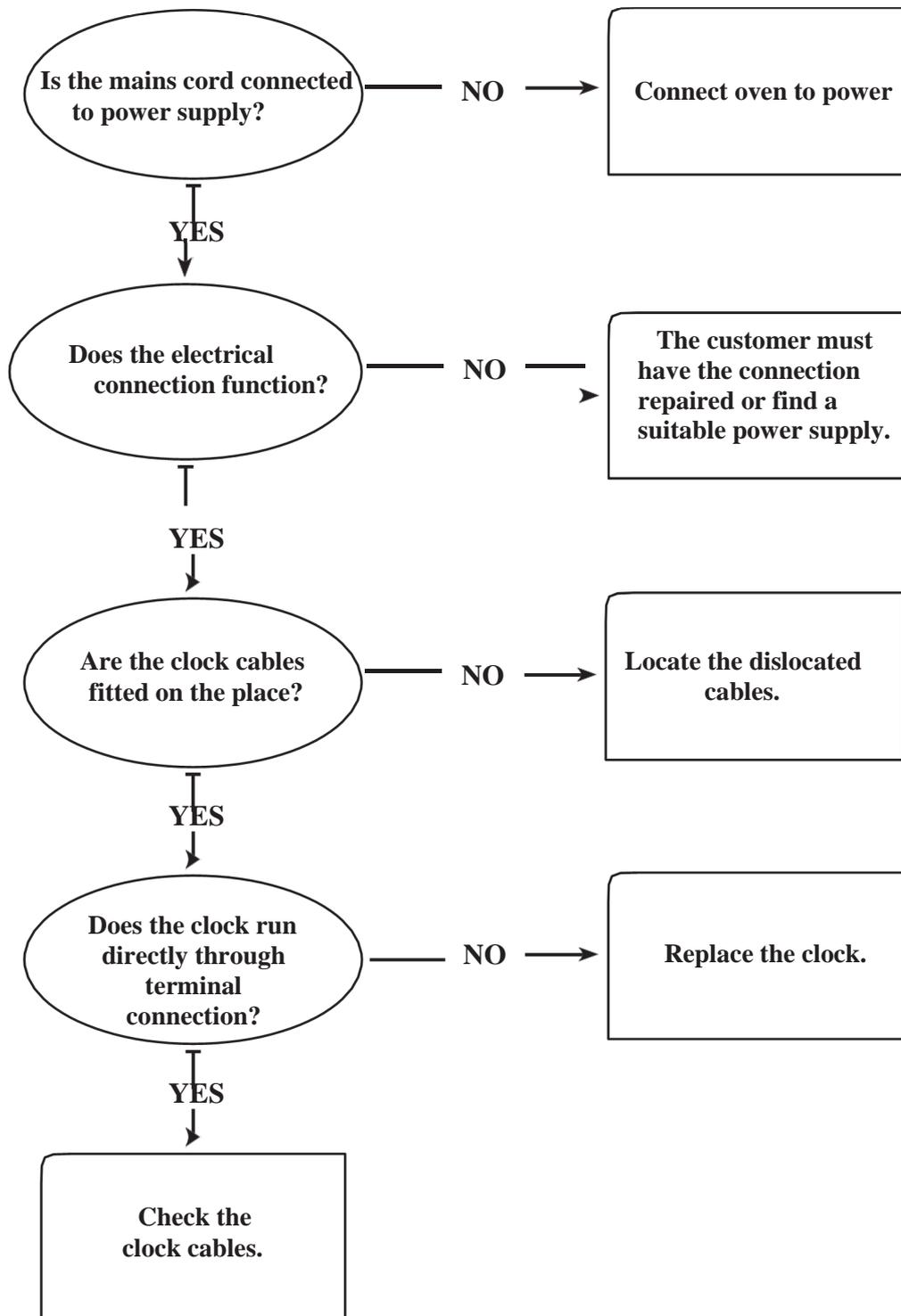


This fan is located on the upper section of the oven cavity. It gets activated directly when the oven is started. It is deactivated by means of a second safety thermostat. It prevents oven from getting overheated and protects control panel section against heat and humidity.

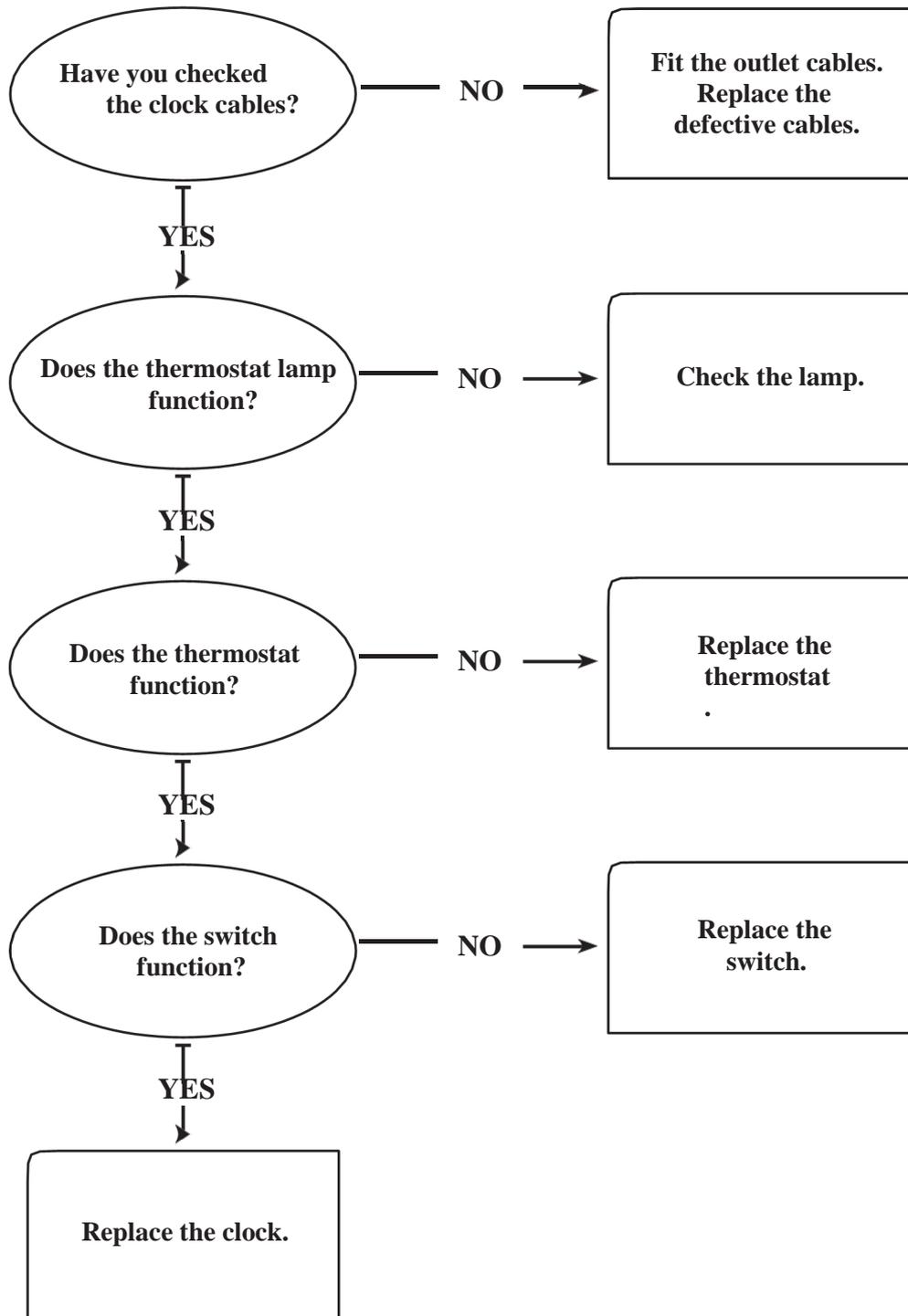
5 FAILURE FLOW / DIAGNOSTIC DIAGRAMS

5.1 TIME CLOCK FAILURES

5.1.1 Time Clock Is Not Running

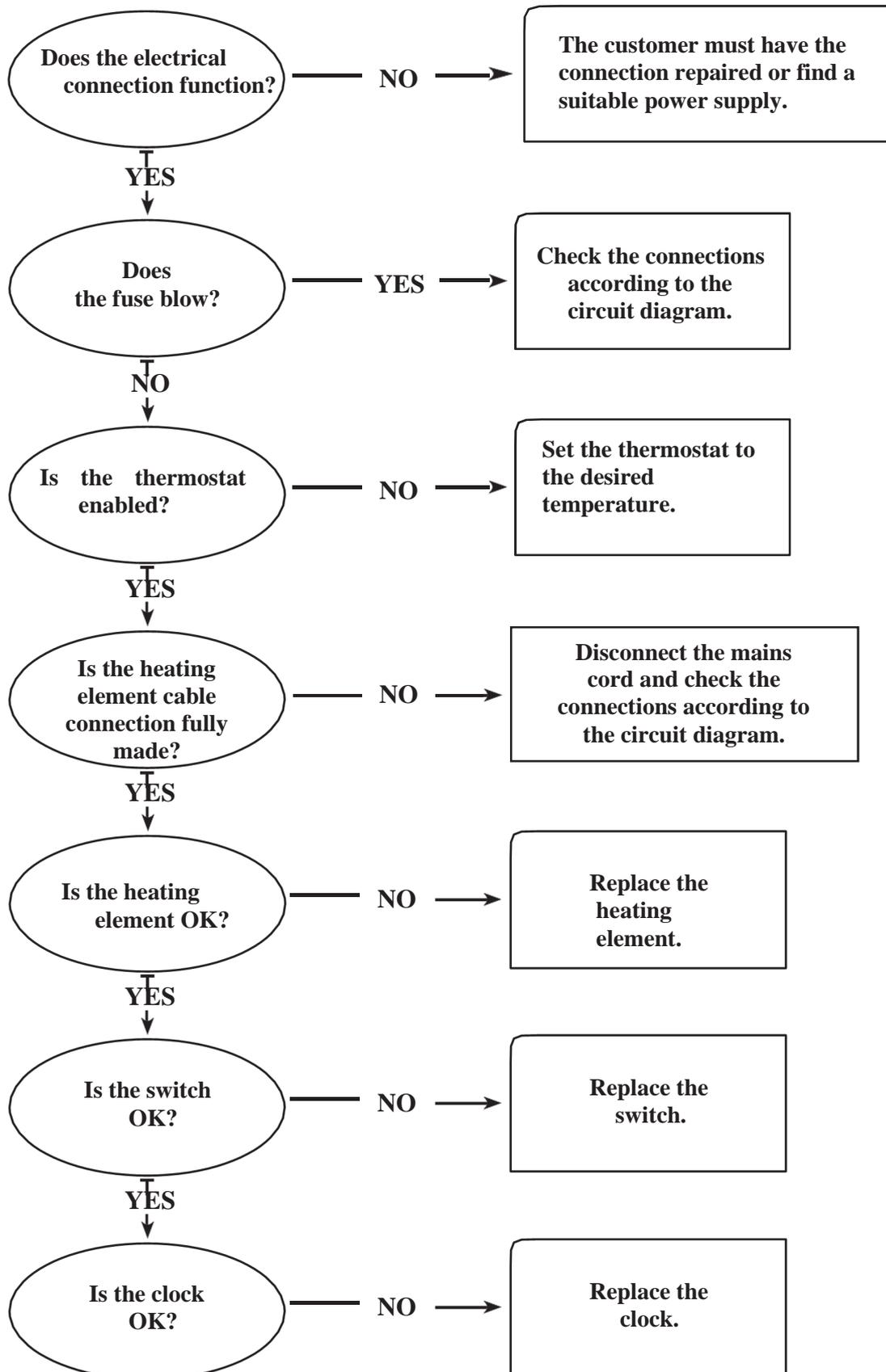


5.1.2 Time Clock Is Running But Not Commanding While Thermostat Is



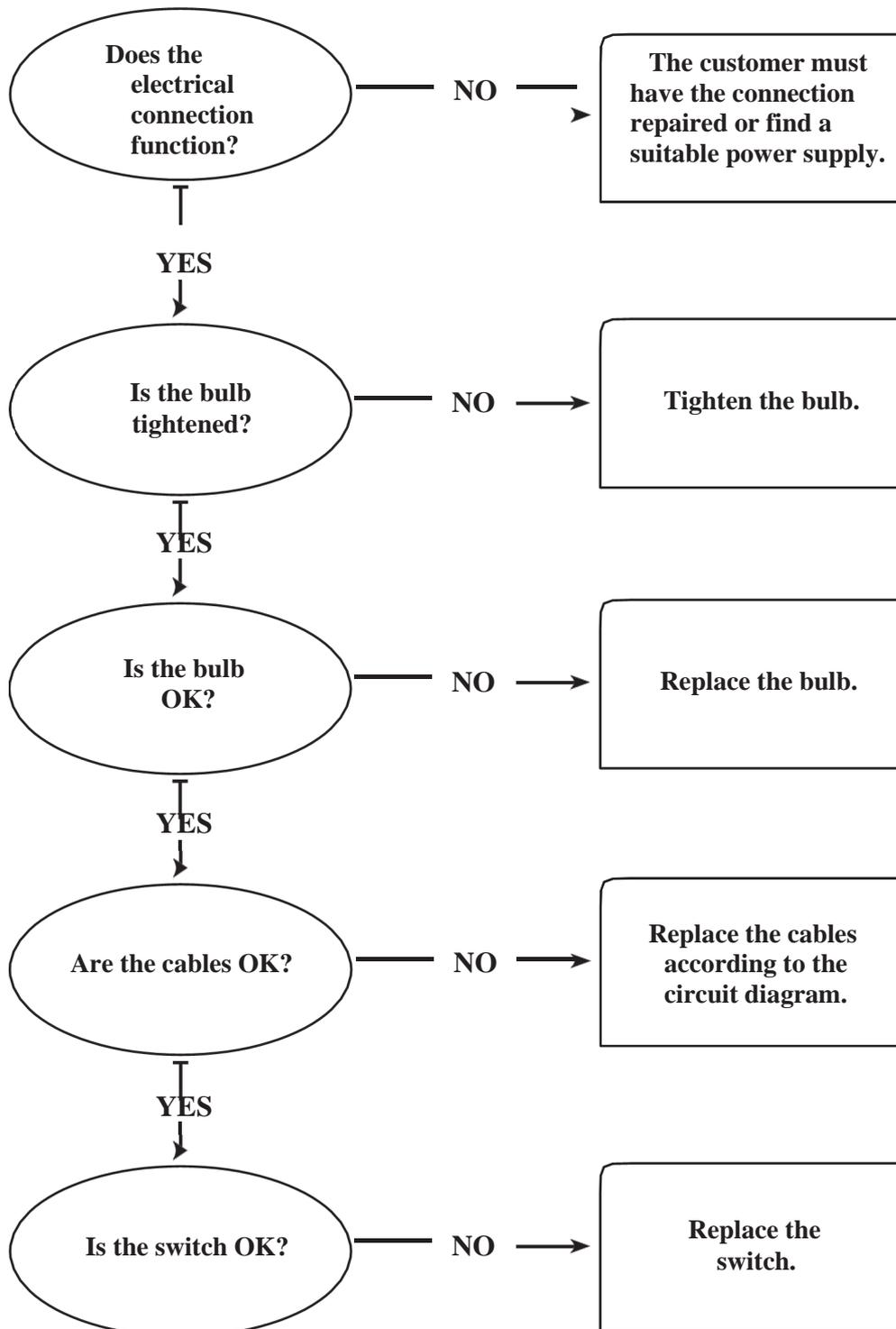
5.2 HEATING ELEMENT FAILURES

5.2.1 Heating Is Not Functioning, Foods Cannot Be Cooked

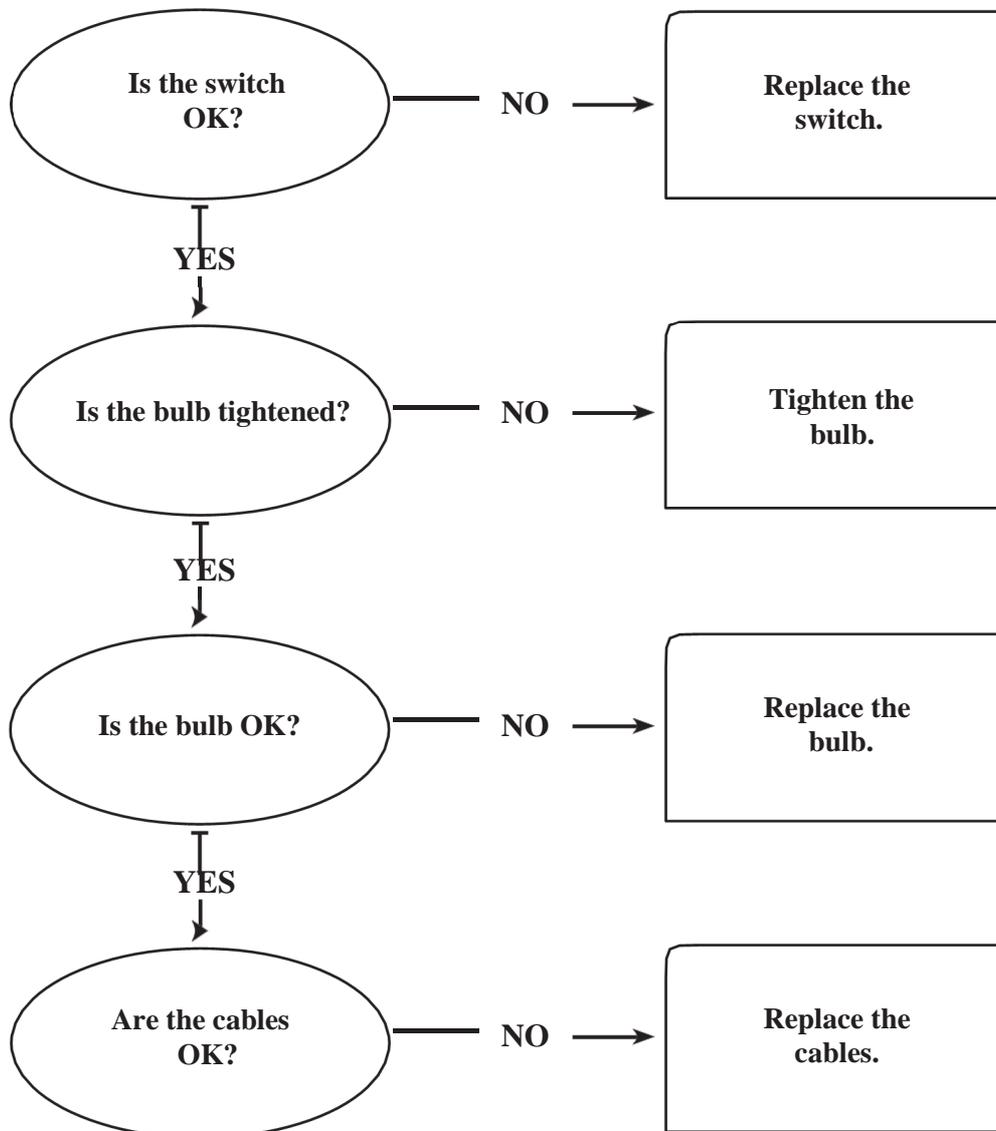


5.3 LAMP FAILURES

5.3.1 Oven Is Operating But Oven Lamp Is Not Lit

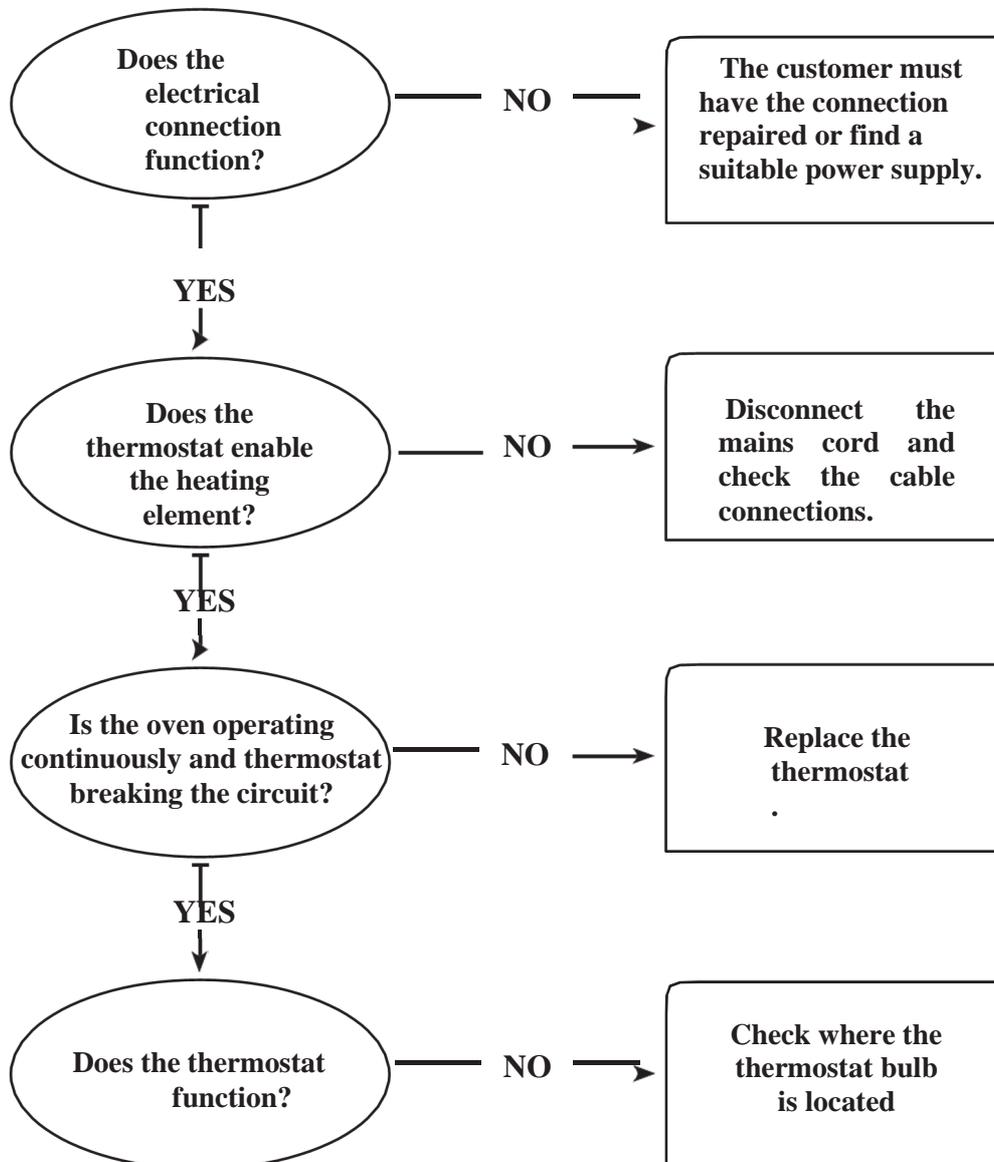


5.3.2 Oven Is Not Operating Nor Oven Lamp Is Lit



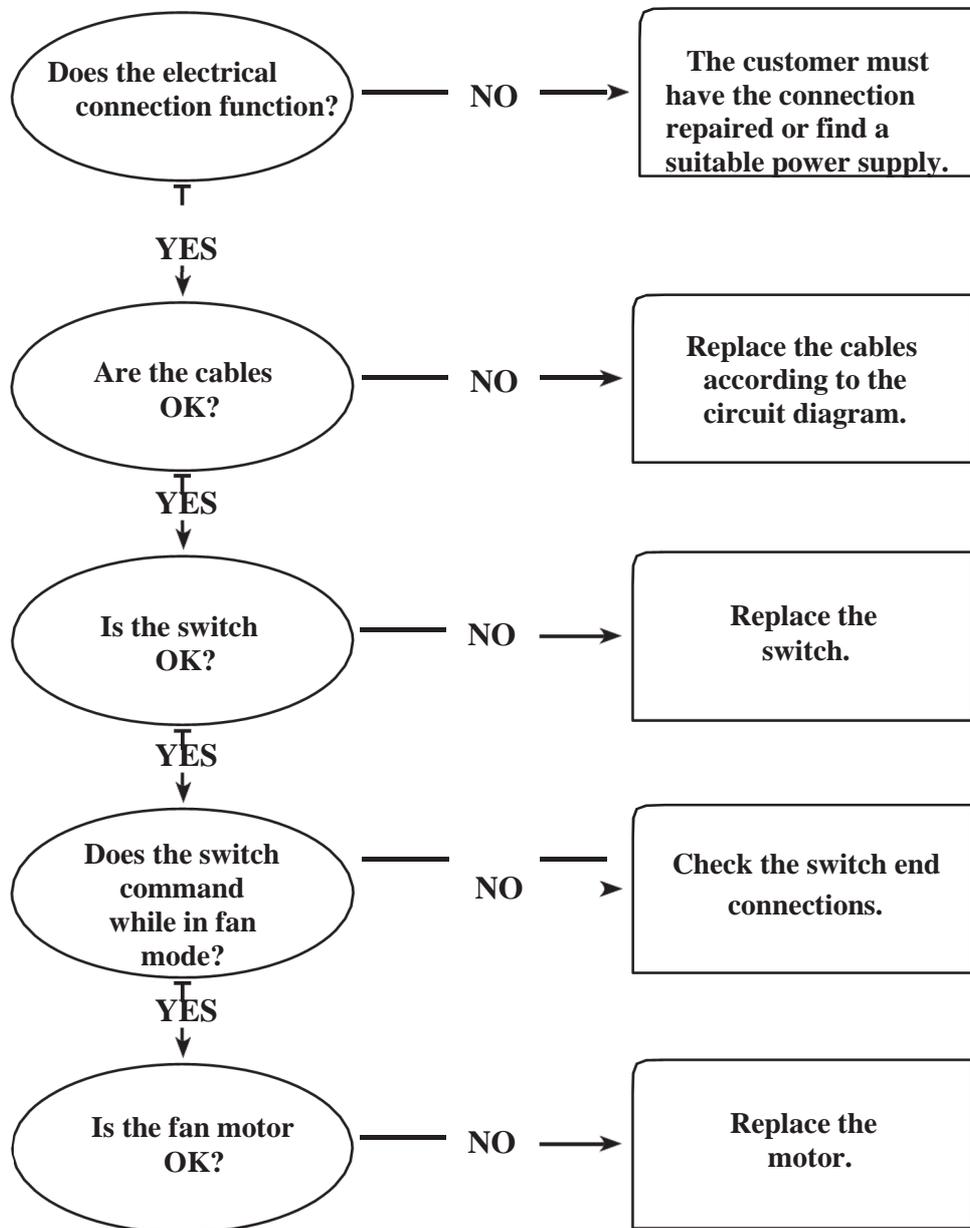
5.4 THERMOSTAT FAILURES

5.4.1 Oven Is Operating Continuously, Thermostat Does Not Break the Circuit



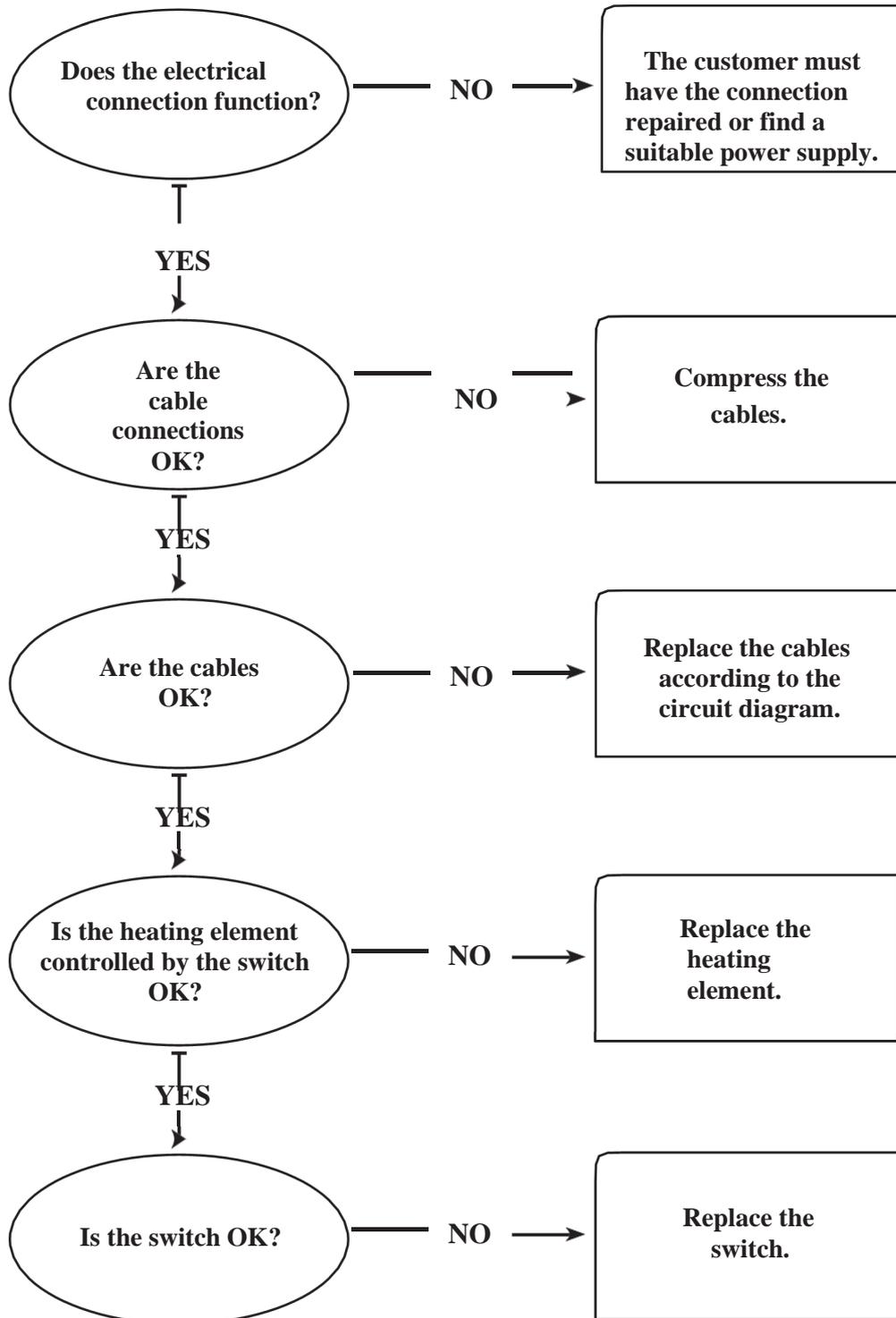
5.5 TURBO MOTOR FAILURES

5.5.1 Oven Is Not Operating In Turbo Motor Mode, No Cooking Is Made



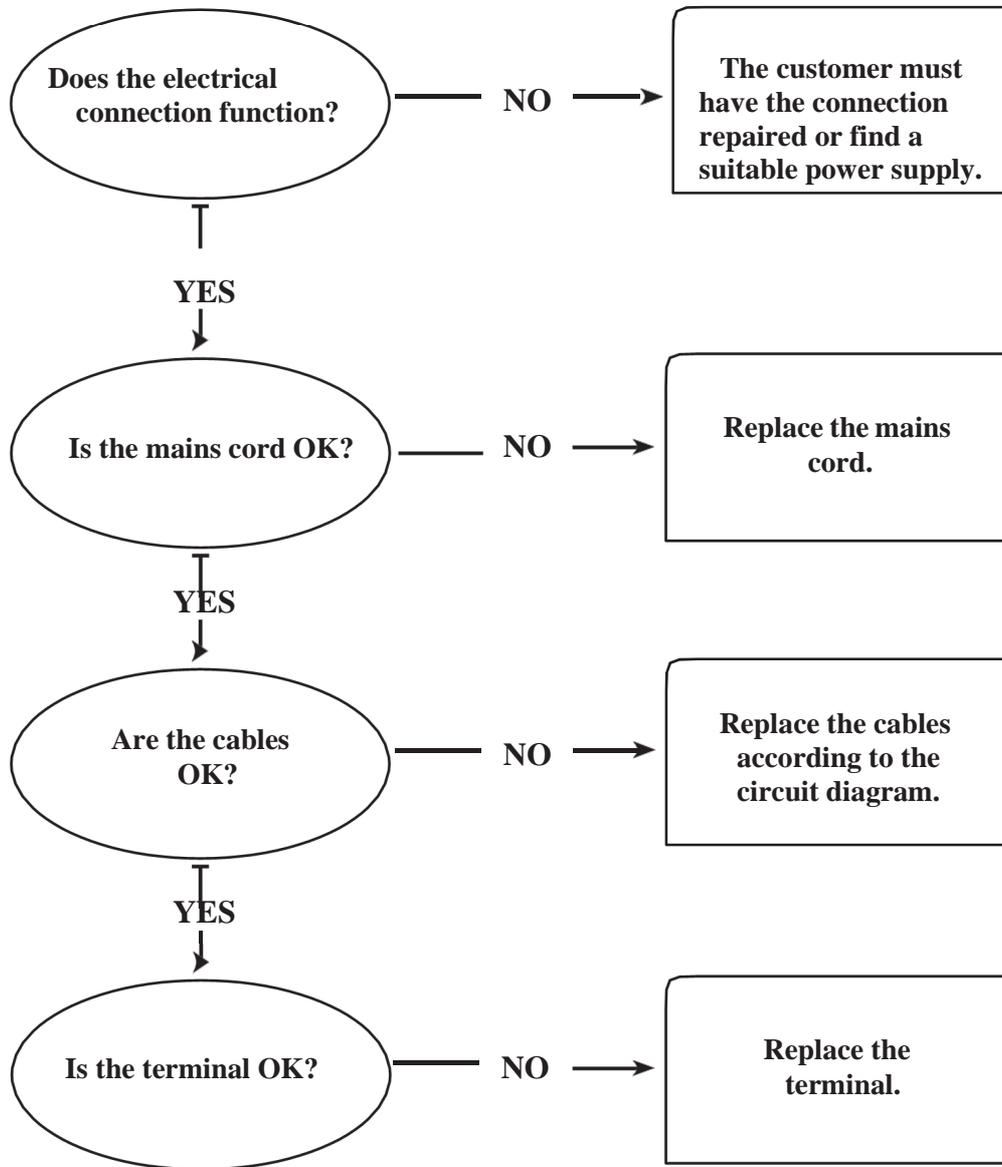
5.6 SWITCH FAILURES

5.6.1 Switch Is Not Functioning, Oven Cannot Cook.

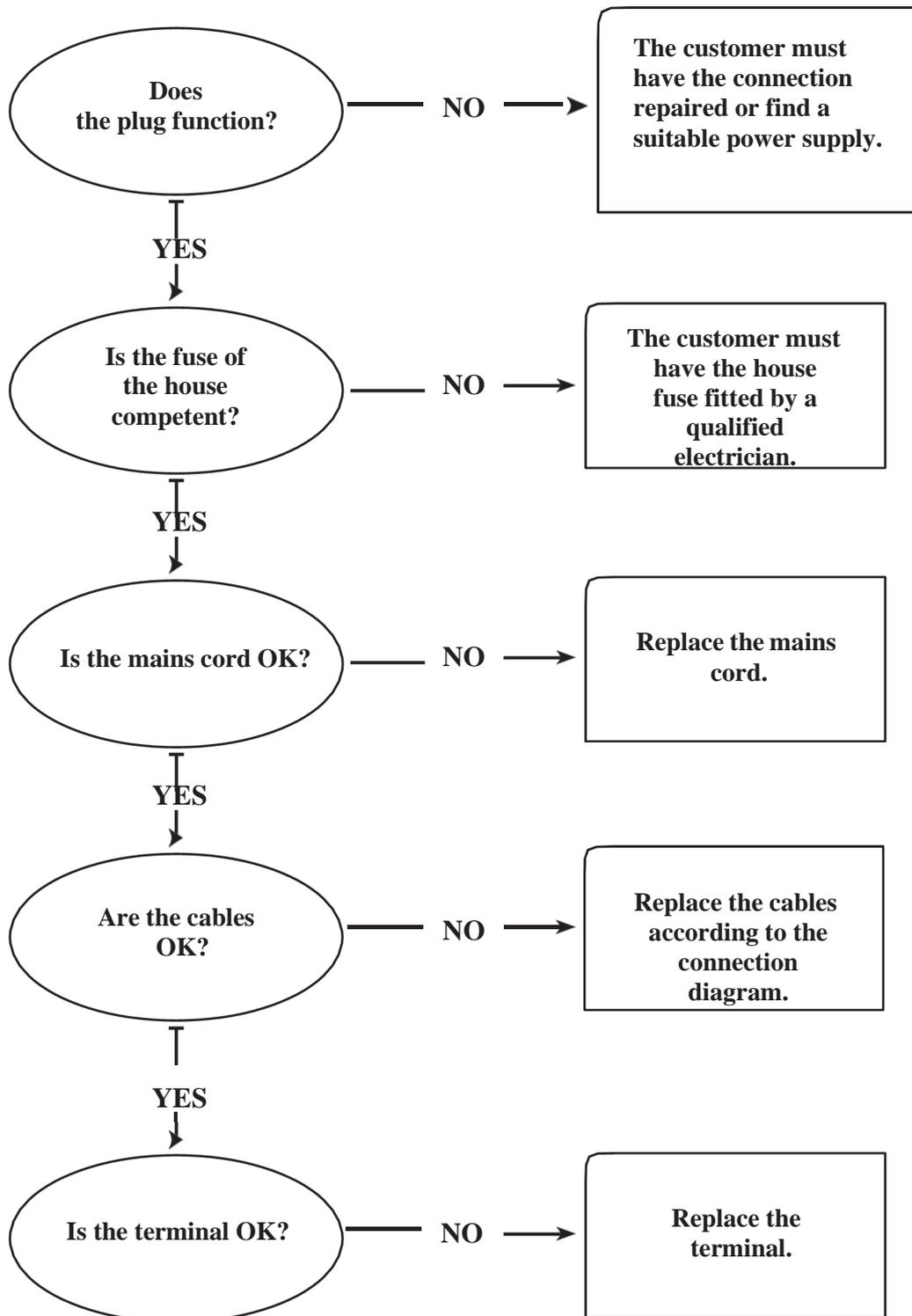


5.7 TERMINAL FAILURES

5.7.1 Electricity Is Not Received by the Terminal or Not Distributed In the Oven

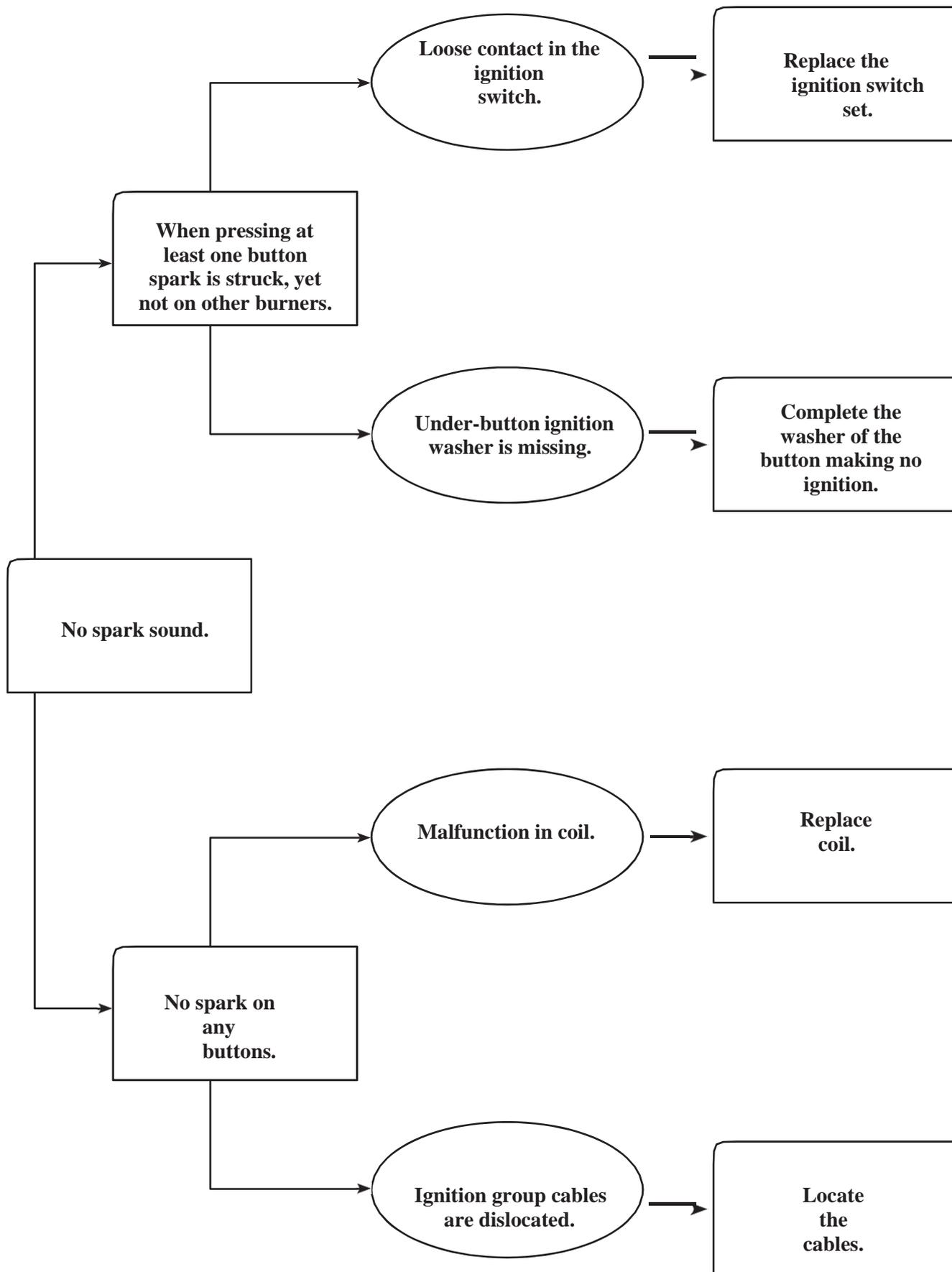


5.7.2 Plugging In the Oven Blows the Fuse

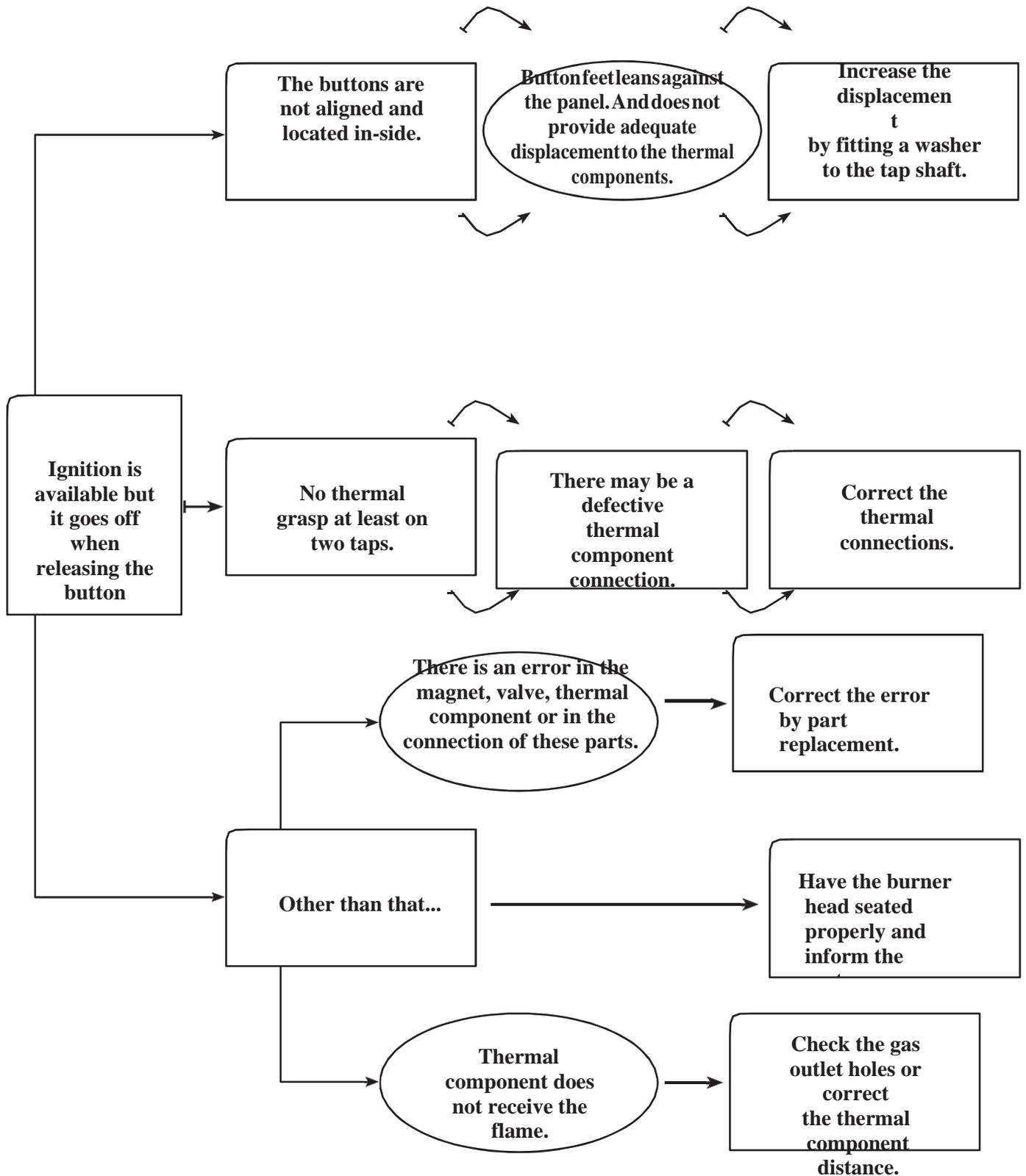


5.8 IGNITION FAILURE DIAGRAMS (For the Models Having Ignition Button)

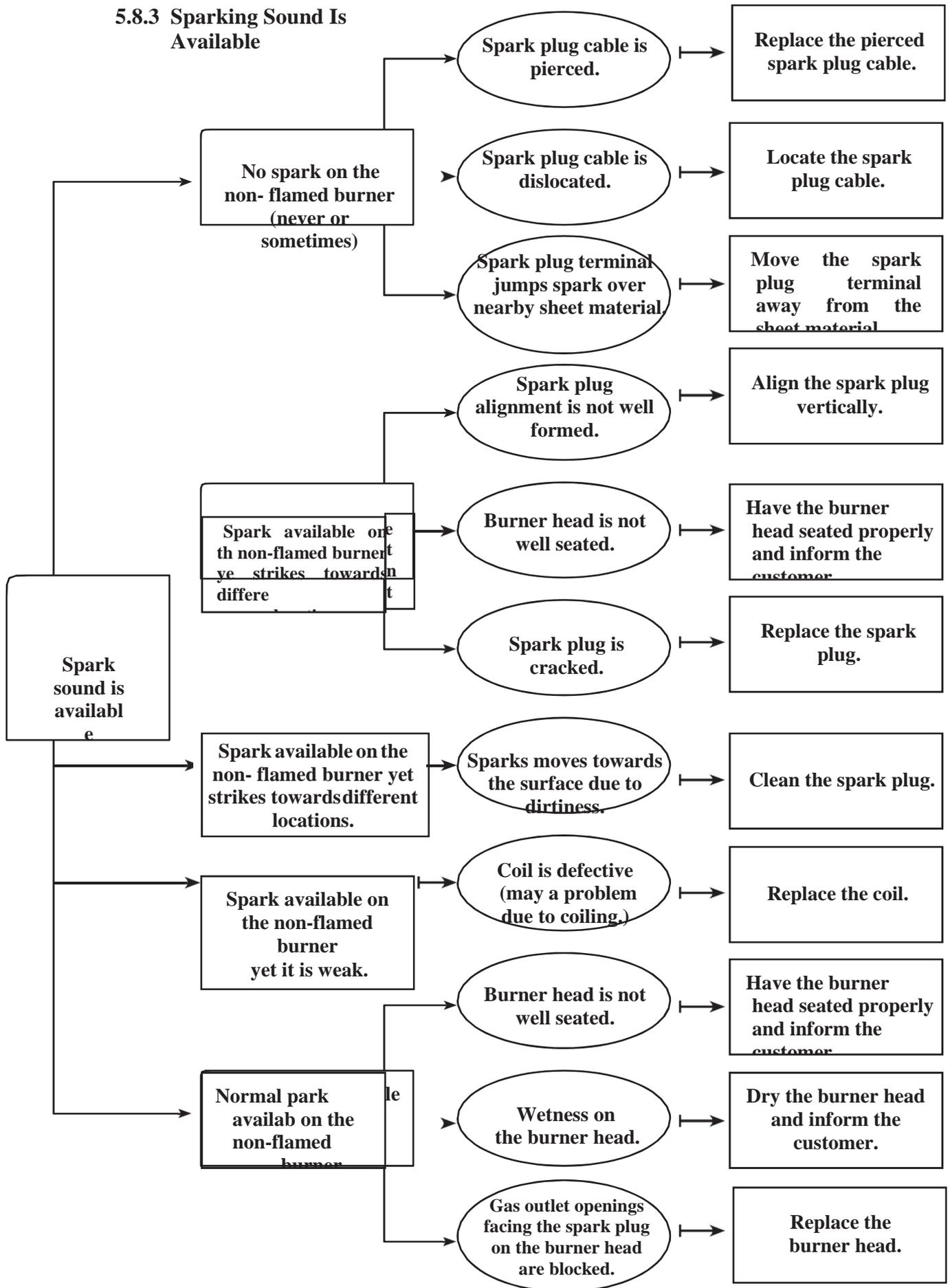
5.8.1 No Spark Sound



5.8.2 Ignition Is Available But It Goes Off When Releasing the Button



5.8.3 Sparking Sound Is Available



6 MEASUREMENTS MADE TO DETECT FAILURES IN COMPONENTS

An example for ring heating element measurement.



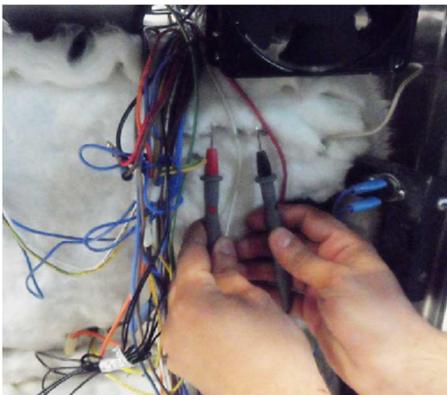
The current and power drawn by the components on the appliance is measured with a device called multimeter.



Multimeter set to heating element measuring position to measure the heating element value. If the heating element is OK, a heating element values appears on the multimeter.



If any value appears on the multimeter screen, it means the heating element is in operating status.



Remove the cables of the heating element. Touch the terminals of the heating element with the probes of the measuring device.

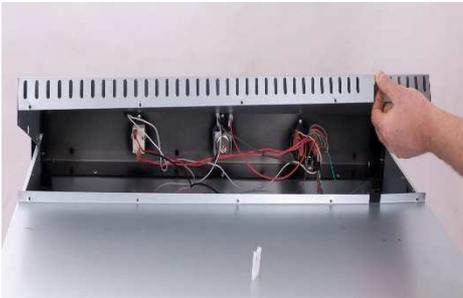


If no value appears on the multimeter display, it means that the heating element is defective.

7. MOUNTING / DEMOUNTING COMPONENTS

Note: How to demount the components is explained in the following part. Carry out the mentioned processes reversely while mounting the components.

7.1 REPLACING THE CIRCUIT BREAKER



Open the oven's service cover.



Remove the screw that connects the circuit breaker shell to the panel with a screwdriver.



Remove the circuit breaker shell by turning it right or left.



Remove two screws that secure the circuit breaker to the circuit breaker shell with a screwdriver.

Pull the circuit breaker shell towards yourself to remove it after removing the screws.

7.2 REPLACING FRONT DOOR



Open the front door. After opening the front door, open the clips locating on the front door hinge slot on the right and left sides by pulling them upwards.

Hold the door on the right and left sides and remove the door from the hinge slots.

7.3 REPLACING FRONT DOOR HINGE

The front door glasses must be removed before replacing front door hinge.



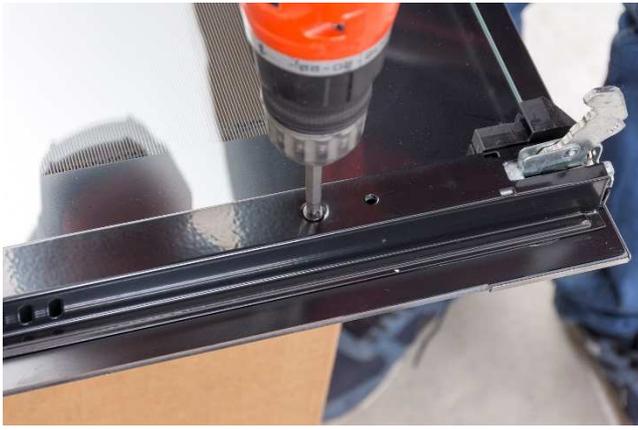
Push buttons on side of removable profile



Remove metal profile above the glasses



Remove inner glass that on the oven door.



Remove screws by screwdriver.



Pull hinges to remove.



7.4 REPLACING FRONT DOOR HANDLE



Remove the glass top profile by pressing right and left side after removing screws and plastic clips on side profiles.



Remove the screws on front glass.



Take the released handle.

7.5 REPLACING CHASSIS GASKET



The tabs located on the sealing clamps on the chassis. You can replace the gasket by removing it from the tabs.

7.6 REPLACING CHASSIS FAN PROTECTION SHEET



There are four screws holding the fan protection sheet in the chassis.



Remove the fan protection sheet by removing the screws with the help of a screwdriver.



7.7 REPLACING CIRCULATION PROPELLER

The fan protection sheet must be removed before this operation.



Remove the nut located on the middle of the circulation propeller with the help of pointed nippers.
The nut used here has left-hand threads.

7.8 REPLACING OVEN UPPER HEATING ELEMENT



The heating element located on the upper side in the oven is attached to the chassis with two screws. Remove the screws with the help of a screwdriver. Then, the screw that secures the heating element to the chassis from inside must also be removed.

7.9 REPLACING OVEN LOWER HEATING ELEMENT

For this operation, you must firstly remove the chassis base sheet and open the relevant of the insulation.



Remove screws with the help of screwdriver and remove cables on the heating element. Push from sides of heating element cover plate and pull towards back side of oven as shown in picture.

7.10 REPLACING SAFETY THERMOSTAT

You must remove the service panel and top panel guard to replace the safety thermostat.



Remove the cables connected to the safety thermostat with a socket by holding on the terminals.

The safety thermostat is attached to the chassis with two screws. Replace the thermal cutter by removing the screw.



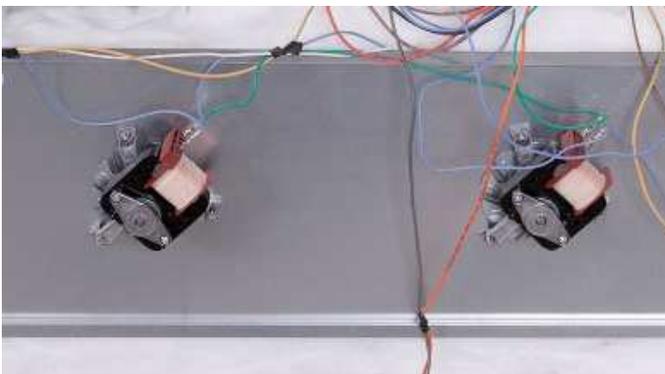
7.11 REPLACING THERMOSTAT AND THERMOSTAT BULB



Thermostat bulb and thermostat are one-piece.
You must replace the thermostat to change the bulb.
The thermostat bulb in the oven is removed from the place.
Replace it with a new one by removing the two screws on the front panel.

7.12 REPLACING TURBO MOTOR

For this operation, you must firstly remove the rear guard. And take the circulation propeller out of the chassis.



The turbo motor is attached to the turbo motor connection sheet with three screws. Hold and remove the cables from the terminals.



Remove the turbo motor by removing the screws.

7.13 REPLACING SIGNAL LIGHT



Signal light is attached to the signal light plug located behind the panel with a socket. Pull and remove the socket. Fit the new signal light on the place of the old one in the switch.

7.14 REPLACING OVEN LAMP SOCKET

For this operation, you must first remove the rear guard.



Pull and remove the cables attached to the lamp located behind the chassis from their terminals to replace the oven lamp. You can remove the lamp cleared off the cable connections by pressing the tabs.

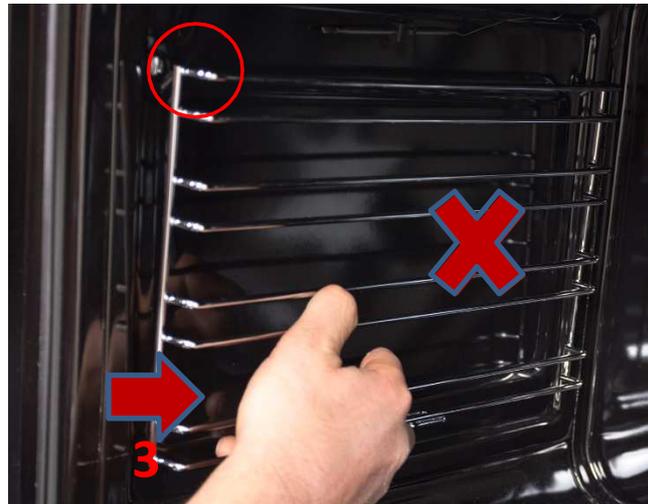
7.15 REPLACING OVEN ISOLATION

For this operation, you must firstly remove the side walls and rear guard.



Remove the wire of the insulation coiled around the chassis with wire.
Replace the released insulation with a new one.

7.16 REPLACING OVEN WIRE SHELVES



Push the hook that holds side racks on the direction of arrow 1 and release it. Then, move racks in upright direction as arrow 2 to remove.

ATTENTION: After you apply step 1, never pull racks in direction of arrow 3. Otherwise racks can damage cavity enamel at the point shown in circle.

7.17 REPLACING CATALYTIC PANEL



Catalytic Panel

- Catalytic panels are located behind the wire racks of the oven, on the right and left walls and rear of the oven cavity.
- Over time, oil and food odours permeate into enameled oven walls and heating elements.
- Catalytic panels absorb any food and oil odours and burns them during cooking to clean your oven.

Detaching catalytic panel

- To remove the side catalytic panels first remove the wire racks.
- Once wire racks are removed, catalytic panel will be free.
- To remove the rear catalytic panel, panel mounting screws need to be removed.
- It is advised to replace the catalytic panel once every 2-3 years.
- To reattach the catalytic panels, follow the above steps in reverse.

7.18 REPLACING TELESCOPIC RAIL



Telescopic rails are fixed by two clips at bottom side of part. You should open these clips locked by using a tool like screwdriver

7.19 REPLACING OVEN LAMP

You must first open the oven door completely to replace the lamp in the oven.



Remove the socket glass over the lamp by turning it in counter-clockwise direction. Remove the inner lamp by turning it in counter-clockwise direction. Perform these operations in reverse order after installing the new lamp.

7.20 REPLACING OVEN REAR GUARD



Remove the screws on the rear guard of the oven with a screwdriver. Release and take the rear guard off its tabs.

7.21 REPLACING OVEN TERMINAL PROTECTION

For this operation, you must first remove the oven rear guard sheet.

Release the kado terminal protection plastic off the tab attached to sheet on the upper part.



7.22 REPLACING OVEN TERMINAL BOX

You must firstly remove the oven rear guard and terminal protective plastic before replacing the oven terminal.



Grab and remove the oven inner power cables connected to the terminal from rear part by means of a nippers.

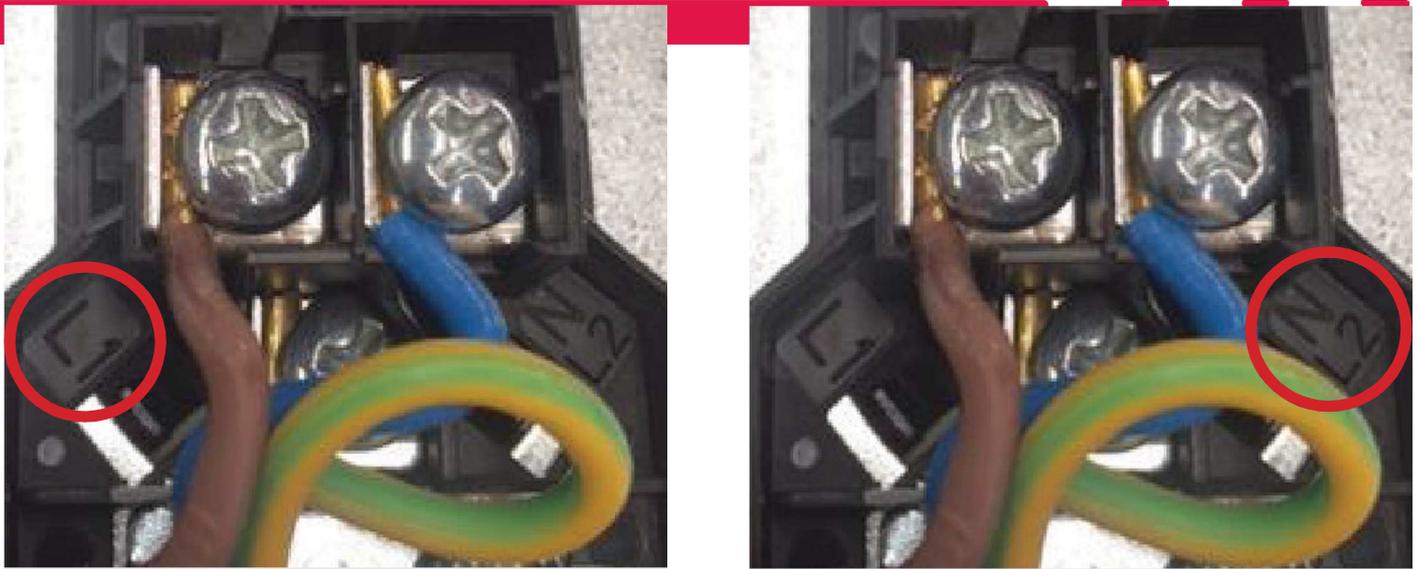
Pry out the terminal cover from lower tabs by means of a screwdriver.

Remove the power cable from the terminal by means of a screwdriver and replace the terminal box.

7.23 SMALL TERMINAL BOX MAINS CORD CONNECTION



The mains cord connection on all the appliance where small terminal box is used must be made as shown in the image.



Left L1: Phase Connection Brown Cable
 Right NL2: Neutral Connection Blue Cable
 Bottom Centre: Earthing Connection Yellow-Green Cable

7.24 CABLE SECTIONS TABLE

CURRENT VALUES RANGE	SUPPLY CABLE	NOMINAL VOLTAGE		
		220	230 V	240 V
0-3A	3x0.75	0-659W	0-689W	0-719W
3-10A	3x1	660-2199W	690-2299W	720-2399W
10-16A	3x1.5	2200-3519W	2300-3679W	2400-3839W
16-40A	3x2.5	3520-8799W	3680-9199W	3840-9599W
40-...A	3x4	8800-.....W	9200-.....W	9600-.....W
16-40A	5x1.5	3520-8799W	3680-9199W	3840-9599W
40-...A	5x1.5	8800-.....W	9200-.....W	9600-.....W
16-40A	N/A	3520-8799W	3680-9199W	3840-9599W
40-...A	N/A	8800-.....W	9200-.....W	9600-.....W



7.25 REMOVING THE OVEN SERVICE COVER

Remove oven service cover to access the circuit breaker, thermostat, mechanical/digital clock.



Remove the screws that connect the service cover on the sides of the product to the side walls by means of a screwdriver.



Remove the screws that connect the service cover of the product to the top cover.



Lift the rear side of the service cover up with an angle of 30° and push it to the rear side of the oven to remove it



You can access circuit breaker, thermostat, mechanical/digital clock and cable connections after removing the service cover.

7.26 REMOVING THE COOLING FAN

Service cover and top cover plate must be removed before this operation.



Remove the screws that connects to cooling duct.

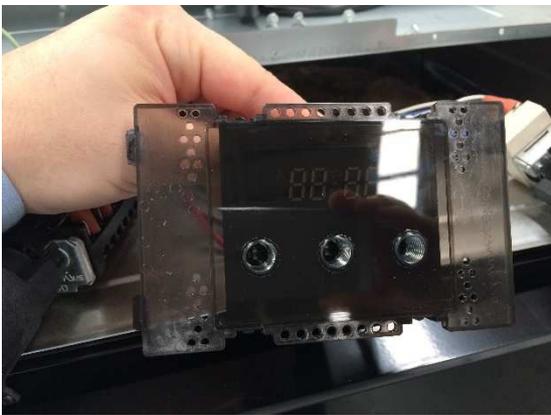


Remove the closed bolt to remove the propeller.



Remove the propeller before removing the motor assembly.
Then remove two screws to which motor group is connected.

7.27 REMOVING THE DIGITAL TIMER



1. Remove the cables.
2. By a pliers unbend and make straight the locking plastics.
3. Pull the timer and remove from the panel

