

 **MINE**



**YAKINIKU HACHIRIN
YH-4121S**

Electric-Type Ductless Barbecue Roaster

Maintenance Manual

(For Maintenance Service Companies)



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Names and Functions of Roaster Components

* Refer to the diagram on the following page.

List of names and functions of each roaster component

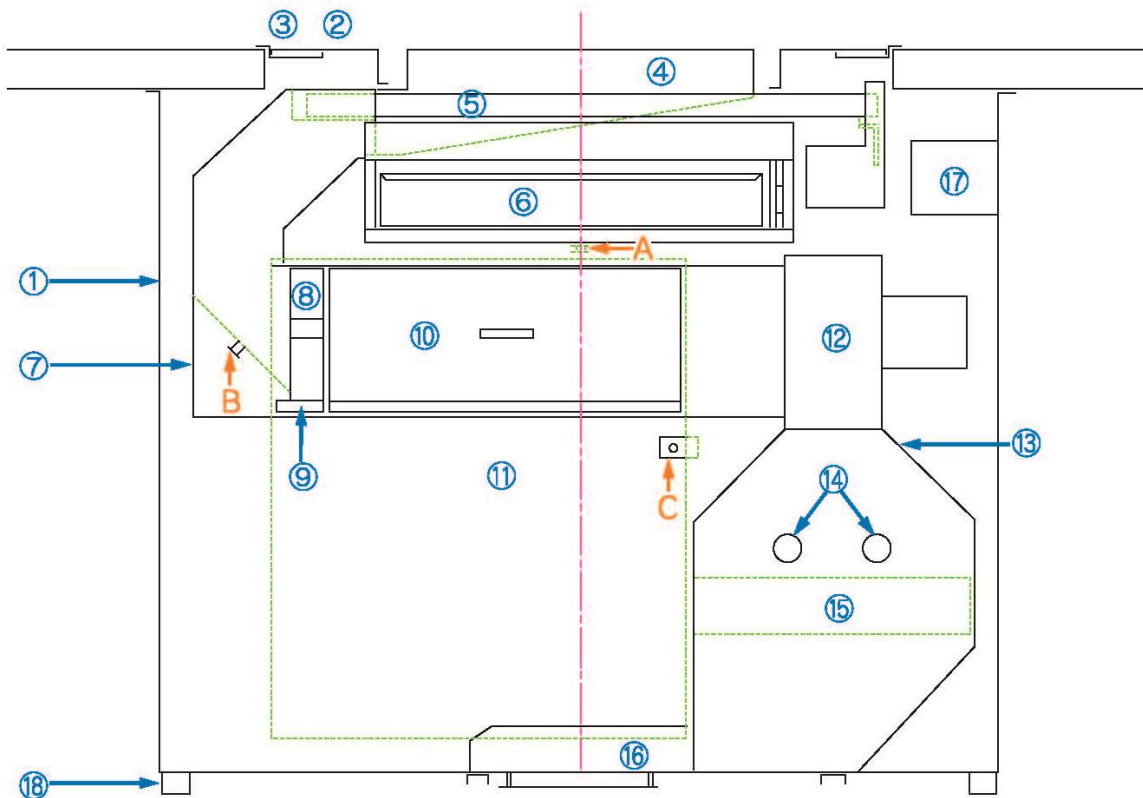
No.	Name	Function
①	Main body box	Housing to cover the entire equipment.
②	Griller top plate	Cover to prevent grease or sauce from the grilled meat from dripping into the inside of the equipment.
③	Support plate for the top plate	Being part of ②, this prevents water or dirt from entering the equipment.
④	Smoke intake nozzle	Nozzle to intake greasy smoke from the grilled meat.
⑤	Cassette heater	An all-in-one heat source that is easily replaceable.
⑥	Water pan	This collects dripped grease and meat juice into the water.
⑦	Griller, electric dust-collector box	Enclosure to contain the following ⑧, ⑨ and ⑩.
⑧	Grease baffle filter	Baffle filter captures large particulates in the greasy smoke
⑨	Oil pan for baffle filter	Pan to collect grease and oil captured in the baffle filter.
⑩	Dust-collecting cells	Using high voltage static electricity, they will process the greasy smoke suctioned from ④ capturing fine and ultrafine particulates.
⑪	Oil pan for the dust-collecting cells	Pan to collect the grease elements dropped from ⑩.
⑫	Sirocco fan	This will take in and exhaust the greasy smoke.
⑬	Deodorizing box	Enclosure to contain the following ⑭ and ⑮.
⑭	Ozone lamps	Lamps to emit ozone.
⑮	Filter case for the deodorizing box	Case to contain the filter that captures and breaks down the residual organic elements and residual ozone.
⑯	Exhaust vent	This will let out the purified vapor.
⑰	Control box	Device to control the entire equipment.
⑱	Adjuster	This provides a horizontal balance for the equipment.

A	No-water safety thermostat (90°C)	When no water is left in the pan, it detects the temperature and turns off the power supply.
B	Fire-prevention thermostat (115°C)	If fire occurs in the duct, this detects the temperature in the duct and turns off the power supply.
C	Maintenance door switch	When the maintenance door is opened, the power supply turns off.

Major specifications

Product name	Electric type non-duct roaster (barbecue roaster) YH-4121S
Outside dimensions	Main body dimensions: 864 (L) x 370 (D) x 685 (H) mm
	Effective fire-bed dimensions: 410 (L) x 210 (D) mm
	Grill dimensions: 400 (L) x 200 (D) mm
Electric capacity	208V single-phase 3.4 kw
Heating method	Far-infrared ray sheath heater
Equipment materials	Body: Zinc-plated steel plate finished with baked powder coating
	Internal structure: Stainless steel
Equipment weight	75 kg
Controls	Heater fan: On/off switch
	Heat and air flow volumes: Adjustable

Names of Roaster Components



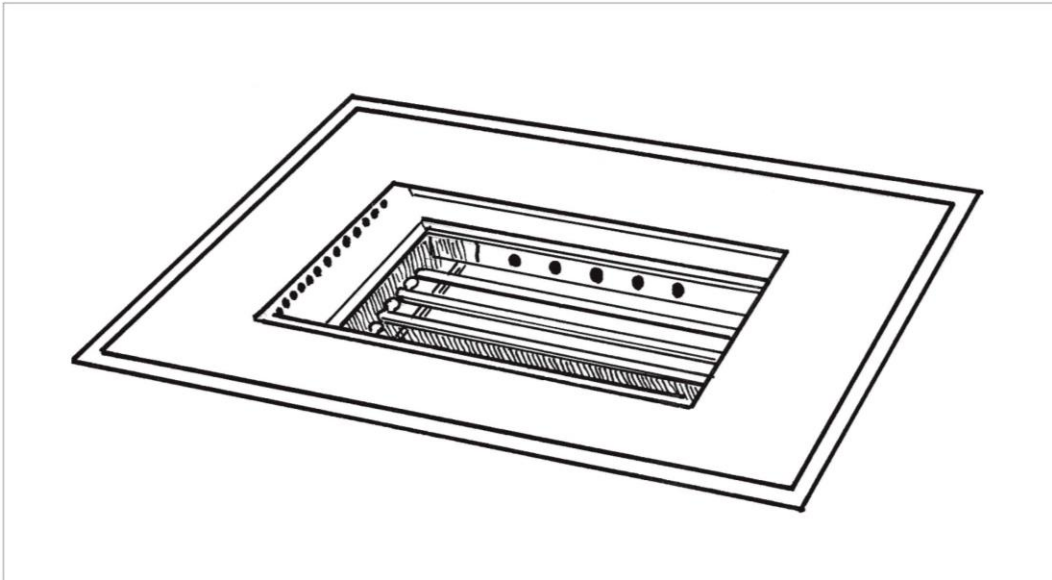
Names of components

- | | | |
|-----------------------------------|---|---------------------------------------|
| ① Main body box | ⑦ Griller, electric dust-collector box | ⑬ Deodorizing box |
| ② Griller top plate | ⑧ Grease Baffle Filter | ⑭ Ozone lamps |
| ③ Support plate for the top cover | ⑨ Oil pan for the pre-filter | ⑮ Filter case for the deodorizing box |
| ④ Smoke intake nozzle | ⑩ Dust-collecting cells | ⑯ Exhaust vent |
| ⑤ Cassette heater | ⑪ Oil pan for the dust-collecting cells | ⑰ Control box |
| ⑥ Water pan | ⑫ Sirocco fan | ⑱ Adjuster |

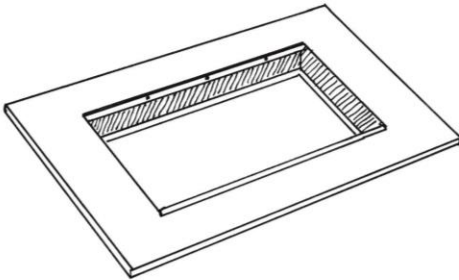
Safety devices

- A No-water safety thermostat (90°C)
 B Fire-prevention thermostat (115°C)
 C Maintenance door switch

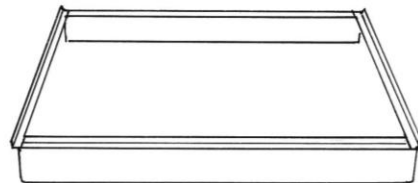
Component Name: ① Heater Section



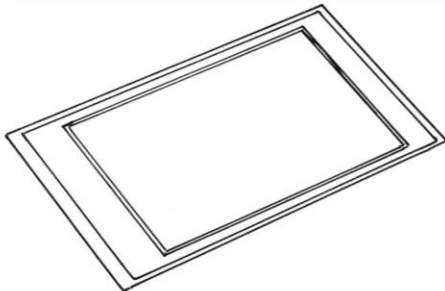
Griller top plate



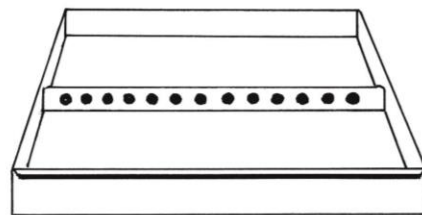
Middle frame



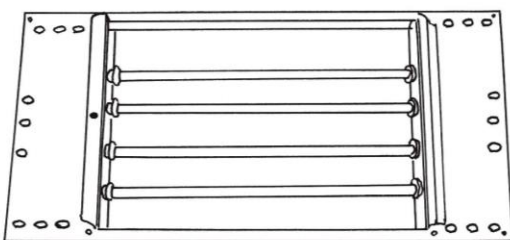
Support plate for the top plate



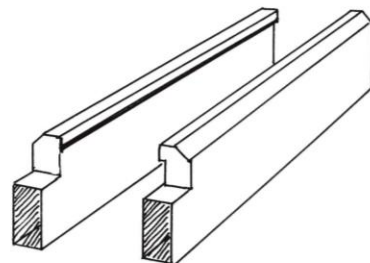
Water pan



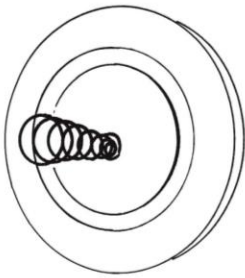
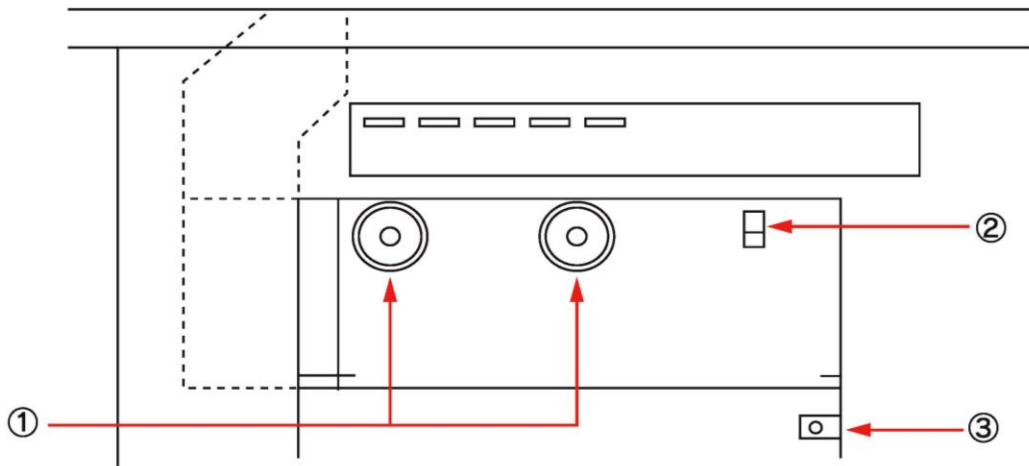
Cassette heater



Smoke intake nozzle



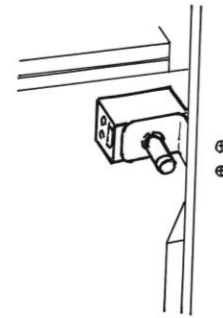
Component Name: ② Dust-Collecting Cell Section



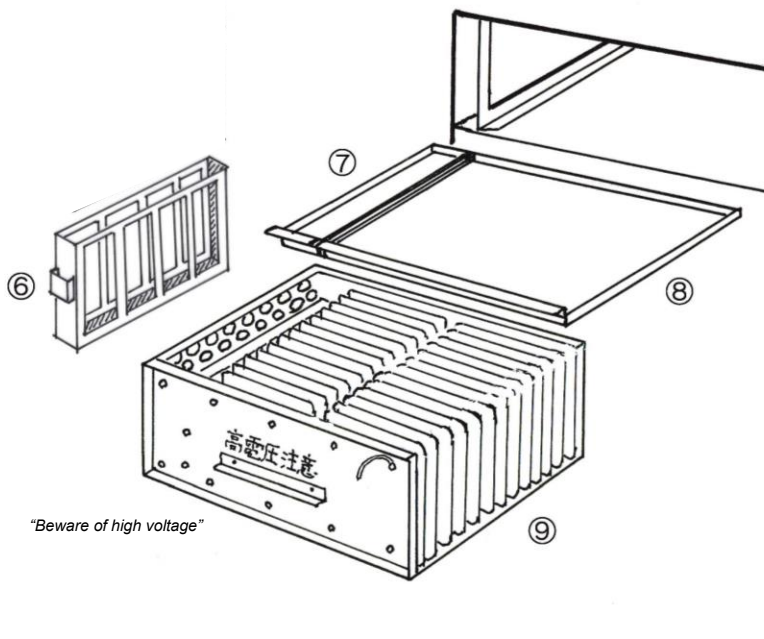
① Conductor



② Grounding copper plate



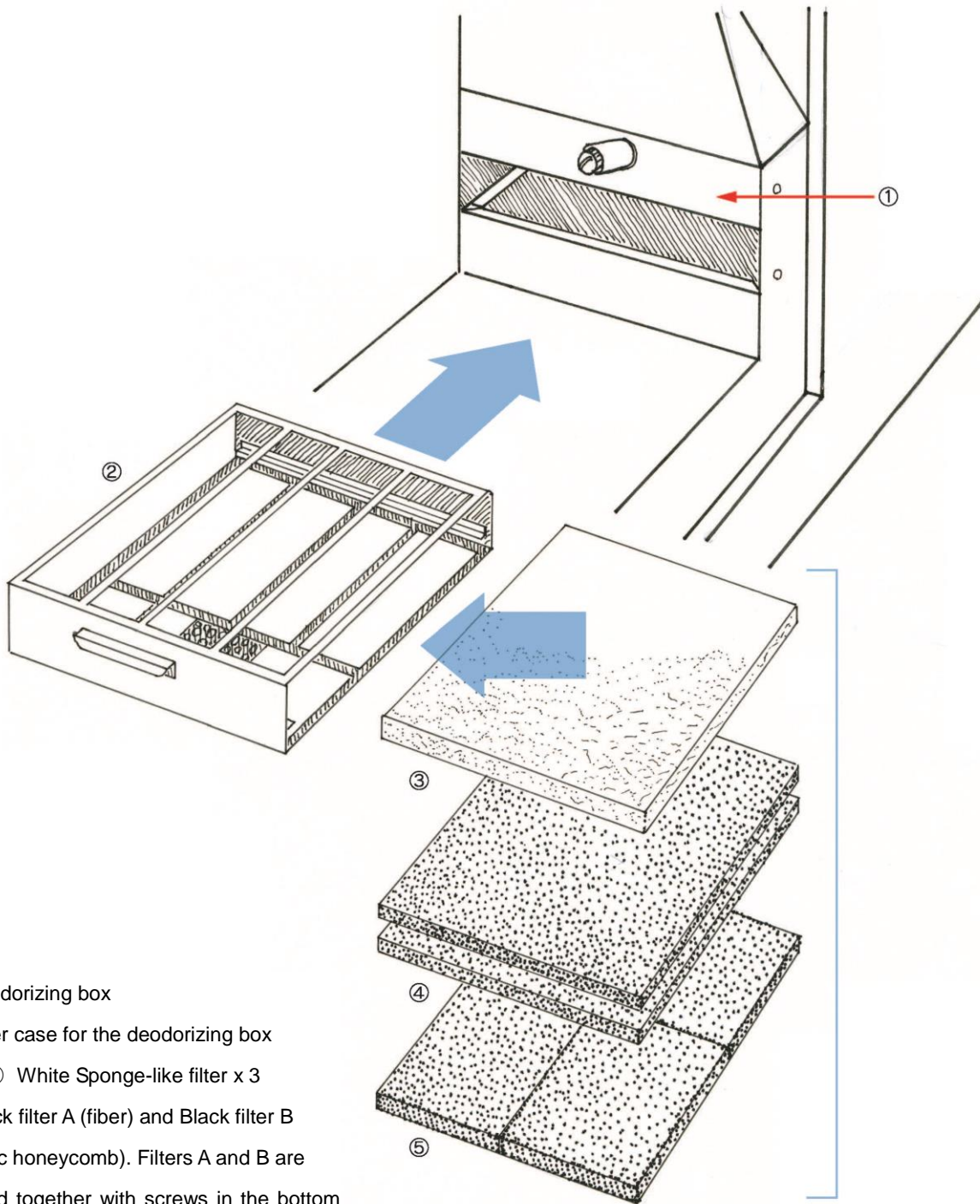
③ Door switch



"Beware of high voltage"

- ⑥ Grease Baffle Filter
- ⑦ Oil pan for baffle filter
- ⑧ Oil pan for the dust-collecting cells
- ⑨ Dust-collecting cells

Component Name: ③ Deodorizing Section



- ① Deodorizing box
- ② Filter case for the deodorizing box
- ③ & ④ White Sponge-like filter x 3
- ⑤ Black filter A (fiber) and Black filter B (ceramic honeycomb). Filters A and B are Mounted together with screws in the bottom of the Filter Case.

To Use Our Product Safely and Correctly

To use our product safely and correctly, precautionary and prohibitive uses are described as follows:

Warning

This product is electrical equipment. Do not wash the equipment itself or the cassette heater with water.

NFPA 96

- ◇ Installation, use, and maintenance of the Yakiniku Hachirin are to be in accordance with NFPA 96, the Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations.

Applications

- ◇ Limit the use of this equipment to heating or cooking food only.
- ◆ Otherwise, unexpected accidents may occur.

- ◇ Do not climb onto the equipment or place anything heavy on the equipment.
- ◆ This may cause equipment failure or accident.

Prohibition of disassembly

- ◇ No matter what, do not disassemble the equipment.
- ◆ It may cause equipment failure or damage, or electric shock or bodily injury.

Power supply

- ◇ Limit the use of the power supply to that which is suitable for the equipment.
- ◆ Otherwise, a short-circuit accident or fire may occur.

- ◇ Periodically clean the power-supply plug and the outlet, and check them for any connection failure.
- ◆ If they are left for a long period of time, they will collect dust and dirt. If they are continuously used in that condition, a fire or electric shock may occur.

- ◇ To unplug the power supply, be sure to hold the plug itself rather than pull the cable.
- ◆ Pulling the power-supply cable may cause a connection failure.

Fire prevention

- ◇ Do not use any flammable substance such as gasoline or spray around the equipment.
- ◆ This may cause fire or burns.

- ◇ No matter what, do not place burning food materials or other burning materials into the intake nozzle.

- ◇ Be sure to use the equipment with water in the pan.

- ◇ Do not use the equipment when it is excessively dirty.
- ◆ This may cause fire or the operational failure of the equipment.

Prevention of burns

- ◇ Do not touch the heater or the intake vent area with the hands.
- ◆ The area is of high temperature and may cause burns if touched.

- ◇ Do not touch the heater section (including the water pan) with the hands right after using the equipment.

- ◆ It may cause burns. Touching is allowed after the temperature of the heater section has sufficiently cooled.
- ◇ Do not place any object around the heater area.
- ◆ It may be heated by the radiation heat and cause burns if it is touched.

Replacement or consumable parts

- ◇ Do not use parts other than our genuine parts or the parts designated by our company.
- ◆ Otherwise, they may cause an equipment failure, accident or bodily injury.

Ansul System Operation and Inspection

- ◇ Consult the Owners guide in the appendix for operating and inspection procedures.

Ansul System Maintenance

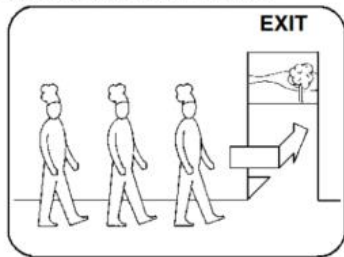
- ◇ Maintenance is required semi-annually. At the 12-year interval, along with the normal maintenance exam.
- ◇ Maintenance must deal with the limitations and parameters of this pre-engineered system. Those individuals responsible for the maintenance of the R-102 system must be trained and hold a current ANSUL certificate in an R-102 training program.
- ◆ Otherwise, they may cause an equipment failure, fire, accident or bodily injury.

Ansul System Manual Actuation

- ◇ The system can be triggered automatically via fusible link or manually via pull handle. Follow the instructions below for manual triggering of the ANSUL system.

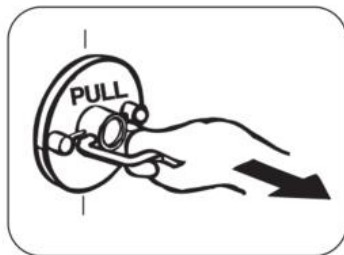
IN THE EVENT OF FIRE IN THE PROTECTED AREA

1. Evacuate others from the premises. In a loud, clear voice say: "WE HAVE A FIRE—PLEASE LEAVE THE BUILDING CAREFULLY, BUT QUICKLY."
- ▶ 3. Call the local fire department or emergency number.



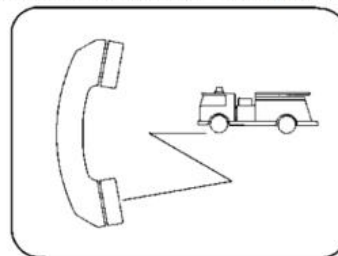
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2. If the automatic actuation has not yet taken place, operate the system manually as follows:
 - Pull handle or pull ring straight out on manual pull station with enough force to actuate the fire suppression system.



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Once the fire suppression system is actuated, equipment to shut off the fuel supply to the cooking appliances will operate.

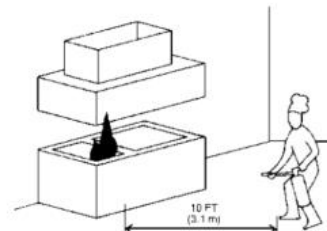


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- ▶ 4. Stand by with a K-GUARD® wet chemical hand portable fire extinguisher.

If you need to use it:

 - a. Pull pin
 - ▶ b. Stand back 10 ft (3.0 m)
 - c. Aim at base of fire, squeeze handle and sweep side to side



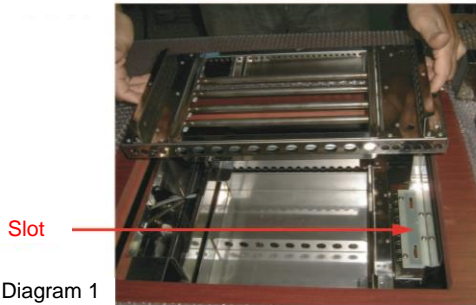
CAUTION

1. Do not attempt to extinguish a grease fire with a hand portable fire extinguisher before the Fire Suppression System has been manually or automatically actuated.
2. Do not discharge wet chemical agent from the K-GUARD Wet Chemical hand portable fire extinguisher unless the fire suppression system will not operate or a re-flash has occurred.
3. Do not attempt to use a Class ABC Multipurpose Dry Chemical, CO₂, or Water type hand portable fire extinguisher in/on an appliance with burning cooking oil or grease.

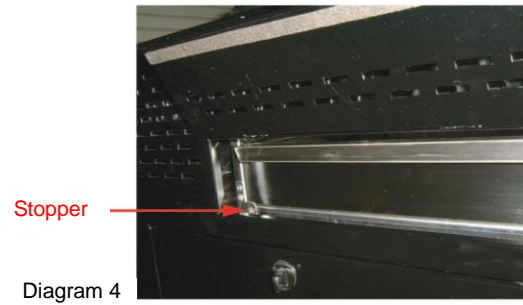
How to Use

● Preparations for use

- 1** Confirm that the cassette heater is firmly inserted into the slots. (Refer to Diagram 1.) (If the insertion is not firm, the slots may be heated, causing an equipment failure.)



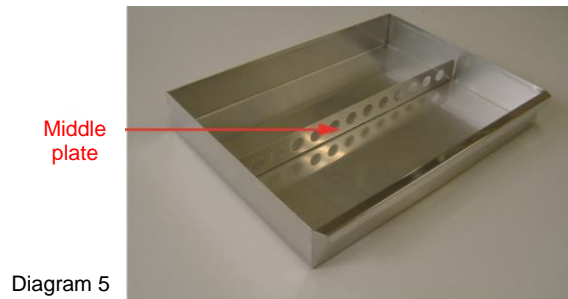
- 4** Confirm that the water pan is firmly set all the way (farther than the stopper in the front) and the water level is covering the middle plate. (Refer to diagrams 4 and 5.)



- 2** Confirm that the smoke intake nozzle is firmly inserted into the slot. (Refer to Diagram 2.) (If the insertion is not firm, the smoke may not be correctly suctioned away.)



- 5** Confirm that the maintenance door is securely closed. (If the door is not correctly closed, the door switch will not be activated and the equipment will fail to turn on.)

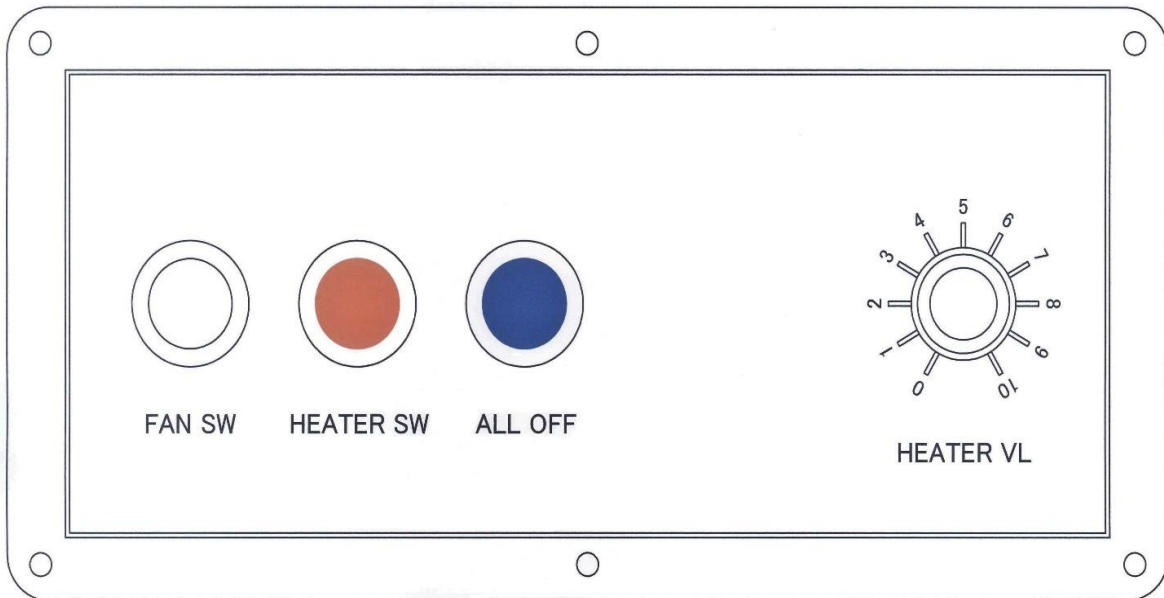


- 3** Confirm that the middle frame is correctly set inside the cassette heater. (Refer to Diagram 3.)



- 6** Confirm that the main power supply is turned on. Also, confirm that the power-supply plug is inserted into the outlet.

Turning on the Power Supply



Control Box

- ① Fan switch ② Heater switch ③ All Off switch ④ Heat adjustment knob

* Go over all the preparations before use described in the previous page and, particularly, ensure that the main power supply and the outlet plug are properly set.

- 1 Turn on the ① fan switch. The white-color lamp will be lit to activate the fan.
- 2 Turn on the ② heater switch. The orange lamp will be lit to activate the heater.
- 3 Adjust the volume of the heat by turning the ③ knob. (The MAX setting is normally used.)
- 4 After use, press the ALL OFF switch (blue) to stop the Hachirin.

* The heater switch will not turn on by itself. It will turn on only after the fan switch is turned on. Under the normal setting, the meat will be fully cooked after four minutes or so.

Care Required for Use

Heater section

- **The cassette heater should not be basically removed unless replacement is required.**
(Frequent removals will loosen the connections, causing problems such as burned meat sticking to the grill.)
- After washing the cleanable components such as the griller top plate, middle frame and smoke intake nozzle, they must be completely dried before putting them back into the equipment.
(If moisture is left on these components, there is the danger of short-circuiting.)

Water pan

- While the equipment is being used or right after it is used, the water in the equipment could be boiling, thus posing a dangerous condition. Extreme care must be used if it is necessary to touch the equipment.
- Heat from the heater causes a large amount of water in the pan to evaporate. Be sure there is always water in the pan. Check the water level every time before cooking for new customers. (If the pan is out of water, the equipment is designed to stop operating.)

Dust-collecting cells (Refer to Photo A)

- When the dust-collecting cells must be removed for cleaning, remove them after eliminating the static electricity using the static-electricity removal cable. (The electrode plates in the dust-collecting cells are loaded with approximately 9,000 volts while the equipment is being used. The power supply is turned off as soon as the maintenance door is opened, but caution is required because the residual static electricity could still be present.)
- When removing the dust-collecting cells, slowly draw out the cells horizontally without bending so that the aluminum fins will not be damaged.
- Check to ensure that the cells are completely dry when putting them back. The moisture left could cause short-circuiting. Additionally, assemble the cells back by firmly inserting them all the way, referring to the right and left markings.

Pre-filter

- The pre-filter assembly consists of a stainless-steel grease baffle filter and tray. After the baffle filter assembly is removed, cleaned, and dried be sure to put them back by firmly inserting them all the way. (note: the baffle filter can be oriented with either end up.)

Deodorizing section filter (Photo B)

- The filter for the deodorizing section consists of 3 sponge-like filters and two black filters. The filter required for cleaning and replacement in regular care is the sponge-like filter. However, since the black filters A (activated carbon) and B (black ceramic honeycomb catalytic filter) are installed in the same case with screws, the utmost caution is required in handling. **Particularly, the black filter B (Photo B) should be handled with extreme care because it is extremely fragile.**

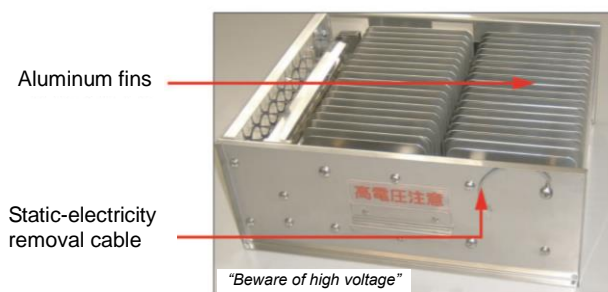


Photo A



Photo B

Routine Handling Care: Guidelines for Cleaning the Components

* Be sure to turn off the power supply before cleaning.

Everyday cleaning

1. Griller top plate ----- Wipe with a soft cloth after wetting and wringing it well. Avoid the use of anything hard such as a scrub brush.
2. Support plate for the top plate ----- Clean it in the same manner as the griller top plate.
3. Cassette heater ----- Wipe the surfaces of the heater with a well-wrung cloth when there is still residual heat left on the heater.
4. Middle frame ----- * Using the detergent, wash and rub the frame with a scrub brush. When the dirt is excessive, immerse the frame in hot water and allow it to soak overnight.
5. Water pan ----- Clean it in the same manner as the middle frame. **Do not use a metal scrub brush.**

Weekly cleaning

1. Smoke intake nozzle ----- After soaking the nozzle in hot water with detergent, rinse the nozzle without scrubbing. Alternatively, wash in a commercial dishwasher.
2. Pre-filter case ----- Clean the baffle filter and drip pan in a commercial dishwasher or degreaser. Alternatively, soak in hot water with detergent, scrub and rinse the filter assembly.

Semimonthly cleaning

1. Dust-collecting cells ----- Place carefully and wash in a commercial dishwasher. Alternatively, soak the cells in hot water with detergent, and rinse them. **Do not rub them with a metal brush.**
2. Deodorizing section filter ----- Clean the sponge-like filter by soaking in hot soapy water, thoroughly rinsing and drying them; replace every two months.
Do not wash the black filters A and B. They must be handled with extreme care, since they are fragile. Replace filter A every six months.

* Detergent: Mild detergent used for washing dishes. When there is excessive dirt, mildly alkaline detergent can be used to remove dirt from the area around the grill and fan blades.

* The above frequencies are simply suggested guidelines. The cleaning frequency will vary according to the frequency of the equipment use.

Routine Handling Care: Methods of Routine Handling Care

* After use, be sure to turn off the main power supply.

* Because this equipment is electric, any moisture may cause short-circuiting. When a cloth is used for cleaning, it must be well wrung.

Cassette heater

- After the power supply is turned off, wipe the surfaces of the heater with a well-wrung cloth while there is still residual heat in the heater.
(Removing salt and other substances left on the heater surfaces will prolong the life of the heater.)

Water pan

- When cleaning the water pan, **avoid the use of anything metallic such as a metal brush.** (If a metal brush is used, it may cause pinholes in the pan.)
If the pan is excessively dirty from the meat sauce, the pan must be left to soak before the dirt is rinsed off.

Smoke intake nozzle

- The inside of the nozzle is **coated with Teflon. Do not rub it when cleaning.**
- If it is excessively dirty, it should be soaked in hot water with detergent and then rinsed.

Dust-collecting cells

- When the dust-collecting cell is removed, wipe the inside wall surfaces with a dry cloth or kitchen towel. Also, similarly wipe the conductors located deep within. (Do this carefully so that the springs will not be bent.)
- Wash the dust-collecting cell and drip pan in a commercial dishwasher. Alternatively, if a commercial dishwasher is not used, soak the cells and pan overnight in hot water of 50° to 60°C with the proper amount of detergent in a large bucket or sink tub. Rinse them the next day with water, and sufficiently dry them. (Let them dry by themselves or dry them in the shade for half a day or so.)
- When strong alkaline detergent is used, it may damage the aluminum fins. No matter what, do not soak them more than 15 minutes.
- **No matter what, do not wash them by rubbing them with hard brushes.** Always wash simply by rinsing them. Additionally, be sure to confirm that the cells are completely dry before putting them back into the equipment. (The residual moisture may cause short-circuiting, resulting in equipment failure.)
- After cleaning and before putting the cells back into the equipment, check to see if moisture or lint is left between the fins or the fins are bent. (This problem may cause the cells to leak, making crackling noises.)

Pre-filter

- Wash the grease baffle filter and drip pan in a commercial dishwasher or, alternatively, apply a proper amount of detergent to the metal-mesh filter, and wash it well using a brush.

Deodorizing section filter

- The sponge-like filters are cleaned by soaking them in hot water with detergent, and rinse them while gently pressing. Replace every 2.5 months.
- **The black filter A (sponge-like activated carbon) should not be washed.** It must be replaced every two to three years.
- **The black filter B (honeycomb shaped ceramic) should not be washed, either.** It must be replaced every two to three years.

Diagnostic Troubleshooting Flowchart

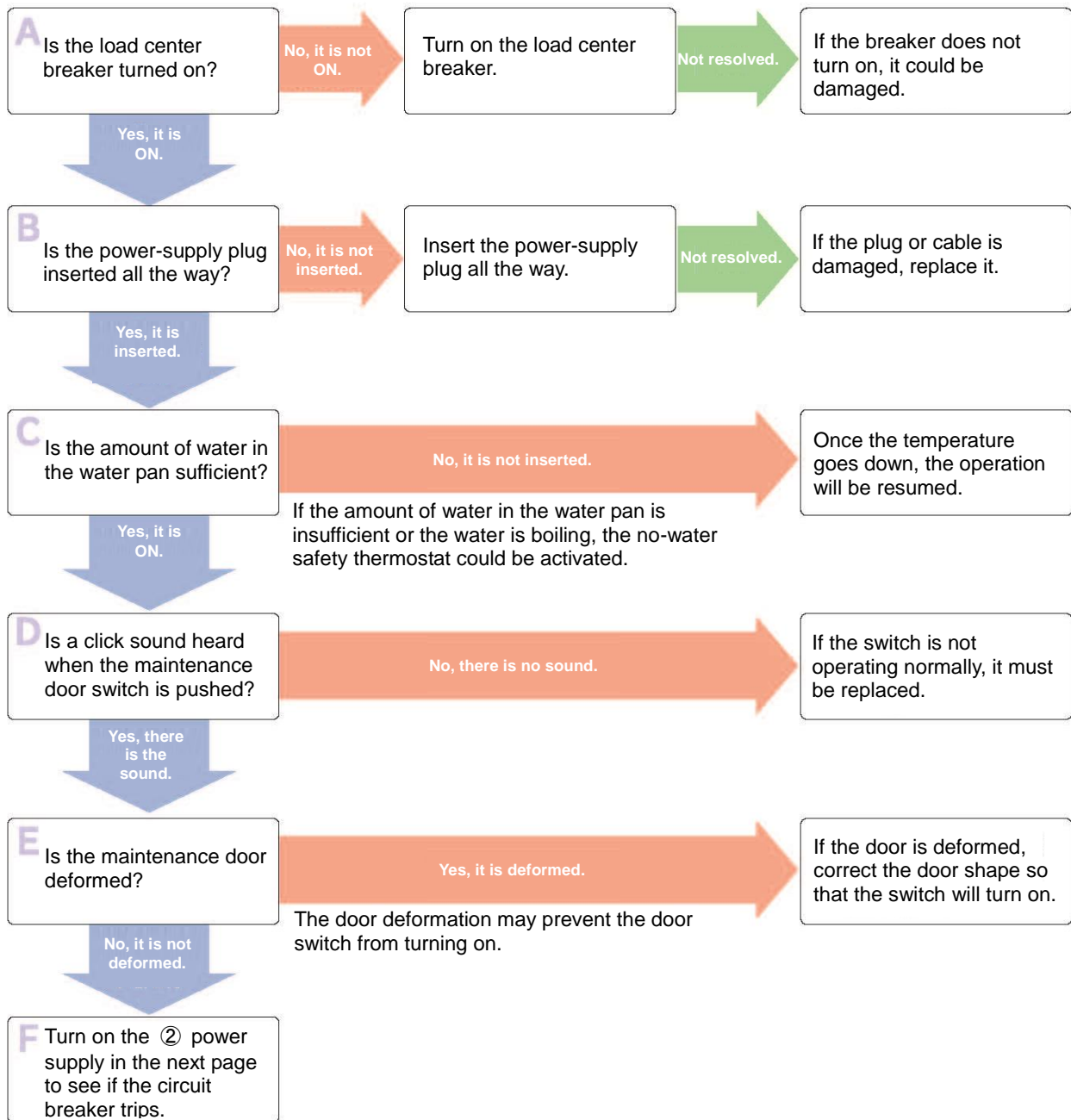
* Before conducting diagnostic troubleshooting, be sure to hear the specific description of the failure from the user.

What kind of failure was reported from which part?

When did it happen?

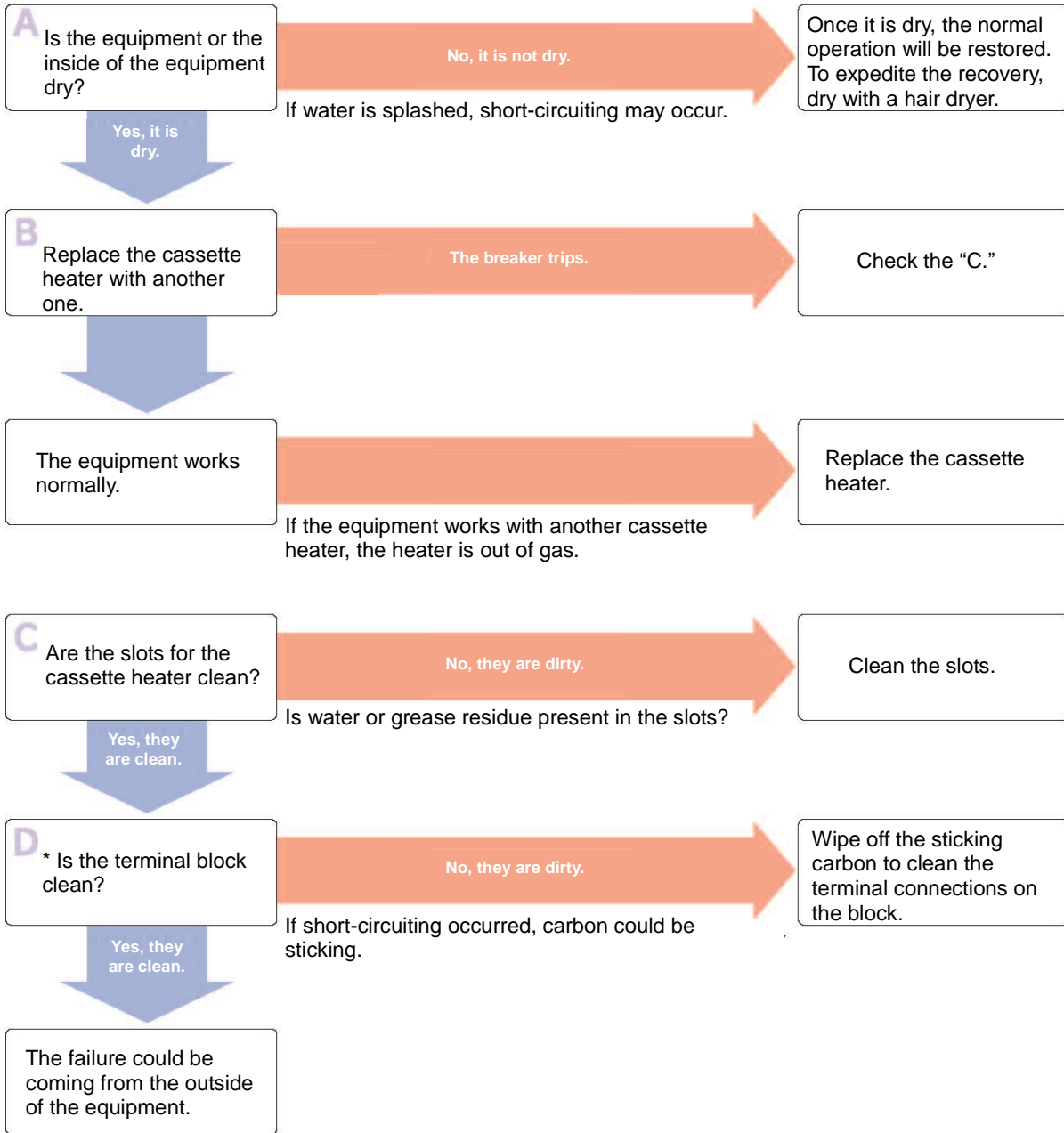
Does the failure happen at all times or occasionally?

Power-supply trouble: ① No power supply is available.



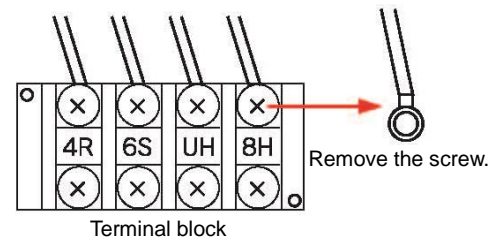
Diagnostic Troubleshooting Flowchart

Power-supply trouble: ② When the power supply is turned on, the circuit breaker trips.



* The terminal block in "D"

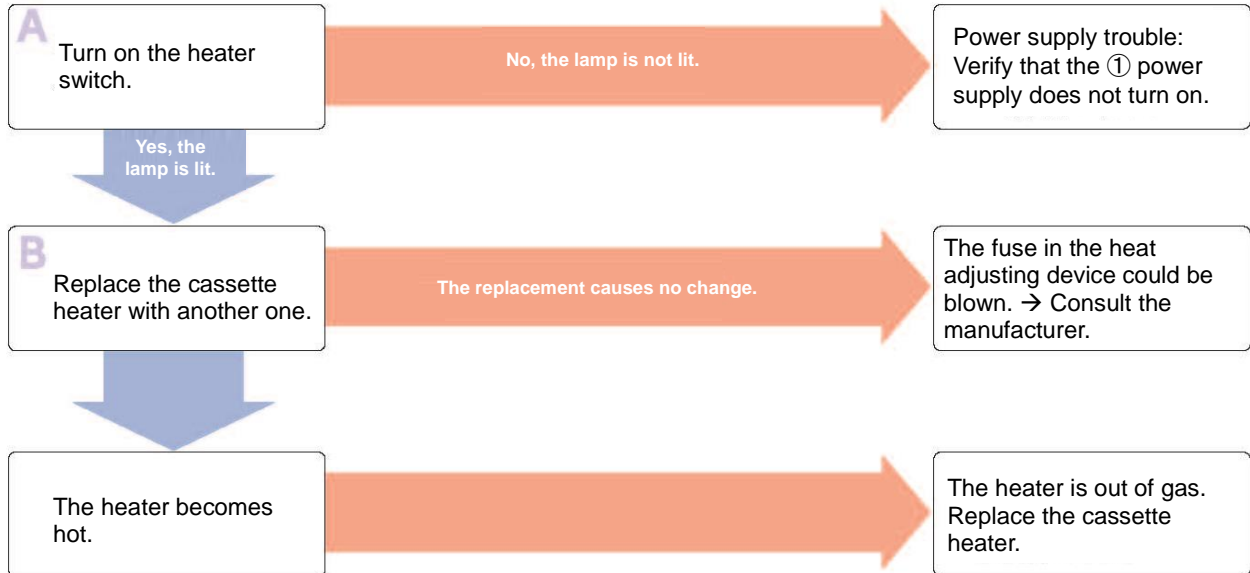
Open the cover beneath the control box (using a Phillips screwdriver) and locate the terminal block in the front. Remove the screws for wire connections from the terminal block, and closely check the connectors (at the tip of each wire). Caused by short-circuiting from whatever reason, carbon could be sticking to the screws, terminals or terminal block. If so, wipe off the carbon. The problem may be resolved when the clean terminals are attached again. * At the time of troubleshooting, be sure the power supply is turned off.



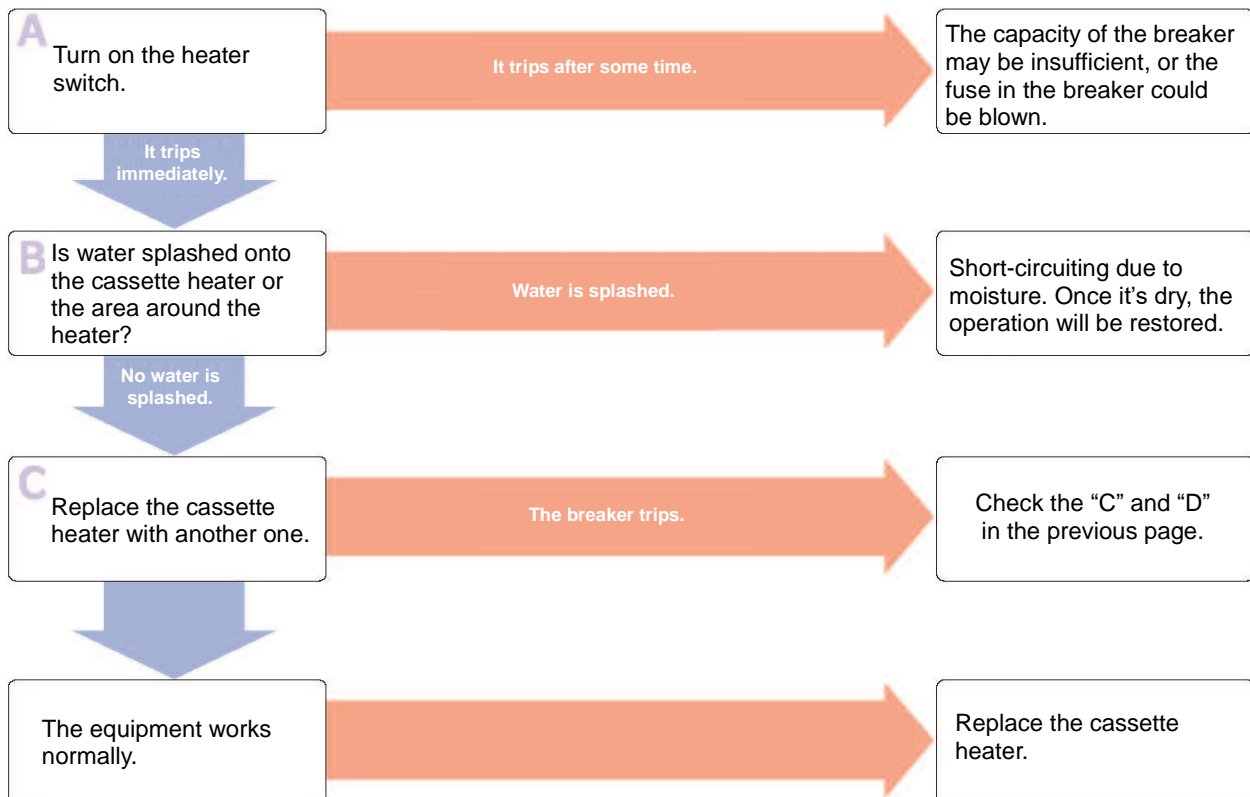
Diagnostic Troubleshooting Flowchart

Problems associated with the heater

1. The heater does not become hot even if the switch is turned on.



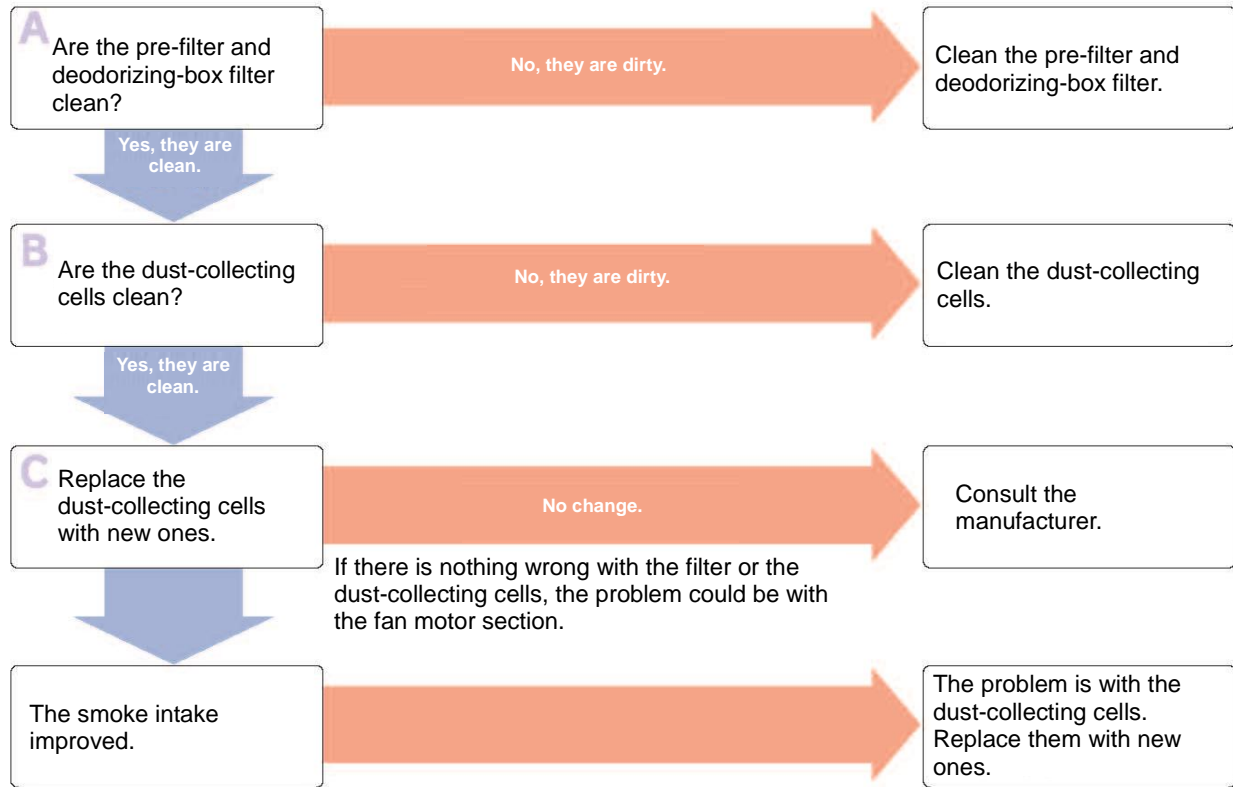
2. When the switch is turned on, the breaker trips.



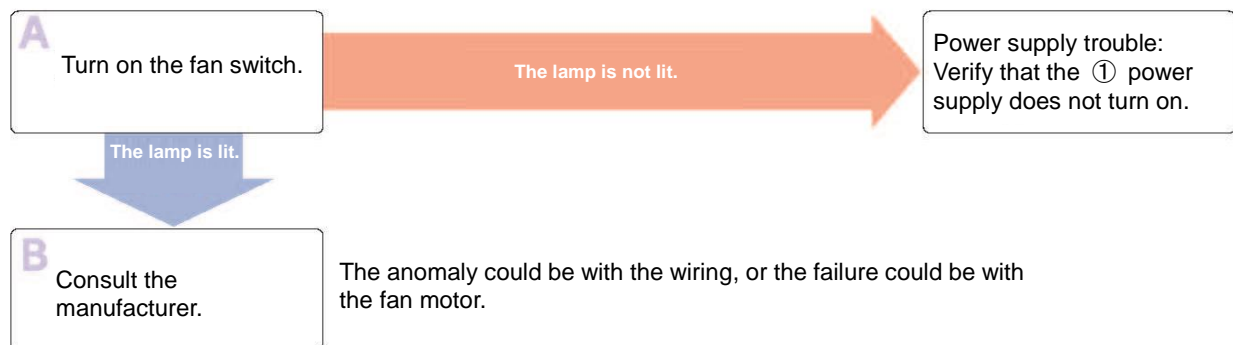
Diagnostic Troubleshooting Flowchart

Problems associated with smoke or odor: ① Fan

1. The smoke intake is insufficient.



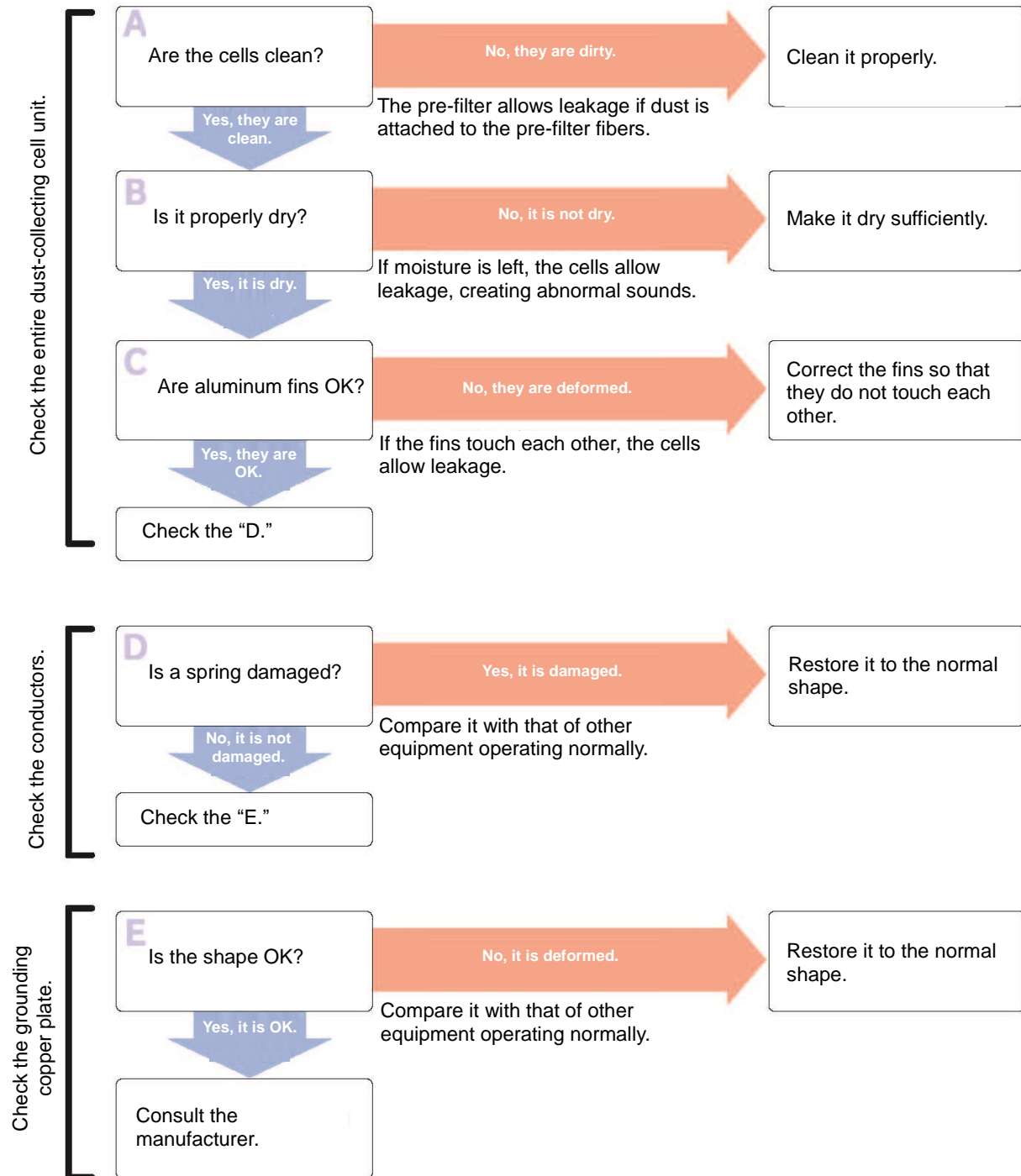
2. The fan does not operate.



Diagnostic Troubleshooting Flowchart

Problems associated with smoke or odor: ② Dust-collecting cells

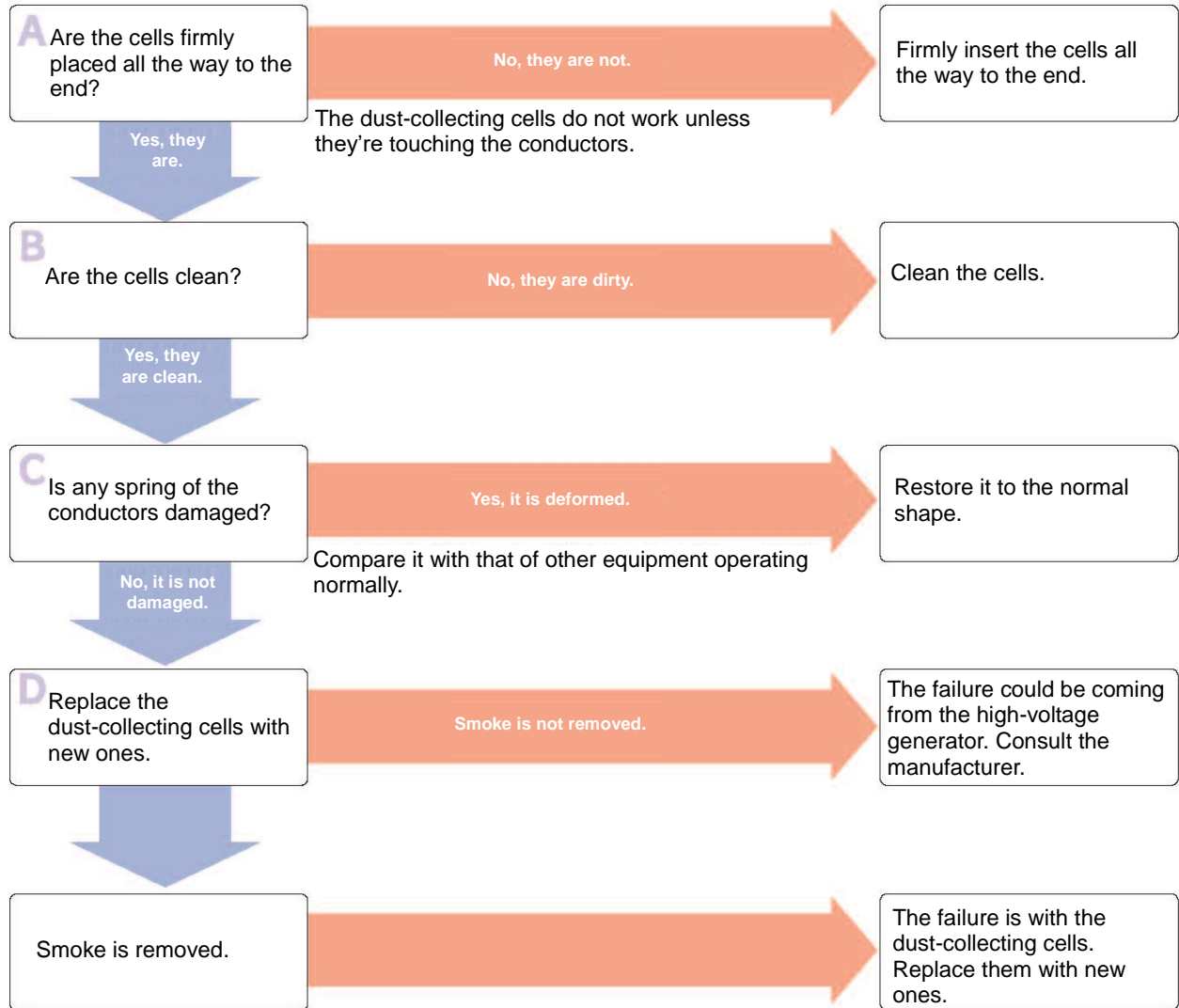
Abnormal noise such as a buzzing or crackling sound occurred.



Diagnostic Troubleshooting Flowchart

Problems associated with smoke or odor: ② Dust-collecting cells

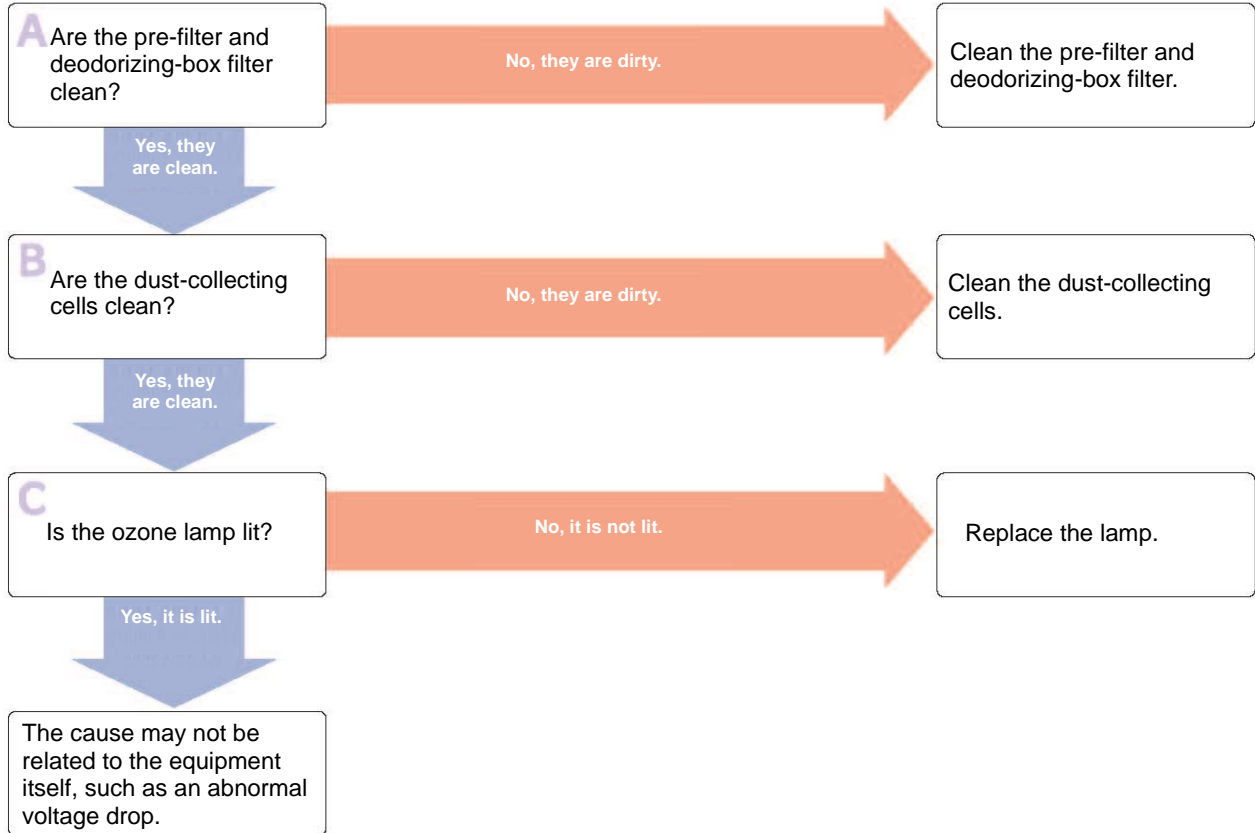
2. Smoke is not properly removed.



Diagnostic Troubleshooting Flowchart

Problems associated with smoke or odor: ② Deodorizing section

Deodorizing capability has deteriorated. (Odor is not completely removed.)



Component Replacement Method: Cassette Heater Replacement Procedure

* When the heater needs to be replaced, be sure to turn off the main switch for the load center breakers. The heater replacement must be performed after turning off the main switch for the load center breakers and verifying the OFF position of the equipment switch.

- 1 Remove the grill, middle frame and griller top plate (including the support plate for the top plate).
- 2 Remove the smoke intake nozzle.
- 3 Using the hands, hold the guides on the side of the control box as shown in Photo A and remove the plugs from the slots as shown in Photo B.
- 4 Insert a new cassette heater into the slots. At that time, sufficient care should be given to ensure that the plugs will go into the slots securely.
- 5 Once the new heater is installed, install the other respective components in the reverse order.

* The slots are made extremely tight and it may be difficult to insert the plugs. At that time, proper care must be given because the insulators attached to the cassette heater may be damaged if excessive force is applied for the insulator.

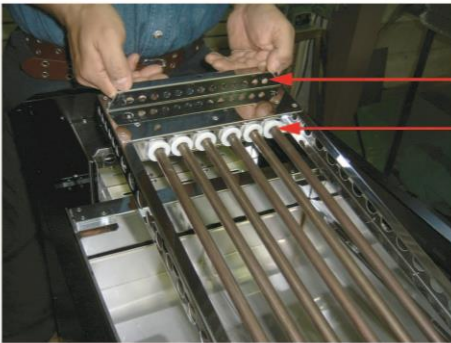


Photo A

Guide

Plug

Insulator

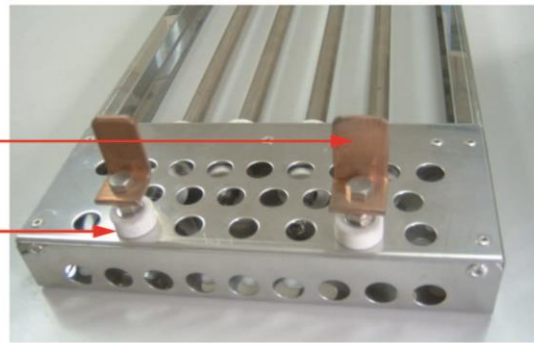


Photo B

Component Replacement Method: Ozone Lamp Replacement Procedure

Lamp replacement procedure

- 1 Remove the cover located next to the right side of the maintenance door. A Phillips screwdriver is required. See Photo A.
- 2 Remove the two 1P connectors at the tip of wiring for the attached lamp. See Photo B.
- 3 Remove the screws that hold the lamp, and take out the lamp.
- 4 Install a new lamp and tighten the screws.
- 5 Insert the 1P connectors firmly.

* If the replacement procedure is not correctly followed, there may be the danger of breaking the lamp. Be careful.

Checking the lighting of the lamp

- 1 Open the maintenance door and remove the whole case for the deodorizing filter unit located in the lower-right corner.
- 2 Push the door switch located in the middle of the right side of the maintenance door while the fan switch is turned on.
- 3 A pale-blue light can be seen at the place where the deodorizing unit filter is set. See Photo C. (It could be difficult to see, but check to see if two lamps are lit.)

* No matter what, do not look at the light of the lamps directly for a long period of time.

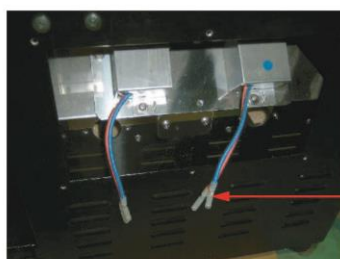


Photo A

1P connector



Photo B



Photo C

Component Replacement Method: Lamp Inverter Replacement Procedure

If the lamps are not lit even after replacement, the problem could be with the lamp inverter.

Lamp inverter replacement procedure

- 1 Open the cover located next to the right side of the maintenance door. (A Phillips screwdriver is required.) Refer to Photo A in the previous page.
- 2 Remove two of the above 2P connectors and four of the bottom 1P connectors connected to the lamps. See Photo D.
- 3 Remove the screws installed on the left and right sides, and remove the inverter.
- 4 Replace with a new kit and tighten the screws.
- 5 After completing the replacement, confirm that the lamps will light.

* Because the lamp inverter is mounted on a slanted surface, hold a rather small screwdriver in a slanted position to remove and put back the screws.

* When removing the connectors, be sure to hold each connector itself. If the wire is held and pulled instead, the wire may come off from the respective connector.

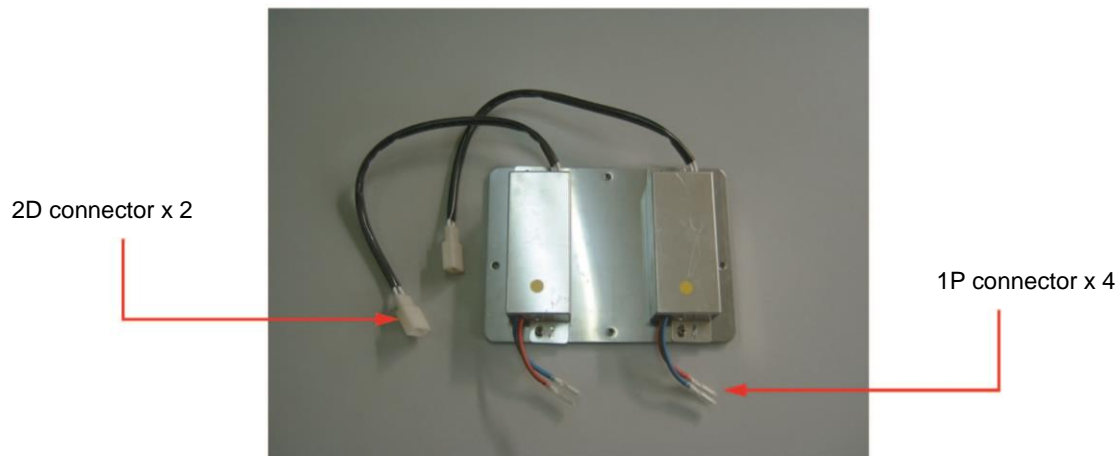


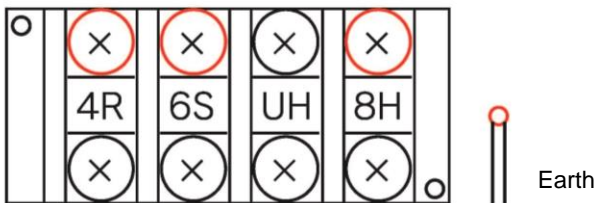
Photo D

Component Replacement Method: Control Box Replacement Procedure

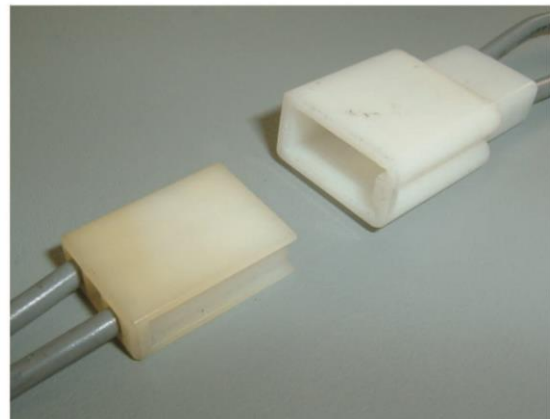
In the event any problem associated with the control box is reported, such as if the lighting of the lamps or the adjustment of the air flow and/or heat is disabled, it is basically recommended that you replace the entire control box.

Control box replacement procedure

- 1 Remove the cover from beneath the control box. (A Phillips screwdriver is required.)
- 2 Remove the terminals connected to the **4R, 6S, and 8H** locations of the terminal block mounted in the front.
- 3 Remove the terminal connected to the grounding at the right end.
- 4 Remove the four connectors for **TRANS F, VOLUME, FAN and OVER HEAT**.
- 5 Once all of the above components are removed, the control box can be drawn out after removing the screws.
- 6 Replace with a new control box and put the other components back in the reverse order.



Terminal block



Connector



OWNER'S GUIDE

R-102™ RESTAURANT FIRE SUPPRESSION SYSTEM

The National Fire Protection Association (NFPA) recommends that employees be instructed in personal safety and the operation of the system. ANSUL® provides this owner's guide with each Restaurant Fire Suppression System.

This owner's guide has been provided to help you understand...

- ...how your restaurant system works
- ...your responsibilities for maintenance
- ...what to do in case of fire

This owner's guide is not intended to cover all requirements detailed in the Installation, Operation, Recharge, Inspection, and Maintenance Manual, Part No. 418087. This guide is solely for the use of the end-user to become more knowledgeable with the fire suppression system and the steps necessary in the event of a fire.

Should the end-user want to find out more information concerning the ANSUL Restaurant Fire Suppression System, your authorized ANSUL distributor can furnish a detailed Installation, Operation, Recharge, Inspection, and Maintenance Manual.

YOUR ROLE IN FIRE PROTECTION

Your ANSUL Fire Suppression System is of the highest quality. It has been carefully engineered to be reliable, manufactured to exacting standards, proven by over 30 years of service, and custom designed to protect your particular hazard.

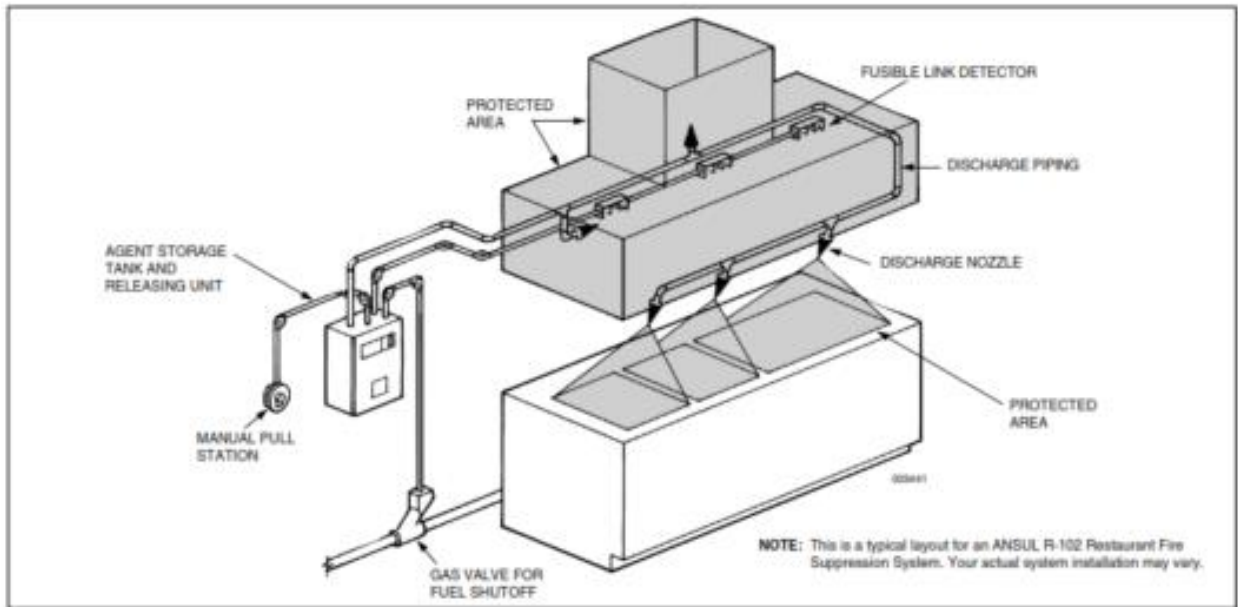
If properly maintained, your system should provide years of protection. However, the primary objective of this guide is to provide enough basic information to help you to prevent a disastrous fire. By observing some fundamental rules, you can greatly reduce the risk of serious fire damage.

- 1. Keep all kitchen equipment free of grease build-up, including gas flues which are not intended to be grease coated.
- 2. Never use flammable solvents or cleaners. Flammable residues could be left in the hazard area.
- 3. Never store flammable materials near cooking equipment or gas flue areas.
- 4. Make certain obstructions, such as utensils, pots, pans, cooking materials, etc., are not stored in areas that can obstruct the fire suppression system discharge.
- 5. Operate your exhaust system whenever the appliance is pre-heating, heating, cooking or cooling. This helps to prevent excessive heat build up which could actuate the system.

- 6. Never operate filter-equipped exhaust systems without the filters in place. Excessive grease may build-up in the hood and duct system. Cooking with filters removed can impact air movement and/or temperatures, which may result in system discharge. Use only UL listed filters.
- 7. Never restrict air intake passages; this can reduce the efficiency of your exhaust system. Cooking with filters that contain excessive amounts of grease can impact air movement and/or temperatures, which may result in system discharge.
- 8. Operate all UL tested grease extractors by the manufacturer's instructions to ensure effective grease removal from the hood and duct system.
- 9. Never tamper with the system components (i.e., detectors, nozzles, agent storage container(s) or releasing unit(s)).
- 10. Before you revise your kitchen equipment layout or make changes which affect the basic configuration of the protected area, contact your trained, authorized ANSUL distributor for a system update evaluation. The system is made up of components tested within limitations contained in the detailed installation manual. The system designer must be consulted whenever changes are planned for the system or area of protection.
- 11. Do not allow anyone except an authorized ANSUL distributor to perform maintenance on your ANSUL system. Maintenance to your system must be performed semi-annually. It is essential that the system be maintained properly.
- 12. Post operating instructions in an obvious place in the kitchen and make sure your employees know what to do in case of fire.
- 13. Make certain that hand portable extinguishers are properly placed and compatible with the restaurant system. An authorized ANSUL distributor can assist your needs.

OWNER'S GUIDE

R-102™ RESTAURANT FIRE SUPPRESSION SYSTEM



HOW THE ANSUL R-102 SYSTEM OPERATES

1. A fire starts in the protected area...
2. Heat sensitive fusible link detectors activate the system.
3. Appliance energy sources are automatically shut off by accessory equipment appropriate for the type of fuel used by your cooking equipment.
4. The fire extinguishing agent is discharged into the plenum and duct and onto the cooking appliances.
5. The agent and the hot grease mix to form a foam. This temporarily seals combustible vapors, helping to inhibit re-ignition. This seal must not be disturbed.

INSPECTING YOUR R-102 SYSTEM

Your ANSUL R-102 system should be inspected at least monthly. **Should you discover any irregularities, contact an authorized ANSUL distributor immediately.**

1. Never use corrosive cleaning solutions on the fusible links or cables. Check to make certain there is no corrosion to any of the detection system components. Certain high alkaline cleaners could cause corrosion.
2. Ensure that metal fusible links are replaced semi-annually. Deterioration of these links could cause the system to be actuated or to malfunction in case of a fire.
3. Make certain the releasing unit has not been tampered with, and that visual inspection seals are not broken or missing.
4. At daily intervals check your system for loose pipes and missing or grease covered nozzle caps. Make certain

nozzle caps are in place over the ends of each nozzle. Temporarily remove cap, check to make certain it is not brittle, and snap back on nozzle.

Note: If caps are damaged or missing, contact the authorized ANSUL distributor for immediate replacement.

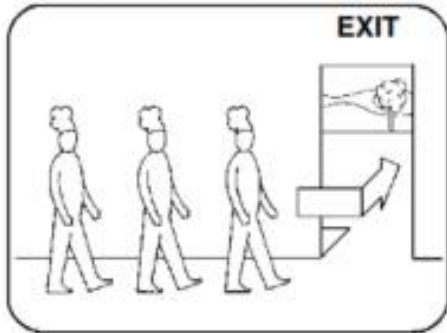
5. Check each metal blow-off cap and make certain the cap can be turned freely on the nozzle.
6. Periodically check your visual indicator on the releasing unit to make certain the system is cocked.
7. Have your system inspected by an authorized ANSUL distributor at a maximum of 6 month intervals and immediately after major hood and duct cleaning. Often fusible links are wired shut during the cleaning process to prevent accidental activation. This will prevent the system from operating automatically. It's also possible that your system might have been disconnected, damaged, or has accumulated excessive deposits of grease causing your system to become inoperative.
8. Check that the manual pull station is not obstructed, has not been tampered with, and is ready for operation.
9. Make certain that each tank and releasing unit is mounted in an area with a temperature range of 32 °F to 130 °F (0 °C to 54 °C).
10. Make certain the agent storage tank is not in an area in which the temperature can exceed 130 °F (54 °C) or can be heated to a temperature exceeding 130 °F (54 °C) due to conductivity through heated discharge piping.

OWNER'S GUIDE

R-102™ RESTAURANT FIRE SUPPRESSION SYSTEM

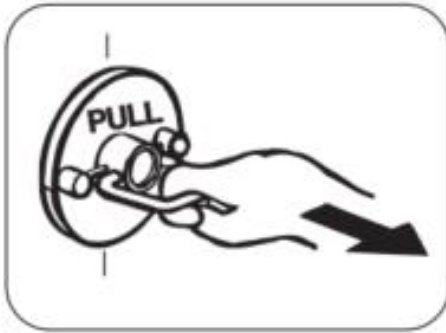
IN THE EVENT OF FIRE IN THE PROTECTED AREA

1. Evacuate others from the premises. In a loud, clear voice say: "WE HAVE A FIRE--PLEASE LEAVE THE BUILDING CAREFULLY, BUT QUICKLY."



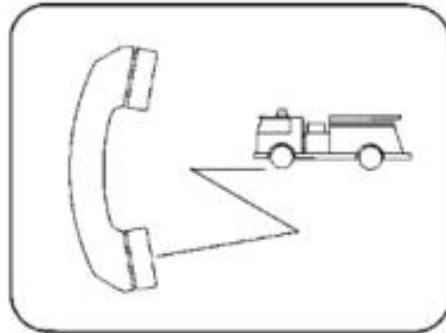
2. If the automatic actuation has not yet taken place, operate the system manually as follows:

- Pull handle or pull ring straight out on manual pull station with enough force to actuate the fire suppression system.



Once the fire suppression system is actuated, equipment to shut off the fuel supply to the cooking appliances will operate.

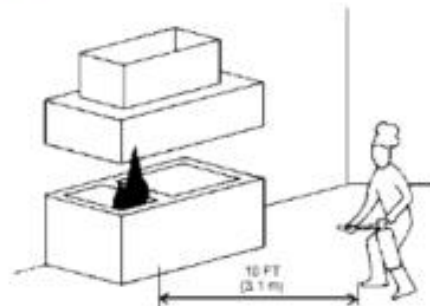
3. Call the local fire department or emergency number.



4. Stand by with a K-GUARD® wet chemical hand portable fire extinguisher.

If you need to use it:

- a. Pull pin
- b. Stand back 10 ft (3.0 m)
- c. Aim at base of fire, squeeze handle and sweep side to side



CAUTION

1. Do not attempt to extinguish a grease fire with a hand portable fire extinguisher before the Fire Suppression System has been manually or automatically actuated.
2. Do not discharge wet chemical agent from the K-GUARD Wet Chemical hand portable fire extinguisher unless the fire suppression system will not operate or a re-flash has occurred.
3. Do not attempt to use a Class ABC Multipurpose Dry Chemical, CO₂, or Water type hand portable fire extinguisher in/on an appliance with burning cooking oil or grease.

OWNER'S GUIDE

R-102™ RESTAURANT FIRE SUPPRESSION SYSTEM

BEFORE RESUMING BUSINESS

1. Immediately after discharge, call your authorized ANSUL distributor to inspect and recharge your Fire Suppression System.
2. Have your ANSUL distributor determine the cause of the system actuation.
3. Area must be cleaned up within 24 hours after discharge using warm water and cleaning detergents.

CLEANUP PROCEDURES

Although there is no unusual cleanup procedure of ANSULEX® or ANSULEX LpH agents, due to the alkaline nature of these agents, they should be cleaned from kitchen surfaces within 24 hours after system discharge. The reaction from the wet chemical agent on cooking grease or oil produces a foamy bi-product that can be wiped up with a cloth or sponge. The following procedures should be followed:

CAUTION

1. Before attempting any cleanup, make certain that all fuel sources to the equipment to be cleaned have been shut off. Make certain that the exhaust hood and all appliance electrical controls have been de-energized to avoid any chance of electrical shock resulting from the cleaning process or from electrically conductive alkaline liquid agent and/or its residue.
2. Make certain all surfaces to be cleaned have cooled down to room temperature.
3. Do not use water to clean any appliances that contain hot grease or cooking oils. Doing so may result in violent steaming and/or spattering.

1. The fire suppression system agent is non-toxic; however, food product and cooking grease/oil that has come in contact with the agent will no longer be suitable for human consumption and should be discarded.
2. Sponge as much of the agent as possible using sponges or clean rags. Dispose of these sponges or rags in a local sanitary land fill site in accordance to local authorities.

Note: Wear rubber gloves during cleanup as sensitive skin may become irritated. If the ANSULEX agent or its residue comes in contact with skin or eyes, flush thoroughly with clean water.

3. Using hot, soapy water and either a clean cloth or sponge, wipe away all foamy residue and thoroughly scrub all surfaces that have come in contact with the agent. **Note:** Wear rubber gloves during cleanup as sensitive skin may become irritated. If the ANSULEX agent or its residue comes in contact with skin or eyes, flush thoroughly with clean water.
4. After thoroughly cleaning all affected surfaces, adequately rinse and allow to completely dry before re-energizing the equipment.

WARRANTY

A. Ansul Products

Except as indicated in B below, your R-102 System is warranted to you as the original purchaser for five years from date of delivery against defects in workmanship and material. Ansul Incorporated ("ANSUL") will replace or repair any metal part which, in its opinion, is defective and has not been tampered with or subjected to misuse, abuse or exposed to highly corrosive conditions.

B. Purchased Products

The following items which are not manufactured but purchased by ANSUL are warranted against defects resulting from the manufacturer's fabrication, process or parts for one year from the date of purchase: detectors, electric manual pull station, time delay relays, thermostats, solenoids, switches, fuel shut-off valves, and pressure relief valves. Evaluation of each reportedly defective relay, valve, etc., returned to ANSUL will be made by the original manufacturer or an agent thereof and their judgment shall be final.

- C. Except as provided in A and B, there are no warranties, express or implied made by ANSUL, concerning this system. There are no implied warranties of FITNESS FOR PURPOSE OR MERCHANTABILITY. ANSUL shall have no liability for consequential, special or similar damages.

For repairs, parts and service of the ANSUL System, contact your local ANSUL representative, or Ansul Incorporated, Marinette, Wisconsin 54143-2542; 800-TO-ANSUL (862-6785).

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