

## AIR CURTAIN

# HANDBOOK

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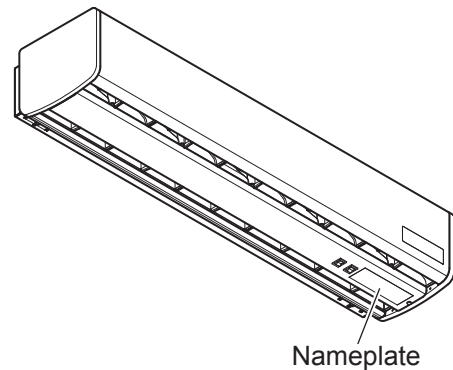
### MODELS

**GK-2509YS2-CE**

**GK-2512AS2-CE**

**GK-3009AS2-CE**

**GK-3012AS2-CE**



**Warning:**









Repair work must be performed by the manufacturer, its service agent or a similarly qualified person in order to avoid hazards.




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# 1. Safety precautions

- Read the following precautions thoroughly before the maintenance, and then inspect and repair the product in a safe manner.
- The types and levels of danger that may arise if the product is handled incorrectly are described with the warning symbols shown below.

|  <b>Warning</b>  |  | Improper handling of the product may result in serious injury or death.   |  |
|---|--|---|--|
| <p>◇ <b>Electric shock</b><br/>If you must inspect the circuitry while the power is on, do not touch the live parts.</p> <p>(Failure to observe this warning may result in electric shock.)</p>  <p>Caution against electric shock</p> |  | <p>◇ <b>Turn off the power supply</b><br/>Be sure to shut off the circuit breaker before disassembling the unit for repair.</p> <p>(Failure to observe this warning may result in electric shock.)</p>  <p>Be sure to follow this instruction.</p>   |  |
|   |  | <p>◇ <b>Use proper parts and tools</b><br/>For repair, be sure to use the parts listed in the parts catalog of the applicable model and use the proper tools.</p> <p>(Failure to observe this warning may result in electric shock, fire and/or injury.)</p>  <p>Be sure to follow this instruction.</p>   |  |
| <p>◇ <b>Modification is prohibited</b><br/>Do not modify the unit.</p> <p>(Failure to observe this warning may result in electric shock, fire and/or injury.)</p>  <p>Prohibited</p>   |  | <p>◇ <b>Proper electric work</b><br/>Use the electric wires designated for electric work, and conduct electric work in accordance with your local electric work regulations and the installation manual.</p> <p>(Improper connection or wiring installation may result in electric shock and/or fire.)</p>  <p>Be sure to follow this instruction.</p> |  |
|   |  | <p>◇ <b>Replace damaged and/or degraded parts</b><br/>Be sure to replace the power cord and lead wires if they are damaged and/or degraded.</p> <p>(Failure to observe this warning may result in electric shock and/or fire.)</p>  <p>Be sure to follow this instruction.</p>   |  |
|   |  | <p>◇ <b>Check insulation</b><br/>Upon completing repair work, always measure the insulation resistance. Verify that it is at least 10 MΩ (with a 500 V DC insulation resistance tester), and then turn on the power.</p> <p>(Inadequate insulation may result in electric shock.)</p>  <p>Be sure to follow this instruction.</p>                    |  |

|  <b>Caution</b>  |  | Improper handling of the product may result in injury or damage to properties including buildings and equipment.  |  |
|---|--|---|--|
| <p>◇ <b>Caution for injury</b><br/>Do not work at a location where you do not have a sure footing.</p> <p>(Failure to observe this caution may result in a fall.)</p>  <p>Prohibited</p> |  | <p>◇ <b>Wear gloves</b><br/>Wear a pair of gloves when servicing.</p> <p>(Failure to observe this caution may result in injury.)</p>  <p>Be sure to follow this instruction.</p> |  |
|   |  |   |  |

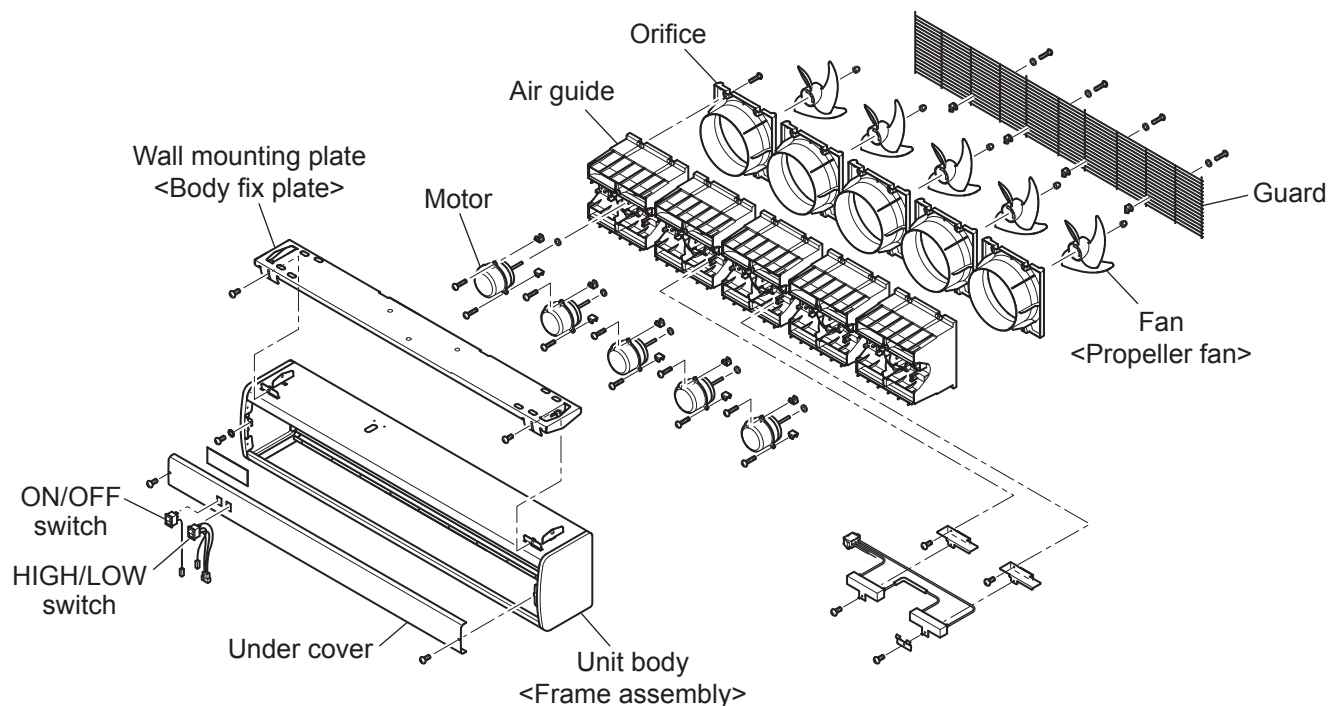
## Notes for servicing

- Inspect the grounding, and repair it if it is incomplete. Make sure that an earth leakage breaker is installed, if it is not installed, install one.
- Make sure that the product operates properly upon completion of repair. Clean the product and the surrounding area, and then notify the customer of the completion of repair.

## 2. Changed points

| New model     | Former model  | Changes from the former model  |
|---------------|---------------|--|
| GK-2509YS2-CE | GK-2509YS1-CE | <ul style="list-style-type: none"> <li>• HIGH/LOW switch and ON/OFF switch are added.</li> <li>• Fan, air guide, and orifice are changed.</li> </ul> |
| GK-2512AS2-CE | GK-2512AS1-CE |  |
| GK-3009AS2-CE | GK-3009AS1-CE |  |
| GK-3012AS2-CE | GK-3012AS1-CE |  |

## 3. Names of components



### Notes:

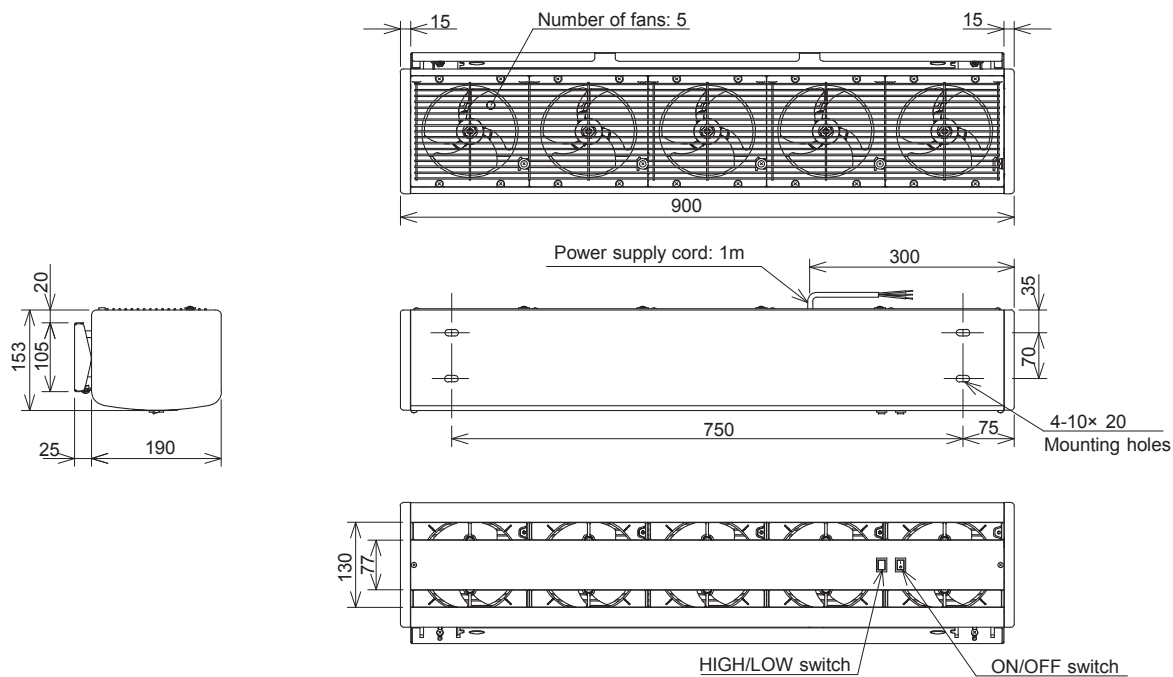
- The names in the angle brackets < > show the part names in the parts catalog.
- The illustration shows GK-2509YS2-CE.

## 4. Specifications

| Model         | Power supply voltage (V) |       | Fan speed | Maximum air velocity (m/s) |       | Noise (dB) |       | Starting current (A) | Rating current (A) | Weight (kg) |
|---------------|--------------------------|-------|-----------|----------------------------|-------|------------|-------|----------------------|--------------------|-------------|
|               | 50 Hz                    | 60 Hz |           | 50 Hz                      | 60 Hz | 50 Hz      | 60 Hz |                      |                    |             |
| GK-2509YS2-CE | 220-240                  | 220   | High      | 9.5                        | 9.5   | 44.5-46    | 44    | 0.36                 | 0.25-0.26          | 10.5        |
|               |                          |       | Low       | 7                          | 7     | 38-41      | 35    |                      | 0.31               |             |
| GK-2512AS2-CE |                          |       | High      | 9.5                        | 9.5   | 45-46      | 46    | 0.42                 | 0.30-0.32          | 13.3        |
|               |                          |       | Low       | 7                          | 7     | 37.5-42    | 36    |                      | 0.40               |             |
| GK-3009AS2-CE |                          |       | High      | 12                         | 12    | 47-47.5    | 50    | 0.88                 | 0.41-0.49          | 11          |
|               |                          |       | Low       | 8                          | 8     | 43.5-45.5  | 40    |                      | 0.47               |             |
| GK-3012AS2-CE |                          |       | High      | 12                         | 12    | 47.5-48.5  | 51    | 0.91                 | 0.45-0.53          | 14          |
|               |                          |       | Low       | 8                          | 8     | 46-47      | 42    |                      | 0.60               |             |

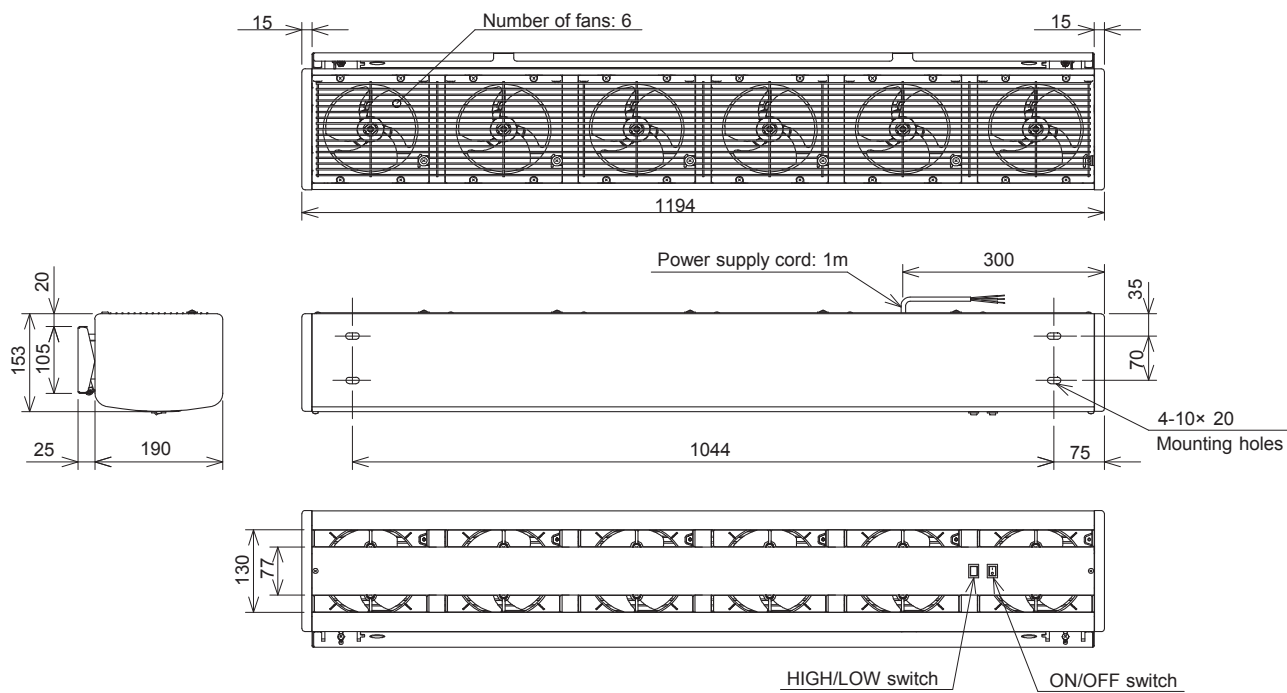
# 5. Outside dimensions

GK-2509YS2-CE, GK-3009AS2-CE



Unit (mm)

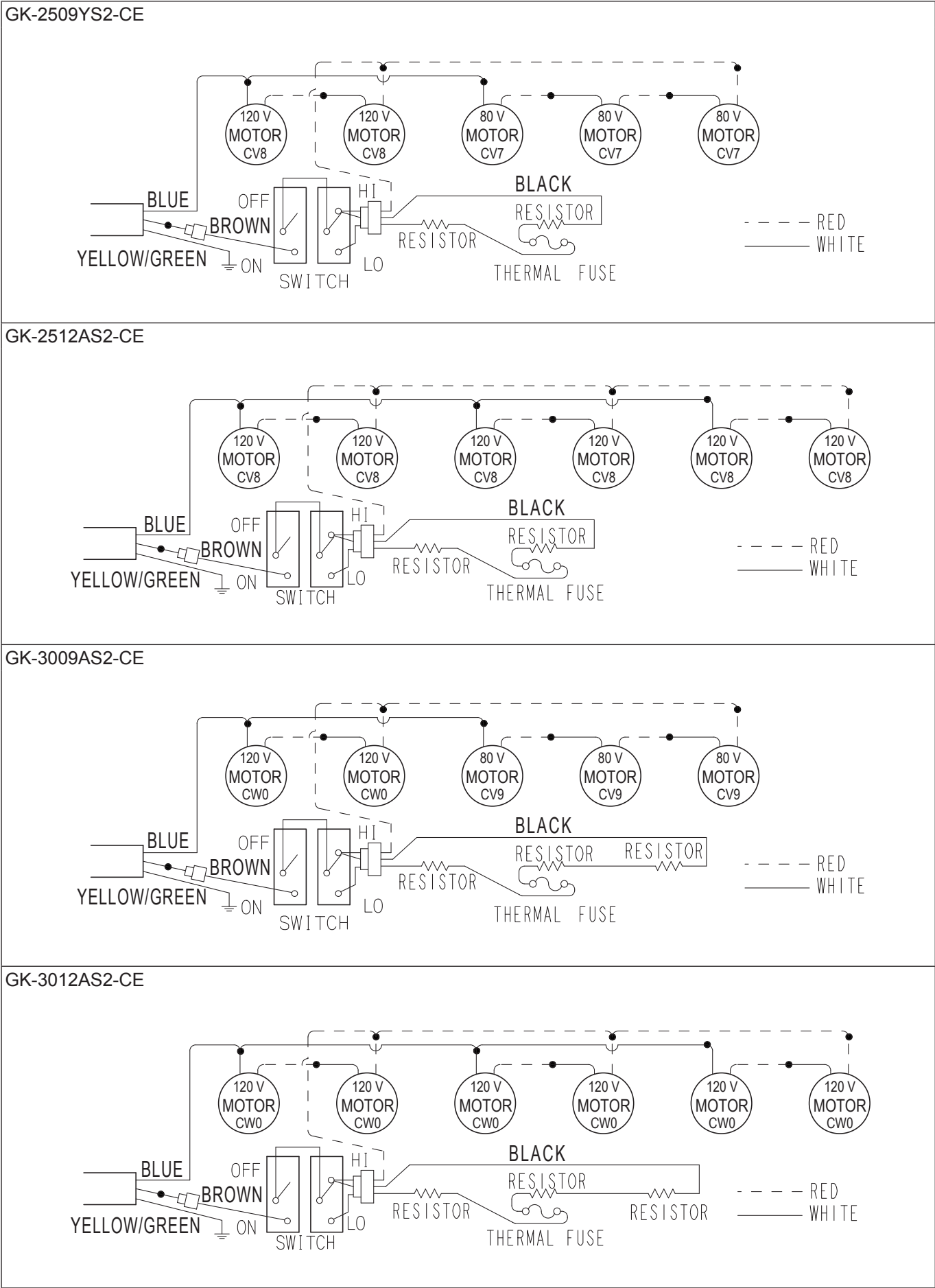
GK-2512AS2-CE, GK-3012AS2-CE



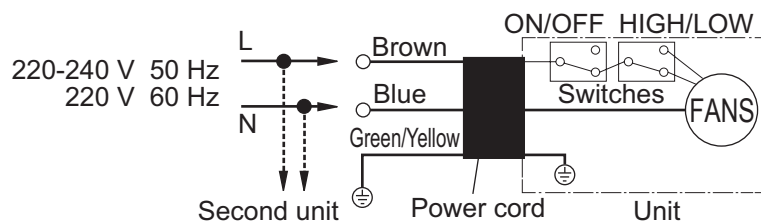
Unit (mm)

# 6. Electrical wiring diagrams

## 6-1 Internal wiring diagrams



## 6-2 Switch wiring diagram

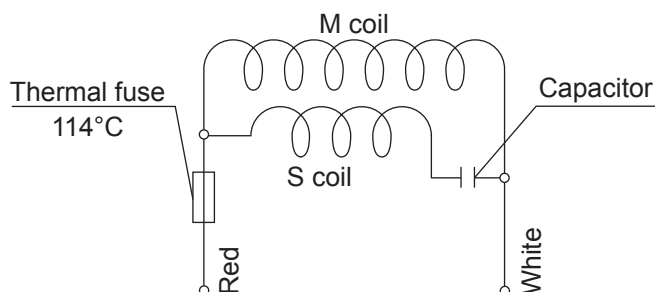


- Thick and dotted lines are field work.
- The wiring must be performed by a qualified person.

## 6-3 Motor coil diagram

※ The motor contains a built-in capacitor. (S coil resistance cannot be measured.)

※ Coil resistance at a temperature of 30°C



| Model         | Motor code | Motor rated voltage (V) | Capacitor capacitance (μF) | Resistance (Ω) |        |
|---------------|------------|-------------------------|----------------------------|----------------|--------|
|               |            |                         |                            | M coil         | S coil |
| GK-2509YS2-CE | CV7        | 80                      | 2.5                        | 117            | 152    |
|               | CV8        | 120                     | 1.5                        | 203            | 261    |
| GK-2512AS2-CE | CV8        | 120                     | 1.5                        | 203            | 261    |
| GK-3009AS2-CE | CV9        | 80                      | 3.0                        | 43             | 110    |
|               | CW0        | 120                     | 2.5                        | 91             | 115    |
| GK-3012AS2-CE | CW0        | 120                     | 2.5                        | 91             | 115    |

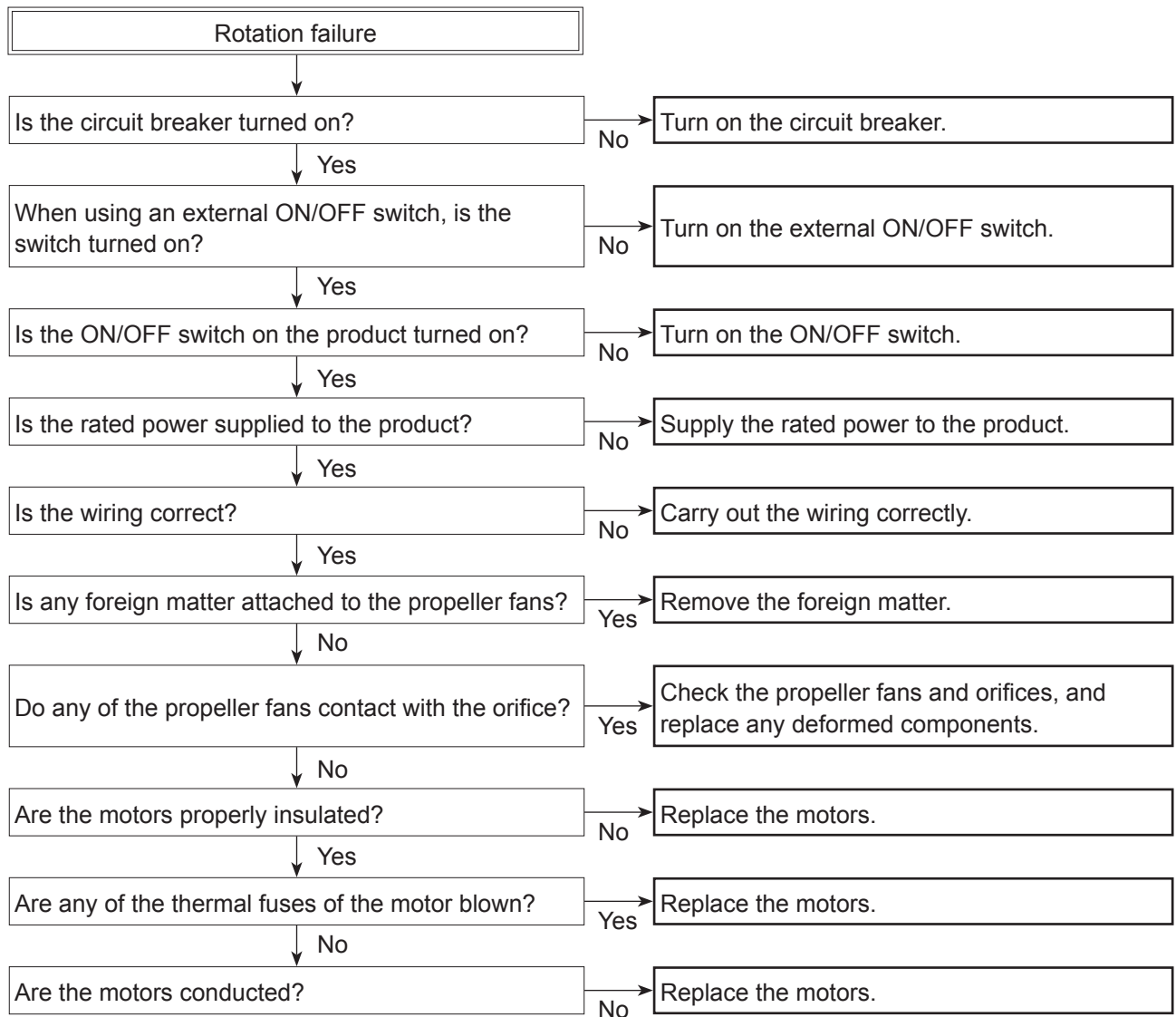
# 7. Troubleshooting

## ■ Work precautions

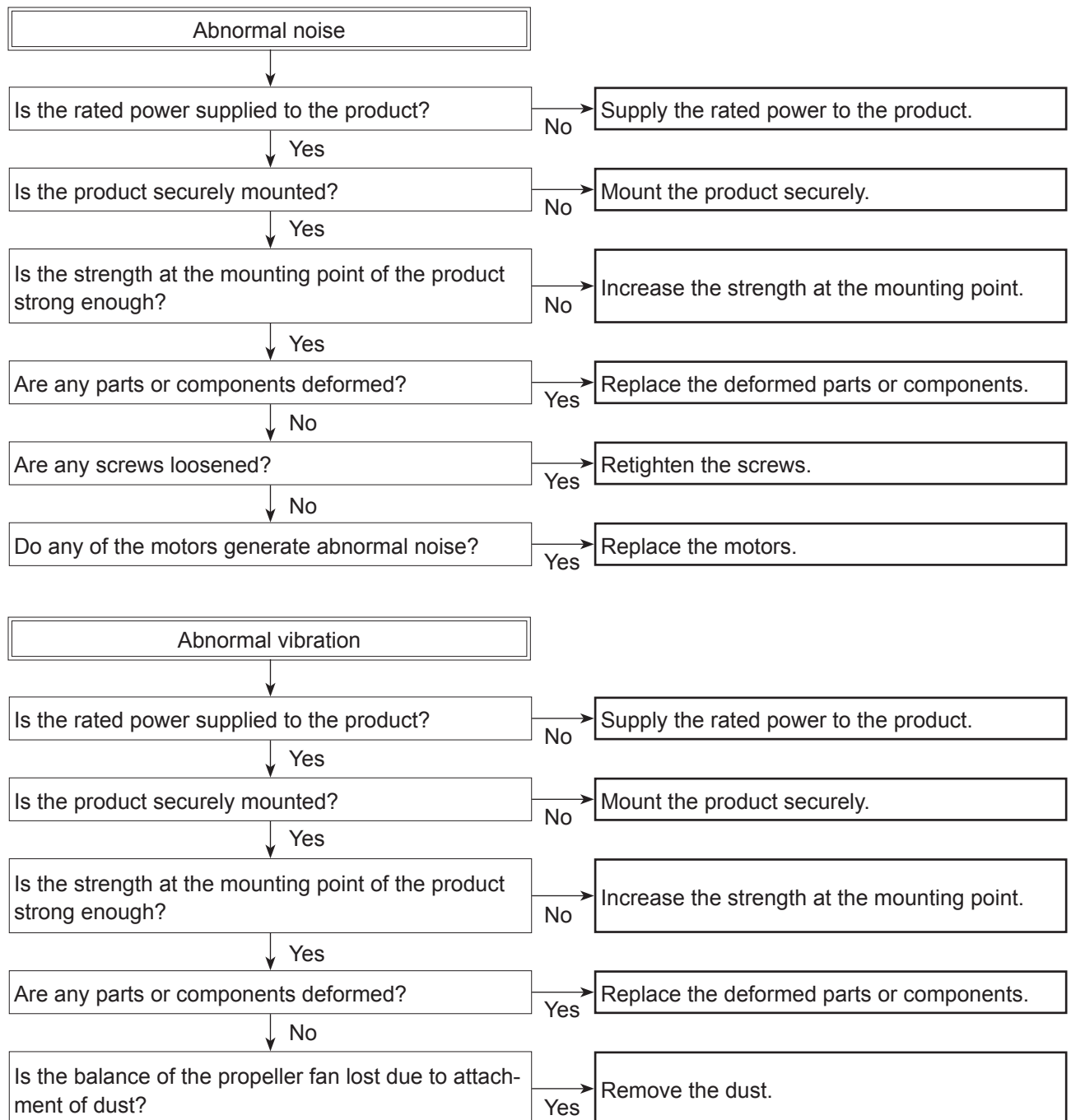
- When servicing, recreate the malfunction two or three times before starting repairs.
- When servicing, always keep proper footing.
- When servicing, always unplug the power cord from the outlet, or turn off the circuit breaker. Pay sufficient attention to avoid electric shock or injury.
- Always connect the power wires properly.

\* The part names in the text are standardized with the part names in the parts catalog. (There are some exceptions.)

## 7-1 Service flowchart







## 7-2 Checklist

| No. | Error  | Cause   | Action  |
|-----|--|---|---|
| 1   | The product does not operate.                        | Is the circuit breaker on the distribution board turned on?                           | Turn on the breaker.  |
|     |  | When using an external ON/OFF switch, is the switch turned on?                        | Turn on the external ON/OFF switch.   |
|     |  | Is the ON/OFF switch on the product turned on?  | Turn on the ON/OFF switch.  |
|     |  | Is the wiring correct?  | Check the wiring.   |
|     |  | Is there any connection failure of the wiring?  | Check that the wiring connections are securely performed.   |
|     |  | Is the rated power supplied to the product?   | Check that the rated power is supplied to the product.  |
|     |  | Are the motors conducted?   | Replace the faulty motors.  |
| 2   | The product does not operate properly.               | Does any foreign matter get caught in the gaps between the propeller fan and orifice? | Remove any foreign matter.  |
|     |  | Do any of the propeller fans contact with the orifice?                                | Check the propeller fans and orifices, and replace any deformed components.                           |
|     | The fan does not rotate.                             | Are the propeller fans deformed?  | Replace the deformed propeller fans.  |
|     | The fan speed cannot be changed.                     | Is the HIGH/LOW switch on the product correctly operated?                             | Operate the HIGH/LOW switch correctly in accordance with the Operating and Installation instructions. |
| 3   | The product generates abnormal sounds or vibrations. | Does any foreign matter get caught in the gaps between the propeller fan and orifice? | Remove any foreign matter.  |
|     |  | Do any of the propeller fans contact with the orifice?                                | Check the propeller fans and orifices, and replace any deformed components.                           |
|     |  | Are the propeller fans deformed?  | Replace the deformed propeller fans.  |
|     |  | Is the product securely mounted?  | Check the installation condition of the product.  |

## 8. Before receiving repair requests

| Frequently asked question   | Response  |
|---|---|
| The product does not operate even though the external ON/OFF switch or ON/OFF switch on the product is turned on. | [1] If the circuit breaker on the distribution board is off, turn it on.<br>[2] Power failure has occurred.   |
| The product generates abnormal sounds or vibrations.  | [1] If any foreign matter is caught on the propeller fans, remove it.<br>[2] If the guard is almost detached (or tilted), fix it firmly.<br>[3] If any of the mounting screws are loose, tighten them properly. |

## 9. Service inspection list

| Location        | Inspection Item   | Check Result |
|-----------------|---|--------------|
| Electric wiring | Is the power source securely connected?   |              |
|                 | Is the wiring correct?  |              |
| Appliance       | Is the main unit securely mounted?  |              |
|                 | Is grounding established properly?  |              |
|                 | Does the product operate as described in the Operating and Installation instructions when the external ON/OFF switch or ON/OFF switch on the product is operated? |              |
|                 | Are the propeller fans rotating?  |              |
|                 | Does the product operate without abnormal vibrations or sounds?   |              |

## 10. Overhauling procedures

### ■ Work precautions

- Before replacing parts or components, follow the instructions described in the troubleshooting.
- When servicing, always keep proper footing.
- When servicing, always unplug the power cord from the outlet, or turn off the circuit breaker. Pay sufficient attention to avoid electric shock or injury.
- Always connect the power wires properly.
- Pay attention not to drop the parts or components.
- After completing repairs, check that the product operates properly.
- Always wear a pair of gloves when servicing.
- Servicing at a high place must be performed by two workers.

\* The part names in the text are standardized with the part names in the parts catalog. (There are some exceptions.)

Note: The pictures and illustrations show GK-3009AS2-CE.

### Precaution

Before replacing the parts or components, dismantle the main unit of the product from the body fix plate. Working at the high place causes a danger if the parts or components are replaced without dismantling the unit.

## (1) Turn off the power supply.

- [1] Turn off the external ON/OFF switch or ON/OFF switch on the product.
- [2] Turn off the circuit breaker.

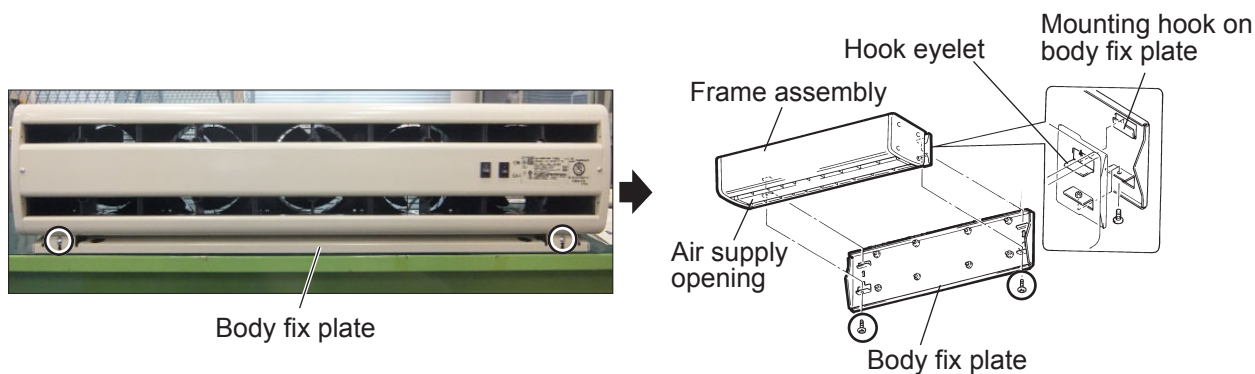
## (2) Dismount the main unit.

- [1] Disconnect the power wires (L, N) and earth lead wire.
  - a. Disconnect the connections between the power leads (L, N) and power cord leads (Brown, Blue).
  - b. Disconnect the outside connection of the earth lead wire.

### Precaution

The circuit breaker must be turned off before disconnecting the power wires and earth lead wire.

- [2] Dismount the main unit from the body fix plate.
  - a. Unscrew the screws (two PT screws 4x8, indicated by ○).
  - b. Lift the main unit to unhook the hook eyelets, and then put the main unit on the floor.



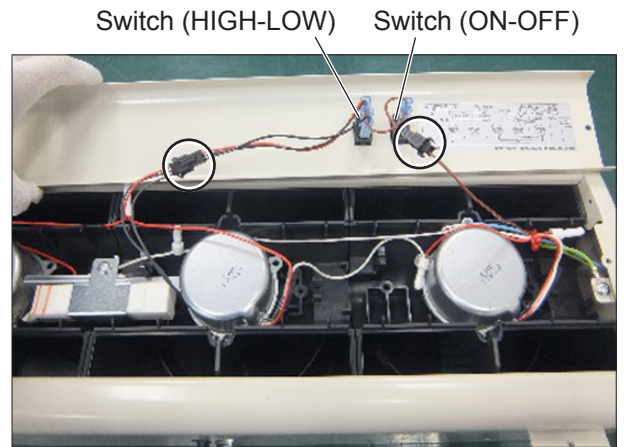
### (3) Remove the motor.

- [1] Unscrew the screws (two PP screws 4x6, indicated by ○), and remove the under cover.



Under cover

- [2] Disconnect the switch connectors. (Two locations, indicated by ○)



- [3] Identify the faulty motors.

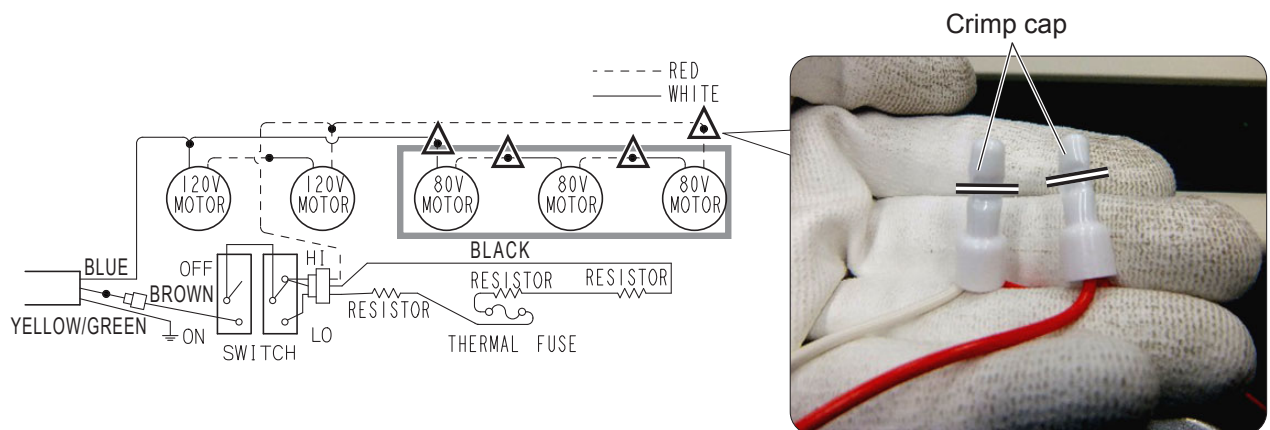
- If one of the motors is not working, replace the motor.
- If multiple motors are not working, identify the faulty motors by the following procedures.

- For example, if the motors surrounded by □ are not working

Cut the crimp caps (indicated by △) at the position indicated by ==, and measure the coil resistance between the lead wires of each motor.

#### Precaution

When cutting the crimp caps, keep the length of the lead wires as long as possible. If the lead wires are too short, they cannot be reconnected after the replacement.

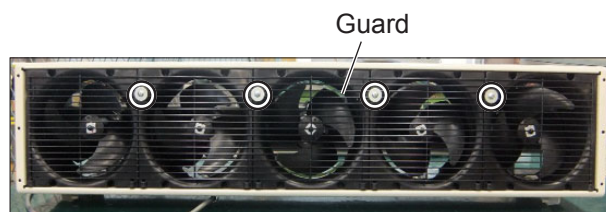


When the coil resistance at ordinary temperatures is equivalent to the values below, the motor is normal.

| Model         | Motor code | Motor rated voltage | Coil resistance |
|---------------|------------|---------------------|-----------------|
| GK-2509YS2-CE | CV7        | 80 V                | 117 Ω           |
|               | CV8        | 120 V               | 203 Ω           |
| GK-2512AS2-CE | CV8        | 120 V               | 203 Ω           |
| GK-3009AS2-CE | CV9        | 80 V                | 43 Ω            |
|               | CW0        | 120 V               | 91 Ω            |
| GK-3012AS2-CE | CW0        | 120 V               | 91 Ω            |

Measure the resistance of all the motors that are not working to identify the faulty motors.

- [4] Remove the guard.
- Turn the main unit upside down.
  - Remove the screws (PTT screws 4x20) and special washers (4.2) (indicated by ○), and then remove the guard.
- <The number of screws>  
 GK-2509YS2-CE, GK-3009AS2-CE: Four screws  
 GK-2512AS2-CE, GK-3012AS2-CE: Five screws



- [5] Loosen the special nut (5) (indicated by ○) clockwise, and remove the propeller fan.

**Reassembly precaution**  
 When installing the propeller fan, fasten the special nut (5) with the tightening torque shown below.

**Tightening torque:**  
 107.8 to 127.4 N·cm



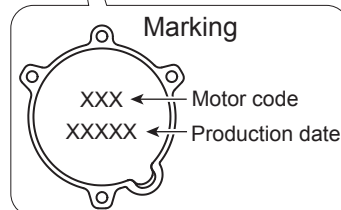
Propeller fan

- [6] Remove the faulty motor.
- Turn the main unit upside down.
  - Unscrew the screws (two PTT screws 4x20, indicated by ○), and remove the motor.
  - Replace the motor, and then reconnect the lead wires with the supplied crimp caps.

**Reassembly precaution**  
 GK-2509YS2-CE and GK-3009AS2-CE contain two types of the motor: rated voltage 80 V and 120 V. Check the motor code marked on the motor, and refer to Internal wiring diagram and Parts catalog. Make sure to replace the motors with the same type motors.

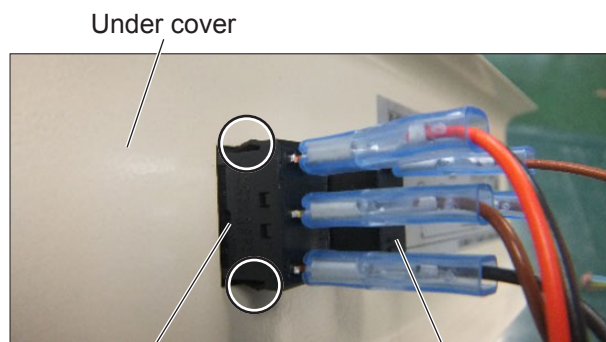


Motor



#### (4) Remove the Switches (ON-OFF/HIGH-LOW).

- Remove the under cover. → See (3) [1].
- Disconnect the switch connectors. → See (3) [2].
- Hold and push the claws (indicated by ○) of the switches, and remove the switches from the under cover.



Under cover

Switch (HIGH-LOW)

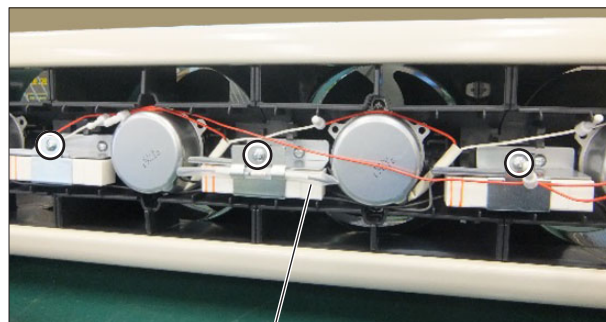
Switch (ON-OFF)



## (5) Remove the resistor assembly.

- [1] Remove the under cover. → See (3) [1].
- [2] Disconnect the switch connectors. → See (3) [2].
- [3] Unscrew the screws (PTT screws 4x6, indicated by ○), and remove the resistor assembly.

| Model         | The number of screws and cement resistors | Resistance |
|---------------|---|------------|
| GK-2509YS2-CE | 2   | 85 Ω       |
| GK-2512AS2-CE | 2   | 85 Ω       |
| GK-3009AS2-CE | 3   | 60 Ω       |
| GK-3012AS2-CE | 3   | 50 Ω       |



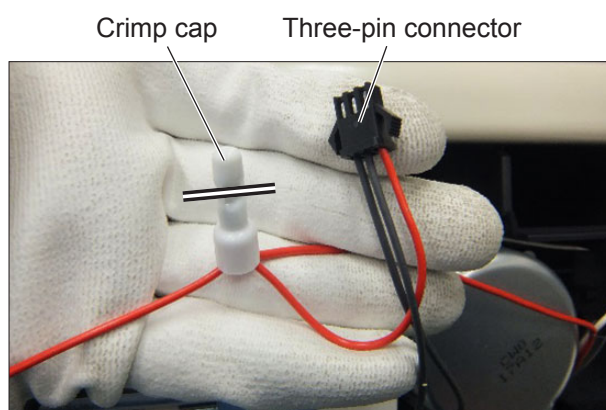
Resistor assembly

- [4] Cut the crimp cap that is connected to the three-pin connector at the position indicated by ≡ to replace the resistor assembly.

### Precaution

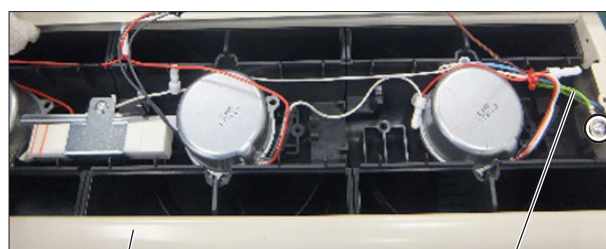
When cutting the crimp cap, keep the length of the lead wires as long as possible.

If the lead wires are too short, they cannot be reconnected after the replacement.



## (6) Remove the cord assembly.

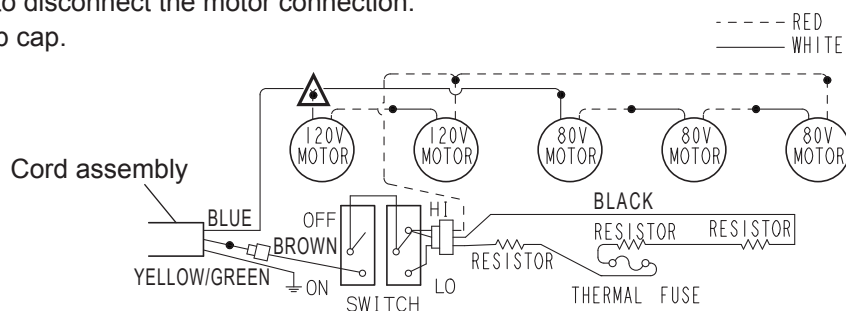
- [1] Disconnect the power wires (L, N) and earth lead wire. → See (2) [1].
- [2] Dismount the main unit from the body fix plate. → See (2) [2].
- [3] Remove the under cover. → See (3) [1].
- [4] Disconnect the ON/OFF switch connector. → See (3) [2].
- [5] Unscrew the screw (one PT screw 4x8, indicated by ○) that is fixed on the frame assembly, and remove the earth lead wire from the unit.



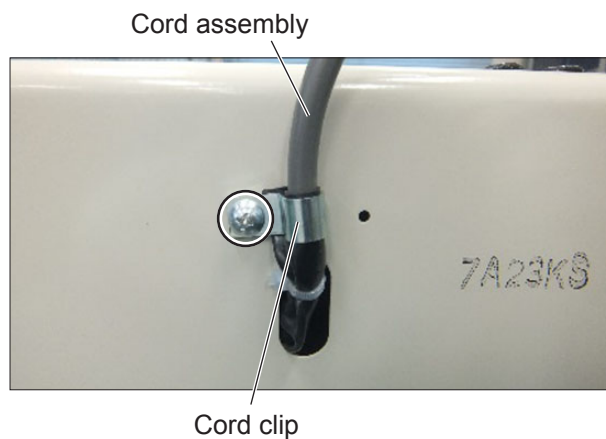
Frame assembly

Earth lead wire

- [6] Cut the crimp cap (indicated by △) to disconnect the motor connection. → See (3) [3] for cutting of the crimp cap.



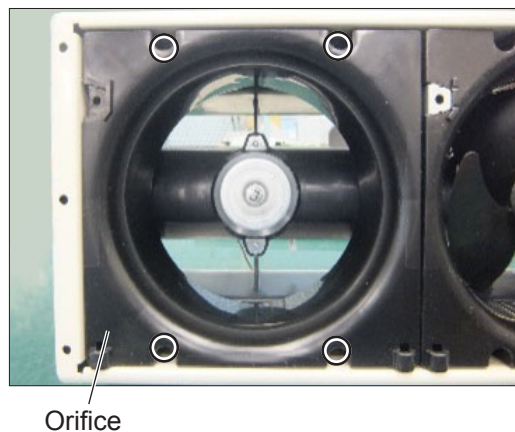
[7] Unscrew the screw (one PTT screw 4x10, indicated by ○), and remove the cord clip that is fixing the cord assembly.



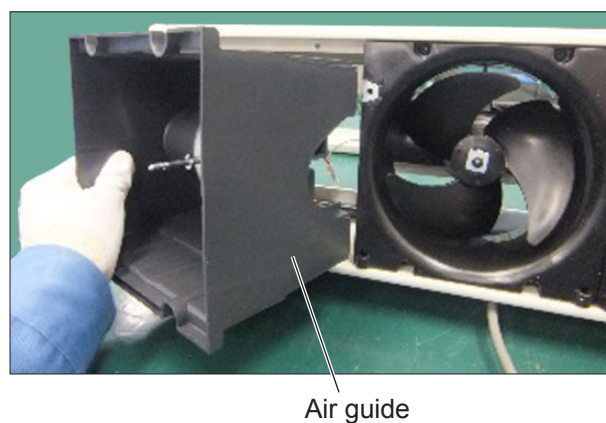
[8] Remove the guard. → See (3) [4].

[9] Remove the orifice and propeller fan in the left end (power cord side).

- a. Remove the propeller fan in the left end.  
→ See (3) [5].
- b. Unscrew the screws (four special (spl) screws 4x10, indicated by ○), and remove the orifice in the left end.



[10] Remove the air guide in the left end, and replace the cord assembly.



### \* When reassembling

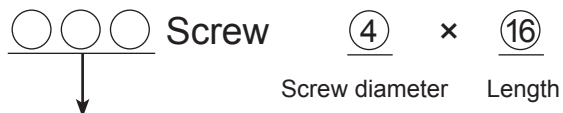
- Reassemble the unit in the reverse order of disassembly.
- Fix all the components securely.
- After reassembly, always make a test run to make sure that the unit operates properly.

# 11. Parts catalog

## Please note the following when using the parts catalog.

1. When ordering parts, always indicate the part number, part name, and the number of parts required.
2. It may take time for you to receive the parts. Make an inquiry about a rush order.
3. No further notice if the specification changes.
4. Parts marked with ⚠ and XXXX are critical for safety.
5. To maintain safety and performance, always replace the parts with the parts prescribed.
6. When replacing the parts to which the nameplate is attached, remove the nameplate and attach it to the new parts.

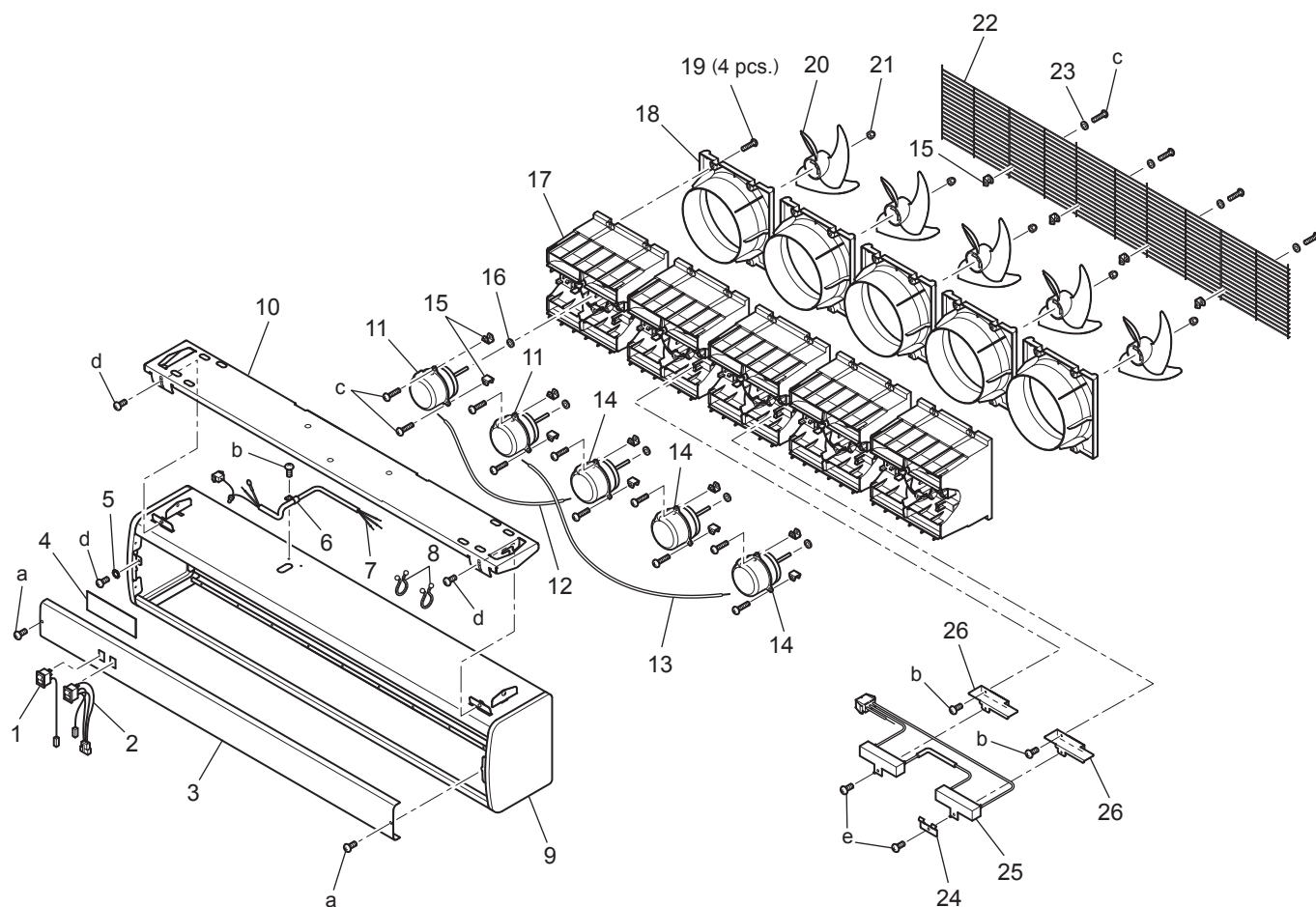
## Description of screw abbreviations



| Abbreviation        | Description  |
|---------------------|--|
| PC screw            | Cross recess flat head machine screw                                   |
| PRC screw           | Cross recess oval head machine screw                                   |
| PP screw            | Cross recess pan head machine screw                                    |
| SW · PP screw       | Cross recess pan head screw with spring washer                         |
| PPT screw           | Cross recess tapping screw   |
| PCT screw           | Cross recess flat head tapping screw                                   |
| PTT screw           | Cross recess truss head tapping screw                                  |
| PT screw            | Cross recess truss head machine screw                                  |
| SET screw           | Slotted head stop screw  |
| SQ · SET screw      | Square head stop screw   |
| P · SET screw       | Pan head stop screw  |
| PMT screw           | Primer truss head screw  |
| HS · SET screw      | Hexagon head stop screw  |
| P · R · W screw     | Cross recess round wood screw  |
| P · C · W screw     | Cross recess flat head wood screw                                      |
| P · R · C · W screw | Cross recess round and flat wood screw                                 |
| R · W screw         | Slotted round wood screw   |
| PW · PP screw       | Cross recess pan head screw with small washer                          |
| SW-PW · PP screw    | Cross recess pan head machine screw with spring washer and flat washer |



# GK-2509YS2-CE



## <Standard screws>

| Symbol | Screw name     |
|--------|----------------|
| a      | PP screw 4x6   |
| b      | PPT screw 4x10 |
| c      | PTT screw 4x20 |
| d      | PT screw 4x8   |
| e      | PTT screw 4x6  |

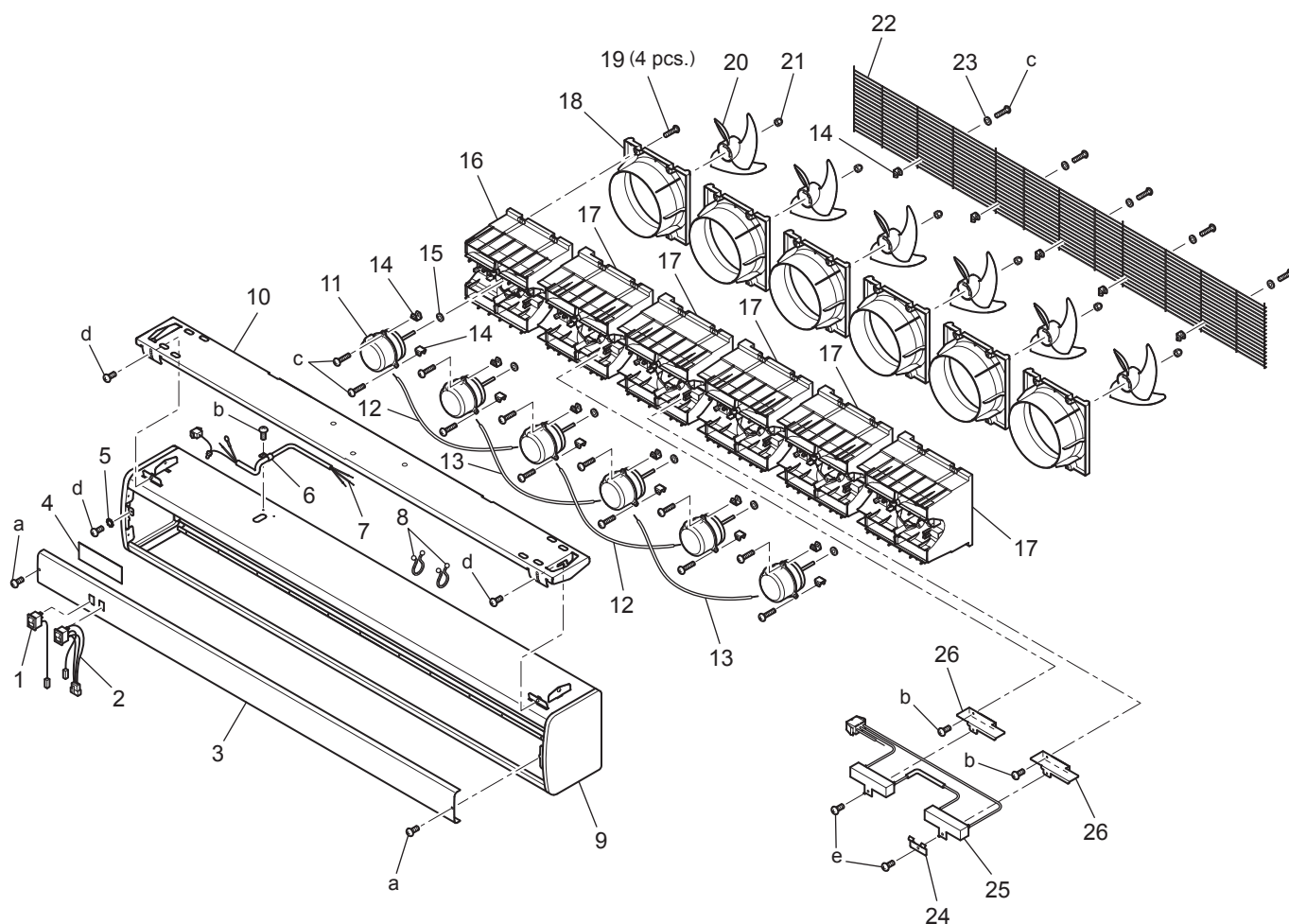
|        |  |                   |
|--------|--|-------------------|
| 4 pcs. |  | Nut (M8)          |
| 4 pcs. |  | Washer (8)        |
| 4 pcs. |  | Spring washer (8) |
| 4 pcs. |  | SPL washer        |

\* shows accessory parts.

# GK-2509YS2-CE

| No. | Name of part         | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>safety | Remarks         |
|-----|----------------------|-------------|------------------|---------------------------|-----------------|
| 1   | Switch (ON-OFF)      | Y82 183 221 | 1                | ⚠                         |                 |
| 2   | Switch (HIGH-LOW)    | Y82 183 222 | 1                | ⚠                         |                 |
| 3   | Under cover          | Y82 183 663 | 1                |                           |                 |
| 4   | Wiring diagram       | Y82 183 358 | 1                |                           |                 |
| 5   | Lock washer (4)      | H00 013 076 | 1                |                           |                 |
| 6   | Cord clip            | M31 717 346 | 1                |                           |                 |
| 7   | Cord assembly        | Y82 183 223 | 1                | ⚠                         | 1600mm、Lead set |
| 8   | Cord band            | H00 128 228 | 2                |                           | Red             |
| 9   | Frame assembly       | Y82 183 664 | 1                |                           |                 |
| 10  | Body fix plate       | Y82 183 669 | 1                |                           |                 |
| 11  | Motor (120 V)        | Y82 183 454 | 2                | ⚠                         | CV8             |
| 12  | Lead wire (White)    | Y82 183 226 | 1                | ⚠                         | 350mm           |
| 13  | Lead wire (Red)      | Y82 183 225 | 1                | ⚠                         | 500mm           |
| 14  | Motor (80 V)         | Y82 183 453 | 3                | ⚠                         | CV7             |
| 15  | Motor fix piece      | K82 103 661 | 14               |                           |                 |
| 16  | Washer (5)           | H00 069 073 | 5                |                           |                 |
| 17  | Air guide            | K82 211 664 | 5                |                           |                 |
| 18  | Orifice              | K82 211 662 | 5                |                           |                 |
| 19  | Spl screw 4x10       | M34 660 020 | 20               |                           |                 |
| 20  | Propeller fan        | K82 211 470 | 5                | ⚠                         |                 |
| 21  | Special nut (5)      | Y82 080 067 | 5                |                           | Left-handed     |
| 22  | Guard                | K82 213 378 | 1                |                           | 857x157.5mm     |
| 23  | Special washer (4.2) | H00 479 081 | 4                |                           |                 |
| 24  | Fuse fix plate       | K82 049 668 | 1                |                           |                 |
| 25  | Resistor assembly    | Y82 183 220 | 1                | ⚠                         | Green           |
| 26  | Resistor fix plate   | Y82 183 661 | 2                |                           |                 |
| 27  | Washer in bag        | Y82 183 049 | 1                |                           |                 |
|     |                      |             |                  |                           |                 |
|     |                      |             |                  |                           |                 |
|     |                      |             |                  |                           |                 |

# GK-2512AS2-CE



## <Standard screws>

| Symbol | Screw name     |
|--------|----------------|
| a      | PP screw 4x6   |
| b      | PPT screw 4x10 |
| c      | PTT screw 4x20 |
| d      | PT screw 4x8   |
| e      | PTT screw 4x6  |

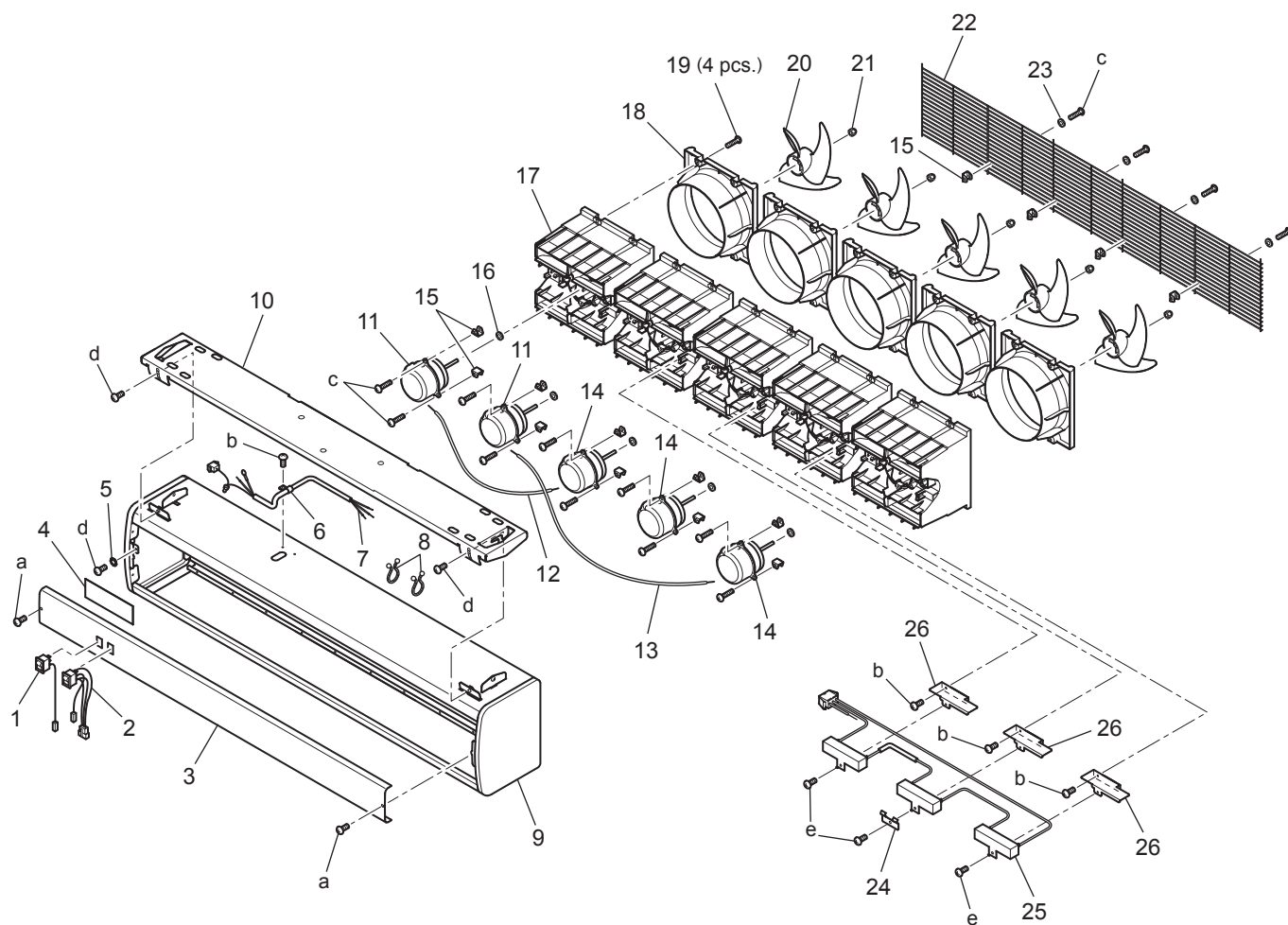
|        |                   |
|--------|-------------------|
| 4 pcs. | Nut (M8)          |
| 4 pcs. | Washer (8)        |
| 4 pcs. | Spring washer (8) |
| 4 pcs. | SPL washer        |

\* shows accessory parts.

# GK-2512AS2-CE

| No. | Name of part         | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>safety | Remarks         |
|-----|----------------------|-------------|------------------|---------------------------|-----------------|
| 1   | Switch (ON-OFF)      | Y82 183 221 | 1                | ⚠                         |                 |
| 2   | Switch (HIGH-LOW)    | Y82 183 222 | 1                | ⚠                         |                 |
| 3   | Under cover          | Y82 183 665 | 1                |                           |                 |
| 4   | Wiring diagram       | Y82 183 359 | 1                |                           |                 |
| 5   | Lock washer (4)      | H00 013 076 | 1                |                           |                 |
| 6   | Cord clip            | M31 717 346 | 1                |                           |                 |
| 7   | Cord assembly        | Y82 183 223 | 1                | ⚠                         | 1600mm、Lead set |
| 8   | Cord band            | H00 128 228 | 2                |                           | Red             |
| 9   | Frame assembly       | Y82 183 666 | 1                |                           |                 |
| 10  | Body fix plate       | Y82 183 670 | 1                |                           |                 |
| 11  | Motor (120 V)        | Y82 183 454 | 6                | ⚠                         | CV8             |
| 12  | Lead wire (White)    | Y82 183 228 | 2                | ⚠                         | 400mm           |
| 13  | Lead wire (Red)      | Y82 183 227 | 2                | ⚠                         | 480mm           |
| 14  | Motor fix piece      | K82 103 661 | 17               |                           |                 |
| 15  | Washer (5)           | H00 069 073 | 6                |                           |                 |
| 16  | Air guide            | K82 211 664 | 1                |                           |                 |
| 17  | Air guide (W)        | Y82 183 667 | 5                |                           |                 |
| 18  | Orifice              | K82 211 662 | 6                |                           |                 |
| 19  | Spl screw 4x10       | M34 660 020 | 24               |                           |                 |
| 20  | Propeller fan        | K82 211 470 | 6                | ⚠                         |                 |
| 21  | Special nut (5)      | Y82 080 067 | 6                |                           | Left-handed     |
| 22  | Guard                | Y82 183 378 | 1                |                           | 1152x157.5mm    |
| 23  | Special washer (4.2) | H00 479 081 | 5                |                           |                 |
| 24  | Fuse fix plate       | K82 049 668 | 1                |                           |                 |
| 25  | Resistor assembly    | Y82 183 224 | 1                | ⚠                         | Blue            |
| 26  | Resistor fix plate   | Y82 183 661 | 2                |                           |                 |
| 27  | Washer in bag        | Y82 183 049 | 1                |                           |                 |
|     |                      |             |                  |                           |                 |
|     |                      |             |                  |                           |                 |
|     |                      |             |                  |                           |                 |

# GK-3009AS2-CE



## <Standard screws>

| Symbol | Screw name     |
|--------|----------------|
| a      | PP screw 4x6   |
| b      | PPT screw 4x10 |
| c      | PTT screw 4x20 |
| d      | PT screw 4x8   |
| e      | PTT screw 4x6  |

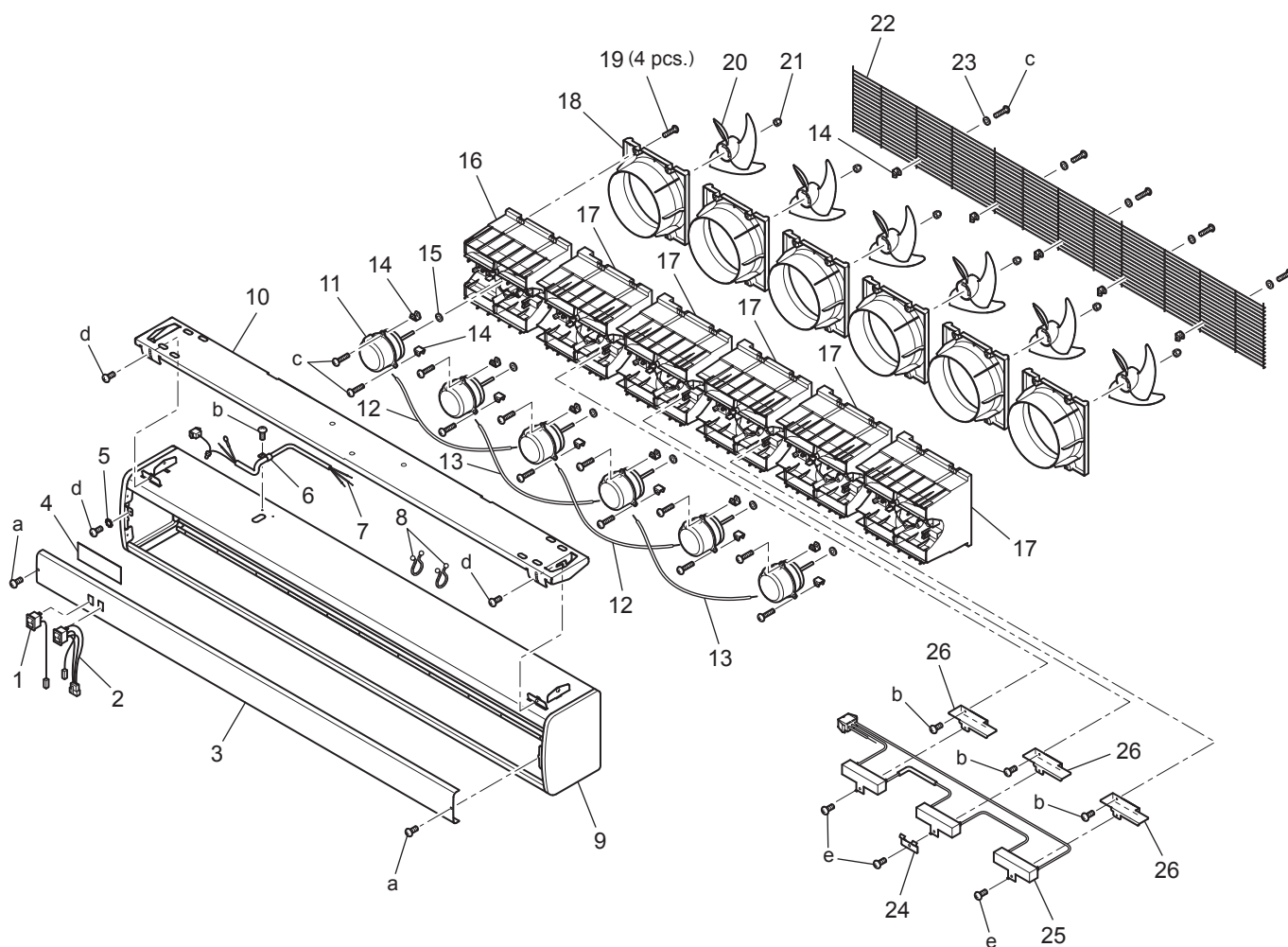
|        |  |                   |
|--------|--|-------------------|
| 4 pcs. |  | Nut (M8)          |
| 4 pcs. |  | Washer (8)        |
| 4 pcs. |  | Spring washer (8) |
| 4 pcs. |  | SPL washer        |

\* shows accessory parts.

# GK-3009AS2-CE

| No. | Name of part         | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>safety | Remarks         |
|-----|----------------------|-------------|------------------|---------------------------|-----------------|
| 1   | Switch (ON-OFF)      | Y82 183 221 | 1                | ⚠                         |                 |
| 2   | Switch (HIGH-LOW)    | Y82 183 222 | 1                | ⚠                         |                 |
| 3   | Under cover          | Y82 183 663 | 1                |                           |                 |
| 4   | Wiring diagram       | Y82 183 358 | 1                |                           |                 |
| 5   | Lock washer (4)      | H00 013 076 | 1                |                           |                 |
| 6   | Cord clip            | M31 717 346 | 1                |                           |                 |
| 7   | Cord assembly        | Y82 183 223 | 1                | ⚠                         | 1600mm、Lead set |
| 8   | Cord band            | H00 128 228 | 2                |                           | Red             |
| 9   | Frame assembly       | Y82 183 664 | 1                |                           |                 |
| 10  | Body fix plate       | Y82 183 669 | 1                |                           |                 |
| 11  | Motor (120 V)        | Y82 184 454 | 2                | ⚠                         | CW0             |
| 12  | Lead wire (White)    | Y82 183 226 | 1                | ⚠                         | 350mm           |
| 13  | Lead wire (Red)      | Y82 183 225 | 1                | ⚠                         | 500mm           |
| 14  | Motor (80 V)         | Y82 184 453 | 3                | ⚠                         | CV9             |
| 15  | Motor fix piece      | K82 103 661 | 14               |                           |                 |
| 16  | Washer (5)           | H00 069 073 | 5                |                           |                 |
| 17  | Air guide            | K82 211 664 | 5                |                           |                 |
| 18  | Orifice              | K82 211 662 | 5                |                           |                 |
| 19  | Spl screw 4x10       | M34 660 020 | 20               |                           |                 |
| 20  | Propeller fan        | K82 211 470 | 5                | ⚠                         |                 |
| 21  | Special nut (5)      | Y82 080 067 | 5                |                           | Left-handed     |
| 22  | Guard                | K82 213 378 | 1                |                           | 857x157.5mm     |
| 23  | Special washer (4.2) | H00 479 081 | 4                |                           |                 |
| 24  | Fuse fix plate       | K82 049 668 | 1                |                           |                 |
| 25  | Resistor assembly    | Y82 184 220 | 1                | ⚠                         | Orange          |
| 26  | Resistor fix plate   | Y82 183 661 | 3                |                           |                 |
| 27  | Washer in bag        | Y82 183 049 | 1                |                           |                 |
|     |                      |             |                  |                           |                 |
|     |                      |             |                  |                           |                 |
|     |                      |             |                  |                           |                 |

# GK-3012AS2-CE



## <Standard screws>

| Symbol | Screw name     |
|--------|----------------|
| a      | PP screw 4x6   |
| b      | PPT screw 4x10 |
| c      | PTT screw 4x20 |
| d      | PT screw 4x8   |
| e      | PTT screw 4x6  |

|        |                   |
|--------|-------------------|
| 4 pcs. | Nut (M8)          |
| 4 pcs. | Washer (8)        |
| 4 pcs. | Spring washer (8) |
| 4 pcs. | SPL washer        |

\* shows accessory parts.

# GK-3012AS2-CE

| No. | Name of part         | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>safety | Remarks         |
|-----|----------------------|-------------|------------------|---------------------------|-----------------|
| 1   | Switch (ON-OFF)      | Y82 183 221 | 1                | ⚠                         |                 |
| 2   | Switch (HIGH-LOW)    | Y82 183 222 | 1                | ⚠                         |                 |
| 3   | Under cover          | Y82 183 665 | 1                |                           |                 |
| 4   | Wiring diagram       | Y82 183 359 | 1                |                           |                 |
| 5   | Lock washer (4)      | H00 013 076 | 1                |                           |                 |
| 6   | Cord clip            | M31 717 346 | 1                |                           |                 |
| 7   | Cord assembly        | Y82 183 223 | 1                | ⚠                         | 1600mm、Lead set |
| 8   | Cord band            | H00 128 228 | 2                |                           | Red             |
| 9   | Frame assembly       | Y82 183 666 | 1                |                           |                 |
| 10  | Body fix plate       | Y82 183 670 | 1                |                           |                 |
| 11  | Motor (120 V)        | Y82 184 454 | 6                | ⚠                         | CW0             |
| 12  | Lead wire (White)    | Y82 183 228 | 2                | ⚠                         | 400mm           |
| 13  | Lead wire (Red)      | Y82 183 227 | 2                | ⚠                         | 480mm           |
| 14  | Motor fix piece      | K82 103 661 | 17               |                           |                 |
| 15  | Washer (5)           | H00 069 073 | 6                |                           |                 |
| 16  | Air guide            | K82 211 664 | 1                |                           |                 |
| 17  | Air guide (W)        | Y82 183 667 | 5                |                           |                 |
| 18  | Orifice              | K82 211 662 | 6                |                           |                 |
| 19  | Spl screw 4x10       | M34 660 020 | 24               |                           |                 |
| 20  | Propeller fan        | K82 211 470 | 6                | ⚠                         |                 |
| 21  | Special nut (5)      | Y82 080 067 | 6                |                           | Left-handed     |
| 22  | Guard                | Y82 183 378 | 1                |                           | 1152x157.5mm    |
| 23  | Special washer (4.2) | H00 479 081 | 5                |                           |                 |
| 24  | Fuse fix plate       | K82 049 668 | 1                |                           |                 |
| 25  | Resistor assembly    | Y82 184 221 | 1                | ⚠                         | Red             |
| 26  | Resistor fix plate   | Y82 183 661 | 3                |                           |                 |
| 27  | Washer in bag        | Y82 183 049 | 1                |                           |                 |
|     |                      |             |                  |                           |                 |
|     |                      |             |                  |                           |                 |
|     |                      |             |                  |                           |                 |