November 2025 No. U218H-C

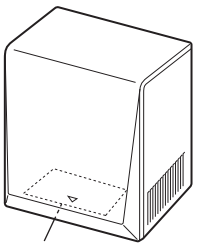
MITSUBISHI ELECTRIC

HAND DRYER

HANDBOOK

MODELS

JT-S1AP-W-NA
JT-S1AP-S-NA



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

MITSUBISHI ELECTRIC CORPORATION

Contents

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.

⚠ Warning

Incorrect handling of the product may result in serious injury or death.

◇ Electric shock

If you must inspect the circuitry while the power is on, do not touch the live parts.

(Failure to heed this warning may result in electric shock.)

Caution against electric shock

◇ Modification is prohibited

Do not modify the unit.

(Failure to heed this warning may result in electric shock, fire and/or injury.)

Prohibited

◇ Proper electric work

- Use the electric wires designated for electric work, and conduct electric work in accordance with the "Electric Installation Engineering Standard", the "Indoor Wiring Regulations" and the installation instructions.
- Make sure that the terminals and fixed wiring are securely connected.

(Improper connection or wiring installation may result in electric shock and/or fire.)

Be sure to follow this instruction.

◇ Scratches and deterioration

Make sure to replace scratched and/or deteriorated wiring and lead wires.

(Failure to heed this warning may result in electric shock and/or fire.)

Be sure to follow this instruction.

◇ Turn off the power

Make sure to turn off the circuit breaker prior to starting repair work. (The charge voltage in the circuitry remains for another 15 seconds or so, even after the power is turned off and the LED is unlit; therefore, wait for at least 15 seconds before disassembling the product.)

(Failure to heed this warning may result in electric shock.)

Be sure to follow this instruction.

◇ Use proper parts and tools

For repair, be sure to use the parts listed in the service parts catalog of the applicable model and use the proper tools.

(Failure to heed this warning may result in electric shock, fire and/or injury.)

Be sure to follow this instruction.

◇ Check insulation

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.

(Inadequate insulation may result in electric shock.)

Be sure to follow this instruction.

⚠ Caution

Incorrect handling of the product may result in minor injury or damage to properties including buildings and equipment.

◇ Wear gloves

Always wear a pair of gloves during inspection or repair work.

(Failure to heed this caution may result in injury.)

Be sure to follow this instruction.

Notes for servicing

- Before repairs, take the product off the wall.
- Inspect the grounding condition, and repair it if it is incomplete. Make sure that a circuit breaker or an overload protection device is installed, if it is not installed, recommend the customer to install one.
- Check whether the filter is installed securely in place.
- Do not leave a towel or other objects in the hand-drying area.
- Never place any objects on the main body nor cover it.
- Make sure that the product is not being used in any of the following locations:
  - Outdoors
  - Locations where the temperature could be lower than 32°F (0ºC)
  - Locations where the temperature could be higher than 104°F (40ºC)
  - Locations where there is a lot of dust
  - Locations where there is a lot of condensation
  - Locations where salt damage may occur
  - In vehicles (including ships and airplanes)
  - Locations where corrosive, neutral, or reductive gases are present (This may shorten the working life of the unit and/or cause malfunctions.)
  - Near food or tableware
  - Kitchens (Where there is a risk of water splashing)
  - Locations where the product may come into direct contact with water
  - Locations where the product is in direct sunlight or strong light (It may cause sensor malfunction)
  - Rooms that have a sterilization basin, swimming pools, or bathrooms

- 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. Features

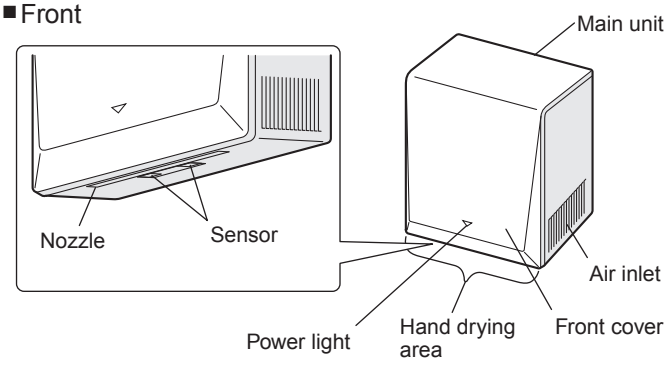
- High speed drying with low energy use and quiet operation
- Robust, tamper-resistant body
- Quick 0.1 second response time improves user experience.

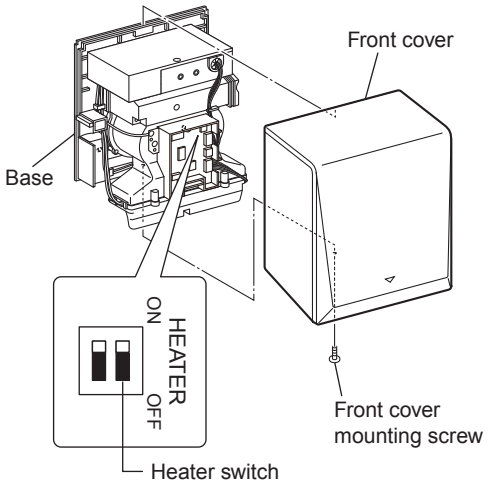
3. Names and functions of components

(1) Names of components

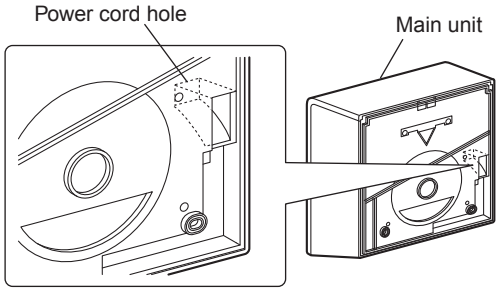
*Shaded areas in the figure indicate antibacterial material (excluding outlet nozzle areas).

■Front





■Rear



(2) How to open the front cover

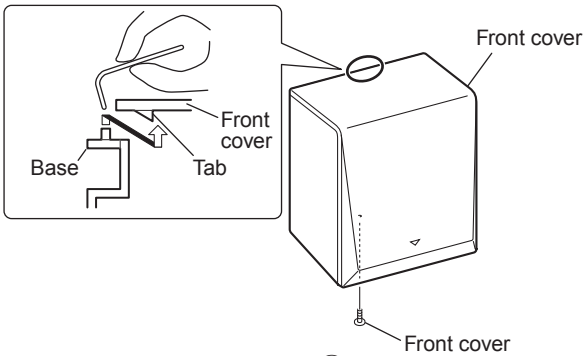
NOTE

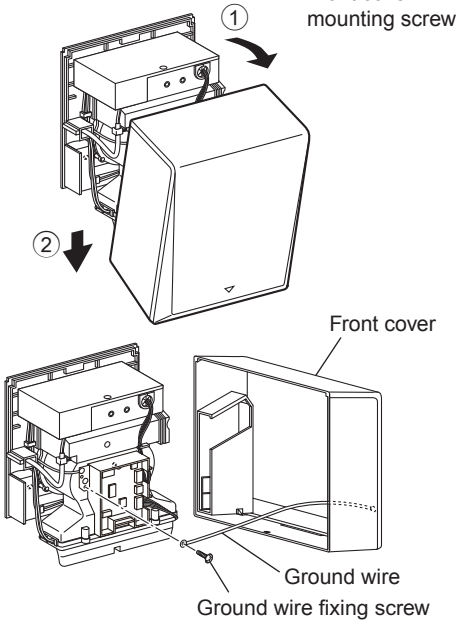
- Prevent scratching on the front cover. Rust may form on the scratched area.

1 Remove the front cover mounting screw (1 pc.) on the bottom of the main unit.

2 Insert a thin stick or the like into near the tab of the upper part of the front cover and disengage the tab.

3 Remove the ground wire fixing screw (1 pc.) from the base and remove the front cover.





- Attach the front cover in the reverse order.

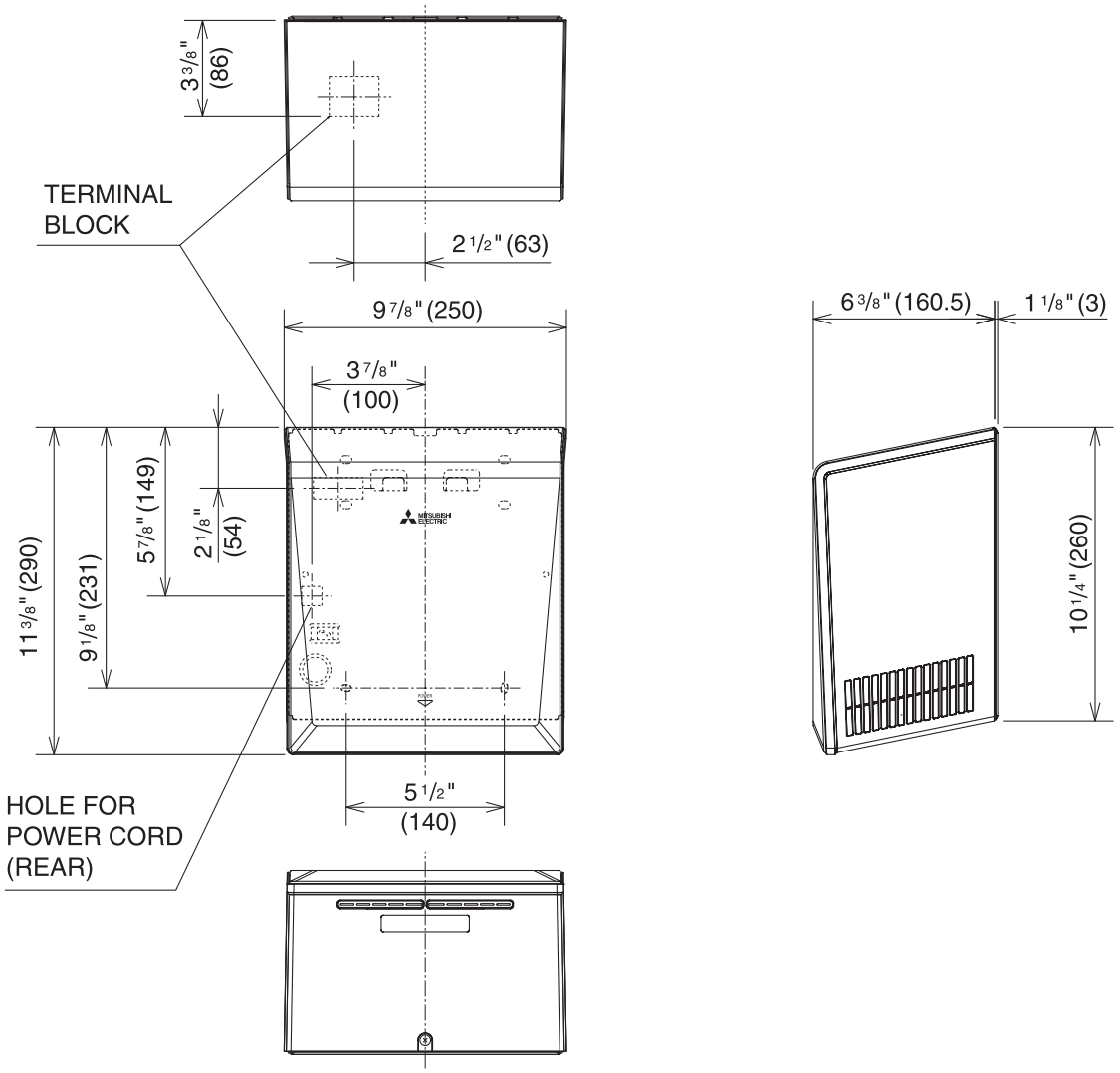
4. Specifications

Model	Rated voltage (V AC)	Rated frequency (Hz)	Heater	Power consumption (W)	Rated current (A)	Air speed (mph)	Noise (dB (A))	Weight (lb)
JT-S1AP-W-NA JT-S1AP-S-NA	120 Single phase	60	ON	1020	8.8	353 (158 m/s)	62	11 (5 kg)
			OFF	730	6.3			

- Air speed is calculated from the static pressure measured by the pitot tube (at the nozzle).
- Noise is the A range value measured in an anechoic room. (Average of the three points: 78 3/4" (2 m) from the front and both sides of the unit.)
- The heater is turned off automatically when ambient temperature is 86°F (30°C) or more.
- Compliance: Conforms to ANSI/UL Std. UL499
  Certified to CAN/CSA Standard C22.2 No. 36

5. Outside dimensions

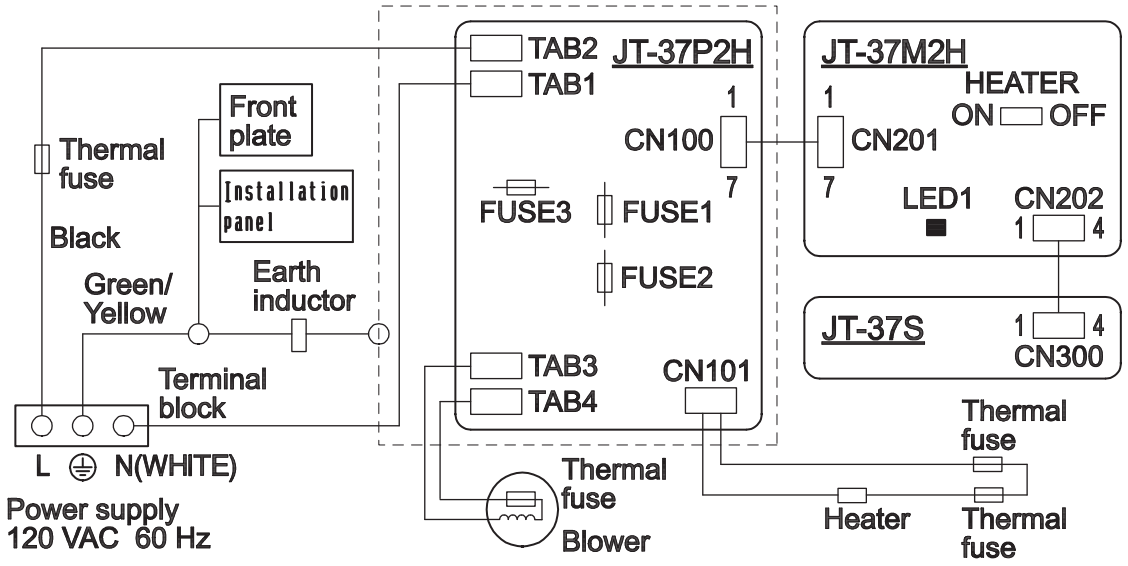
JT-S1AP-W-NA, JT-S1AP-S-NA



Unit: Inch (mm)

6. Electrical wiring diagram

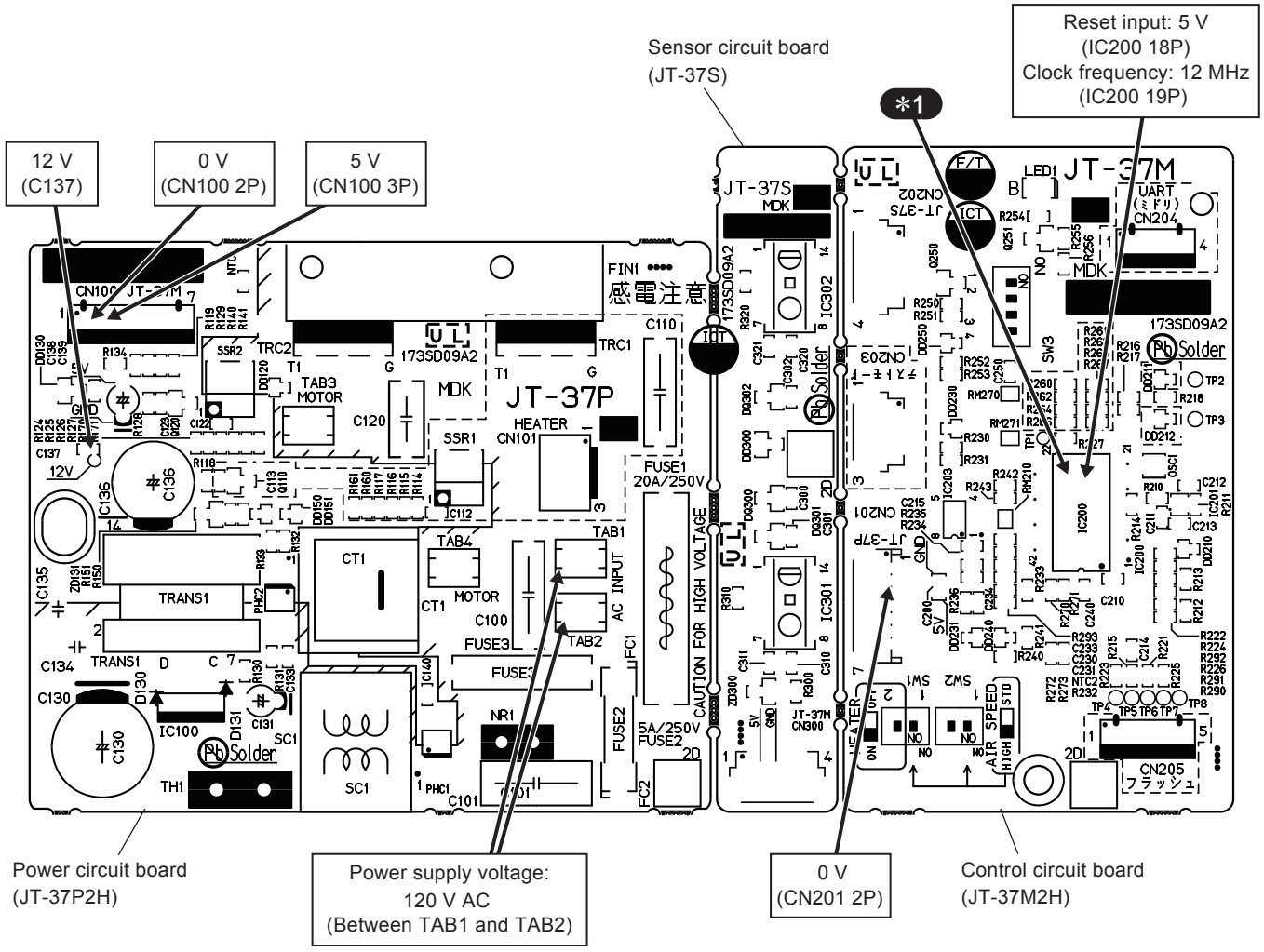
JT-S1AP-W-NA, JT-S1AP-S-NA



Current fuse	Thermal fuse
FUSE1: 250 V 20 A FUSE2: 250 V 5 A FUSE3: 250 V 15 A	201.2°F (94°C)

7. Circuit board diagram

● Circuit board diagrams and check points



*1 Circuit thermostat characteristics (JT-37M2H: IC200 40P and 41P)

Temperature	Resistance	IC200 40P and 41P Voltage
68°F (20ºC)	59.3 kΩ	3.44 V
104°F (40ºC)	24.5 kΩ	2.38 V
140°F (60ºC)	11.3 kΩ	1.47 V

8. Principles of operation

● Descriptions of circuit operation

(1) Notes for turning the power ON / OFF

① When the power is turned ON, the power light (LED 1) turns on after 1.5 seconds, and the hand dryer becomes ready for operation.
- Before the power light turns on, the hand dryer will not operate even if hands are inserted in the hand drying area. In the meantime, the microcomputer (IC200) on the control circuit board performs the initial settings.

② When the power is turned OFF, the power light turns off and operation stops.
- The circuitry takes about 15 seconds to discharge the voltage retained in it. Wait until the discharging time elapses before plugging in or out the connectors, replacing the circuit boards, or doing other maintenance.
- Even when any error is occurred, the error display will go off if the power has been turned off. Only when a microcomputer error is occurred, the error display persists till the voltage retained in the circuitry has been discharged (till the microcomputer has been reset).

(2) Hand detection and operation

① A range sensor is used as the hand detection sensor.

② When the sensor detects hands, the blower motor turns on and the hand dryer starts to operate.

③ Once operation has started, it continues as long as the sensor detects hands.

④ If delay time (*Note 1) elapses without detecting hands by the sensor, the blower motor turns off and operation stops.

Note 1: The delay time until the blower motor turns off is determined by the following setting.

<Motor delay time setting>

When the power is on, use the switch (SW3-3) on the control circuit board (JT-37M2H) to set the delay time to 1 or 2 seconds.

SW3-3	Delay time
OFF	1.0 s
ON	2.0 s

⑤ The hand dryer continuously operates for up to 30 seconds.
- Once 30 seconds have elapsed, the hand dryer stops operating even if hands are detected. (Tamper-resistant timer)
- Since this is a function to assume the presence of a foreign object, the operation will resume when hands are pulled out and reinserted.

(3) Control of the blower motor

① The motor does not start in the following occasions:
- When a temperature detected by the thermostat on the control circuit board (JT-37M2H) is 149°F (65°C) or higher, or lower than -40°F (-40°C)
- When a temperature detected by the thermostat on the power circuit board (JT-37P2H) is 149°F (65°C) or higher, or lower than -40°F (-40°C)

② The air speed decreases in the following occasion:
- When a temperature detected by the thermostat on the control circuit board (JT-37M2H) is 113°F (45°C) or higher

(4) Control of the heater

① To regulate inrush current at startup, the heater turns on 0.5 seconds later than the blower motor.

② The heater does not turn on in the following occasions:
- When the switch (SW1-2) on the control circuit board (JT-37M2H) is in the OFF position
- When a temperature detected by the thermostat on the control circuit board (JT-37M2H) is 89.6°F (32°C) or higher, or when a temperature detected by the thermostat on the power circuit board (JT-37P2H) is 131°F (55°C) or higher

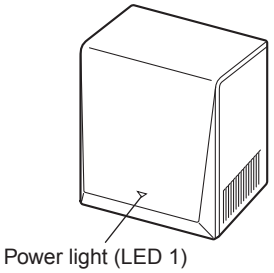
9. Troubleshooting

■ Work precautions

- When servicing, reproduce the malfunction two or three times before starting repairs.
- When servicing, always take care to keep proper footing.
- Before starting the service, always unplug the power cord from the outlet, or turn off the circuit breaker when no power cord plug is provided. Sufficient care must be taken to avoid electric shock or injury.
- Make sure to connect the power supply wires correctly.
- When removing the circuit board, always hold it at both ends and remove carefully so as not to apply force to the surface mounted parts.
- When removing the circuit board, be careful of the metal edges on the board.
- When removing or inserting the connectors for the circuit board, hold the entire housing section. Never pull on the lead wires.
- When circuit board failure is considered to be a cause, check closely for any broken section on the copper foil patterns, burning or discoloration of parts.
- After replacing a circuit board, make sure to restore the same settings as before the replacement.

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

Description of the error display



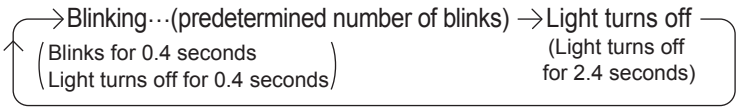
Model name of the circuit boards

Power circuit board	JT-37P2H
Control circuit board	JT-37M2H
Sensor circuit board	JT-37S

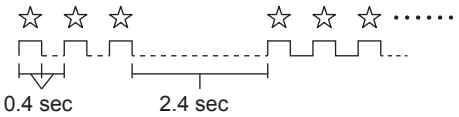
Malfunction location quick reference chart (The malfunction location is indicated by the LED lighting status.)

○ : Lit ● : Unlit ☆ : Blinking (ON for 0.4 seconds/ OFF for 0.4 seconds)

<Blinking cycle>

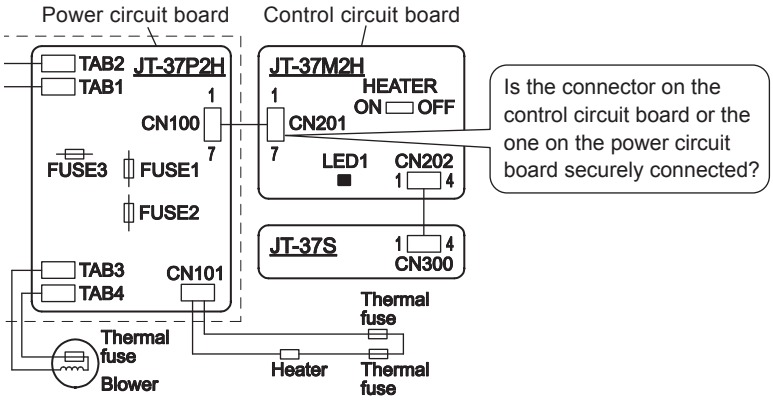


Ex: “Motor abnormality 1” blinks 3 times



	Description	Power light (LED1)	Main cause of error
Normal	When normal	○	–
	Tamper prevention	☆	30-second continuous operation (automatic return)
Abnormal	Power-supply detection abnormality	2 blinks	Power-supply noise (automatic return)
	Motor abnormality 1	3 blinks	Motor: lock/connector detached
	Motor abnormality 2	4 blinks	Motor: brush life limit/brush abnormality
	Power circuit board temperature abnormality	5 blinks	Power circuit board: high-temperature/low-temperature (automatic return)
	Control circuit board temperature abnormality	6 blinks	Control circuit board: high-temperature/low-temperature (automatic return)
	Microcomputer abnormality	7 blinks	Microcomputer abnormality (Control circuit board)
	Power-supply OFF/fuse melting	●	Power-supply OFF, electric current fuse and temperature fuse melting

Troubles with error display

<table>
<tr><th>Error Display</th><th>Cause</th><th>Check Method and Remedy</th></tr>
<tr><td rowspan="3">Power light (LED 1)
●
(The hand dryer does not operate, and the light does not light up.)</td><td>Connector disconnection</td><td>Check if the lead wire connectors between the power circuit board and the control circuit board are disconnected.</td></tr>
<tr><td>Blowout of the current fuse</td><td>Measure the resistance across the current fuses (FUSE 1 and 2) on the power circuit board. If the resistance is not normal, replace the power circuit board.
<table><tr><th>Resistance</th><th>Judgment</th></tr><tr><td>0 Ω</td><td>Normal</td></tr></table></td></tr>
<tr><td>Malfunction of the control circuit board</td><td>If the error persists after performing the above, replace the control circuit board.</td></tr>
<tr><td></td><td>Malfunction of the power circuit board</td><td>If the error persists after replacing the control circuit board, replace the power circuit board.</td></tr>
<tr><td rowspan="2">Power light (LED 1)
●
(The hand dryer operates, but the light does not light up.)</td><td>Malfunction of the control circuit board</td><td>Check if the connector CN201 on the control circuit board or CN100 on the power circuit board is disconnected.
 

(If a light-emitting device of the control circuit board is in a state of short circuit or open fault, the light does not light up.)</td></tr>
<tr><td>Malfunction of the control circuit board</td><td>If the error persists after performing the above, replace the control circuit board.</td></tr>
<tr><td rowspan="3">Power light (LED 1)
☆
(Tamper-resistant timer)</td><td>30 seconds have elapsed.</td><td>If hands are inserted in the hand drying area for 30 seconds, the error occurs.
It returns to normal if hands are pulled out.</td></tr>
<tr><td>Dirty sensor window</td><td>Check for dirt sticking to the sensor area.
If the hand dryer operates for 30 seconds because of dirt on the sensor window, remove the sensor dirt, and then reset the power.</td></tr>
<tr><td>Malfunction of the control circuit board</td><td>If the error persists after performing the above, replace the control circuit board.</td></tr>
<tr><td rowspan="4">Power light (LED 1)
2 blinks
(Power failure)</td><td>Connector disconnection</td><td>Check if the lead wire connectors between the power circuit board and the control circuit board are disconnected.</td></tr>
<tr><td>Malfunction of the control circuit board</td><td>Replace the control circuit board.</td></tr>
<tr><td>Malfunction of the power circuit board</td><td>Replace the power circuit board.</td></tr>
<tr><td>Power supply noise</td><td>If there is power supply noise, use a noise filter for the power line or take other noise-control measures.</td></tr>
</table>

Error Display	Cause	Check Method and Remedy
Power light (LED 1) 3 blinks (Motor error)	Connector disconnection for the motor	Check if the lead wire connectors between the motor and the power circuit board are disconnected.
	Motor brush at the end of its life	Replace the blower (assembly).
	Motor lock	Check if the motor vanes are locked.
	Blown current fuse (FUSE 3) or blown thermal fuse of the motor	Measure the resistance between the both ends of the motor lead. If it is ∞ Ω, replace the blower (assembly).
	Malfunction of the control circuit board	If no error is found after checking the above, replace the control circuit board.
	Malfunction of the power circuit board	If the error persists after replacing the control circuit board, replace the power circuit board.
Power light (LED 1) 4 blinks (Motor brush error)	Unusually worn-out motor brush	Replace the blower (assembly).
	Motor brush at the end of its life	Replace the blower (assembly).
	Malfunction of the control circuit board	If the error persists after performing the above, replace the control circuit board.
	Malfunction of the power circuit board	If the error persists after replacing the control circuit board, replace the power circuit board.
Power light (LED 1) 5 blinks (Temperature detection error (Power circuit board))	An abnormal temperature has been detected.	If the temperature on the power circuit board rises because of the overuse, the hand dryer stops the operation. Leave it until the temperature falls, and then check if the error occurs again.
	Malfunction of the power circuit board	If the error persists after performing the above, replace the power circuit board.
Power light (LED 1) 6 blinks (Temperature detection error (Control circuit board))	An abnormal temperature has been detected.	If the temperature on the control circuit board rises because of the overuse, the hand dryer stops the operation. Leave it until the temperature falls, and then check if the error occurs again.
	Malfunction of the control circuit board	If the error persists after performing the above, replace the control circuit board.
Power light (LED 1) 7 blinks (Microcomputer error)	Malfunction of the control circuit board	Replace the control circuit board.

Troubles without error display

<table>
<tr><th>Symptom</th><th>Cause</th><th>Check Method and Remedy</th></tr>
<tr><td rowspan="4">The hand dryer does not blow warm air.</td><td>Malfunction of the heater switch</td><td>After checking that the connector is securely connected, measure the resistance across the heater switch on the control circuit board. If the resistance is not normal, replace the control circuit board.
<table>
<tr><th>Switch (SW1-2)</th><th>Resistance</th><th>Judgment</th></tr>
<tr><td>ON state</td><td>0 Ω</td><td>Normal</td></tr>
<tr><td>OFF state</td><td>∞ Ω</td><td>Normal</td></tr>
</table></td></tr>
<tr><td>Blown thermal fuse of the heater</td><td>Measure the resistance between the heater lead connectors (green and white).
If it is ∞ Ω, replace the heater (PTC).</td></tr>
<tr><td>Ambient temperature is low.</td><td>When the ambient temperature is 18°C or lower, the hand dryer, which is equipped with the simple heater, does not blow sufficiently warm air.</td></tr>
<tr><td>Malfunction of the power circuit board</td><td>If the error persists after performing the above, replace the power circuit board.</td></tr>
<tr><td rowspan="4">The hand dryer does not stop blowing air.</td><td>Dirt on the sensor area</td><td>Check if the sensor window gets dirty.</td></tr>
<tr><td>Influence of light</td><td>Check if the sensor area is exposed to sunlight or strong light.</td></tr>
<tr><td>Malfunction of the power circuit board</td><td>If the error persists after performing the above, replace the power circuit board.</td></tr>
<tr><td>Malfunction of the control circuit board</td><td>If the error persists after replacing the power circuit board, replace the control circuit board.</td></tr>
<tr><td>The air speed cannot be changed.</td><td>Malfunction of the control circuit board</td><td>Replace the control circuit board.</td></tr>
<tr><td>The hand dryer does not blow air even though hands are inserted.</td><td>Hands are too far away from the sensor.</td><td>Sensitivity range of the sensor is 9 cm directly below the sensor. When inserting hands, place hands close to the sensor.</td></tr>
</table>

10. Before receiving repair requests

Frequently asked question			Response
1	The hand dryer does not blow air even though hands are inserted. (It may not stop blowing air in the case of ③.)	The power light is not turned on.	① If the power wires are disconnected, securely connect them to the terminal block. ② If the circuit breaker is OFF, turn it ON.
		Cases other than the above	③ The sensor area may get dirt, clean up the sensor area.
2	The hand dryer does not blow warm air.	The heater switch is not turned on.	① If the heater switch (SW1-2) is OFF, turn it ON.
		Ambient temperature is low.	② When the room temperature is 18°C or lower, the hand dryer, which is equipped with the simple heater, does not blow sufficiently warm air.
3	Air blow is too weak to dry hands quickly.		If the filter is clogged, clean it up.

11. Service inspection list

Location	Inspection Item	Check Result
Electric wiring	Are lead wire connectors connected securely?	
	Is the wiring correct?	
Operation	Does the hand dryer operate properly? Isn't there any abnormal noise, vibration, etc.?	
Power light	Does the light (LED) come on?	
Filter	Is the filter inserted into the proper position?	
Wall installation	Isn't there any gaps between the product and the back wall?	

12. Overhauling procedures

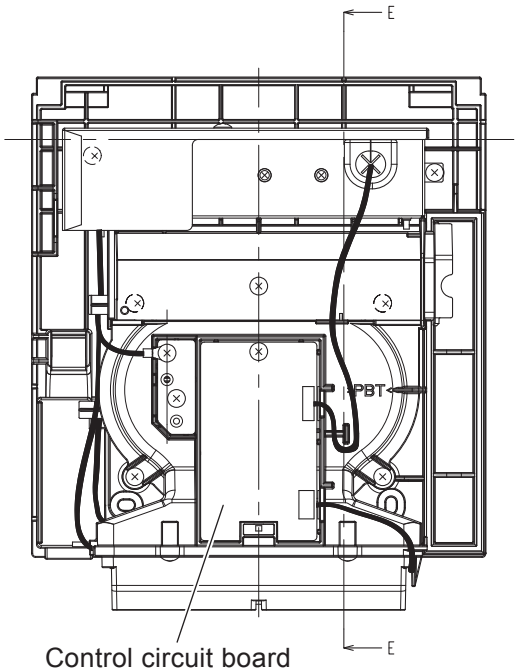
■ Work precautions

- Before replacing parts, follow the instructions described in the troubleshooting.
- When servicing, always take care to keep proper footing.
- Before starting the service, always unplug the power cord from the outlet, or turn off the circuit breaker when no power cord plug is provided. Sufficient care must be taken to avoid electric shock or injury.
- Make sure to connect the power supply wires correctly.
- After completing repairs, check that the unit operates properly.

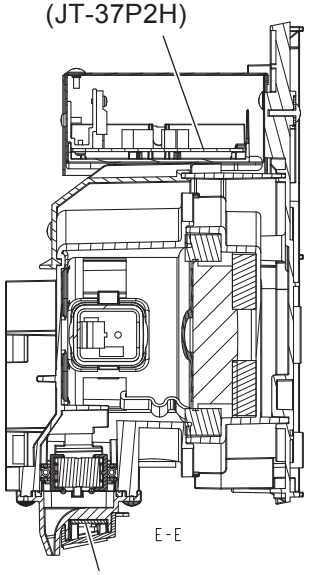
∗ Always wear gloves when servicing.

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

<Internal view and circuit board locations>



Control circuit board
(JT-37M2H)



Power circuit board
(JT-37P2H)

Sensor circuit board
(JT-37S)

(1) Turn off the power supply.

- Turn off the circuit breaker on the distribution board.

(2) Control circuit board (JT-37M2H)

① Remove the front panel clamping screw.
(One PT screw 4 x 14, indicated by ○)

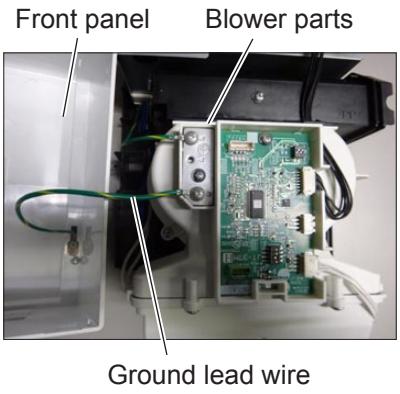
Tightening torque:
1.0 ± 0.1 N·m

<A bottom view of the product>

Front panel

② Unhook the inside claws (Indicated by ○) of the front panel from the base, and remove the front panel. → See page 5.

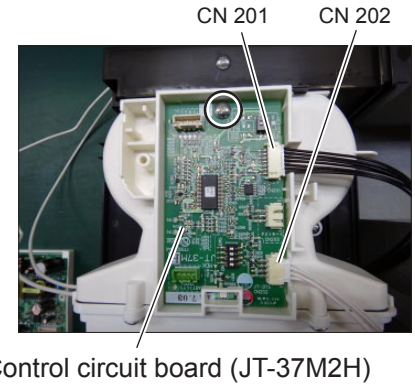
Precaution
Be aware that the ground lead wire is connected between the front panel and blower parts.



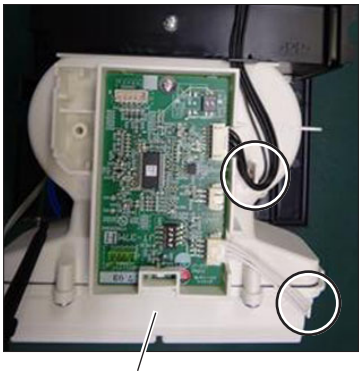
③ Unscrew the screw to remove the control circuit board.
(One PTT screw 4 x 14, indicated by ○)

Tightening torque:
1.0 ± 0.1 N·m

④ Disconnect the connectors (CN201 and CN202) from the control circuit board.



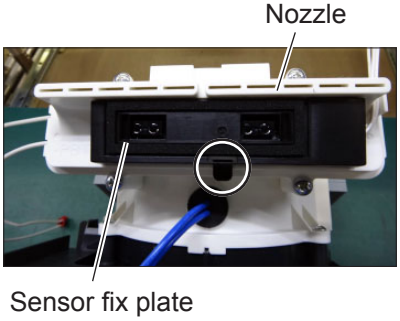
Assembly precautions
• Run the lead wires through the grooves of the blower cover. (Indicated by ○)
• Take care not to pinch the lead wires.



(3) Sensor circuit board (JT-37S)

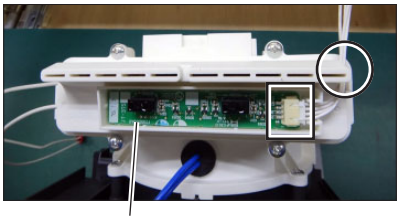
① Remove the front panel. → See (2) ① and ②.

② Unhook the claw (indicated by ○) of the sensor fix plate from the nozzle, and then remove the sensor fix plate.



③ Disconnect the connector from the sensor circuit board.
(Indicated by □)

④ Remove the sensor circuit board.



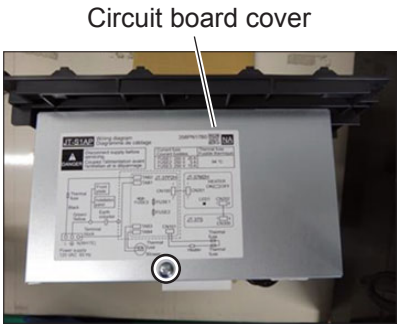
Assembly precautions
• Run the lead wires through the groove of the nozzle. (Indicated by ○)
• Take care not to pinch the lead wires.

(4) Power circuit board (JT-37P2H)

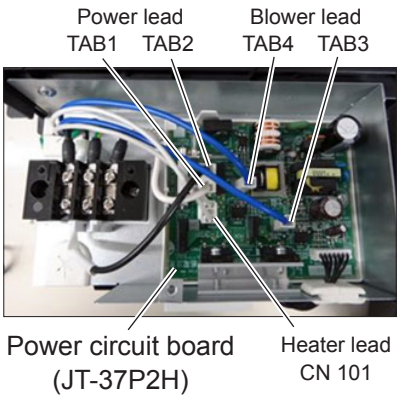
① Remove the front panel. → See (2) ① and ②.

② Unscrew the screw to remove the circuit board cover.
(One PTT screw 4 x 6, indicated by ○)

Tightening torque:
1.0 ± 0.1 N·m

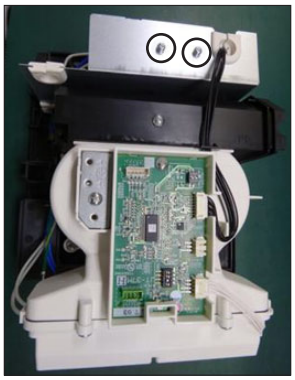


③ Disconnect the connectors from the power circuit board.



④ Unscrew the screws.
(Two SW-PW·PP screws 4 x 8, indicated by ○)

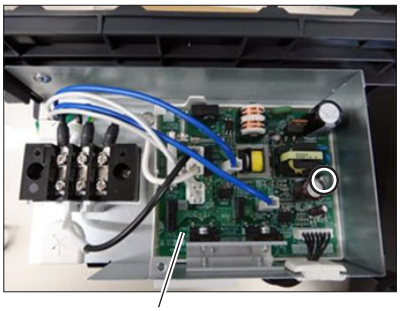
Tightening torque:
1.0 ± 0.1 N·m



⑤ Unscrew the clamping screw for the power circuit board.
(One PTT screw 4 x 14, indicated by ○)

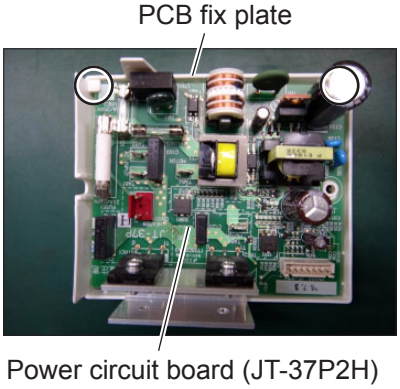
Precaution
When removing the screw, pay attention not to drop the power circuit board.

Tightening torque:
1.0 ± 0.1 N·m



⑥ Remove the power circuit board from the PCB fix plate.

Assembly precaution
Fit the power circuit board into the claws of the PCB fix plate.
(Indicated by ○)



(5) Terminal block (with the thermal fuse)

① Remove the front panel .→ See (2) ① and ②.

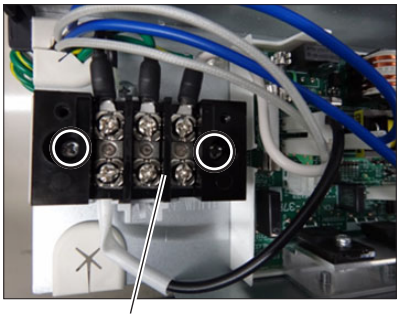
② Remove the circuit board cover .→ See (4) ① and ②.

③ Disconnect the power leads (TAB1 and TAB2) from the power circuit board. → See (4) ③.

④ Unscrew the terminal block clamping screws.
(Two PPT screws 4 x 20, indicated by ○)

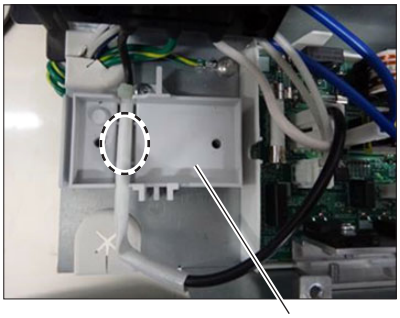
Tightening torque:
1.2 ± 0.1 N·m

⑤ Remove the terminal block (with the thermal fuse).



Terminal block

Assembly precaution
When running the lead wire through the groove of the terminal block (TB) holder, set the thermal fuse in the center of the groove. (Indicated by ○)



TB holder

(6) Heater (PTC) (with the thermal fuse)

① Remove the front panel .→ See (2) ① and ②.

② Disconnect the white lead connector (CN202) from the control circuit board. → See (2) ④.

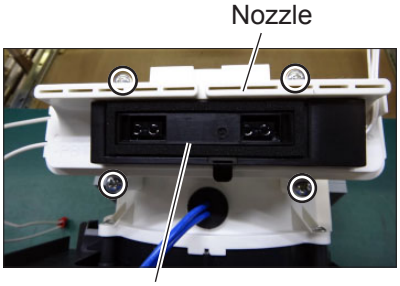
③ Disconnect the heater lead connector (CN101) from the power circuit board. → See (4) ② and ③.

④ Unscrew the nozzle clamping screws.
(Four PTT screws 4 x 14, indicated by ○)

Precaution
When removing the screws, pay attention not to drop the sensor fix plate.

Assembly precaution
Tighten the screws in a crisscross pattern.

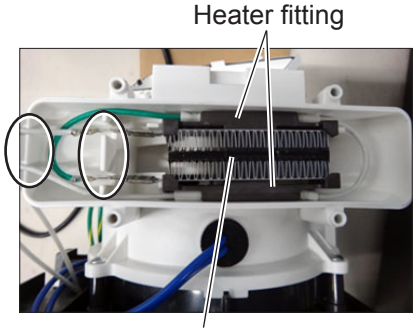
Tightening torque:
1.0 ± 0.1 N·m



Sensor fix plate

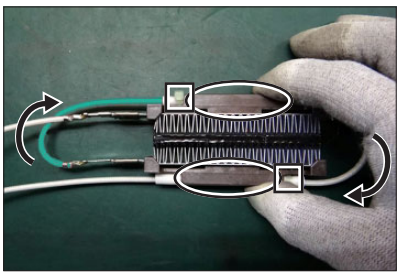
⑤ Remove the heater (PTC) with the heater fittings.

Assembly precautions
• Run the lead wires through the grooves of the blower cover. (Indicated by ○)
• Take care not to pinch the lead wires.



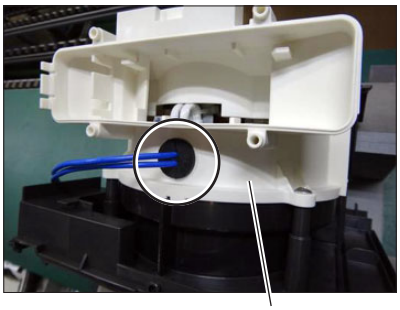
Heater (PTC)

Assembly precautions
• Run the heater lead wires as shown in the picture at right.
• Fit the thermal fuse parts into the grooves of the heater fittings. (Indicated by ○)
• Align the cable ties with the edge of the grooves. (Indicated by □)

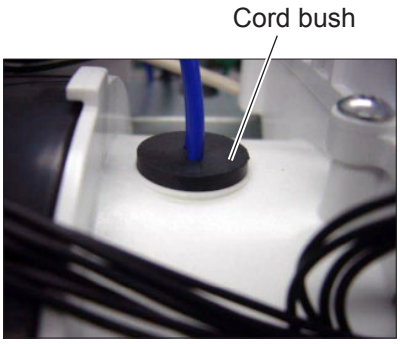


(7) Blower assembly (Thermal fuse of the motor)

① Remove the front panel. → See (2) ① and ②.
② Disconnect the connectors (CN201 and CN202) from the control circuit board. → See (2) ④.
③ Disconnect the blower lead connectors (TAB3 and TAB4) from the power circuit board. → See (4) ② and ③.
④ Push the cord bush into the blower cover. (Indicated by ○)



Assembly precautions
• Attach the cord bush as shown in the picture at right.
• Make sure that there is no slack in the lead wires inside the blower cover.



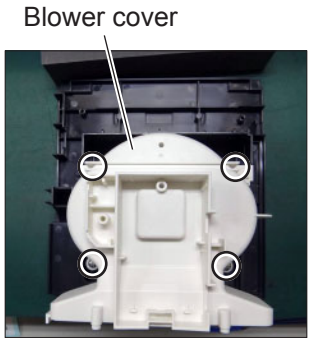
⑤ Unscrew the screw to remove the intake air duct. (One PTT screw 4 x 14, indicated by ○)

Tightening torque:
1.0 ± 0.1 N·m

Assembly precaution
Set the intake air duct in the groove of the blower cover. (Indicated by ○)

⑥ Unscrew the blower cover clamping screws.
(Four PTT screws 4 x 14, indicated by ○)

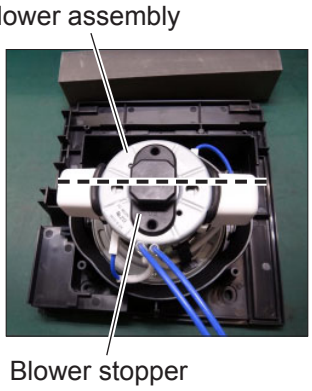
⑦ Remove the cord bush from the lead wires.
→ See the picture of (7) ④.



⑧ Remove the blower stopper.

⑨ Remove the blower assembly.

Assembly precautions
- Set the blower assembly horizontally.
- When installing the blower stopper, make sure that it is not loose.



✻ When reassembling

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