

HAND DRYER

# HANDBOOK

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## MODELS

**JT-SB116JH-G-NA**

**JT-SB116JH-W-NA**



Nameplate

**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**



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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>		Incorrect handling of the product may result in serious injury or death.	
<p>◇ <b>Electric shock</b> If you must inspect the circuitry while the power is on, do not touch the live parts.</p> <p>(Failure to heed this warning may result in electric shock.)</p> <div style="text-align: right;">   <small>Caution against electric shock</small> </div>	<p>◇ <b>Turn off the power</b> Make sure to turn off the circuit breaker prior to starting repair work. (The charge voltage in the circuitry remains for another 50 seconds or so, even after the power is turned off and the LED is unlit; therefore, wait for at least 50 seconds before disassembling the product.)</p> <p>(Failure to heed this warning may result in electric shock.)</p> <div style="text-align: right;">   <small>Be sure to follow this instruction.</small> </div>		
<p>◇ <b>Modification is prohibited</b> Do not modify the unit.</p> <p>(Failure to heed this warning may result in electric shock, fire and/or injury.)</p> <div style="text-align: right;">   <small>Prohibited</small> </div>	<p>◇ <b>Use proper parts and tools</b> For repair, be sure to use the parts listed in the service parts list of the applicable model and use the proper tools.</p> <p>(Failure to heed this warning may result in electric shock, fire and/or injury.)</p> <div style="text-align: right;">   <small>Be sure to follow this instruction.</small> </div>		
<p>◇ <b>Proper electric work</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Make sure that the terminals and fixed wiring are securely connected.</li> </ul> <p>(Improper connection or wiring installation may result in electric shock and/or fire.)</p> <div style="text-align: right;">   <small>Be sure to follow this instruction.</small> </div>	<p>◇ <b>Check insulation</b> 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> <div style="text-align: right;">   <small>Be sure to follow this instruction.</small> </div>		
<p>◇ <b>Scratches and deterioration</b> Make sure to replace scratched and/or deteriorated wiring and lead wires.</p> <p>(Failure to heed this warning may result in electric shock and/or fire.)</p> <div style="text-align: right;">   <small>Be sure to follow this instruction.</small> </div>			

 <b>Caution</b>		Incorrect handling of the product may result in injury or damage to properties including buildings and equipment.	
<p>◇ <b>Wear gloves</b> Always wear a pair of gloves during inspection or repair work.</p> <p>(Failure to heed this caution may result in injury.)</p> <div style="text-align: right;">   <small>Be sure to follow this instruction.</small> </div>			

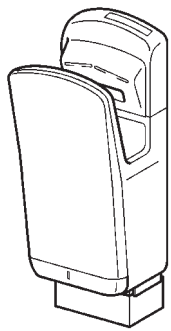

## Request for repair

- Before repairs, take the product off the wall.
- Inspect the grounding condition, and repair it if it is incomplete. Make sure that a ground fault circuit interrupter or an overload protection device is installed, if it is not installed, recommend the dealer to install one.
- Check whether the air filter, side cover, and the drain tank are installed securely in place.
- Do not leave a towel or other object in the hand-drying area.
- Never place any object 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 (0°C)
  - Locations where the temperature could be higher than 104°F (40°C)
  - Locations where there is a lot of dust
  - Locations where there is a lot of condensation
  - Locations where salt damage could occur
  - Vehicles (including ships and airplanes)
  - Locations where corrosive, neutral, or reductive gases are present
  - Near food or tableware
  - Kitchens
  - Locations where the product may come into direct contact with water (Where there is a risk of water splashing)
  - Locations where the product is in direct sunlight or strong light (It may cause sensor malfunction)
  - Rooms that have a sterilization basin, swimming pools, 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

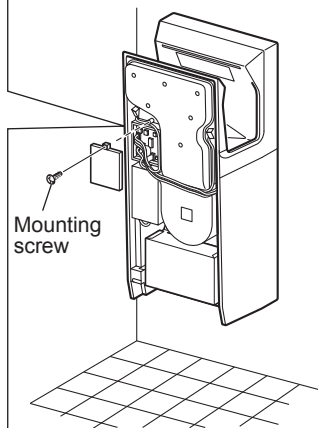
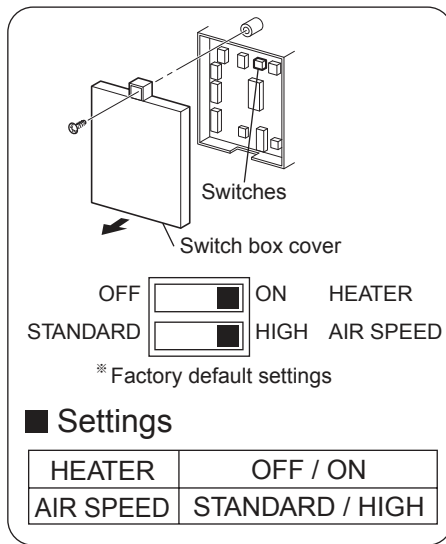
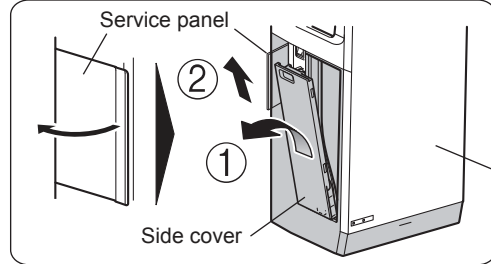
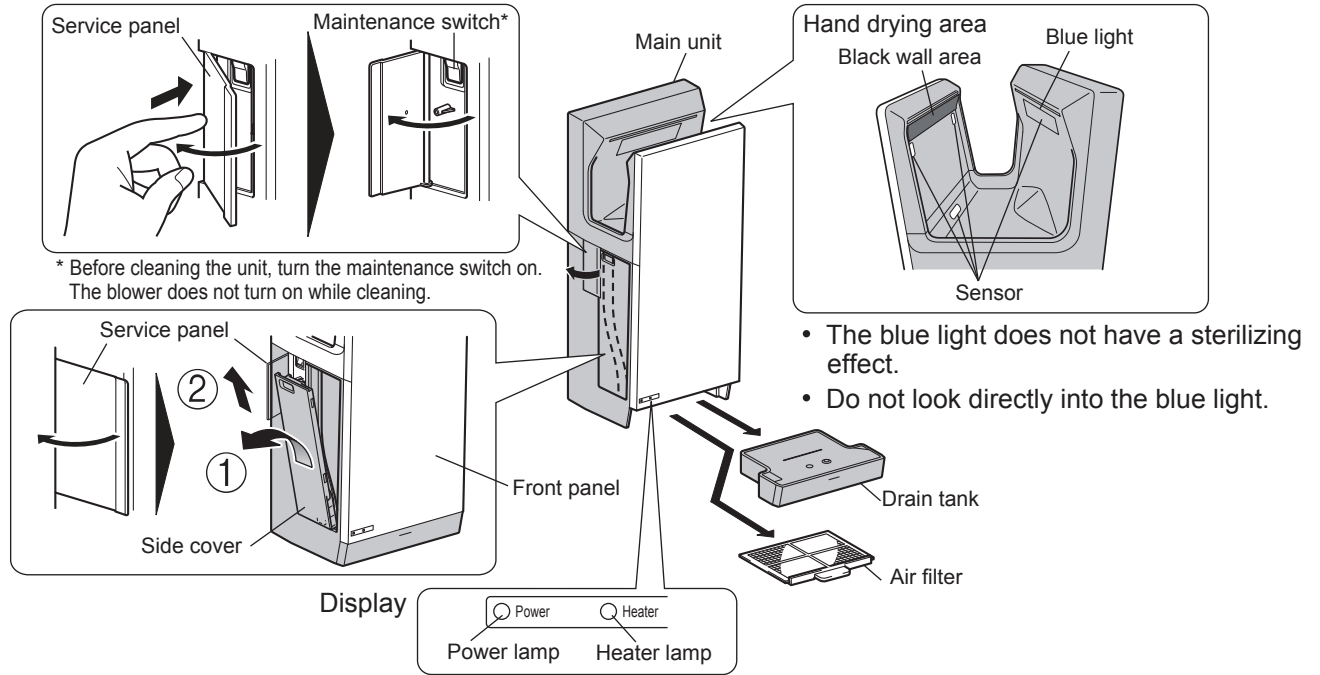
- Wide hand drying area: easy-to-use for people with big hands
- Child sensor: easy-to-use for children
- The wave nozzle has reduced operating sound by 1 dB.
- Cleanable drain ditch
- Joints of hand drying area has been reduced by half.
- Exteriors can be cleaned by wiping with alcohol.
- The square design matches various lavatories.

### 3. Improved points

Item	Old model	New model
	JT-SB116EH-G-UL (With a thermal storage heater)	JT-SB116JH-G-NA JT-SB116JH-W-NA (With a simple heater)
Appearance		
Drying time (sec.)	10 to 12	9 to 11
Nozzle	Hyper slit nozzle	Wave nozzle
Noise (dB)	64	61
Draining device	Drain hose	Cleanable drain ditch
Rated power consumption (W)	1060 (Heater ON)	1250 (Heater ON)
	660 (Heater OFF)	730 (Heater OFF)
Rated current (A)	9.8 (Heater ON)	11.4 (Heater ON)
	7.1 (Heater OFF)	7.7 (Heater OFF)
Weight (lbs (kg))	37 (17)	26.5 (12)

# 4. Names of components

\*Shaded areas in the figure indicate antibacterial material.

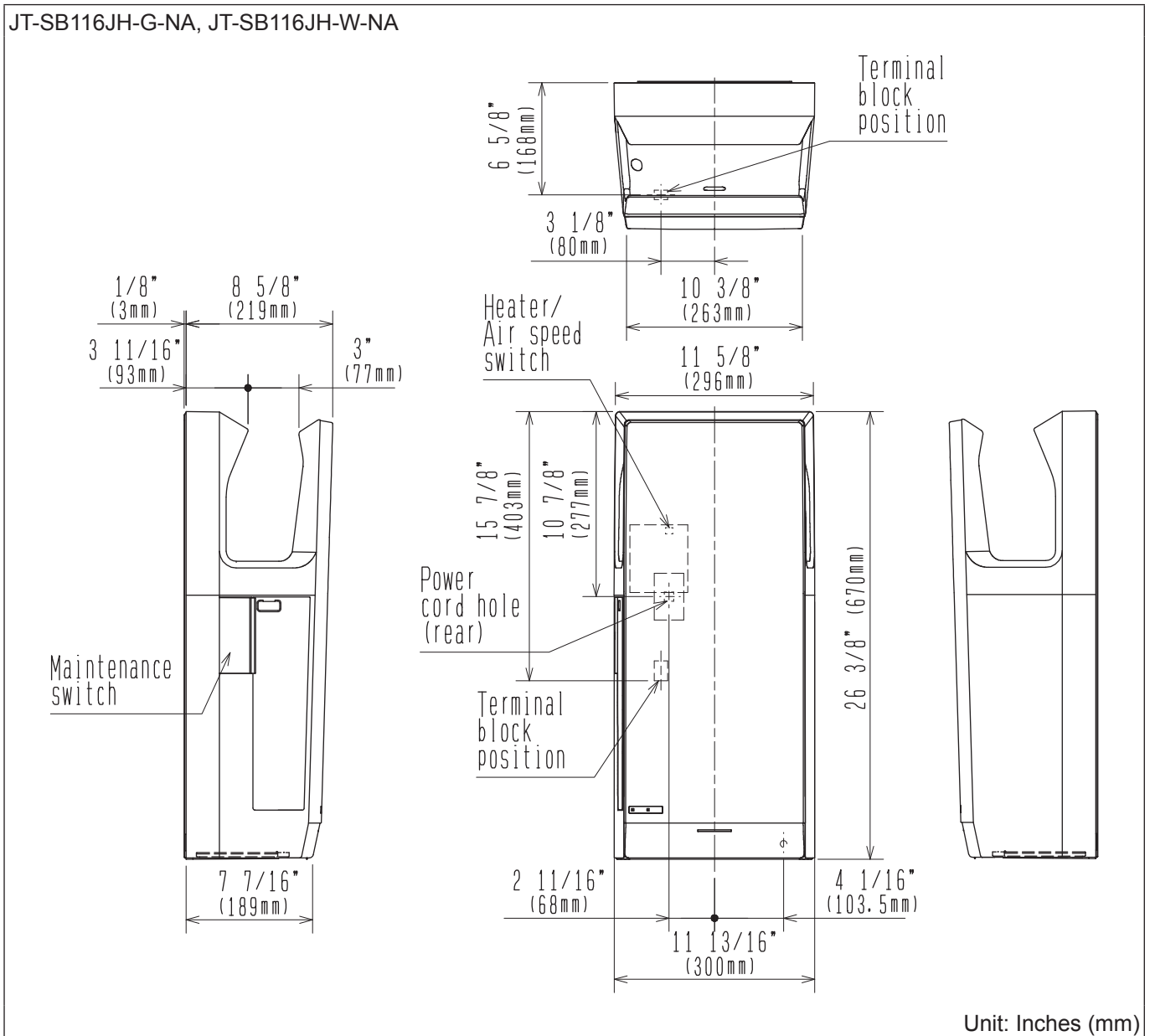


# 5. Specifications

Model	Rated voltage (Vac)	Rated frequency (Hz)	Rated current (A)	Air speed setting	Power consumption (W)		Air speed (m/h)	Sound (dB(A))	Weight	Drain tank capacity
					Heater ON	Heater OFF				
JT-SB116JH-G-NA	120	60	11.4	HIGH	1250	730	235	61	26.5 lbs (12 kg)	1.7 pt (0.8 l)
JT-SB116JH-W-NA				STANDARD	1090	570	215	58		

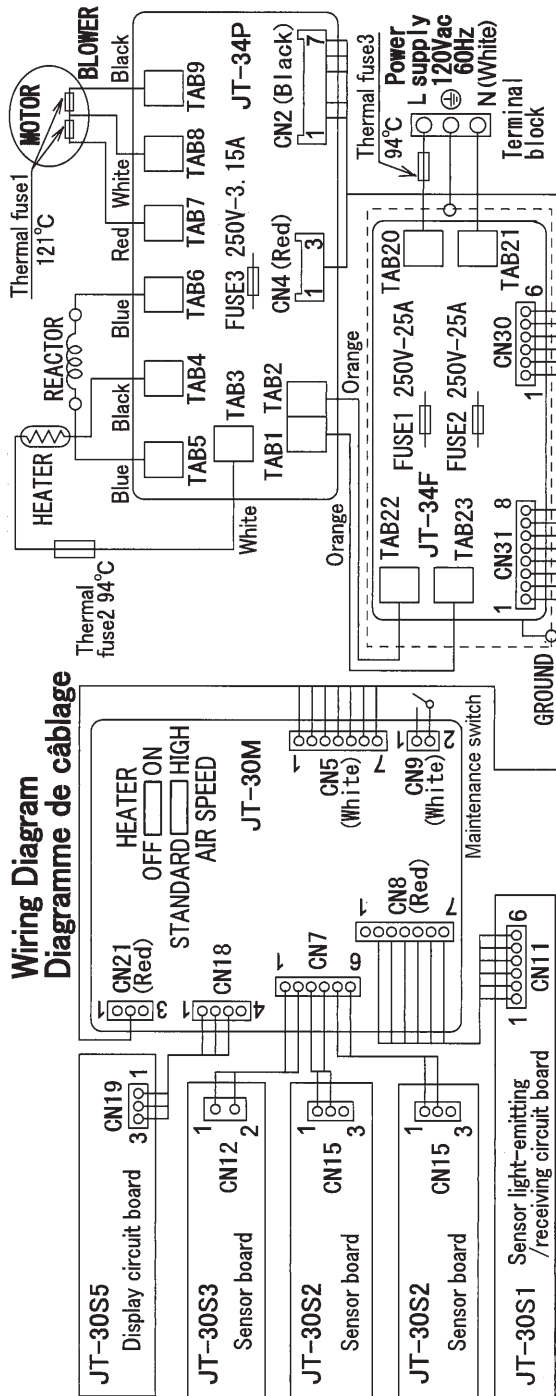
- Air speed is calculated from the static pressure measured by the pitot tube (at the nozzle).
- Sound is the A range value measured in an anechoic room.  
(Average of the three points: 2 m from the front and both sides of the unit.)
- The heater is turned off automatically when the room temperature around the unit reaches 86°F (30°C) or above.

# 6. Outside dimensions



# 7. Electrical wiring diagram

JT-SB116JH-G-NA, JT-SB116JH-W-NA



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

Power LED	Heater LED	Detected content	Cause
★	○ or ●	Tamper-proof timer	Insertion of foreign objects, continuous operation
○	★	Overvoltage, undervoltage detection	Overvoltage impress, undervoltage impress, power circuit
○	★	Motor lock error	Power circuit, blower
★	★	Motor overspeed error, step-out error	Air filter, blower, power circuit
★	★	Overcurrent detected	Blower (short circuit), power circuit (overcurrent)
●	★	Motor current detection error	Power circuit, disconnected motor
●	★	Motor signal error	Power circuit, disconnected motor
●	★	Microcomputer error	Control circuit
●	★	Fusing	Current fuse, thermal fuse in motor
Power LED	Heater LED	Défaut détecté	Cause
★	○ or ●	Minuterie contre triptotage	Insertion de corps étrangers, fonctionnement continu
○	★	Surtension détectée, sous-tension détectée	Surtension, sous-tension, circuit d'alimentation
○	★	Erreur de verrouillage moteur	Circuit d'alimentation, ventilateur
★	★	Survitesses du moteur, hors synchronisme	Filter à air, ventilateur, circuit d'alimentation
★	★	Surintensité détectée	Ventilateur (court-circuit), circuit d'alimentation (surintensité)
●	★	Erreur de détection de courant du moteur	Circuit d'alimentation, moteur déconnecté
●	★	Erreur du signal du moteur	Circuit d'alimentation, moteur déconnecté
●	★	Erreur du microprocesseur	Circuit de commande
●	★	Fondre	Fusible à intensité, fusible thermique du moteur

- ★ : Blinking (every 0.4 sec.)
- Clignote (toutes les 0,4 sec.)
- : Lit
- Eteint
- : Unlit
- Allumé
- \* : Blinking (every 0.1 sec.)
- Clignote (toutes les 0,1 sec.)

○ or ● : Lit when the heater switch is on, and unlit when off

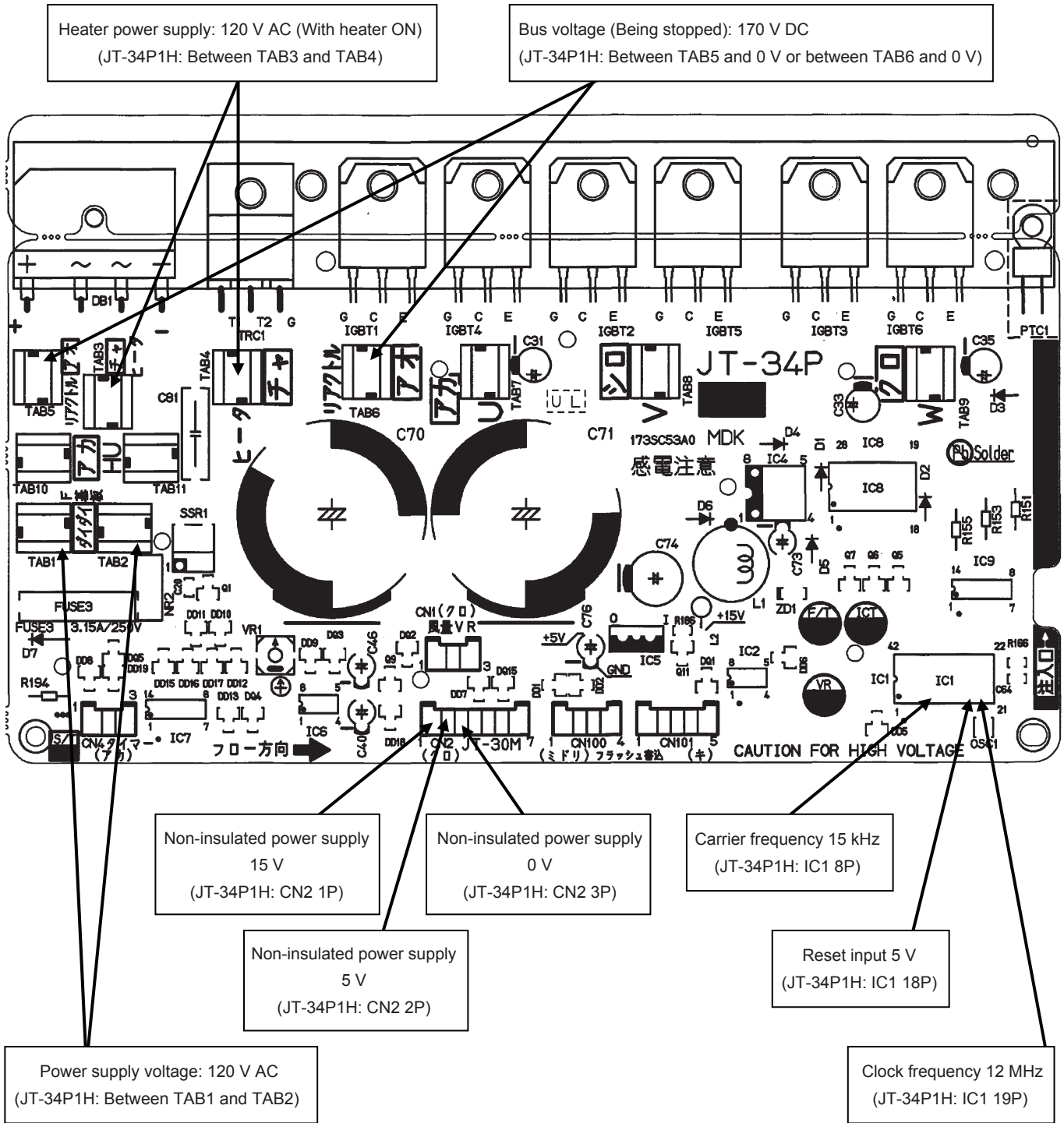
Lumineux lorsque l'interrupteur du réchauffeur est activé et sombre lorsqu'il est désactivé.



# 8. Circuit board diagrams

## ● Circuit board diagrams and check points

### ① Power circuit board (JT-34P1H)

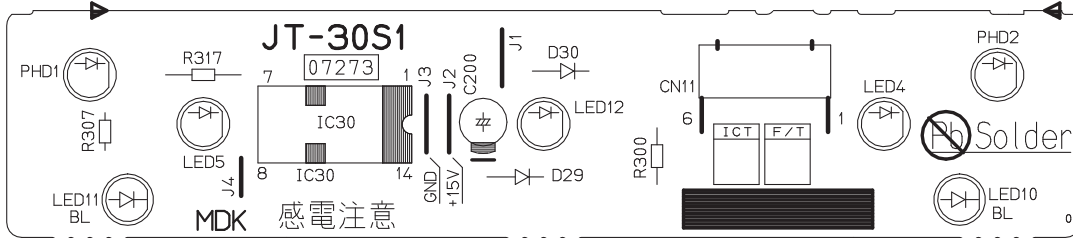




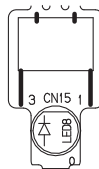
**\*1** Circuit thermostat characteristics (JT-30M4/JT-30M4A: IC20 5P)

Temperature	Resistance	IC20 5P Voltage
68°F (20°C)	59.3 kΩ	3.44 V
86°F (30°C)	37.6 kΩ	2.91 V
104°F (40°C)	24.5 kΩ	2.38 V

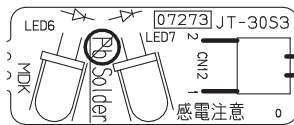
④ Light receiving circuit board (JT-30S1) (Upper sensor)



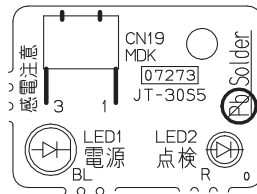
⑤ Sensor circuit board (JT-30S2) (Middle sensor)



⑥ Sensor circuit board (JT-30S3) (Lower sensor)



⑦ Display circuit board (JT-30S5)



## 9. Fundamentals of operation

### ● Descriptions of circuit operation

#### (1) Notes for turning the circuit breaker “ON / OFF”

- ① When the circuit breaker is turned “ON” and the power is supplied to the product, the power lamp (LED1), the heater lamp (LED2) (with the heater switch ON), and blue illumination lamps (LED10, 11) turn on after 1.5 seconds(\*1), and the hand dryer becomes ready for operation.
  - Before the power lamp turns on, the hand dryer will not operate even if hands are inserted in the hand drying area. In the meantime, the microcomputer (IC20) of the main unit performs the initial settings, including the setting of the hand detection sensor sensitivity.
  - In order to set the sensitivity of the hand detection sensor correctly, do not insert hands in the hand drying area until the power lamp is turned on.
  - Even if the hand dryer has started immediately (within 15 seconds or less) after turning the circuit breaker “ON”, it is normal though the motor input may become slightly lower due to the initial setting.

\*1: If the circuit breaker is turned ON again 30 to 120 seconds after turning the circuit breaker OFF, it may take 3 seconds before the operation is enabled.
- ② When the circuit breaker is turned “OFF”, the power lamp and blue illumination lamps turn off and operation stops.
  - The circuitry takes about 50 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 circuit breaker 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 The hand detection sensors are infrared sensors containing the light emitting sensor (infrared LED) and light receiving sensor (photo-diode), etc. and consist of the upper sensor, the middle sensors, and the lower sensor.
- ② Reflection type upper sensor:  
This sensor detects the change in the reflected amount of infrared light when hands are inserted.  
Transmission type middle and lower sensors:  
These sensors detect that the infrared light is shielded when hands are inserted.
- ③ When the lower or middle sensors detect hands, the blower motor turns on and the hand dryer starts to operate.
- ④ Once operation has started, it continues as long as any of the upper, middle, or lower sensors detects hands.
- ⑤ If 1.5 to 3 seconds elapse without detecting hands by any of the sensors, the blower motor turns off and operation stops.
- ⑥ 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.
  - Since this is a function to assume the presence of a foreign object, the operation will resume if hands are pulled out and reinserted.

#### (3) Control of the heater

- ① The heater turns ON simultaneously with the blower motor turns ON. (The heater lamp turns on.)
- ② The heater does not turn ON in the following occasions:
  - When the heater switch is turned “OFF”
  - When a temperature detected by the circuit thermostat on the control circuit board (JT-30M4/JT-30M4A) is 89.6°F (32°C) or higher

#### (4) Turning ON/OFF of the blue illumination lamps

- ① While the power is ON and the motor stops, switching the air speed switch six times within 5 seconds turns off the blue illumination lamps. (The switching can be started from either side of HIGH or STANDARD.)
- ② Also when turning the illumination lamps on from off, perform the switching in the same way as described in ①.

# 10. Troubleshooting

## ■ Work precautions

- When servicing, be sure to recreate 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.

## Description of the error mode display



Power LED    Heater LED

- : ON    ☆ : Slow blinking (ON for 0.4 seconds/ OFF for 0.4 seconds)  
 ● : OFF    \* : Fast blinking (ON for 0.1 second/ OFF for 0.1 second)

## Troubles with error display

Error Mode Display	Checkpoint	Check Method and Remedy				
<table border="1" style="width: 100%;"> <tr> <td style="text-align: center;">Power</td> <td style="text-align: center;">Heater</td> </tr> <tr> <td style="text-align: center;">●</td> <td style="text-align: center;">●</td> </tr> </table> <p>(Fuse is blown)</p>	Power	Heater	●	●	Power supply voltage	Check that the circuit breaker is turned ON and that approx. 120 V AC is supplied at both ends of the power cord connections on the terminal block. ■ If 120 V AC is not supplied, check the following point. Check that the power cord is connected securely to the terminal block.
Power	Heater					
●	●					
	Power supply voltage on the power circuit board (JT-34P1H)	Check that approx. 120 V AC is supplied between TAB1 and TAB2 (orange) on the power circuit board (JT-34P1H).				
<b>●If 120 V AC is not supplied, check the following points.</b>						
	Power supply voltage on the filter circuit board (JT-34F)	Check that approx. 120 V AC is supplied to the following points in the order of ① and ②. ① Between TAB20 and TAB21 (red) If approx. 120 V AC is not supplied, check the connection from the circuit breaker. ② Between TAB22 and TAB23 (orange) If approx. 120 V AC is not supplied, replace the filter circuit board (JT-34F).				
<b>●When 120 V AC is supplied, check the following points.</b>						
	Connector disconnection for the display circuit board (JT-30S5)	Check if the connector CN19 on the display circuit board (JT-30S5) or CN18 on the control circuit board (JT-30M4/JT-30M4A) is disconnected.				
	Connector disconnection between the circuit boards	Check if the connector CN2 on the power circuit board (JT-34P1H) or CN5 on the control circuit board (JT-30M4/JT-30M4A) is disconnected.				

Error Mode Display		Checkpoint	Check Method and Remedy
Power ●	Heater ●	Malfunction of the control circuit board (JT-30M4/JT-30M4A)	If no error is found after checking the above, replace the control circuit board (JT-30M4/JT-30M4A).
(Fuse is blown)			
		Malfunction of the power circuit board (JT-34P1H)	If the hand dryer does not operate even after replacing the control circuit board (JT-30M4/JT-30M4A), replace the power circuit board (JT-34P1H).
Power ☆	Heater ○ or ●	Remaining foreign object Dirty sensor window Connector disconnection for the sensors	Check for any objects left over and shielding the sensor in the hand drying area. Dirt may shield the sensors. Wipe the dirt off the sensor window. Check if the following connectors are disconnected. ① Sensor circuit board (JT-30S3) connector CN12 ② Sensor circuit board (JT-30S2) (2 locations) connectors CN15 ③ Light receiving circuit board (JT-30S1) connector CN11 ④ Control circuit board (JT-30M4/JT-30M4A) connectors CN7 and CN8
(Tamper-proof timer)			
		Malfunction of the control circuit board (JT-30M4/JT-30M4A)	If no error is found after checking the above, replace the control circuit board (JT-30M4/JT-30M4A).
Power ●	Heater ○	Abnormal power supply voltage	Check that correct power supply voltage is applied. • The error will occur if the power supply voltage is approx. 170 V AC or over, or approx. 60 V AC or under. *Note: If 170 V AC or over is applied, a current fuse on the power circuit board (JT-34P1H) may blow.
(Overvoltage or undervoltage detection)			
		Malfunction of the power circuit board (JT-34P1H)	If no error is found after checking the above, replace the power circuit board (JT-34P1H).
Power ○	Heater ☆	Motor malfunction Malfunction of the power circuit board (JT-34P1H) Blower (assembly) malfunction	Check that the motor is not locked, and turns smoothly by hand. If no error is found after checking the above, replace the power circuit board (JT-34P1H). If the error display persists after replacing the power circuit board (JT-34P1H), replace the blower (assembly).
(Motor start error)			
(Motor lock) (Motor over-revolution)			
Power ☆	Heater ☆	Motor overload Connector disconnection for the motor Blown thermal fuse of the motor Malfunction of the power circuit board (JT-34P1H)	Check for causes of motor overload. (Too much higher power supply voltage, any object disturbing the motor revolution, etc.) Check if the motor lead wire connectors (black, white, and red) are disconnected. Measure the resistance between Red and White and between Red and Black of the motor lead wires. If it is $\infty\Omega$ , replace the blower (assembly). If no error is found after checking the above, or if the error display persists after replacing the blower (assembly), replace the power circuit board (JT-34P1H).
(Motor overcurrent error) (Current detection circuit error)			
Power ●	Heater ☆	Connector disconnection Malfunction of the power circuit board (JT-34P1H)	Check if the connector CN5 on the control circuit board (JT-30M4/JT-30M4A) or CN2 on the power circuit board (JT-34P1H) is disconnected. If no error is found after checking the above, replace the power circuit board (JT-34P1H).
(Motor signal error)			
Power ●	Heater *	Malfunction of the control circuit board (JT-30M4/JT-30M4A)	Replace the control circuit board (JT-30M4/JT-30M4A).
(Microcomputer error)			

Troubles without error display

Symptom	Cause	Check Method and Remedy
Warm air does not blow.	Heater switch	Check that the heater switch is turned ON. (Heater lamp lights with the heater switch ON.)
	Connector dis-connection for the heater	Check if the connectors TAB3 and TAB4 on the power circuit board (JT-34P1H) are disconnected.
	Blown thermal fuse of the heater	Measure the resistance between the connectors TAB3 and TAB4 on the power circuit board (JT-34P1H). At a heater temperature of 32°F (0°C) or over: 100 Ω or under If the fuse is blown, the resistance will be ∞ Ω. In this case, replace the heater (PTC) and the power circuit board (JT-34P1H).
	Malfunction of the power circuit board (JT-34P1H)	Check that approx. 120 V AC is output at both ends of the connectors TAB3 and TAB4 on the power circuit board (JT-34P1H). If it is not output, replace the power circuit board (JT-34P1H). *Note: Approx. 120 V AC is output during operation, and it is not output during standby.
The hand dryer operates by itself. The hand dryer does not stop operation.	Heater malfunction	If no error is found after checking the above, replace the heater (PTC).
	Connector dis-connection for the sensors	Check if the following connectors are disconnected. ① Sensor circuit board (JT-30S3) connector CN12 ② Sensor circuit board (JT-30S2) (2 locations) connectors CN15 ③ Light receiving circuit board (JT-30S1) connector CN11 ④ Control circuit board (JT-30M4/JT-30M4A) connectors CN7 and CN8
	Malfunction of the sensor circuit boards (JT-30S1/2/3)	Visually check the sensor circuit boards for a defect such as a crack, corrosion, or a cold solder joint. If the error persists after replacing the control circuit board (JT-30M4/JT-30M4A) in the next procedure, replace the damaged sensor circuit boards (JT-30S1/2/3).
Air speed switch does not change the air volume.	Malfunction of the control circuit board (JT-30M4/JT-30M4A)	If no error is found after checking the above, replace the control circuit board (JT-30M4/JT-30M4A).
	Connector disconnection	Check if the connector CN21 on the control circuit board (JT-30M4/JT-30M4A) or CN4 on the power circuit board (JT-34P1H) is disconnected.
The hand dryer makes abnormal noises. Air blow is weak.	Malfunction of the power circuit board (JT-34P1H)	If no error is found after checking the above, replace the power circuit board (JT-34P1H).
	Sucking of foreign matter	Check for any foreign matter sticking to the blower (assembly) vanes.
	Clogged filter	Check the filter for clogging with dust, etc.
	Incorrect wiring	Check if the motor lead wires of the blower (assembly) (red to TAB7, white to TAB8, black to TAB9) are connected to incorrect TABs on the power circuit board (JT-34P1H). (If they are connected incorrectly, the motor turns in the reverse direction.)
	Malfunction of the power circuit board (JT-34P1H)	If no error is found after checking the above, replace the power circuit board (JT-34P1H).

## 11. How to call

Symptom	Remedy
Air blow is too weak to dry hands quickly.	① Check if the filter is clogged. ② Isn't the air speed switch set at the STANDARD position?
Water leaks from the product.	① Check if the drain tank is filled up. (Empty the drain tank.) *Note: Drain water will overflow onto the floor when the drain tank is filled up beyond its capacity. ② Is the drain tank installed properly?
Air does not blow immediately after turning on the circuit breaker and inserting hands.	Initial setting takes 1.5 seconds after turning on the circuit breaker. Operation is disabled in the meantime.
Warm air does not blow.	Is the heater switch turned ON?
The product has an abnormal odor.	① Check if the drain tank is filled up. (Empty the drain tank.) ② Check the inside of the drain tank for any foreign matter. (Remove it.) ③ Is the inside of the side cover cleaned up?

## 12. Service inspection list

Location	Inspection Item	Check Result
Electric wiring	Are lead wire connectors connected securely?	
	Is the wiring correct?	
Operation	Does it operate properly?	
	Isn't there any abnormal noise, vibration, etc?	
Heater	Is warm air blown?	
Lamps	Do the power lamp (LED1), the heater lamp (LED2) (with the heater switch ON), and blue illumination lamps (LED10, 11) come on?	
Wall installation	Isn't there clearance between the product and the back wall?	



# 13. 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 following pictures show JT-SB116JH-G-NA.

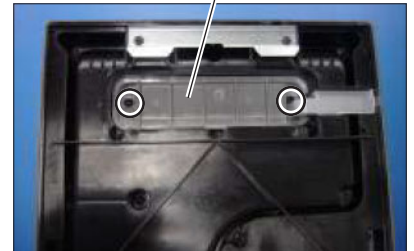
### (1) Turn off the power supply.

- ① Stop the operation.
- ② Turn off the circuit breaker on the distribution board.

### (2) Light receiving circuit board (JT-30S1)

- ① Unscrew the clamping screws, and remove the maintenance (maint.) cover.  
(Two special (spl.) screws 4 x 16, indicated by ○)

Maint. cover



#### Assembly precaution

Insert the maint. cover into the groove of the base. (Indicated by ○)



- ② Remove the fix plate.

#### Assembly precautions

- Run the lead wires through the groove of the maint. cover. (Indicated by ○)
- Take care not to pinch the lead wires.

Fix plate



Maint. cover

- ③ Remove the light receiving circuit board (JT-30S1).



Light receiving circuit board (JT-30S1)

### (3) Control circuit board (JT-30M4/JT-30M4A)

- ① Draw out the drain tank.
- ② Unscrew the clamping screws, and remove the front panel.  
(Two spl. screws 4×16, indicated by ○)

Front panel



- ③ Unscrew the clamping screw, and remove the cover (micro).  
(One spl. screw 4×16, indicated by ○)



Cover (micro)

- ④ Disconnect the lead wires from the control circuit board (JT-30M4/JT-30M4A).
- ⑤ Unscrew the clamping screw, and remove the control circuit board (JT-30M4/JT-30M4A).  
(One spl. screw 4×12, indicated by ○)



Control circuit board (JT-30M4/JT-30M4A)

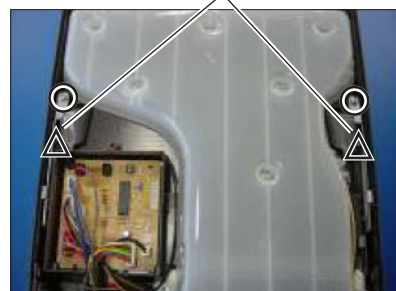
**Assembly precaution**  
Take care not to pinch the lead wires.

### (4) Sensor circuit board (JT-30S2)

- ① Remove the front panel. → See (3) ① to ②.
- ② Unscrew the clamping screws.  
(Two PTT screws 4×16, indicated by ○)
- ③ Unscrew the clamping screws, and remove the fix pieces.  
(Two spl. screws 4×12, indicated by △)

**Assembly precaution**  
Take care not to pinch the lead wires.

Fix piece

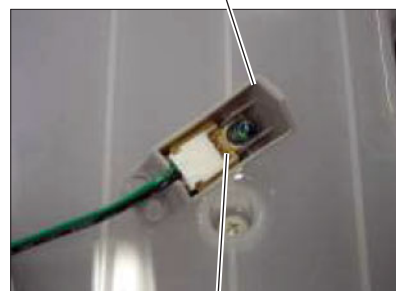


- ④ Remove the sensor circuit boards (JT-30S2). (Two locations)

**Assembly precautions**

- Insert the sensor circuit board between the claws of the fix piece.
- Take care not to pinch the lead wires.
- After installing the circuit board, make sure that the LED is upright.

Fix piece



Sensor circuit board (JT-30S2)

## (5) Power circuit board (JT-34P1H)

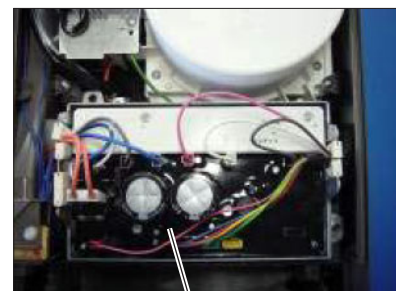
- ① Remove the front panel. → See (3) ① to ②.
- ② Unscrew the clamping screws, and remove the circuit board (PCB) cover for the power circuit board (JT-34P1H).  
(Two PTT screws 4×16, indicated by ○)



- ③ Disconnect the lead wires from the power circuit board (JT-34P1H), and remove the power circuit board.

### Assembly precautions

- Take care not to pinch the lead wires.
- Connect the lead wires as labeled on the PCB cover for the power circuit board.

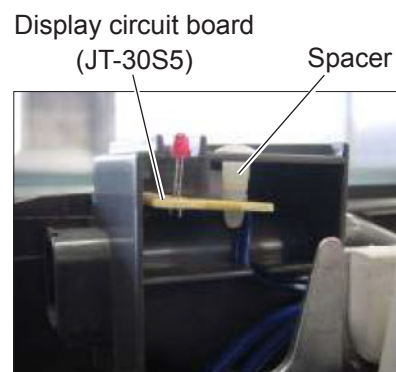


## (6) Display circuit board (JT-30S5)

- ① Remove the PCB cover for the power circuit board (JT-34P1H).  
→ See (5) ① to ②.
- ② Remove the display circuit board (JT-30S5) from the spacer.

### Assembly precaution

- After installing the circuit board, make sure that the LEDs are upright.

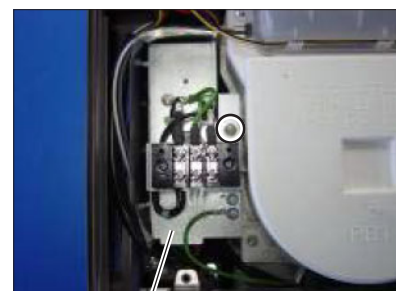


## (7) Filter circuit board (JT-34F)

- ① Remove the front panel. → See (3) ① to ②.
- ② Unscrew the clamping screw, and remove the terminal block (TB) cover.  
(One PTT screw 4×6, indicated by ○)



- ③ Unscrew the clamping screw, and remove the terminal block (TB) fix plate.  
(One PTT screw 4×16, indicated by ○)

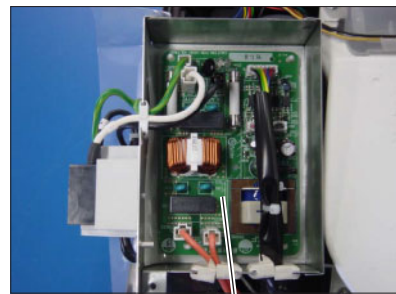


- ④ Unscrew the clamping screw, and remove the PCB cover for the filter circuit board (JT-34F).  
(One PTT screw 4×6, indicated by ○)



PCB cover

- ⑤ Disconnect the lead wires from the filter circuit board (JT-34F).



Filter circuit board (JT-34F)

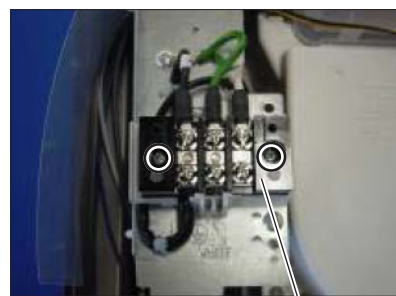
- ⑥ Remove the spacers (four locations, indicated by ○), and then remove the filter circuit board (JT-34F).  
(Pinch the spacers from the back for easier removal.)



## (8) Terminal block

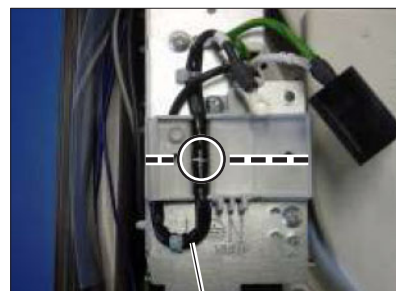
- ① Remove the TB cover. → See (7) ① to ②.  
② Unscrew the clamping screws, and remove the terminal block.  
(Two PPT screws 4×20, indicated by ○)

**Assembly precaution**  
Take care not to pinch the lead wires.



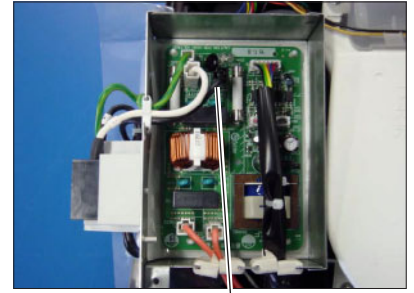
Terminal block

**Assembly precaution**  
Set the marking of the thermal fuse lead wire directly underneath the terminal block. (Indicated by ○)



Thermal fuse lead wire

- ③ Remove the PCB cover for the filter circuit board (JT-34F), and then remove the thermal fuse lead wire (black) from the filter circuit board.  
→ See (7) ③ to ⑤.



Thermal fuse lead wire (black)

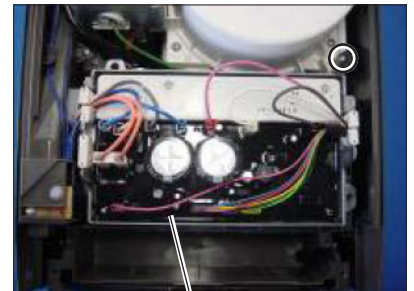
## (9) Heater (PTC)

- ① Disconnect the heater lead wires from the power circuit board (JT-34P1H). → See (5) ① to ③.

### Assembly precautions

- Take care not to pinch the lead wires.
- Connect the lead wires as labeled on the PCB cover for the power circuit board (JT-34P1H).

- ② Unscrew the side panel (right (R)) clamping screw.  
(One PTT screw 4×16, indicated by ○)

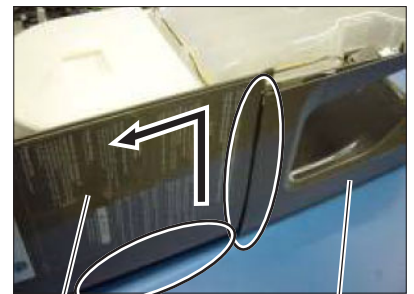


Power circuit board (JT-34P1H)

- ③ Remove the side panel R in the direction of the arrow.

### Assembly precaution

Fit the side panel R into the groove of the panel (back) and the base. (Indicated by ○)

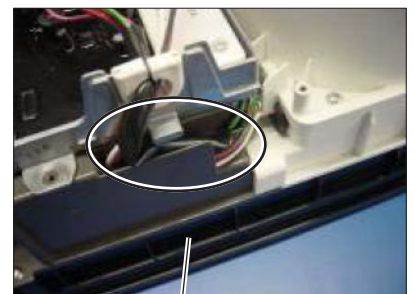


Side panel R

Panel (back)

### Assembly precaution

Run the lead wires through the groove of the base. (Indicated by ○)

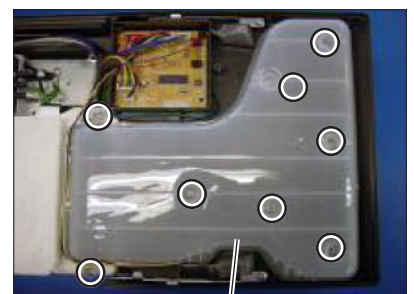


Base

- ④ Unscrew the clamping screws, and remove the exhaust duct.  
(Eight PTT screws 4×16, indicated by ○)

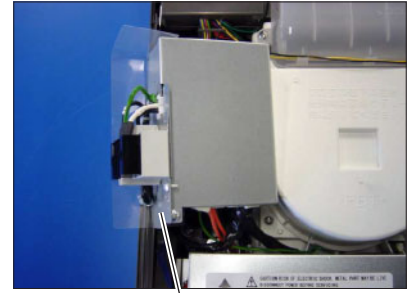
### Assembly precautions

- Replace the packing used in the disassembled section with a new one.
- Take care not to twist the packing when installing it.



Exhaust duct

⑤ Remove the TB fix plate. → See (7) ② to ③.



TB fix plate

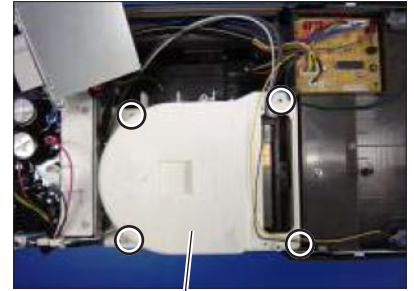
⑥ Unscrew the clamping screws, and remove the blower cover.  
(Four PTT screws 4×16, indicated by ○)

**Precaution**

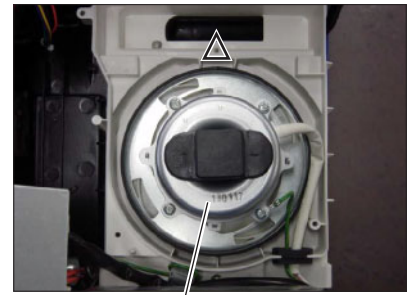
- Since the blower (assembly) may drop off the blower case, remove the lead wires first, and then slowly remove the blower cover.

**Assembly precautions**

- Replace the packing used in the disassembled section with a new one.
- Take care not to twist the packing when installing it.
- When replacing the heater, attach the included fixing piece to the position, indicated by △, with a screw (one PTT screw 4×16) to prevent the blower from dropping off.



Blower cover



Blower (assembly)

⑦ Unscrew the clamping screws, and remove the heater (PTC).  
(Two PTT screws 4×16, indicated by ○)

**Assembly precaution**

When installing the heater, set the heater as the lead wire comes out from the right side. (Indicated by △)



Heater (PTC)

Lead wire

**Assembly precautions**

- Run the lead wires through the groove of the blower cover. (Indicated by ○)
- Take care not to pinch the lead wires.



## (10) Blower (assembly)

- ① Remove the blower cover. → See (9) ① to ⑥.

### Precaution

- Since the blower (assembly) may drop off the blower case, remove the lead wires first, and then slowly remove the blower cover.

### Assembly precautions

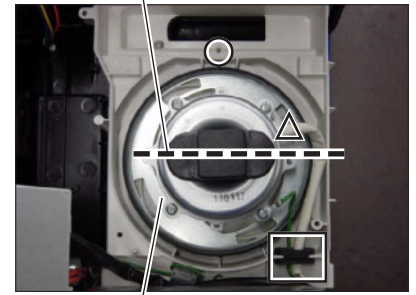
- When replacing the blower (assembly), attach the included fixing piece to the position, indicated by ○, with a screw (one PTT screw 4×16).
- Set the blower (assembly) as the lead wire outlet comes to the position indicated by △.
- The part of the lead wires covered by the white cord tube must pass through the cord bush. (Indicated by □)

- ② Remove the blower (assembly).

### Assembly precaution

- Run each lead wire through the hole of the cord bush.  
(Indicated by ○)

Set the blower horizontally.

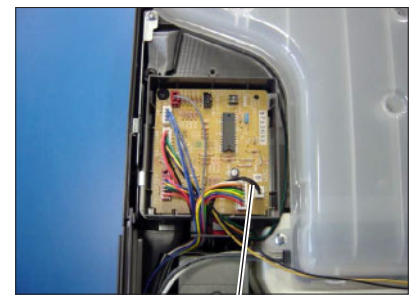


Blower (assembly)



## (11) Switch

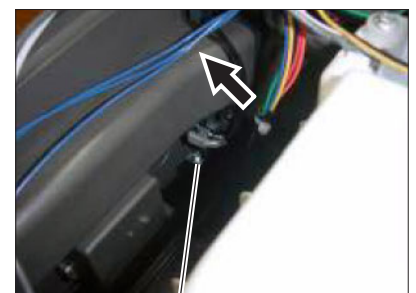
- ① Disconnect the switch lead wires (black) from the control circuit board (JT-30M4/JT-30M4A). → See (3) ① to ④.



Switch lead wires (black)

- ② Remove the TB fix plate. → See (7) ② to ③.

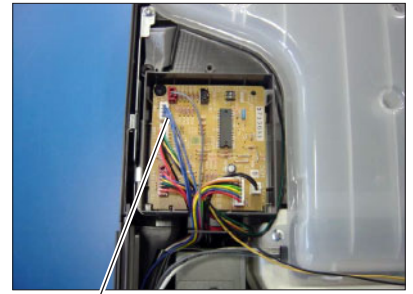
- ③ Push out the switch in the direction of the arrow, and remove it.



Switch

## (12) Sensor circuit board (JT-30S3)

- ① Disconnect the display circuit board lead wires (blue) from the control circuit board (JT-30M4/JT-30M4A).  
→ See (3) ① to ④.



Display circuit board lead wires (blue)

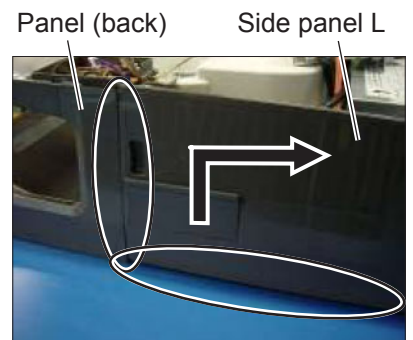
- ② Remove the TB fix plate. → See (7) ② to ③.
- ③ Unscrew the side panel (left (L)) clamping screw.  
(One PTT screw 4×16, indicated by ○)



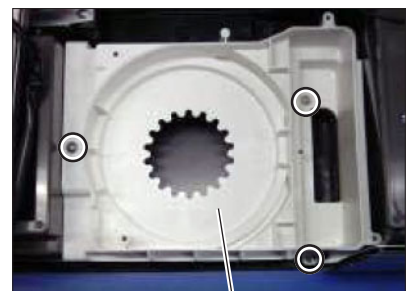
- ④ Remove the side panel L in the direction of the arrow.

### Assembly precautions

- Fit the side panel L into the groove of the panel (back) and the base. (Indicated by ○)
- Carry out wiring after screwing the side panel L.

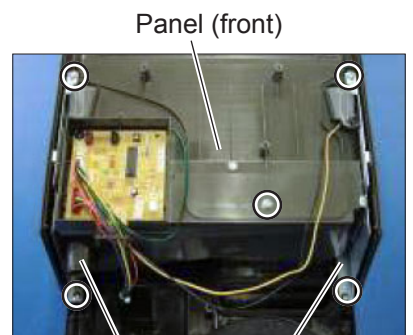


- ⑤ Remove the blower (assembly). → See (10) ① to ②.
- ⑥ Unscrew the clamping screws, and remove the blower case.  
(Three PTT screws 4×16, indicated by ○)



Blower case

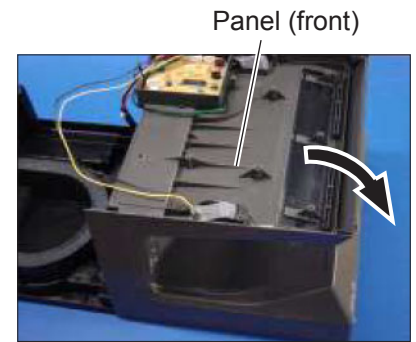
- ⑦ Unscrew the panel (front) and panel holder clamping screws, and remove the panel holders (left (L) and right (R)).  
(Five PTT screws 4×16, indicated by ○)



Panel (front)  
Panel holder L    Panel holder R



- ⑧ Tilt the panel (front) in the direction of the arrow, and remove it.

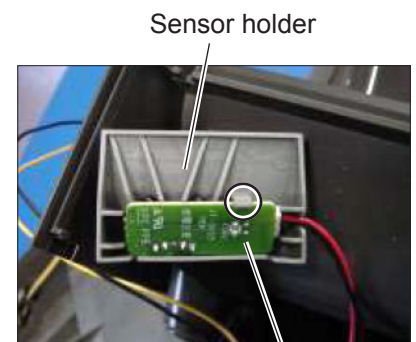


- ⑨ Remove the sensor holder.

**Assembly precaution**  
Take care not to pinch the lead wires.



- ⑩ Unhook the claw of the sensor holder (one location, indicated by ○), and remove the sensor circuit board (JT-30S3).





### \* When reassembling

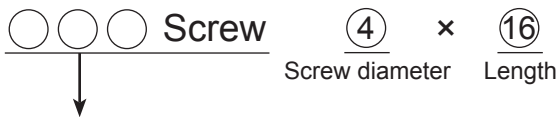
- Reassemble the unit in the reverse order of disassembly.
- After reassembly, always make a test run to be sure that the unit operates properly.

# 14. Parts catalog

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

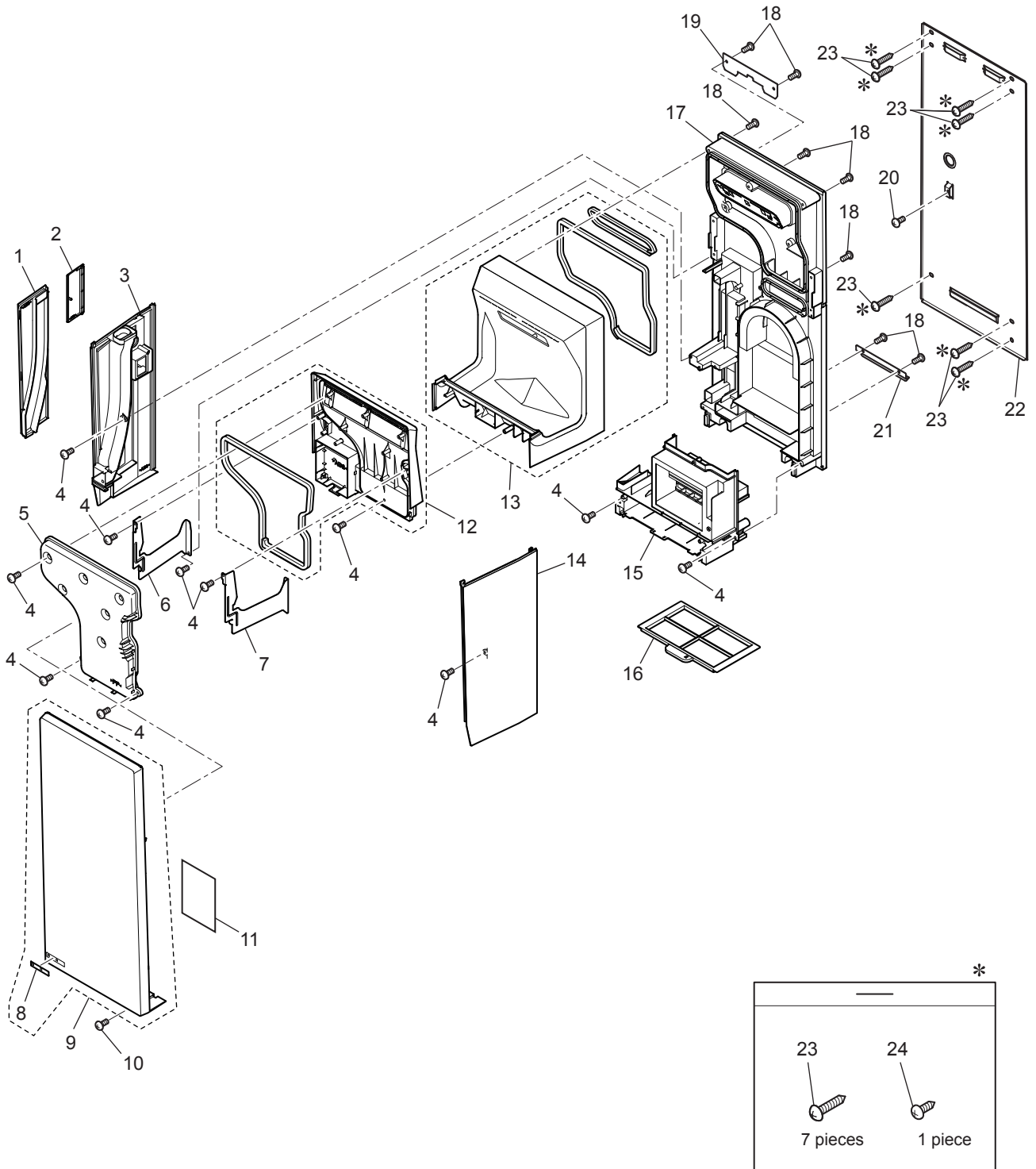
1. When ordering parts, the part number, part name, and the number of parts are required.
2. It may take time for you to receive the parts. Make an inquiry about a rush order.
3. Specifications may be subject to change without notice.
4. Parts marked with  and  are critical for safety.
5. To maintain safety and performance, use the parts specified in the parts catalog.
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

# Body parts



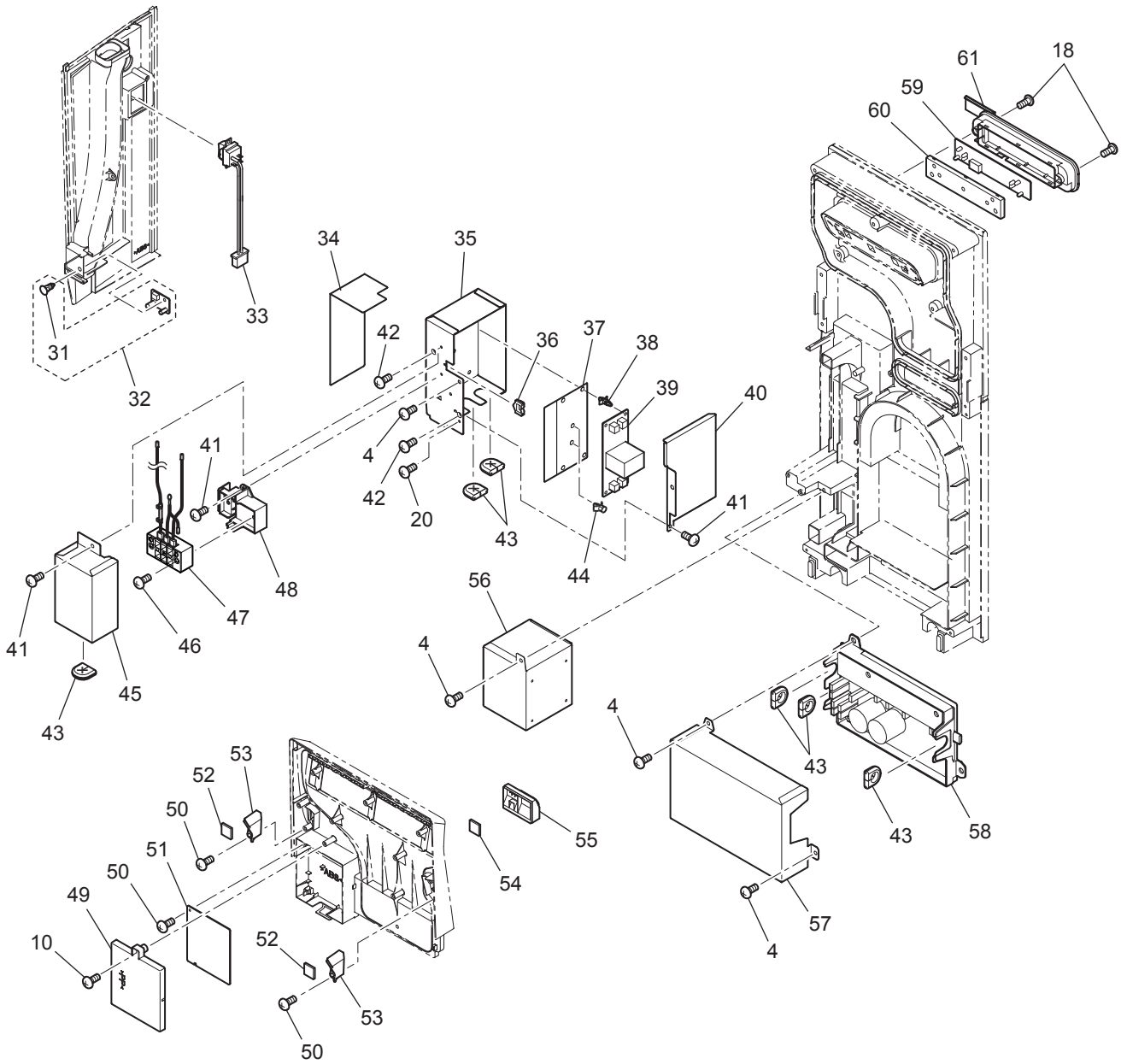
\* shows accessory parts.

## Body parts

JT-SB116JH-G-NA

No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
1	Side cover	Y45 628 806	1		
2	Switch door	Y45 628 808	1		
3	Side panel L	Y45 628 807	1		
4	PTT screw 4x16	Y45 650 012	30		
5	Exhaust duct	Y45 622 802	1		
6	Panel holder L	Y45 650 835	1		
7	Panel holder R	Y45 650 836	1		
8	Indicator plate	Y45 623 809	1		
9	Front panel	Y45 623 804	1		Metallic
10	Spl screw 4x16	Y45 650 045	3		
11	Wiring diagram	Y45 628 358	1		
12	Panel (front)	Y45 628 803	1		With packing
13	Panel (back)	Y45 628 801	1		With packing
14	Side panel R	Y45 628 816	1		
15	Cover	Y45 628 804	1		
16	Filter	Y45 650 827	1	⚠	
17	Base	Y45 622 805	1		
18	Spl screw 4x16	Y45 650 018	17		
19	Hook (upper)	Y45 628 805	1		
20	PT screw 4x8 BS	Y50 190 010	2		
21	Hook (lower)	Y45 621 813	1		
22	Back plate	Y45 628 802	1		
23	Spl screw 5x30	Y45 650 022	7		
24	Spl screw 4x12	Y45 650 017	1		

# Circuit board parts

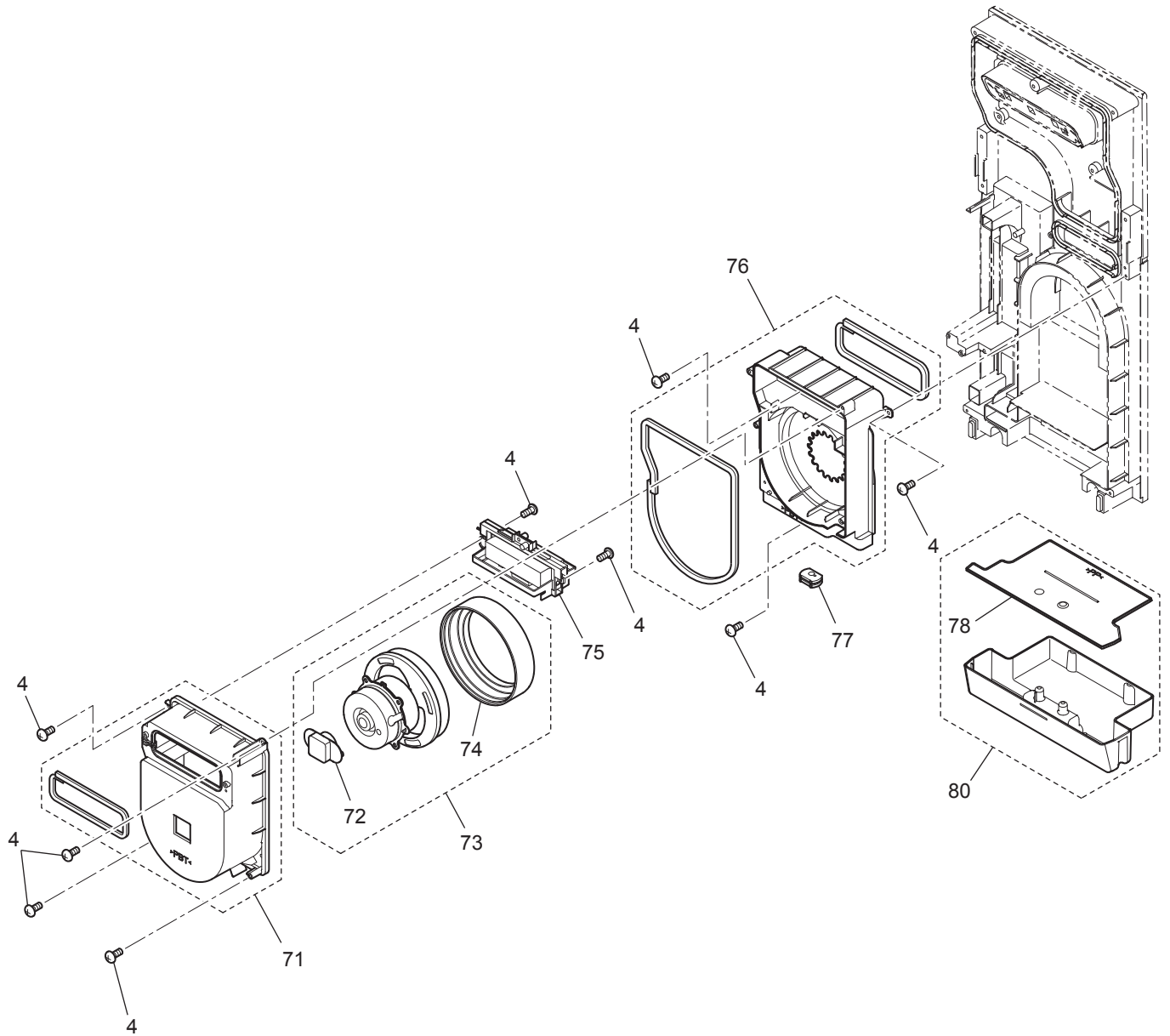


## Circuit board parts

### JT-SB116JH-G-NA

No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
31	Spacer	Y45 650 097	1		
32	Circuit board	Y45 650 177	1	⚠	JT-30S5
33	Switch	Y45 650 259	1	⚠	
34	Insulator sheet	Y45 650 834	1	⚠	
35	TB fix plate	Y45 628 809	1		
36	Cord bush	Y45 650 235	1		
37	Insulator sheet	Y45 628 810	1	⚠	
38	Spacer	Y45 650 096	4		
39	Circuit board	Y45 628 172	1	⚠	JT-34F
40	PCB cover	Y45 628 811	1		
41	PTT screw 4x6	Y45 650 013	3		
42	PT screw 4x6 BS	Y81 293 010	2		
43	Cord bush	Y45 650 236	6		
44	Spacer	Y45 650 099	2		
45	TB cover	Y45 650 837	1		
46	PPT screw 4x20	Y45 650 010	2		
47	Terminal block	Y45 628 222	1	⚠	3P · With a fuse
48	TB holder	Y45 622 808	1		
49	Cover (micro)	Y45 628 817	1		
50	Spl screw 4x12	Y45 650 021	3		
51	Circuit board	Y45 628 173	1	⚠	JT-30M10
52	Circuit board	Y45 650 175	2	⚠	JT-30S2
53	Fix piece	Y45 628 813	2		
54	Circuit board	Y45 650 176	1	⚠	JT-30S3
55	Sensor holder	Y45 628 814	1		
56	Reactor (assy)	Y45 650 832	1	⚠	
57	PCB cover	Y45 650 838	1		
58	Circuit board	Y45 628 171	1	⚠	JT-34P1H
59	Circuit board	Y45 650 174	1	⚠	JT-30S1
60	Fix plate	Y45 628 815	1		
61	Maint. cover	Y45 628 812	1		

# Blower parts



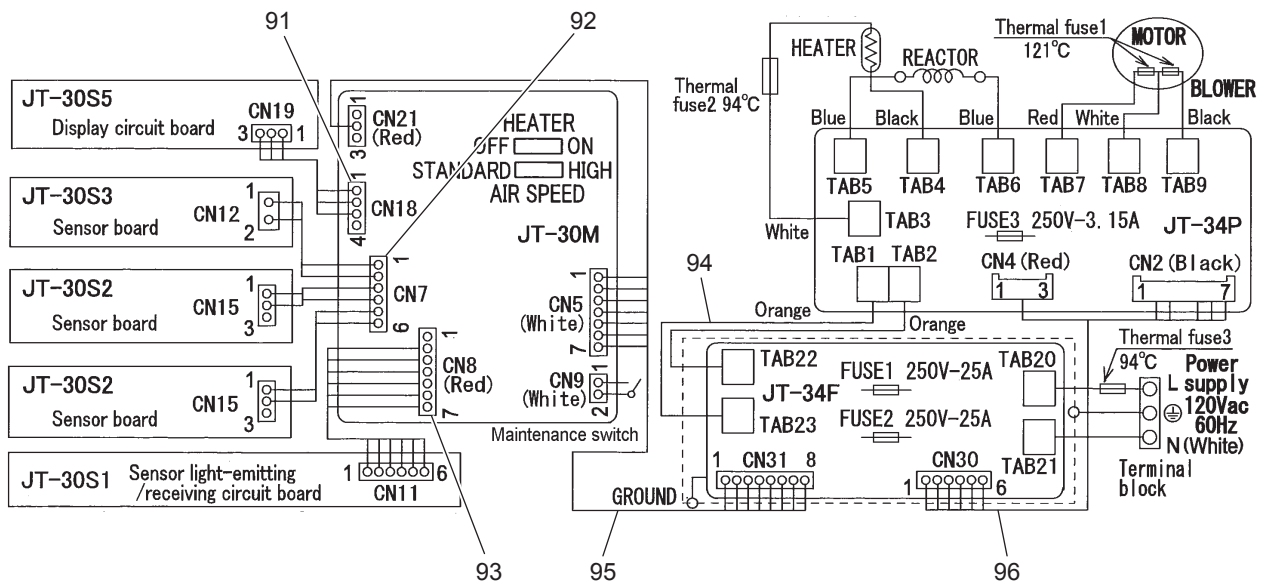
## Blower parts

JT-SB116JH-G-NA

No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
71	Blower cover	Y45 650 880	1		With packing
72	Blower stopper	Y45 650 240	1		
73	Blower assembly	Y45 628 400	1	⚠	
74	Floating rubber	Y45 650 237	1		
75	Heater (PTC)	Y45 650 885	1	⚠	With a fuse
76	Blower case	Y45 650 843	1		With packing
77	Cord bush	Y45 628 225	1		
78	Tank cover	Y45 650 831	1		
80	Tank assy	Y45 650 844	1		



# Wiring parts

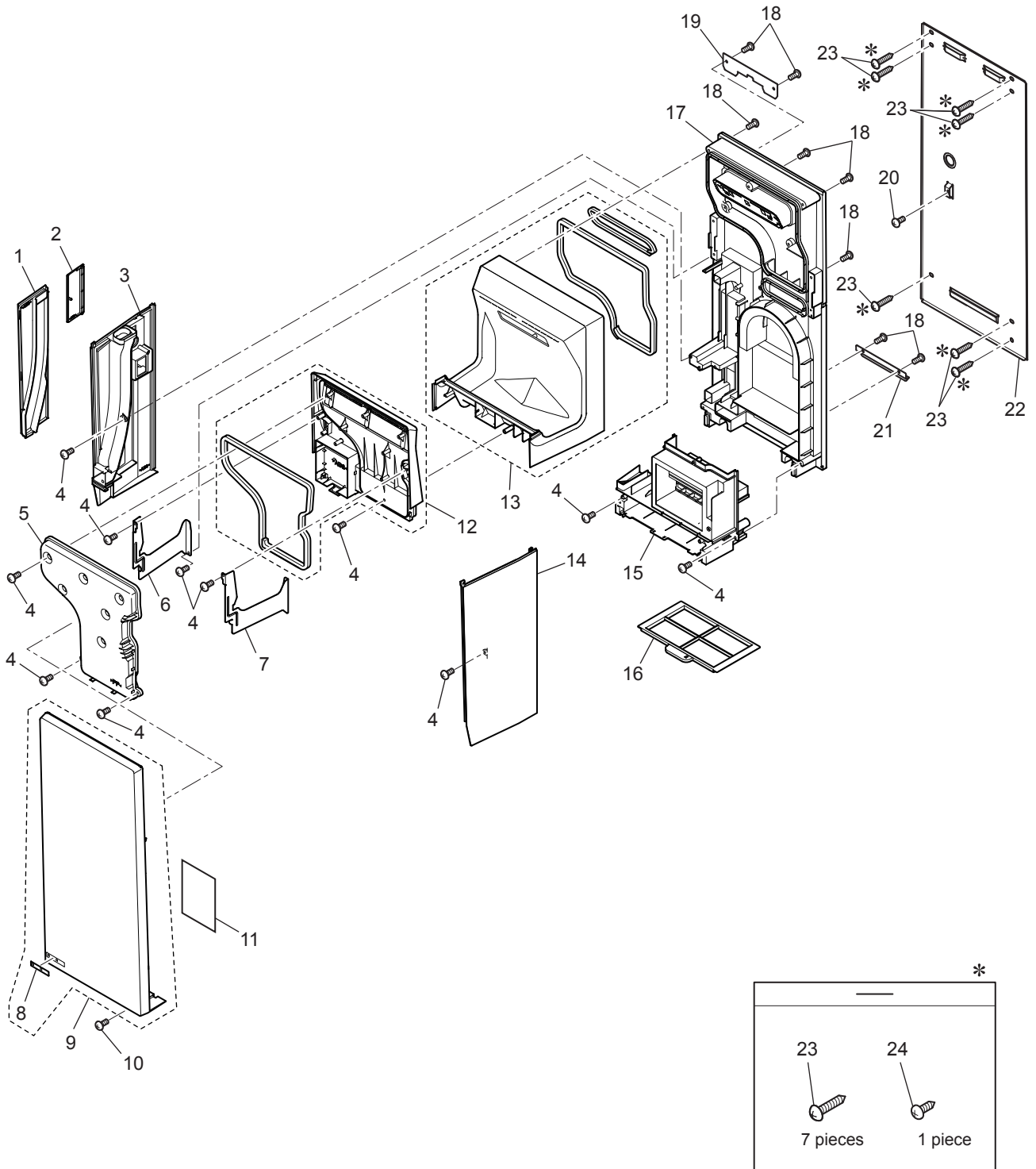


## Wiring parts

JT-SB116JH-G-NA

No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
91	Lead wire	Y45 650 242	1	△	CN18-CN19
92	Lead wire	Y45 650 222	1	△	CN7-CN12、 CN15
93	Lead wire	Y45 650 241	1	△	CN8-CN11
94	Lead wire	Y45 628 221	1	△	TAB1、 2-TAB22、 23
95	Lead wire	Y45 628 220	1	△	CN31-CN5、 CN21
96	Lead wire	Y45 628 219	1	△	CN30-CN2、 CN4

# Body parts



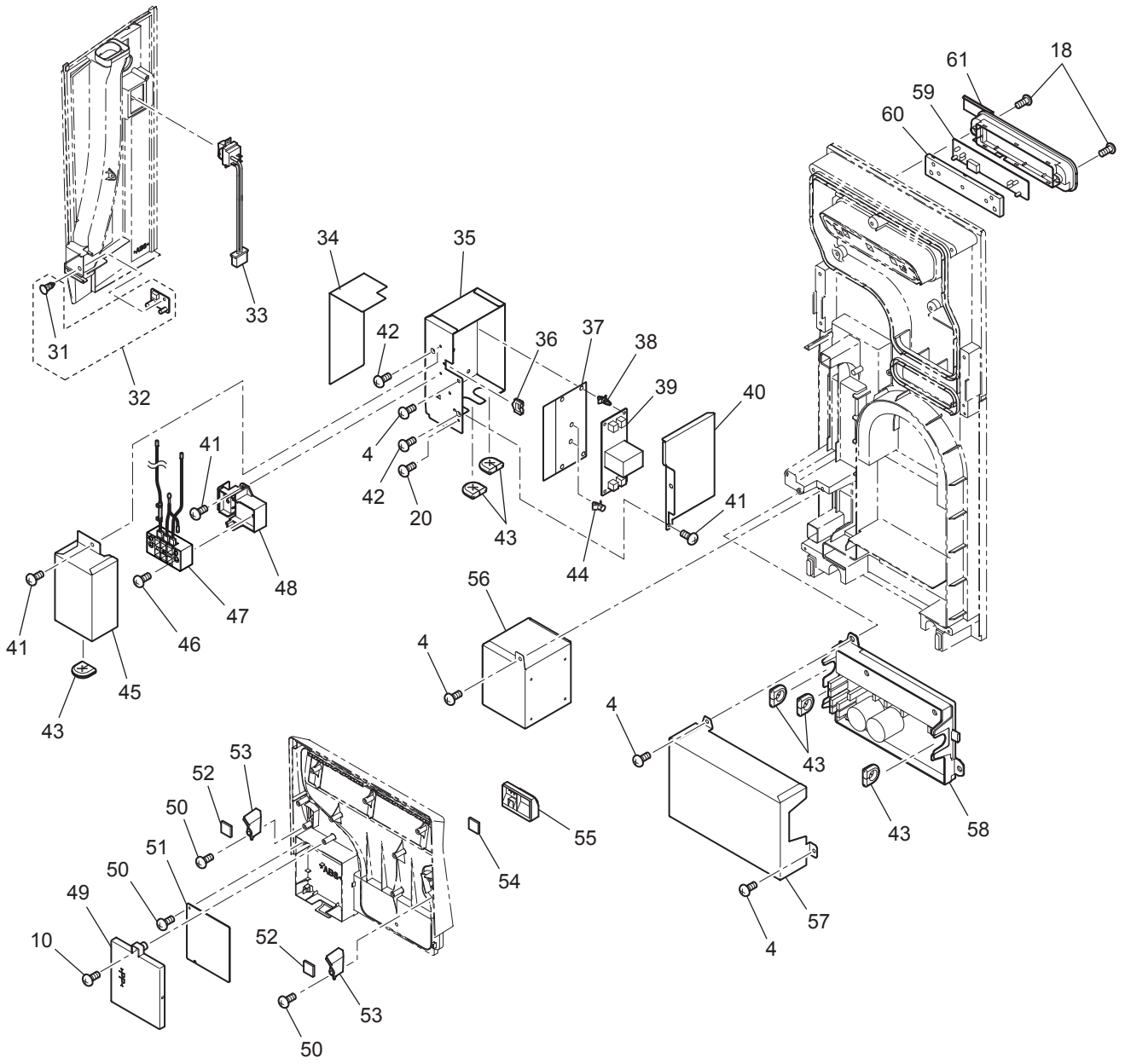
\* shows accessory parts.

## Body parts

JT-SB116JH-W-NA

No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
1	Side cover	Y45 631 806	1		
2	Switch door	Y45 633 807	1		
3	Side panel L	Y45 633 806	1		
4	PTT screw 4×16	Y45 650 012	30		
5	Exhaust duct	Y45 622 802	1		
6	Panel holder L	Y45 650 835	1		
7	Panel holder R	Y45 650 836	1		
8	Indicator plate	Y45 623 809	1		
9	Front panel	Y45 631 800	1		
10	Spl screw 4x16	Y45 650 045	3		
11	Wiring diagram	Y45 633 358	1		
12	Panel (front)	Y45 631 802	1		With packing
13	Panel (back)	Y45 633 800	1		With packing
14	Side panel R	Y45 631 809	1		
15	Cover	Y45 628 804	1		
16	Filter	Y45 650 827	1	⚠	
17	Base	Y45 622 805	1		
18	Spl screw 4x16	Y45 650 018	17		
19	Hook (upper)	Y45 628 805	1		
20	PT screw 4x8 BS	Y50 190 010	2		
21	Hook (lower)	Y45 621 813	1		
22	Back plate	Y45 628 802	1		
23	Spl screw 5x30	Y45 650 022	7		
24	Spl screw 4x12	Y45 650 017	1		

# Circuit board parts

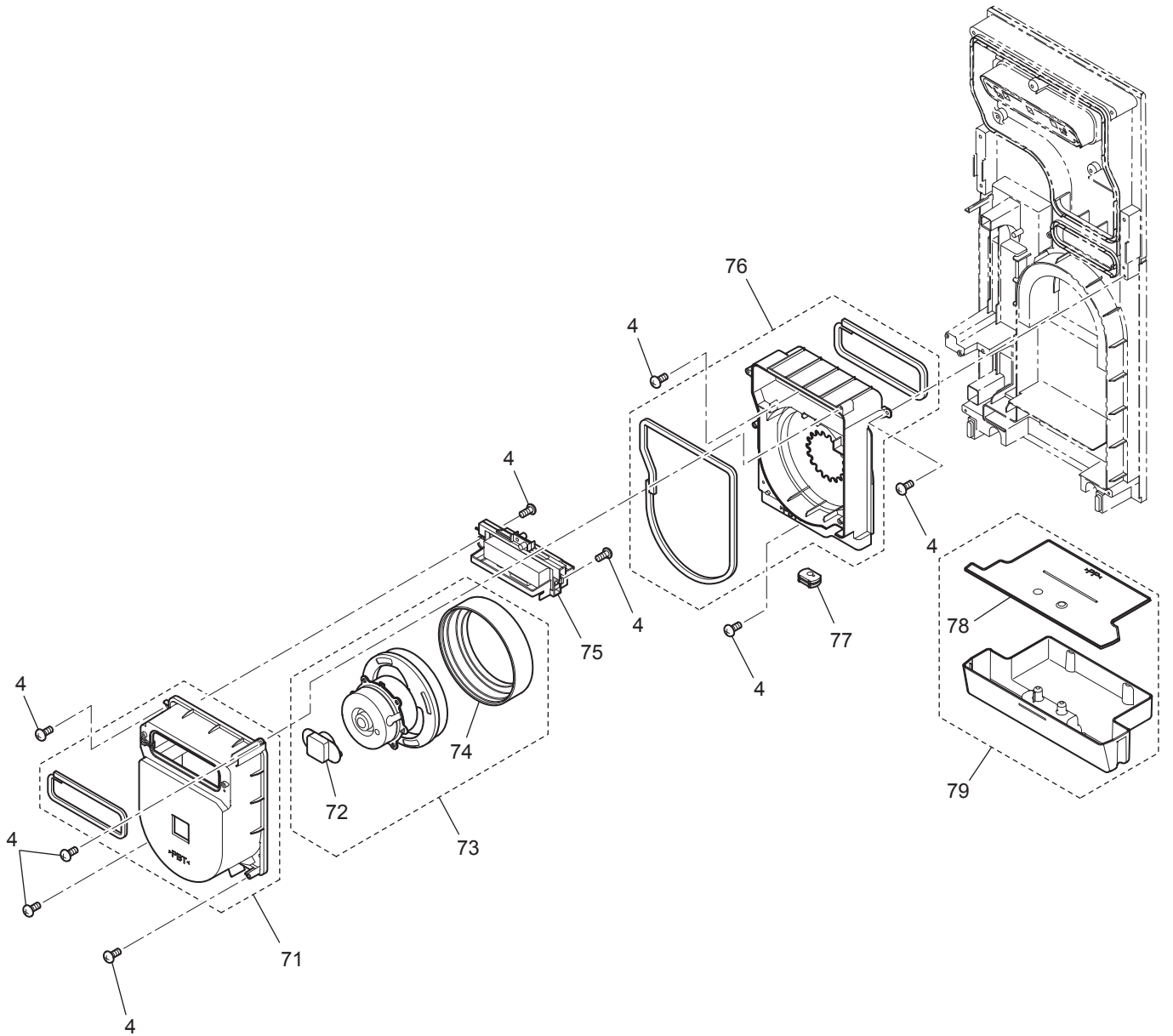


## Circuit board parts

JT-SB116JH-W-NA

No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
31	Spacer	Y45 650 097	1		
32	Circuit board	Y45 650 177	1	△	JT-30S5
33	Switch	Y45 650 259	1	△	
34	Insulator sheet	Y45 650 834	1	△	
35	TB fix plate	Y45 628 809	1		
36	Cord bush	Y45 650 235	1		
37	Insulator sheet	Y45 628 810	1	△	
38	Spacer	Y45 650 096	4		
39	Circuit board	Y45 628 172	1	△	JT-34F
40	PCB cover	Y45 628 811	1		
41	PTT screw 4x6	Y45 650 013	3		
42	PT screw 4x6 BS	Y81 293 010	2		
43	Cord bush	Y45 650 236	6		
44	Spacer	Y45 650 099	2		
45	TB cover	Y45 650 837	1		
46	PPT screw 4x20	Y45 650 010	2		
47	Terminal block	Y45 628 222	1	△	3P · With a fuse
48	TB holder	Y45 622 808	1		
49	Cover (micro)	Y45 628 817	1		
50	Spl screw 4x12	Y45 650 021	3		
51	Circuit board	Y45 633 171	1	△	JT-30M10A
52	Circuit board	Y45 650 175	2	△	JT-30S2
53	Fix piece	Y45 650 840	2		
54	Circuit board	Y45 650 176	1	△	JT-30S3
55	Sensor holder	Y45 650 841	1		
56	Reactor (assy)	Y45 650 832	1	△	
57	PCB cover	Y45 650 838	1		
58	Circuit board	Y45 628 171	1	△	JT-34P1H
59	Circuit board	Y45 650 174	1	△	JT-30S1
60	Fix plate	Y45 650 842	1		
61	Maint. cover	Y45 650 839	1		

# Blower parts



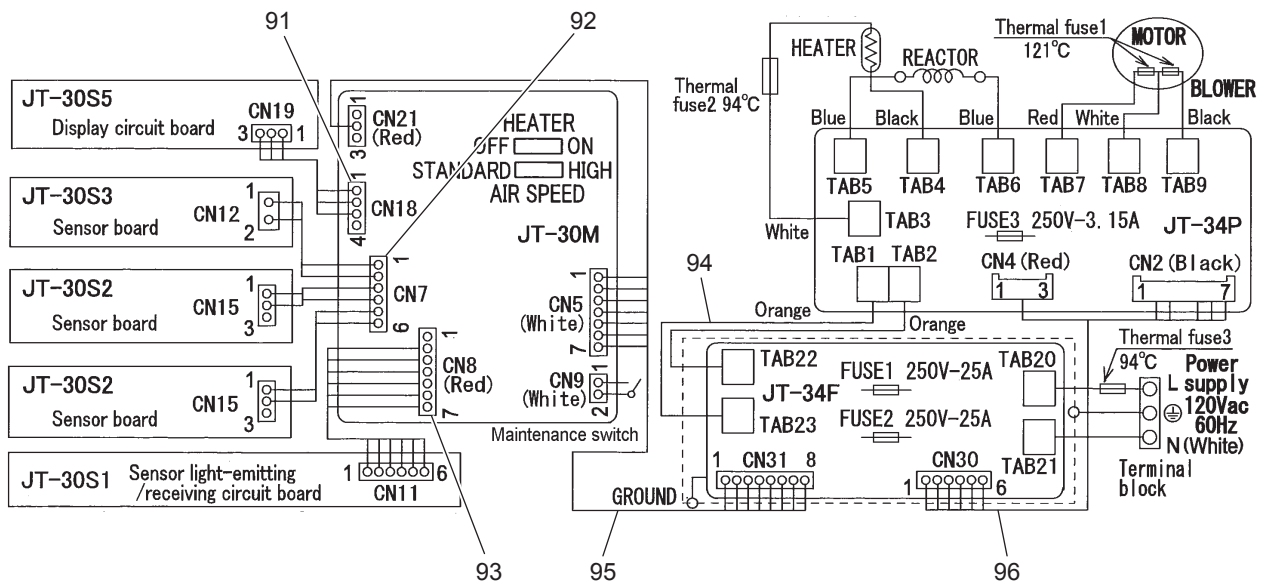
## Blower parts

JT-SB116JH-W-NA

No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
71	Blower cover	Y45 650 880	1		With packing
72	Blower stopper	Y45 650 240	1		
73	Blower assembly	Y45 628 400	1	⚠	
74	Floating rubber	Y45 650 237	1		
75	Heater (PTC)	Y45 650 885	1	⚠	With a fuse
76	Blower case	Y45 650 843	1		With packing
77	Cord bush	Y45 628 225	1		
78	Tank cover	Y45 650 831	1		
79	Tank assy	Y45 650 830	1		



# Wiring parts



## Wiring parts

JT-SB116JH-W-NA

No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
91	Lead wire	Y45 650 242	1	△	CN18-CN19
92	Lead wire	Y45 650 222	1	△	CN7-CN12、 CN15
93	Lead wire	Y45 650 241	1	△	CN8-CN11
94	Lead wire	Y45 628 221	1	△	TAB1、 2-TAB22、 23
95	Lead wire	Y45 628 220	1	△	CN31-CN5、 CN21
96	Lead wire	Y45 628 219	1	△	CN30-CN2、 CN4