

**Fume Hood  
FH (W) Series  
Maintenance Manual**

**Version 2018.02**

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## Part 1.Failure and maintenance



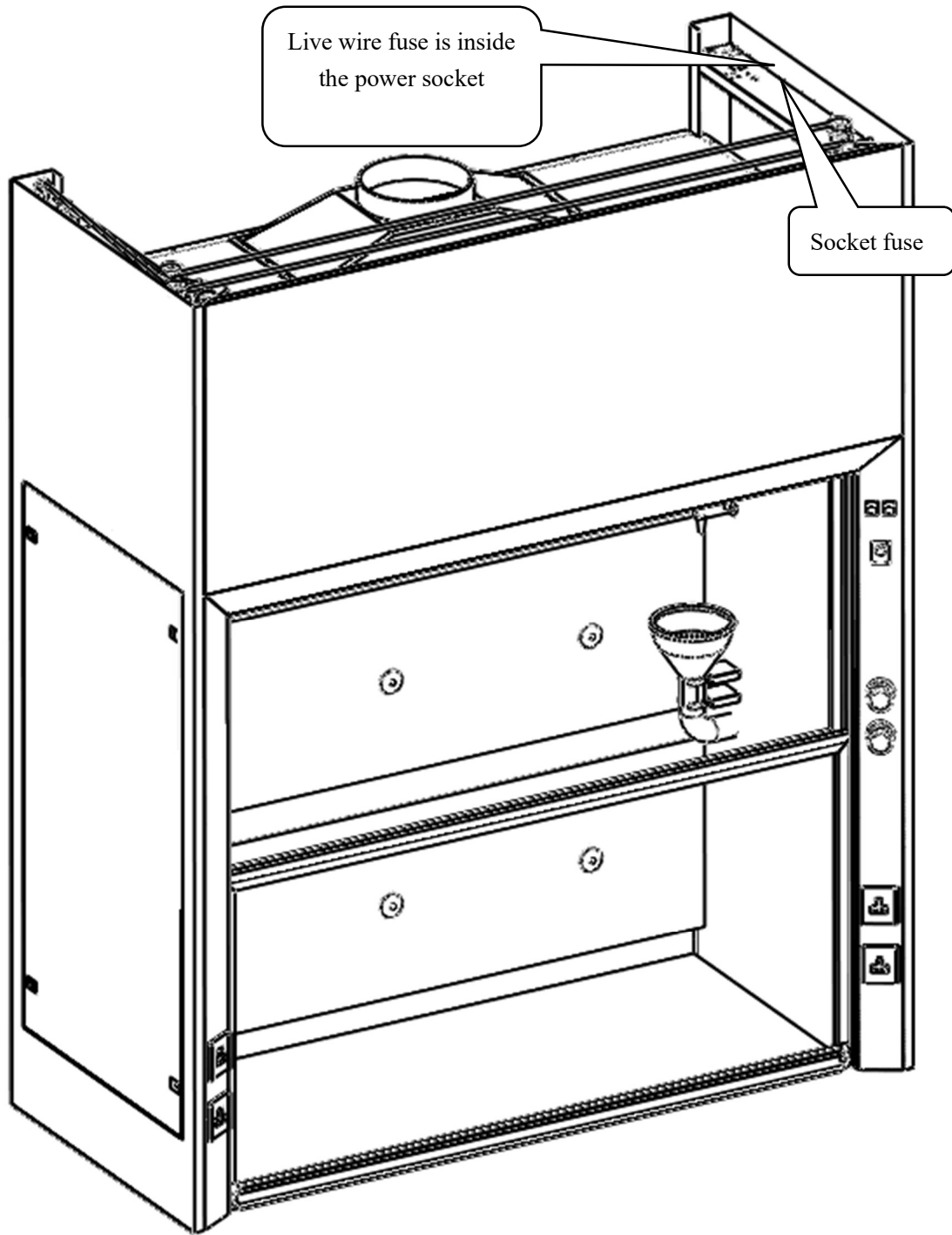
Note: the following maintenance tests should be conducted by professional personnel to avoid accidents caused by improper operation.

### Failure 1: The device is not powered

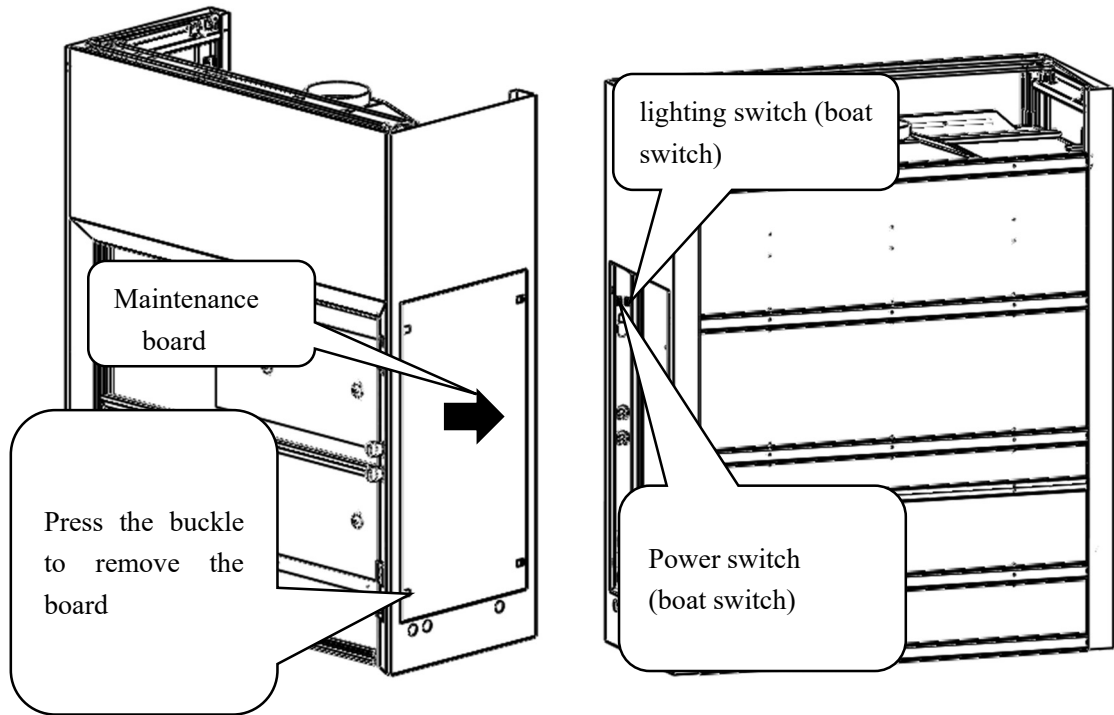
Turn on the power switch when in an energized state , the equipment is not powered on (Turn the blower knob clockwise ,but it does not work ; turn on the light, it is not on. ;the socket has no electricity.) When dealing with such failures, the treatment methods and procedures are as follows:

Detection Position	Processing method	Changing method	Diagrams
Power Wire	Check whether the power supply is normal and whether it is consistent with the electrical parameters required. Use a multimeter to determine whether the power supply wire is broken or damaged.		
Protective Tube	<p>The fire wire of the power input port is equipped with an protective tube. After confirmation of above mentioned matters with no problems, pls detect whether the protective tube(on the top of the right side of the fume hood) is fused. Change by a corresponding model if burnt down.</p> <p>Protective tube is installed on the top at the right of the cabinet (See Picture 1), socket and fire wire protective tube separately mounted in fuse holder and power socket ,which is consistent with the contents of the protective tubes' label.When replacing, pls refer to the labels' content .</p>	<p>The protective tube on the top at the right of cabinet are identified by the label F5A <math>\phi 5 \times 20</math> mm F10A <math>\phi 5 \times 20</math> mm. When replacing the fire wire protective tube, pls turn off the power and pull the plug ,get the fuse holder out with straight screwdriver and change the fuse damaged, after that press back.. When replacing the fuse for socket and fuse tube base, pls turn off the power and pull the plug,then use the phillips screwdriver counterclockwise to twist the fuse tube base,remove the fuse from the fuse base and replace it,at last push the fuse base clockwise to screw it up.</p>	
Power switch (boat switch)	1.After confirm the above matters with no problem, check the power switch (boat switch) for testing, the switch position is shown in Picture 2 ;	1. Mark and take a picture of the part of the power switch (boat switch) harness connection, then remove the	As shown in Picture 2, Picture 3, Picture 4

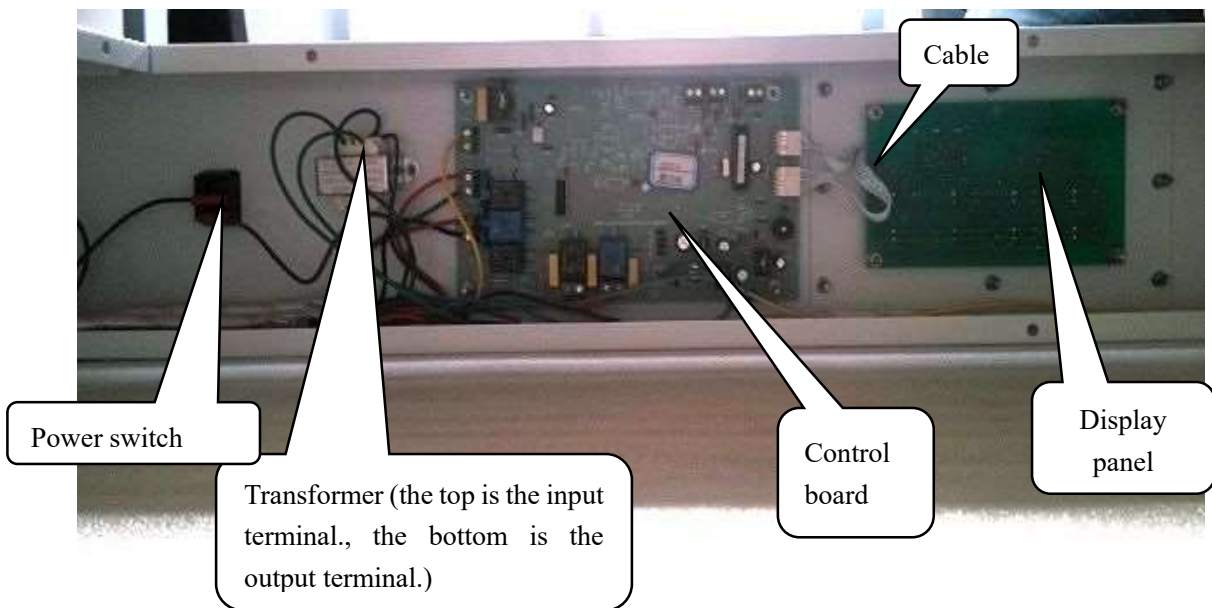
	<p>2. Press the buckle and take maintenance board off on right side to see the power switch (boat switch), lighting switch (boat switch), wind speed adjustment knob;</p> <p>3. With a multimeter to detect switching power (boat switch) voltage output and voltage input(The voltage value should be the supply voltage.)(See Picture 3). If there is no voltage in the test, it indicates that the power switch (boat switch) damage, pls replace the power switch (boat switch).</p>	<p>switch harness, and press the upper and lower sides of the power switch (boat switch) to push forward, disconnect the old power switch (boat switch).</p> <p>2. Take a new boat switch, wiring the switch in accordance with the previous mark and photo, and install it in the original position.</p> <p>3. Power on and running the device, turn off if without error, then re-assemble in the reverse order of disassembly.</p>	
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Picture 1




Picture 2





Picture 3

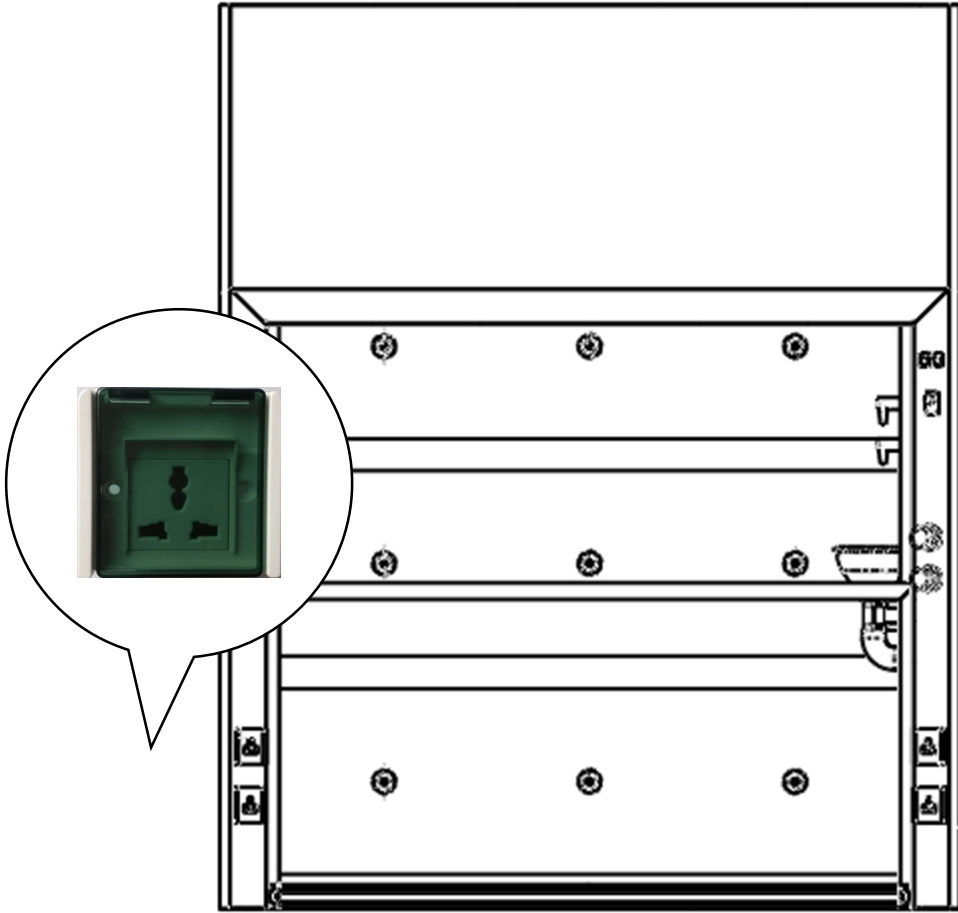
## Failure 2:Socket without electricity

Socket without electricity means turn on the switch when power on, open the control panel power key, Socket on the cabinet

has no electric when start "  " button.

Methods and steps to deal with this failure are as follows:

Detection method	Processing method	Changing method	Diagram
Socket Protective Tube	Pls check the socket protective tube in the back of cabinet if (see the location in Picture 1) is blown, if blown, pls replace the protective tube with corresponding specification.	Pls see the fuse replacement method in PIC 1	See Picture 1
Socket	After confirm the above matters with no problem, remove the socket on the front side (as shown in Picture 4), press the power switch, with a multimeter-AC to measure the voltage of the wire for connecting socket (the voltage value should be the supply voltage of the equipment),and determine whether the socket is damaged or not. If voltage is normal, the socket is damaged, pls replace the socket.	When disassembling, just remove the two screws on both sides of the socket (Before disassembling and removing the socket, please confirm whether the equipment is powered off and pay attention to the internal wire connection when removing, avoid disconnecting the wire. The back "L" is the fire wire interface, "N" is the zero line interface, "  " is the ground interface), take a new socket, and to restore in opposite directions according to the disassembly process.	See Picture4 
Socket Line	After confirm the above matters with no problem, need to use multimeter to test socket line if there is a disconnect. If disconnect, pls reconnect after power failure-the socket line is connected to the power switch output terminal.(see failure 1 ,method for finding power switch ).		See Picture 3




Picture 4

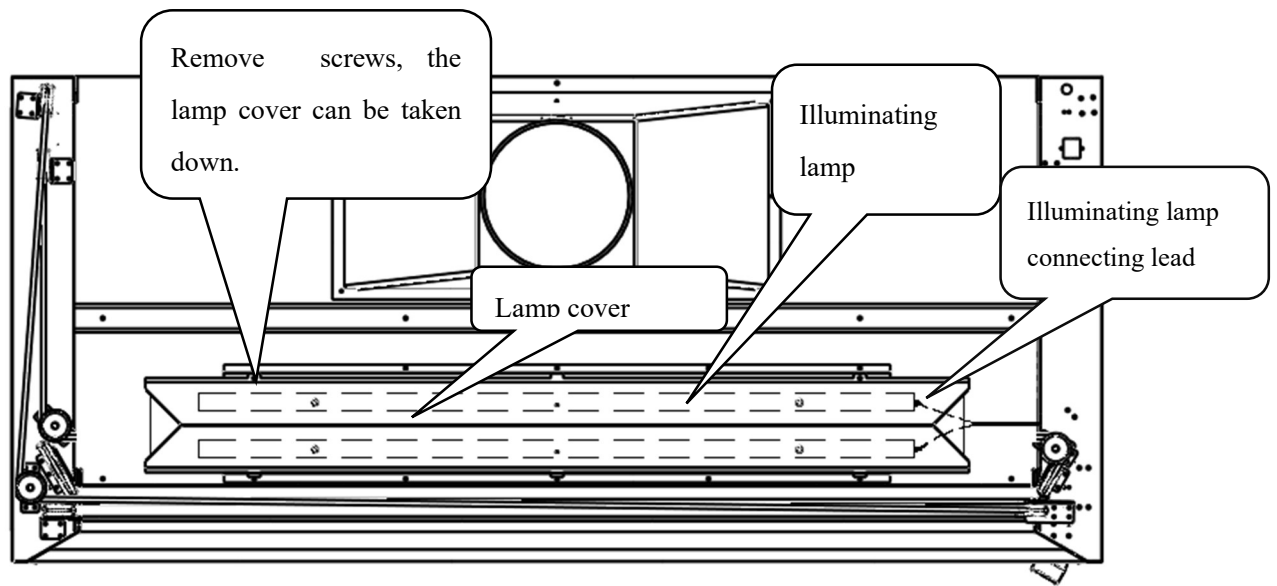


### Failure 3 :LED lamp is not light

LED lamp is not light: Turn on the power and lighting switch when in an energized state, the light is not light.

When dealing with such failures, the treatment methods and procedures are as follows:

Detect Position	Handling Methods	Replacement Methods	Diagrams
Power Line	Shut off the power and check the line on the right side near the lamp are of fine contact or not.		
Light Tube	Replace the lighting lamps (See illuminating lamp's position in PIC 5).	<ol style="list-style-type: none"> <li>1.Remove the lighting tube cable.</li> <li>2.Remove the connection screw for lamp cover on the top with a screwdriver and remove the lamp cover.</li> <li>3.Break the LED lamp holder and remove the old LED lamp (Pictured at right).</li> <li>4.Take a new LED lamp to install in the original location, and restore the cabinet.</li> <li>5.Connect the power supply, then press the power and lighting switch and see if running is good.</li> </ol>	
Lighting Switch (boat switch)	With multimeter detection lighting switch (boat switch) input and output voltage (voltage value should be the supply voltage of the equipment) (See Picture 3). If there is no voltage in the test, judge lighting switch damage, pls replace it with the same model.	<ol style="list-style-type: none"> <li>1.Mark and record pictures of the wire harness connection of lighting switch (boat switch),then remove the wire harness. Hold the both sides of the switch (boat switch) and push forward and remove the old switch.</li> <li>2.Take a new lighting switch(boat switch), according to the previous mark and photo for install,then put it to the original position.</li> <li>3.The power will be switched off after the operation is correct and to restore in opposite directions according to the disassembly process.</li> </ol>	



Picture 5

#### Failure 4: Blower fail to work

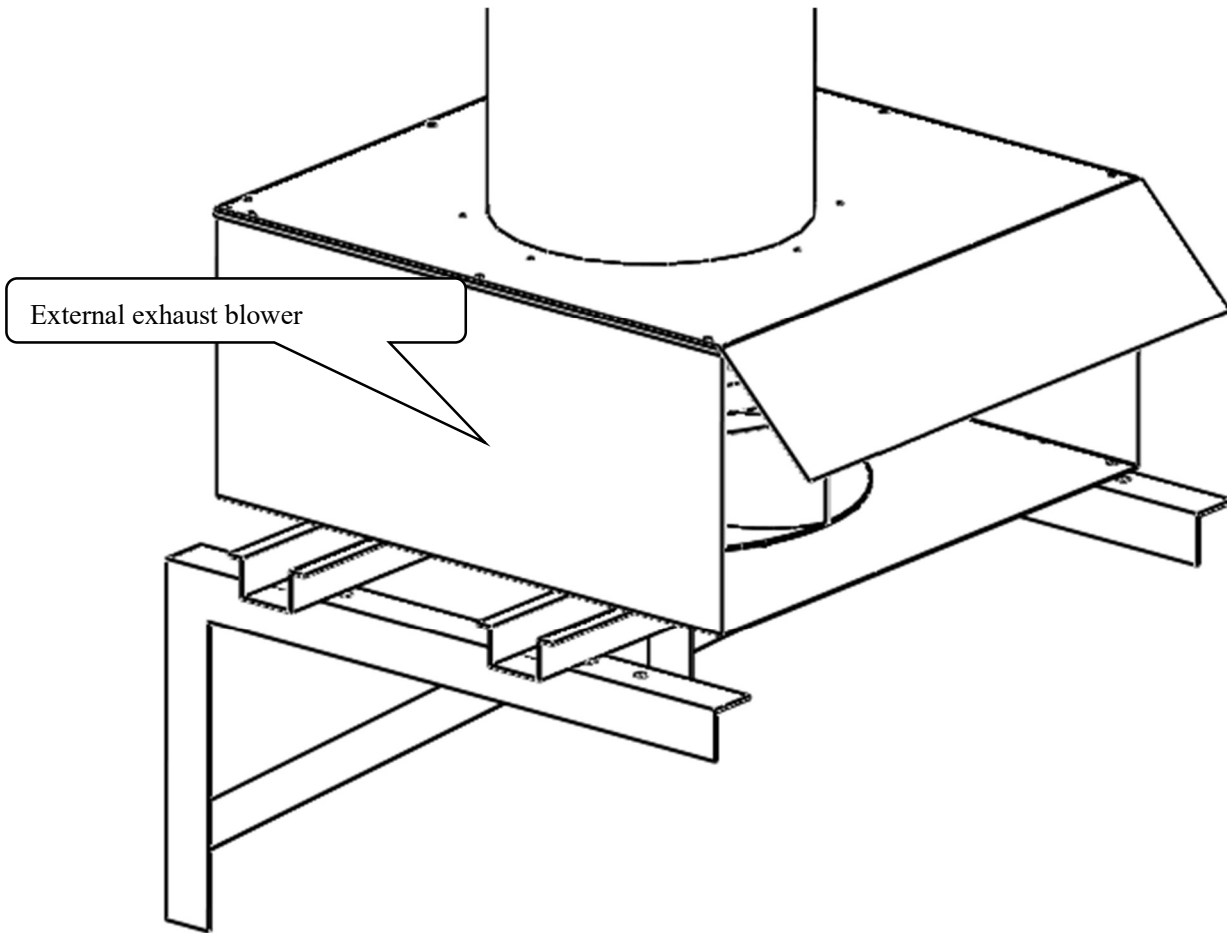
Turn on the power switch, when the device is powered, open the power key on the control panel, start

"  " button, the blower does not work.

The processing methods and steps for dealing with such failures are as follows:

Detect Position	Handling Methods	Replacement Methods	Diagrams
Blower Connection	Check the blower connection whether there is shedding , broken line and short circuit phenomenon. It should be excluded in turn.		
Wind Speed Adjustment Knob	<ol style="list-style-type: none"> <li>1. Look for the wind speed adjusting knob according to the method how to find power switch in “failure 1”.</li> <li>2. Remove the black knobs and nuts in the front of the cabinet., remove the wind speed adjusting knob connecting nuts with the wrench inside of the cabinet, and then install the black knob.</li> <li>3. Turn on the blower knob clockwise to see if the blower works or not. If it is not working, With multimeter detection speed adjusting knob input and output voltage (this voltage should be over 60% of the supply voltage). If the voltage is abnormal, pls replace it.</li> </ol>	<ol style="list-style-type: none"> <li>1. Mark and record pictures of the wire harness connection of wind speed adjustment button ,then remove the wire harness.</li> <li>2. Take a new wind speed adjustment knob, according to the previous mark and photo for install, and also put it to the original position.</li> <li>3. The power will be switched off after the operation is correct and to restore in opposite directions according to the disassembly process.</li> </ol>	See Picture 3

Blower	If there is no problem, connect the blower directly to the power supply , and observe the blower if starts. If not, judge blower damage, pls replace it with the same model.		See Picture 6
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Picture 6

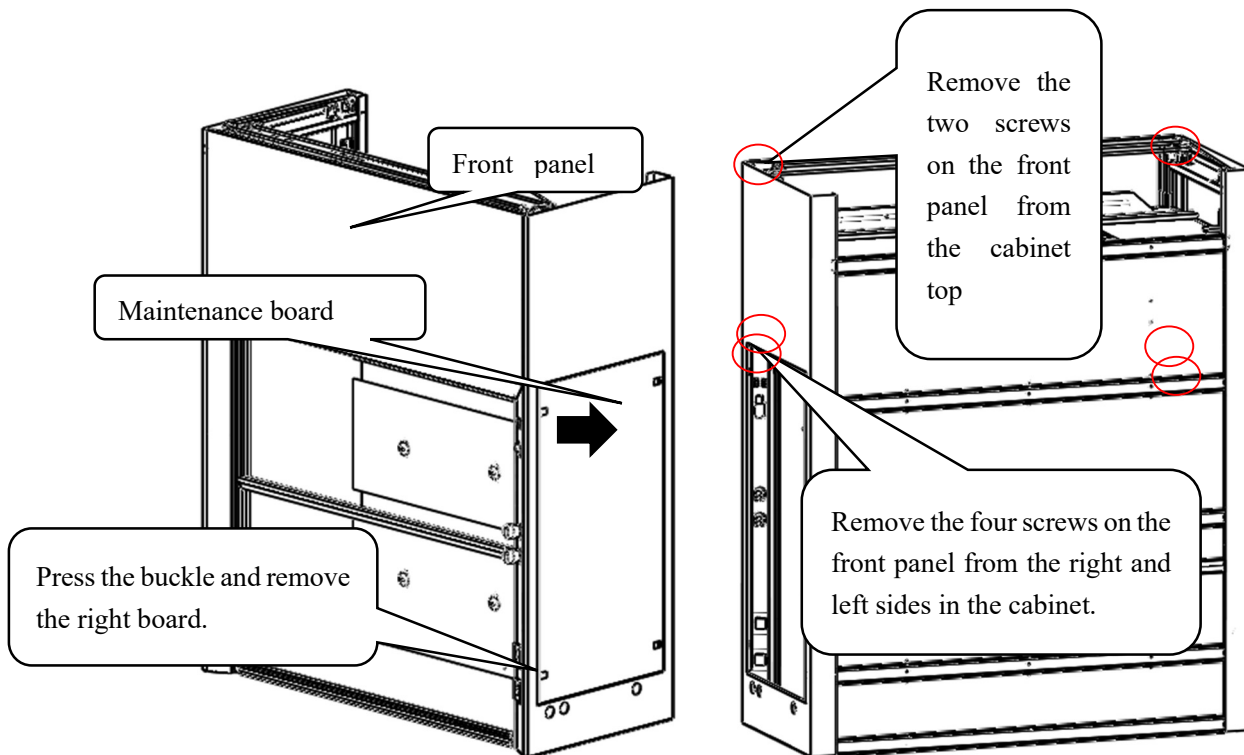
### **Failure 5: Airflow velocity adjustment failure**

Airflow velocity adjustment failure :When turn on blower and continue to rotate wind speed adjustment knob clockwise, the speed of blower has not changed.

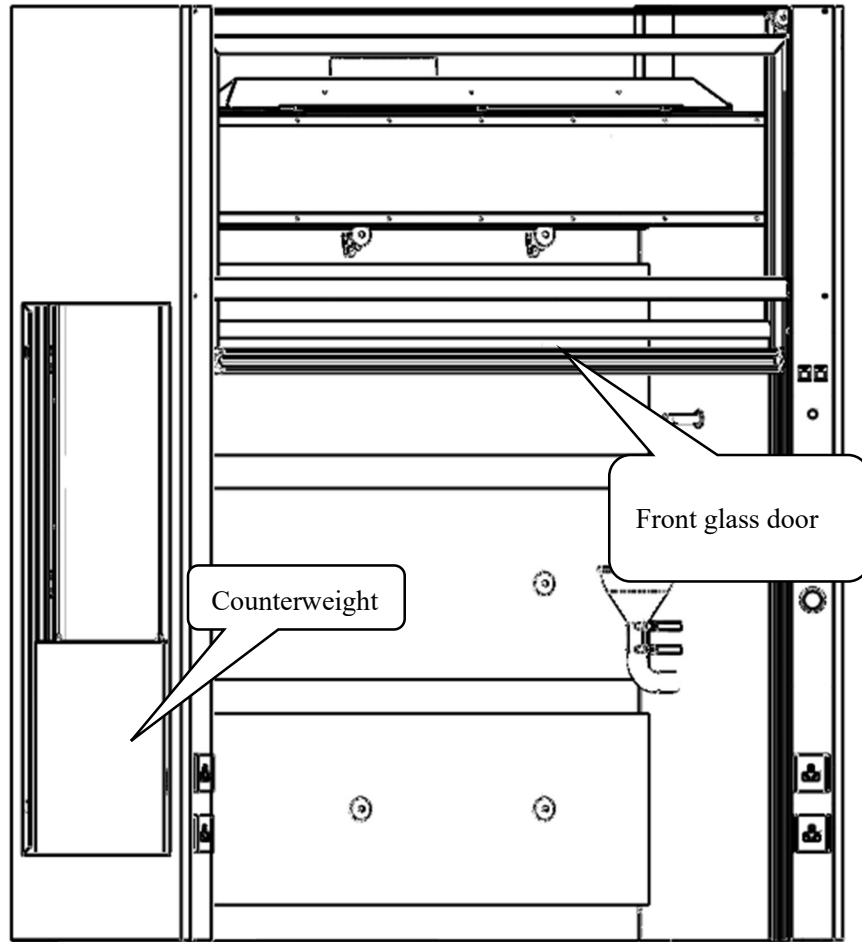
To deal with such failures, please directly replace the blower adjustment knob. Pls see the “failure 3”. method for blower adjustment knob replacement.

## Part 2. Parts replacement

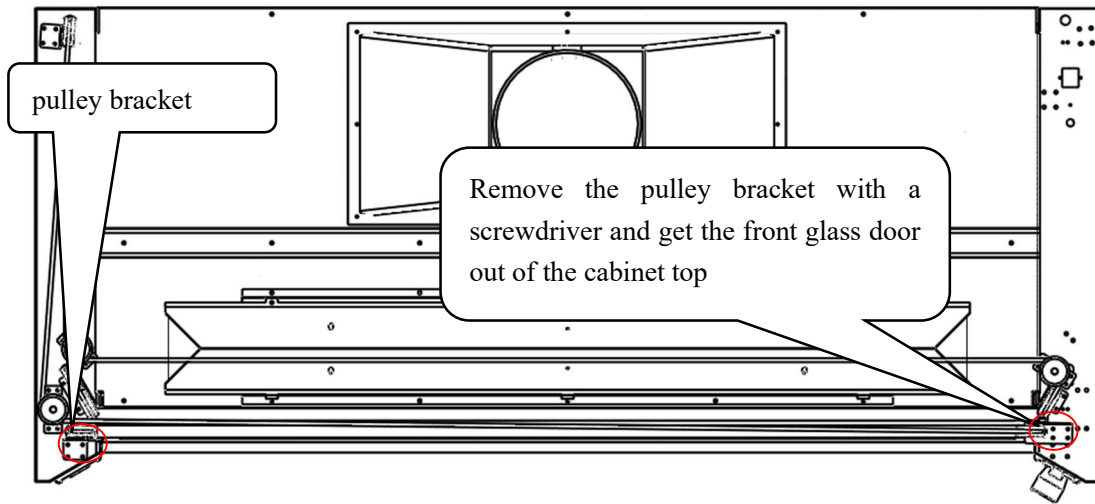
Replace The Part	Replacement Method
<p><b>Front Glass</b></p>	<p>a. Cut off the power of fume hood , press the the two sides of cabinet buckle ,then remove the the maintenance door on both sides.</p> <p>b. While holding the front panel, remove the fixed screws from both sides of the cabinet for front panel with a phillip screwdriver , and remove the front panel, need to photograph the wire rope and connection of pulley .</p> <p>c. Lift the glass door to its highest position, fix the glass counterweight, and find something to support the front window glass, then remove the counterweight rope.</p> <p>d. Remove the pulley bracket above the glass guide rail with a cross screwdriver. Then take down the pulley and wire rope and at last get the glass door out of the cabinet top.</p> <p>e. Take the new glass door, put it down from the top of the cabinet's guide rail and then install the pulley bracket according to the taken photos , connect the steel wire rope and make connection the steel wire rope to the counterweight, at last adjust the lifting height of the front glass door to 1300mm ± 5mm.</p> <p>f. Restore cabinet.</p>



Picture 13



Picture 14



Picture 15

### Part 3. Appendix: Wiring Diagrams

