

REPAIR GUIDELINE

Blower_LB6500



Update Date: 2023/07/21

Table of Contents

NO.	Contents	Page
1	Troubleshooting	3
2	Tool list	4
5	How to Replace the PCBA	5-40
6	How to Replace the Duct Set (Motor included)	41-46
7	How to Assemble the Blower	47-49

Troubleshooting

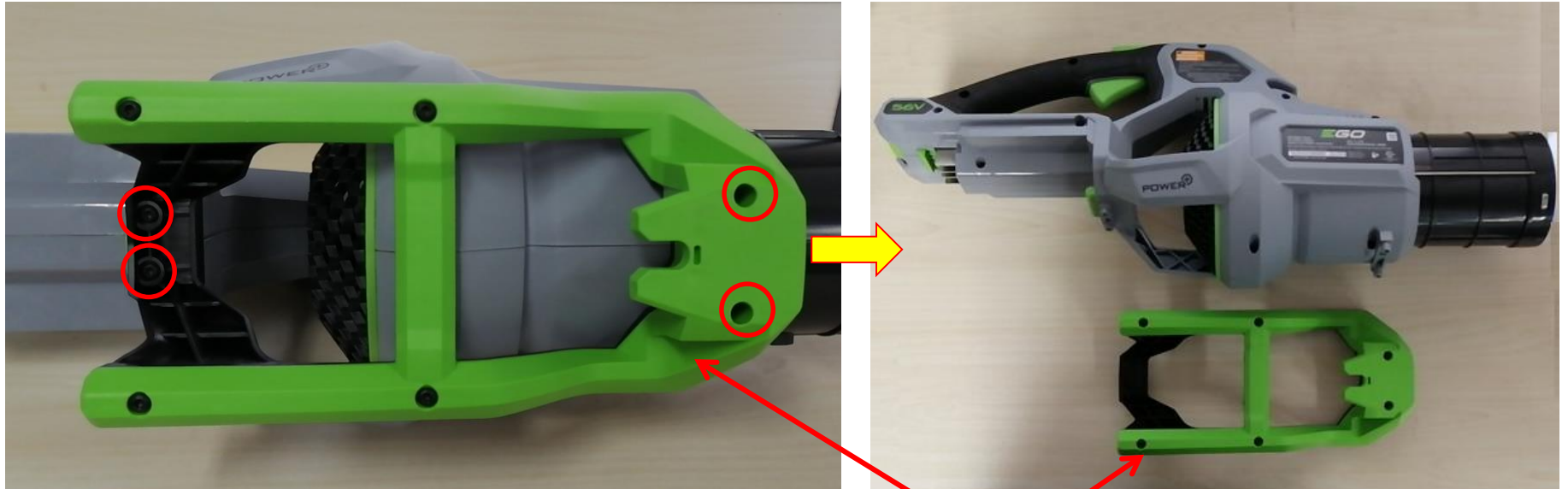
Problem	Possible Cause	Fault Position	Test & Solution
Fail to start	PCBA is damaged.	Handle housing	Replace PCBA in the handle.
	Motor is damaged.	Duct set	<p>Measure the resistance between any two of the three cable terminals of the duct set using a Multimeter.</p> <p>If the resistance is infinite, the motor is open circuit, replace with a new duct set.</p> <p>NOTICE: Judge if there is any burning smell of the motor before having diagnosis. If yes, the motor is burned. Replace it.</p>
Press the air velocity adjusting knob when the blower runs, the air velocity and the volume doesn't change.	Speed-adjustment PCBA is damaged.	Handle housing	Replace the whole PCBA (Speed-adjustment PCBA included) in the handle and verify.
The air velocity and the volume are decreased compared with normal use.	The fan in the duct is over-worn.	Duct set	Open the handle housing, remove the fan baffle and visually check the fan inside the duct set. If the fan is over-worn, replace the whole duct set.

Tool List For Repair

NO.	Tool List	SPEC	Remark
1	Phillips screwdriver	PH2, PH0	
2	Torx screwdriver	T15	
3	Heat gun		
4	Heat-shrinkable sleeves		
5	Scissors		To remove the shrinkable sleeve
6	Multimeter		

How to Disassemble the Blower

1. Remove the 4 screws on the blower bottom base to remove the bottom base.



Bottom base

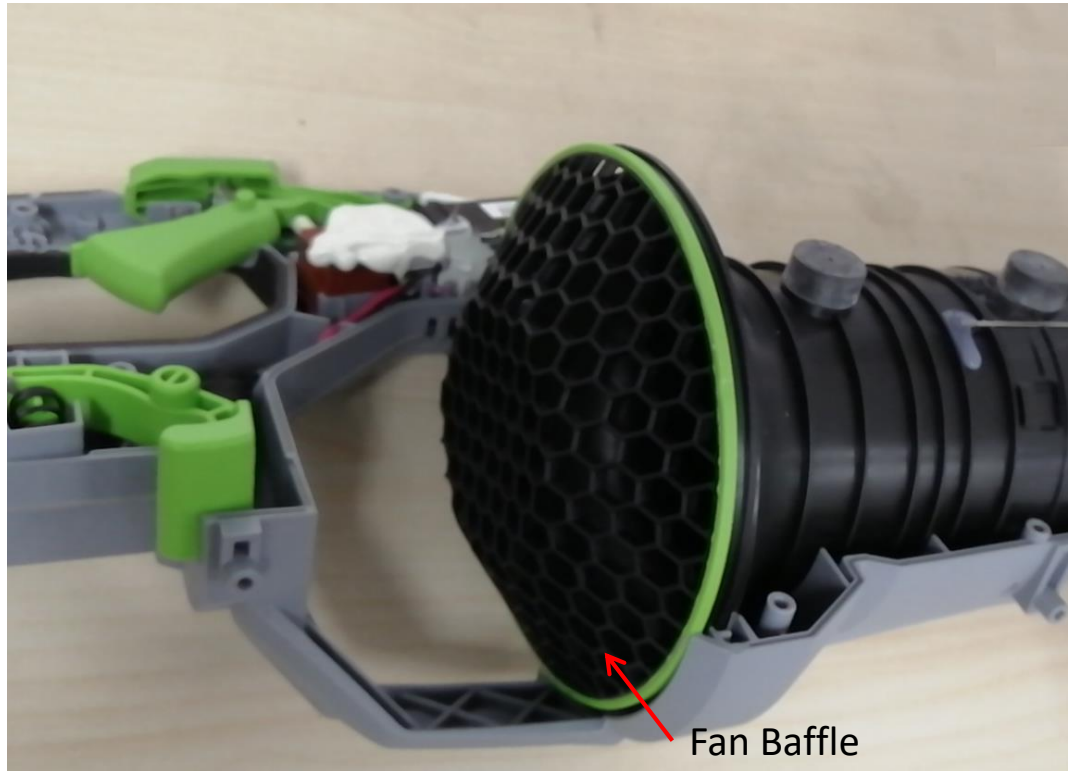
How to Disassemble the Blower

2. Remove the 10 screws to open the blower housings to expose the PCBA and Duct set connectors.



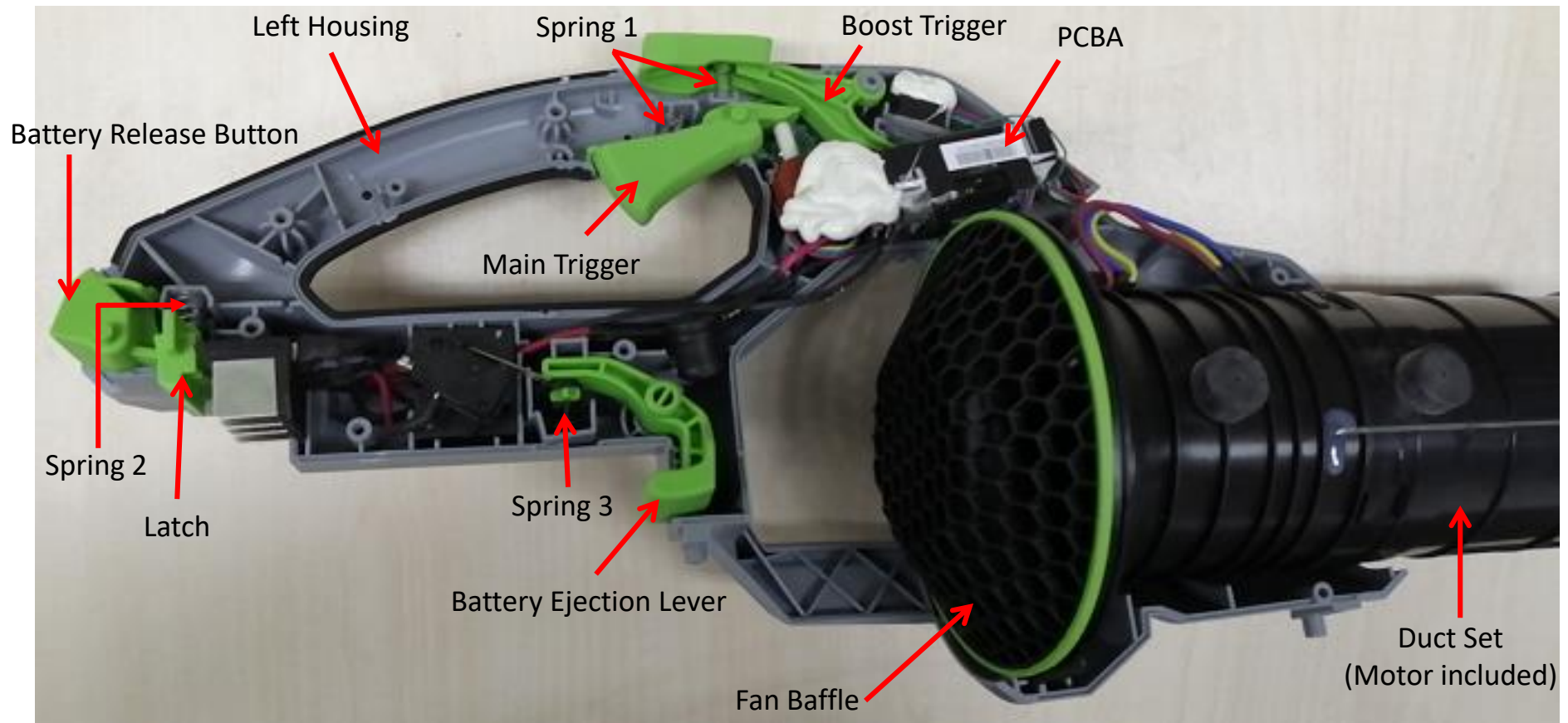
How to Disassemble the Blower

3. Remove the fan baffle away from the housing. If the fan baffle is worn and needs replacement, replace it. Otherwise save it for reassembly.



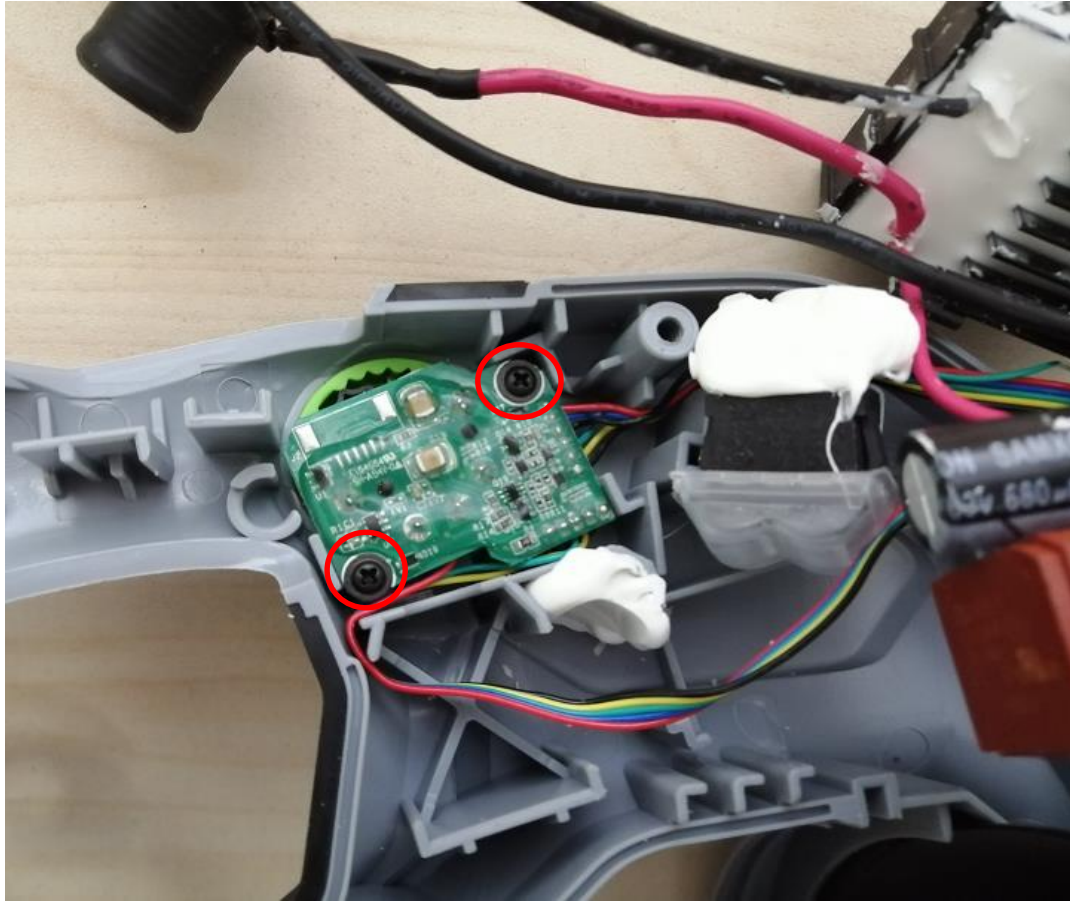
How to Disassemble the Blower

- ✓ The following parts can be replaced after opening the housings.



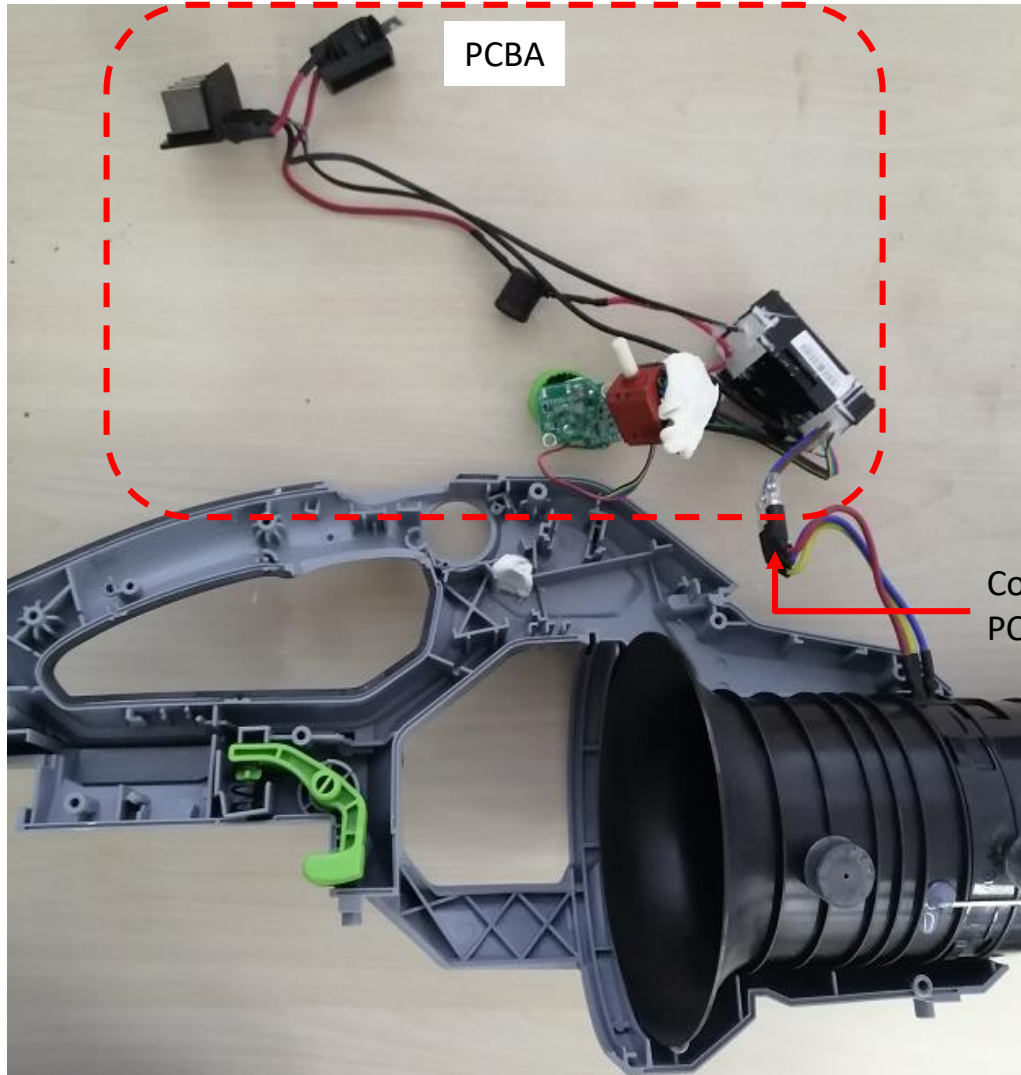
How to Disassemble the Blower

4. Loosen the 2 screws to remove the speed-adjustment PCBA.



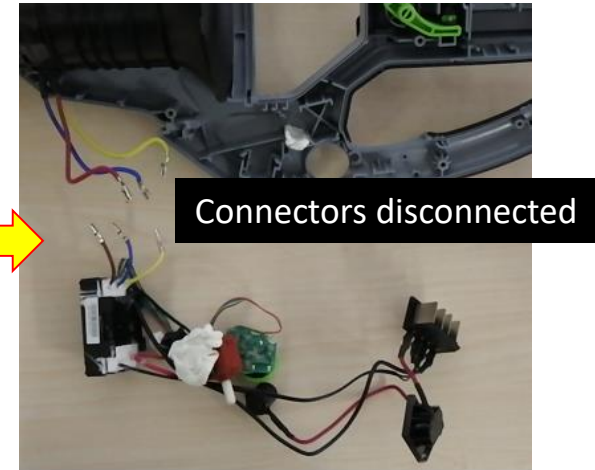
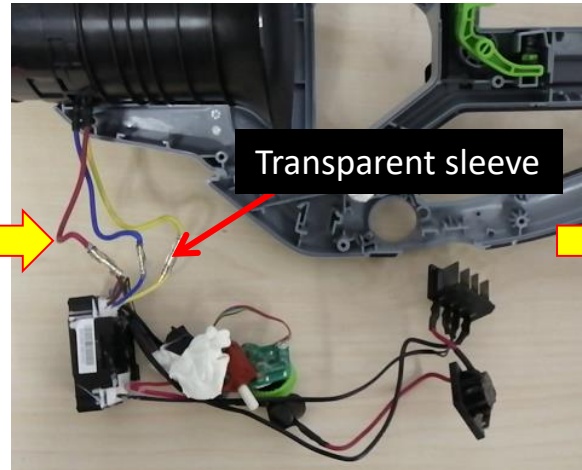
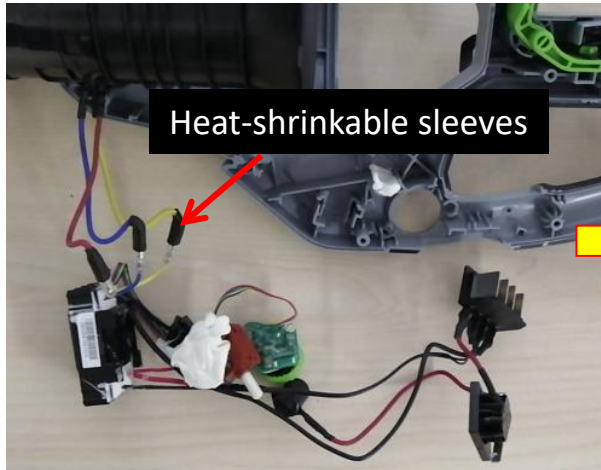
How to Disassemble the Blower

5. Take out the PCBA from the handle housing.



How to Disassemble the Blower

6. Use scissors to cut off the heat-shrinkable sleeves and remove the transparent sleeves aside to separate the three connectors between the PCBA and the duct set (motor included).



How to Detect the PCBA and the Motor

1. Test the duct set (motor included) to judge if the motor is open-circuit.

NOTICE: Judge if there is any burning smell of the motor before having diagnosis. If yes, the motor is burned. Replace it. Otherwise, go on below detection.

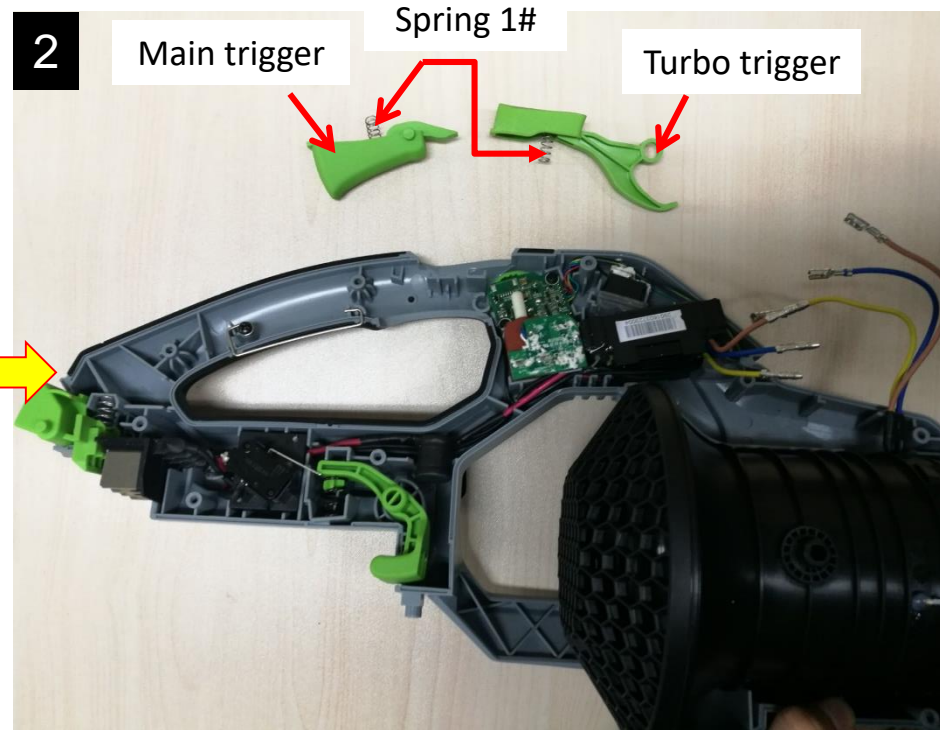


Measure the resistance between any of the two connectors

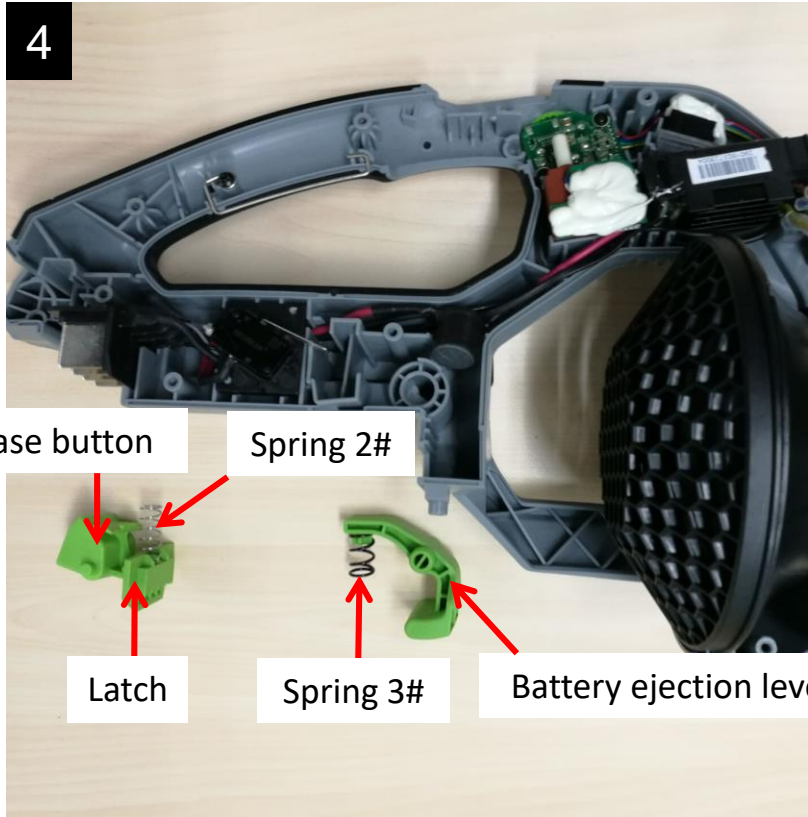
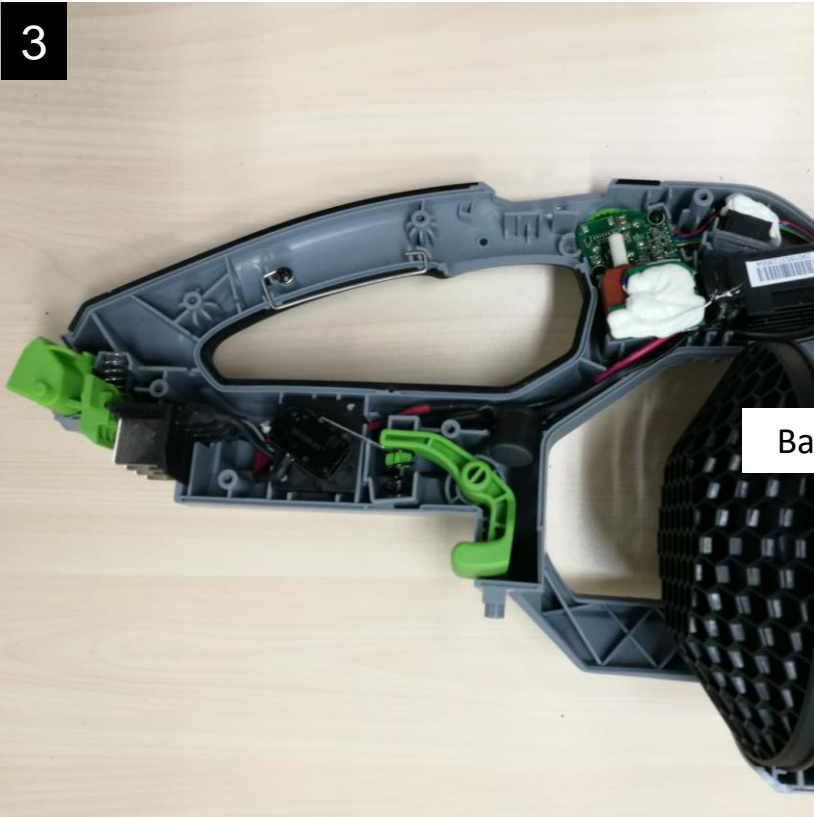
- a) Set the Multimeter function to “Resistance measuring” .
- b) Measure the resistance between any of the two connectors.
- c) If any of the measurements is infinite, means the circuit between the two connectors is open circuit, the motor is damaged. Replace with a new motor.
- d) If the motor is shorted inside,** Multimeter is not applicable for detection. Directly test with a new motor after disconnecting the connectors.

How to Replace the PCBA

1. Follow the section “**How to Disassemble the Blower**” to open the handle housings and separate the connectors between the PCBA and the duct set to remove the PCBA.
2. Save all of the small parts except the PCBA for reassembly. If any of them needs replacement, replace it (Fig. 1-4).

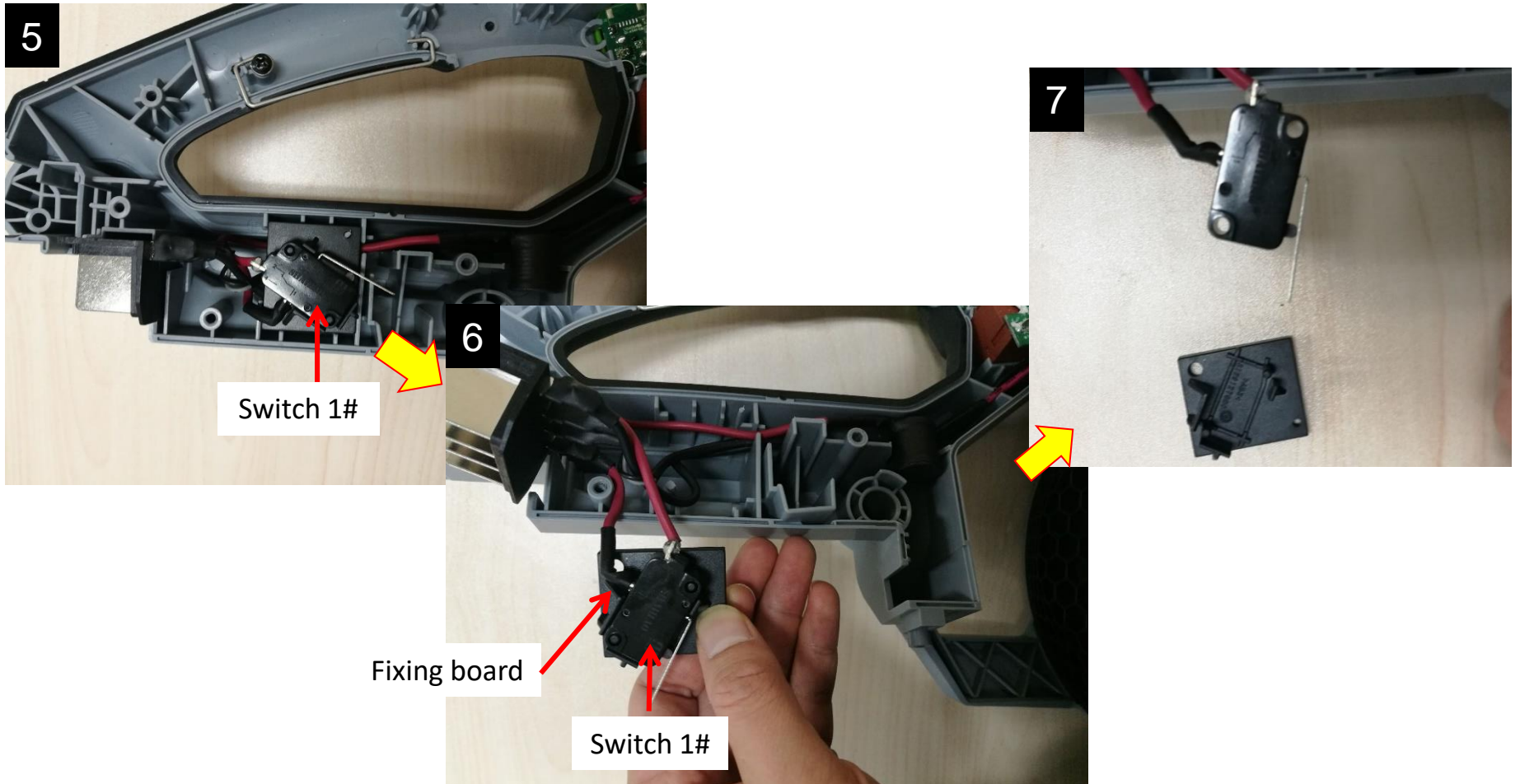


How to Replace the PCBA



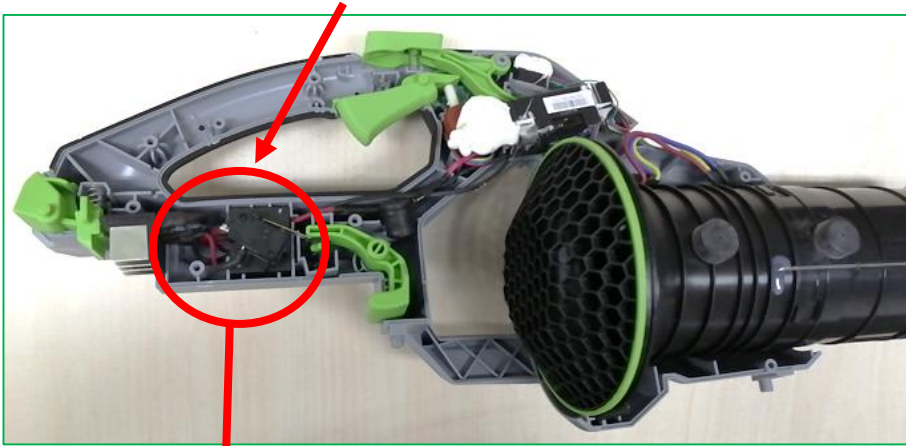
How to Replace the PCBA

3. Remove and save the fixing board on the switch 1# (Fig. 5-7) and then replace with a new PCBA.

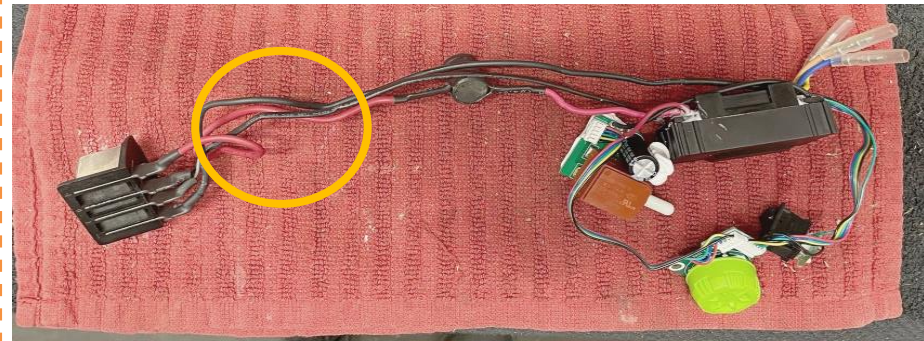
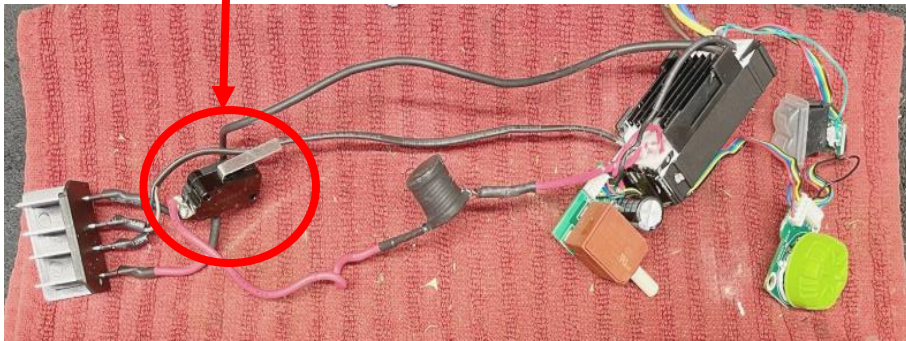
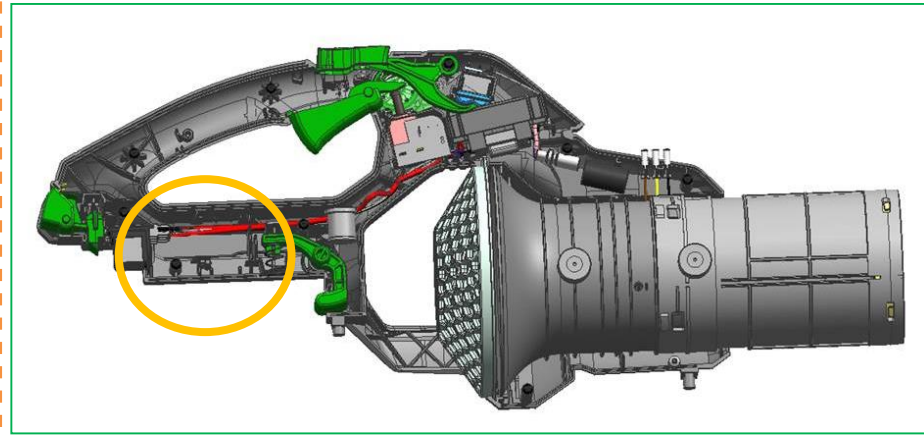


Difference between old PCBA and new PCBA

Old PCBA: w/ micro switch

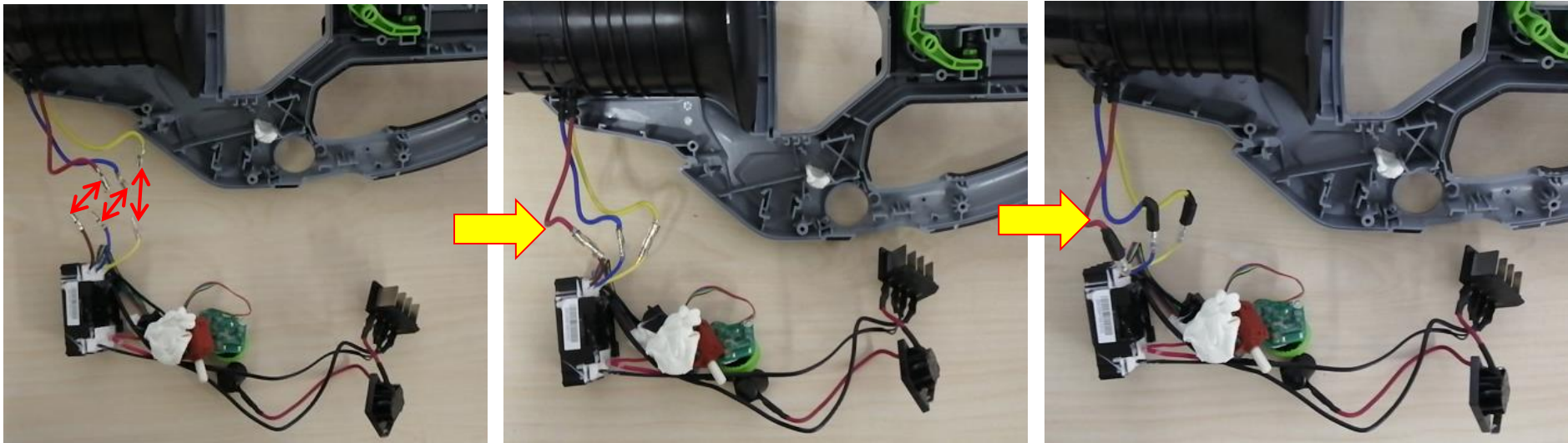


New PCBA: w/o micro switch



How to Replace the PCBA

4. Reconnect the three connectors between the new PCBA and duct set as below instructed.

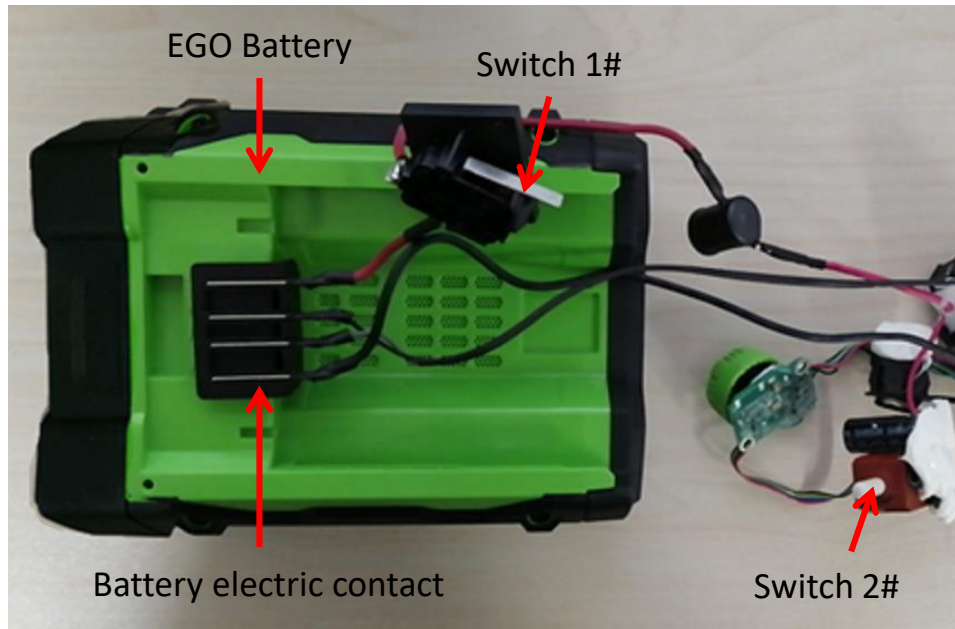


Correct Connection: Brown to brown, yellow to yellow, blue to blue

How to Replace the PCBA

5. Test the blower

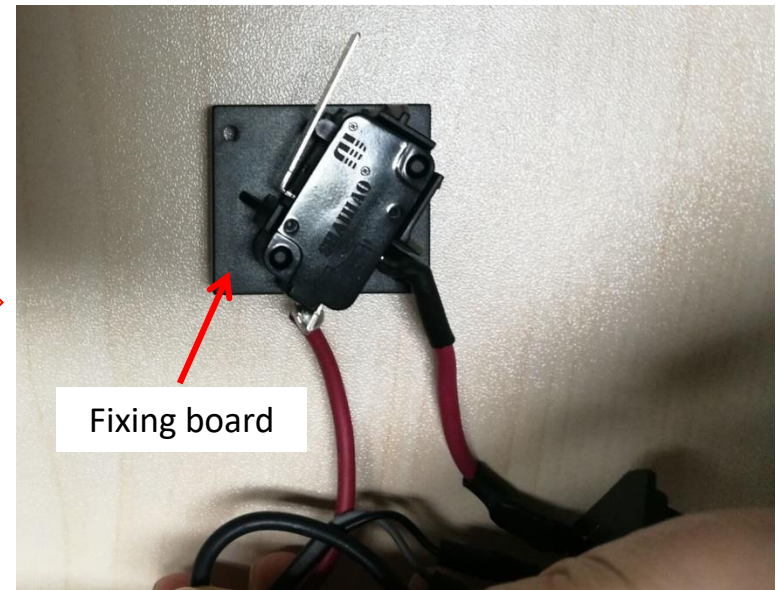
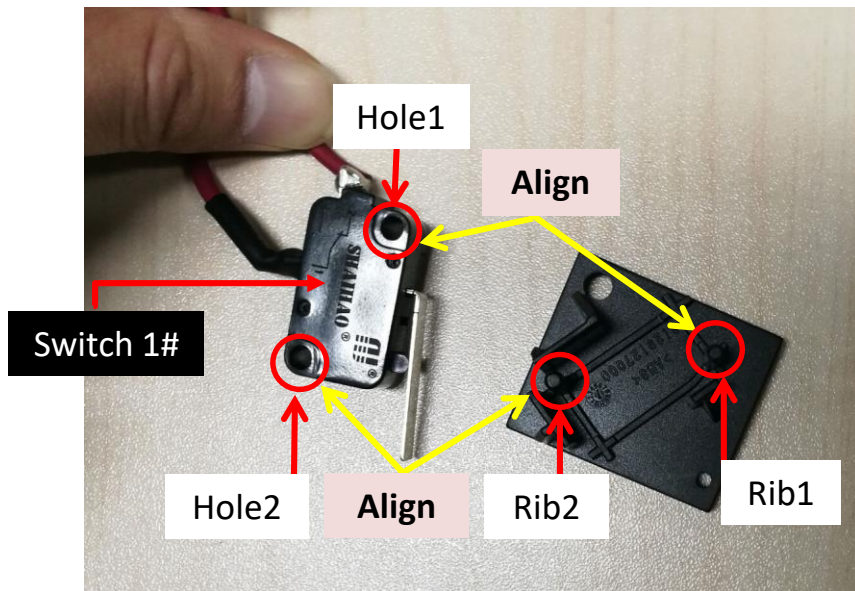
- a) Connect the battery electric contact of the new PCBA to a fully charged EGO battery.
- b) Press the **switch 1# (if the PCBA has micro switch) and switch 2# simultaneously** briefly and release it.
- c) Check the motor(inside the duct set) working status through the fan baffle. If the blower fan rotates counterclockwise, means the replacement is successful. Otherwise recheck the connection or replace a new duct set and test again.



Look through the fan baffle and check the motor rotation direction

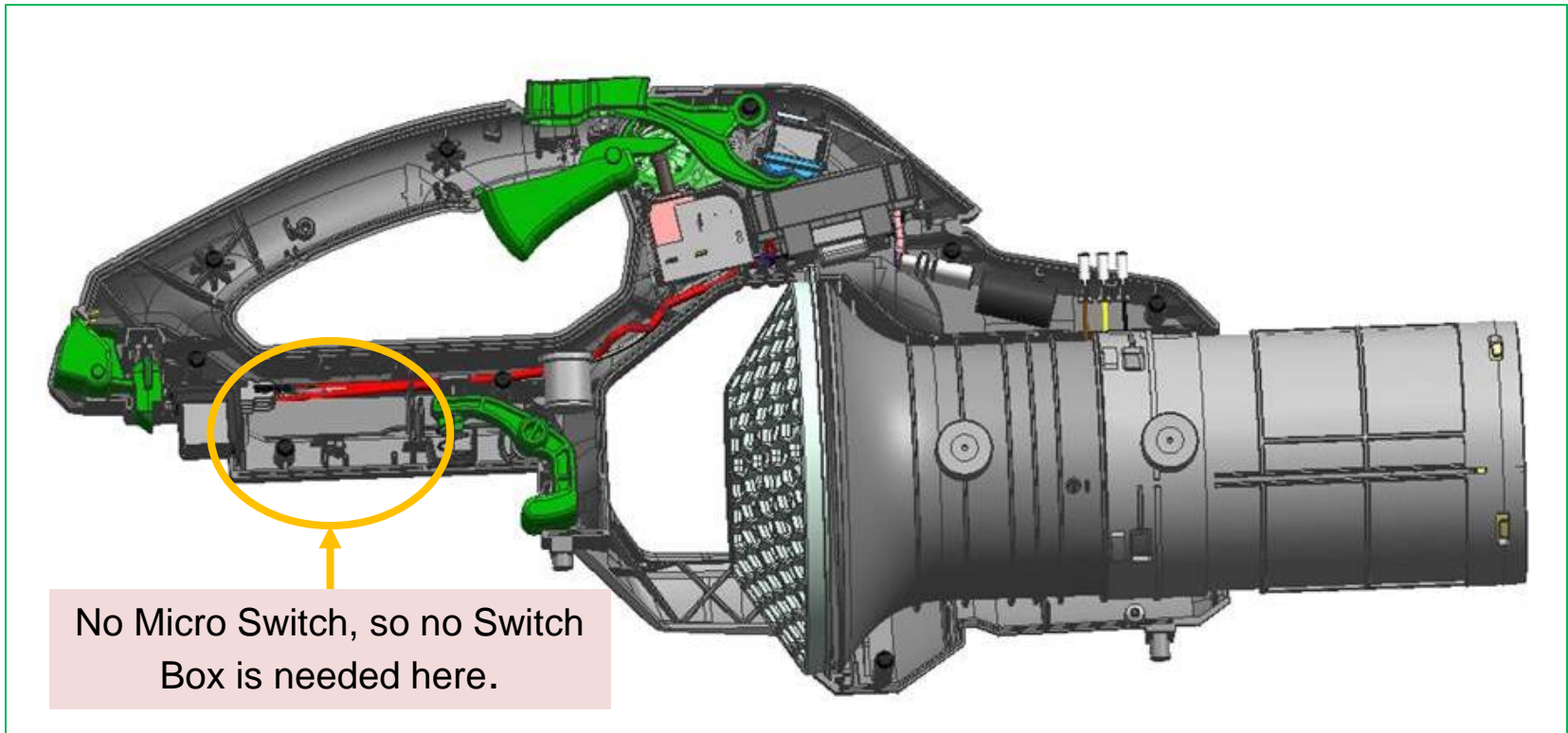
How to Replace the PCBA

6. Align the holes in the switch 1# of the PCBA with micro switch with the ribs on the fixing board to assemble the switch 1# onto the fixing board.



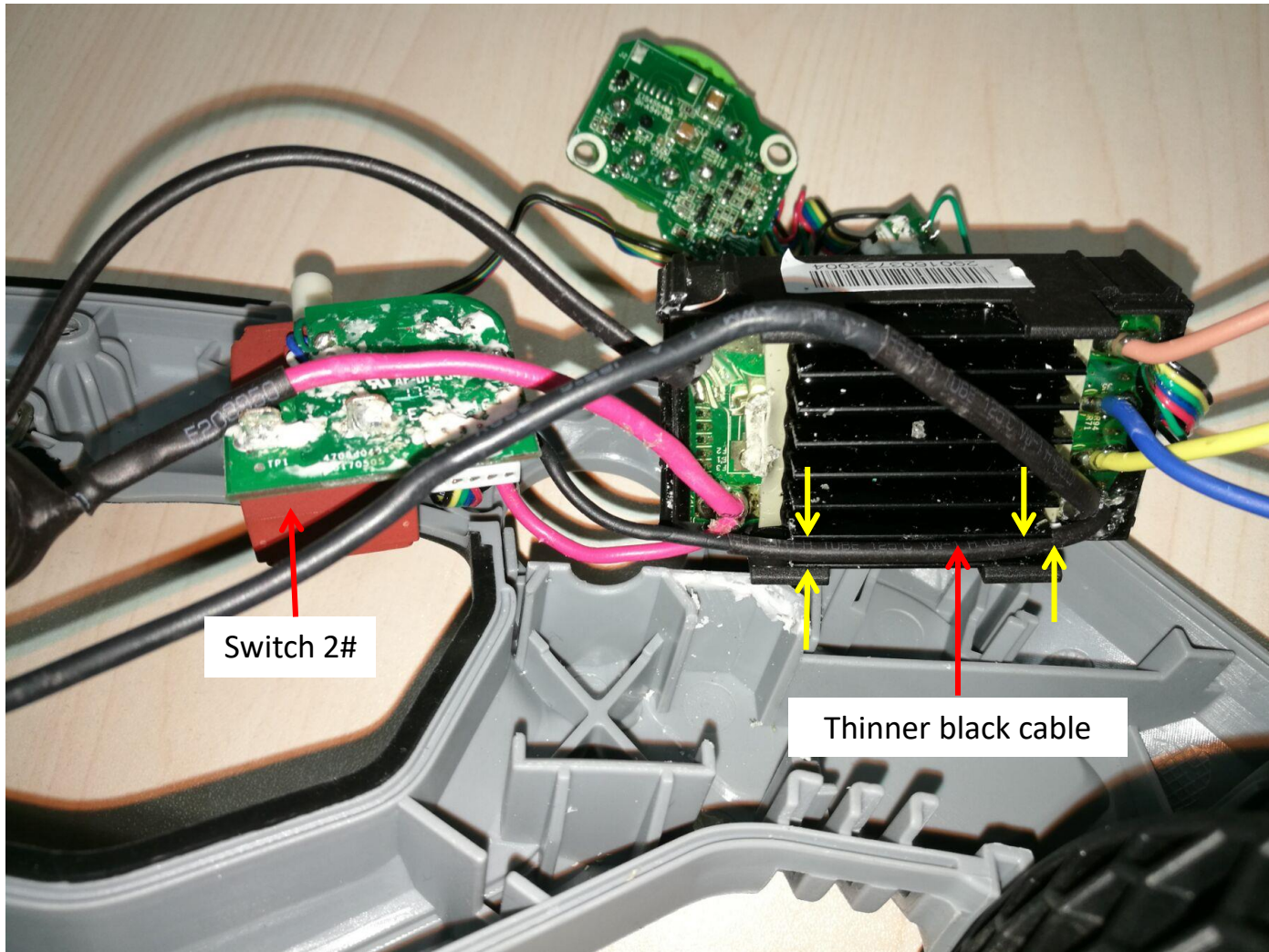
ATTENTION

When using the new PCBA (w/o micro switch), the switch box is not needed.



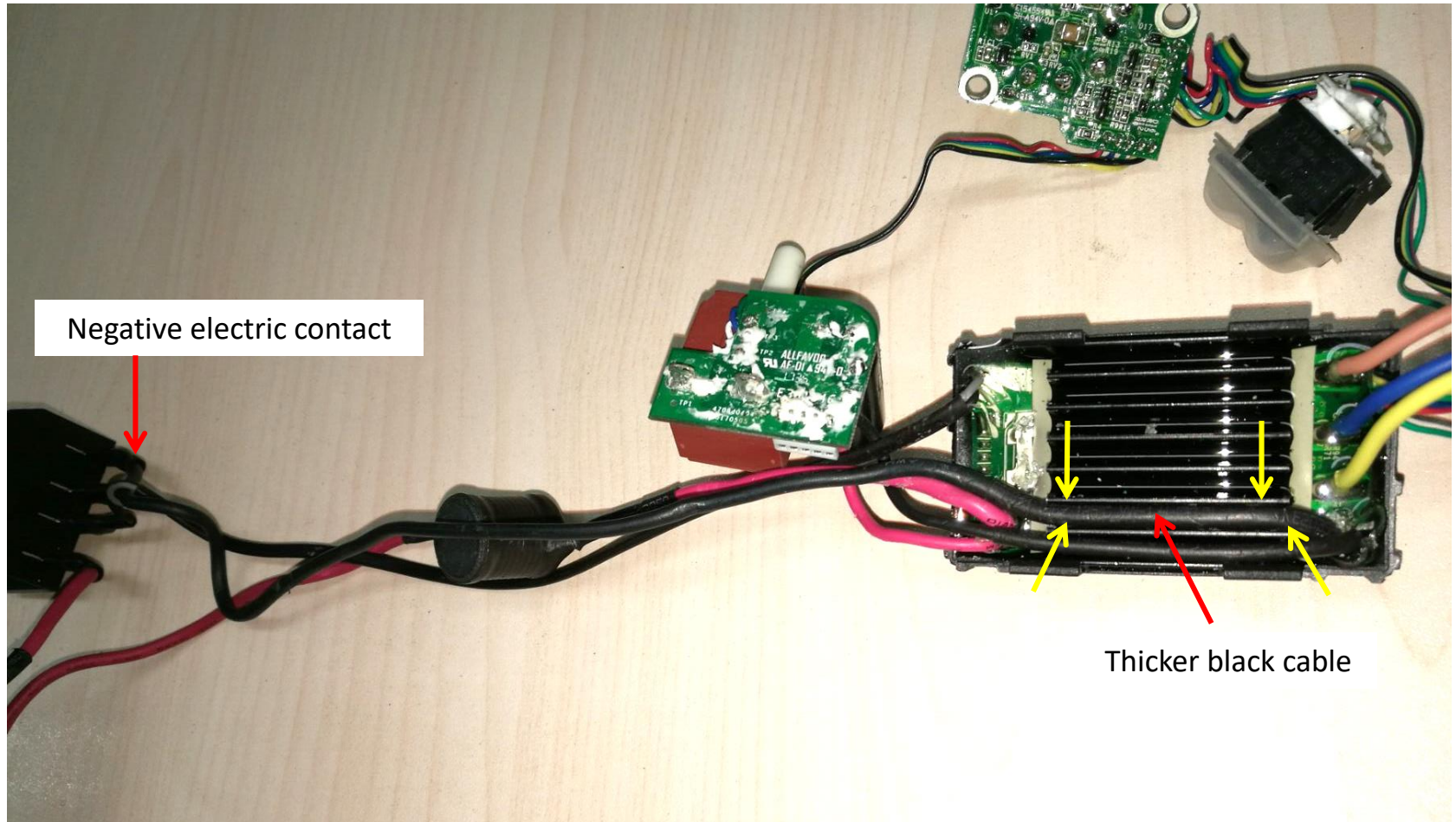
How to Replace the PCBA

7. Align the thinner black cable that is connected to the switch 2# into the groove at the edge of the PCBA.



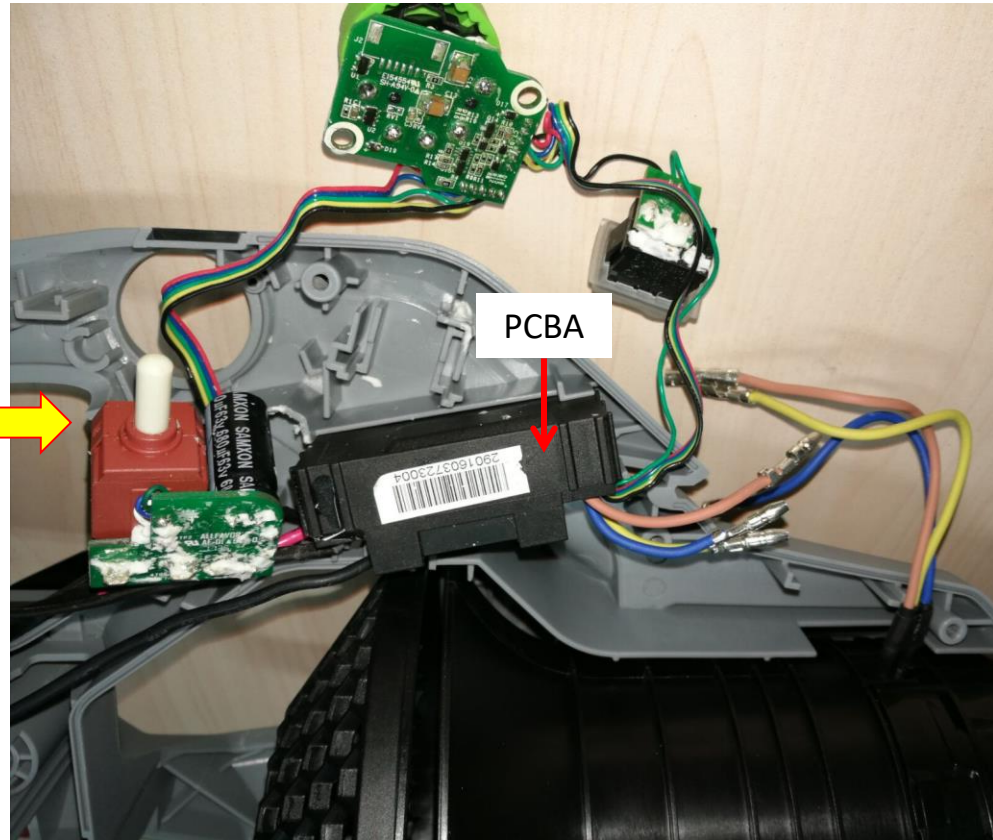
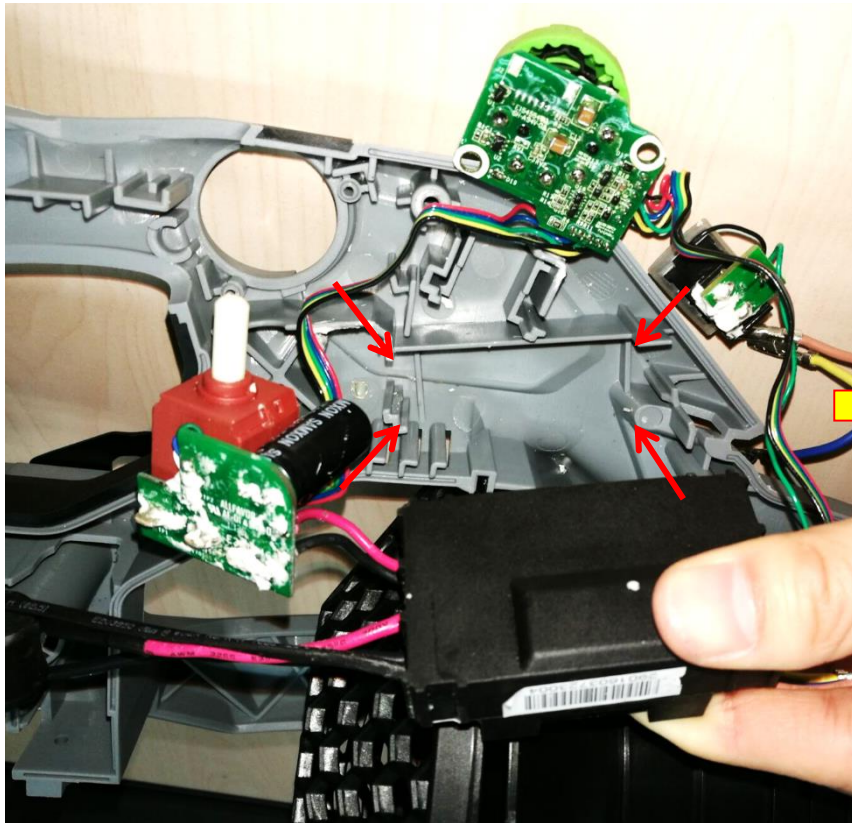
How to Replace the PCBA

8. Align the thicker black cable connected with negative electric contact into the groove at the second edge of the PCBA.



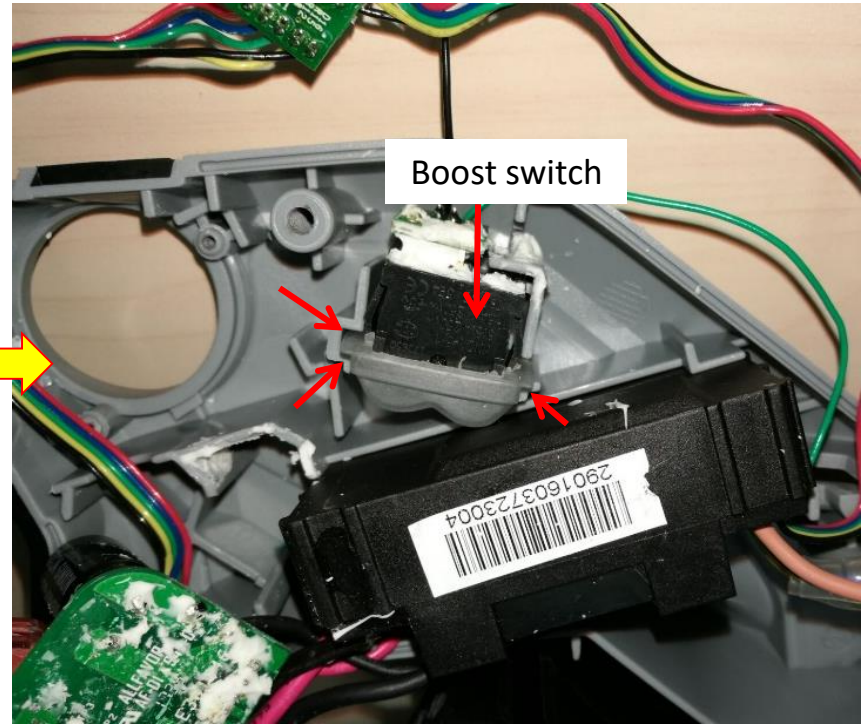
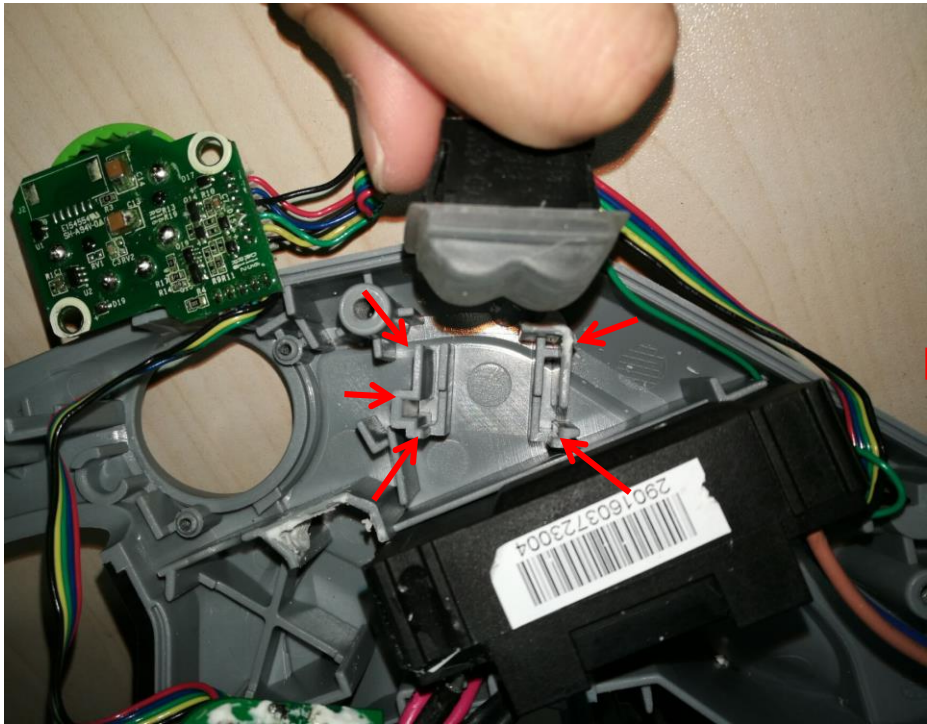
How to Replace the PCBA

9. Mount the PCBA with firmly holding the thinner and thicker wires in their place to put them into the groove in the left housing.



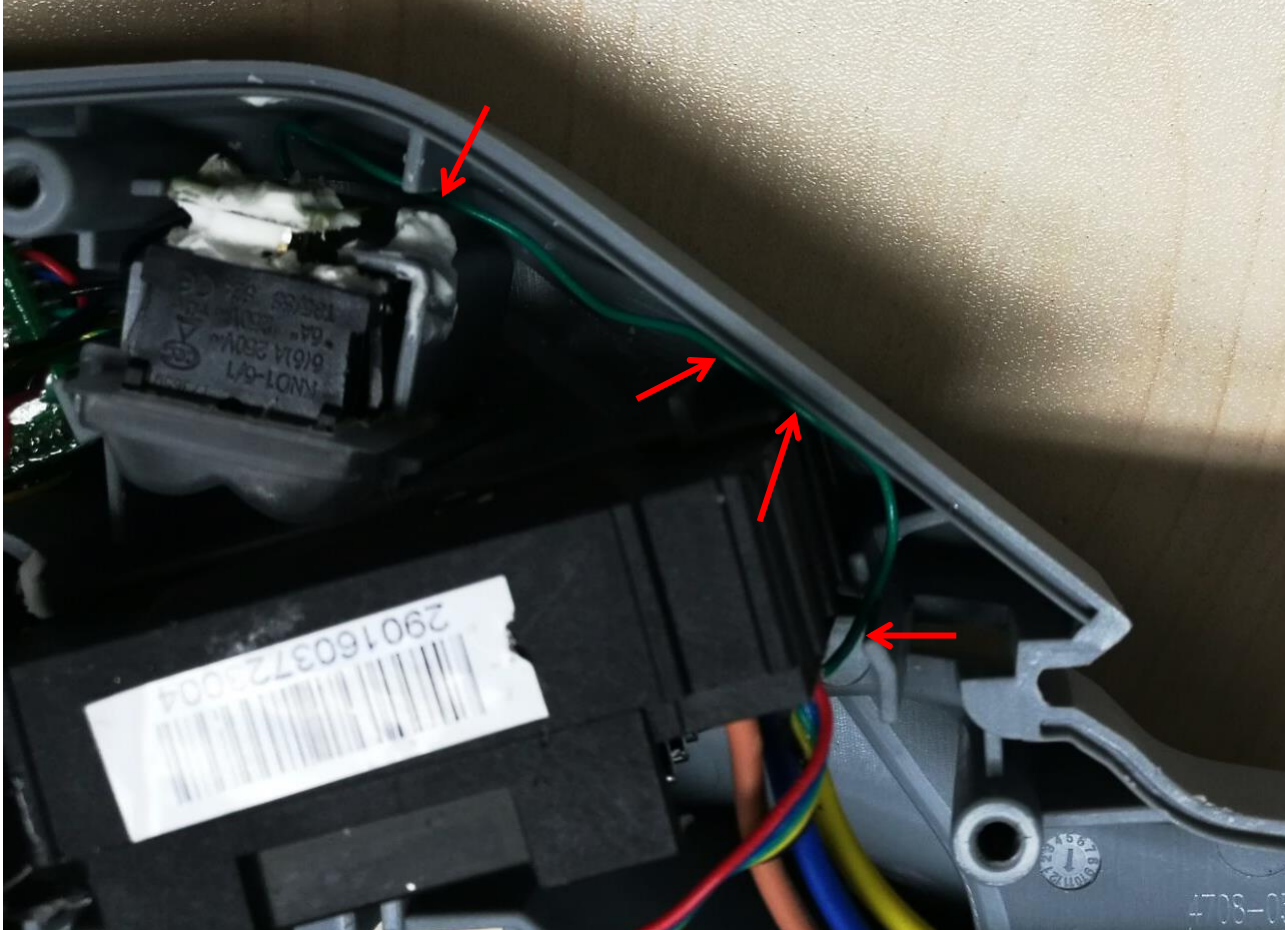
How to Replace the PCBA

10. Mount the boost switch into the groove.



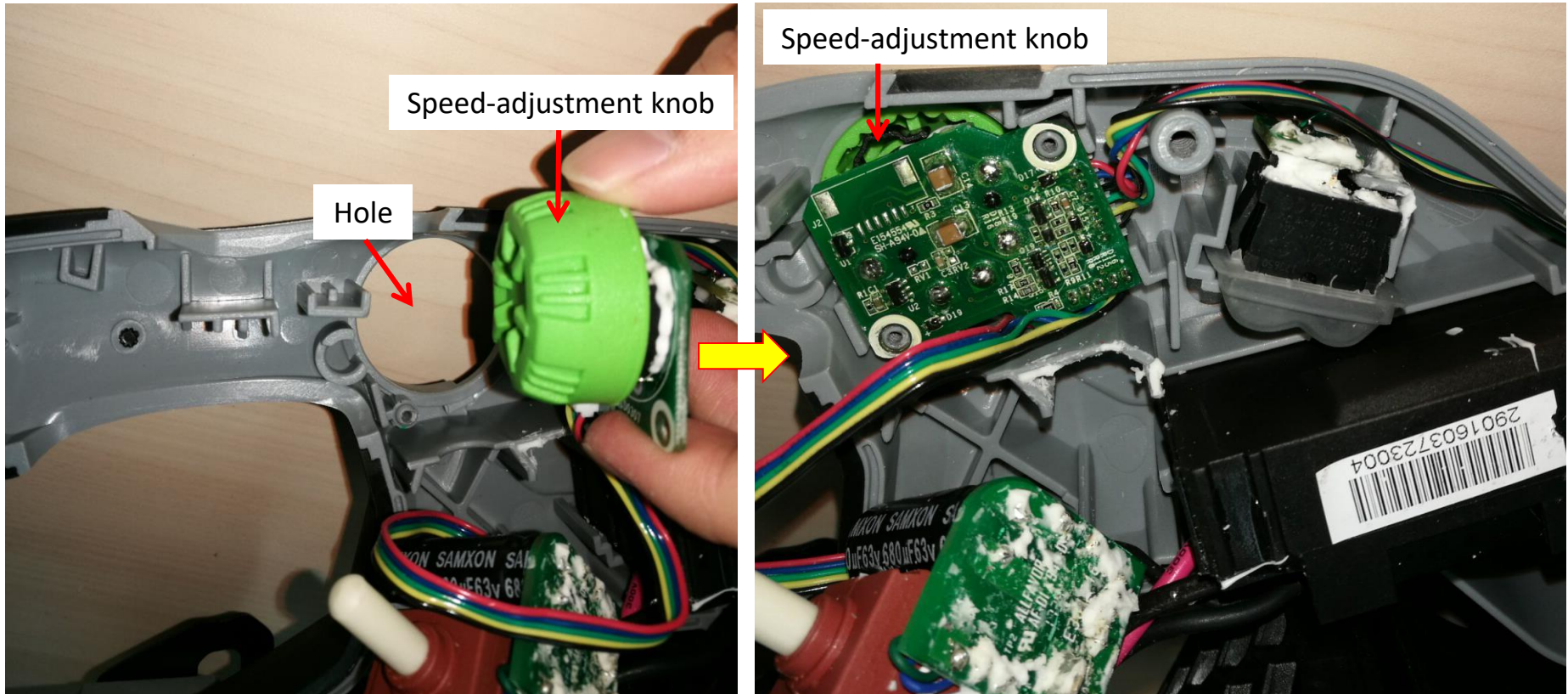
How to Replace the PCBA

11. Align the green thin cable from the boost switch into the groove.



How to Replace the PCBA

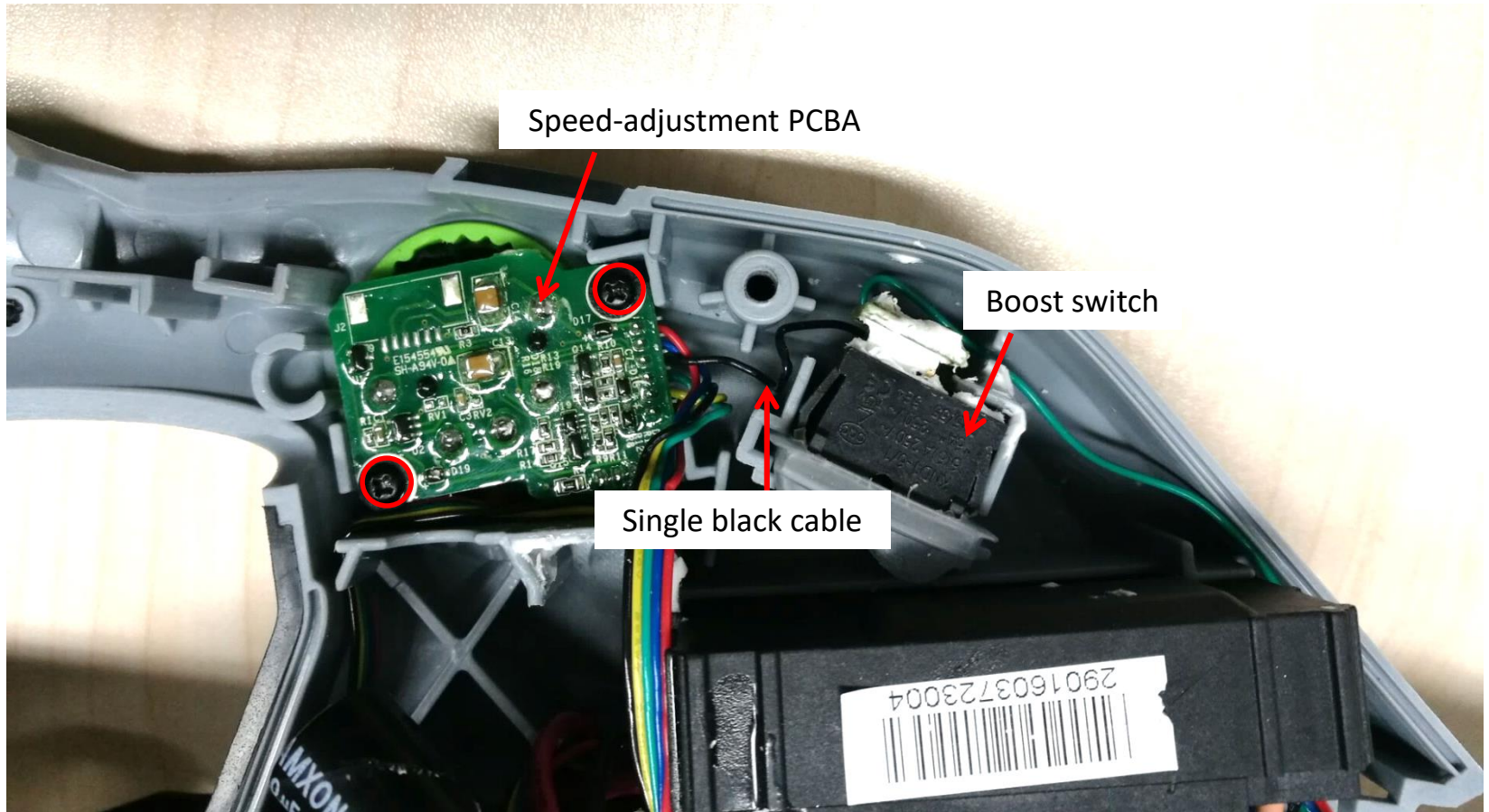
12. Mount the speed-adjustment knob into its corresponding hole in the left housing.



How to Replace the PCBA

13. Tighten the speed-adjustment PCBA with the 2 screws.

14. Align the single black cable which connects the speed-adjustment PCBA to the boost switch into the vacant groove.



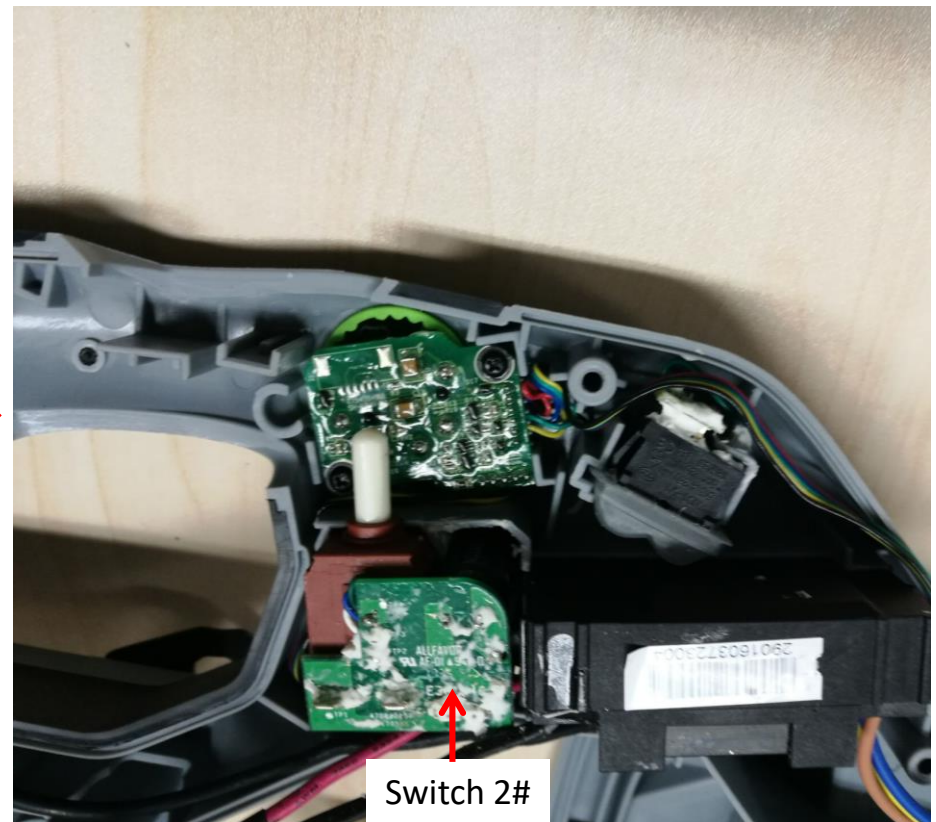
How to Replace the PCBA

15. Align the flat cables into the groove.



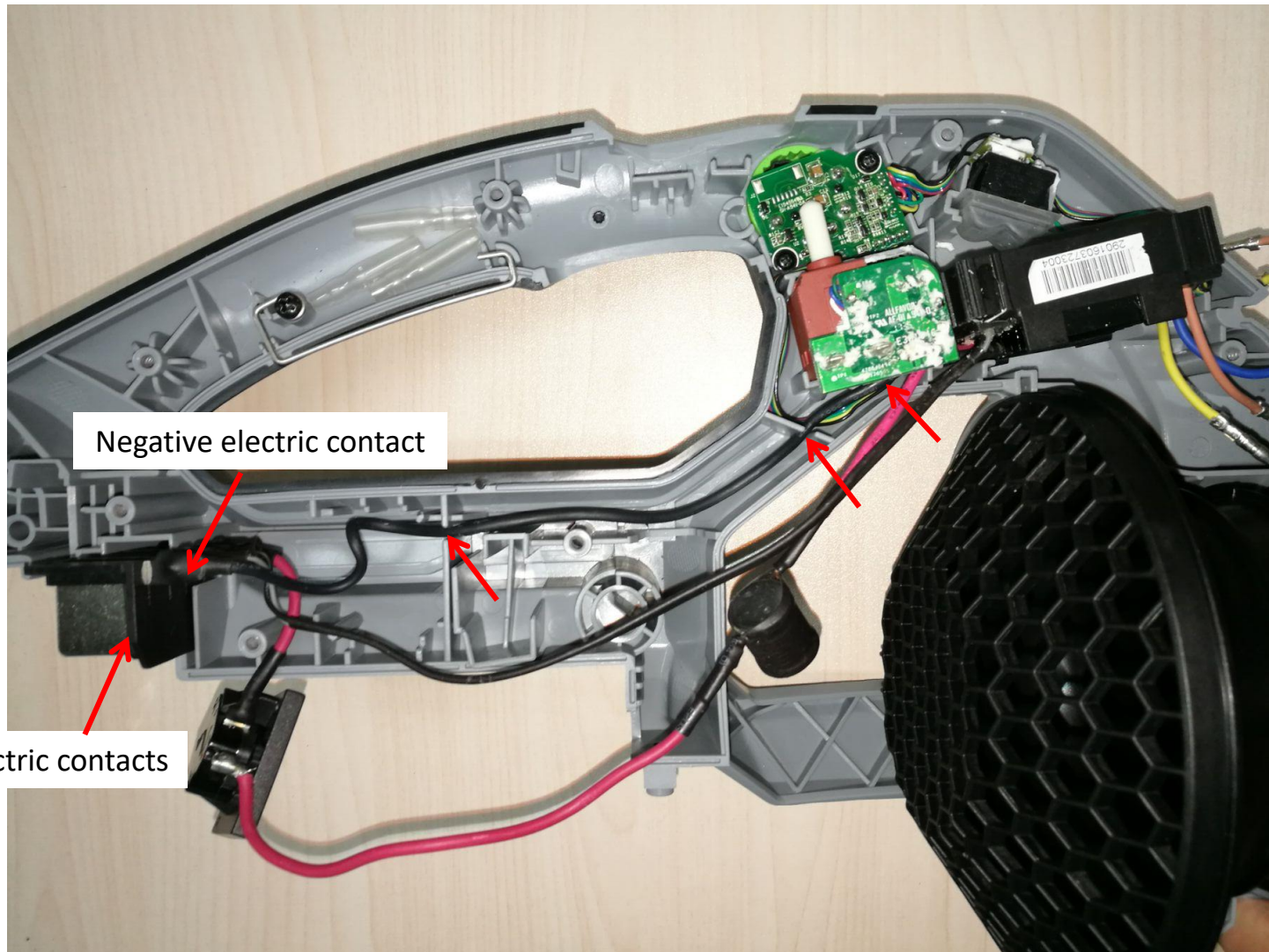
How to Replace the PCBA

- Align the other flat cables which link the switch 2# to the speed-adjustment PCBA into the groove first and then mount the switch 2# into the housing groove.



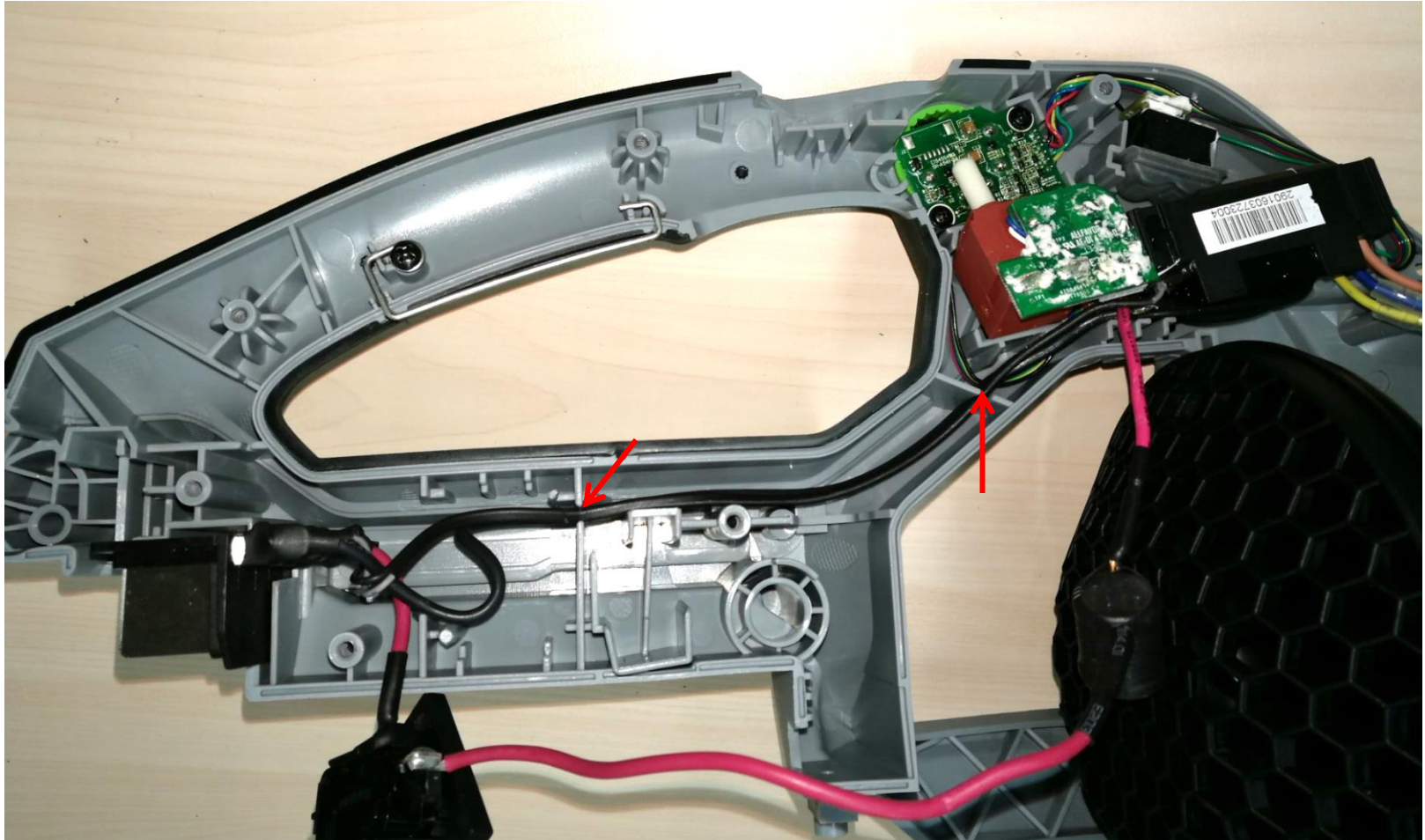
How to Replace the PCBA

17. Mount the battery electric contacts into the left housing and align the black cable which comes from the negative electric contact.



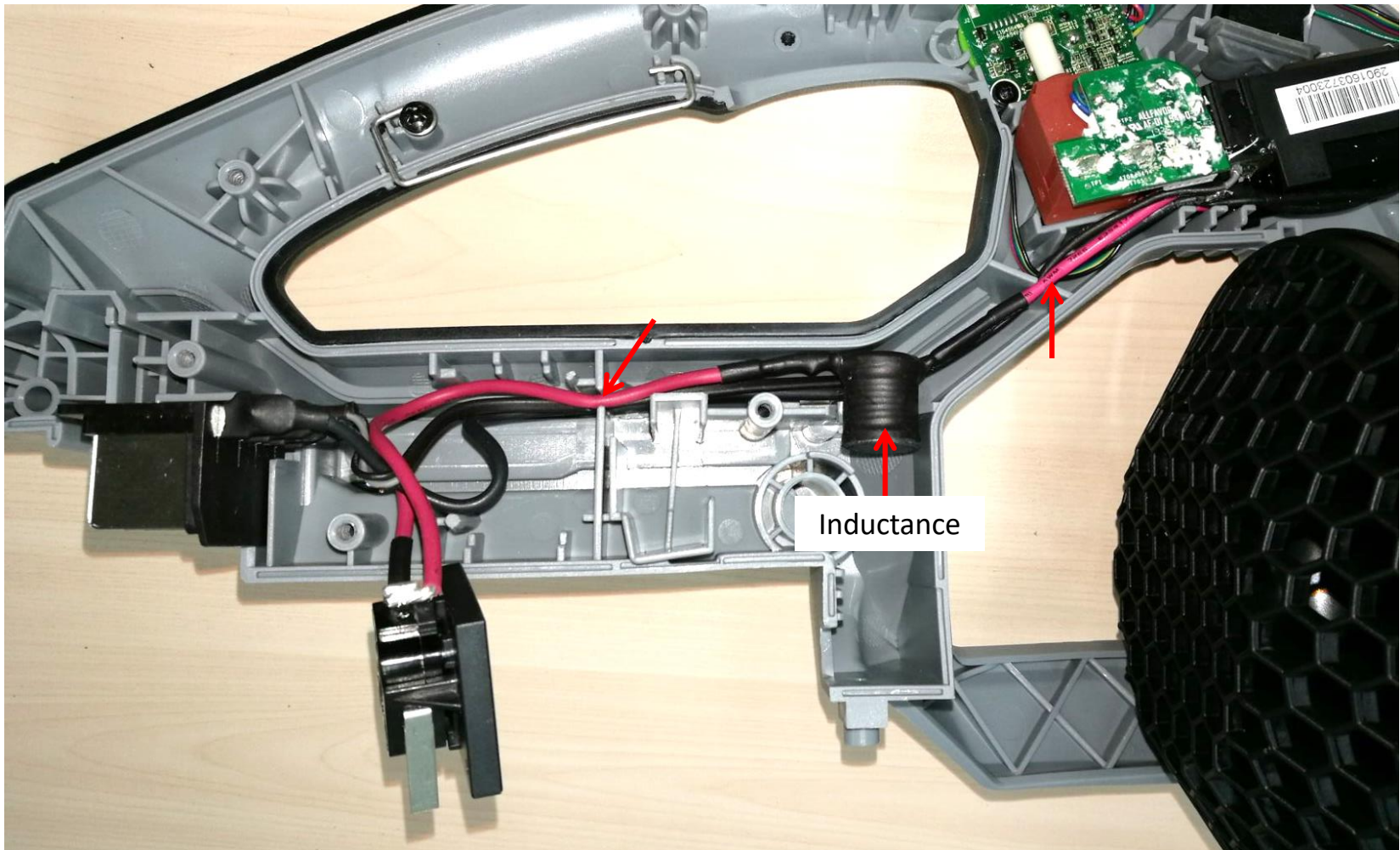
How to Replace the PCBA

18. Align the other black cable into the groove.



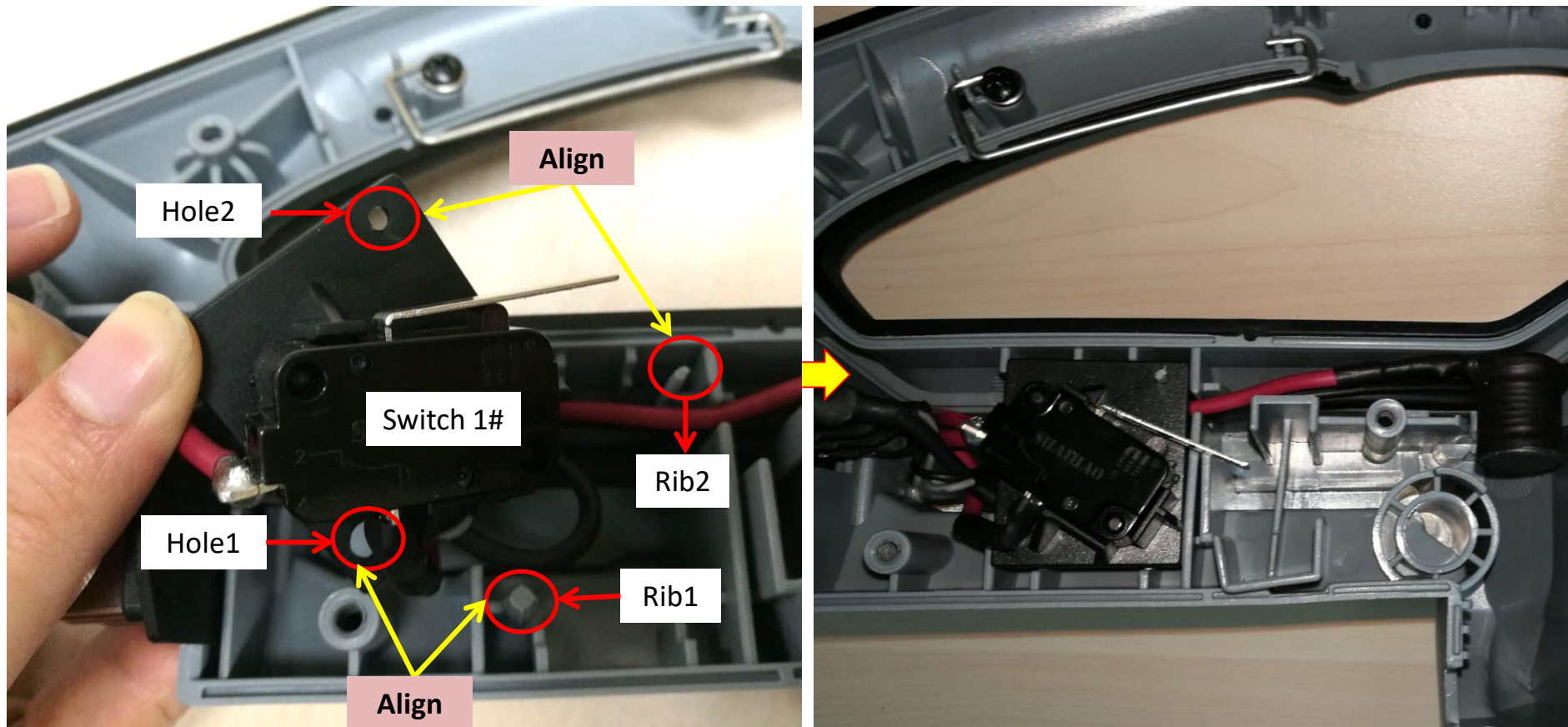
How to Replace the PCBA

19. Mount the inductance into the groove and align its linked red cable into the groove.



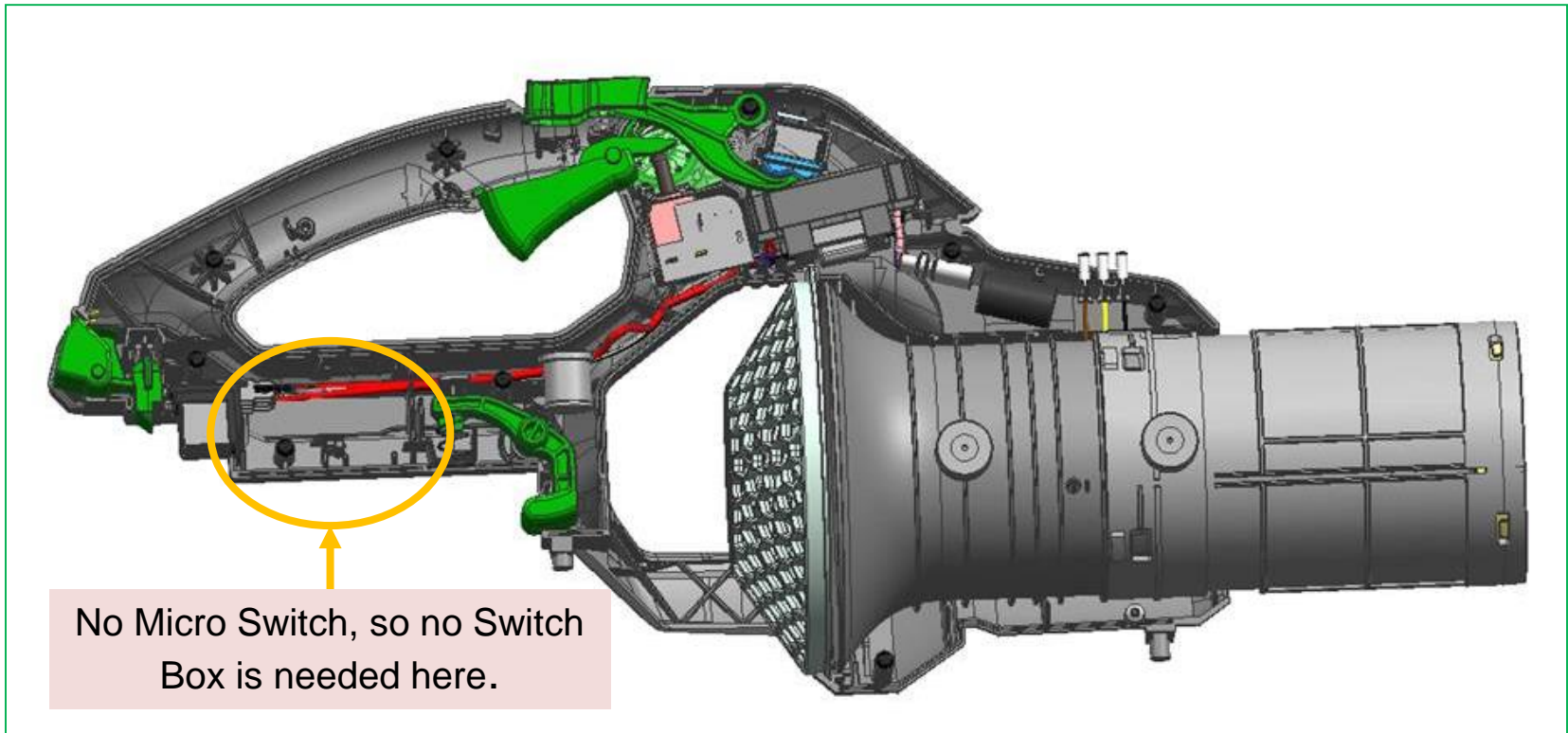
How to Replace the PCBA

20. Align the holes on the fixing board with the ribs on the left housing, and then mount the fixing board and the switch 1# assembly into the left housing.



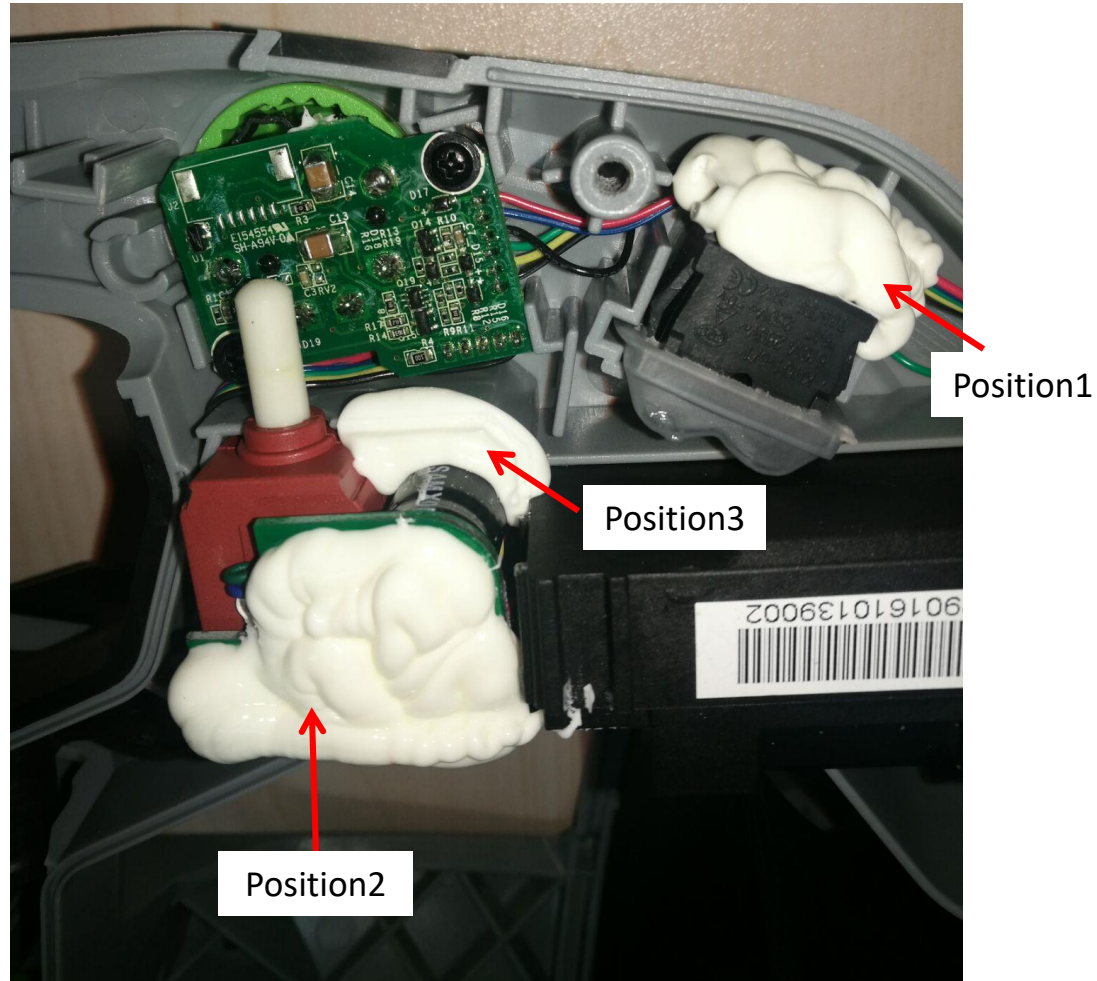
ATTENTION

When using the new PCBA (w/o micro switch), the switch box is not needed.



How to Replace the PCBA

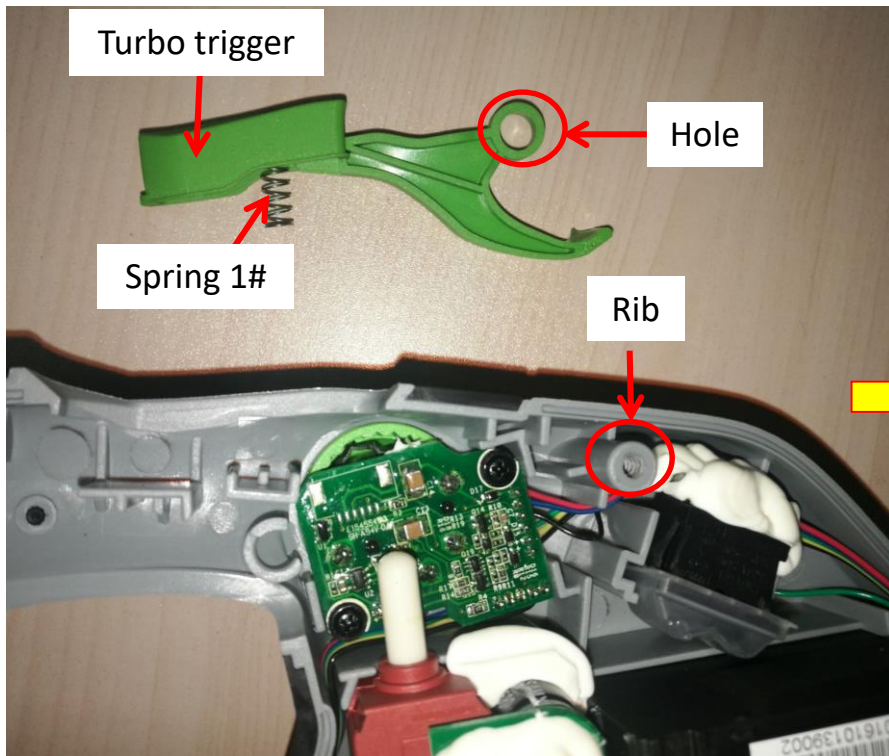
21. Add some waterproof glue on position1 and position2 to protect the electric circuit board and position3 (capacitor fixing).



How to Replace the PCBA

22. Place one spring 1# onto the turbo trigger first.

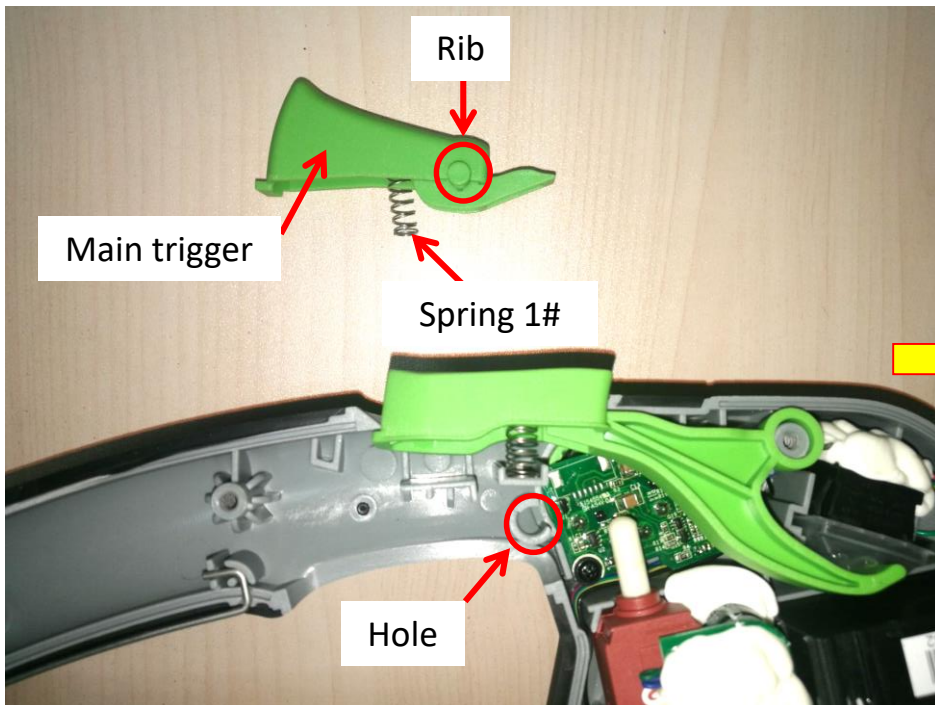
23. Align the hole on the turbo trigger with the rib on the left housing, then mount the trigger onto the rib.



How to Replace the PCBA

24. Assemble the other spring 1# onto the main trigger.

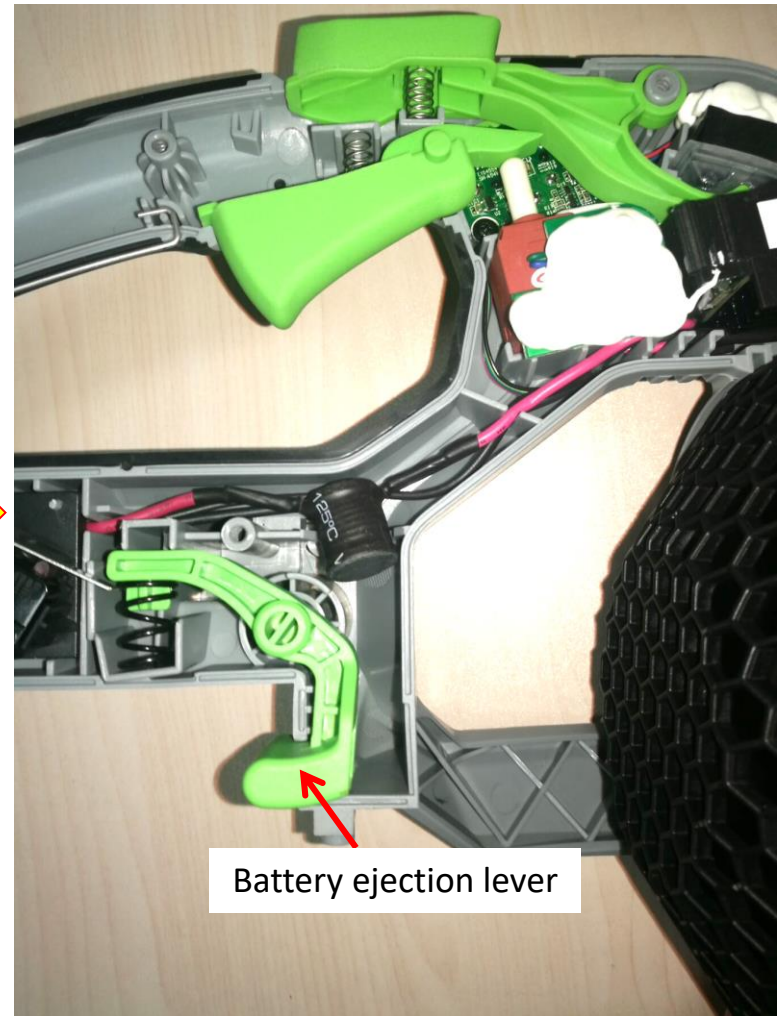
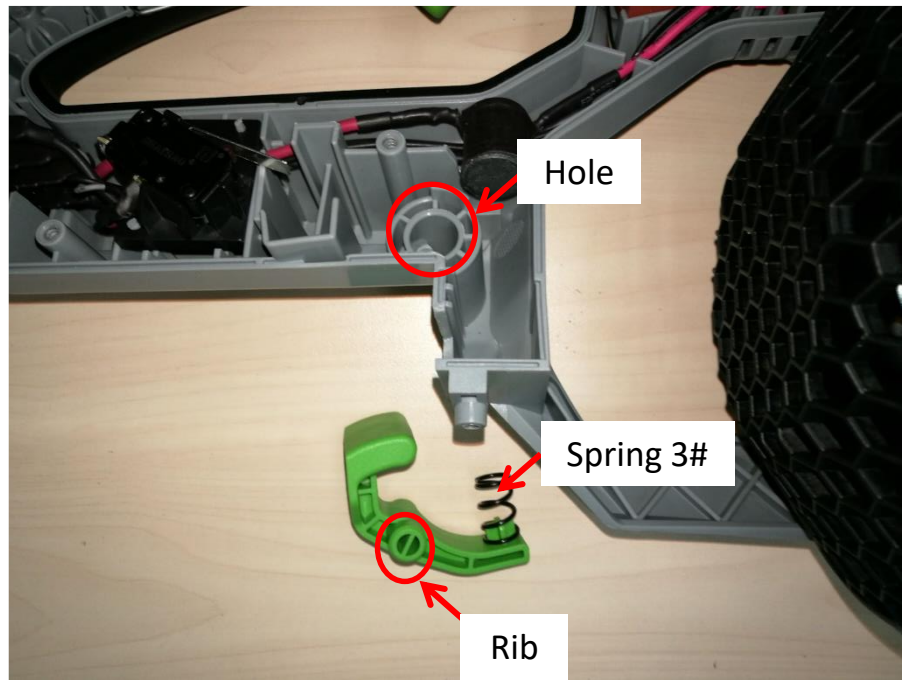
25. Align the rib on the main trigger with the hole on the left housing to mount the main trigger into its place.



How to Replace the PCBA

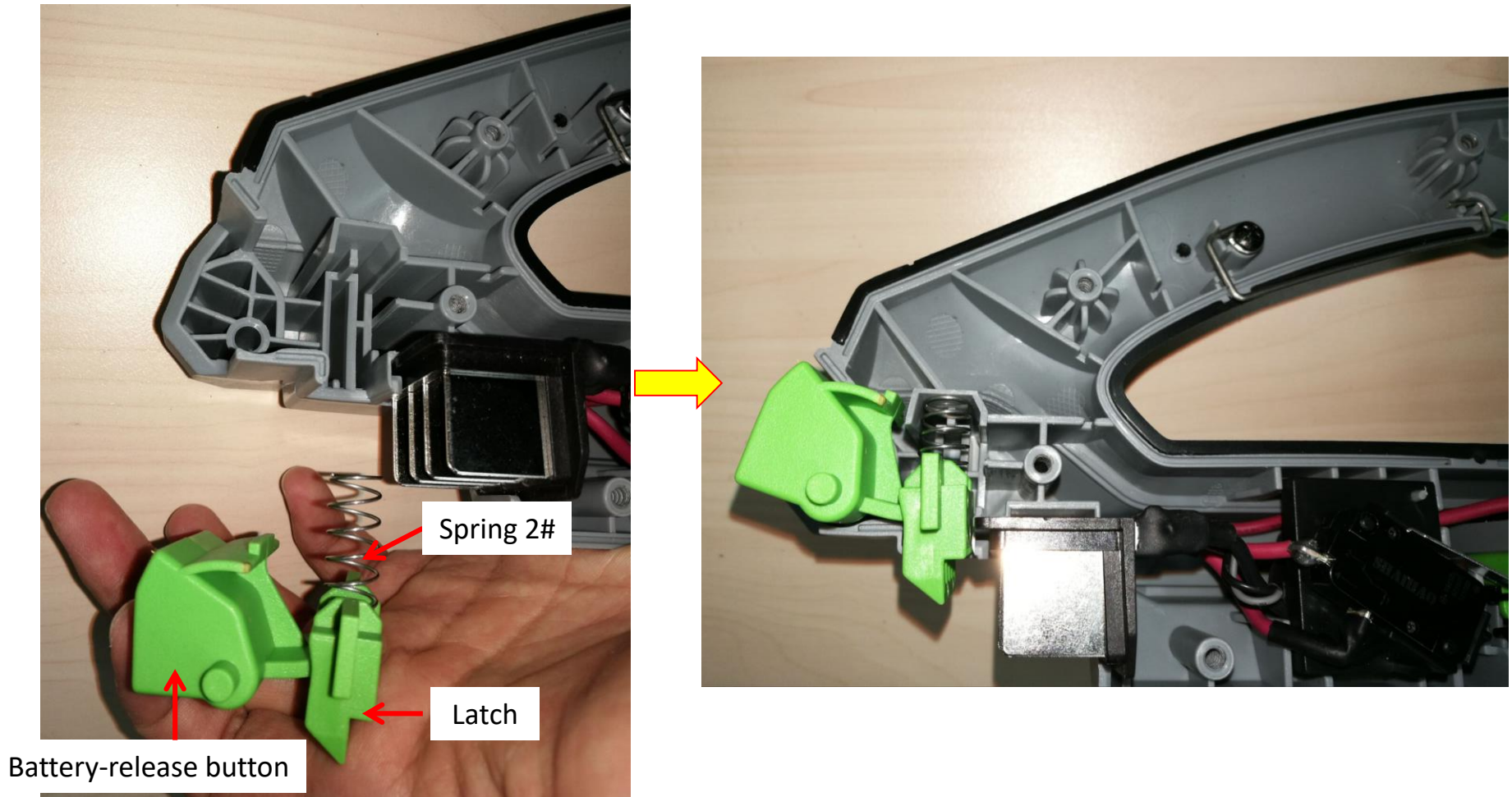
26. Assemble the spring 3# onto the lever.

27. Align the rib on the battery ejection lever with the hole on the left housing to mount the lever into its place.



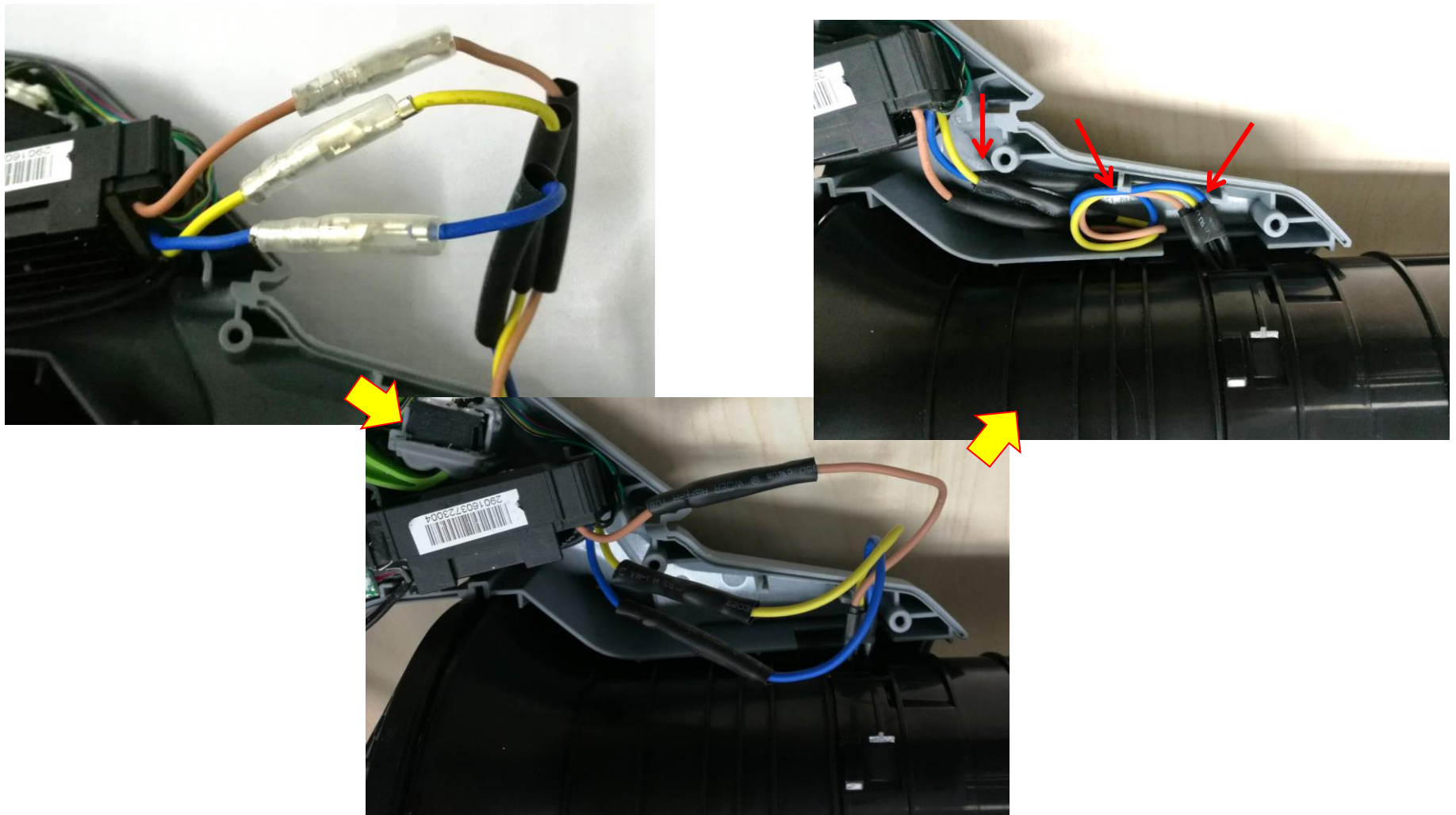
How to Replace the PCBA

28. Assemble the battery-release button, latch and spring 2# first, and then mount them into the groove of the left housing.



How to Replace the PCBA

29. Connect the connectors between the PCBA and the duct set.



How to Replace the Duct Set (Motor included)

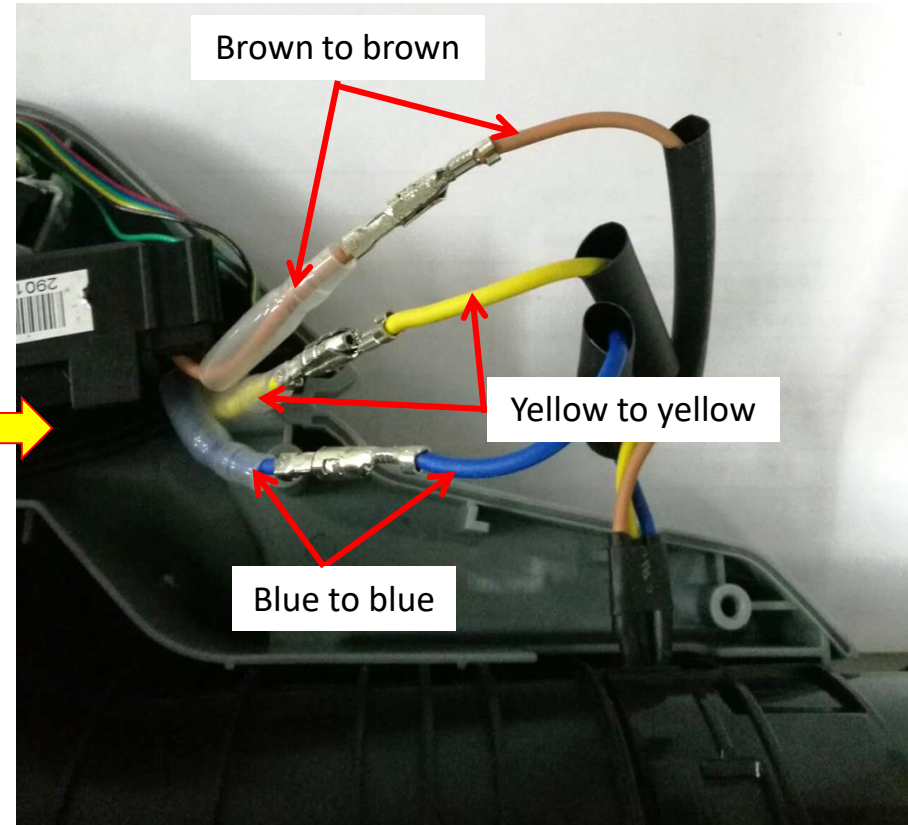
1. Follow the section “**How to Disassemble the Blower**” to open the handle housings and separate the connectors between the PCBA and the duct set to remove the duct set.
2. Replace with a new duct set.



How to Replace the Duct Set (Motor included)

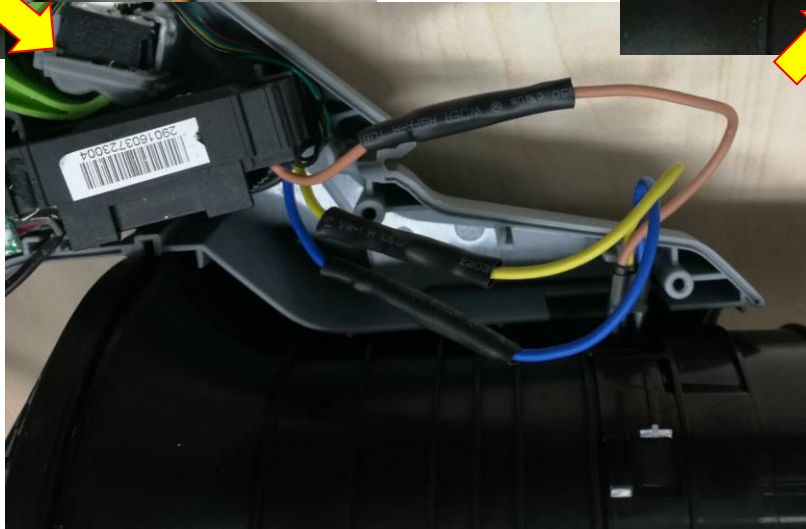
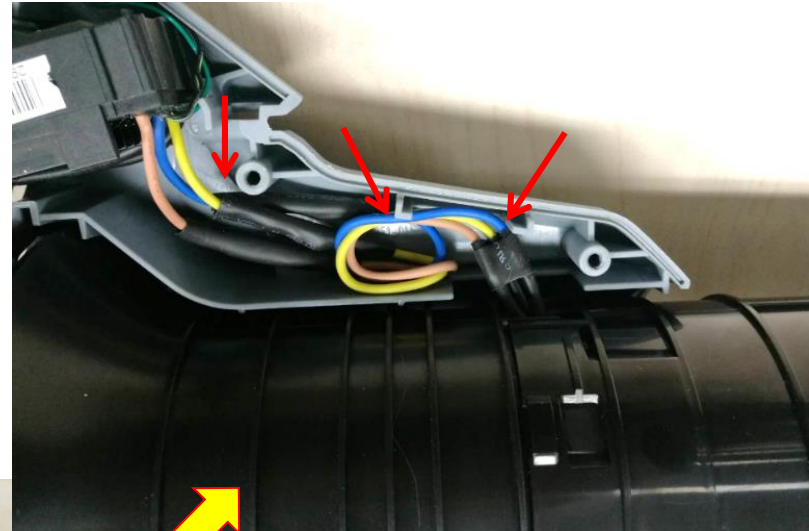
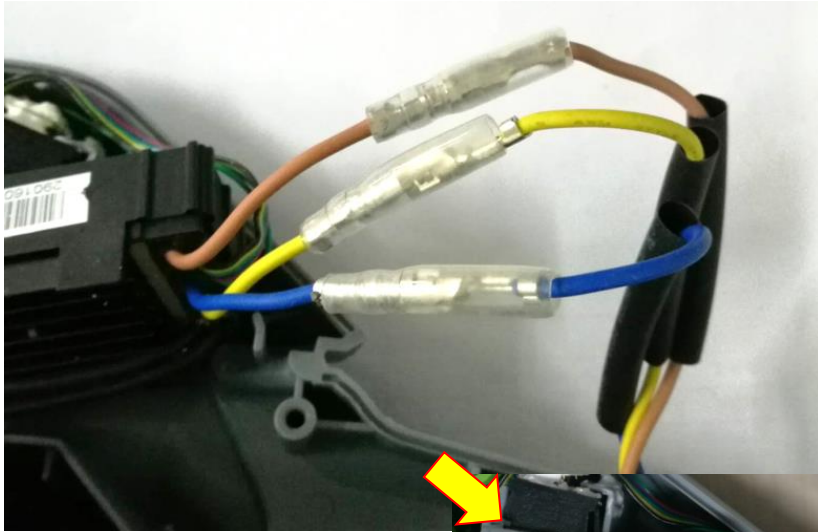
- Put on 3 new heat-shrinkable sleeves one by one onto each terminal, move the transparent sleeve aside before connecting the 3 connectors and then cover the connectors with the transparent sleeves.

Correct Connection: Brown to brown, yellow to yellow, blue to blue



How to Replace the Duct Set (Motor included)

4. Cover the 3 connectors with the heat-shrinkable sleeves and use the heat gun to shrink them.
5. Align the connectors into the corresponding groove in the left housing.



How to Replace the Duct Set (Motor included)

6. Test the blower

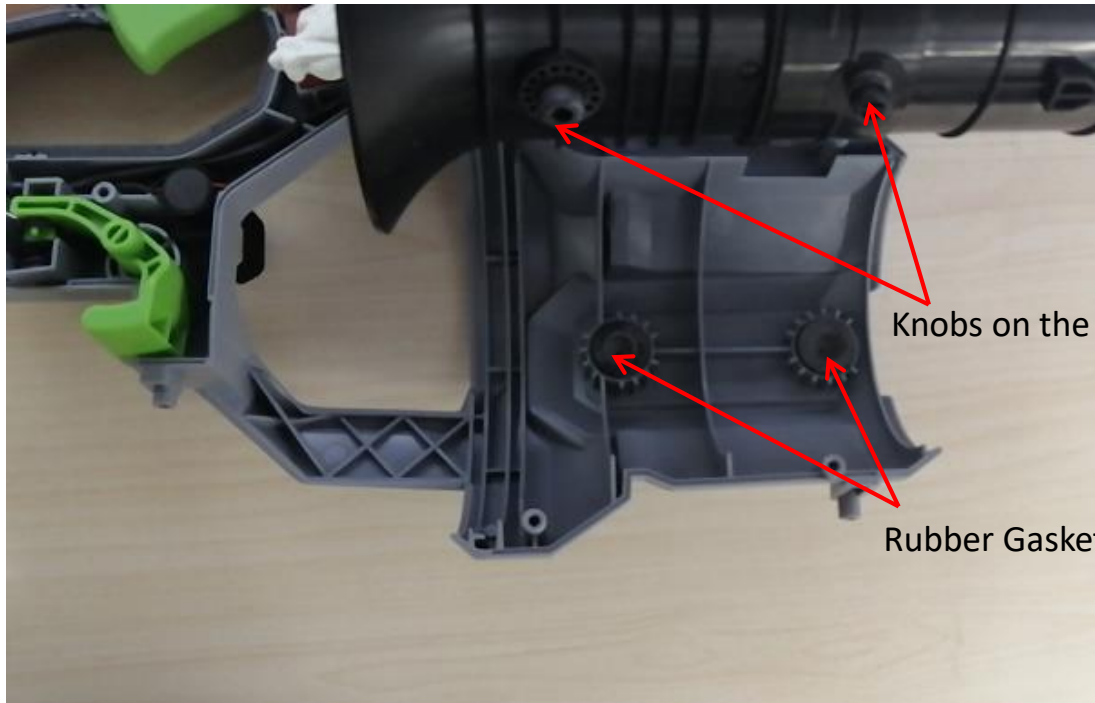
- a) Connect the battery electric contact of the PCBA to a fully charged EGO battery.
- b) Press the **switch 1# (if the PCBA has micro switch) and switch 2# simultaneously** briefly and release it.
- c) Check the motor(inside the duct set) working status through the fan baffle . If the blower fan rotates counterclockwise, means the replacement is successful. Otherwise recheck the connection or replace a new PCBA and test again.



Look through the fan baffle and check the fan rotation direction

How to Replace the Duct Set (Motor included)

7. Check to make sure the two rubber gaskets are located into the left handle housing. If they fell out during disassembly, re-place them.
8. Align the knobs on the duct set with the rubber gasket holes in the left handle housing and mount the duct set in the left housing.

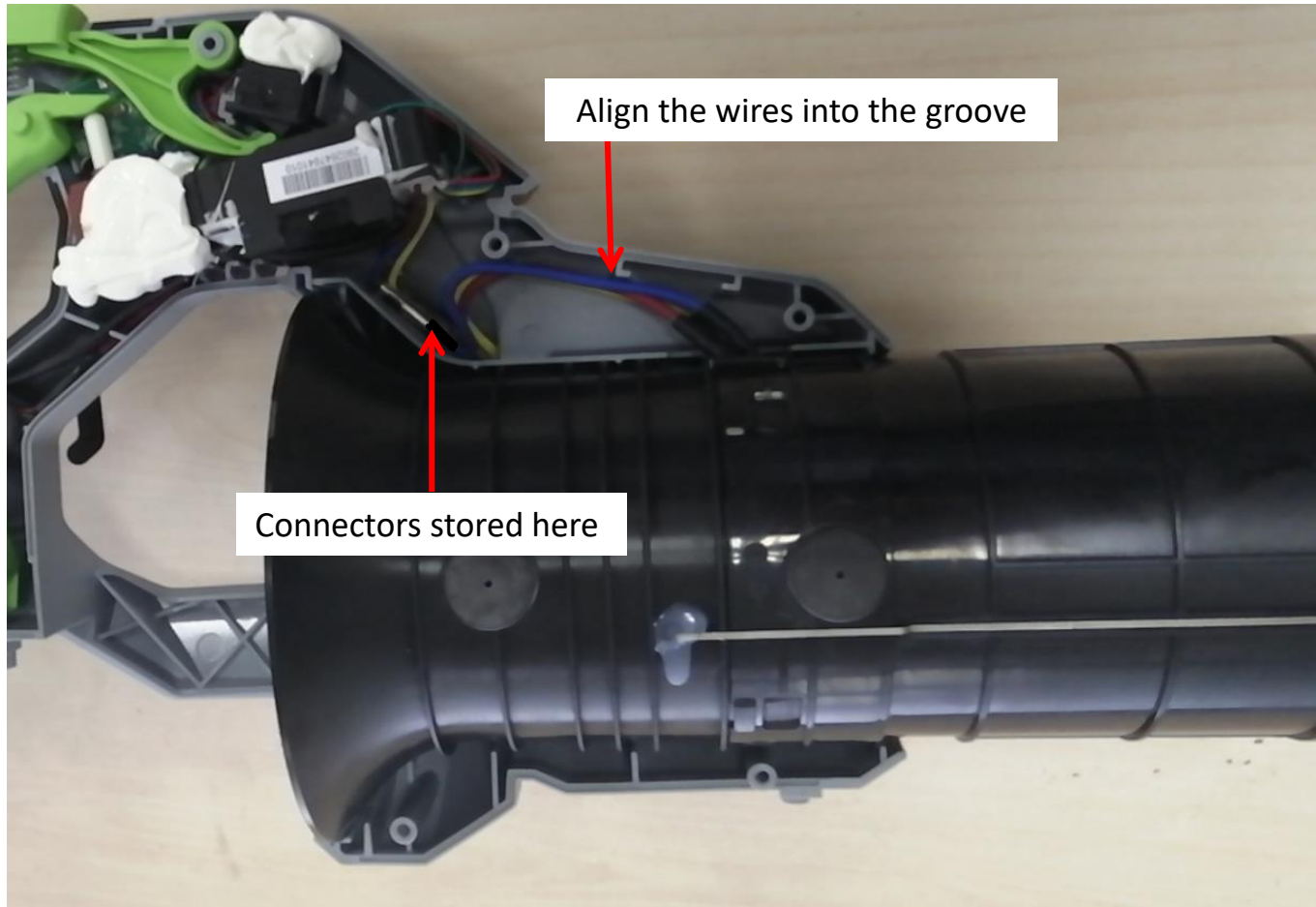


Knobs on the Duct Assembly.

Rubber Gasket

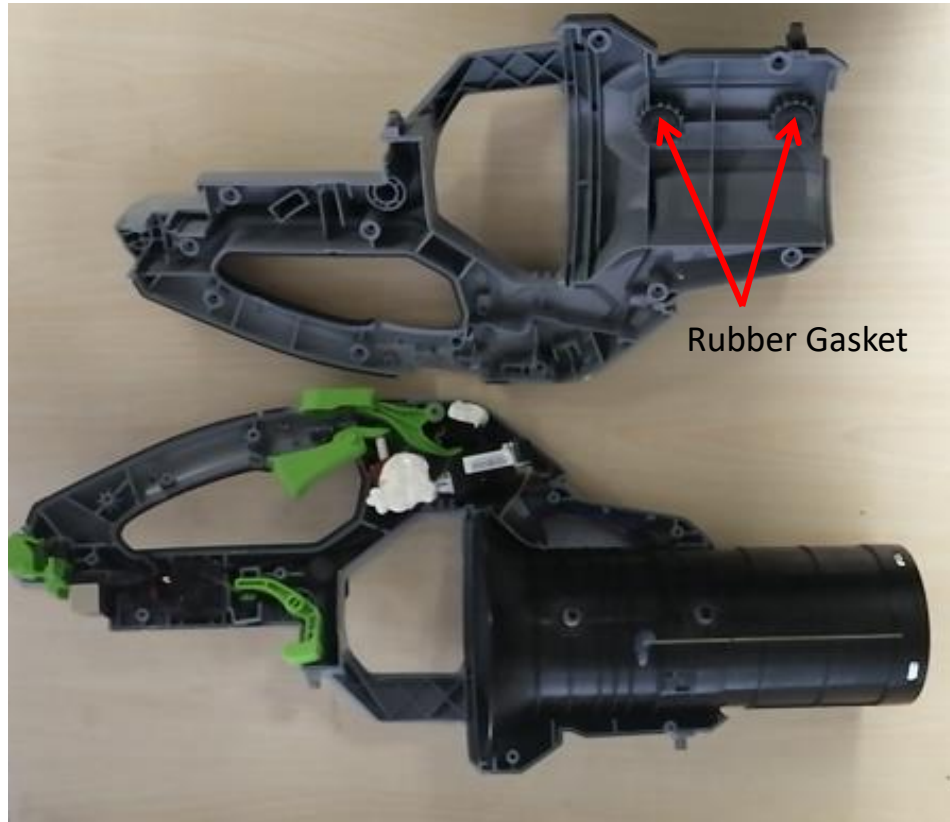
How to Replace the Duct Set (Motor included)

9. Align the wires into the grooves.



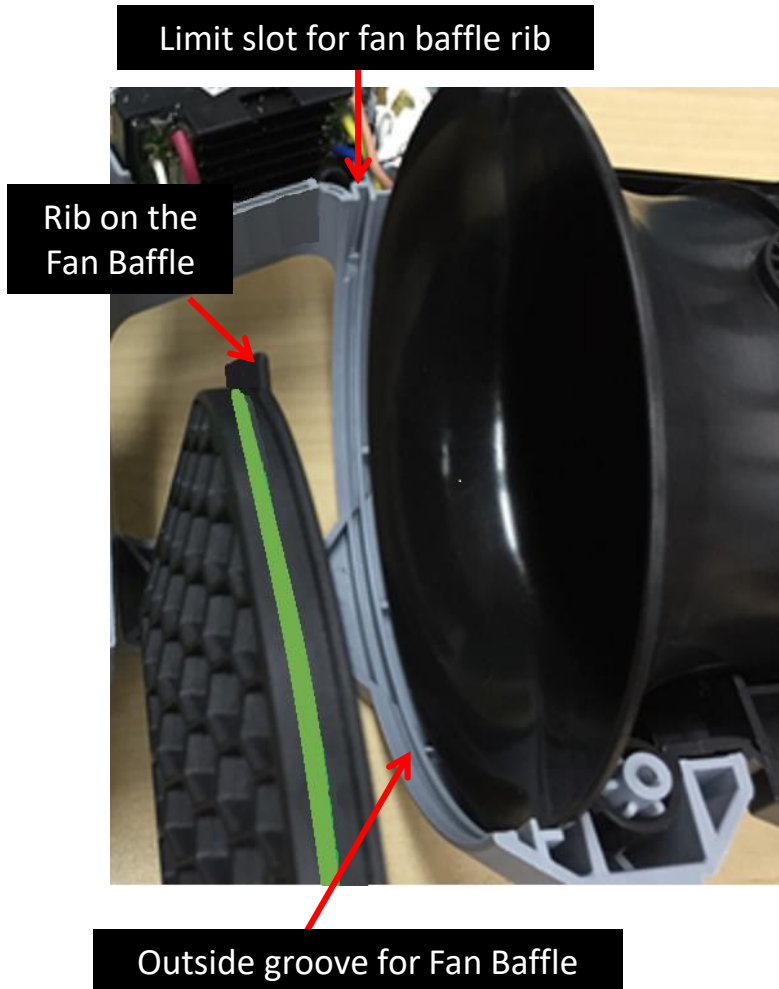
How to Assemble the Blower

1. Before closing the right housing, make sure another two rubber gaskets are located into the right housing, if they fell out during disassembly, re-place them.



How to Assemble the Blower

- Align the rib on the fan baffle with the limit slot in handle housing, and mount the fan baffle into the outside groove in the left housing.



How to Assemble the Blower

3. Check to make sure all the components are fixed in position, and wires are well aligned, NO PICHING, then tighten the 10 screws to tighten the handle housings.
4. Install a fully charged battery onto the blower and test the blower.



THE END