

REPAIR GUIDELINE

Power Head_PH1400E



Version: 1

Issue Date: 12/02/2016

Table of Contents

NO.	Contents	Page
1	Troubleshooting	3
2	Tool list	4
3	Part 1: Replace the Motor Assembly	5-16
4	Part 2: Replace the Shaft Assembly	17-27
5	Part 3: Replace the PCBA	28-40

Troubleshooting

Problem	Possible Cause	Fault Position	Test & Solution
Noise	Shaft is worn	Connecting tube	Take the shaft assembly out from the connecting tube to check whether it is broken, if it is worn, replace it with a new one
Not working	The fuse is broken	Fuse in PCBA assembly	Replace the PCBA with a new one
	PCBA is broken	PCBA in the housing assembly	Replace the PCBA with a new one
Speed failure	Speed change switch is broken	Handle assembly	Replace the switch with a new one

Tool List For Repair

NO.	Tool List	SPEC	Remark
1	Phillips	PH2	
2	Torx screwdriver	T-15	
3	Hex wrench	5mm	
4	Circlip plier		

Part 1: Replace the Motor Assembly

Replace the Motor Assembly

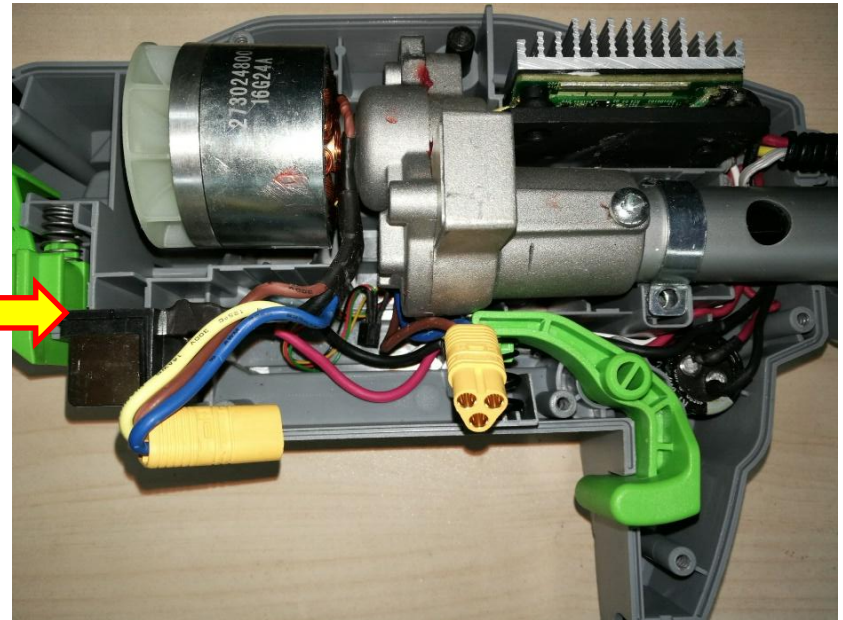
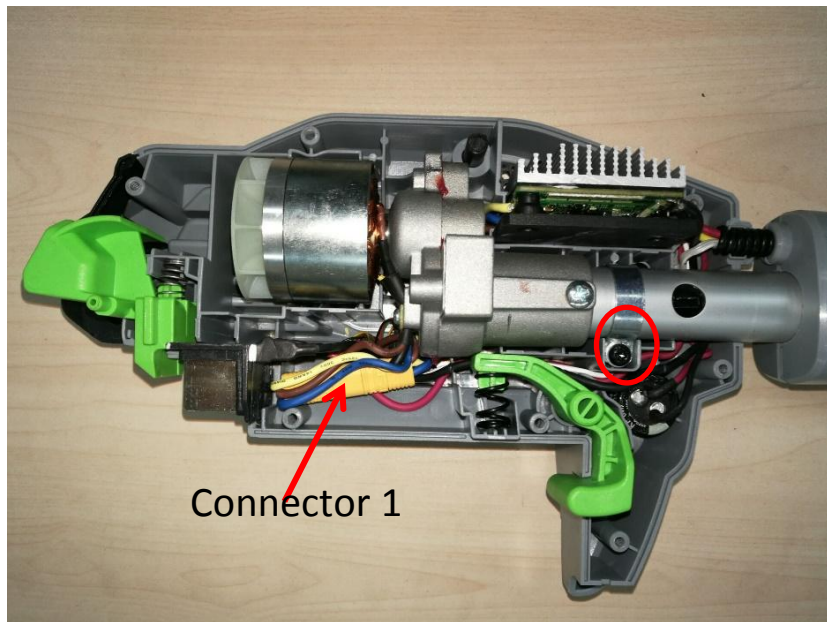
1. Loosen 8 screws to disassemble the housing assembly.



Description	Part Number	Quantity
Tapping screw	5620479001	8

Replace the Motor Assembly

2. Disconnect connector 1 and loosen the screw on the fixed ring.



Replace the Motor Assembly

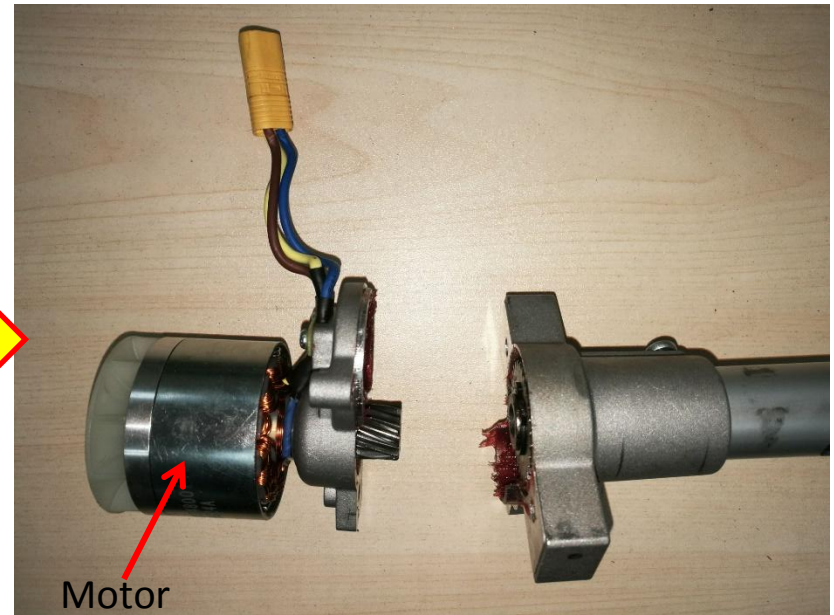
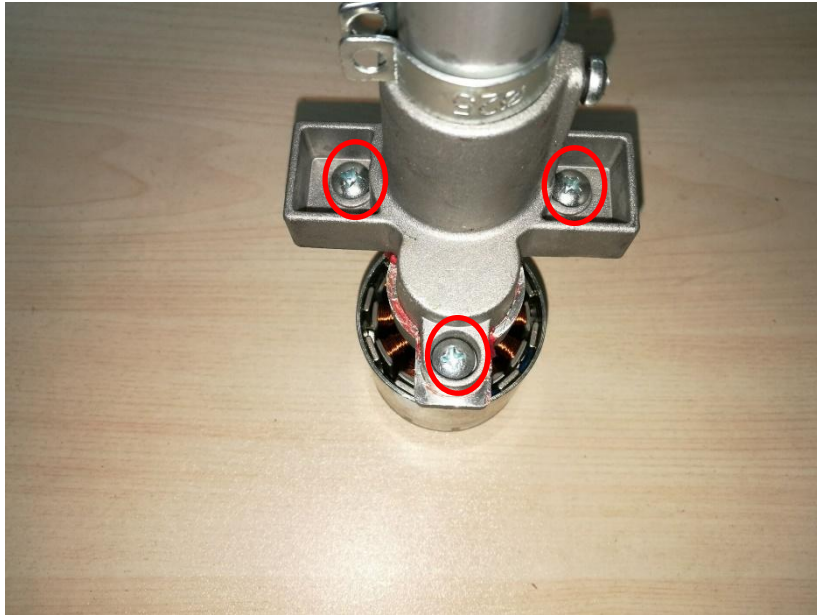
3. Loosen 8 screws on the handle assembly and separate the right handle assembly from the left handle assembly.
4. Separate the motor and shaft assembly from the left handle assembly.



Description	Part Number	Qty.
Tapping screw	5620479001	8

Replace the Motor Assembly

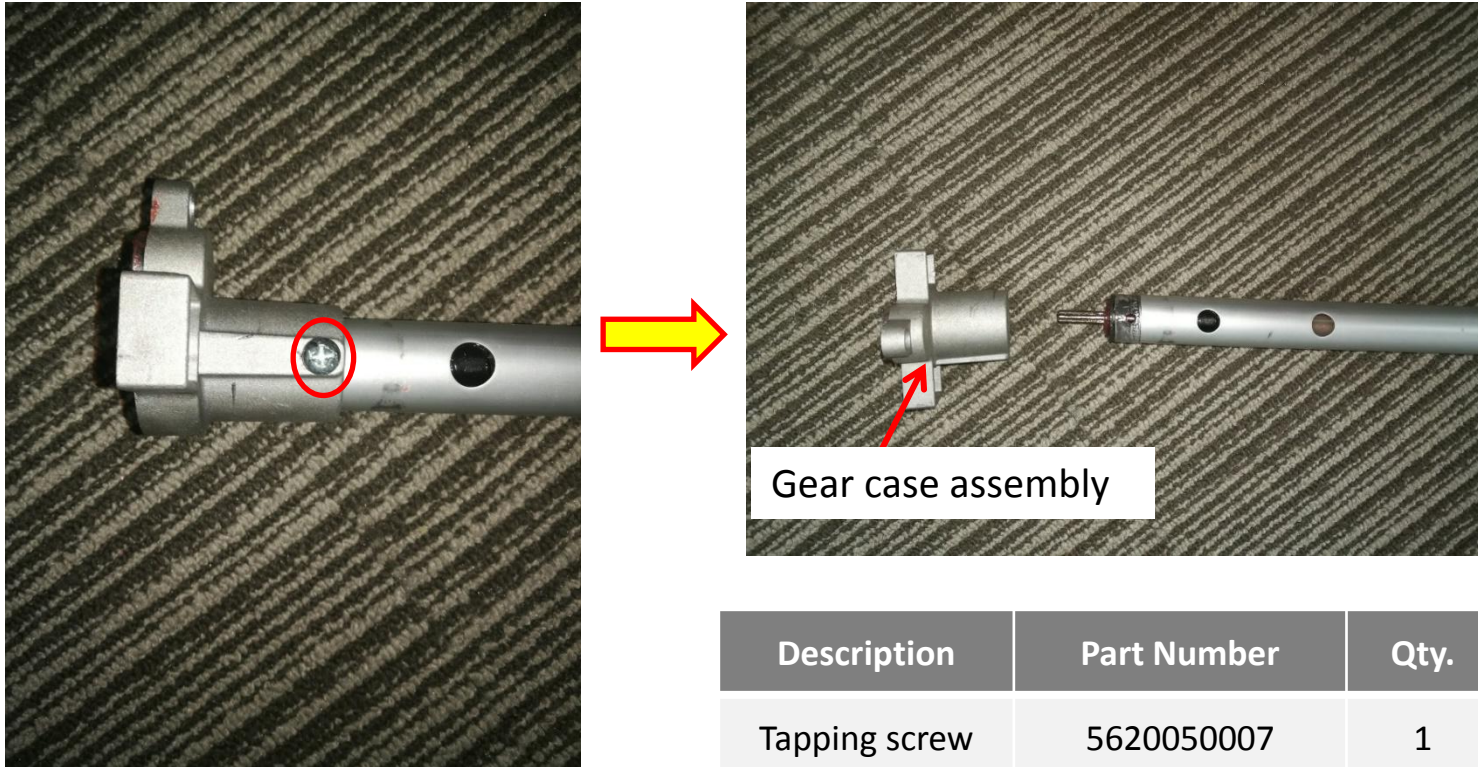
5. Loosen 3 screws to separate the motor from the shaft assembly.



Description	Part Number	Qty.
Tapping screw	5620050007	3
Motor	2824757002	1

Replace the Motor Assembly

6. If the gear case assembly is broken, then loosen the screw on the gear case assembly to separate the gear case assembly from the motor assembly.



Description	Part Number	Qty.
Tapping screw	5620050007	1
Gear case assembly	2824761002	1

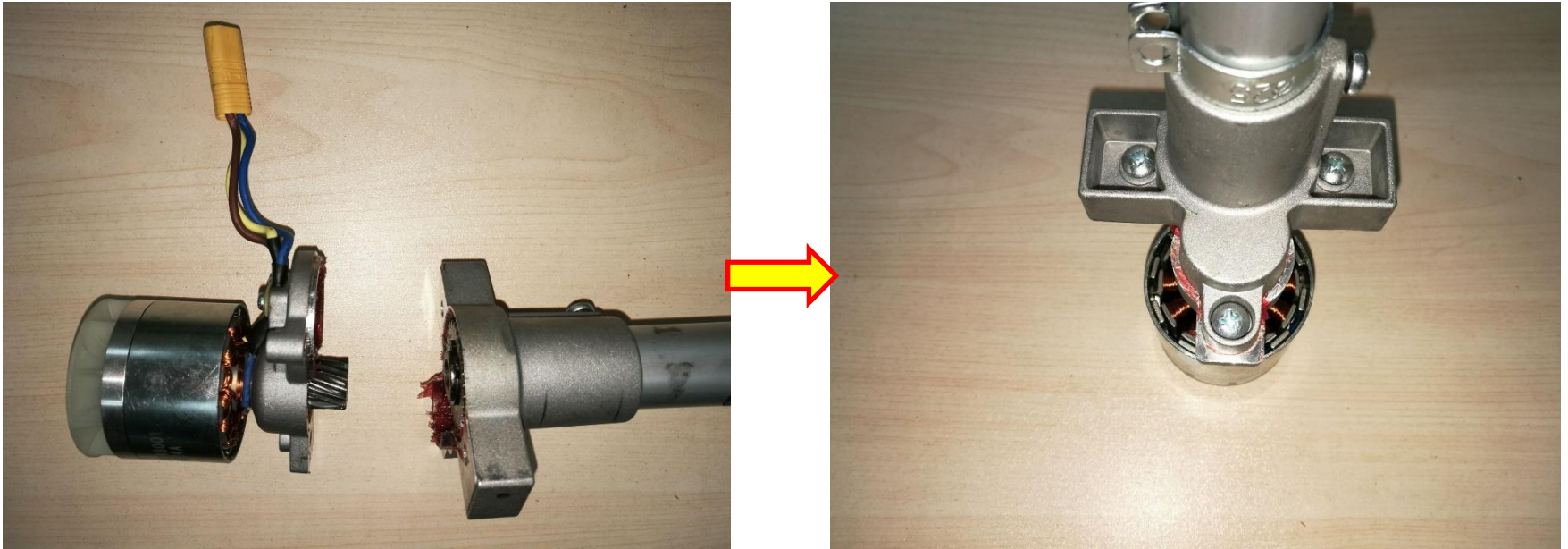
Replace the Motor Assembly

7. Replace the gear case assembly with a new one and assemble the gear case assembly with the shaft assembly with screw.



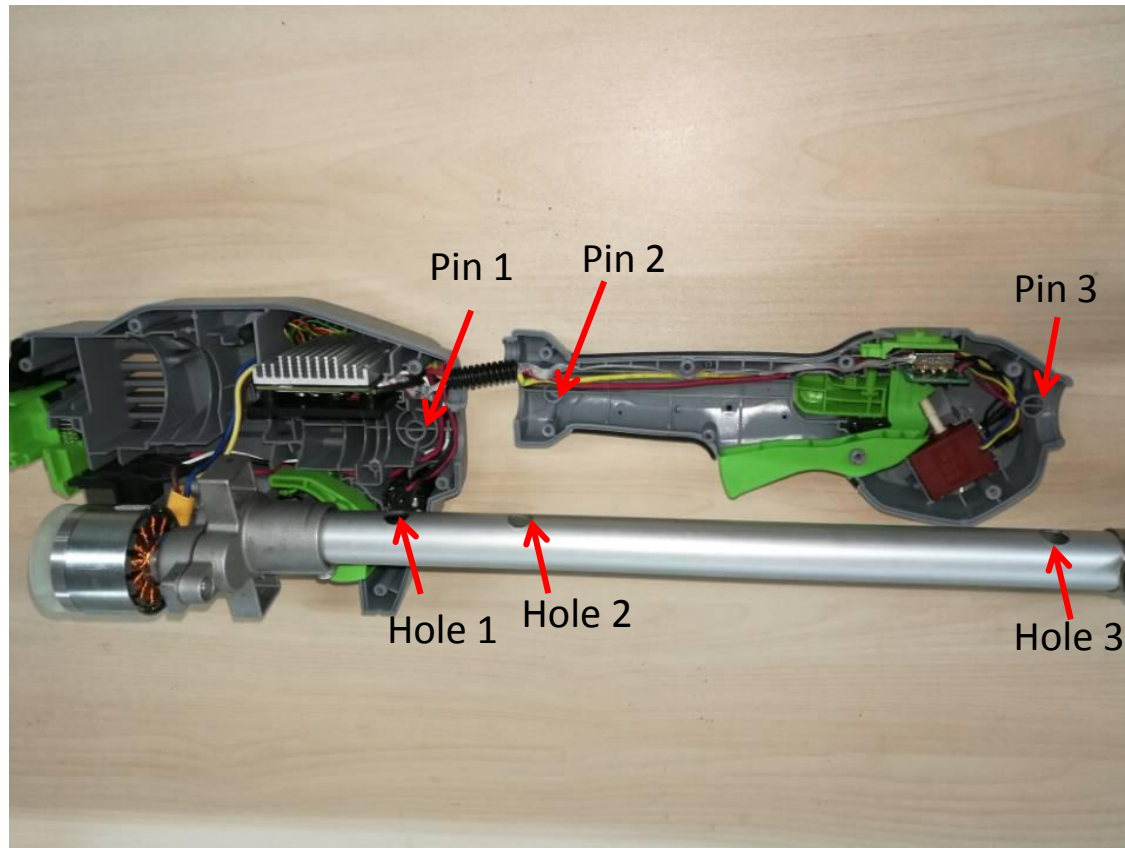
Replace the Motor Assembly

8. Replace the motor with a new one and then assemble the motor with the gear case assembly with screws



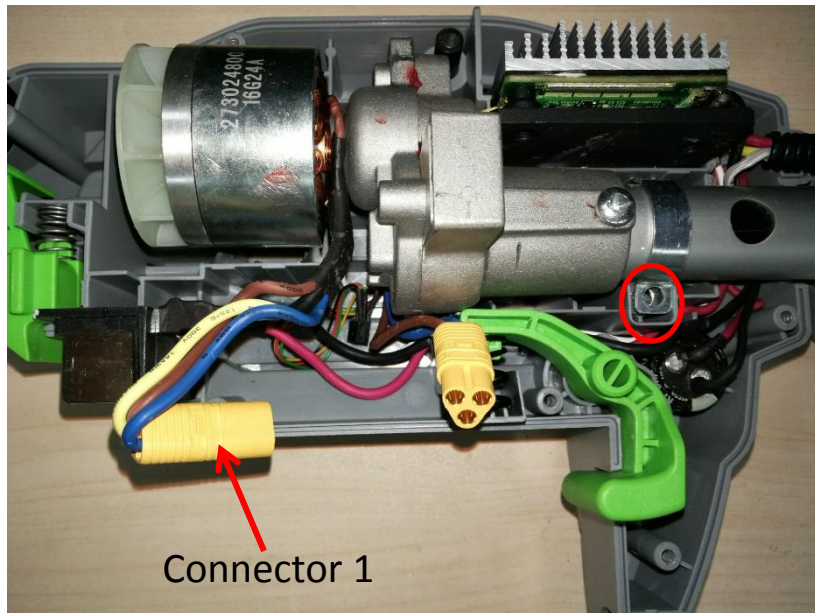
Replace the Motor Assembly

- Align hole 1 on the shaft assembly with the pin 1 on the left housing assembly , hole 2 with pin 2 and hole 3 with pin 3 separately to mount the motor and shaft assembly onto the housing and handle assembly.



Replace the Motor Assembly

10. Connect connector 1 and tighten the fixed ring with screw.



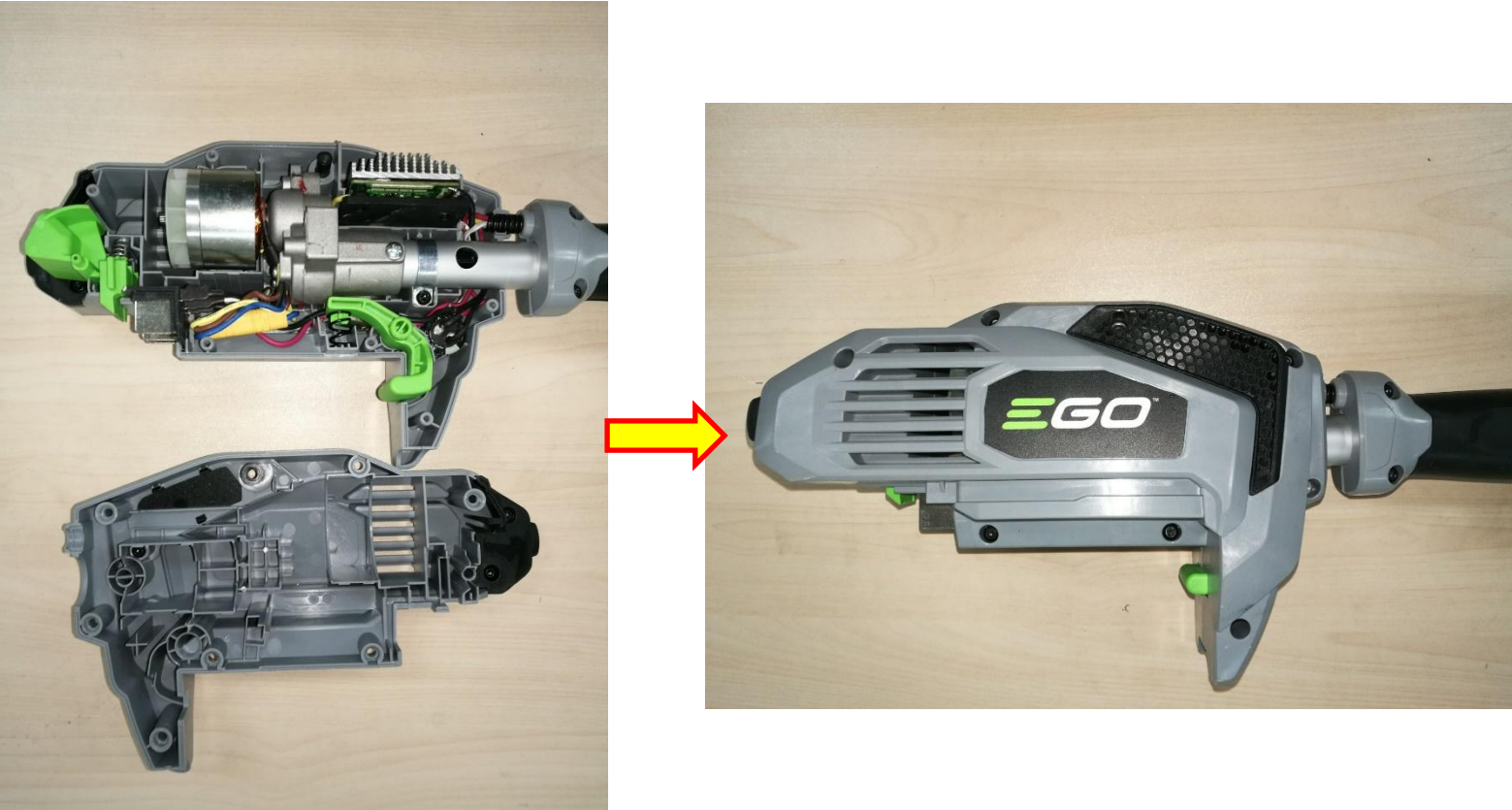
Replace the Motor Assembly

11. Assemble the handle housing assembly with screws.



Replace the Motor Assembly

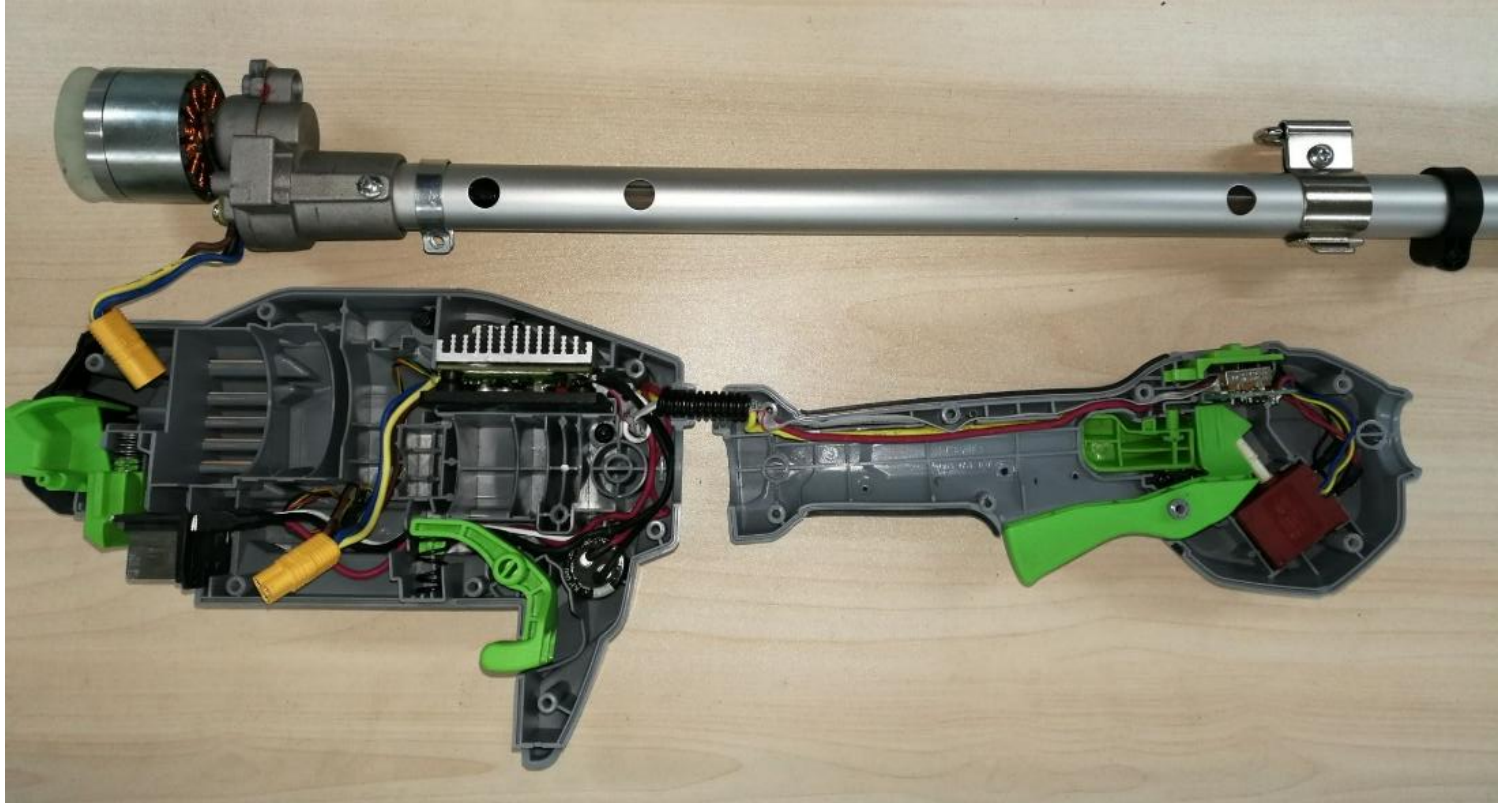
12. Assemble the housing assembly with screws.



Part 2: Replace the Shaft Assembly

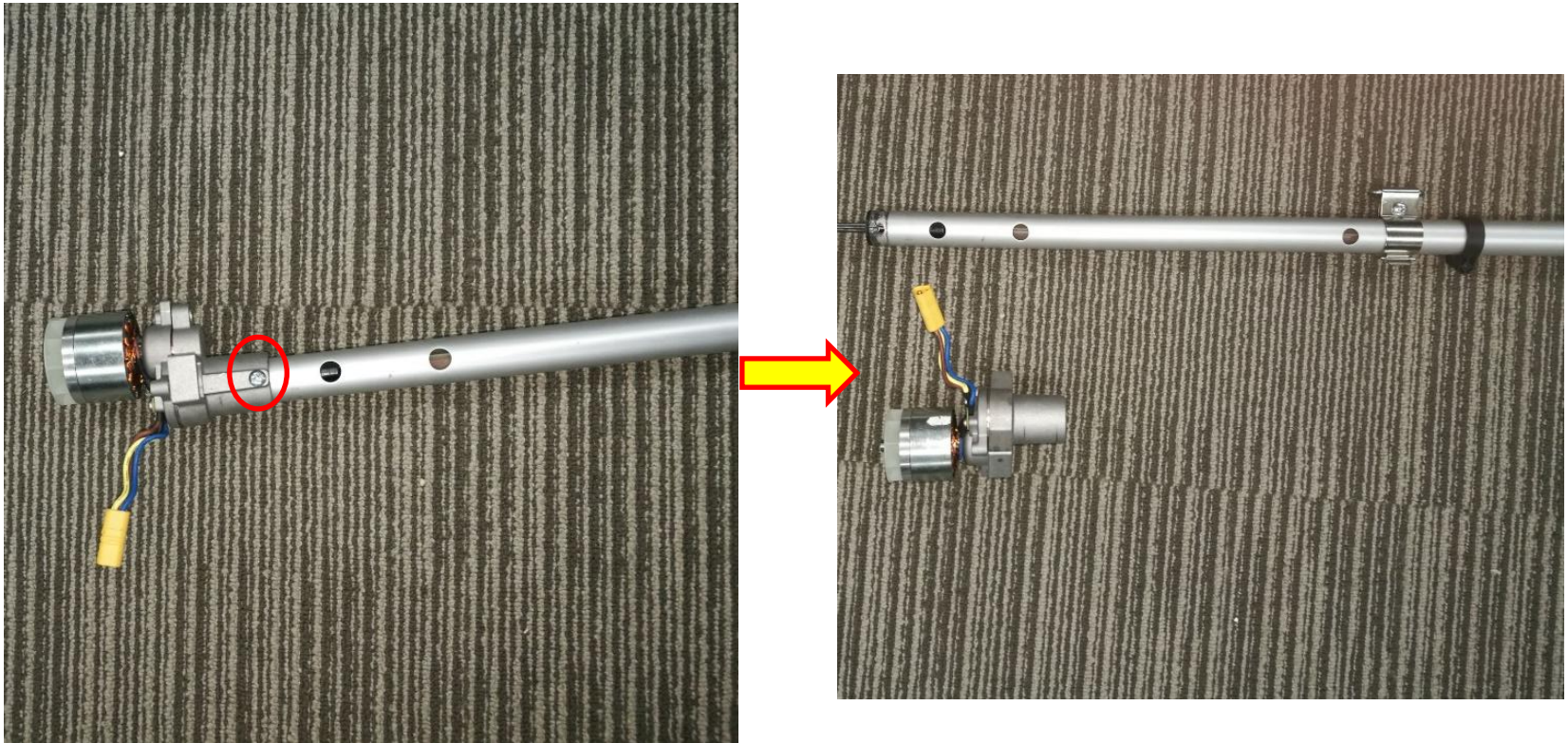
Replace the Shaft Assembly

1. Separate the motor and shaft assembly as shown in the “Replace the Motor Assembly” section.



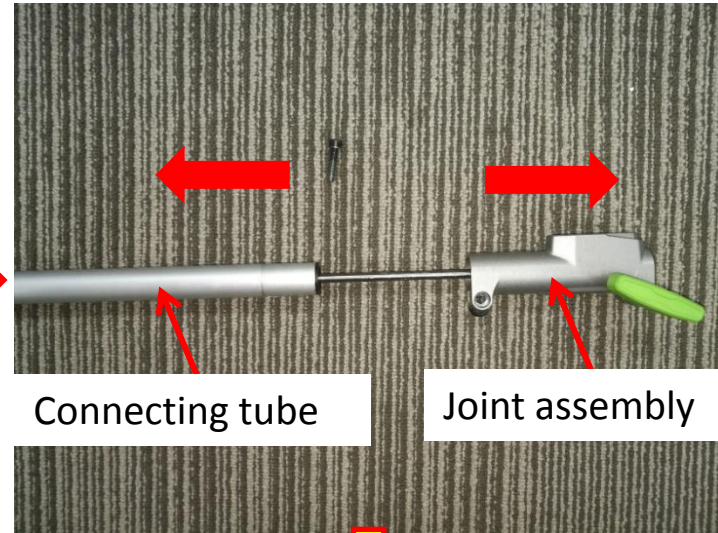
Replace the Shaft Assembly

2. Loosen the screw on the gear case assembly to separate the motor and gear case assembly from the shaft assembly.



Replace the Shaft Assembly

- Loosen the screw on the joint assembly and pull the connecting tube and joint assembly with each hand to separate them.



Description	Part Number	Qty.
Tapping screw	5620550001	1

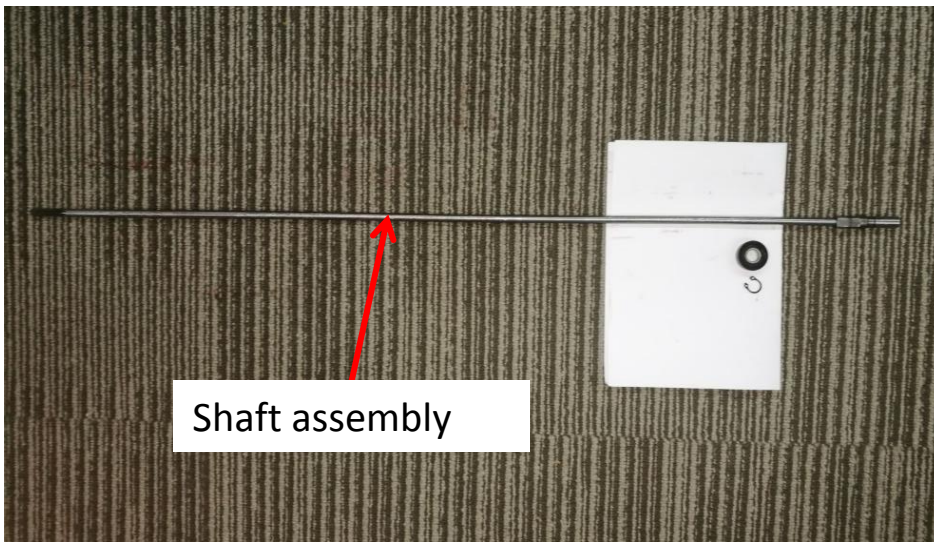
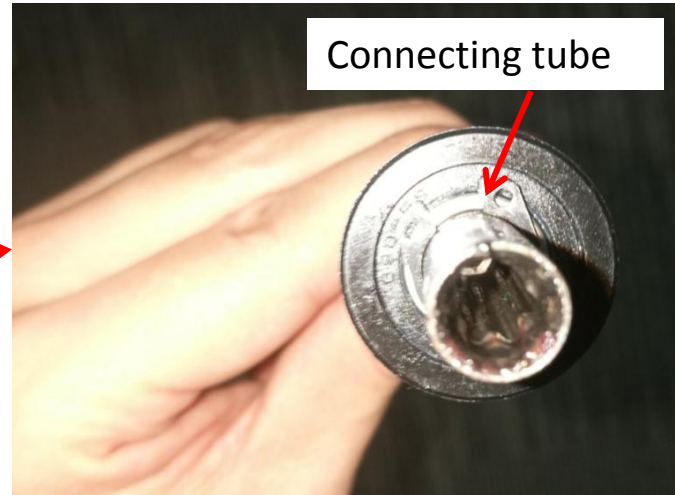
Replace the Shaft Assembly

4. Hold the shaft assembly with one hand and pull the joint assembly with the other hand to separate them.



Replace the Shaft Assembly

5. Take away the E-ring with circlip plier to separate the bearing wrapped with bearing holder from the shaft assembly.



Description	Part Number	Qty.
Shaft assembly	2824956001	1

Replace the Shaft Assembly

6. Replace the shaft assembly with a new one and mount the bearing wrapped with bearing holder onto the shaft assembly and lock them with E-ring.



Replace the Shaft Assembly

7. Insert the side with bearing of the shaft assembly into the joint assembly



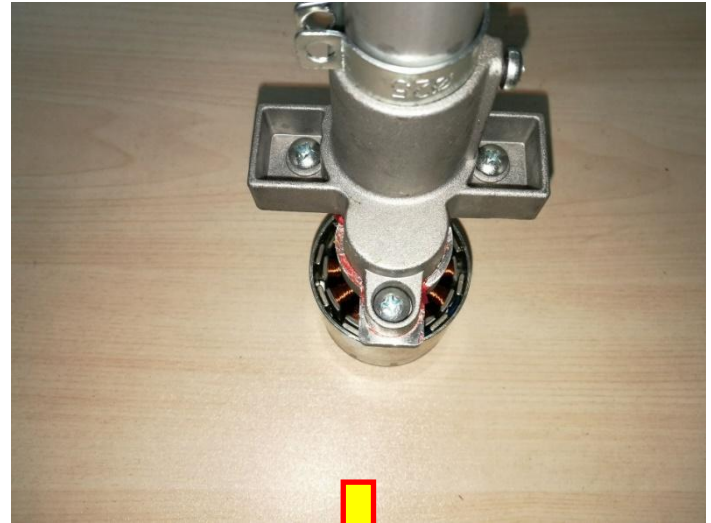
Replace the Shaft Assembly

8. Insert the shaft assembly into the connecting tube and lock the joint assembly with screw.



Replace the Shaft Assembly

9. Assemble the motor and gear case assembly with shaft assembly with screws.



Replace the Shaft Assembly

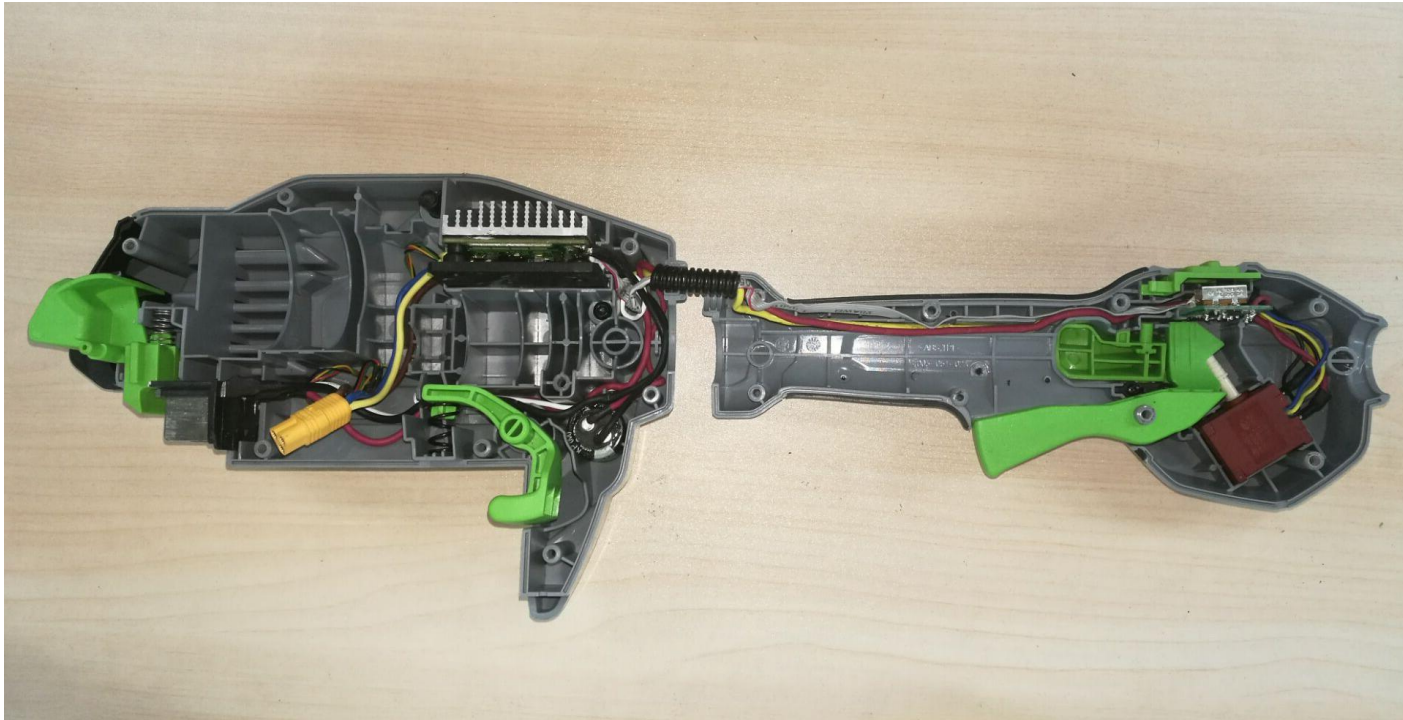
10. Assemble the housing assembly as shown in the “Replace the motor shaft assembly” section.



Part 3: Replace the PCBA

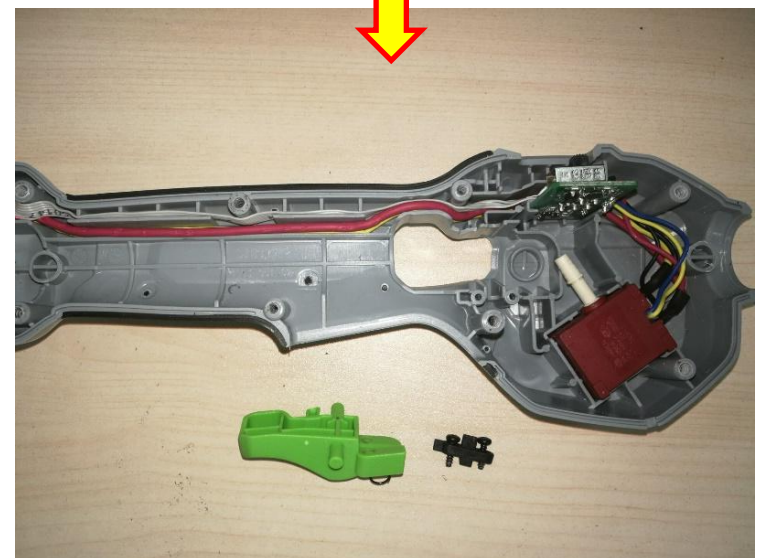
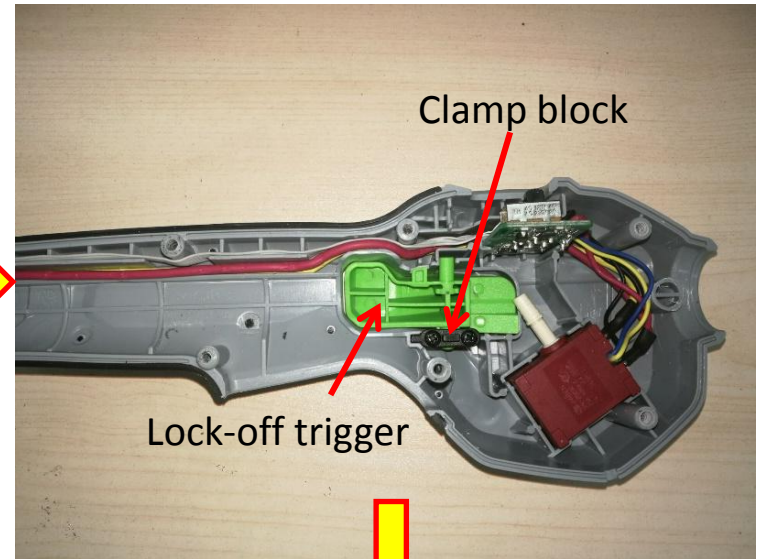
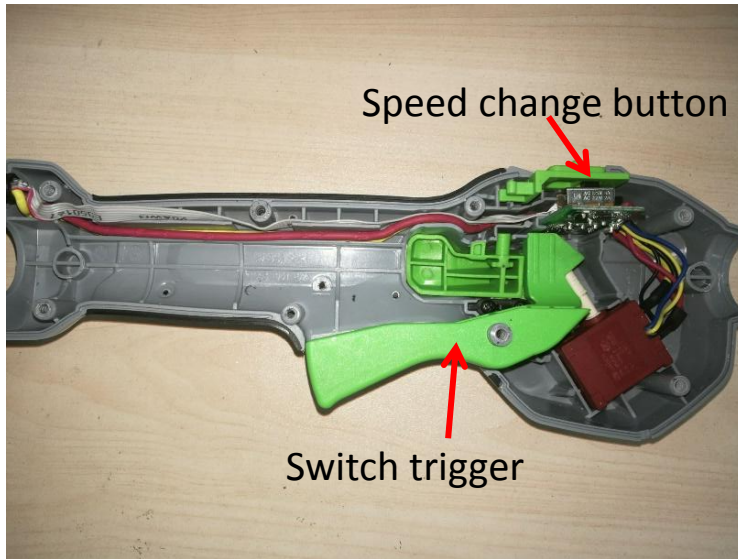
Replace the PCBA

1. Separate the shaft assembly from the housing assembly as shown in the **“Replace the Motor Assembly”** section.



Replace the PCBA

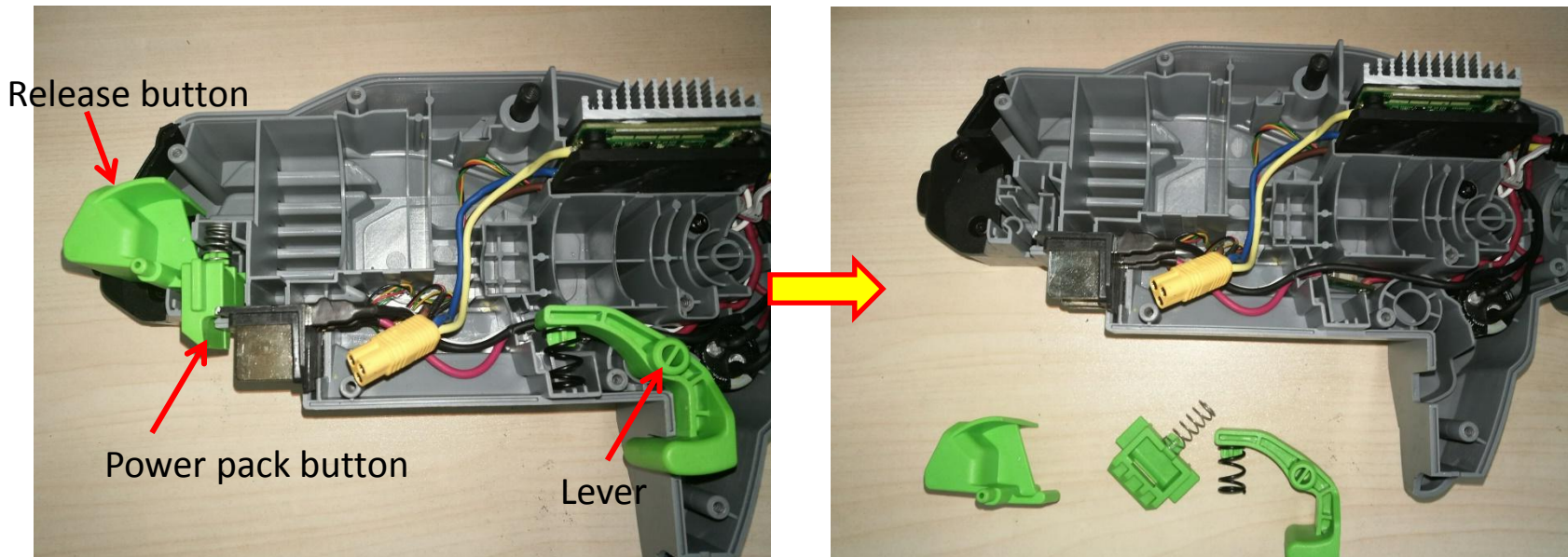
2. Take away the speed change button and switch trigger and then loosen 2 screws on the clamp block to take away the interlock trigger, if they are broken, replace them with a new one.



Description	Part Number	Qty.
Speed change button	3128276001	1
Switch trigger	3128578001	1
Lock-off trigger	3128577001	1

Replace the PCBA

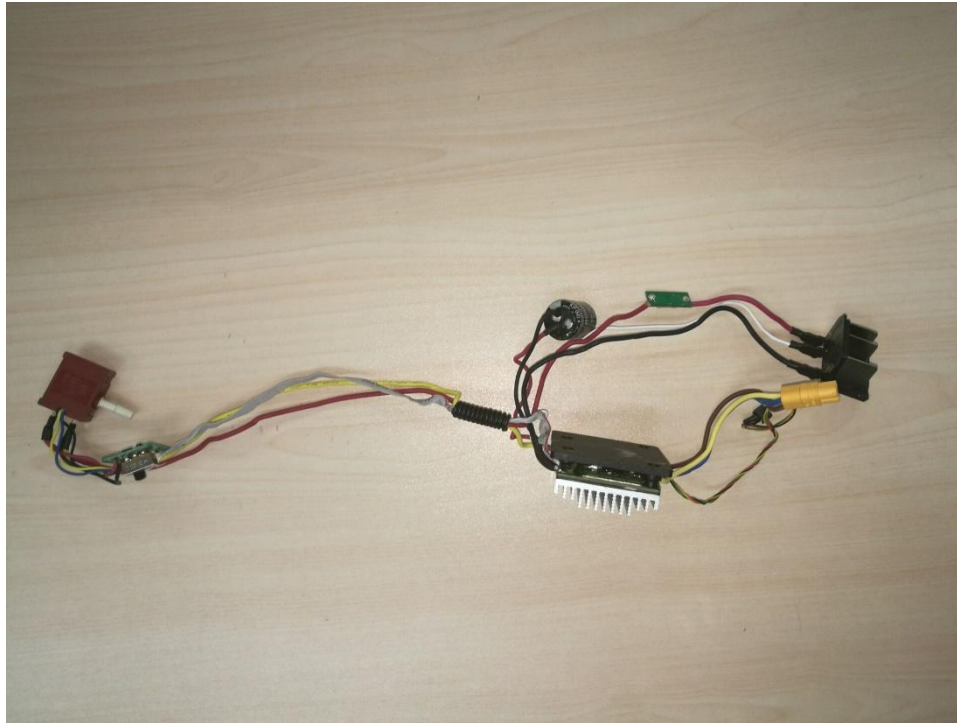
3. Take away the release button, power pack button and lever, if they are broken, replace them with a new one.



Description	Part Number	Qty.
Release button	3127201001	1
Power pack button	3127202001	1
Lever	3128266001	1

Replace the PCBA

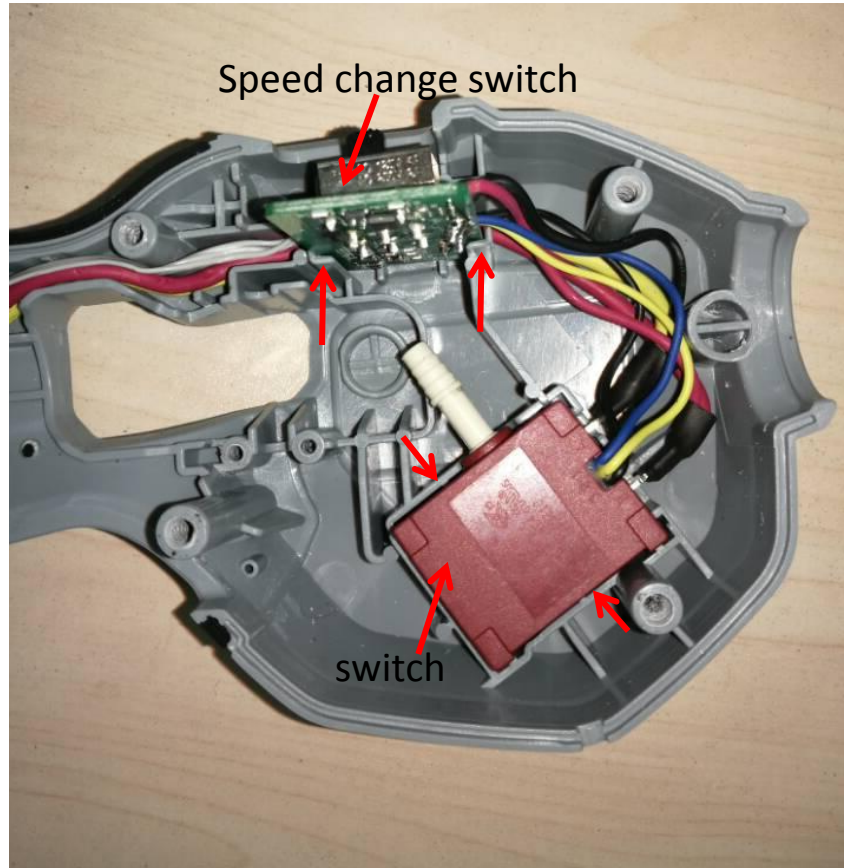
4. Take the PCBA away and replace it with a new one.



Description	Part Number	Qty.
PCB assembly	2830215002	1

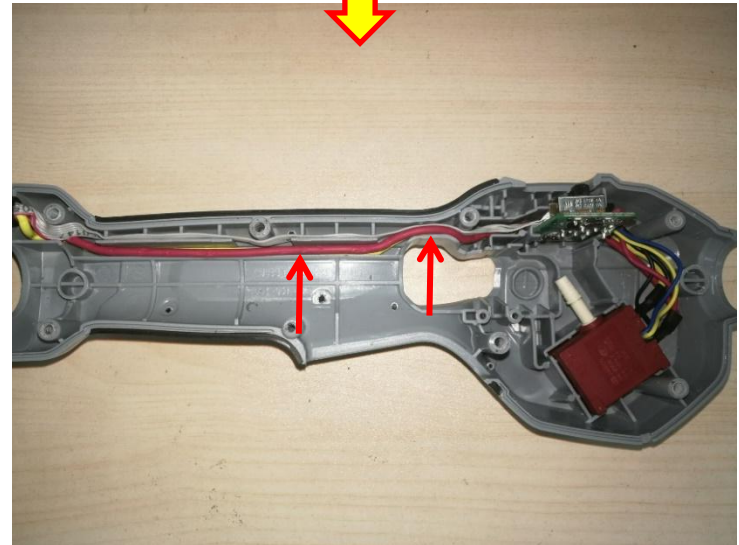
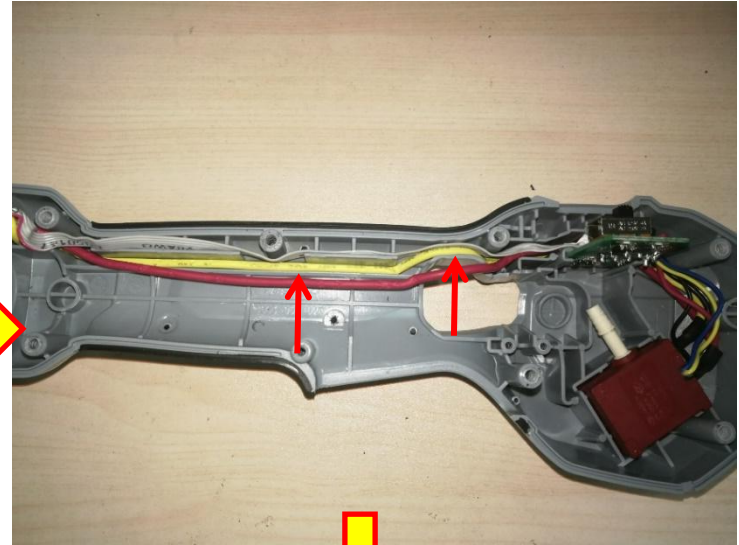
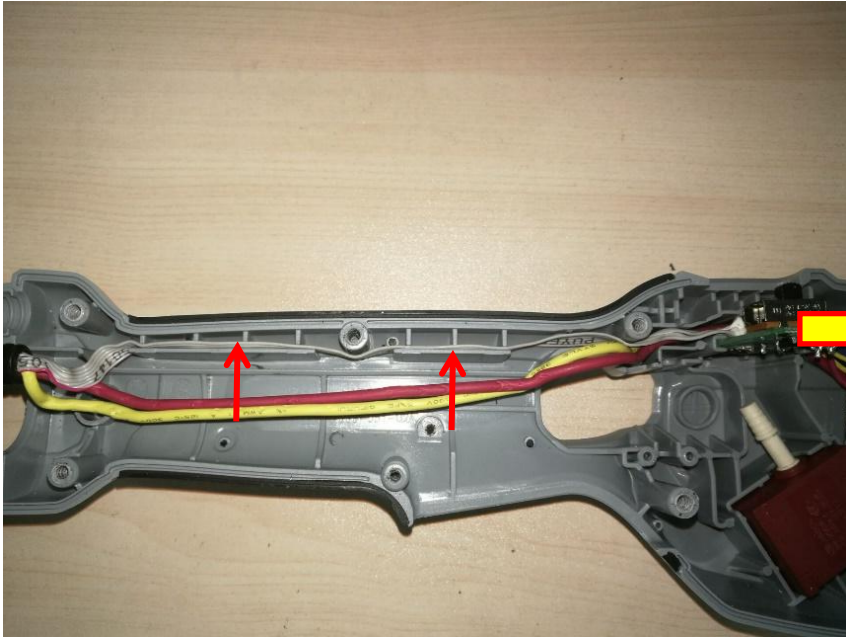
Replace the PCBA

5. Mount the switch and speed change switch into the grooves respectively.



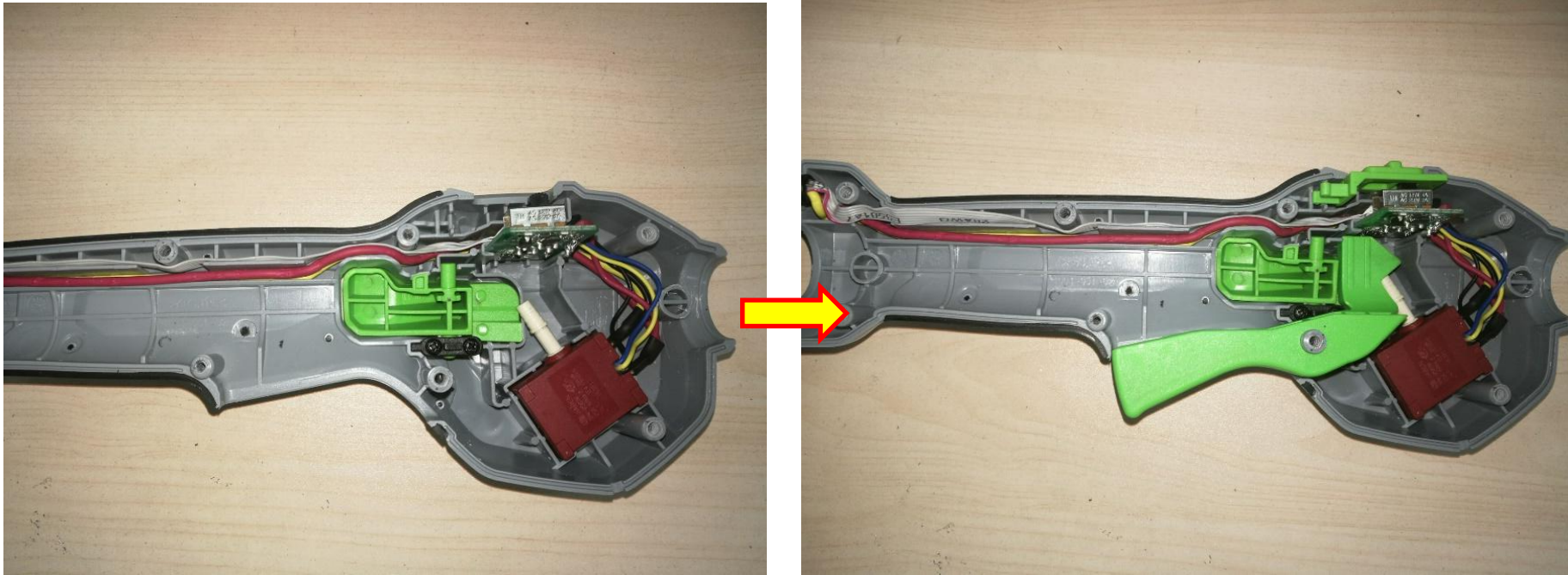
Replace the PCBA

6. Align the white cable, yellow cable and red cable in sequence.



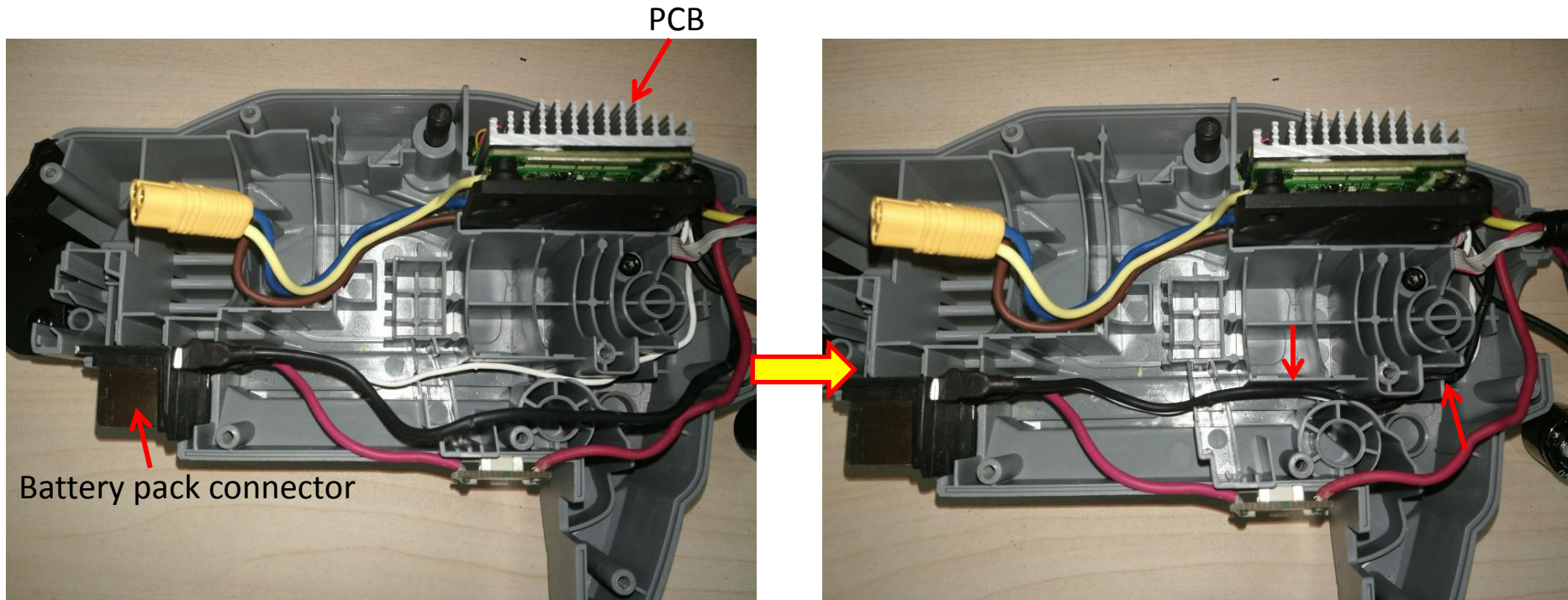
Replace the PCBA

7. Mount the interlock trigger into the groove and lock it with clamp which was tightened by screw, then assemble the switch trigger and speed change button.



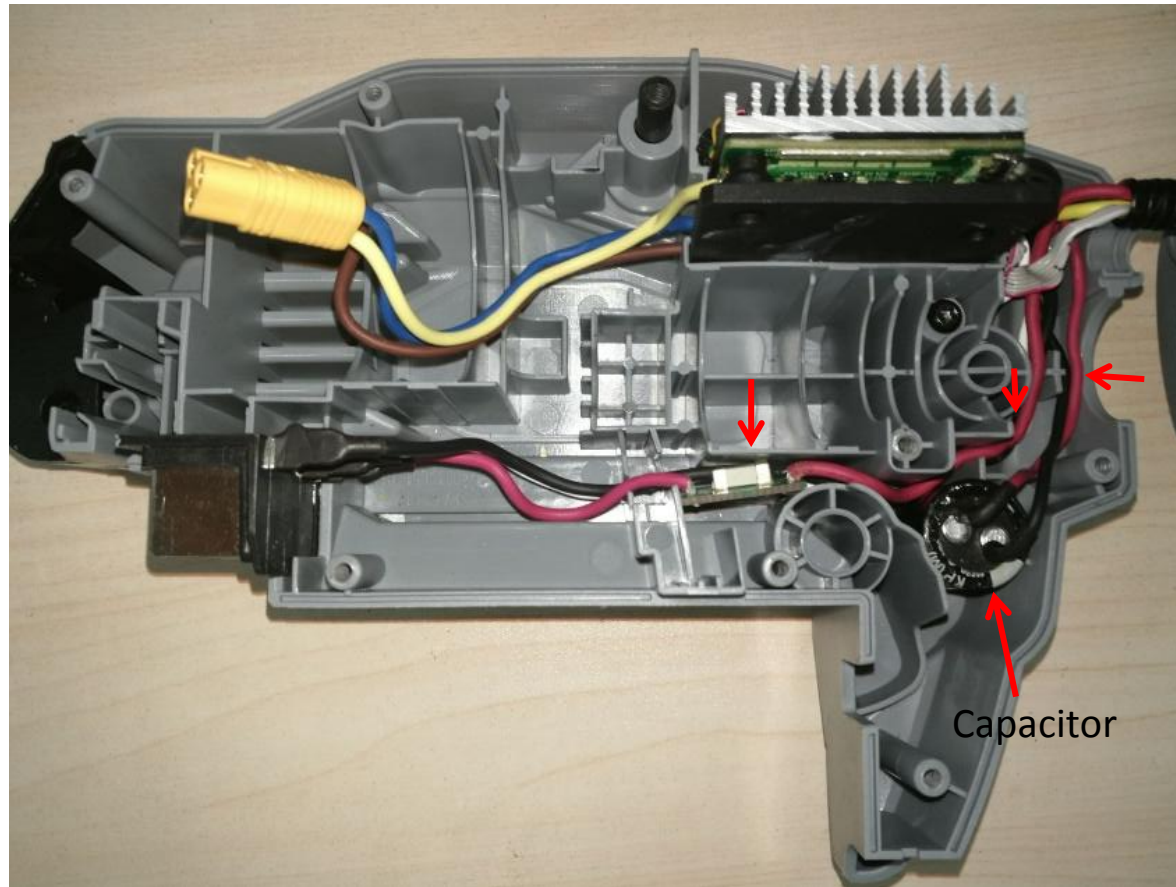
Replace the PCBA

8. Mount the PCB and battery pack connector into the groove and then align the red cable.



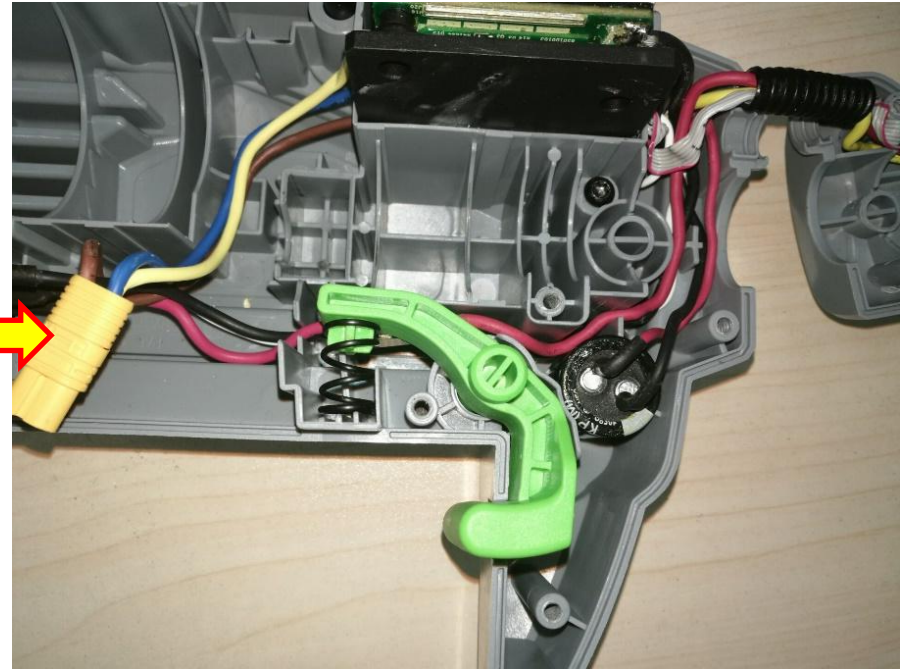
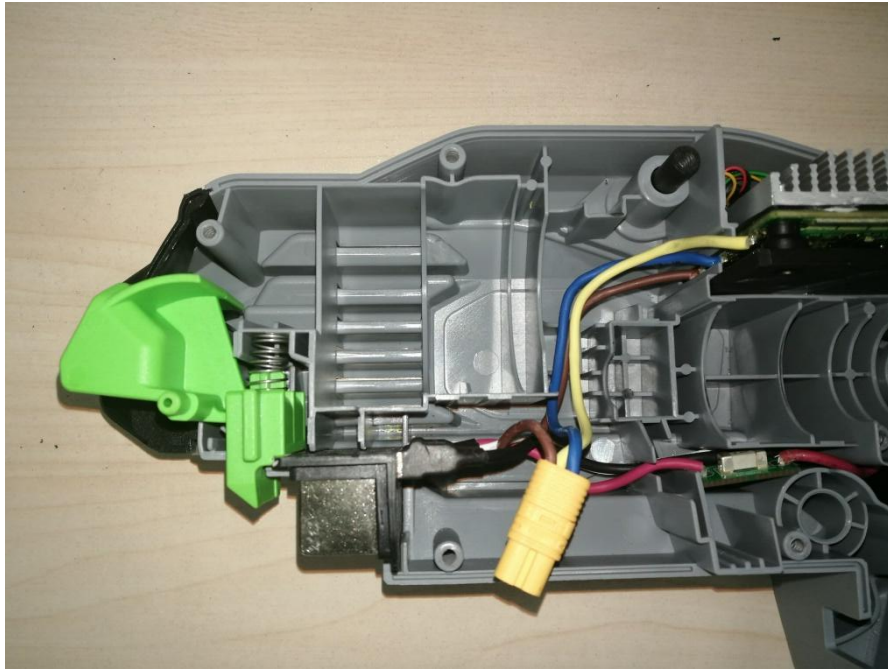
Replace the PCBA

9. Align the red cable, then mount the capacitor into the groove and align the black and white cables into the groove.



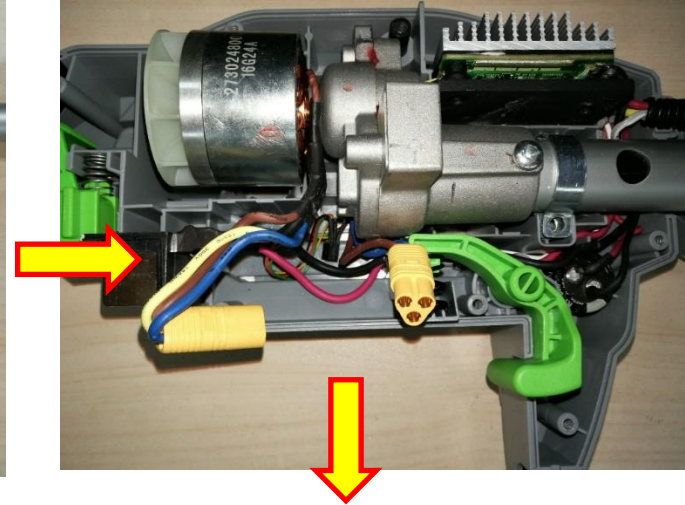
Replace the PCBA

10. Mount the power pack button together with the release button into the groove and then put the lever into its position.



Replace the PCBA

11. Mount the motor and shaft assembly into the housing assembly, connect connector 1 and lock the fixed ring with screw, then assemble the handle assembly as shown in the “Replace the Motor Assembly” section.



Replace the PCBA

12. Assemble the housing assembly as shown in the “Replace the Motor Assembly” section.

