

# REPAIR GUIDELINE

Line trimmer \_STX3800



*Version: 1*

*Issue Date: 01/11/2019*

# Table of Contents

NO.	Contents	Page
1	Troubleshooting	3-4
2	Tool list	5
3	Part 1: Replace the Housing Assembly and Gear Case	6-26
4	Part 2: Measure the Motor Assembly and PCBA	27-32
5	Part 3: Replace the Motor Assembly and PCBA	33-51
6	Part 4: Replace the Shaft and Tube Assembly	52-55

# Troubleshooting

Problem	Possible Cause	Fault Position	Test & Solution
The motor speed varies up and down when the line trimmer works.	Motor was burned due to overload	Motor	Replace the motor
Not working	The cables that connect to motor are loose or disconnected from motor.	Motor	Open the motor housing, check the cable connection with motor.
	Motor is damaged	Motor	If the cables are well connected, diagnose the motor and test with a new motor.
	PCBA is broken	PCBA	If the cables are well connected, and motor is functional, diagnose the PCBA and replace if necessary.
Noise	Lack of grease in gearbox	Gear case	Add grease

# Troubleshooting

Problem	Possible Cause	Fault Position	Test & Solution
Not feeding line	Poor cutting line	Trimmer line	Replace the cutting line. (e.g. 2.4mm nylon line)
	Trimmer head is broken	Trimmer head	Replace the trimmer head
	Too much dust in trimmer head	Trimmer head	Clean the trimmer head
Hard to wind up line	Spool and lower housing assembly is worn	Lower housing assembly	Replace the spool or lower housing assembly
Not cutting the line	Blade on the guard assembly is worn	Guard assembly	Replace the blade or guard assembly

# Tool List For Repair

NO.	Tool List	SPEC	Remark
1	Socket wrench	15mm	
2	Torx screwdriver	T-15&T-20	
3	Hex wrench	5mm	

# **Part 1: Replace the Housing Assembly and Gear Case**

# 1. Replace the Housing Assembly and Gear Case

STX3800 LINE TRIMMER

1. Loosen 2 screws to disassemble the guard assembly, if the guard assembly is broken, replace it with a new one.



Description	Part Number	Qty.
Tapping screw	5620216006	2
Spring Washer	5650015012	2
Guard assembly	2825603001	1

# 1. Replace the Housing Assembly and Gear Case

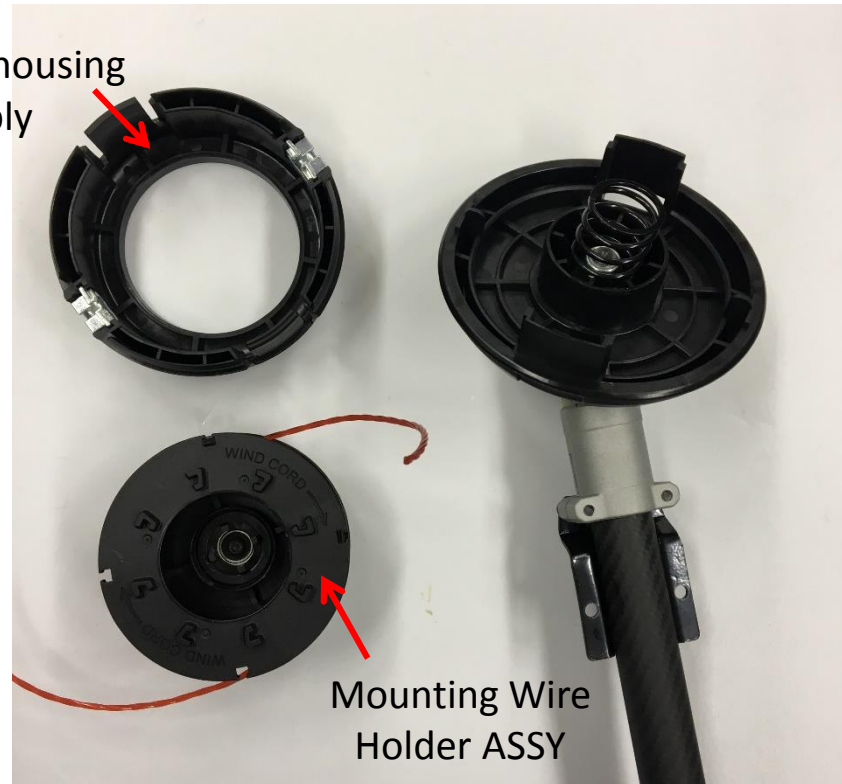
STX3800 LINE TRIMMER

2. Press the release tabs to remove the lower housing assembly & mounting wire holder ASSY.



Description	Part Number	Qty.
Mounting Wire Holder ASSY	2825610001	1
Lower housing assembly	2825608001	1
Cutting head set	2825606001	1

Lower housing assembly





# 1. Replace the Housing Assembly and Gear Case

STX3800 LINE TRIMMER

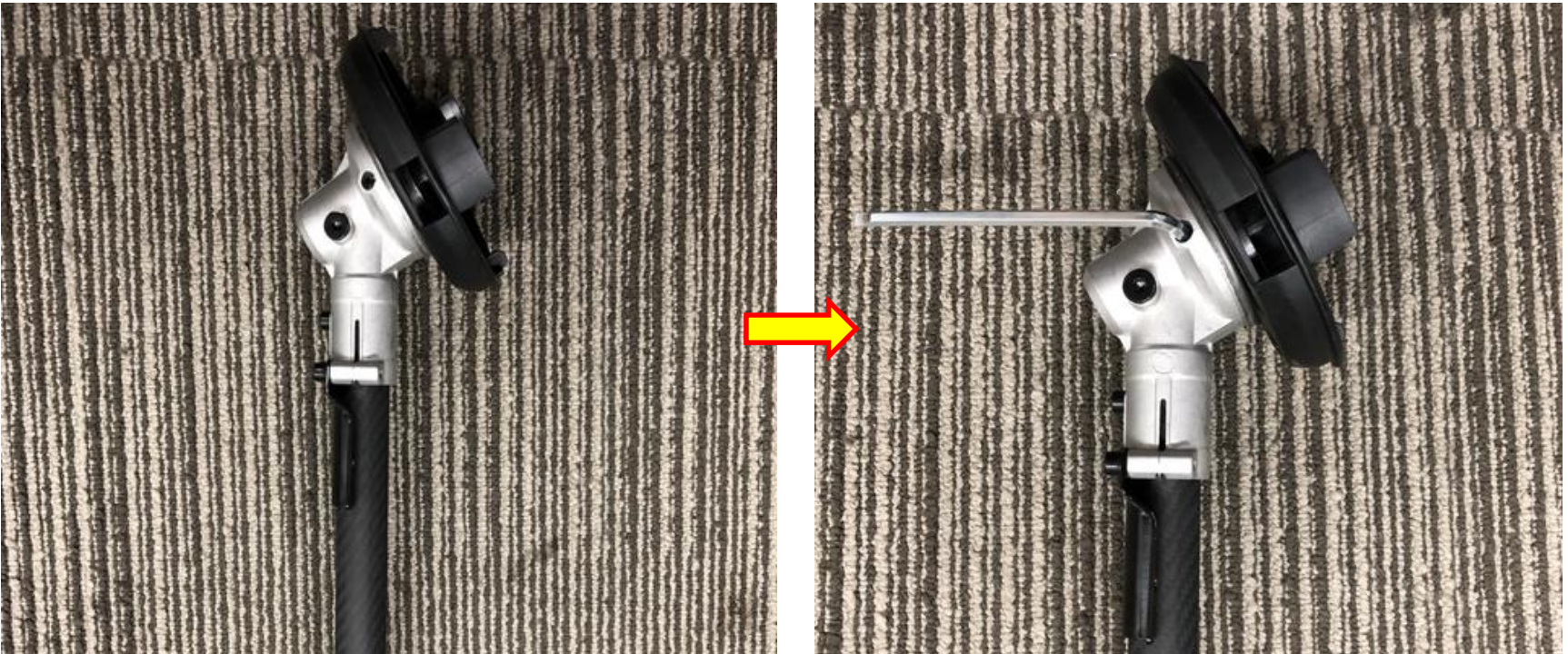
3. Take the spring out of the upper housing assembly.



# 1. Replace the Housing Assembly and Gear Case

STX3800 LINE TRIMMER

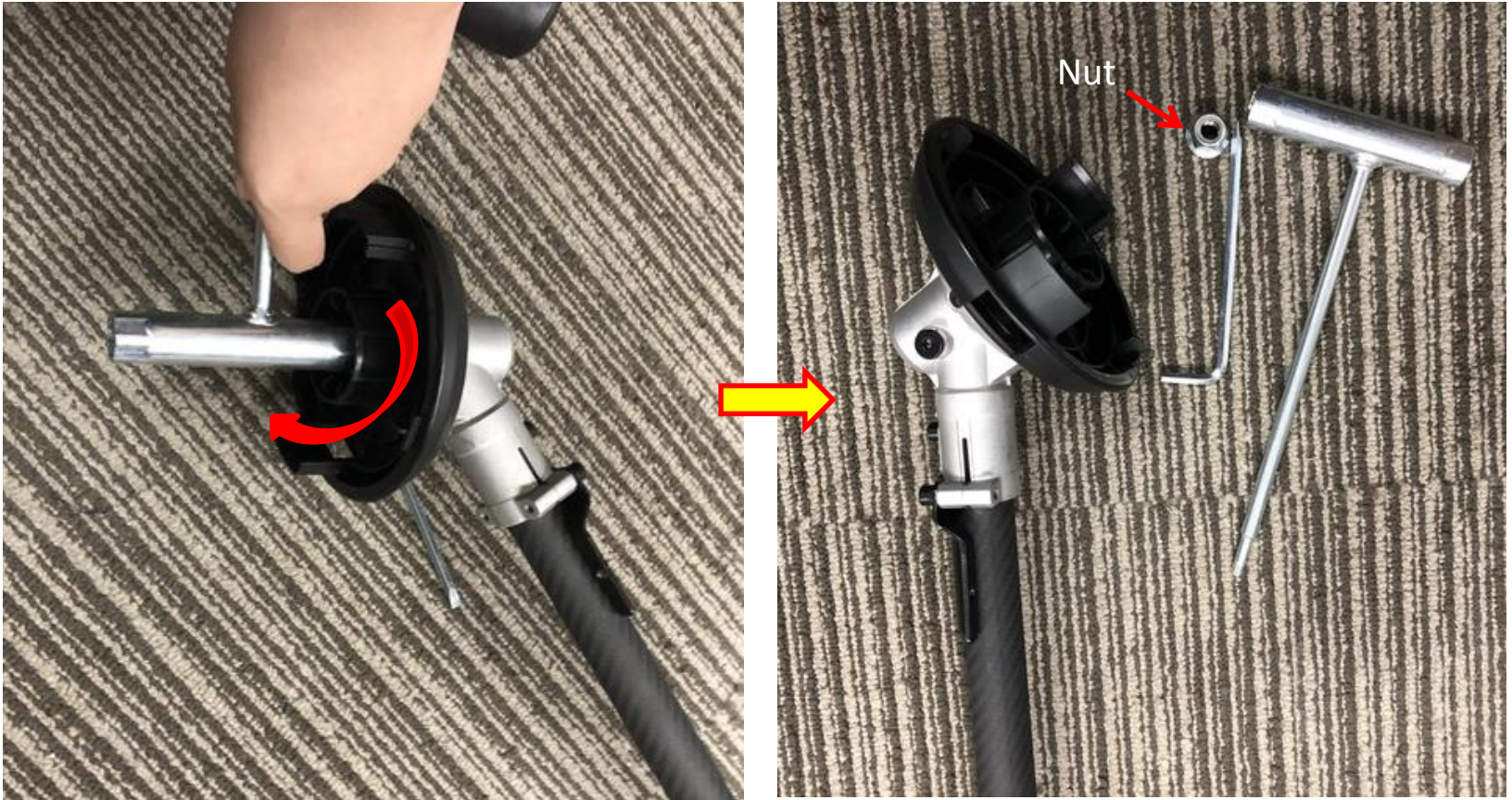
4. Rotate the upper housing assembly to align the slot in the flange with the hole in the gear case.
5. Insert the hex wrench into the aligned holes to act as a stabilizer.



# 1. Replace the Housing Assembly and Gear Case

STX3800 LINE TRIMMER

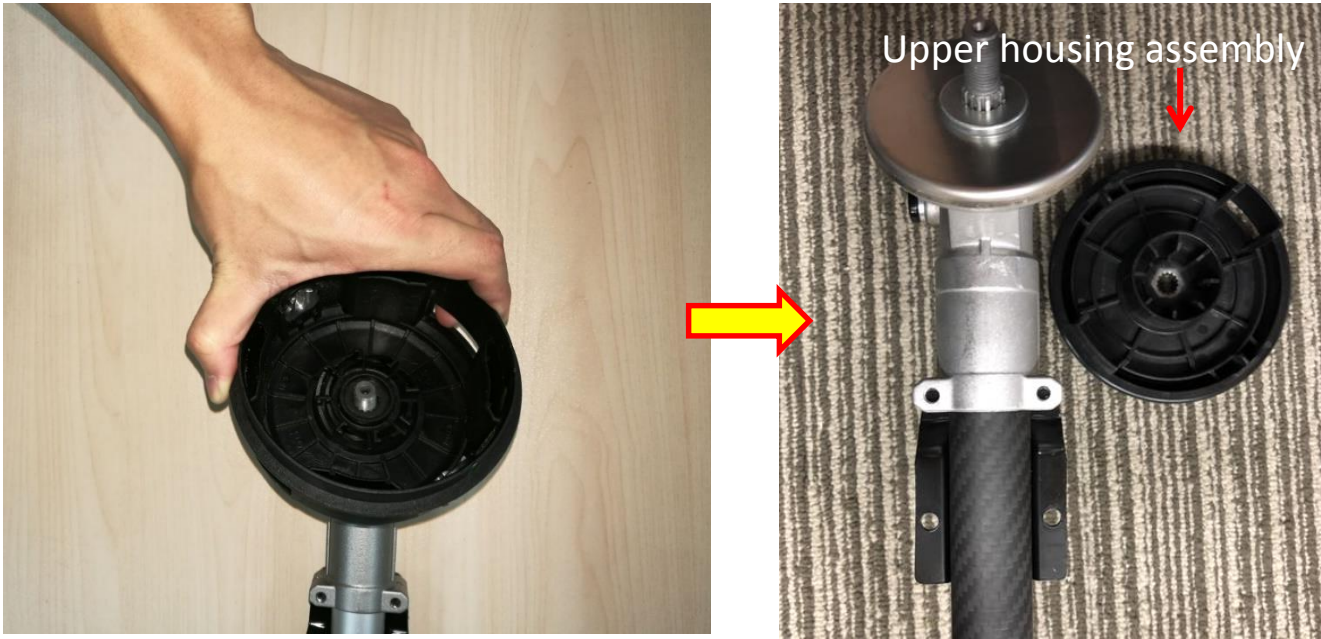
6. Loosen the nut with socket wrench clockwise to remove it from the shaft.



# 1. Replace the Housing Assembly and Gear Case

STX3800 LINE TRIMMER

7. Take the upper housing assembly out of the shaft.



Description	Part Number	Qty.
Upper housing	3402942001	1

# 1. Replace the Housing Assembly and Gear Case

STX3800 LINE TRIMMER

8. Take the flange cover out of the shaft.

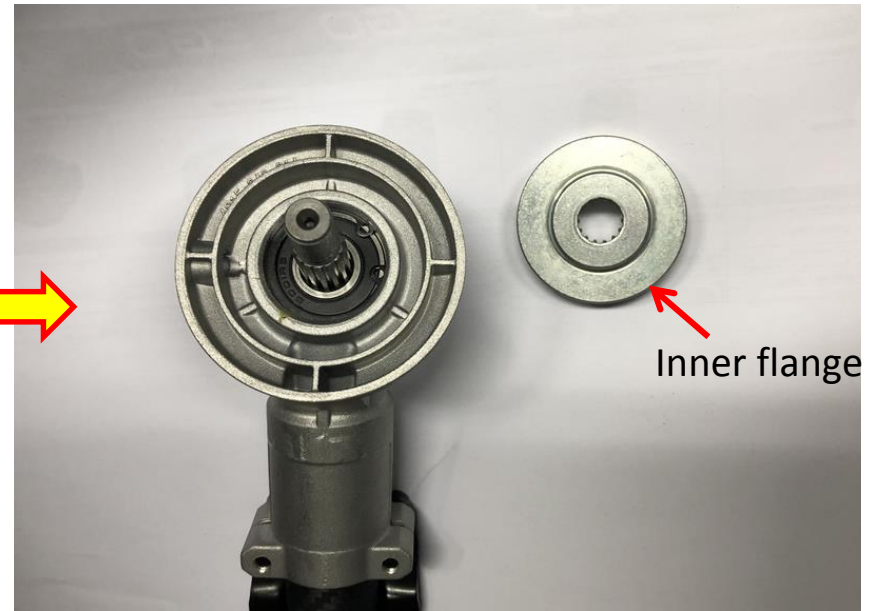


Description	Part Number	Qty.
Flange cover	3706103001	1

# 1. Replace the Housing Assembly and Gear Case

STX3800 LINE TRIMMER

9. Take the flange out of the shaft.



Description	Part Number	Qty.
Inner flange	3552509001	1

# 1. Replace the Housing Assembly and Gear Case

STX3800 LINE TRIMMER

10. Loosen 3 screws to remove the fixing board.

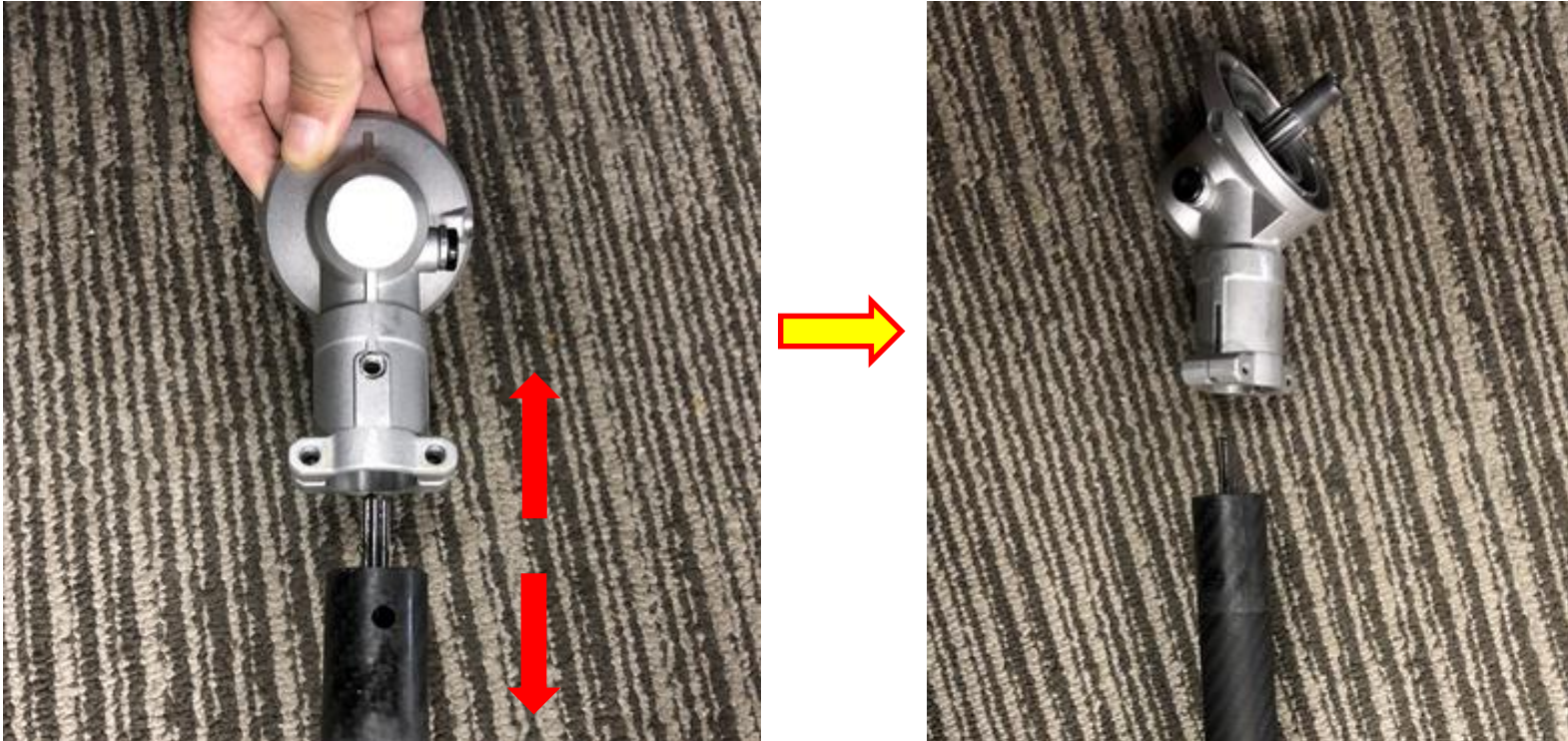


Description	Part Number	Qty.	Description	Part Number	Qty.
Screw 1	5620213003	1	Washer	5650598001	2
Screw 2	5620216006	2	Fixing board	3705417001	1

# 1. Replace the Housing Assembly and Gear Case

STX3800 LINE TRIMMER

11. Pull the connecting tube with one hand and pull the gear case with the other hand to separate them from each other.



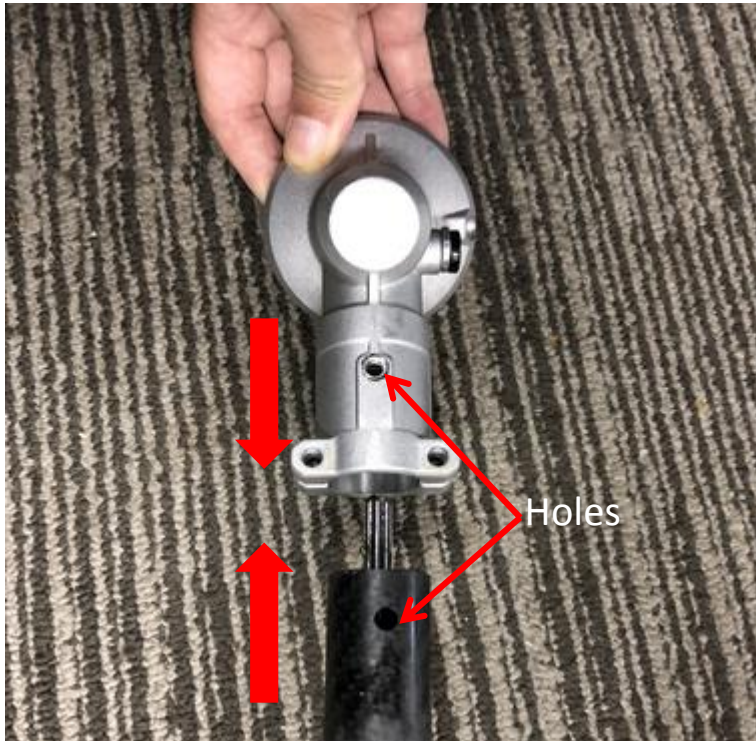
Description	Part Number	Qty.
Gear case assembly	2825611001	1



# 1. Replace the Housing Assembly and Gear Case

STX3800 LINE TRIMMER

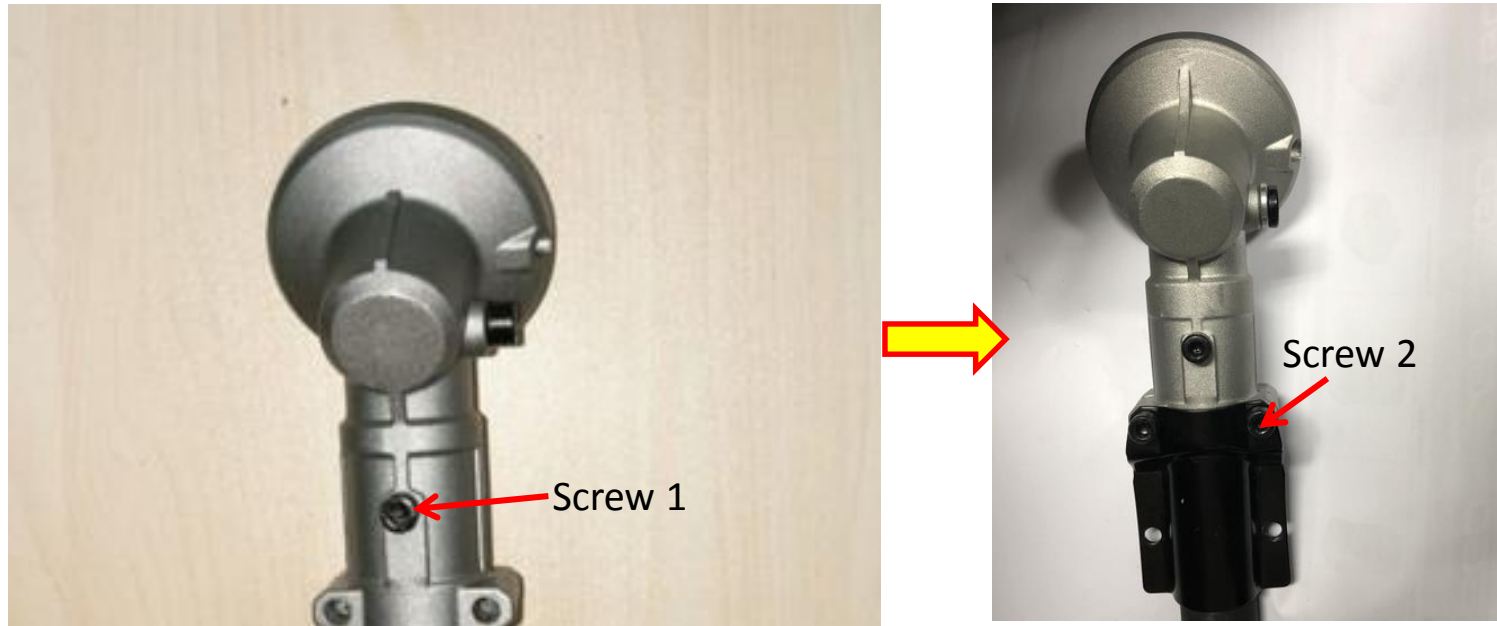
12. With the hole in the gear case aligned with the hole in the tube, reassemble them into place.



# 1. Replace the Housing Assembly and Gear Case

STX3800 LINE TRIMMER

13. Tighten the gear case with the connecting tube with screw.
14. Tighten the fixing board with the gear case with screws.



# 1. Replace the Housing Assembly and Gear Case

STX3800 LINE TRIMMER

15. Mount the flange onto the shaft.



# 1. Replace the Housing Assembly and Gear Case

STX3800 LINE TRIMMER

16. Mount the flange cover onto the shaft.



# 1. Replace the Housing Assembly and Gear Case

STX3800 LINE TRIMMER

17. Mount the upper housing assembly onto the shaft.



# 1. Replace the Housing Assembly and Gear Case

STX3800 LINE TRIMMER

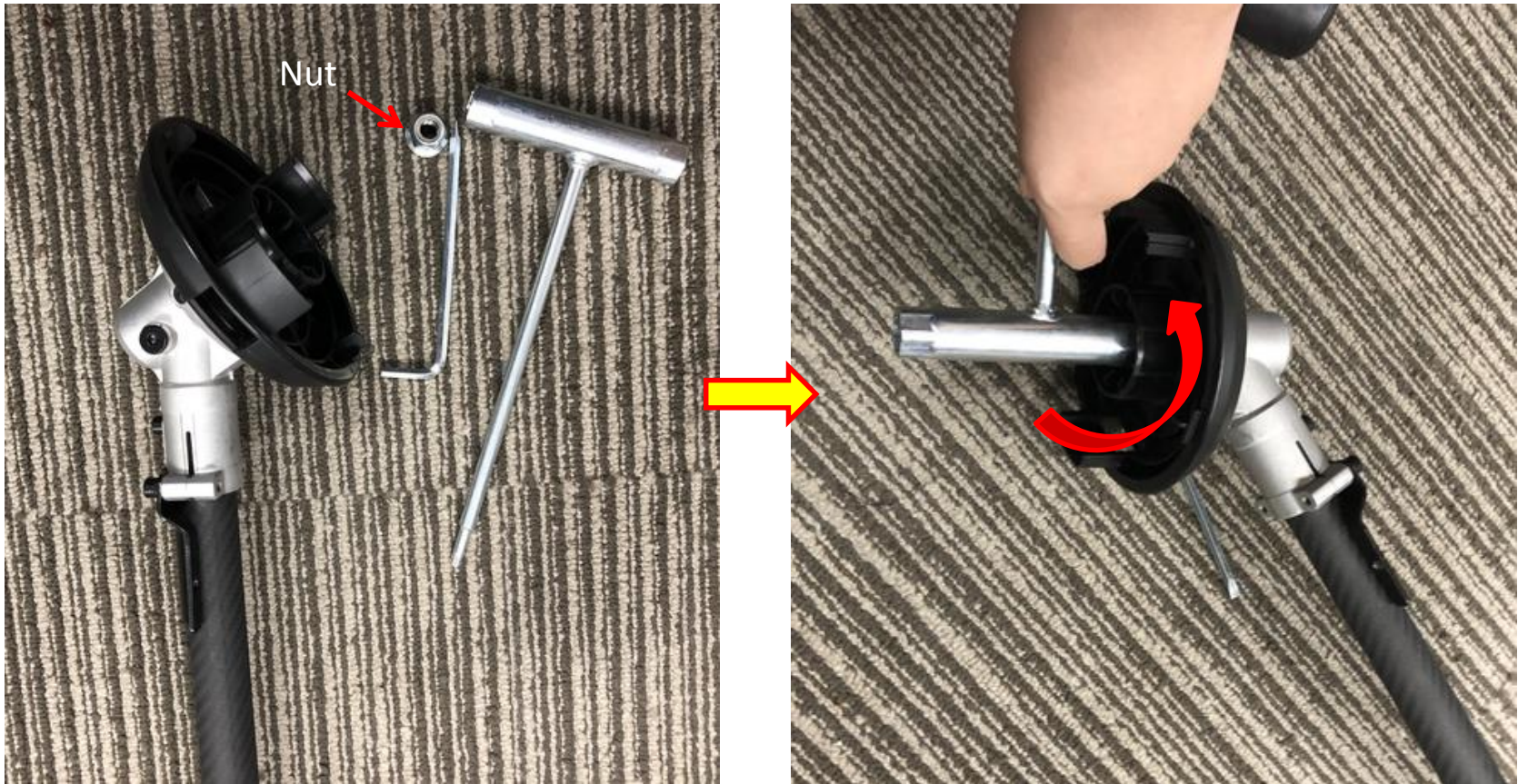
18. Rotate the upper housing assembly to align the slot in the flange with the hole in the gear case.
19. Insert the hex wrench into the aligned holes to act as a stabilizer.



# 1. Replace the Housing Assembly and Gear Case

STX3800 LINE TRIMMER

20. Mount the nut onto the shaft and tighten it with multifunction wrench anticlockwise.



Description	Part Number	Qty.
Nut	5630292001	1

# 1. Replace the Housing Assembly and Gear Case

STX3800 LINE TRIMMER

21. Mount the spring onto the upper housing.

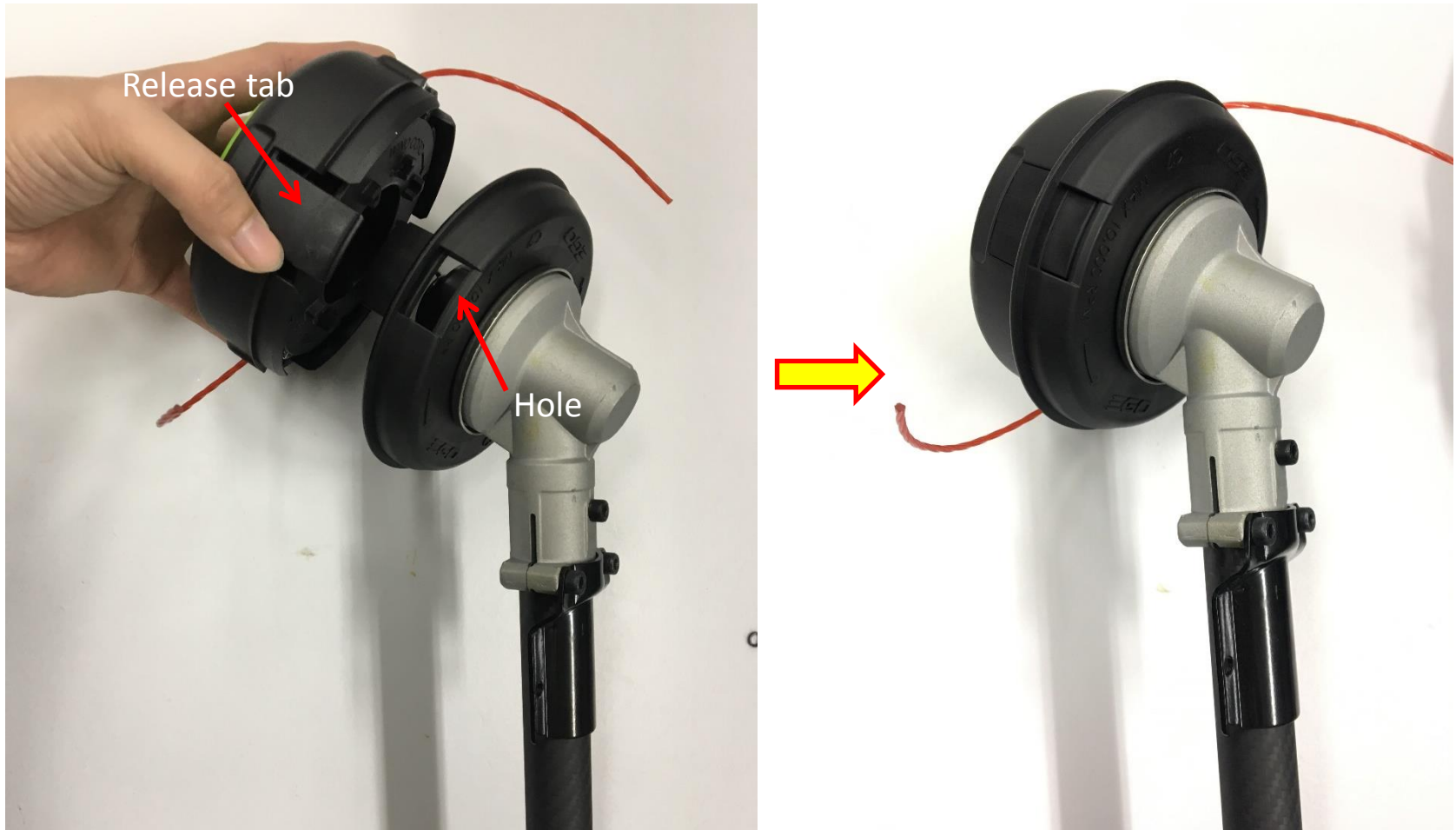




# 1. Replace the Housing Assembly and Gear Case

STX3800 LINE TRIMMER

22. Align the release tabs on the lower housing assembly with the holes on the upper housing assembly to assemble them together.



# 1. Replace the Housing Assembly and Gear Case

STX3800 LINE TRIMMER

23. Assemble the guard assembly with the fixing board with screws & washer.



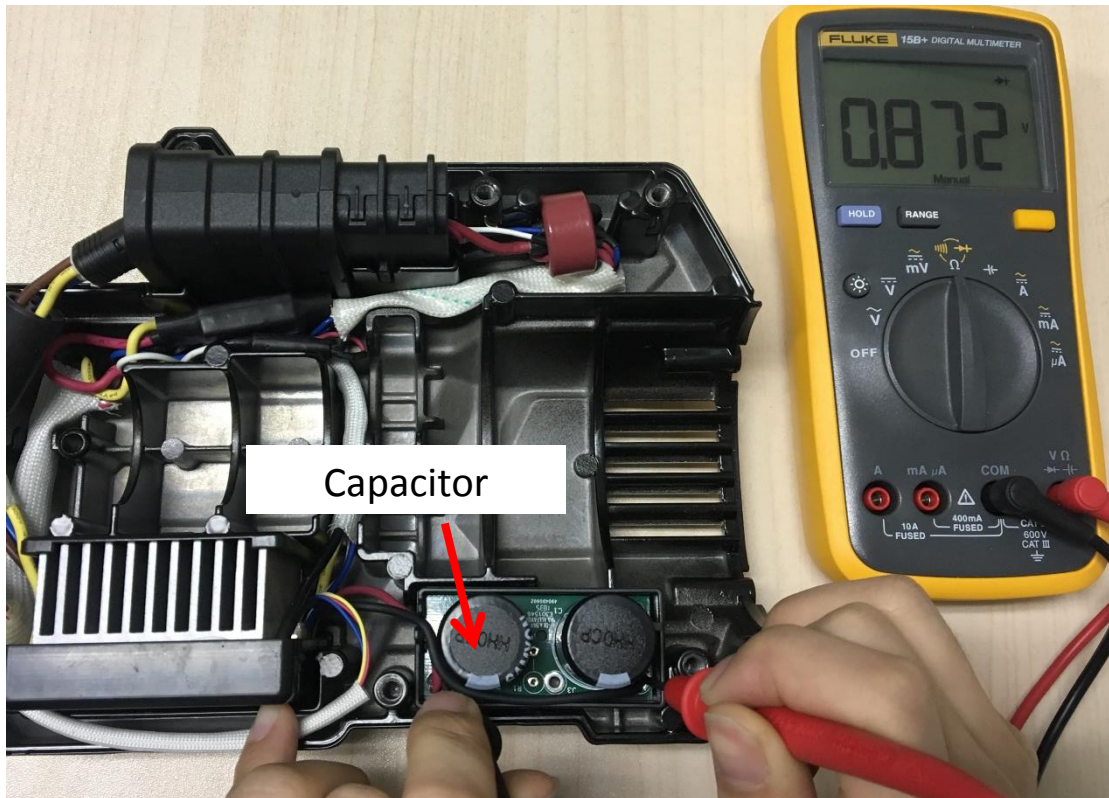
# **Part 2: Measure PCBA, Motor and Internal Wire Assembly**

## 2. Measure PCBA, Motor and Internal Wire ASSY

STX3800 LINE TRIMMER

1. Following the instructions for “**Replacing the Motor Assembly and PCBA**” to Separate the PCBA.
2. Find the capacitor in the PCBA and set the multimeter function to “Diode measuring”.
3. Contact the red pen pin to the negative electric contact (the joint that connects to black wire).  
Contact the black pen pin to the positive electric contact (red wire).

**Notice:** When the voltage is below 1V and buzzing sound stops, the discharging has finished.



**PCBA Measurement**

## 2. Measure PCBA, Motor and Internal Wire ASSY

STX3800 LINE TRIMMER

4. Contact the red pen pin to the contact with black wire of the yellow connector (connect to the internal wire assembly) and the black pen pin to the three contactors of the black connector (connect to the motor).

**Notice :** If the LCD displays 0.45~0.55V for each measurement, means a good upper MOSFET, go to the next testing step; otherwise means a broken PCBA, replace a new PCBA.



**PCBA Measurement**

## 2. Measure PCBA, Motor and Internal Wire ASSY

STX3800 LINE TRIMMER

5. Contact the black pen pin to the contact (connect to the yellow line) of the black connector and red pen pin to the three contacts of the black connector (connect to the motor).

**Notice :** If the LCD displays 0.45~0.55V for each measurement, means a good upper MOSFET, go to the next testing step; otherwise means a broken PCBA, replace a new PCBA.



PCBA Measurement

## 2. Measure PCBA, Motor and Internal Wire ASSY

STX3800 LINE TRIMMER

1. Following the instructions for “**Replacing the Motor Assembly and PCBA**” to Separate the PCBA.
2. Set the multimeter function to “Resistance measuring”.
3. Measure the resistance between any of the two contacts.

**Notice: If the resistance is not infinite, means a good motor. Otherwise, replace the damaged motor**

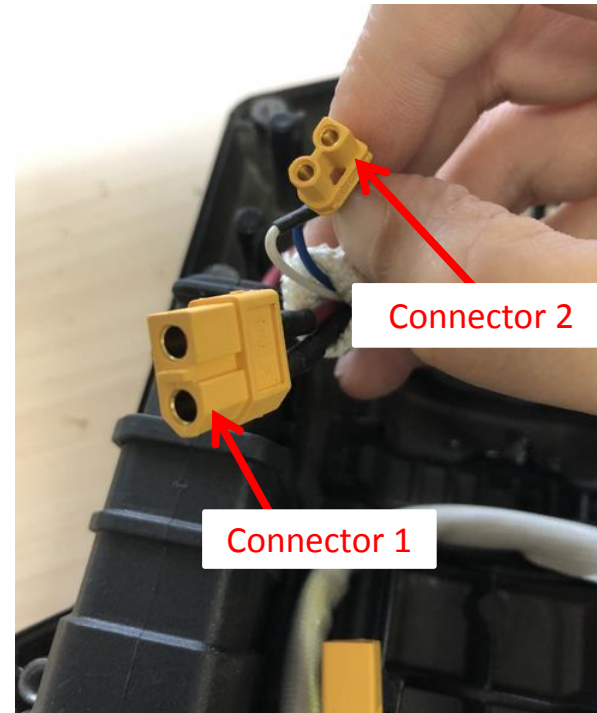
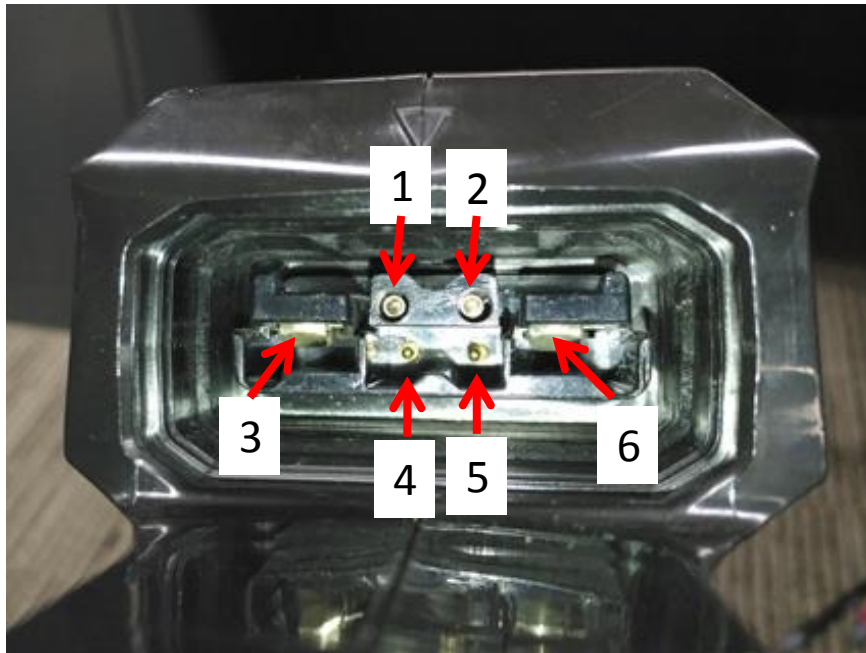
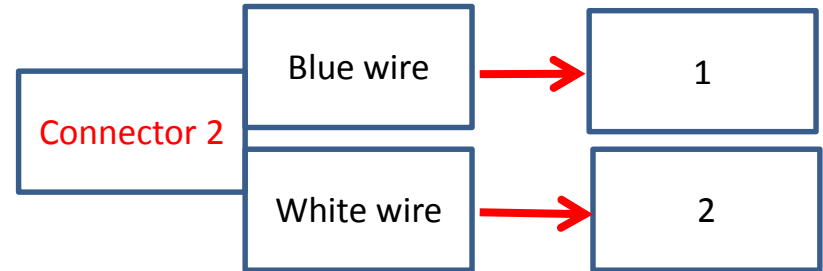
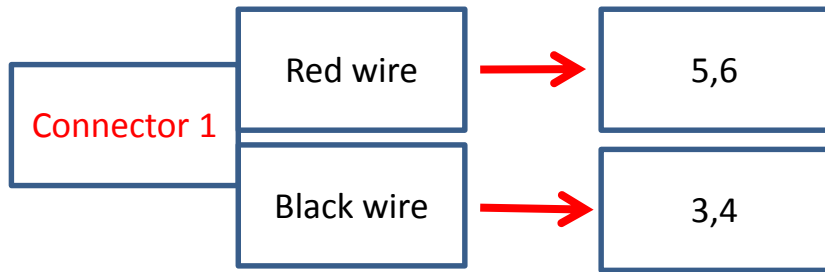


**Motor Measurement**

## 2. Measure PCBA, Motor and Internal Wire ASSY

STX3800 LINE TRIMMER

1. There is 6 contacts in the socket. Contact the black pen pin to the 6 contacts and the red pen pin to their corresponding contacts of the two connectors.



**Internal Wire Assembly Measurement**

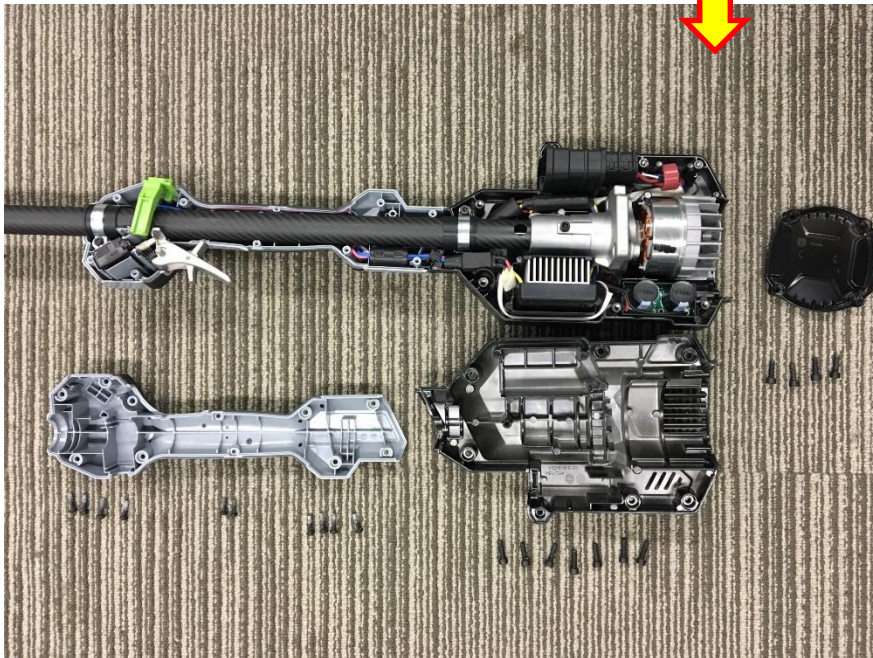
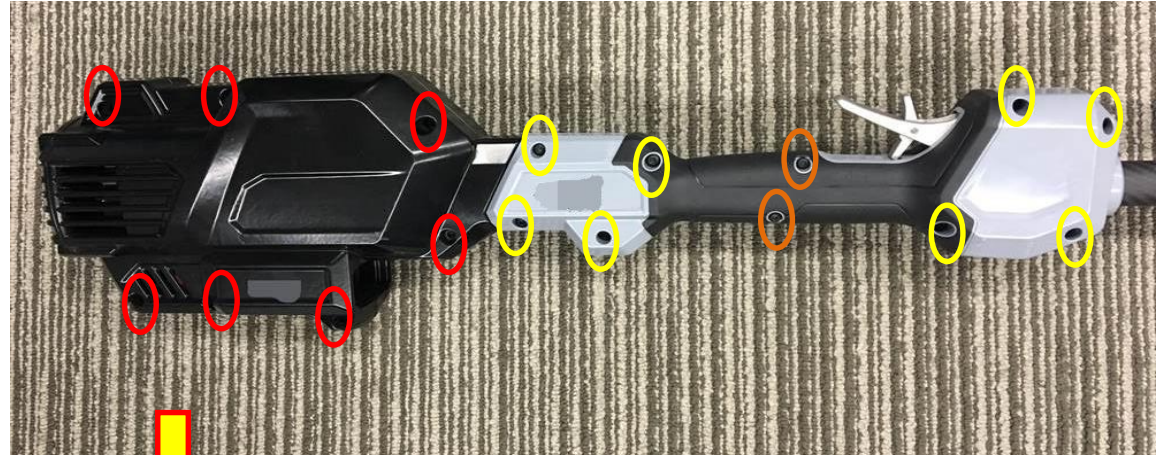
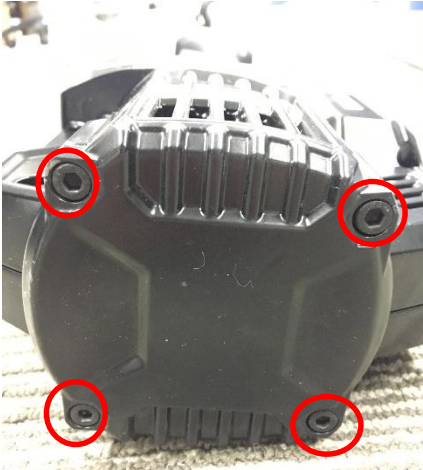


## **Part 3: Replacing the Motor Assembly and PCBA**

### 3. Replace the Motor Assembly and PCBA

STX3800 LINE TRIMMER

1. Loosen Hexagon socket screws & 8 screws & 2 tapping screws to disassemble the housing assembly.

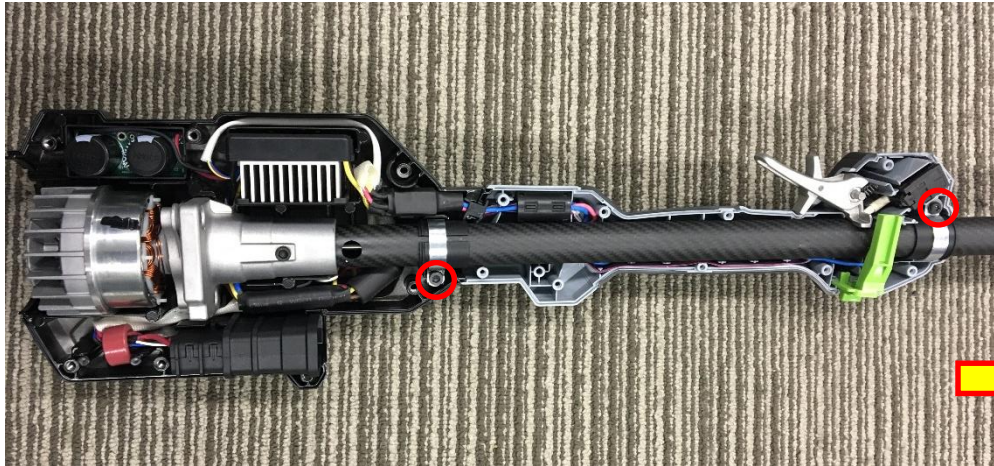


Description	Part Number	Quantity
Hexagon socket screw	5620019004	11
Screw	5620479001	8
Tapping screw	5610305001	2

### 3. Replace the Motor Assembly and PCBA

STX3800 LINE TRIMMER

2. Loosen the screw on the fixed ring.
3. Take push button, the shaft and motor out its groove.



Push button

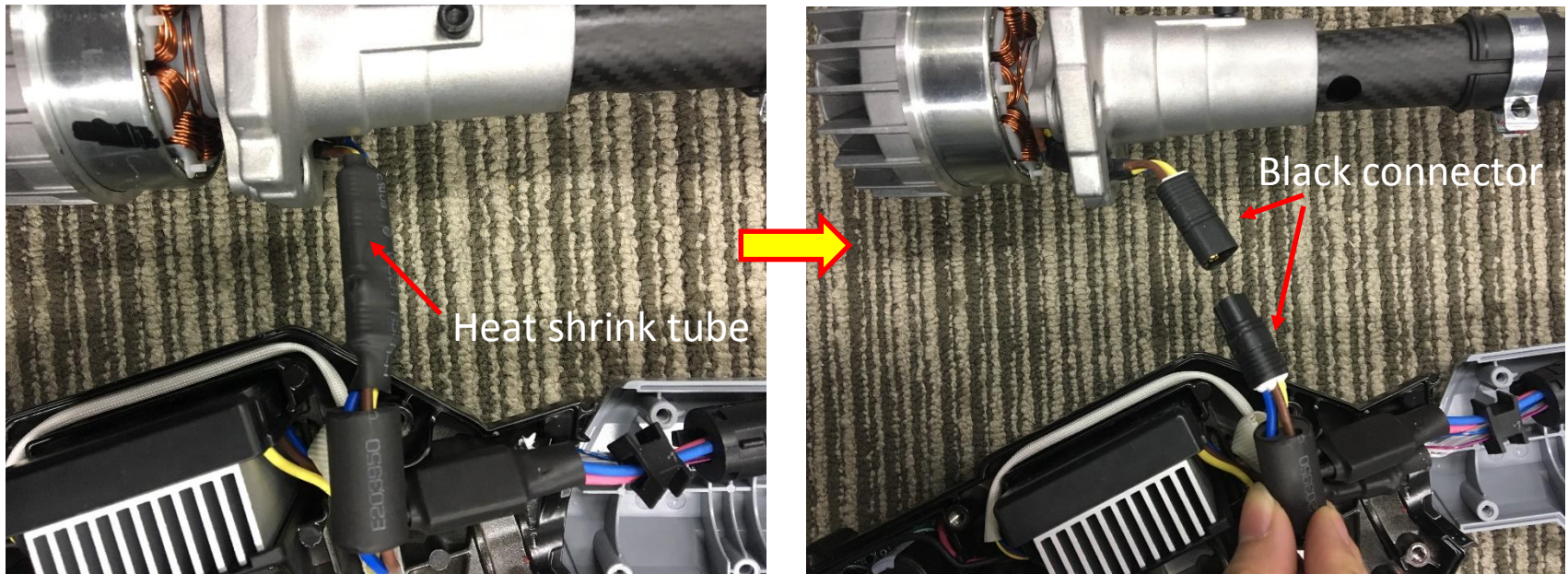


Description	Part Number	Quantity
Tapping screw	5620018005	1
Washer	5650598001	1
Screw	5620479001	1
Push button	3130093001	1

### 3. Replace the Motor Assembly and PCBA

STX3800 LINE TRIMMER

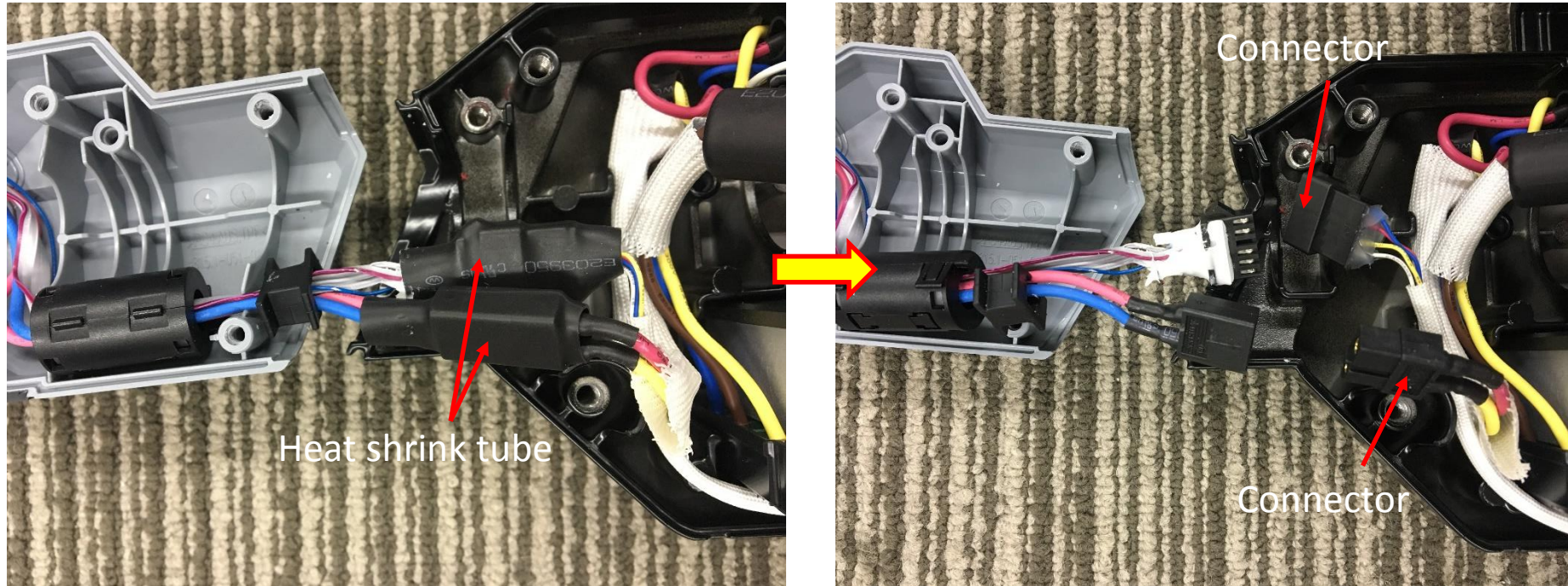
4. Remove the heat shrink tube and disconnect the black connector to detach the motor and PCBA.



### 3. Replace the Motor Assembly and PCBA

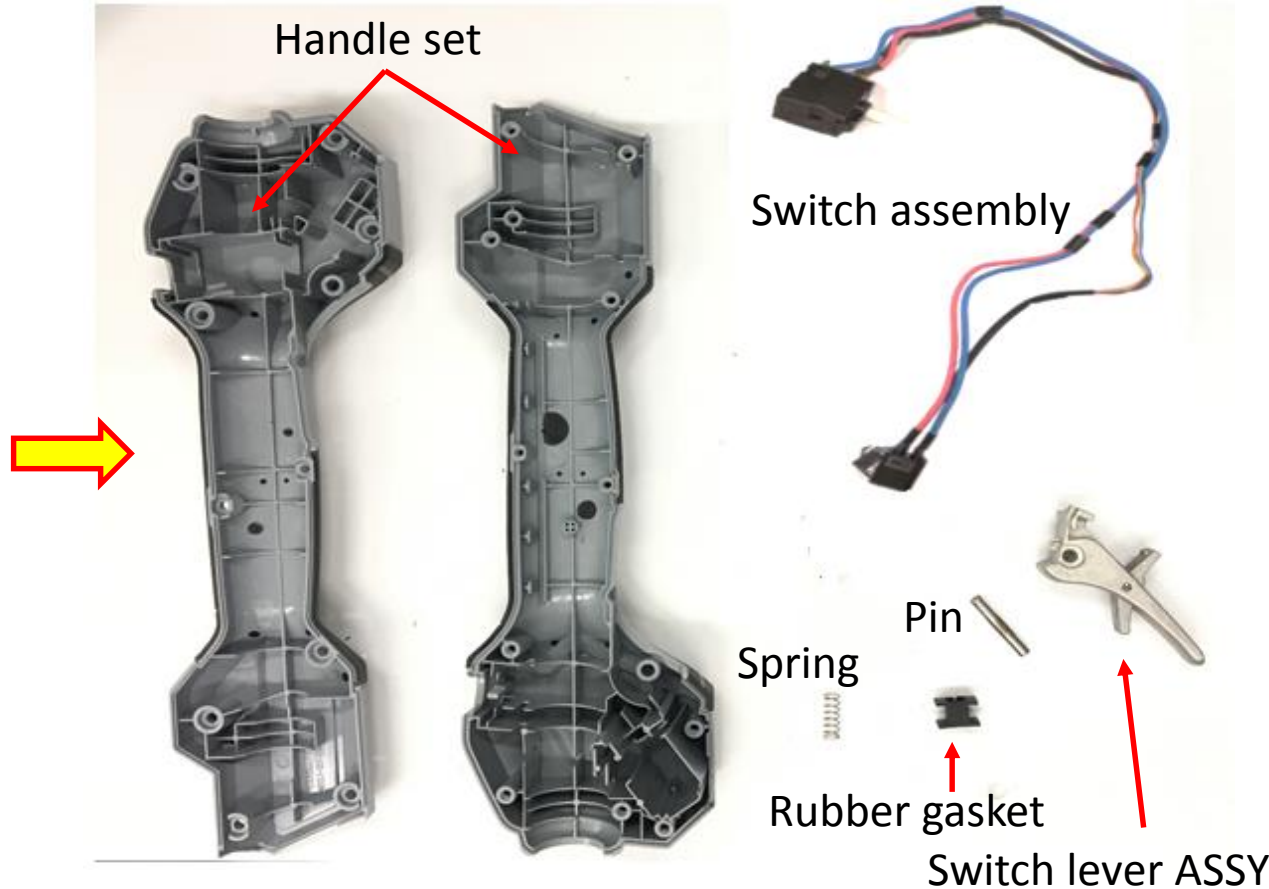
STX3800 LINE TRIMMER

5. Remove the two heat shrink tubes and disconnect the two connectors.



### 3. Replace the Motor Assembly and PCBA

6. Remove all the switches as well as their cables from the handle set, replace the damaged part.

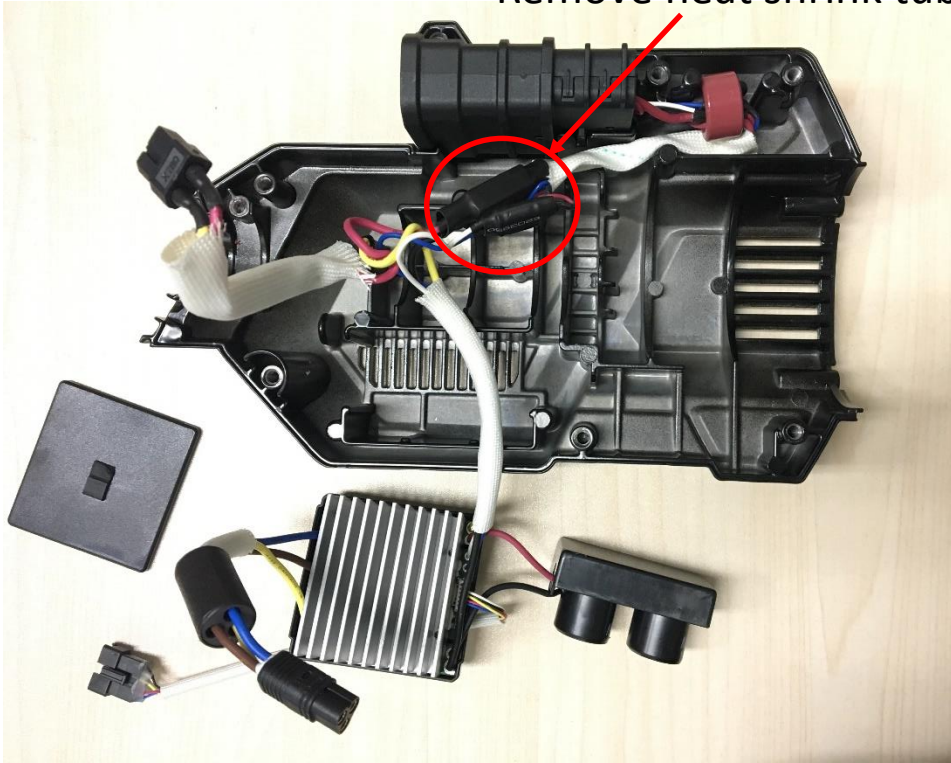


Description	Part Number	Spec.	Description	Part Number	Spec.
Handle set	3900163001	-	Pin	5670028002	-
Switch assembly	4870685001	-	Rubber gasket	5650604001	-
Spring	5620479001	-	Switch lever ASSY	2826345001	-

# 3. Replace the Motor Assembly and PCBA

- 7. Take the PCBA away and separate the two connectors from PCBA. If PCBA is damaged, replace it with a new one.

Remove heat shrink tubes

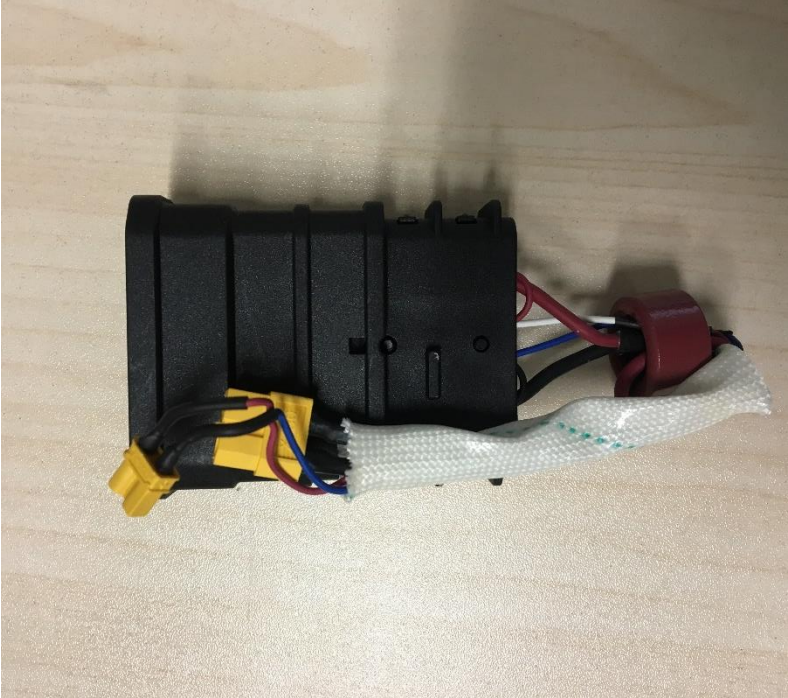


Description	Part Number	Qty.
PCB assembly	2830332002	1

# 3. Replace the Motor Assembly and PCBA

STX3800 LINE TRIMMER

- 8. Take the internal wire ASSY away. If the internal wire ASSY is damaged, replace it with a new one.

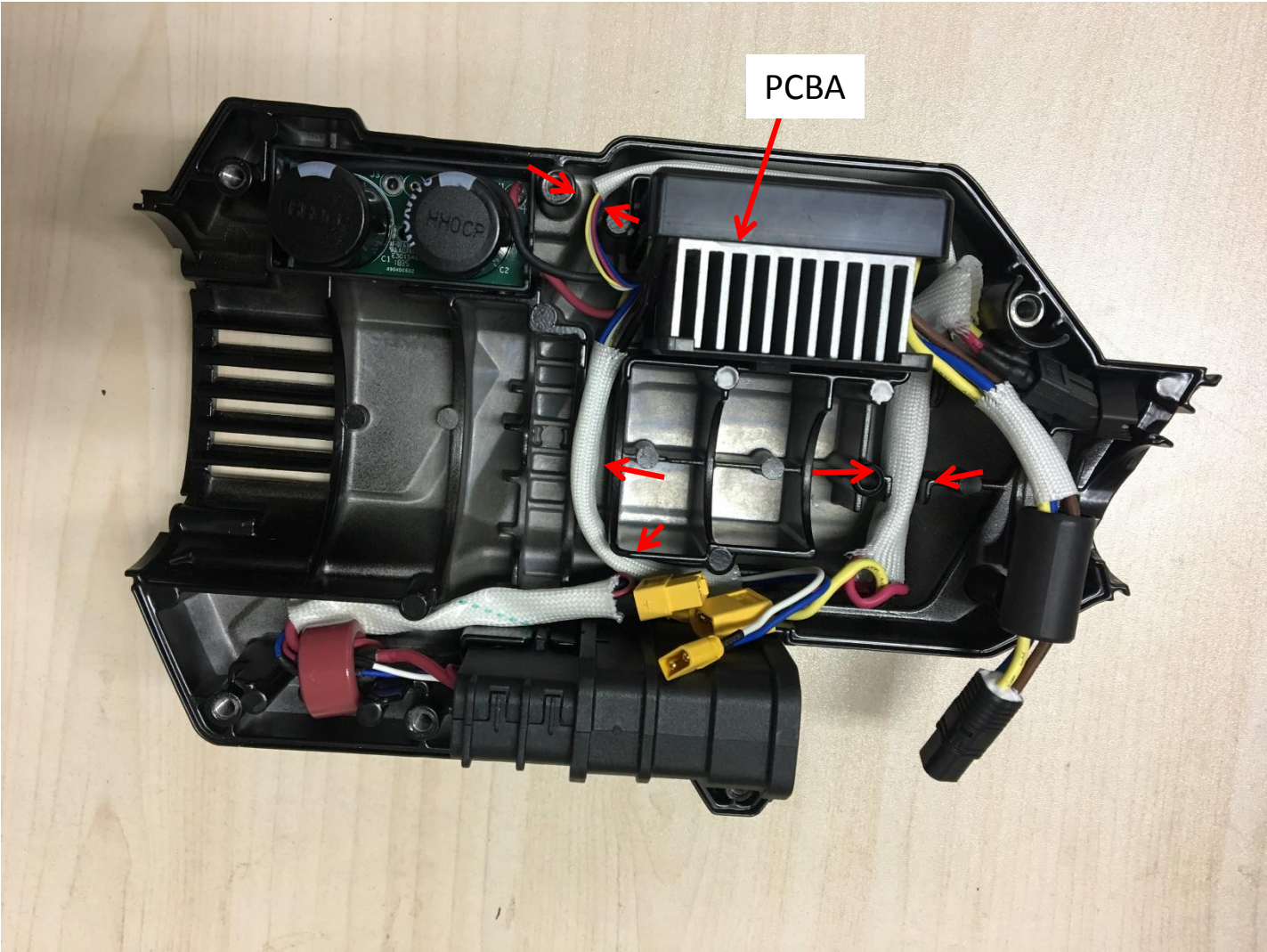


Description	Part Number	Qty.
Internal wire ASSY	4860525002	1



# 3. Replace the Motor Assembly and PCBA

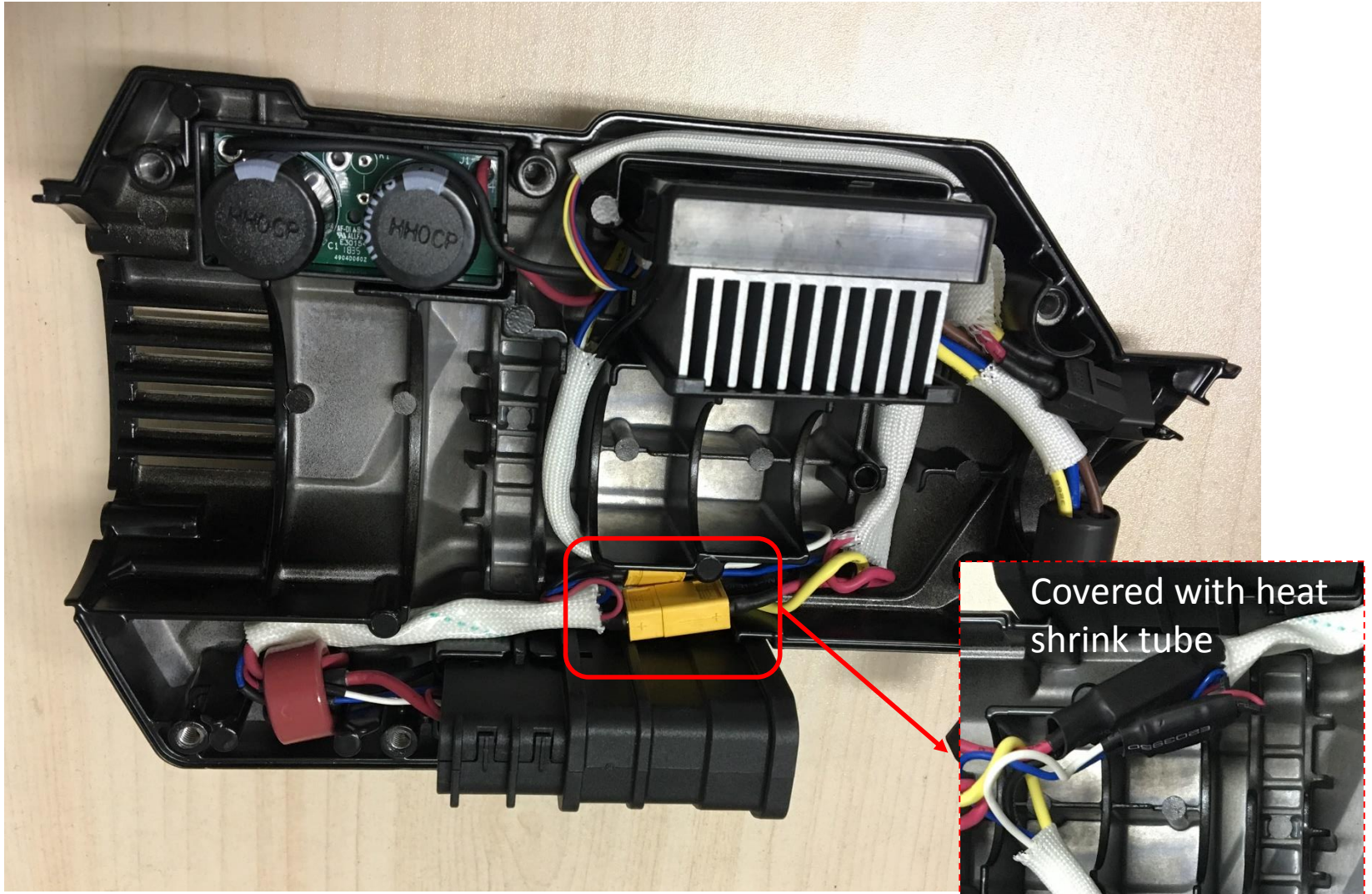
- 9. Align the wires into its groove and mount the PCBA into the housing.



### 3. Replace the Motor Assembly and PCBA

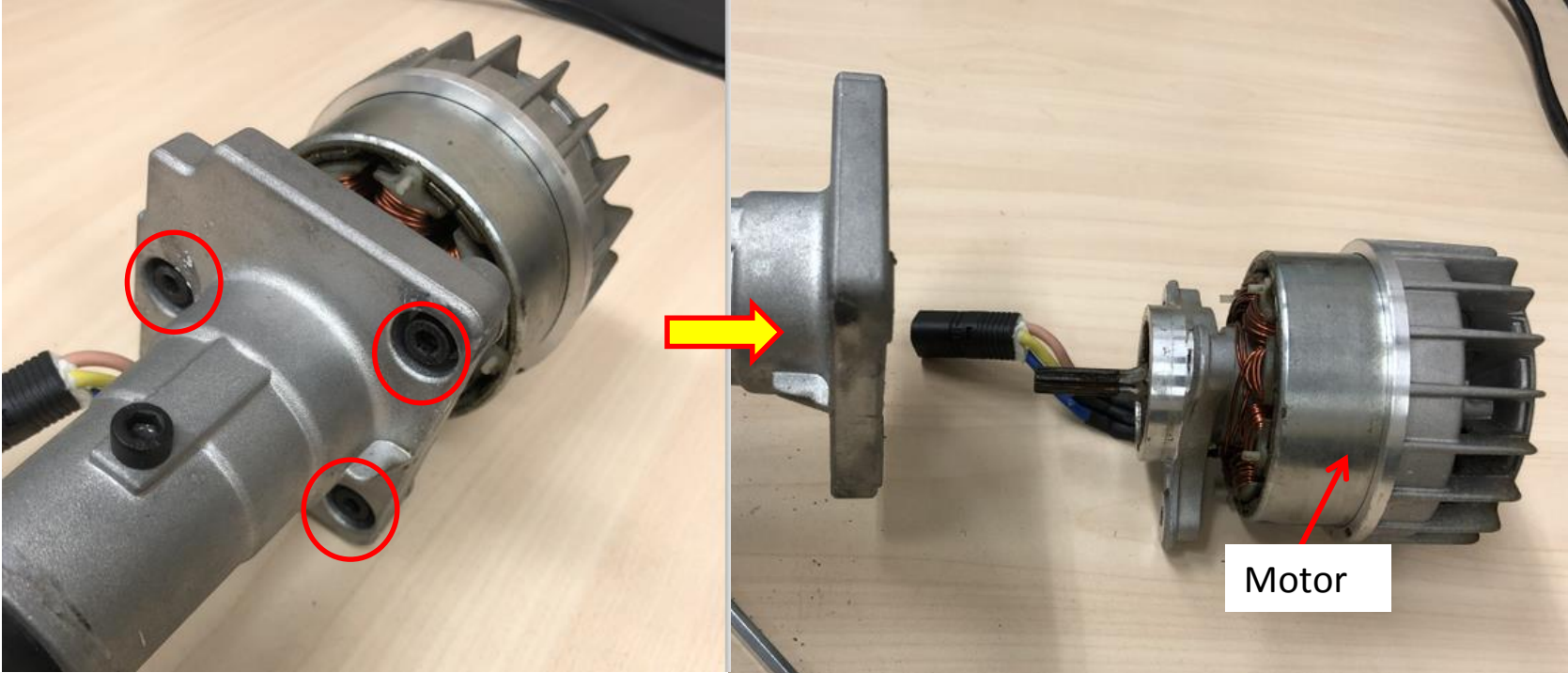
STX3800 LINE TRIMMER

10. Connect the two connectors(yellow in picture) . Then align them into groove.



# 3. Replace the Motor Assembly and PCBA

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

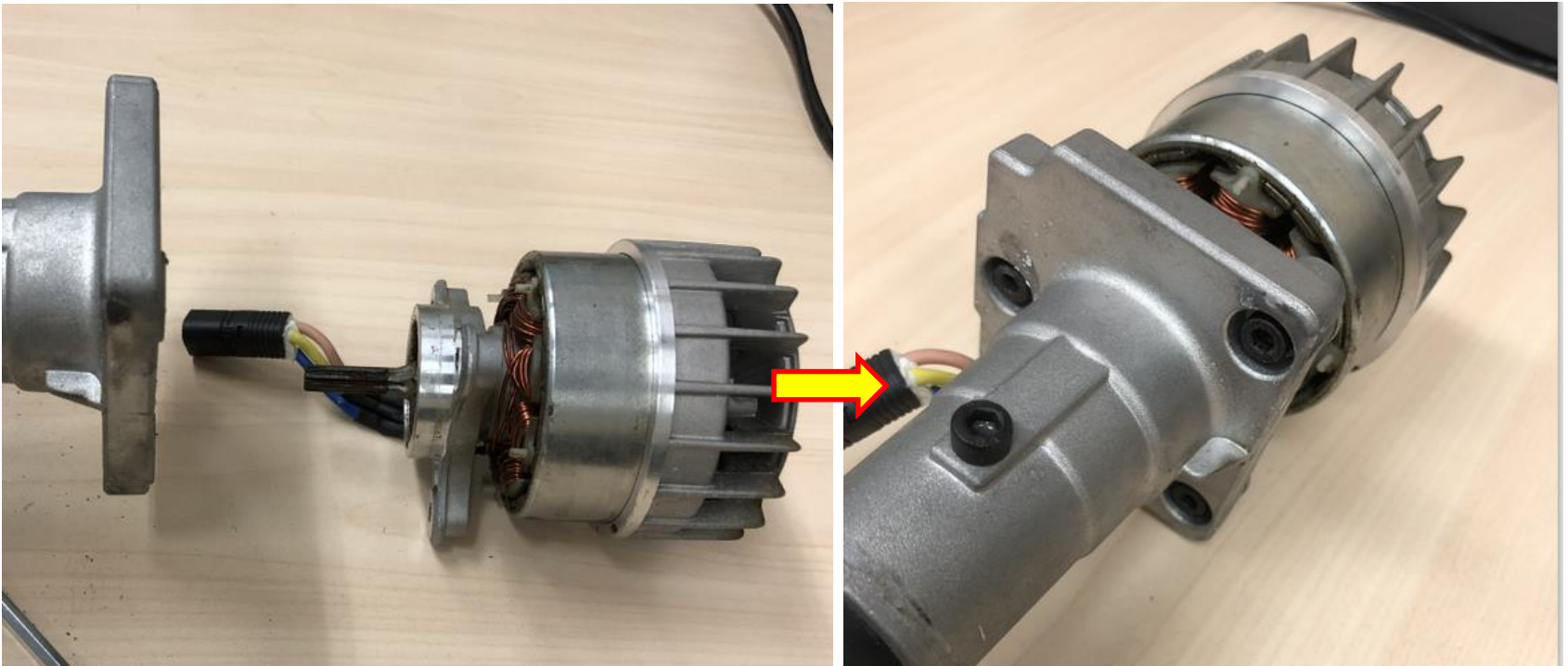


Description	Part Number	Qty.
Tapping screw	5620018005	3
Motor	2730271001	1

### 3. Replace the Motor Assembly and PCBA

STX3800 LINE TRIMMER

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



### 3. Replace the Motor Assembly and PCBA

STX3800 LINE TRIMMER

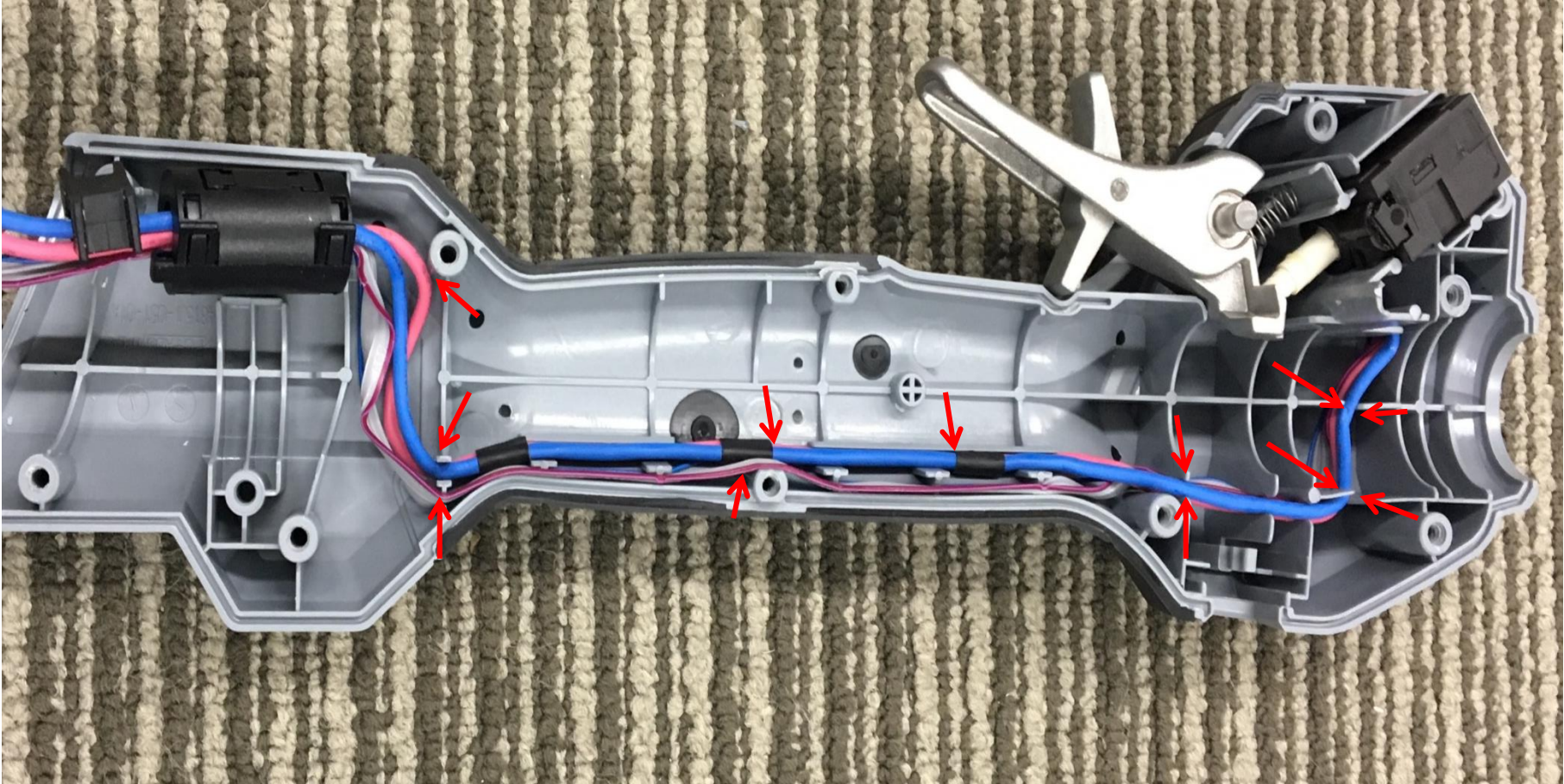
13. Replace the gear case assembly with a new one and assemble the gear case assembly with the shaft assembly with screw.



# 3. Replace the Motor Assembly and PCBA

STX3800 LINE TRIMMER

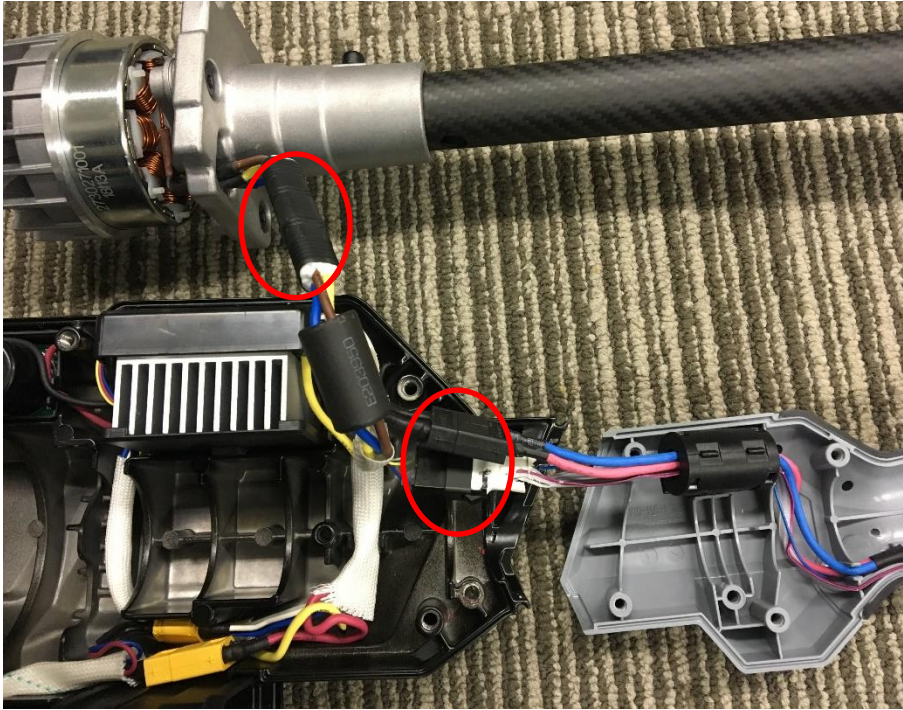
14. Assemble the handle set and align the wires.



### 3. Replace the Motor Assembly and PCBA

STX3800 LINE TRIMMER

15. Connect the three connector and cover them with heat shrink tube, put the shaft with motor into the housing.



### 3. Replace the Motor Assembly and PCBA

STX3800 LINE TRIMMER

16. Tighten the 2 screws to fix the tube on the housing and handle set, assemble the switch lever assembly and push button on the handle set.

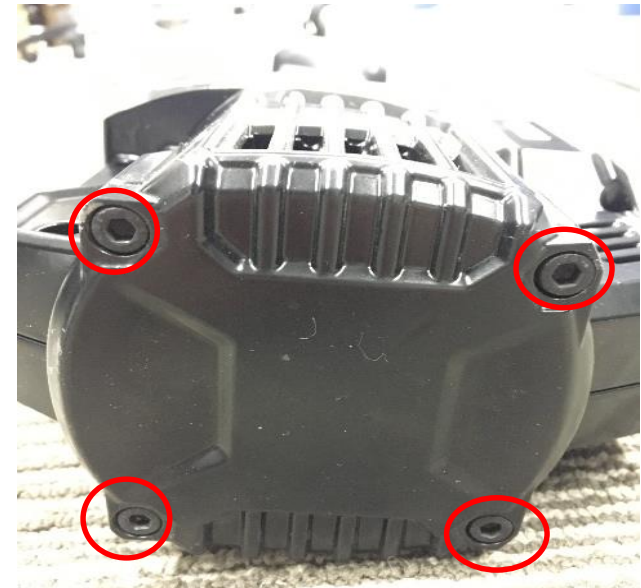
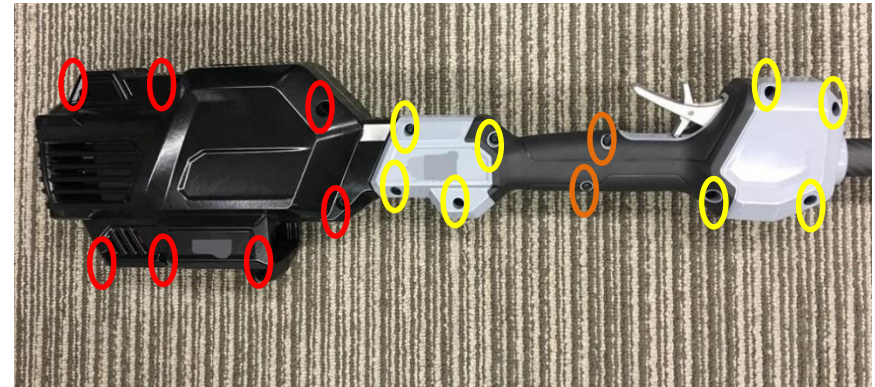
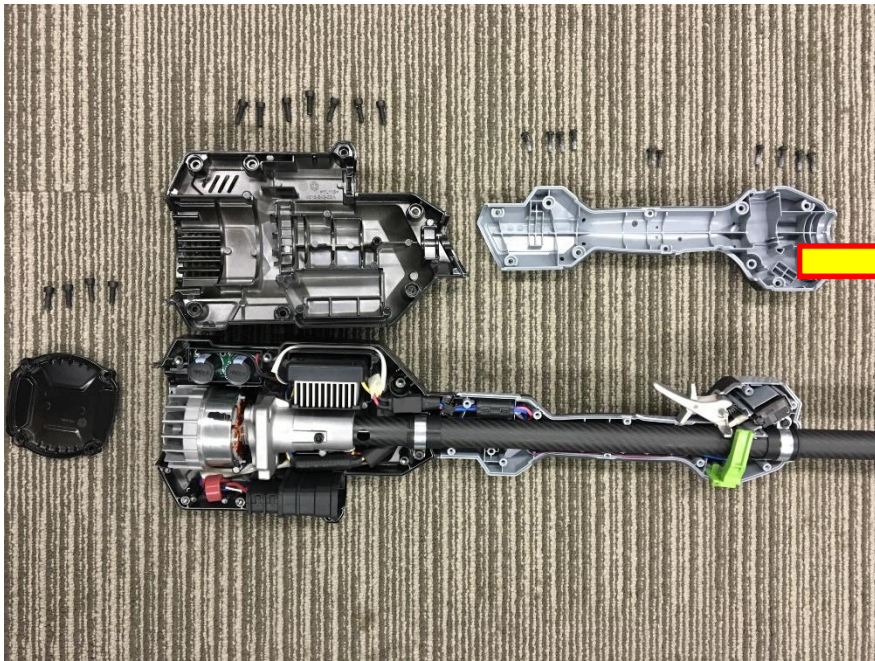




### 3. Replace the Motor Assembly and PCBA

STX3800 LINE TRIMMER

17. Assemble the housing assembly with 17 screws. Then assemble the Rear Cover with 4 screws.



## **Part 4: Replacing the Shaft Assembly**

# 4. Replace the Shaft and Tube Assembly

- 1. Loosen the screw to separate the motor & base assembly from the shaft.



Description	Part Number	Qty.
Screw	5620213003	1

# 4. Replace the Shaft and Tube Assembly

- 2. Remove the screw and take retaining ring from the shaft .

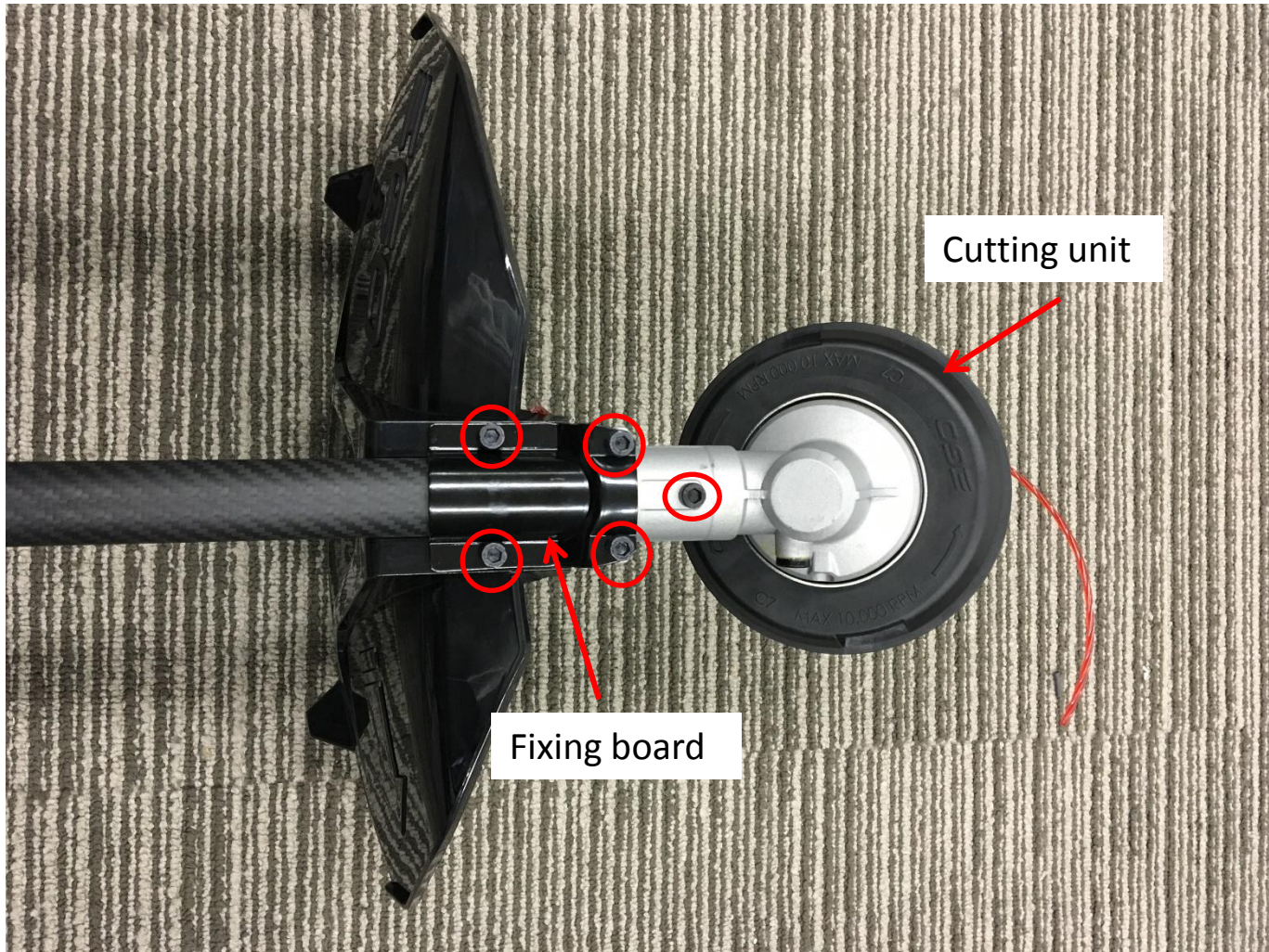


Description	Part Number	Qty.
Screw	5620213003	1
Retaining ring	3128598001	1

## 4. Replace the Shaft and Tube Assembly

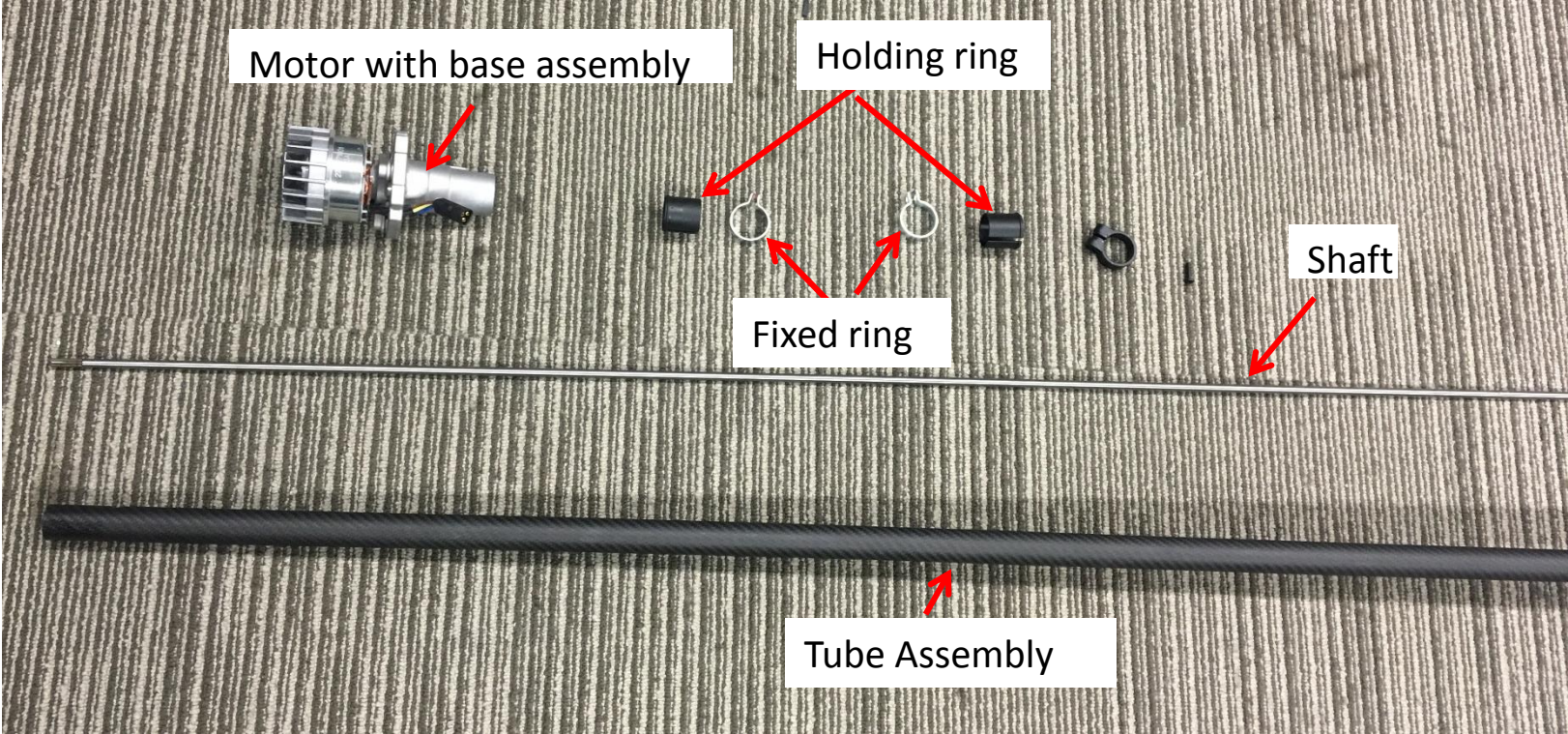
STX3800 LINE TRIMMER

3. Loosen the five screws to separate cutting unit fixing board & guard from the shaft.



# 4. Replace the Shaft and Tube Assembly

4. Pull out the shaft from the tube ASSY and replace the shaft or the tube ASSY with a new one.



Description	Part Number	Qty.
Shaft	2825589001	1
Tube Assembly	2826455001	1
Holding ring	3129457001	2
Fixed ring	3706559001	2

## 4. Replace the Shaft and Tube Assembly

STX3800 LINE TRIMMER

5. Insert the shaft into the tube ASSY, then assemble the cutting unit, fixing board, tubing clip set, fixing ring, gear case, housing assembly and handle lever set with mounting ASSY in sequence .

THE END