

# REPAIR GUIDELINE

## Bike Handle Line Trimmer \_BC1500E-F



*Version:2*

*Issue Data: 10/08/2018*

# Table of Contents

NO.	Contents	Page
1	Troubleshooting	3
2	Tool list	4
3	Part1: Replacing the Connecting Tube	5-12
4	Part2: Replacing the Motor Assembly	13-30
5	Part3: Replacing the PCB Assembly	31-44

# Troubleshooting

BC1500E-F Bike Handle Line Trimmer

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)
Unable to wind up line	Support of the lower housing assembly is worn	Lower housing assembly	Replace the lower housing assembly
Line not being cut	Blade on the guard assembly is worn	Guard assembly	Replace the guard assembly
Fail to start	The cables that connect to the motor are loose.	Motor	Open the motor housing, check the cable connection with motor.
	Motor is burned	Motor	If the cables are well connected, check the motor and test with a new motor.
	PCBA is broken	PCBA in rear housing	If the cables are well connected, and motor is functional, replace the PCBA in the rear housing.
The battery pack is not locked on the trimmer properly; or hard to remove from the trimmer.	The locking mechanism is worn.	Rear housing	Replace the rear housing set.
The motor speed varies up and down when the trimmer works.	Motor was burned due to overload	Motor	Replace the motor

# Tool List For Repair

BC1500E-F Bike Handle Line Trimmer

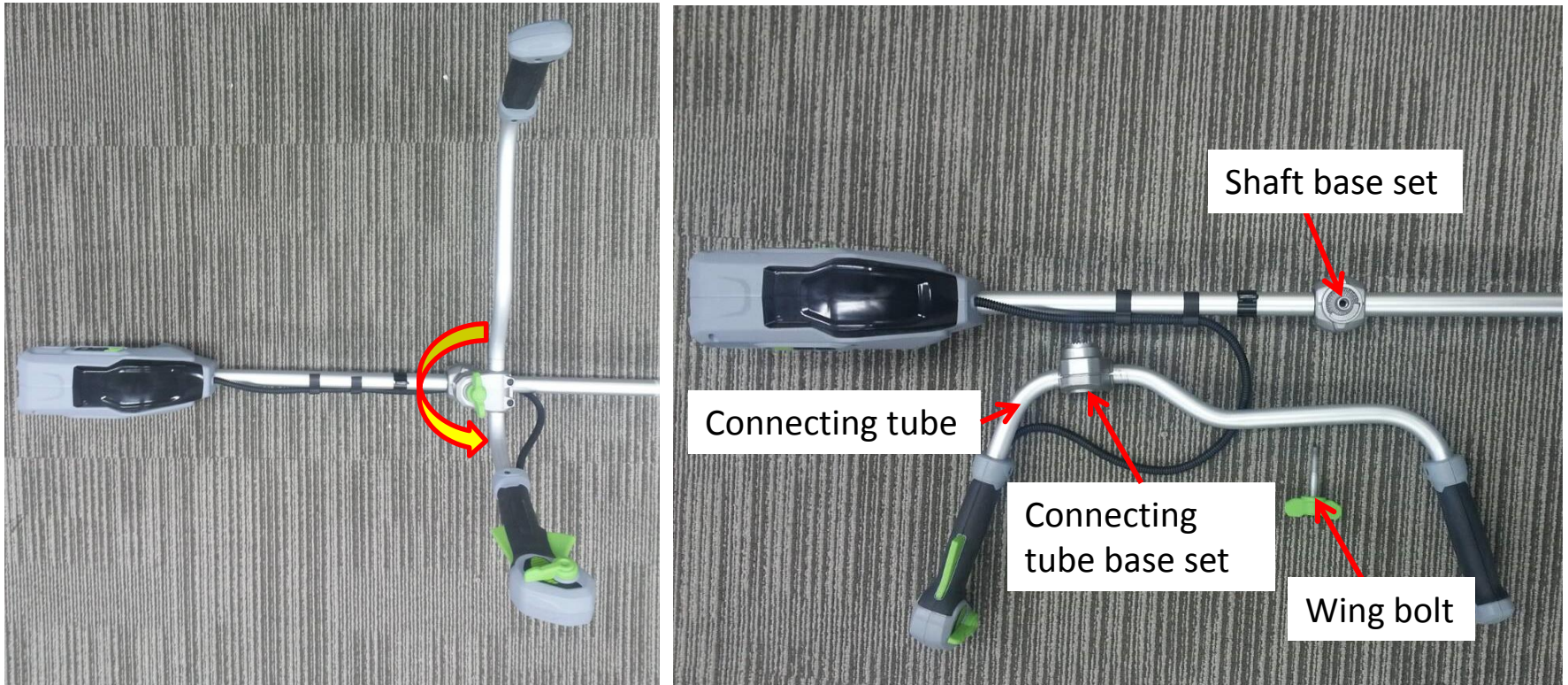
NO.	Tool List	SPEC	Remark
1	Phillips	PH2	
2	Socket wrench	14mm	
3	Torx screwdriver	T-15	
4	Hex wrench	M5	
5	Electric soldering iron		
6	Heat gun		
7	Heat shrinkable sleeves		
8	Scissors		To remove the shrinkable sleeve

# **Part 1: Replacing the Connecting Tube**

# Replacing the Connecting Tube

BC1500E-F Bike Handle Line Trimmer

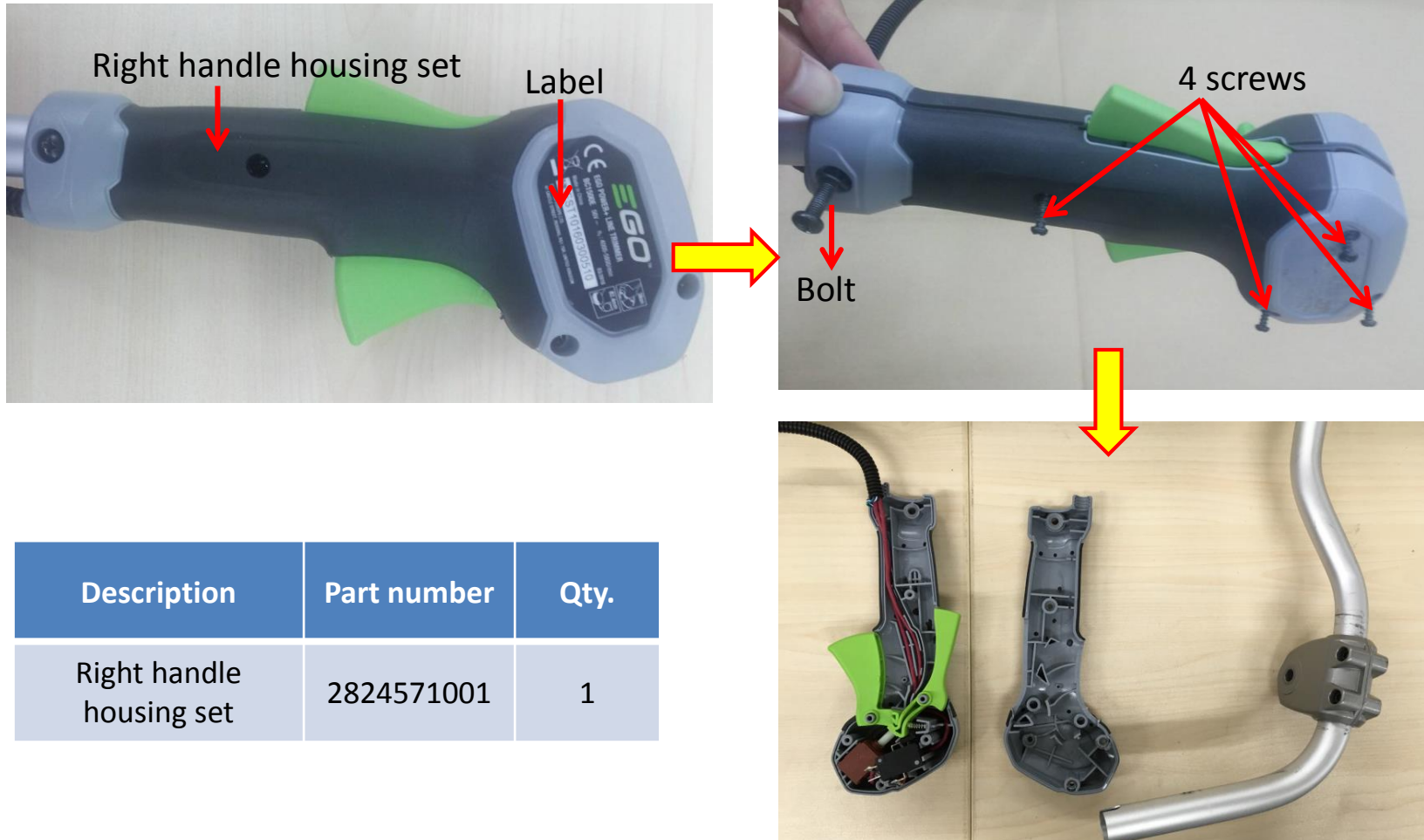
1. Stop the motor and remove the battery pack from the line trimmer.
2. Rotate the wing bolt counterclockwise to separate the connecting tube base set from the shaft base set and put the connecting tube aside.



# Replacing the Connecting Tube

BC1500E-F Bike Handle Line Trimmer

3. Remove the label on the right handle housing to expose the screw which is beneath it and continue to loosen the 4 screws and 1 bolt on the right handle housing to open it.



# Replacing the Connecting Tube

BC1500E-F Bike Handle Line Trimmer

- Loosen the two screws on the left handle housing set to separate it from the connecting tube.

**NOTICE:** if the left handle housing set is broken or worn replace it with a new one.



Description	Part Number	Qty.
Left handle housing set	2824570001	1

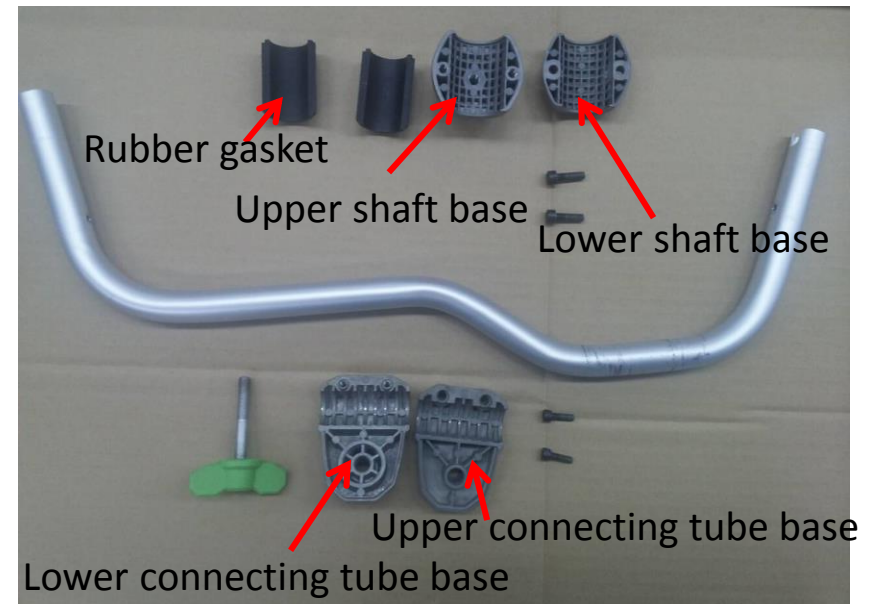
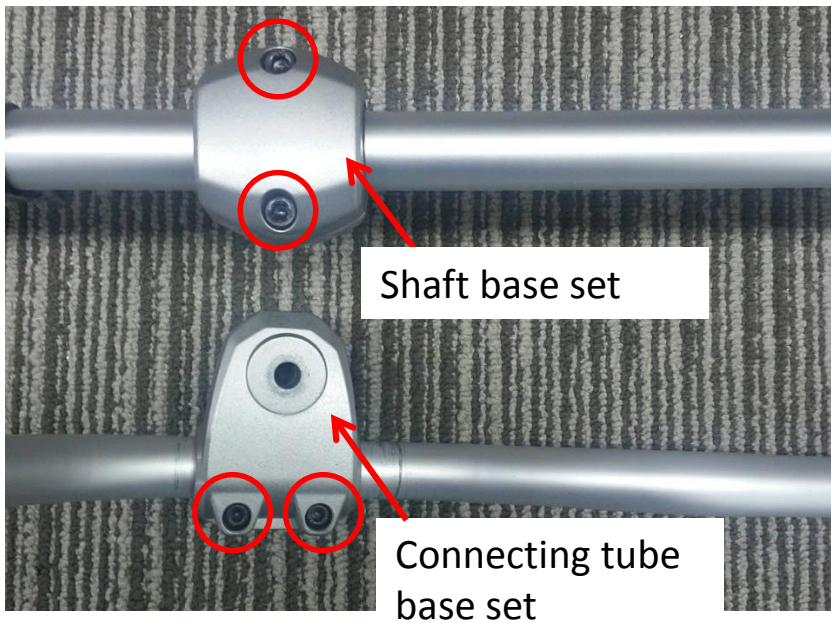


# Replacing the Connecting Tube

BC1500E-F Bike Handle Line Trimmer

- Loosen screws on the shaft base set and connecting tube base set and disassemble them. Replace the connecting tube with a new one.

**NOTICE:** If the connecting tube base set or the shaft base set is worn or broken replace it with a new one.



Description	Part Number	Qty.	Description	Part Number	Qty.
Upper connecting tube base	3421812001	1	Upper shaft base	3421813001	1
Lower connecting tube base	3421811001	1	Lower shaft base	3421810001	1

# Replacing the Connecting Tube

BC1500E-F Bike Handle Line Trimmer

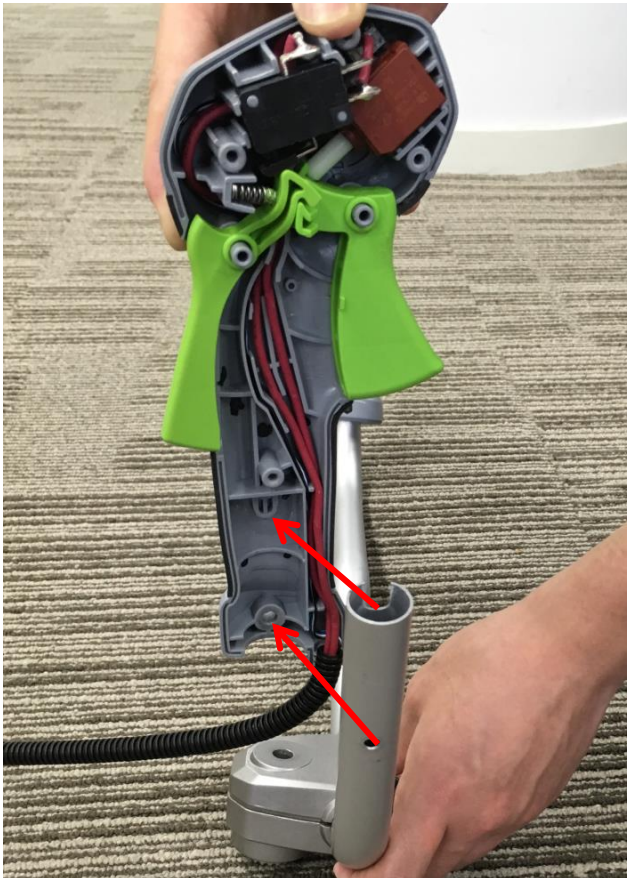
6. Assemble the connecting tube base set and connecting tube as well as assembling the shaft base set and shaft with screws.
7. Align the slot on the connecting tube with the rib on the left handle housing as well as aligning the hole on the connecting tube with the pole on the left handle housing. Fix the left handle housing set with screws.



# Replacing the Connecting Tube

BC1500E-F Bike Handle Line Trimmer

8. Align the slot on the connecting tube with the rib on the housing, as well as aligning the location pole on the housing with the hole on the connecting tube to mount the right handle housing set onto the connecting tube.
9. Lock the right handle housing set with 4 screws and 1 bolt with its washer and nut.



# Replacing the Connecting Tube

BC1500E-F Bike Handle Line Trimmer

10. Rotate the wing bolt to connect the shaft base set with the connecting tube base set.



## **Part 2: Replacing the Motor Assembly**

# Replacing the Motor Assembly

BC1500E-F Bike Handle Line Trimmer

1. Stop the motor and remove the battery from the string trimmer.
2. Loosen the two hex bolts in the guard with the M5 hex wrench, remove the guard from the shaft.



Description	Part Number
Guard Assembly	2824870002
Hex Bolt	5620216003
Spring Washer	5650015012

# Replacing the Motor Assembly

3. Press the release tabs on the lower housing assembly to remove the lower housing assembly.

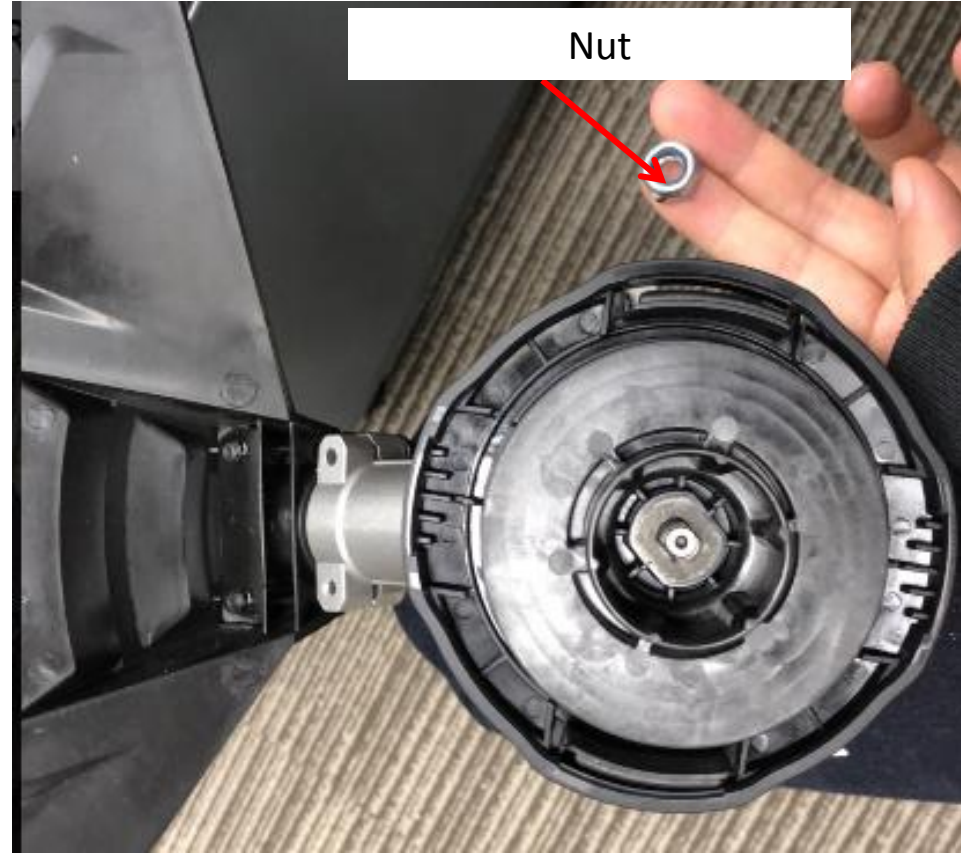


Description	Part Number	Qty.
Lower Housing Assembly	2826636001	1

# Replacing the Motor Assembly

BC1500E-F Bike Handle Line Trimmer

4. Rotate the nut counterclockwise to remove the nut.



Description	Part Number	Qty.
Nut	5630271001	1



# Replacing the Motor Assembly

BC1500E-F Bike Handle Line Trimmer

5. Pull spool out of the motor shaft.

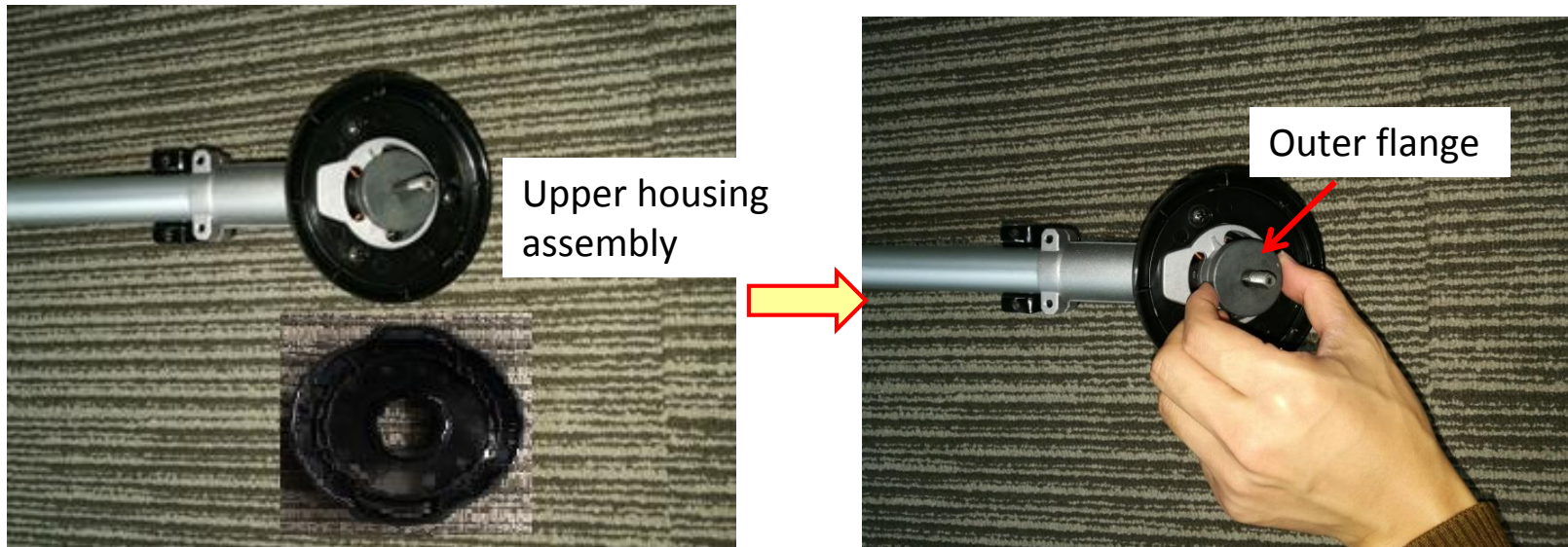


Description	Part Number	Qty.
Spool	2826062001	1

# Replacing the Motor Assembly

BC1500E-F Bike Handle Line Trimmer

6. Pull the upper housing assembly out of the motor shaft and then pull the outer flange out of the motor shaft.



Description	Part Number	Qty.
Upper housing assembly	2826063001	1
Outer flange	3520800001	1

# Replacing the Motor Assembly

BC1500E-F Bike Handle Line Trimmer

7. Loosen the three screws on the shield cover, remove the shield cover from the motor assembly.

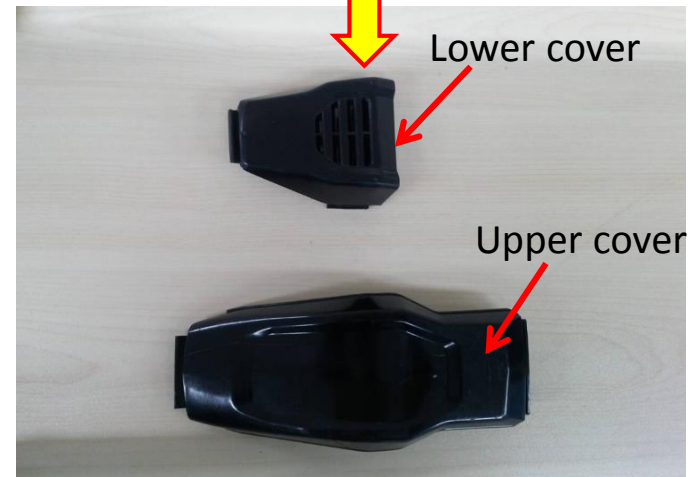


Description	Part Number	Qty.
Shield cover	3127655001	1
Screw	5610059007	1
washer	5650396003	1

# Replacing the Motor Assembly

BC1500E-F Bike Handle Line Trimmer

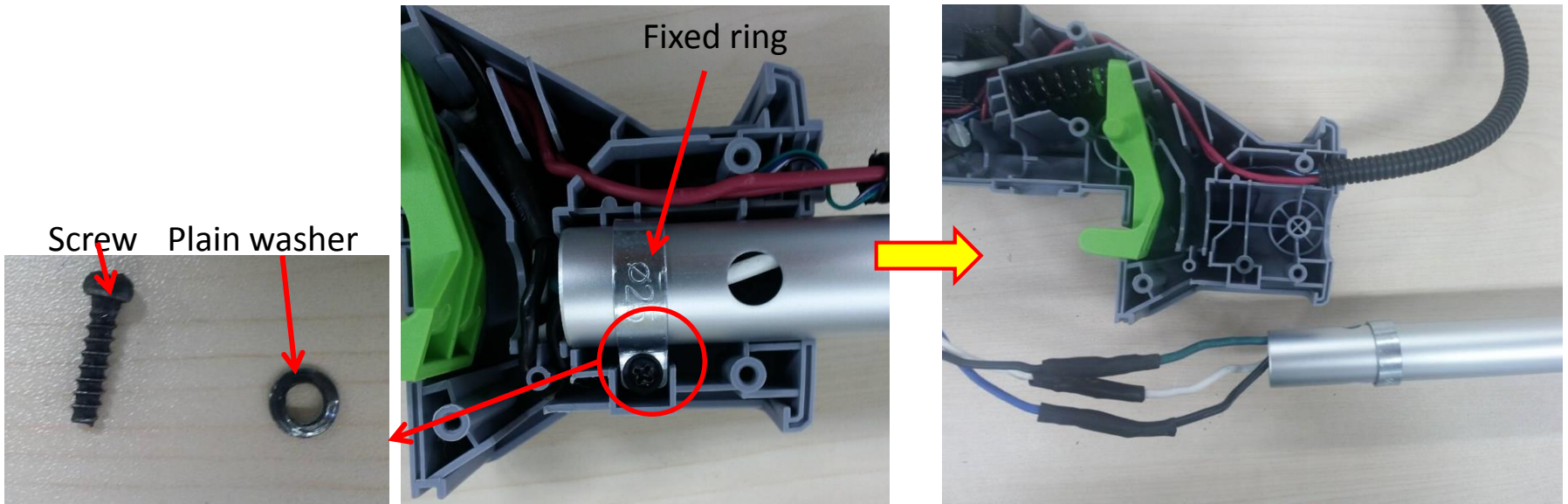
8. Loosen the 7 screws in the rear housing. Remove the housing, upper cover and lower cover.



Description	Part Number	Qty.
Rear housing	2824012001	1
Lower cover	3127675002	1
Upper cover	3127650001	1

# Replacing the Motor Assembly

9. Loosen and remove the locking screw on the fixed ring to separate the shaft from the housing. Move the shaft to the side and pull out the three cables wrapped with heat-shrinkable sleeves. This makes replacing the motor assembly easier.



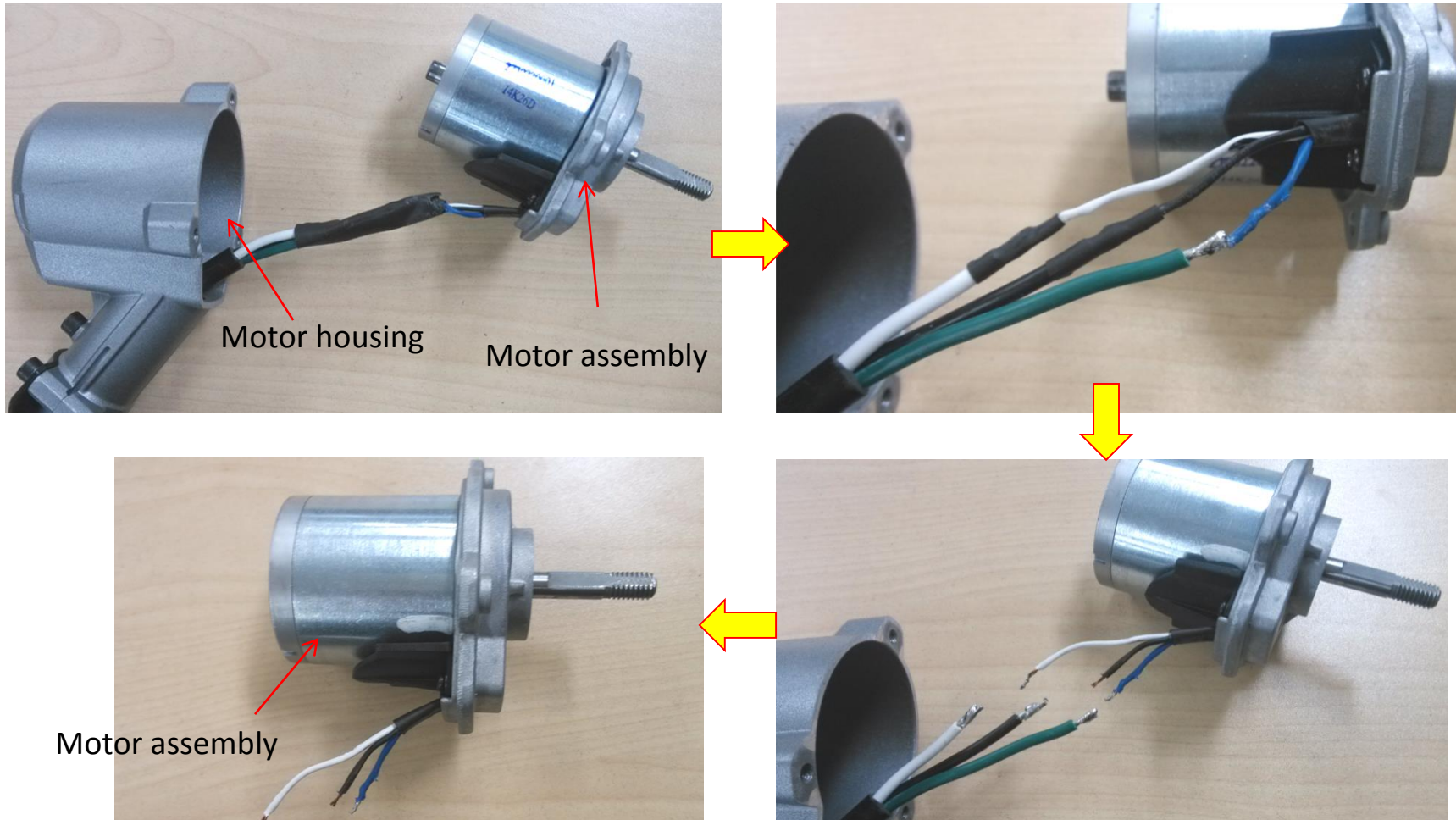
Description	Part Number	Qty.
Fixed ring	3705178001	1
Screw	5610294001	1
Plain washer	5650005002	1

# Replacing the Motor Assembly

BC1500E-F Bike Handle Line Trimmer

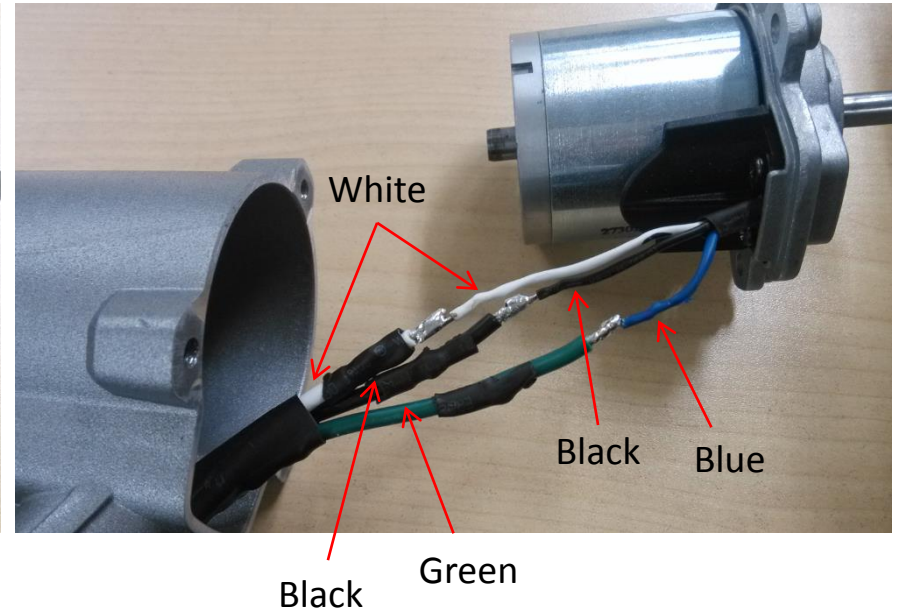
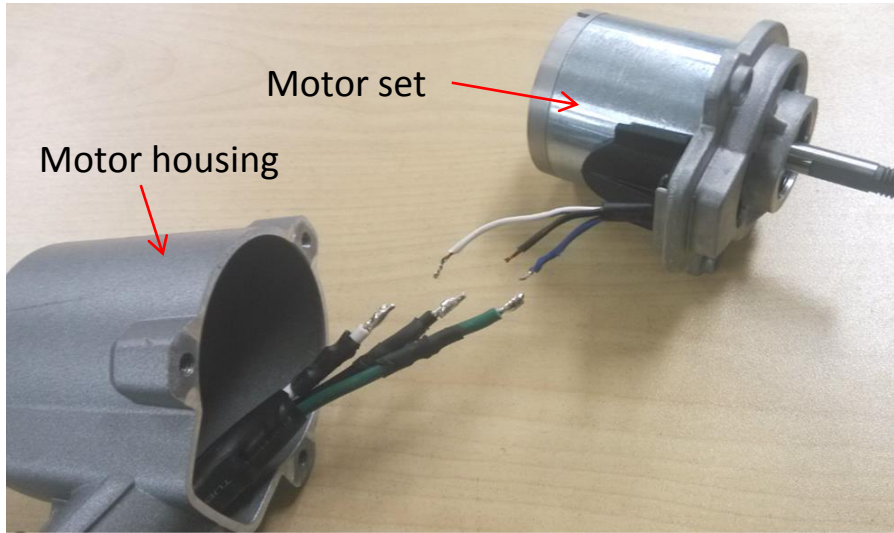
10. Take out the motor assembly from the motor housing.

11. Remove the heat-shrinkable sleeves from the cables and disconnect the cables.



# Replacing the Motor Assembly

12. Replace the damaged motor with a new one.
13. The motor housing can be replaced as well if it is broken or worn.
14. Place new heat-shrinkable sleeves through the cables. Connect the cables with electric soldering iron. Correct connection: White to White, Black to Black, Blue to Green.



Description	Part Number	Qty.
Motor housing	3421602001	1
Motor set	2730220001	1

# Replacing the Motor Assembly

BC1500E-F Bike Handle Line Trimmer

15. Move the heat-shrinkable sleeves to cover the soldering points and use a hot air gun to shrink the sleeves.



16. Position the motor assembly into the motor housing; mount the shield cover on the motor assembly and lock it with three screws and washers.

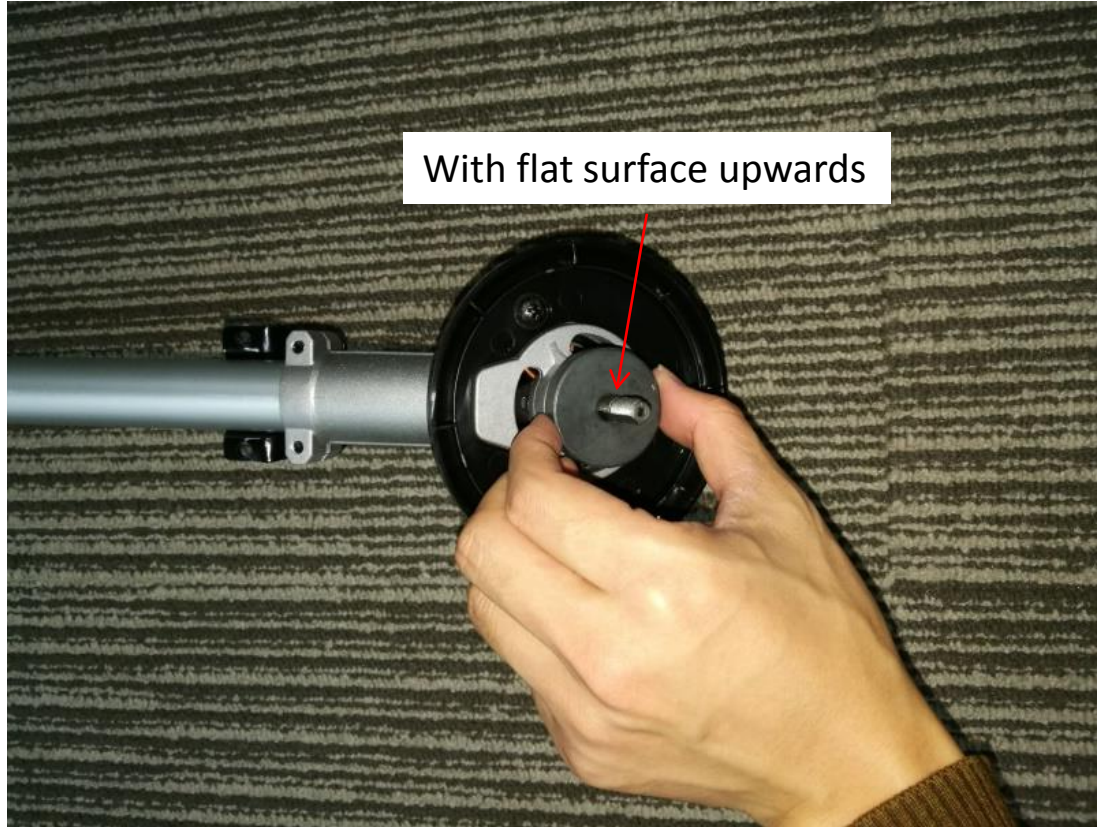




# Replacing the Motor Assembly

BC1500E-F Bike Handle Line Trimmer

17. Put the outer flange onto the shaft.



# Replacing the Motor Assembly

BC1500E-F Bike Handle Line Trimmer

18. Mount the upper housing & spool & nut , then pre-tighten it by hand and then tighten it clockwise with a socket wrench.



# Replacing the Motor Assembly

BC1500E-F Bike Handle Line Trimmer

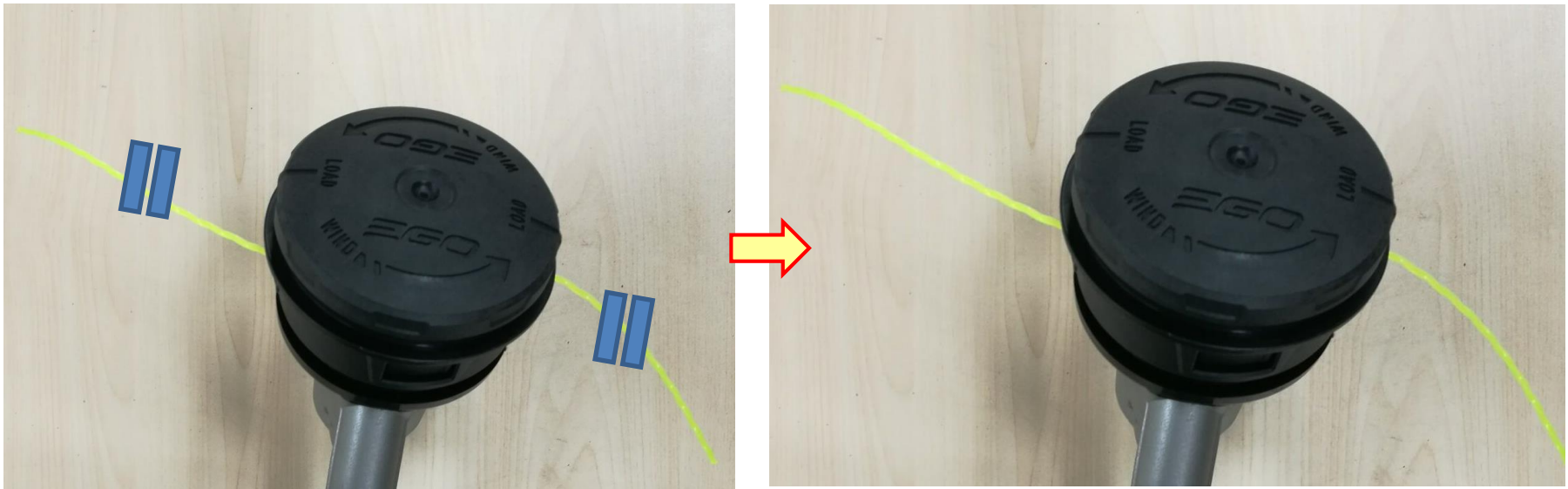
19. Align the release tabs with the holes to mount the lower housing assembly onto the upper housing assembly.



# Replacing the Motor Assembly

BC1500E-F Bike Handle Line Trimmer

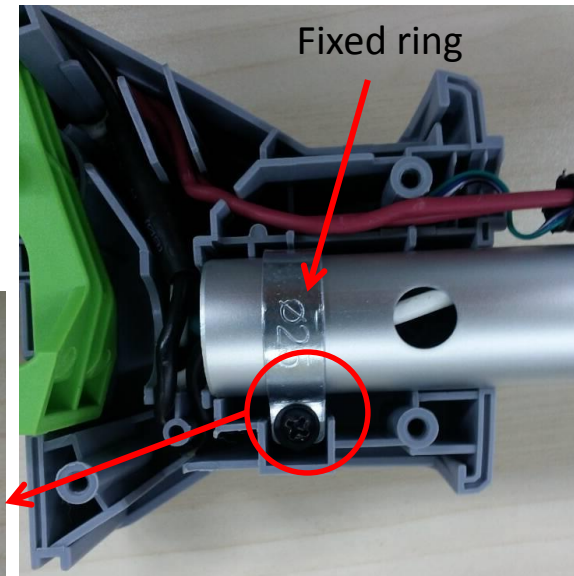
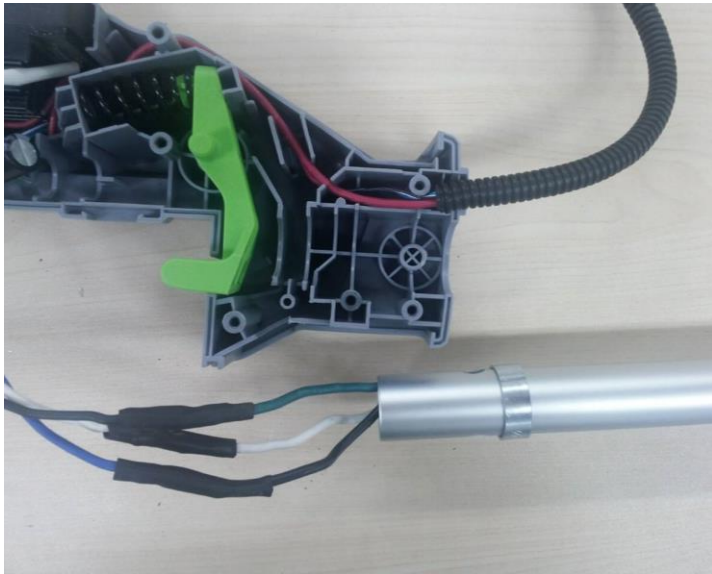
20. Cut one piece of trimmer line 5m long. Insert the line into the mounting hole inside the eyelet. Push and pull the line from the other side until equal amounts of line appear on both sides of the spool.
21. Rotate the lower housing assembly counterclockwise to wind the line on the spool until approximately 14cm of line is showing on each side.



# Replacing the Motor Assembly

BC1500E-F Bike Handle Line Trimmer

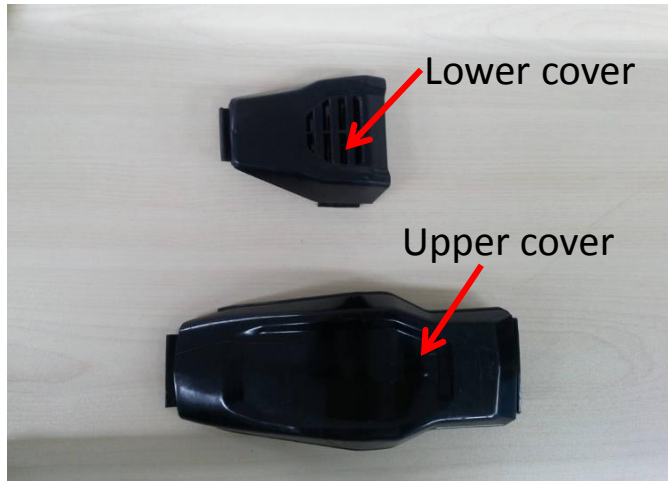
22. Put the cables into its groove and assemble shaft with the rear housing with fixed ring.



Description	Part Number	Qty.
Fixed ring	3705178001	1
Screw	5610294001	1
Plain washer	5650005002	1

# Replacing the Motor Assembly

23. Mount the lower cover and upper cover onto the rear housing and assemble the rear housing with screws.



Description	Part Number	Qty.
Rear housing	2824012001	1
Lower cover	3127675002	1
Upper cover	3127650001	1

## **Part 3: Replacing the PCB Assembly**

# Replacing the PCB Assembly

BC1500E-F Bike Handle Line Trimmer

1. Disassemble the right handle housing set as shown in “Replacing the Connecting Tube” section.





# Replacing the PCB Assembly

2. Disassemble the rear housing as shown in the “Replacing the motor” section, and then loosen the locking screw on the fixed ring to separate the shaft from the housing.

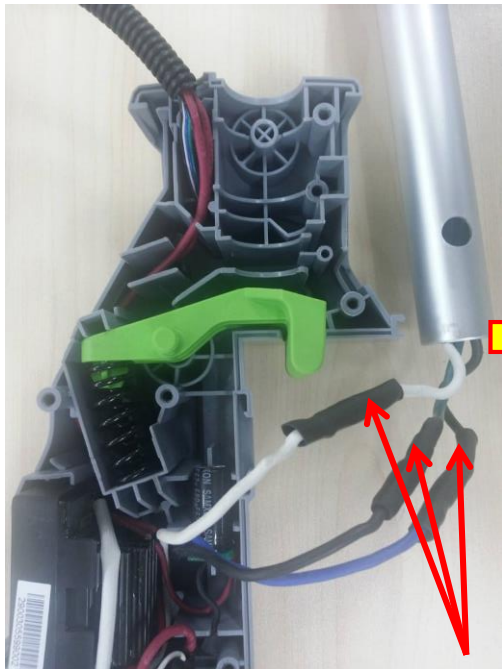


Description	Part Number	Qty.
Fixed ring	3705178001	1
Tapping screw	5610294001	1
Plain washer	5650005002	1

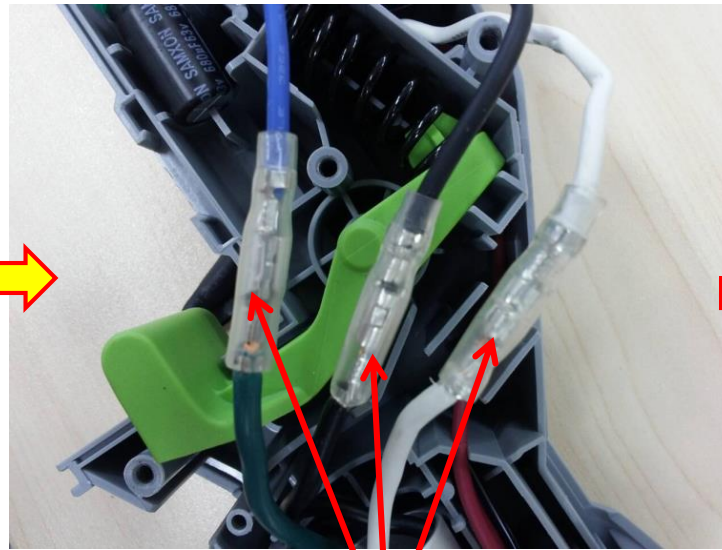
# Replacing the PCB Assembly

BC1500E-F Bike Handle Line Trimmer

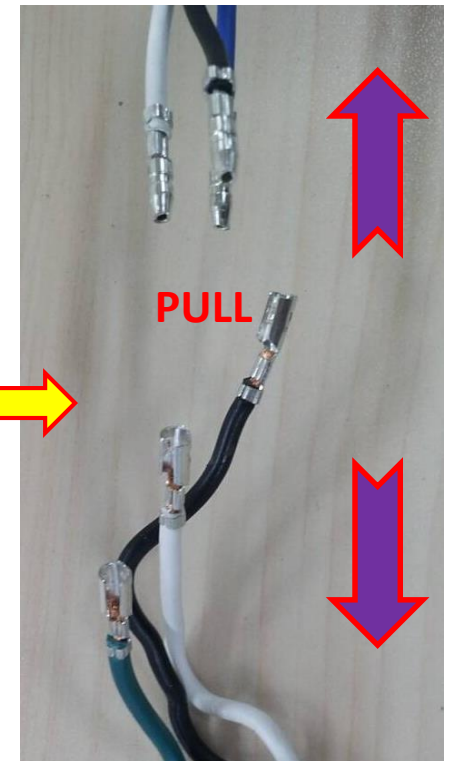
3. Remove the heat-shrinkable sleeves from the connectors with a scissor.
4. Move the transparent sleeves aside and pull the connectors to separate.



Heat-shrinkable sleeve



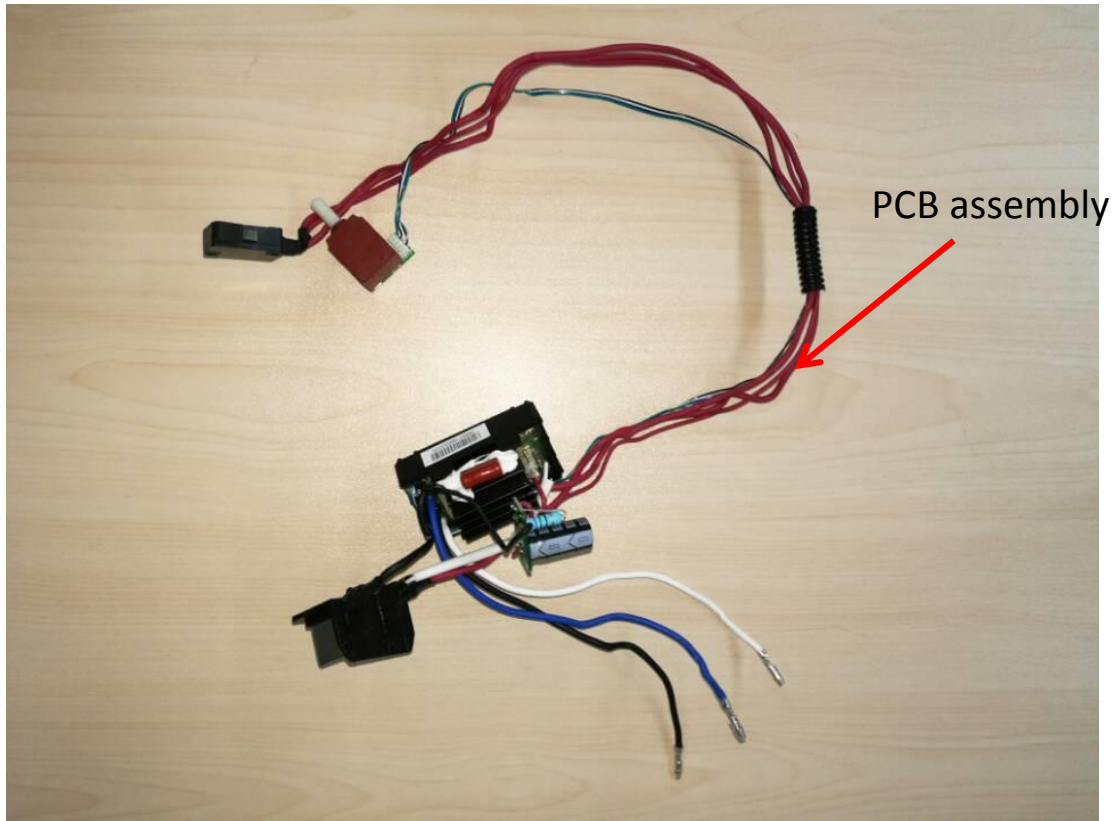
Transparent sleeve



# Replacing the PCB Assembly

BC1500E-F Bike Handle Line Trimmer

5. Remove the PCB assembly from the housing and replace it with a new one.

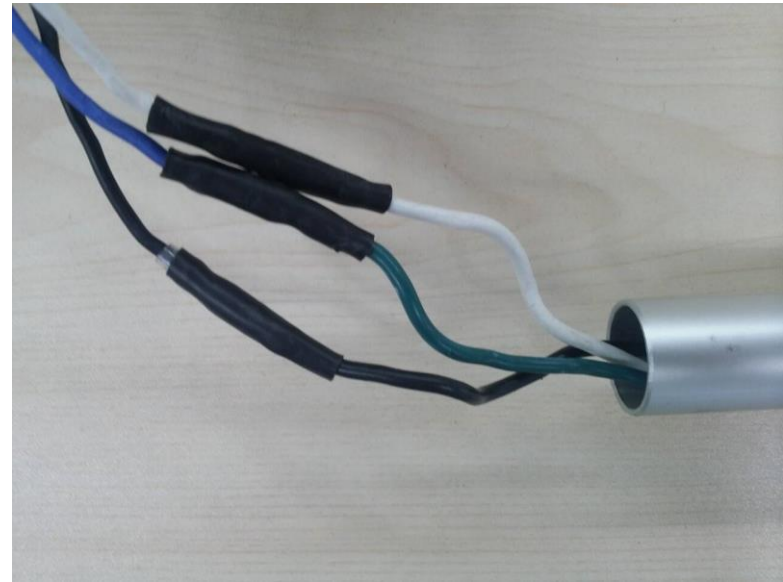
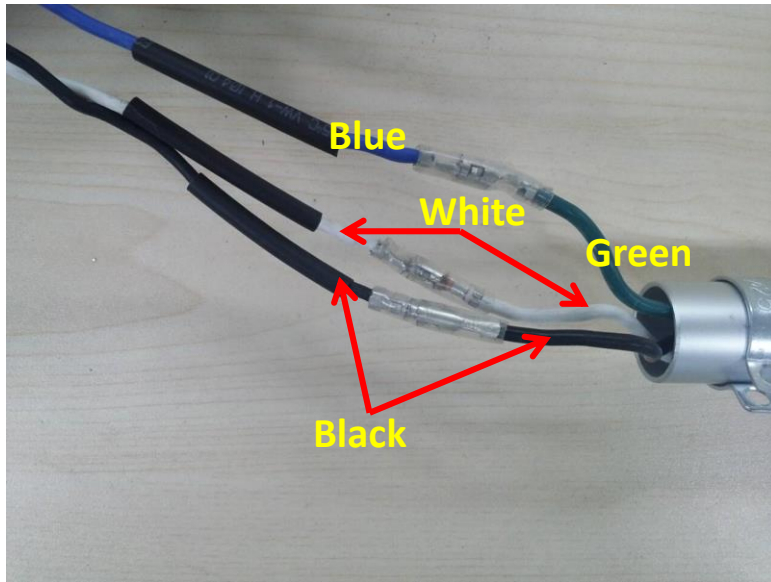


Description	Part Number	Qty.
PCB assembly	2830211001	1

# Replacing the PCB Assembly

BC1500E-F Bike Handle Line Trimmer

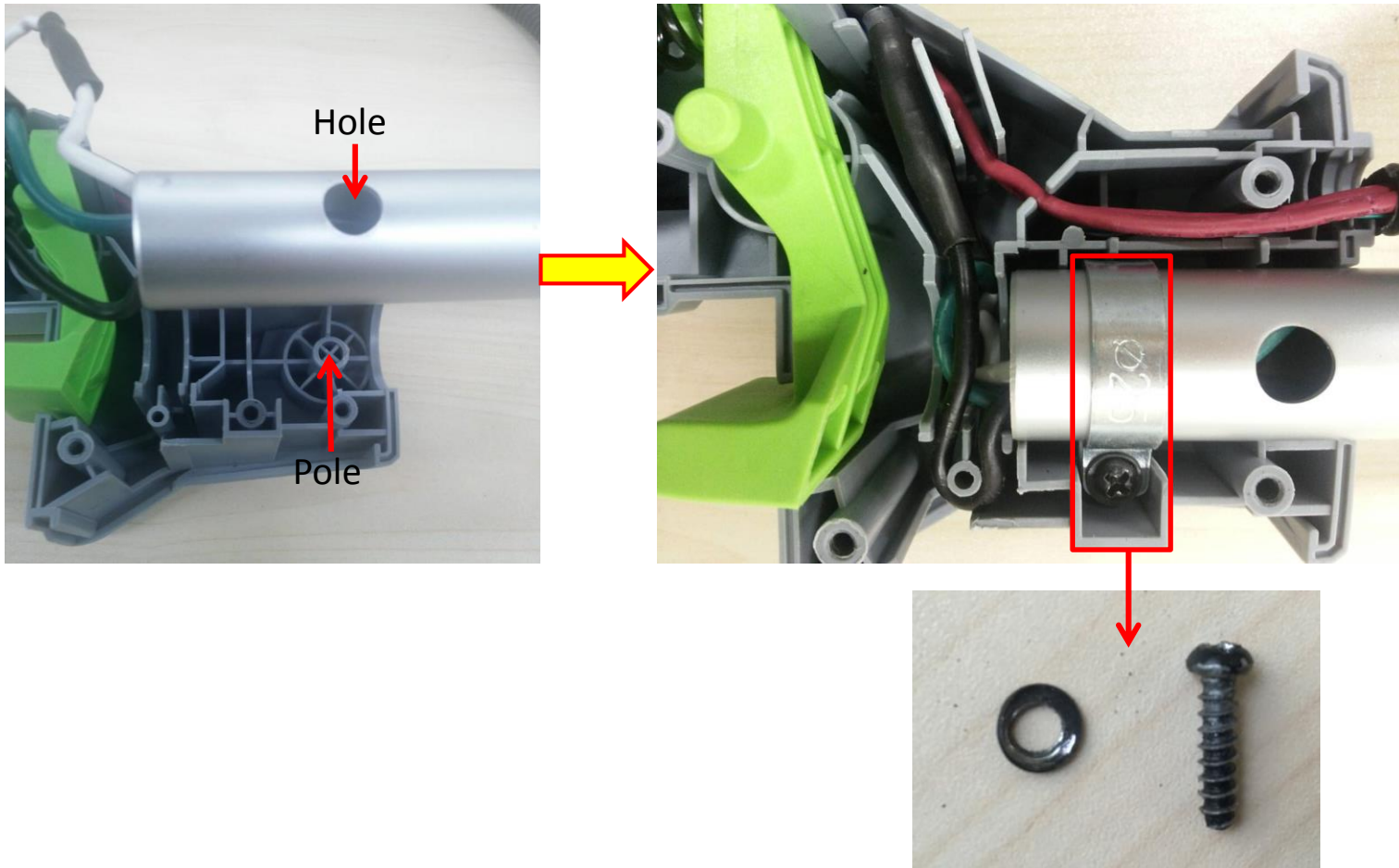
6. Place new heat-shrinkable sleeves over the connectors.
7. Plug the three connectors, ensuring they are fully inserted.  
**Correct direction: blue to green, white to white, black to black.**
8. Move the transparent sleeves and the heat-shrinkable sleeves to cover the connectors and use heat gun to shrink the sleeves.



# Replacing the PCB Assembly

BC1500E-F Bike Handle Line Trimmer

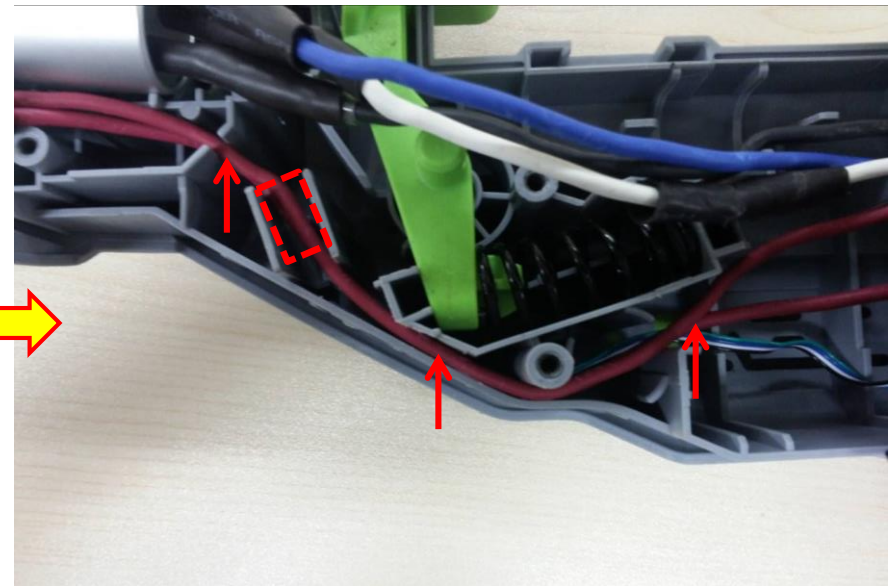
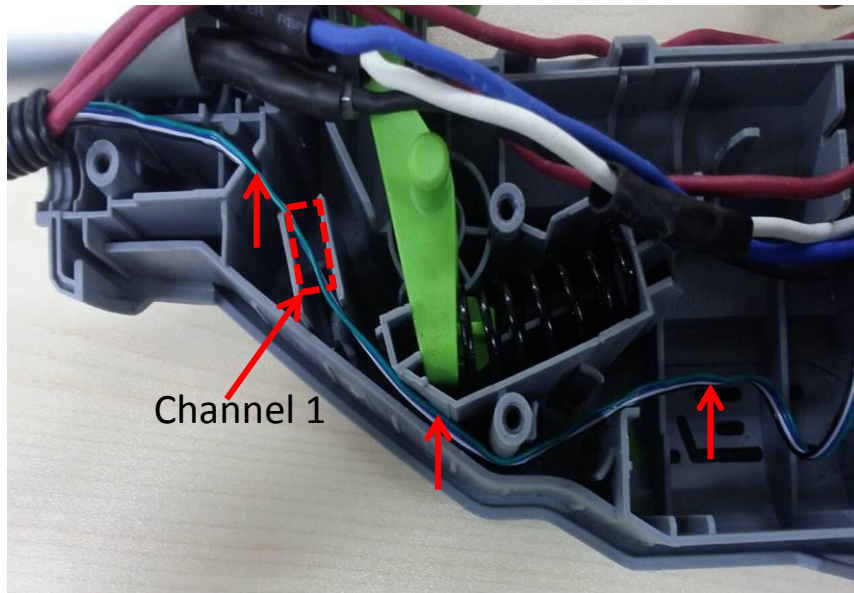
- Align the hole in the shaft with the pole on the housing and then fasten the fixed ring with the screw and the washer to connect the shaft with the rear housing.



# Replacing the PCB Assembly

BC1500E-F Bike Handle Line Trimmer

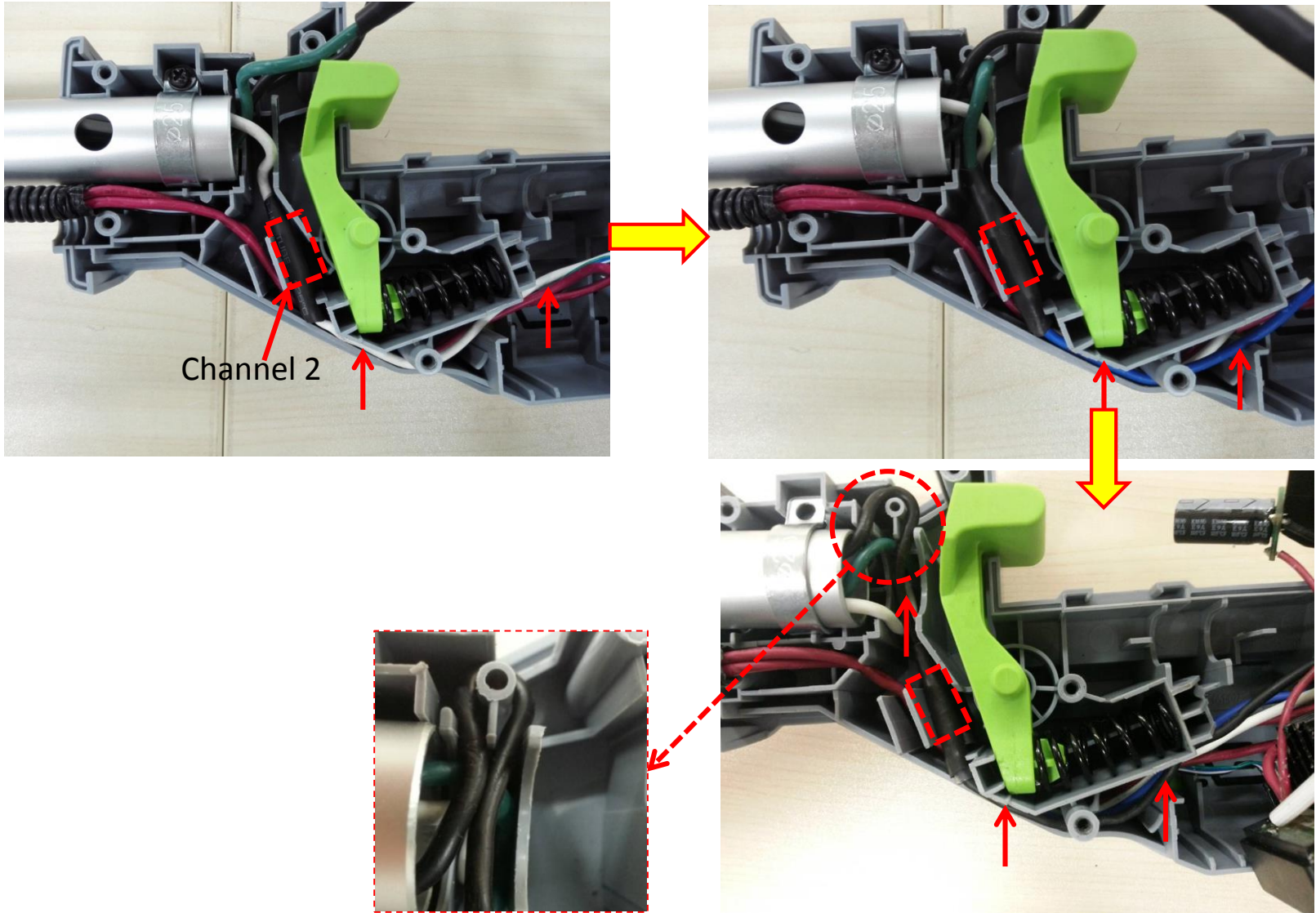
10. Place the wires in the housing grooves in sequence.
  - a) Align the thin cables (green, white and black) into the bottom of the housing groove through channel 1.
  - b) Align the two red cables into the groove through channel 1.



# Replacing the PCB Assembly

BC1500E-F Bike Handle Line Trimmer

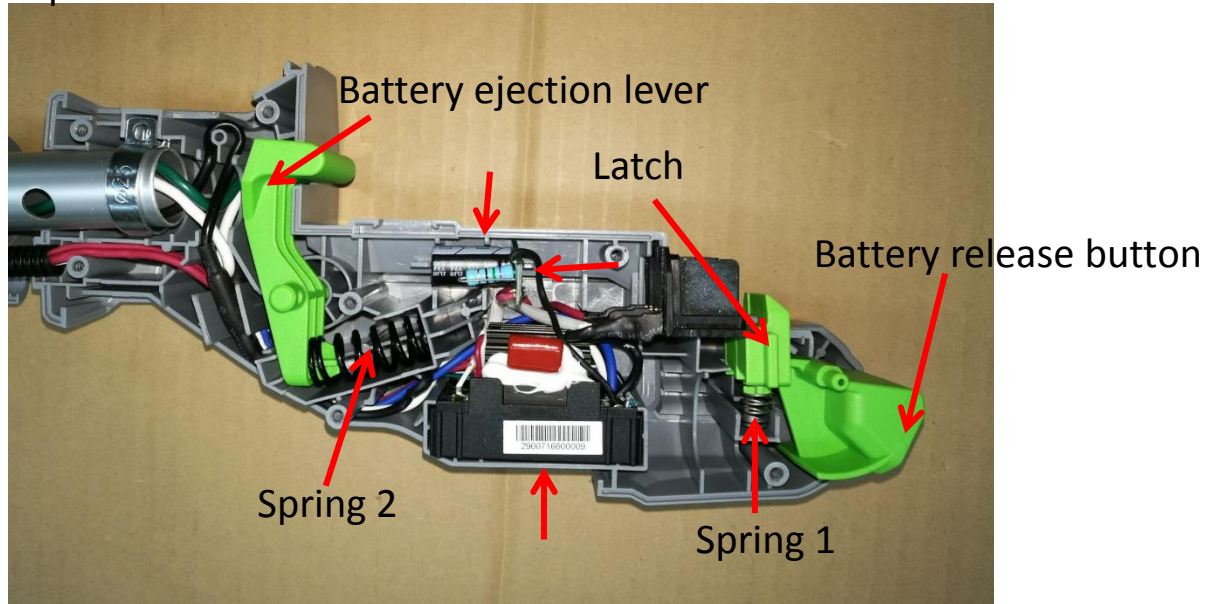
c) Align the cables connected with the motor through channel 2.



# Replacing the PCB Assembly

BC1500E-F Bike Handle Line Trimmer

11. Position the PCB assembly into the housing.
12. The battery release button, battery ejection lever, latch or springs can be replaced when the rear handle housing is open.



Description	Part Number	Qty.
Latch	3127202001	1
Battery ejection lever	3127206001	1
Battery release button	3127201001	1
Spring 1	3660013003	1
Spring 2	3660129002	1



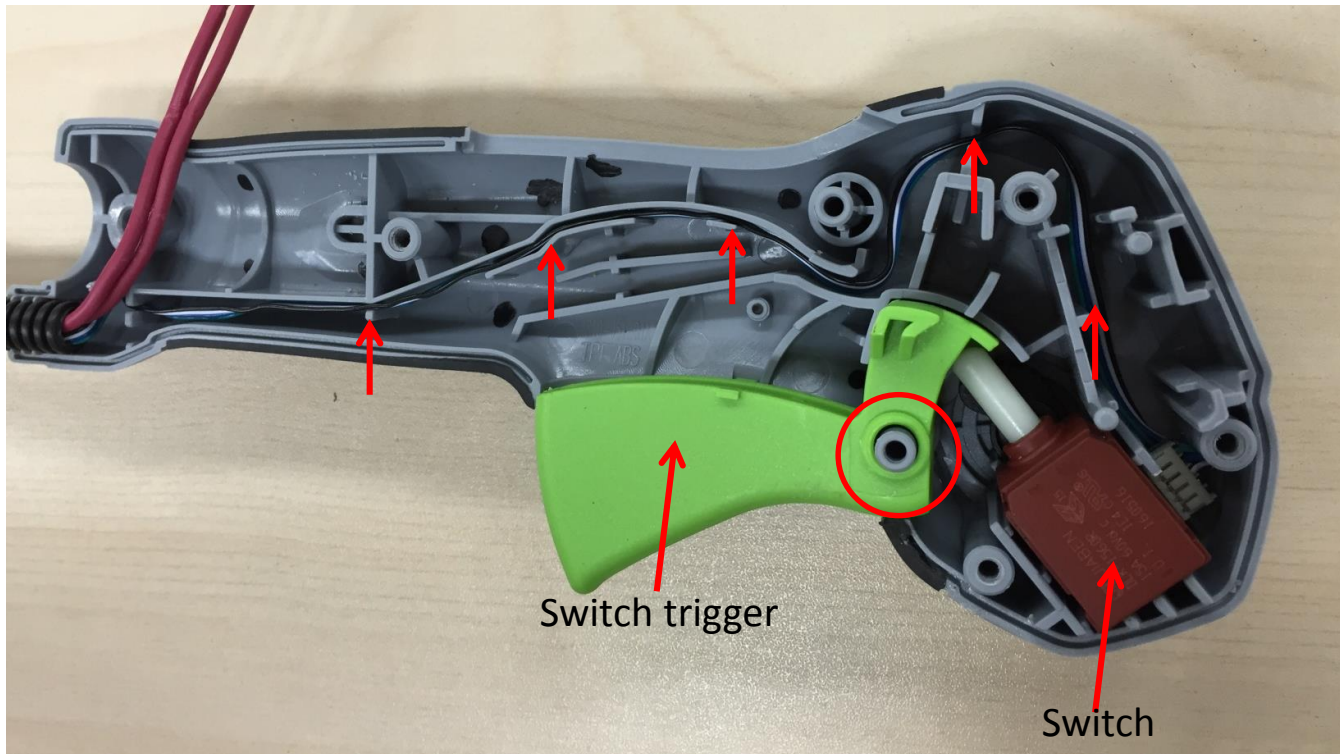
13. Assemble the rear housing.



# Replacing the PCB Assembly

BC1500E-F Bike Handle Line Trimmer

14. Align cables and position parts into the right handle housing.
  - a) Align the hole in the switch trigger with the pole on the right handle housing.
  - b) Place the switch in position and align the thin wires as shown.



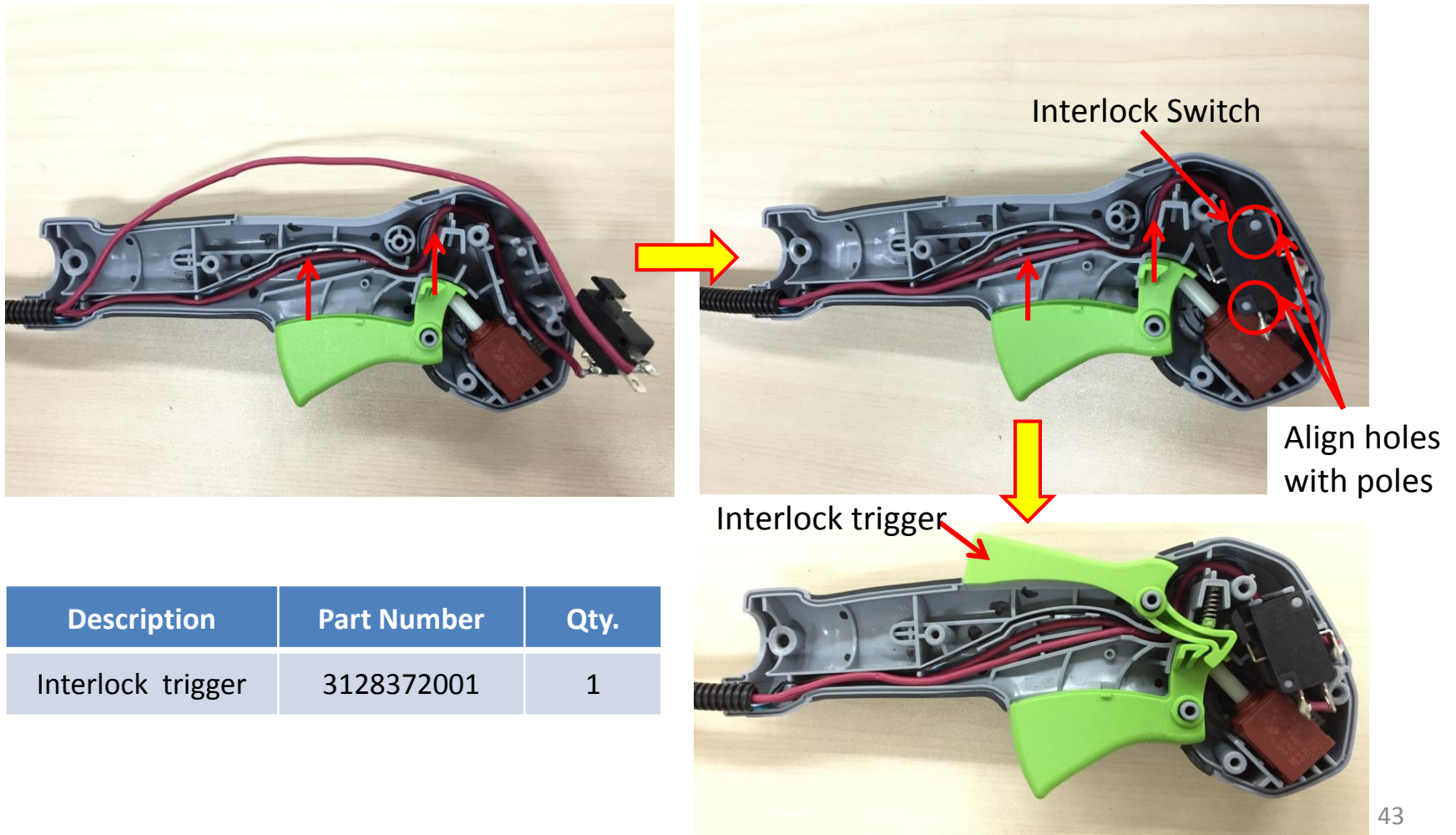
Description	Part Number	Qty.
Switch trigger	3128373001	1

# Replacing the PCB Assembly

BC1500E-F Bike Handle Line Trimmer

- c) Place the interlock switch into the correct position aligning the two red cables one by one.
- d) Place the interlock trigger into the right handle housing.

**NOTICE:** if the switch trigger or interlock trigger is broken or worn, replace it with a new one.



Description	Part Number	Qty.
Interlock trigger	3128372001	1

# Replacing the PCB Assembly

BC1500E-F Bike Handle Line Trimmer

15. Assemble the right handle housing set as shown in the “Replacing the Connecting Tube” section.



THE END