

# REPAIR GUIDELINE

## Bike Handle Line Trimmer \_BC1500E



*Version:1*

*Issue Data: 06/28/2016*

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Problem	Possible Cause	Fault Position	Test & Solution
Inferior	Line not feeding	Trimmer line	Replace the cutting line. (e.g. 2.4mm nylon line)
Failure	The cables that connect to motor are loose or have fallen off the motor.	Motor	Open the motor housing, check the cable connection with motor.
	Motor is burnt	Motor	If the cables are connected, check the motor and test with a new motor.
	PCB assembly is damaged	PCB assembly in rear housing	If the cables are connected, and motor is functional, replace the PCB assembly in the rear housing.
The battery pack does not lock into the trimmer properly; or is 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 is working.	Motor damaged due to overload	Motor	Replace the motor

# Tool List For Repair

BC1500E Bike Handle Line Trimmer

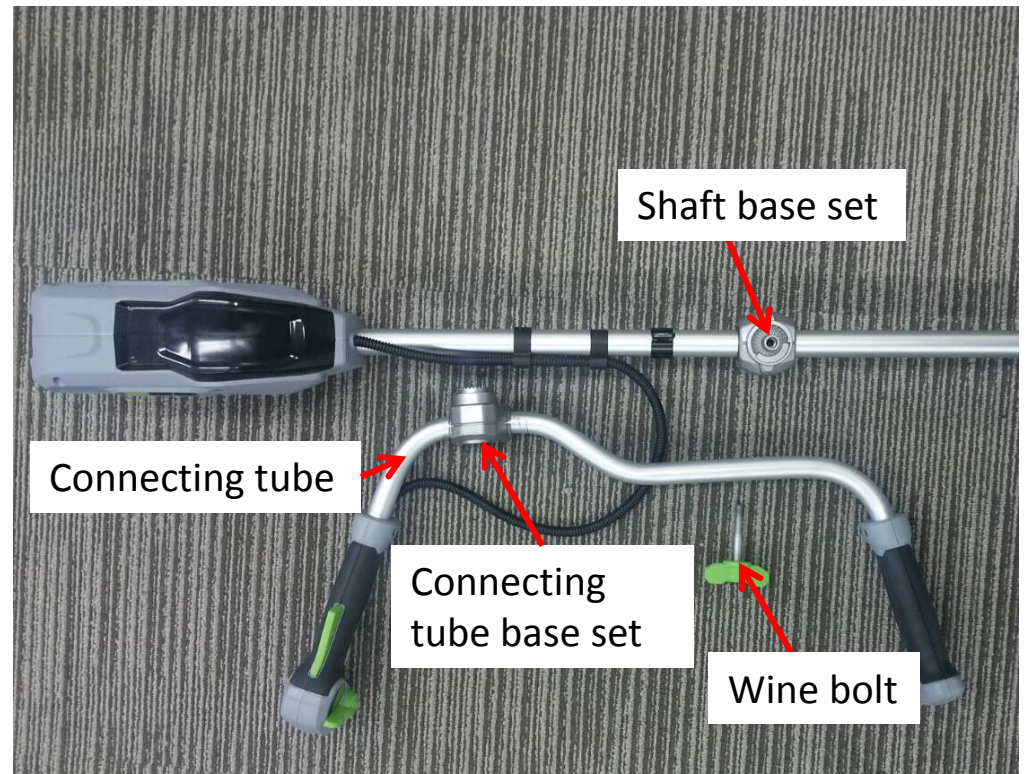
NO.	Tool List	SPEC	Remark
1	Magnetic bits		
2	Socket wrench	13mm	
3	Hex wrench	4mm	
4	Electric soldering iron		
5	Heat gun		
6	Heat shrinkable sleeves		
7	Scissors		To remove the shrinkable sleeves

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

# Replacing the Connecting tube

BC1500E Bike Handle Line Trimmer

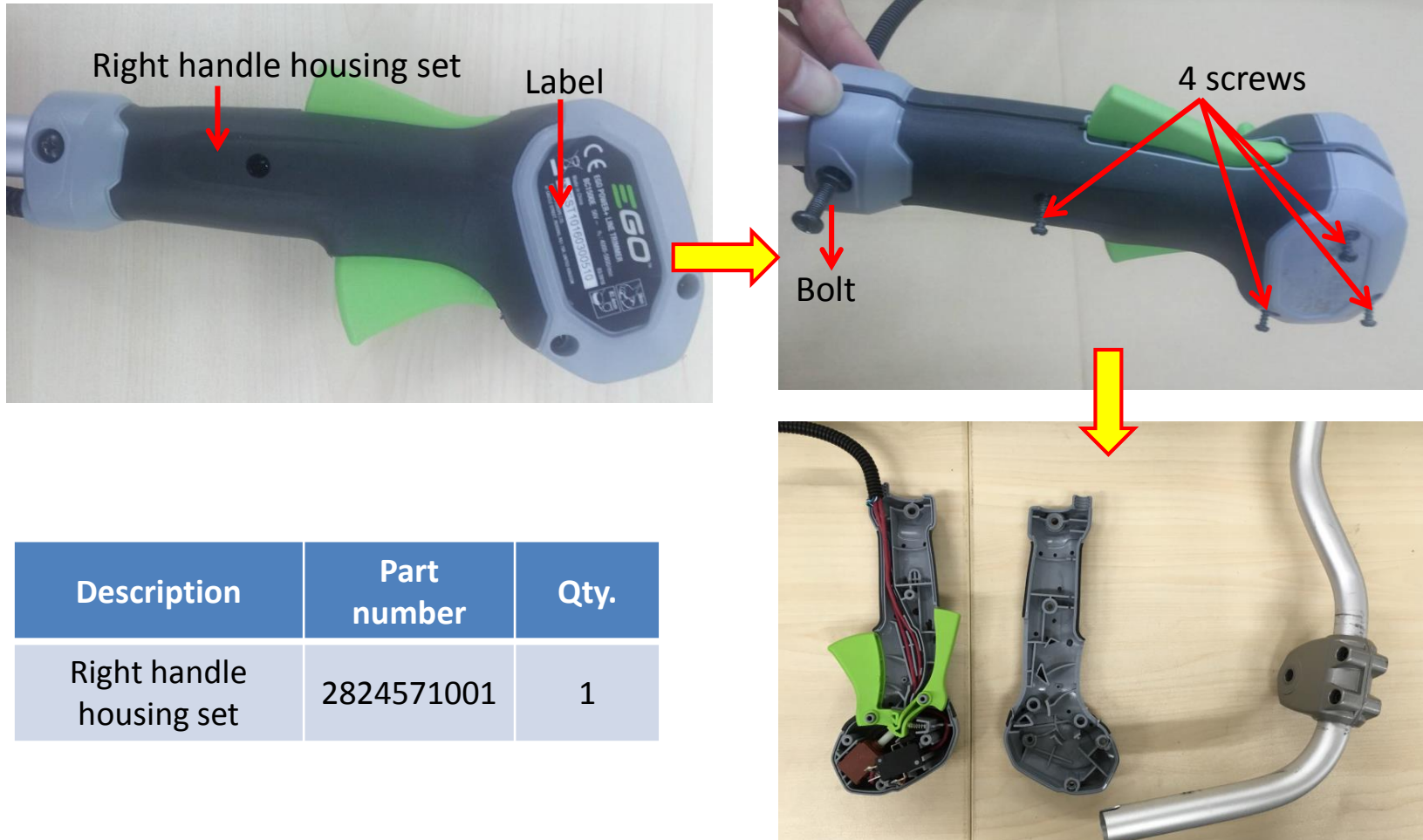
1. Stop the motor and remove the battery pack from the line trimmer.
2. Rotate the wing bolt counterclockwise to separate the connecting tube base set from the shaft base set and set the connecting tube aside.



# Replacing the Connecting tube

BC1500E 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 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.



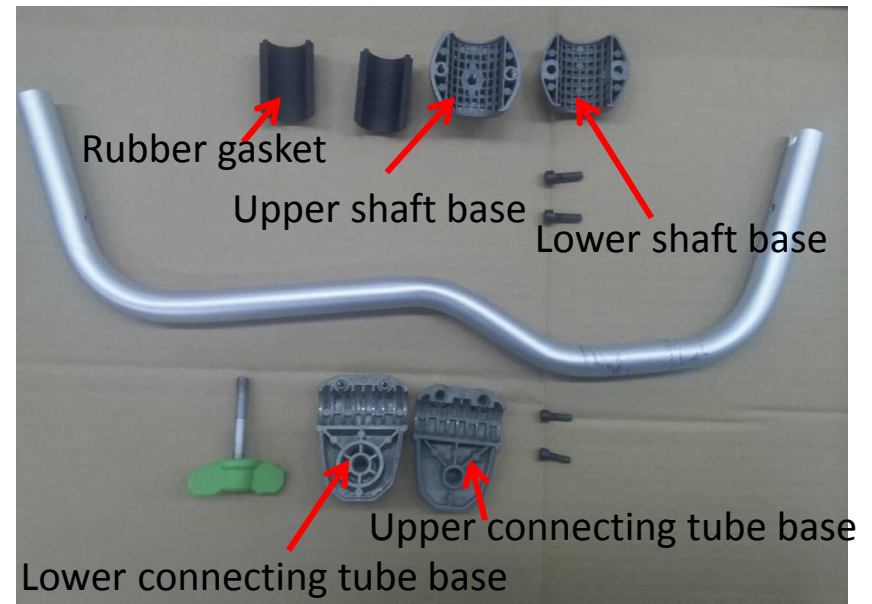
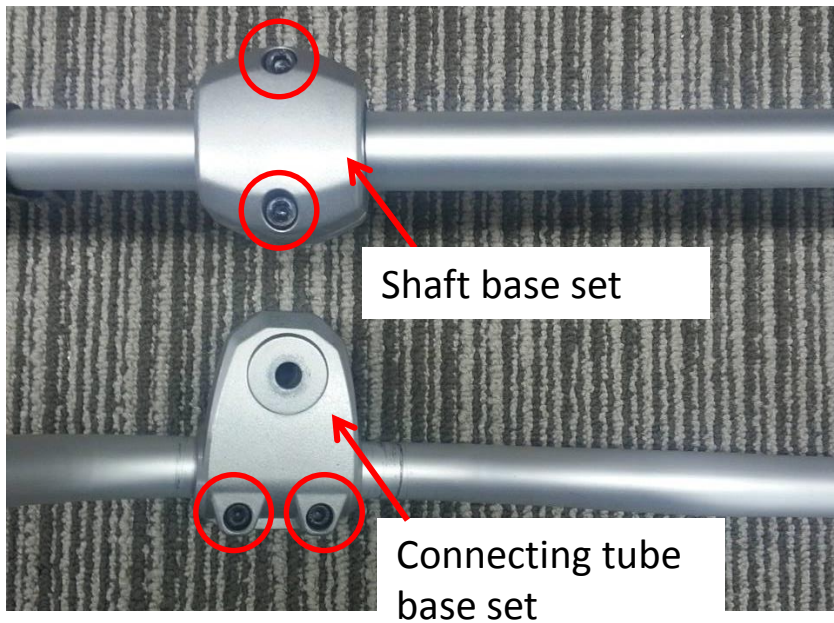
Description	Part Number	Qty.
Left handle housing set	2824570001	1



# Replacing the Connecting tube

- 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	5620019004	1	Upper shaft base	3421813001	1
Lower connecting tube base	3421811001	1	Lower shaft base	3421810001	1

# Replacing the Connecting tube

BC1500E Bike Handle Line Trimmer

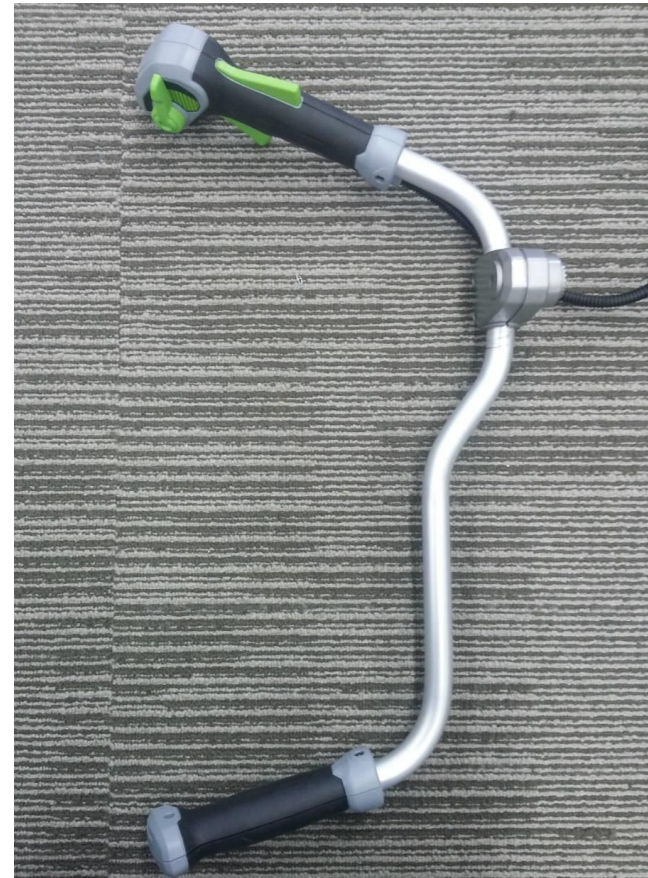
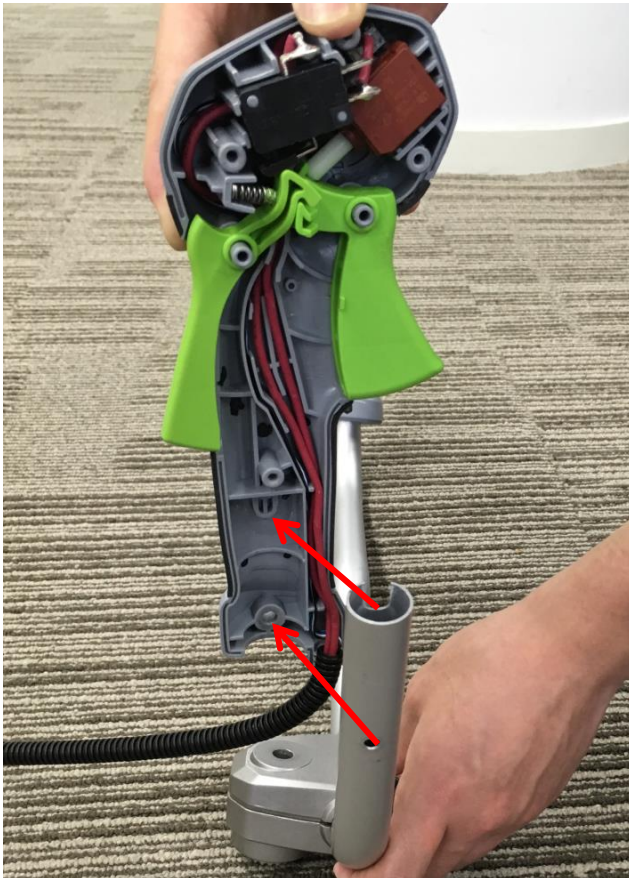
6. Assemble the connecting tube base set and connecting tube as well as assembling the shaft base set and shaft with screws.
7. Align the slot on the connecting tube with the rib on the left handle housing as well as aligning the hole on the connecting tube with the pole on the left handle housing. Fix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



# Replacing the Connecting tube

BC1500E 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 Bike Handle Line Trimmer

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

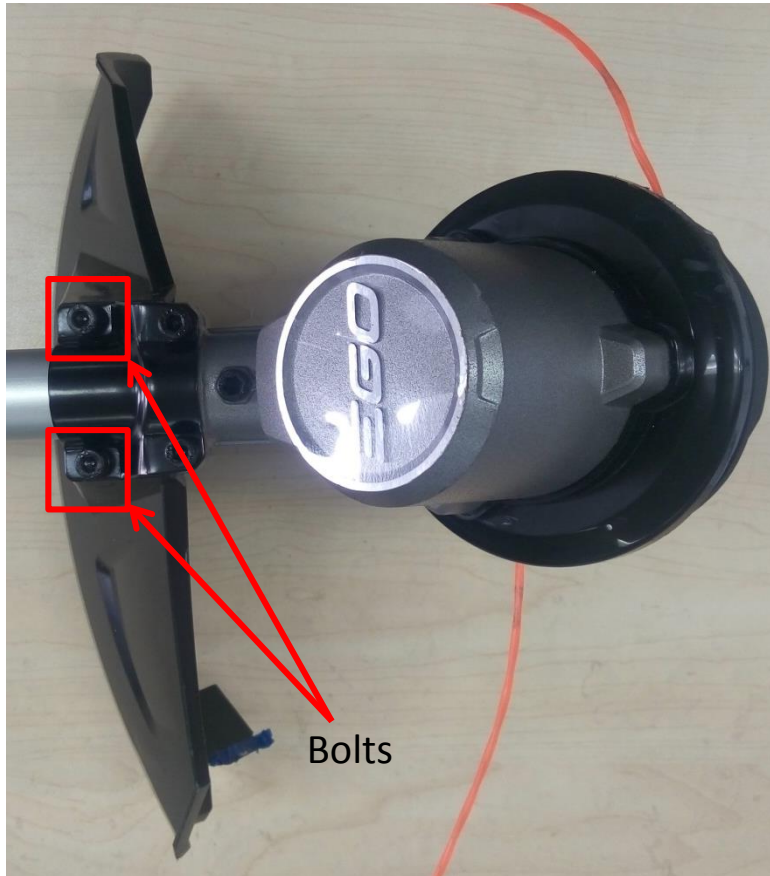


## **Part 2: Replacing the Motor Assembly**

# Replacing the Motor Assembly

BC1500E Bike Handle Line Trimmer

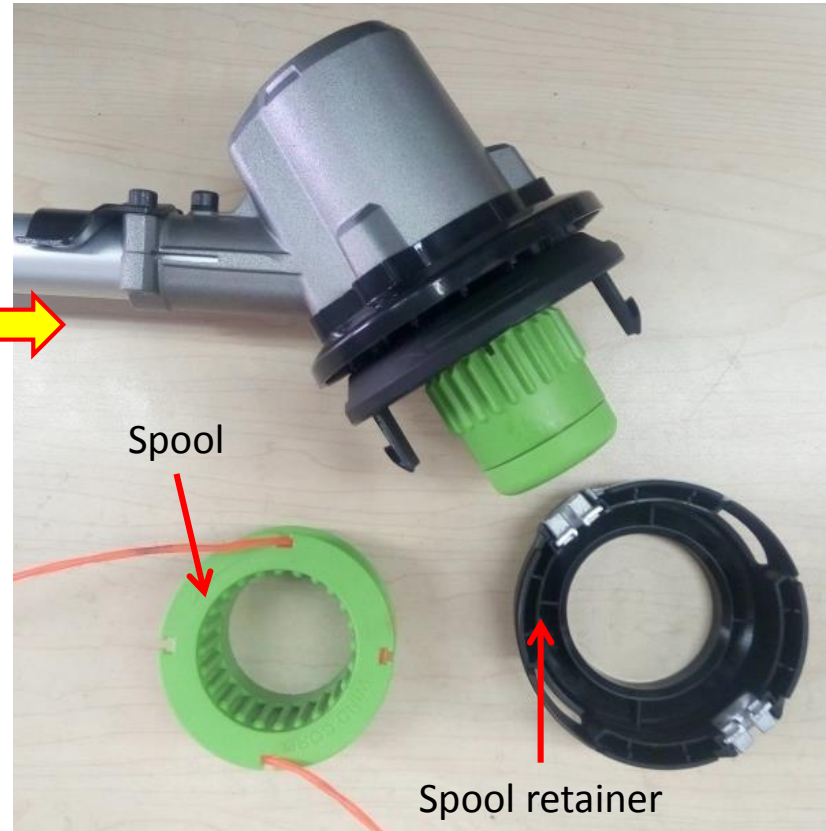
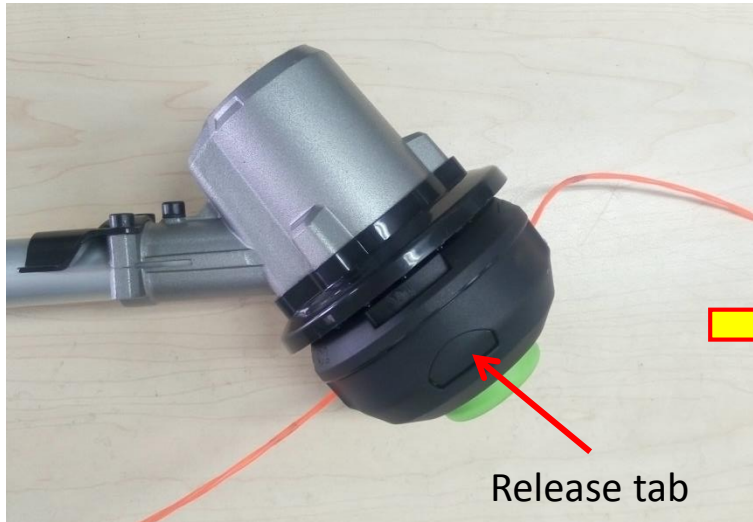
1. Loosen the two hex bolts in the guard with a 4mm hex wrench, remove the guard from the shaft.



Description	Part Number	Qty.
Spring washer	5650015012	2
Guard	2824117001	1
Hex bolt	5620216003	2

# Replacing the Motor Assembly

2. Press the release tabs on the upper housing to remove the spool and spool retainer.



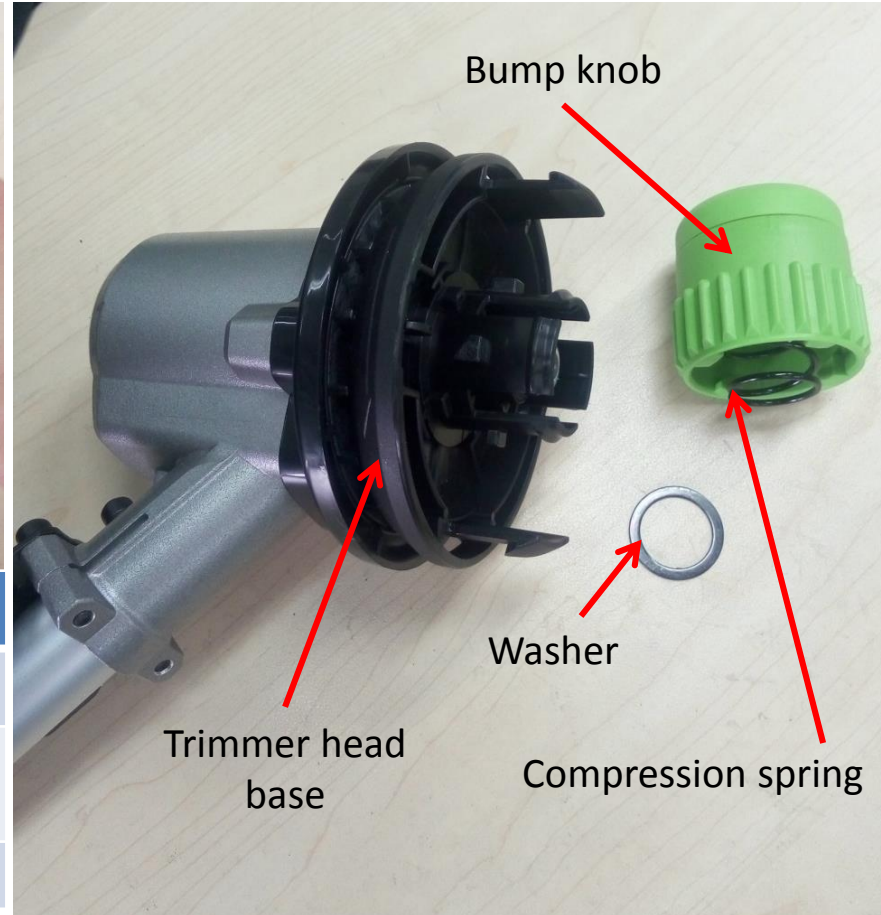
Description	Part Number	Qty.
Spool retainer	2824019002	1
Spool	3127635001	1

# Replacing the Motor Assembly

3. Hold the bump knob and pull it straight out. Remove the bump knob, compression spring and washer from the trimmer head base.



Description	Part Number	Qty.
Bump knob	2824022001	1
Compression spring	3660582001	1
Washer	5650349002	1

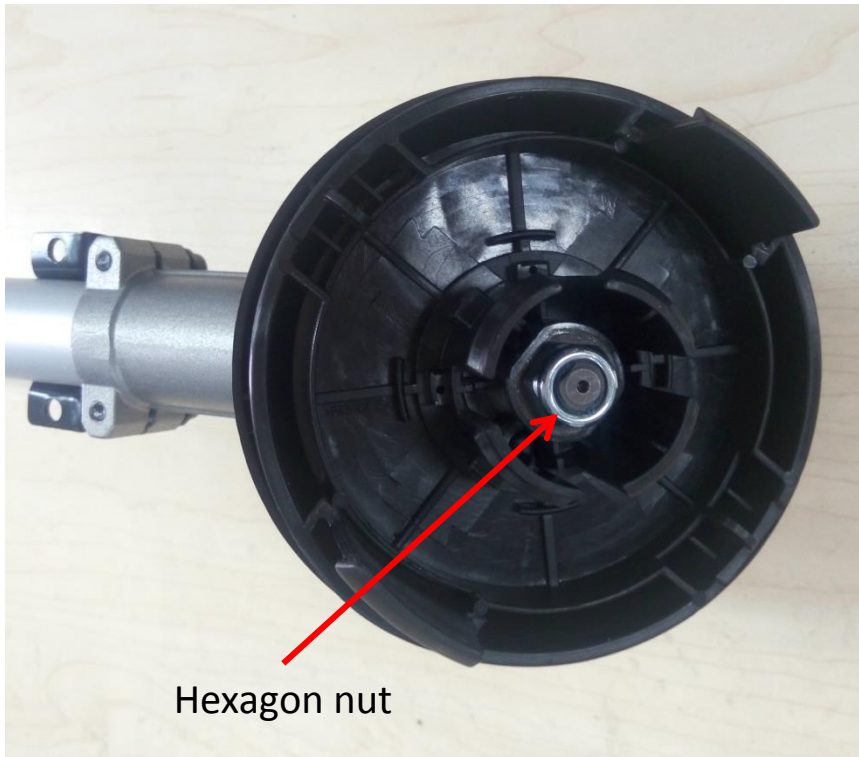




# Replacing the Motor Assembly

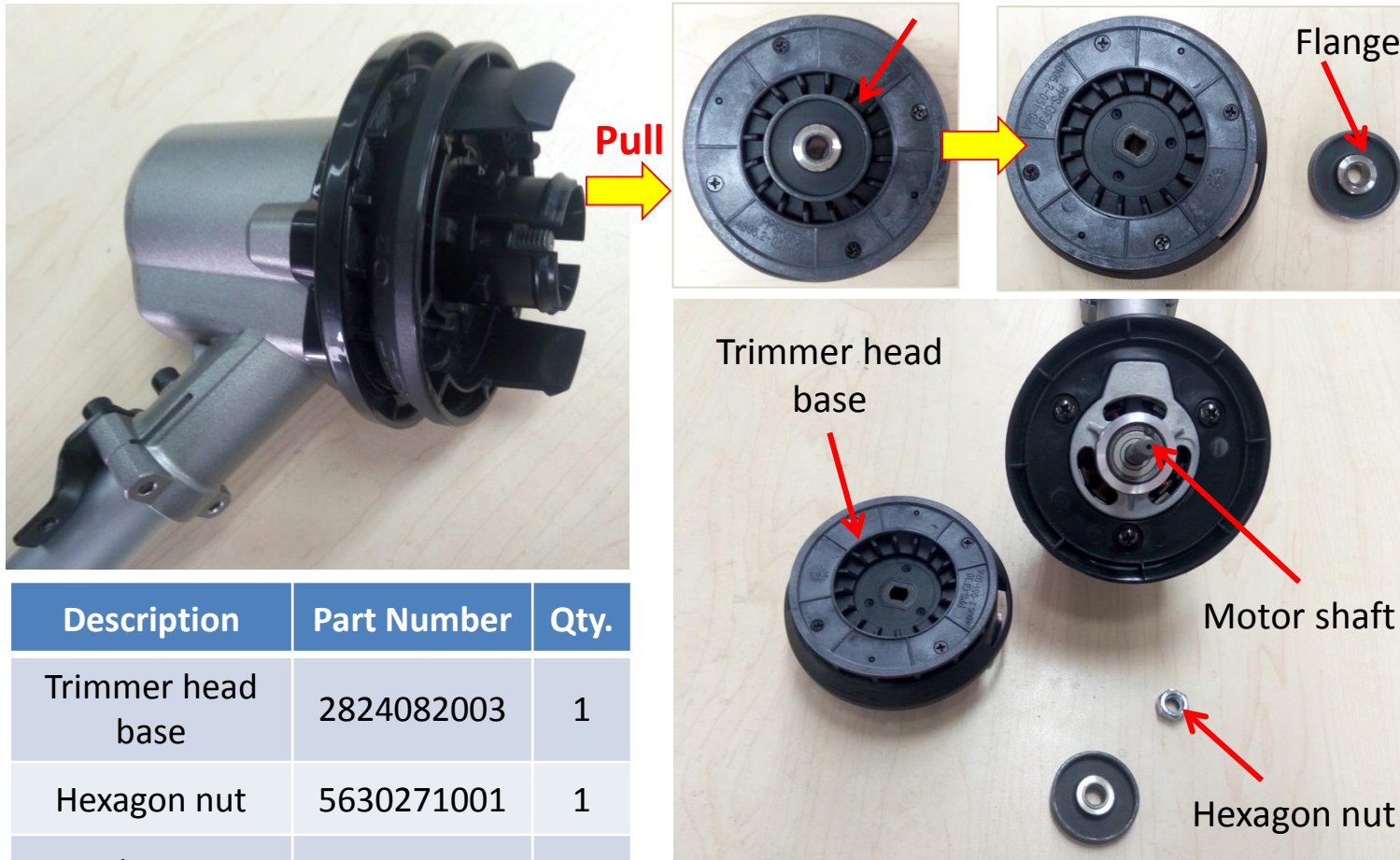
BC1500E Bike Handle Line Trimmer

4. Wear gloves and hold the trimmer head base with one hand, use a 13mm socket wrench to turn the hexagon nut counterclockwise to loosen it.



# Replacing the Motor Assembly

5. Hold the trimmer head base and pull it straight out from the motor shaft. Remove the flange from the base.

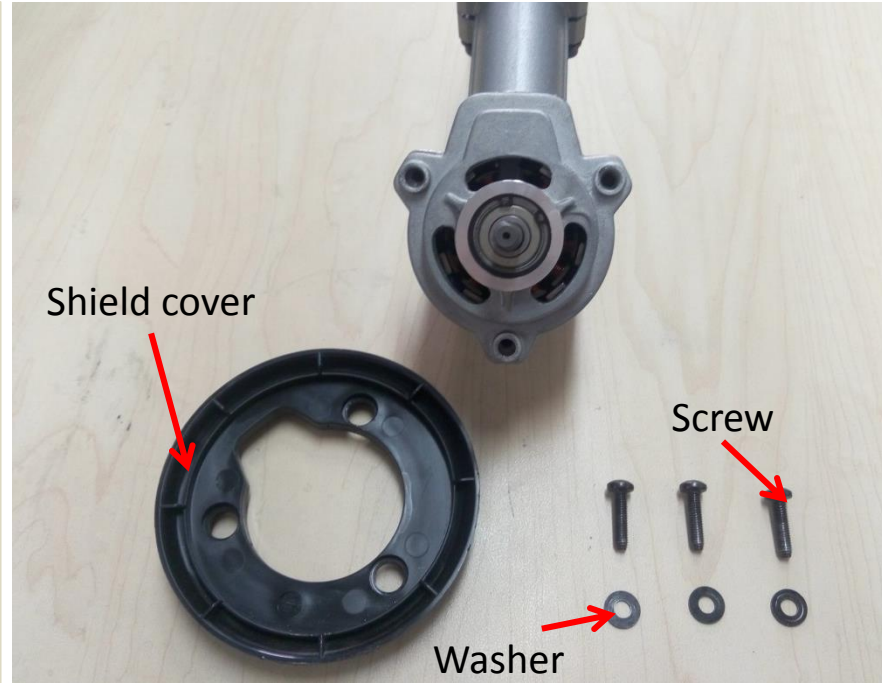


Description	Part Number	Qty.
Trimmer head base	2824082003	1
Hexagon nut	5630271001	1
Flange	3520800001	1

# Replacing the Motor Assembly

BC1500E Bike Handle Line Trimmer

6. Loosen the 3 screws on the shield cover, remove the shield cover from the motor assembly.

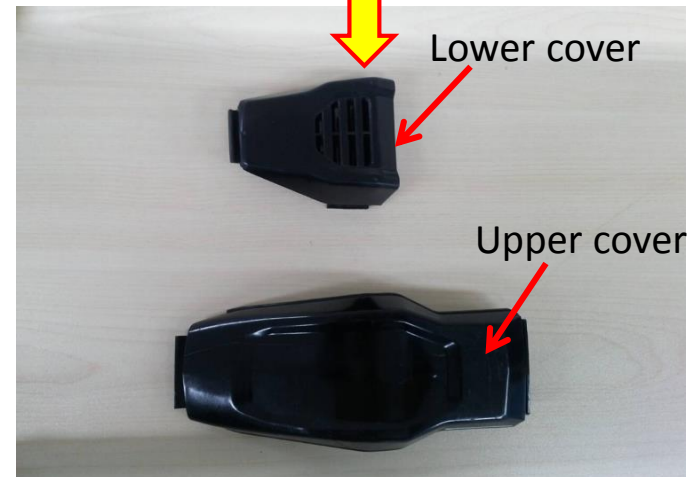


Description	Part Number	Including
Trimmer Head Set	2824021002	Spool, spool retainer, bump knob, compression spring, washer, trimmer head base, hexagon nut
Shield cover	3127655001	
Screw	5610059007	
Washer	5650396003	

# Replacing the Motor Assembly

BC1500E Bike Handle Line Trimmer

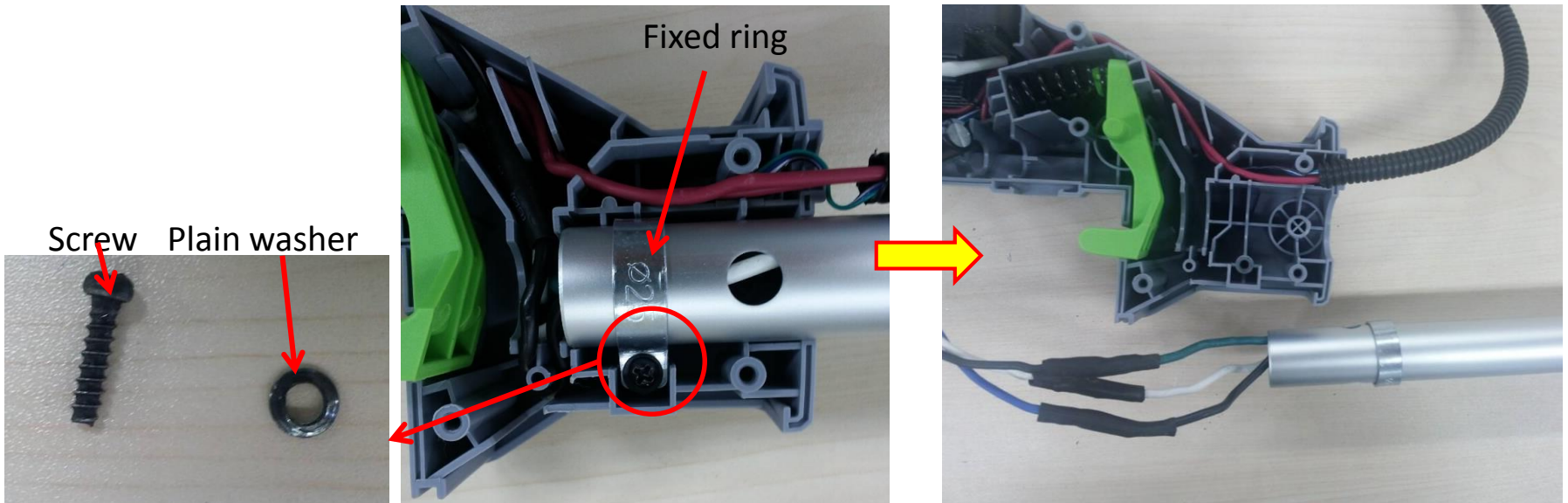
7. Loosen the 7 screws in the rear housing. Remove the housing, upper cover and lower cover.



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

# Replacing the Motor Assembly

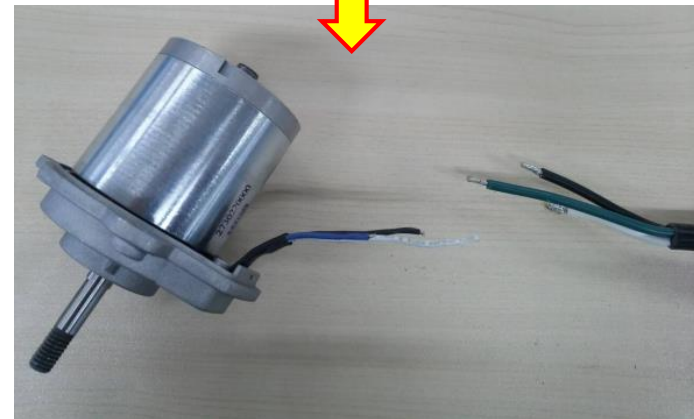
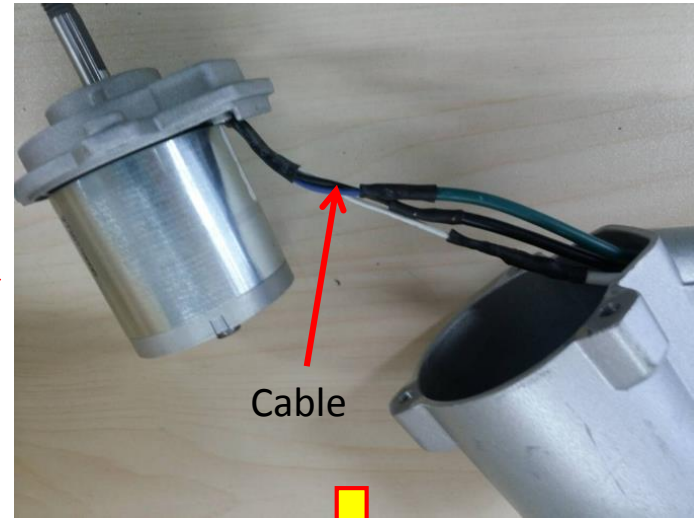
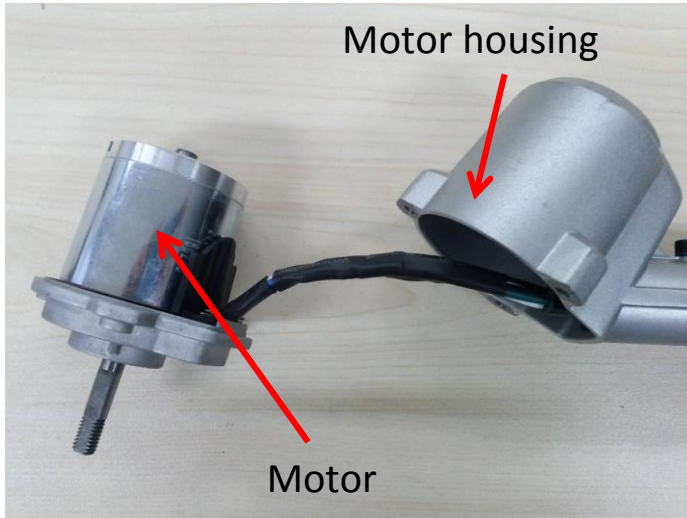
8. Loosen and remove the locking screw on the fixed ring to separate the shaft from the housing. Move the shaft to the side and pull out the three cables wrapped with heat-shrinkable sleeves. This makes replacing the motor assembly easier.



Description	Part Number	Qty.
Fixed ring	3705178001	1
Screw	5610032004	1
Plain washer	5650005002	1

# Replacing the Motor Assembly

9. Separate the motor from the motor housing.
10. Remove the heat shrinkable sleeves with a scissor and disconnect the cables.



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

# Replacing the Motor Assembly

11. If the motor housing is broken or worn, loosen and remove the 3 screws with a 4mm wrench to replace the damaged housing with a new one.



Description	Part Number	Qty.
Fixing board	3705712001	1
Screw 1#	5620213003	1
Plain washer	5650014003	1
Screw 2#	5620216003	2

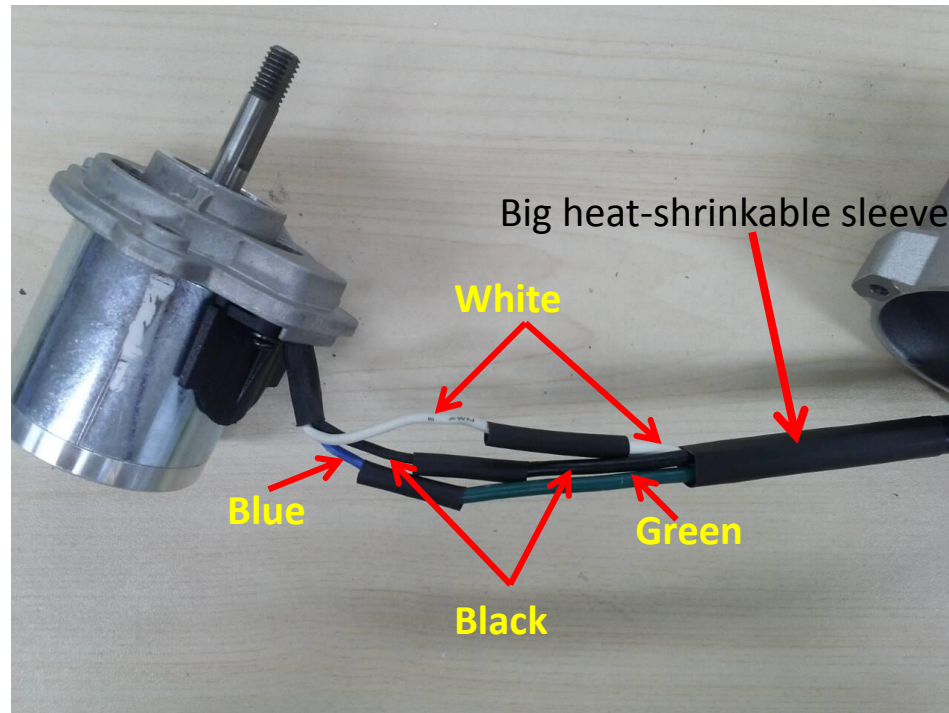


# Replacing the Motor Assembly

12. Replace the broken motor with a new one.
13. Place new heat-shrinkable sleeves through the wires , including 3 small heat-shrinkable sleeves and a big one. Joint the wires by electric soldering iron.

**Correct connection: black to black, white to white, green to blue.**

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





# Replacing the Motor Assembly

15. Move the big heat-shrinkable sleeve to cover the three small heat-shrinkable sleeves and use a hot air gun to shrink it.



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.

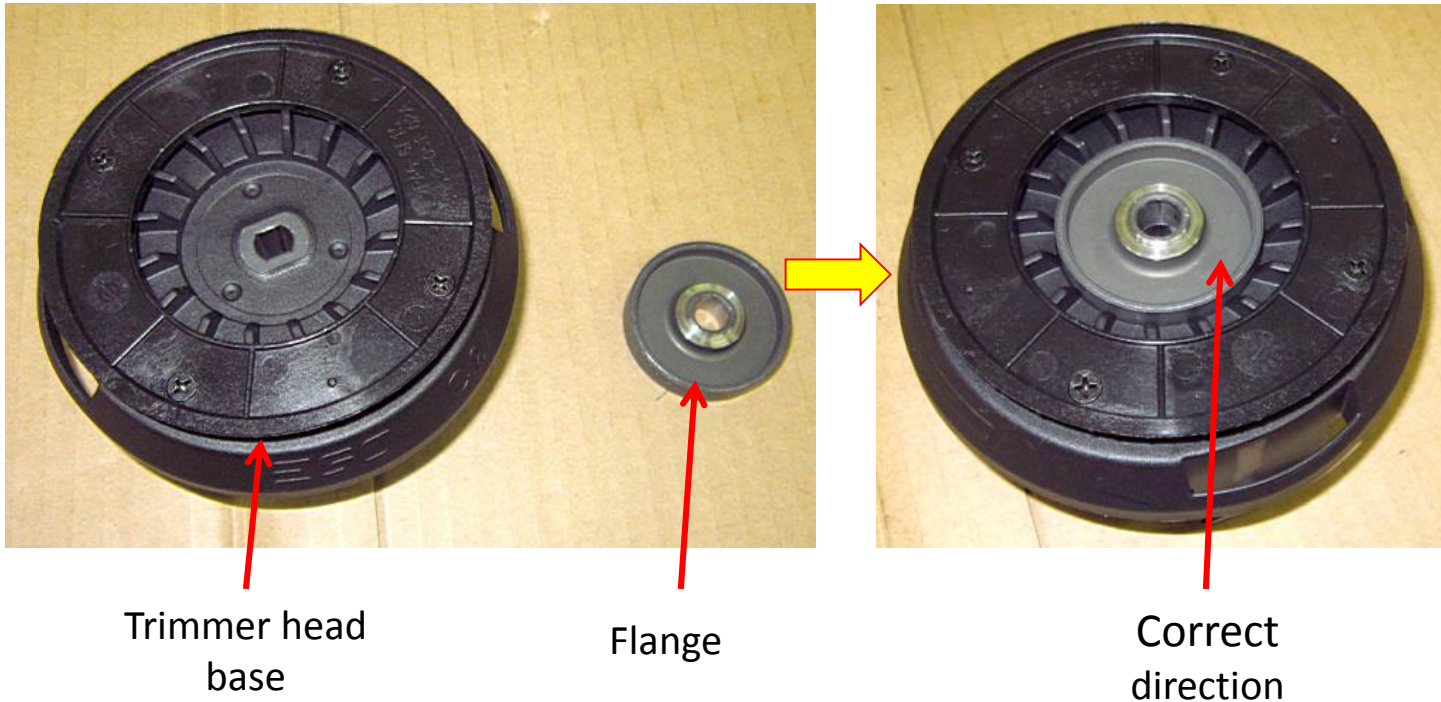


# Replacing the Motor Assembly

17. Assemble the trimmer head set onto the motor shaft.

a) Position the flange into the trimmer head base;

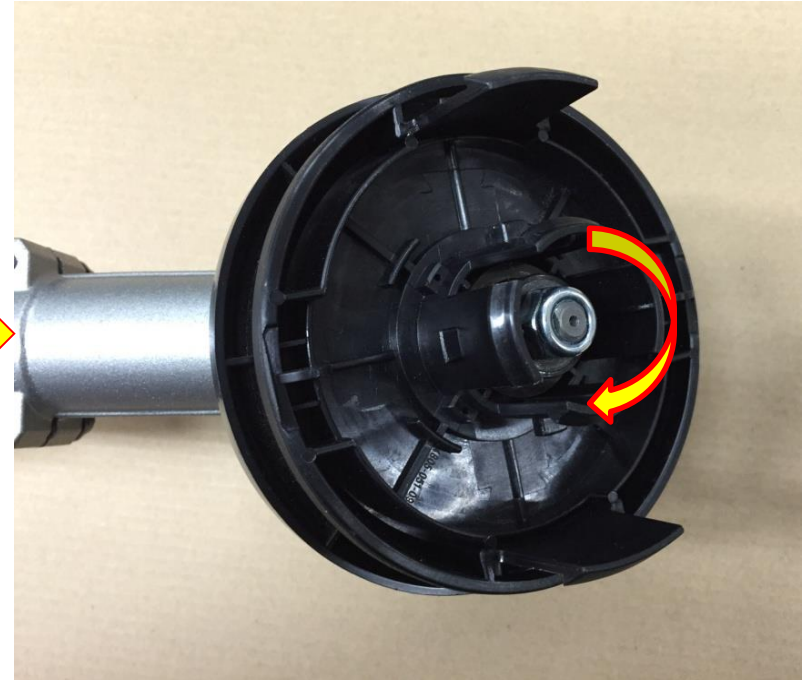
**NOTICE:** The flat surface of the flange should rest on the trimmer head base.



# Replacing the Motor Assembly

BC1500E Bike Handle Line Trimmer

- b) Mount the trimmer head base together with the flange onto the motor shaft, lock the base with the hexagon nut.



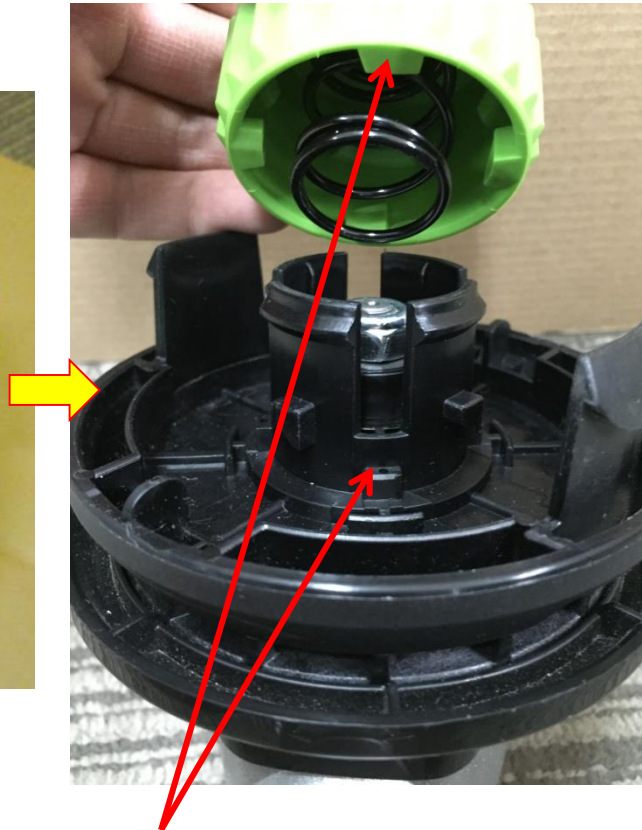
# Replacing the Motor Assembly

BC1500E Bike Handle Line Trimmer

- c) Fix the washer into the trimmer head base.
- d) Align the ribs in the bump knob with the slots in the trimmer head base, fix the bump knob onto the base.
- e) Press the bump knob until it is fully slid in position and locked by the base.



Washer



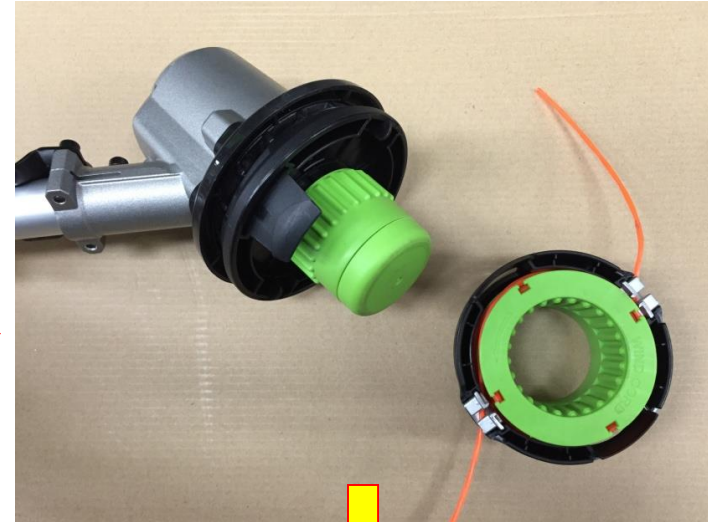
Align the ribs with slots in the base



# Replacing the Motor Assembly

BC1500E Bike Handle Line Trimmer

- f) Put the spool in the spool retainer and mount the spool retainer to the trimmer head base.
18. Assemble the rear housing as shown in the “replacing the PCB assembly” section.



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

# Replacing the PCB Assembly

BC1500E 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.

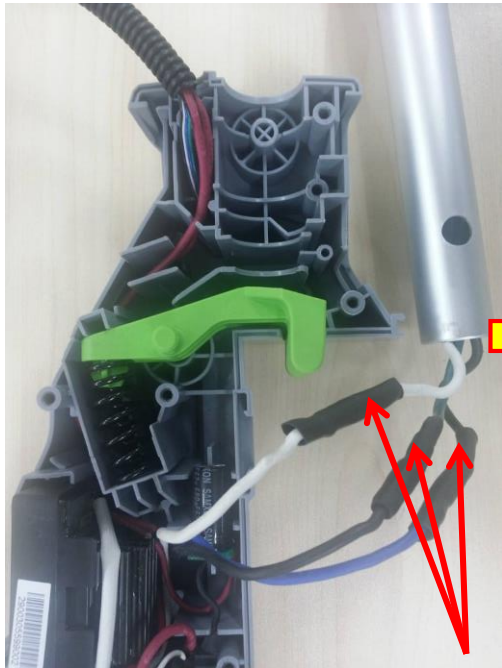


Description	Part Number	Qty.
Fixed ring	3705178001	1
Tapping screw	5610032004	1
Plain washer	5650005002	1

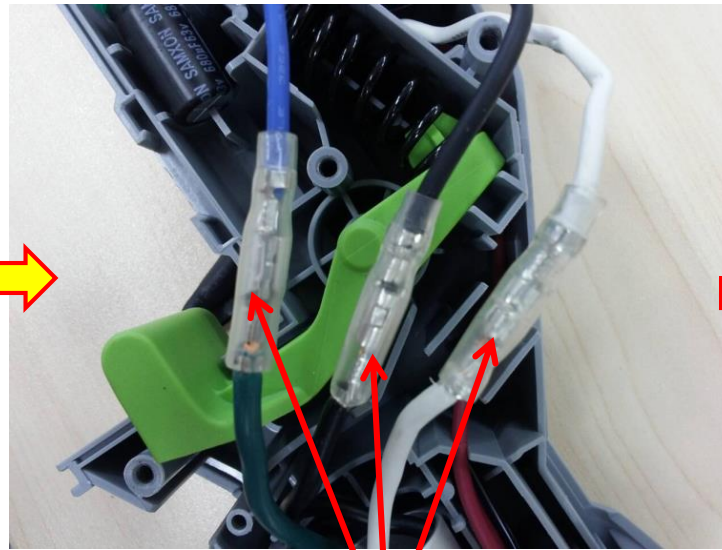


# Replacing the PCB Assembly

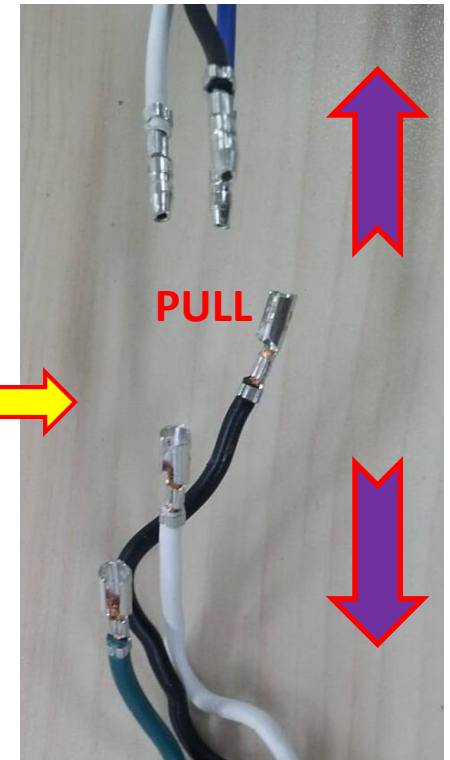
3. Remove the heat-shrinkable sleeves from the connectors with a scissor.
4. Move the transparent sleeves aside and pull the connectors to separate.



Heat-shrinkable sleeve

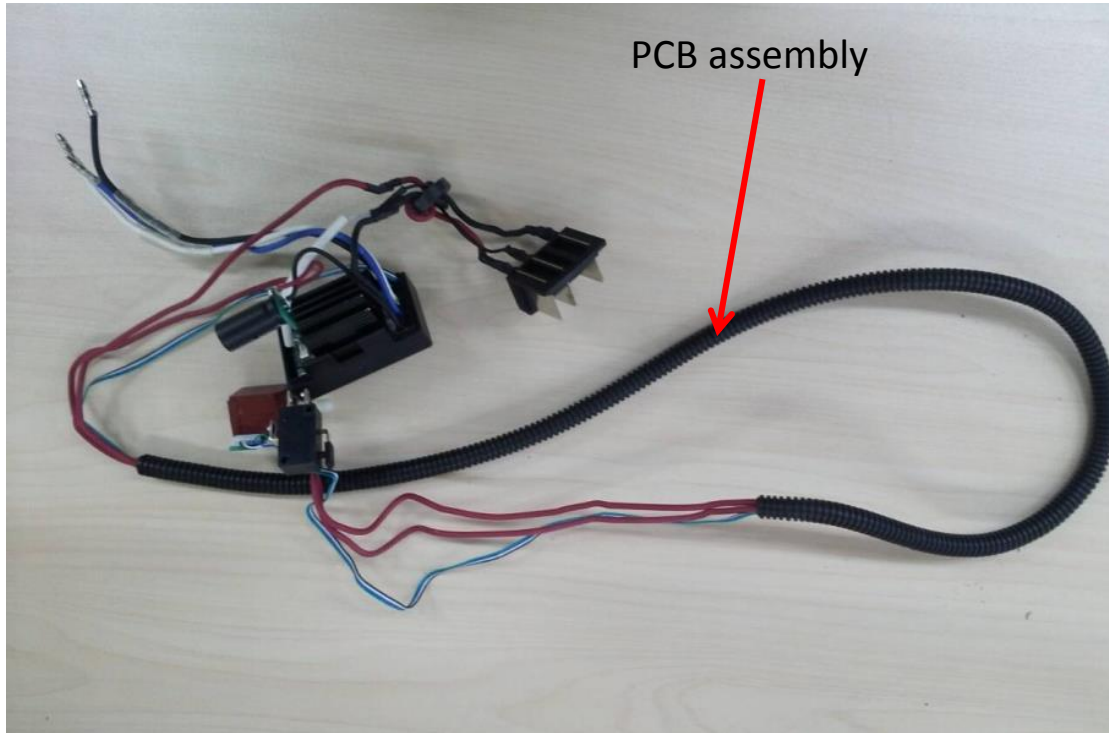


Transparent sleeve



# Replacing the PCB Assembly

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



Description	Part Number	Qty.
PCB assembly	2830141001	1

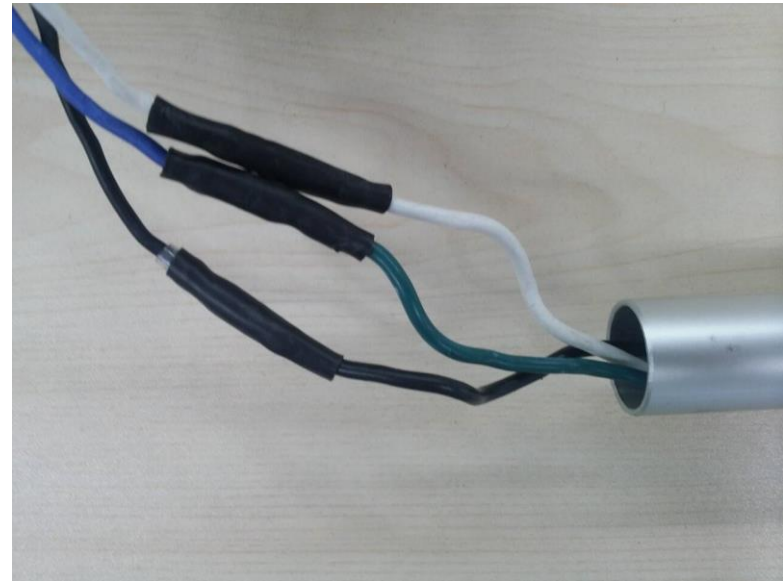
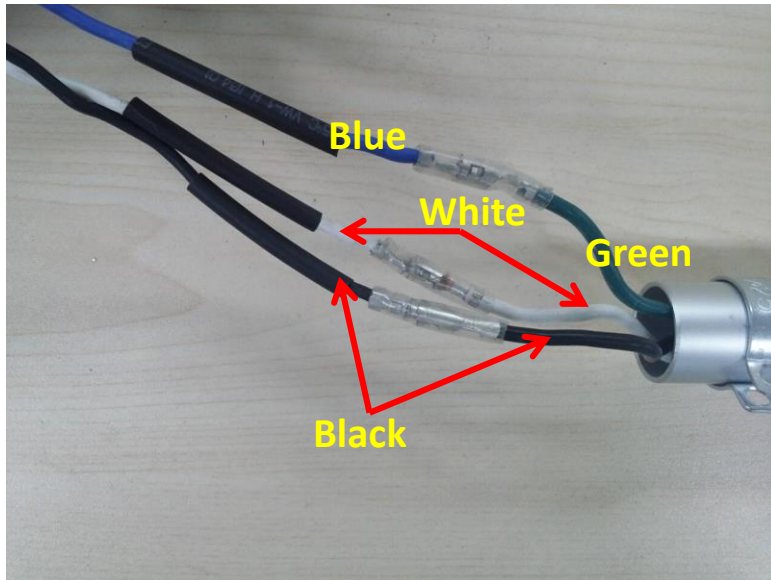
# Replacing the PCB Assembly

BC1500E Bike Handle Line Trimmer

6. Place new heat-shrinkable sleeves through the connectors.
7. Plug the three connectors, ensuring they are fully inserted.

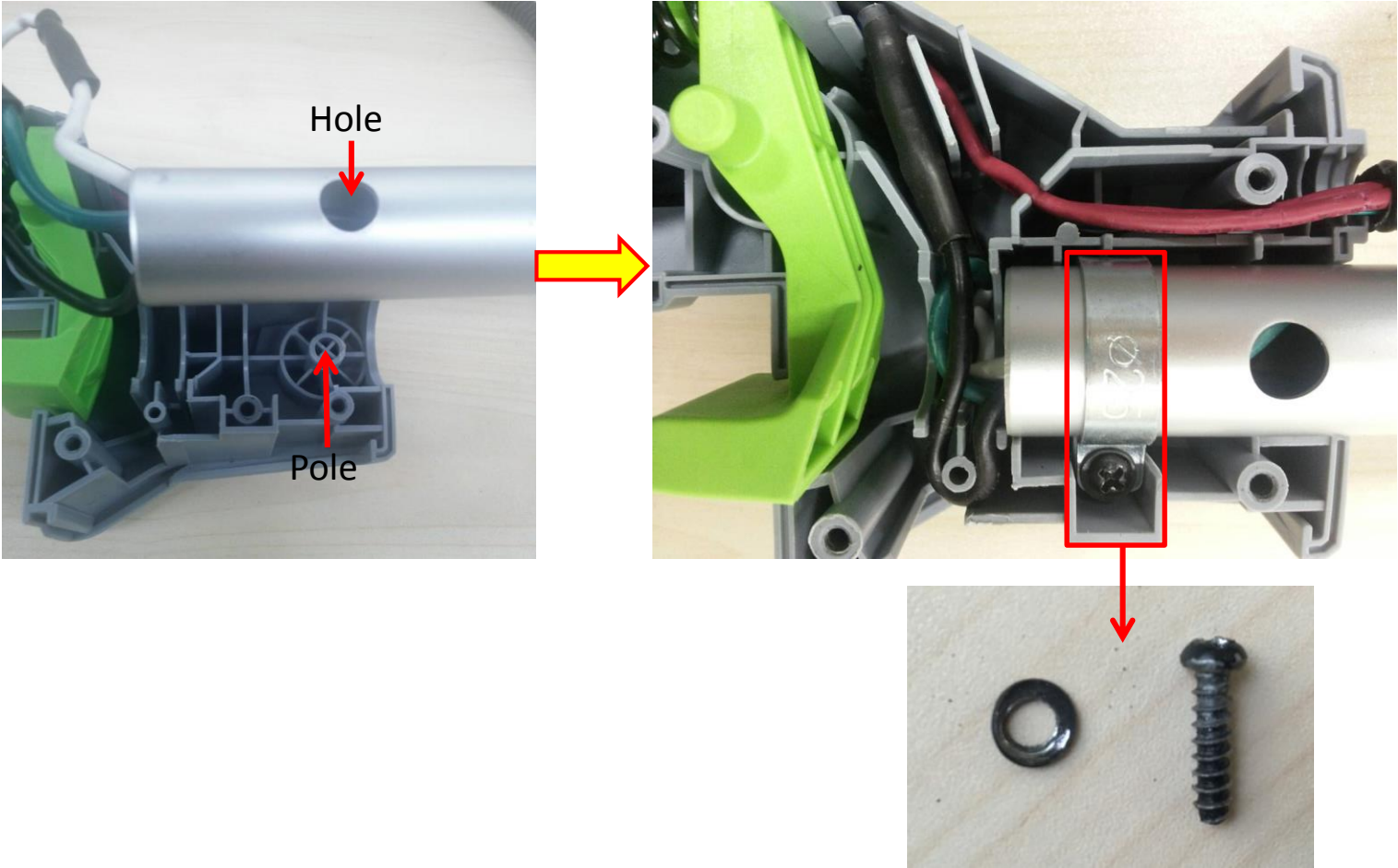
**Correct direction: blue to green, white to white, black to black.**

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

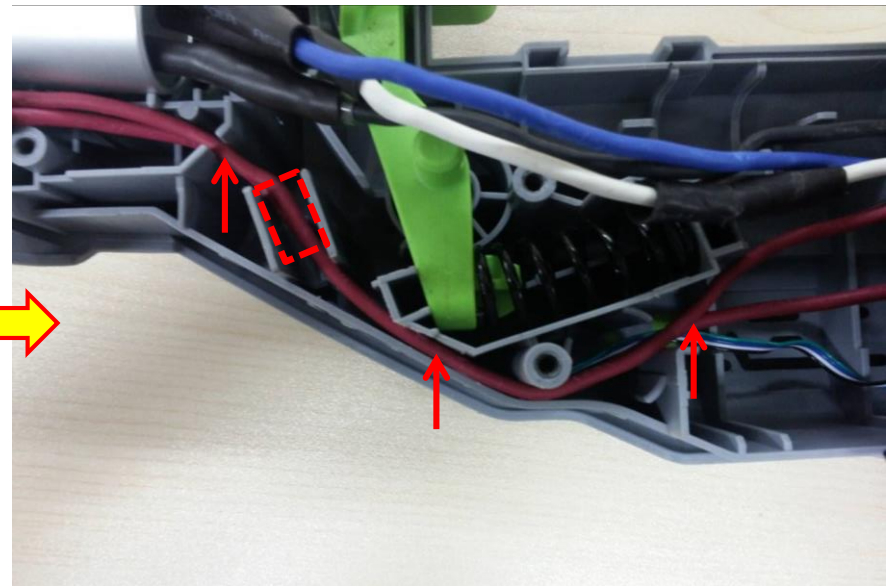
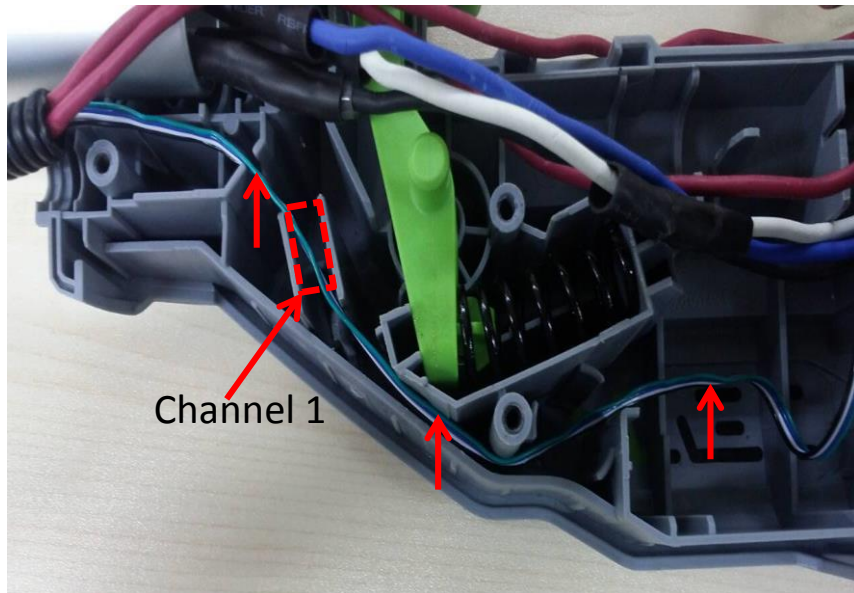
- 9. Align the hole in the shaft with the pole on the housing and then fasten the fixed ring with the screw and the washer to connect the shaft with the rear housing.



# Replacing the PCB Assembly

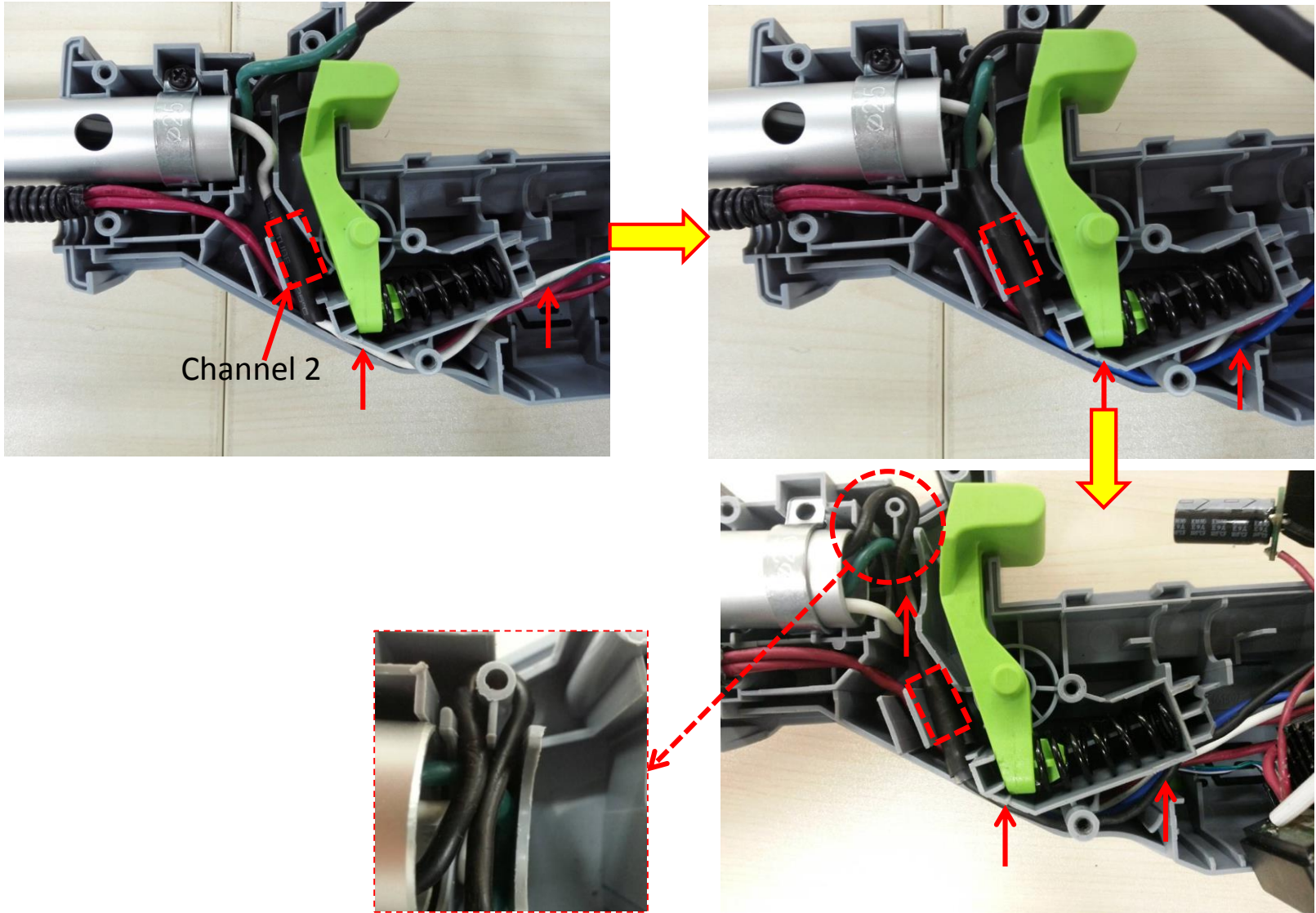
BC1500E Bike Handle Line Trimmer

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.



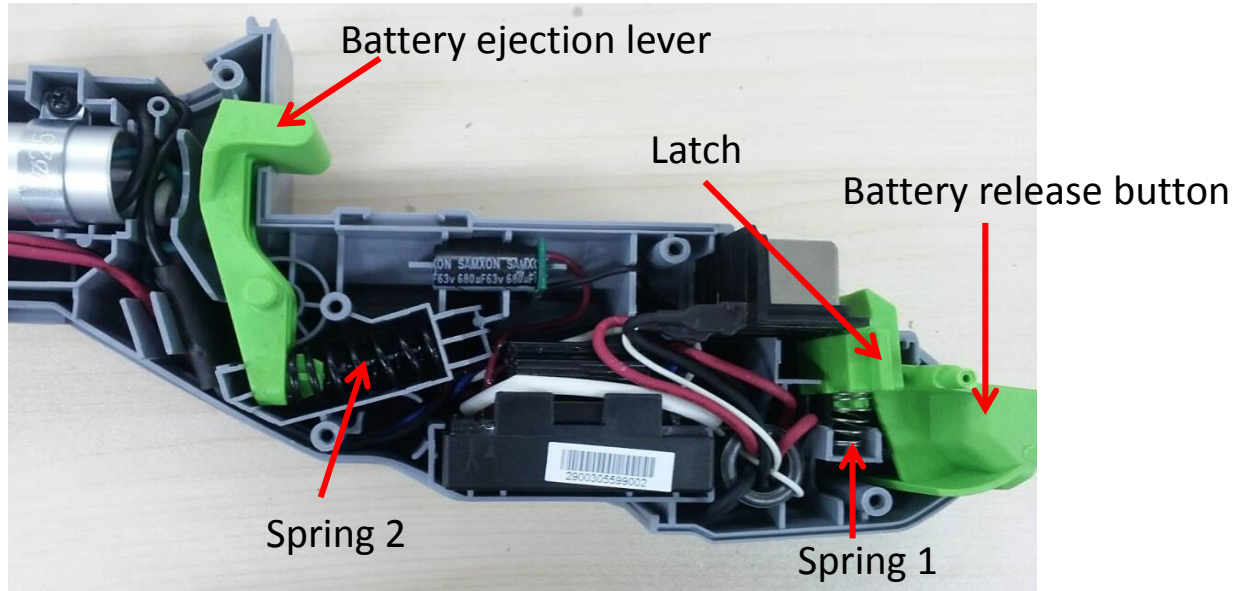
# Replacing the PCB Assembly

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



# Replacing the PCB Assembly

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

# Replacing the PCB Assembly

BC1500E Bike Handle Line Trimmer

13. Assemble the rear housing.

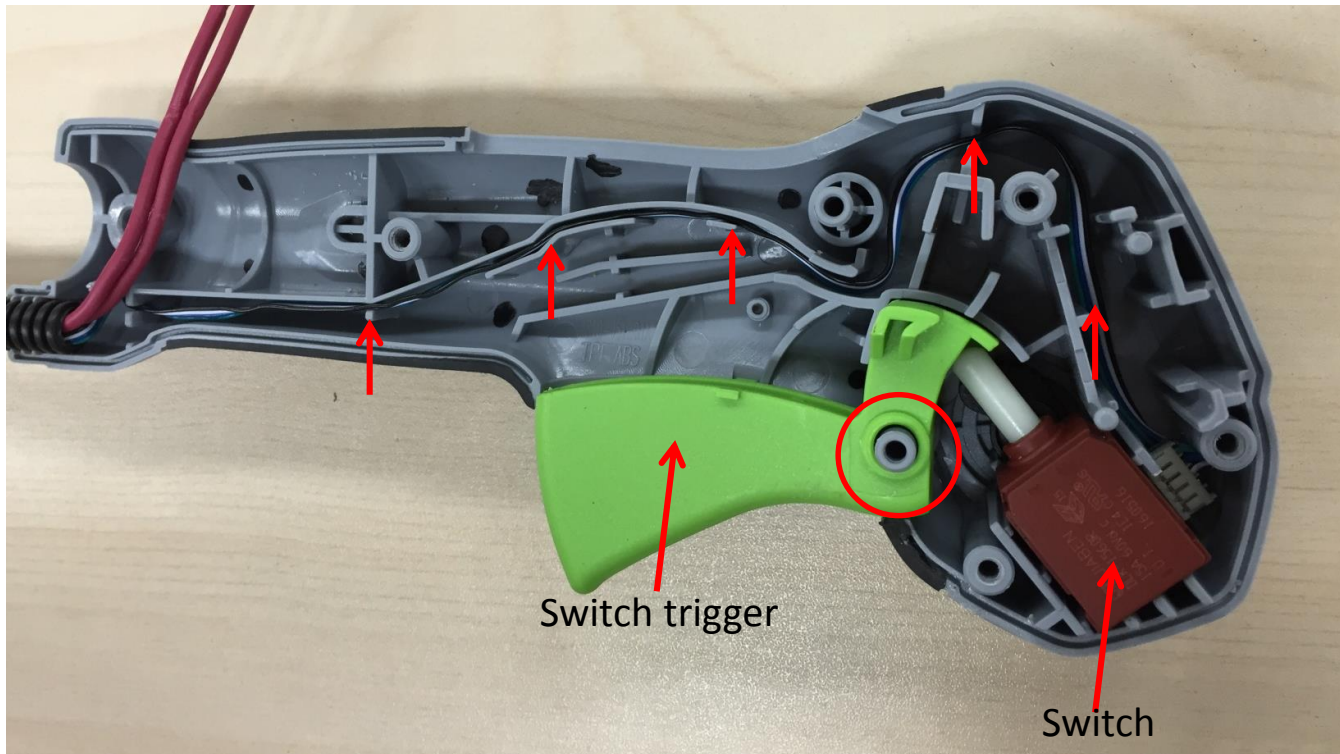




# Replacing the PCB Assembly

BC1500E 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.



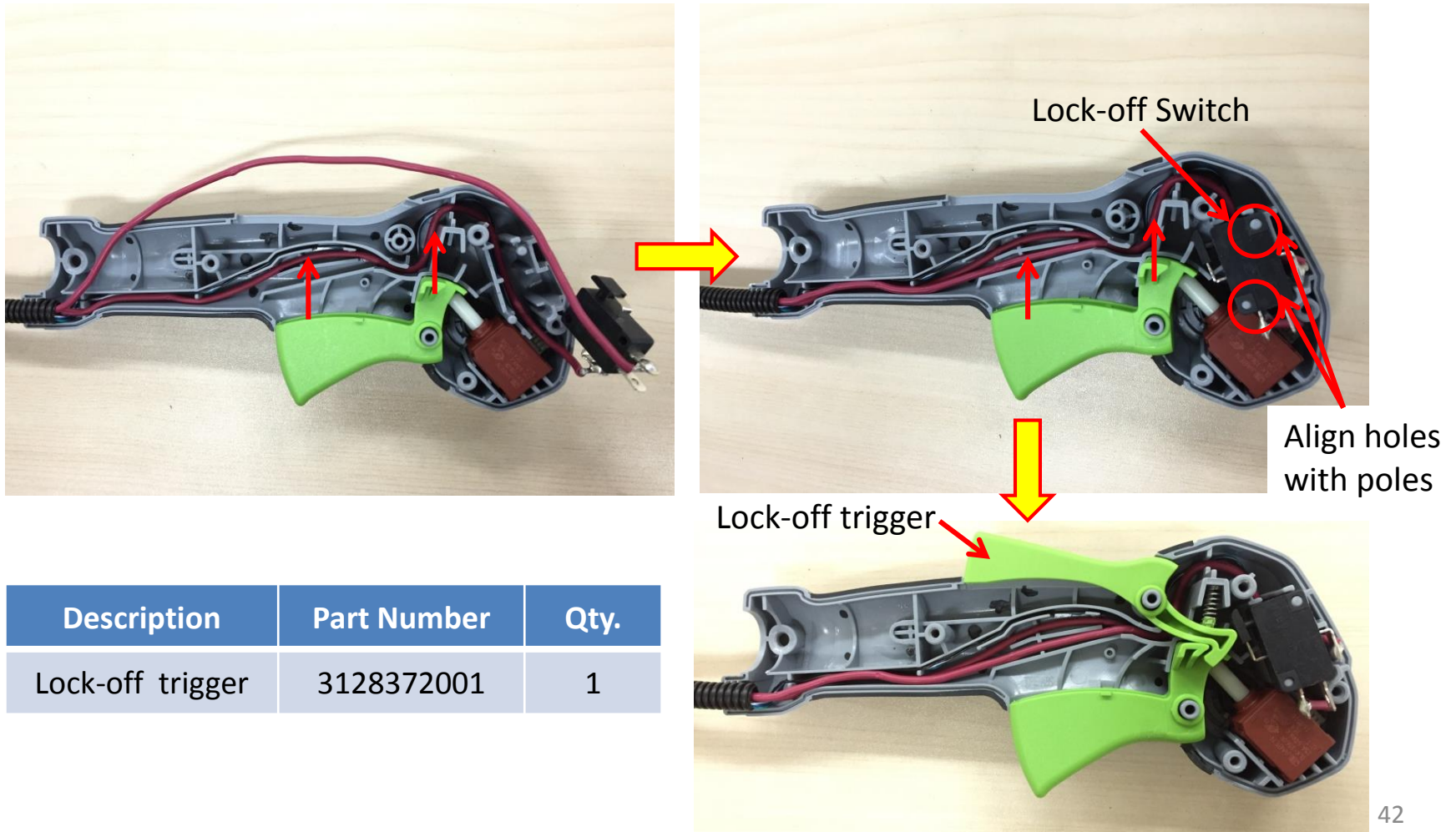
Description	Part Number	Qty.
Switch trigger	3128373001	1

# Replacing the PCB Assembly

BC1500E Bike Handle Line Trimmer

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

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



Description	Part Number	Qty.
Lock-off trigger	3128372001	1

# Replacing the PCB Assembly

BC1500E Bike Handle Line Trimmer

15. Assemble the right handle housing set as shown in the “replacing the connecting tube” section.



THE END