



# Philips Norelco BG2040/34 BodyGroom 7100 Battery Replacement

How to disassemble without bending or breaking enclosure and how to replace batteries IF you can find suitable replacements. **READ WHOLE GUIDE FIRST**

Written By: Tim



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## INTRODUCTION

The battery life of this product is poor. This guide will walk you through replacing the batteries with higher quality ones - IF YOU CAN FIND THEM - I got Battery World to supply the green replacement batteries you see in this guide and they FAILED A FEW WEEKS AFTER. In the comments you can see that Modern NiMH batteries are not compatible with the original charging circuit. I think this may be true, but others have had success. People have suggested ENELOOP AAA worked. I have not tried these.. So, I'll leave this guide up for people that want to give battery replacement a try, but you have been warned: my batteries failed after a short time. I am sick of companies building rechargeable products with the intention they be thrown out every two years.

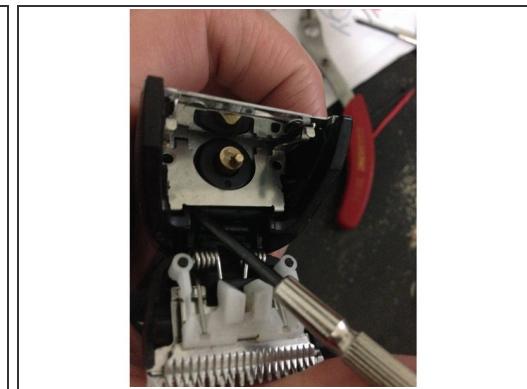
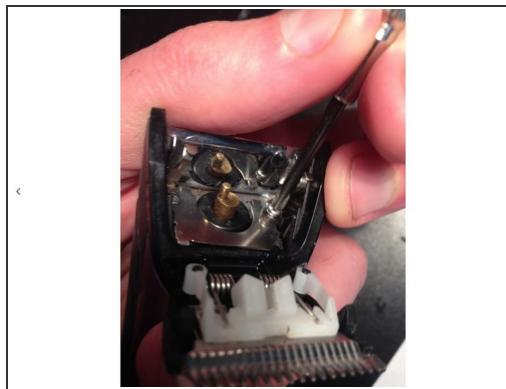
### TOOLS:

- Small Phillips Head Screwdriver (1)

### PARTS:

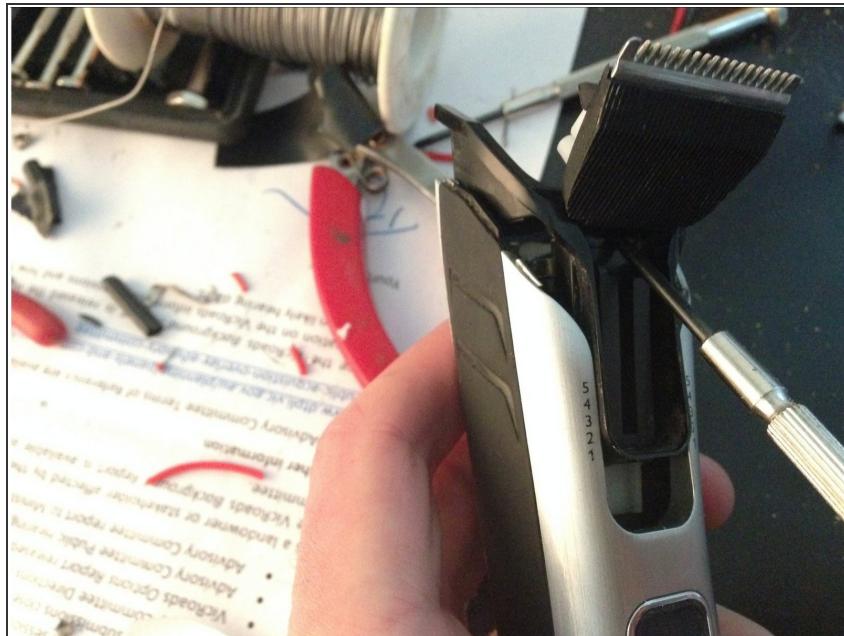
- Rechargeable AAA Batteries (2)  
Ni-MH  
*Panasonic/Sanyo Eneloop preferred (for longest life)*

## Step 1 — Open Trimmer Head



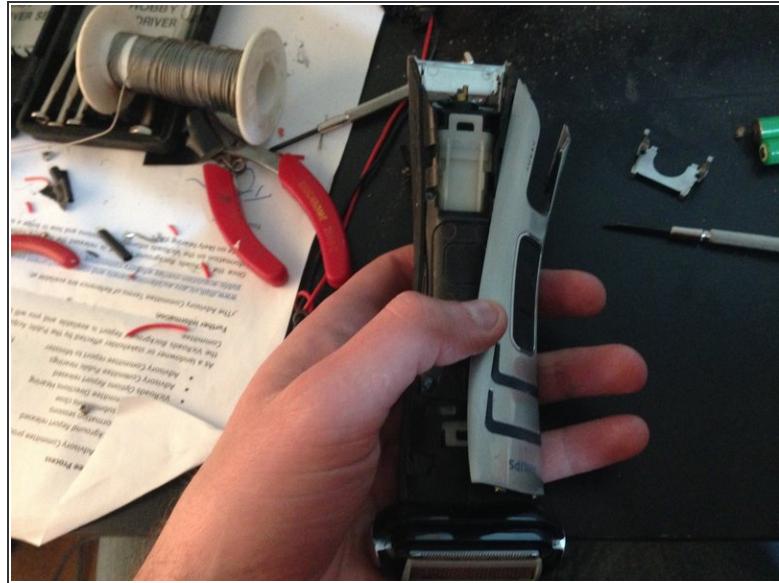
- Pushing with your thumb, pop the trimmer blade open it on its hinge.
- Remove the two steel screws.
- The metal clip can now be levered off using a thin screwdriver.

## Step 2 — Remove Trimmer Assembly



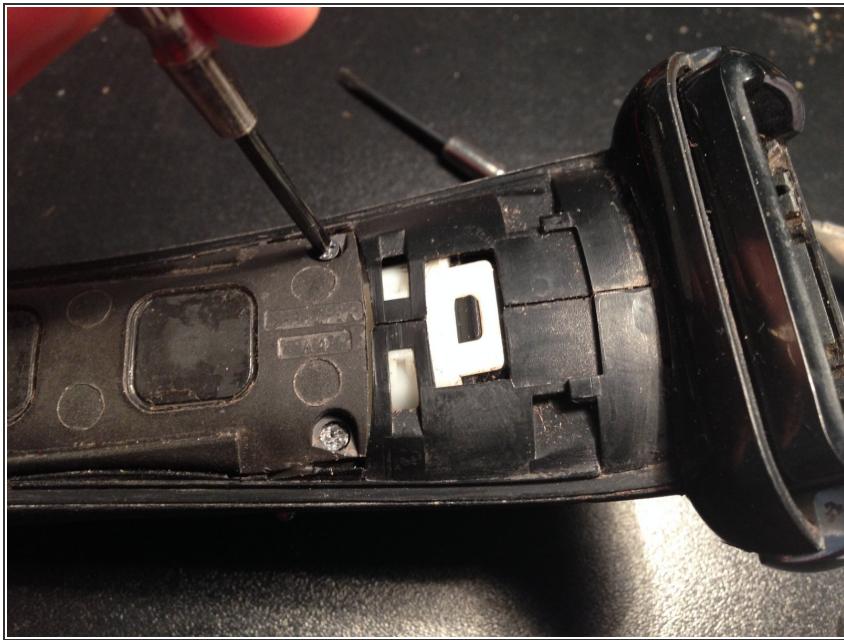
- With the screws out and the metal bracket removed, pushing with a screwdriver, the trimmer assembly will slide out. In most cases you can also just push gently with your thumbs.

## Step 3 — Remove Plastic Chrome Panels



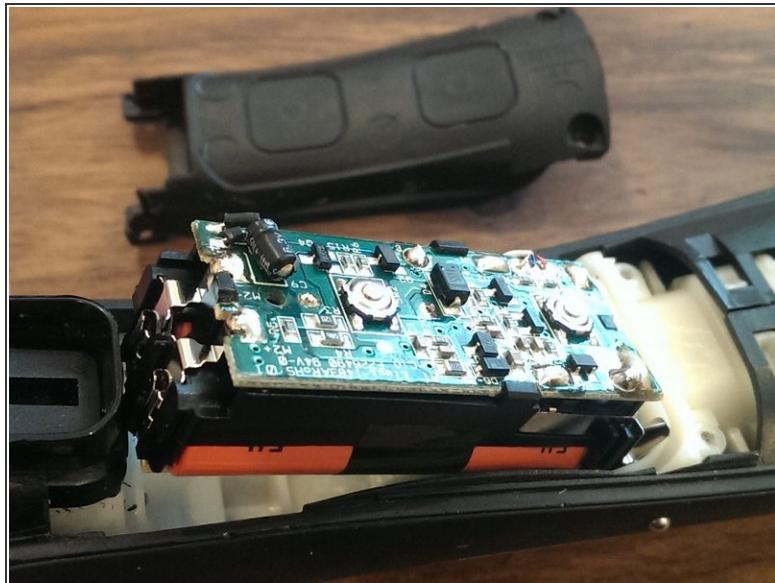
- Hold the bodygroom in one hand, buttons up, foil end towards you, with your thumb on the rubber buttons.
- Push forward with your thumb and the chrome plastic front panel will slide forward 3mm easily. You can now take it off.
- The second chrome panel on the opposite side also slides off in the same way.

## Step 4 — Remove Rubber Cover



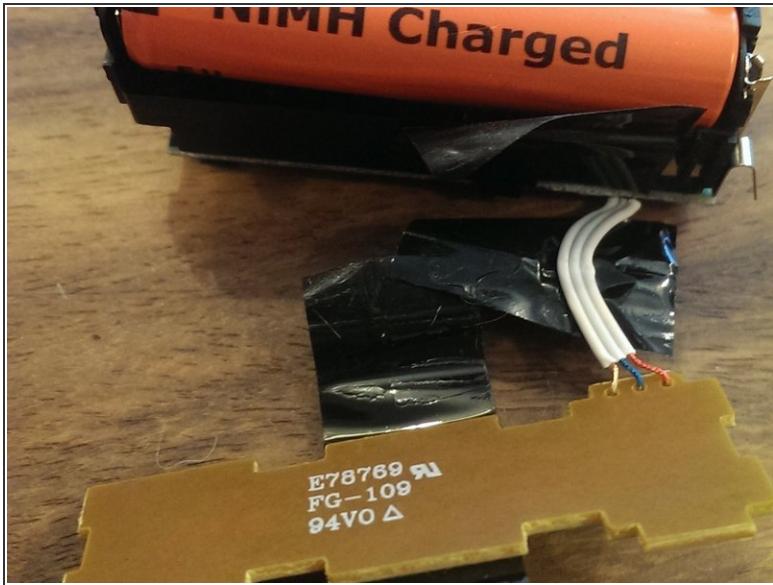
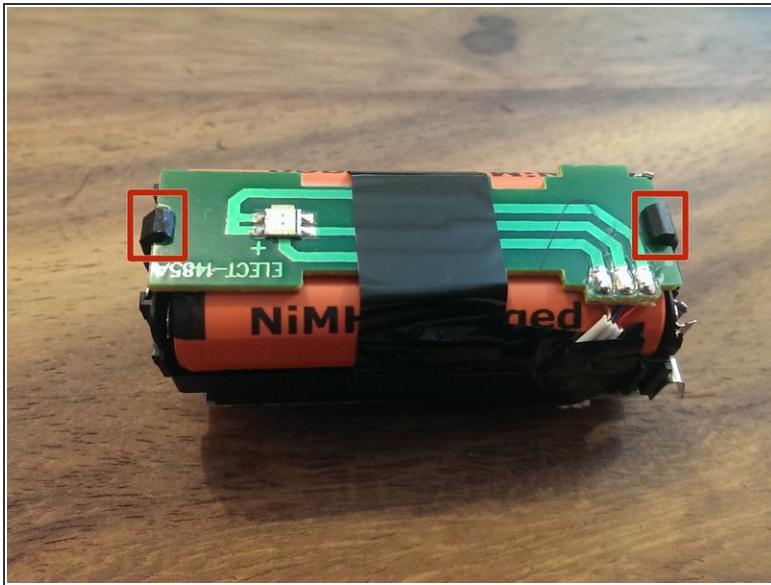
- Remove the 4 Phillips screws and pull off the plastic cover.
- *(i)* The 2 bottom screws can be a little difficult to see at first.
- *(i)* The spudger/iSesamo is useful to pull off the cover. (Start from the top.)

## Step 5 — Remove Electronics



- Carefully remove the circuit board and battery assembly.
- The spudger/iSesamo is useful here too.

## Step 6 — Remove LED Board



- Remove tape that holds LED board. The LED board is taped to the battery assembly.

**⚠** Three wires or a ribbon cable connect this board - be careful not to bend these wires - **they break easily and it's almost impossible to get to them**. I suggest you tape where they join to the main board while you work on it so they don't keep bending back and forth.

## Step 7

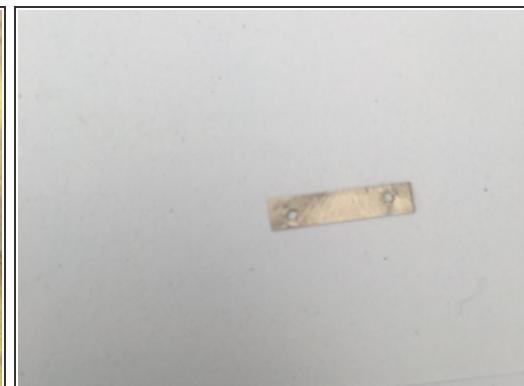
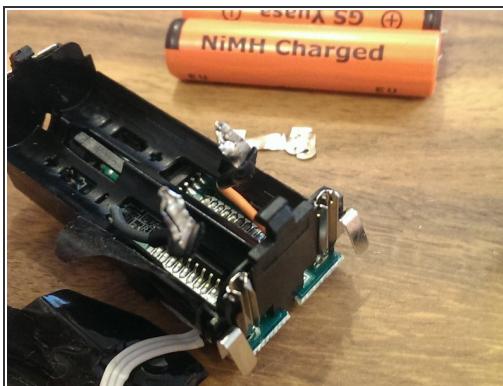


**i** Finding a battery is tough. I'm not sure which ones work. This one specially made up by BatteryWorld (Melbourne Australia) for \$26 FAILED later. If you find a better solution let me know.

 Phillips has designed their product with a battery enclosure that is approx 1mm too short to fit the standard size AAA batteries. In my

opinion, designing with built-in obsolescence like this should be a criminal offense.

## Step 8 — Remove Batteries



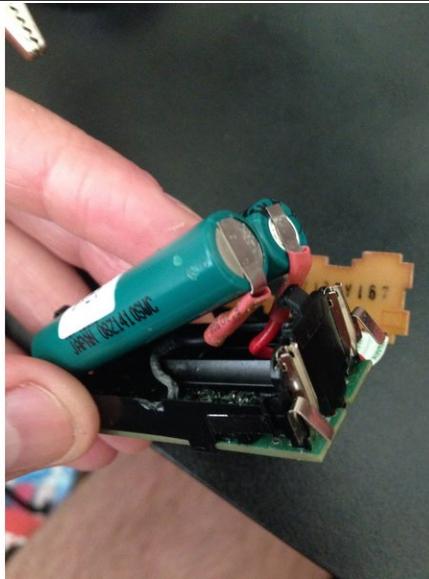
- This part requires skill and care.

- Using needle nose pliers, pry off the wires and metal tabs carefully.

**⚠** Be careful to not damage the metal tabs/connectors! They will be reused.

- If you're having trouble prying off the wires, you may try drilling out the welds that secure the wires. Note that it's easy to permanently damage components when drilling, so only attempt this procedure if you're confident.

## Step 9 — Swap Batteries - The hardest step



**⚠** Replacing the batteries is difficult. **The wires must be as in this picture** - there is simply no room for them to be anywhere on the outside of the housing.

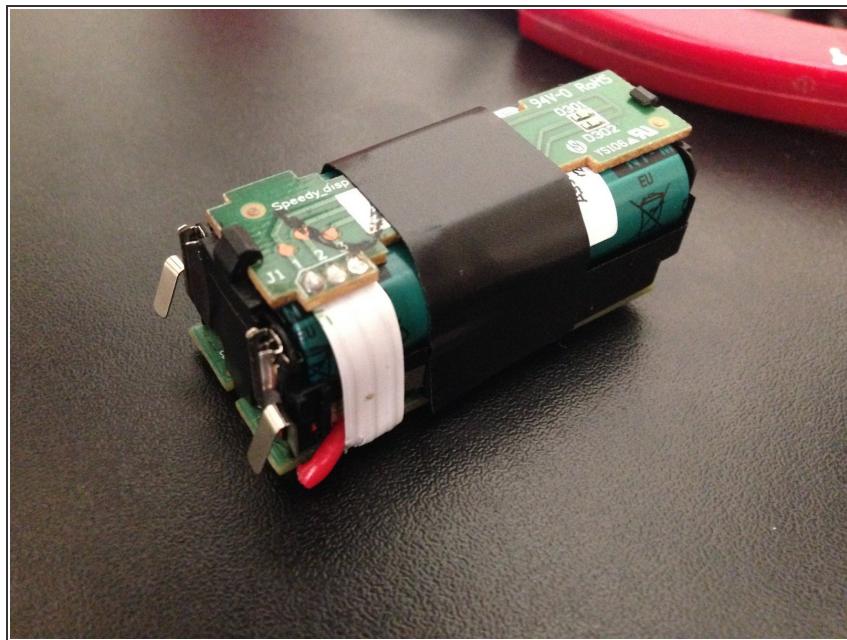
**(i)** My unit did not fit AAA, but some pics suggest that some units do fit AAA. If yours fits AAA then you can use AAA Ni-MH rechargeable batteries. Chopping the nipples off to make the batteries shorter is a bad idea because the battery quickly becomes useless when the air seal is broken.

**⚠** Be extremely careful not to damage the red and black wires. If you mess around too much they will break and you will have to find another way to solder them back on. Work out where they connect to now so if you do break them you have a hope of putting them back on.

**⚠** Make sure to correctly align the polarity of the batteries, as noted on the housing! If your batteries get hot all of a sudden, it is because you are shorting them or have wired them wrongly.

- Cut 5mm of heat shrink and put on wires before soldering to tabs. Use a clamp to hold the unit when soldering. Get a good join. This unit generates serious vibration and any dodgy join will soon break. Red to positive, Black to Negative.

## Step 10



- This is what it should look like when you are done soldering.
- Note there are no wires in the way of the motor terminals.
- Clip in the LED board and apply a neat piece of electrical tape to help hold it in place.

## Step 11 — Make contact!



- Align the battery housing and circuit board.
- Take note of where the spring contacts will connect to the charging pins, where the grooves will connect to the motor contacts at each end.
- With all wires clear it should push and pop in quite easily. If it is at all difficult something is in the way. Do not force - take it out and have a look.

## Step 12 — Testing before reassembly



- It is important to test everything now while you still have access to the board:
  - Put the unit in charging cradle and see if it charges.
  - If the unit does not charge properly, the battery holder may not be making contact with the charging pins that can be seen on the sides of the unit. Ensure that the battery compartment is seated completely and that the two metal pins/arms are clean and making a solid connection.
  - If either the trimmer or shaver does not come on, it may be that the batteries need charging OR the metal contacts are bent causing them to not connect. Take electronics out, inspect contacts and try again.

## Step 13 — Reassembly



- Reassemble starting with the black cover. This pops in pretty easily if you help it bit by bit with a small screwdriver on each side as in picture.
- Then put screws back.
- Put on chrome cover and slide it back into place snugly.
- Slide on trimmer assembly
- Put steel spring clip back on. Screw in steel screws. Pop trimmer closed and put black plastic guard back on.
- Congratulations on replacing the batteries despite the manufacturer being environmentally unfriendly, designing a product that makes battery replacement nearly impossible.

To reassemble your device, follow these instructions in reverse order.