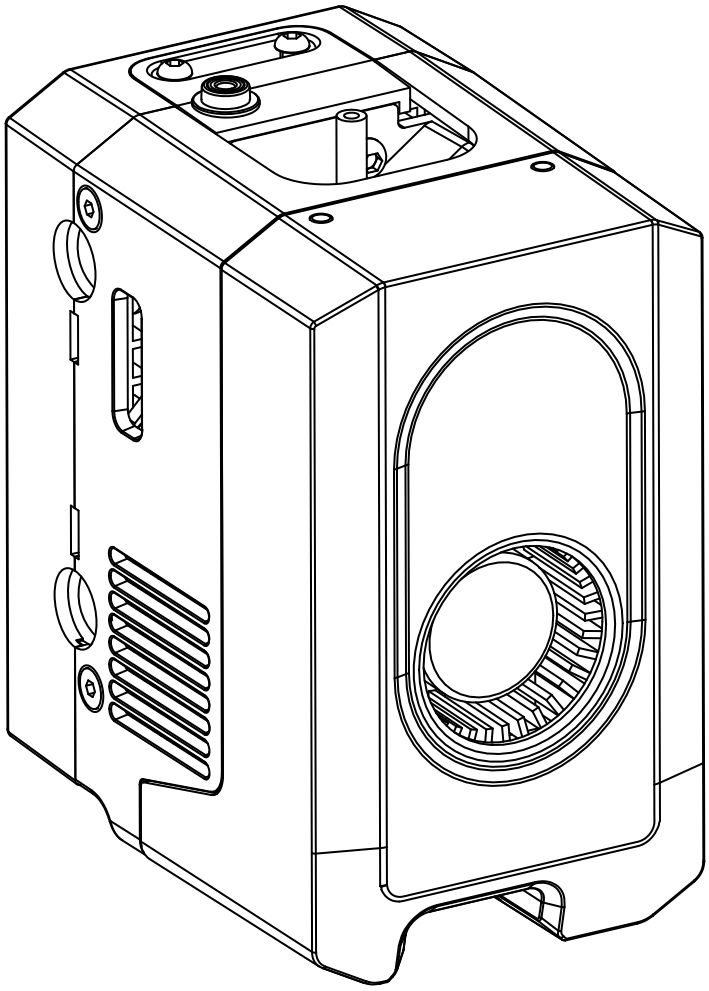


Elegoo Centauri Carbon 3D Printer Head Disassembly and Maintenance Guide

V1.0

Contents

Disassembly guide:

This guide includes the entire disassembly and assembly process of the nozzle,
but some part of components do not need to be disassembled as a whole,
You can skip some steps, the following are the steps and sequence required to disassemble specific components.
The number represents the steps corresponding to the directory page, , and [XXX]represents other steps
that need to be inserted when disassembling this component

[1. Preparation] This step is applicable to all the following components and
can help you obtain a wider space for easy operation,
We suggest that you perform this step before doing all the steps.

Drag chain, nozzle communication cable, and PTFE tube:
Ⅱ

Extruder air duct component:
Ⅲ

Extruder front shell:
Ⅲ、 Ⅳ

Extruder back cover:
Ⅴ

Nozzle heating board: (Choose one of the following two options)
(Ⅴ、 Ⅵ)
It can be disassembled, but the space is relatively small and the wires are prone to damage.

(Ⅲ、 Ⅳ、 Ⅴ、 Ⅵ)
There is more room for operation, it is recommended to follow this step.

Nozzle communication board:
Ⅱ (Just remove the communication cable) 、 Ⅴ、 Ⅵ、 Ⅶ

Cooling fan: (Choose one of the following two options)
(Ⅲ、 Ⅳ、 Ⅷ) ,
At this point, the wires can be disconnected and removed, but the space is limited and the wires are prone to damage.

(Ⅲ、 Ⅳ、 [Disassemble the nozzle heating board]、 Ⅷ)
There is a large operating space, it is recommended to follow this step.

Separation of gearbox and hot end:
Ⅱ (Just remove the PTFE tube) 、 Ⅲ、 Ⅳ、 Ⅸ

Extrusion motor:
Ⅴ、 [Disassemble the nozzle communication board]、 Ⅹ

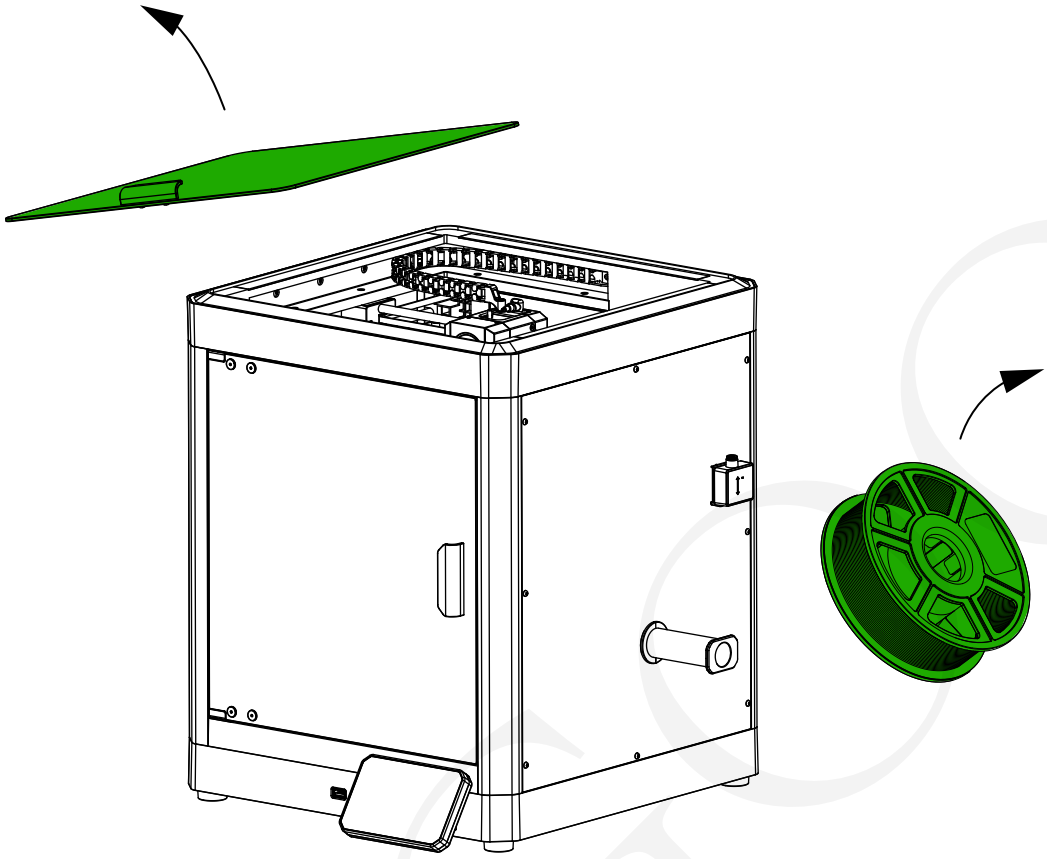
Cutting blade component:
Ⅲ、 Ⅳ、 Ⅺ

Separate the gearbox from the hot end:
[Separation of gearbox and hot end]、 XII

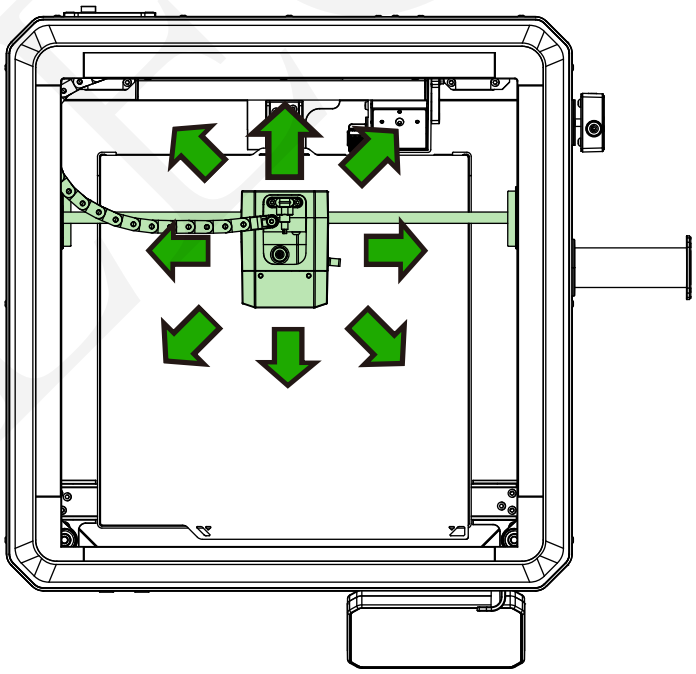
Gearbox:
[Separate the gearbox from the hot end]、 Ⅺ、 XIII

Hot end:
[Separate the gearbox from the hot end]、 XⅣ

I .Preparation

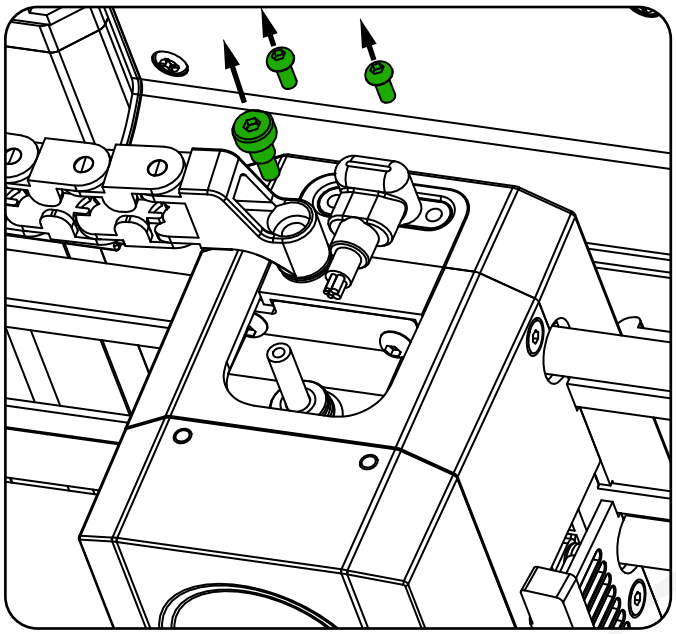


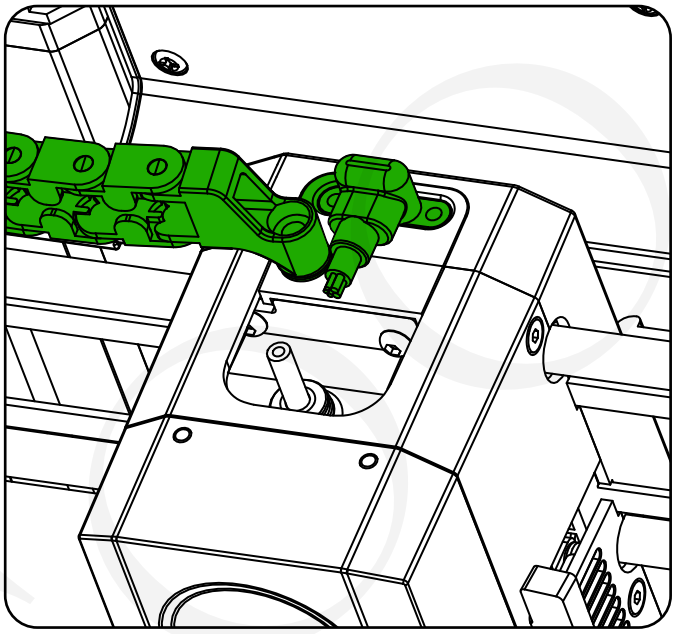
Before disassembly and maintenance, please remove the upper cover glass and consumables for subsequent operations



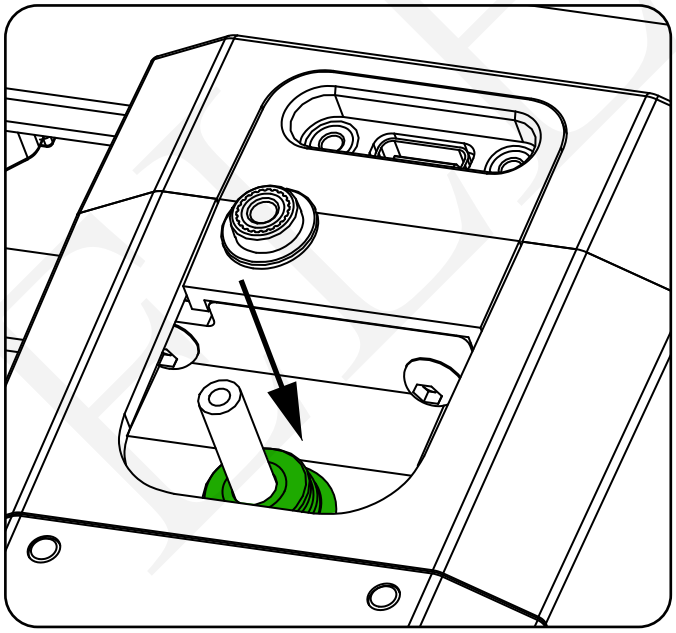
When disassembling or maintaining, the nozzle can be moved to different positions according to the actual situation to facilitate your operation of the nozzle

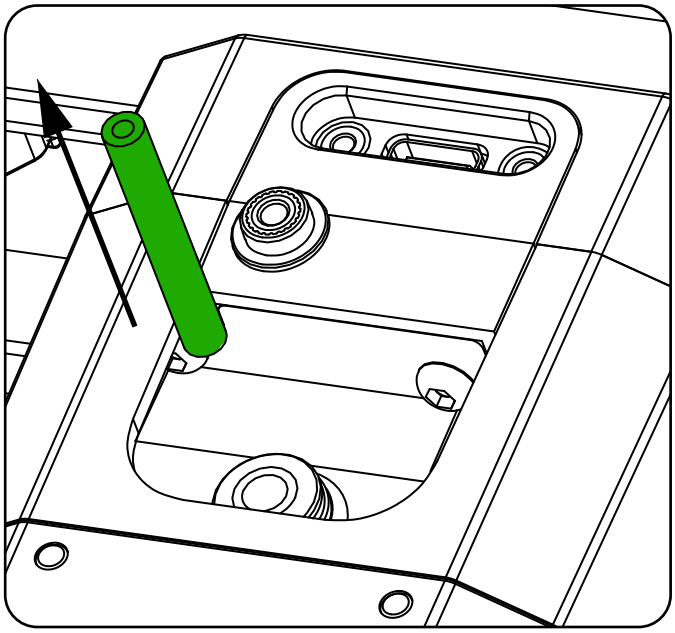
Ⅱ .Disassembly of drag chains, nozzle communication cables, and PTFE pipes





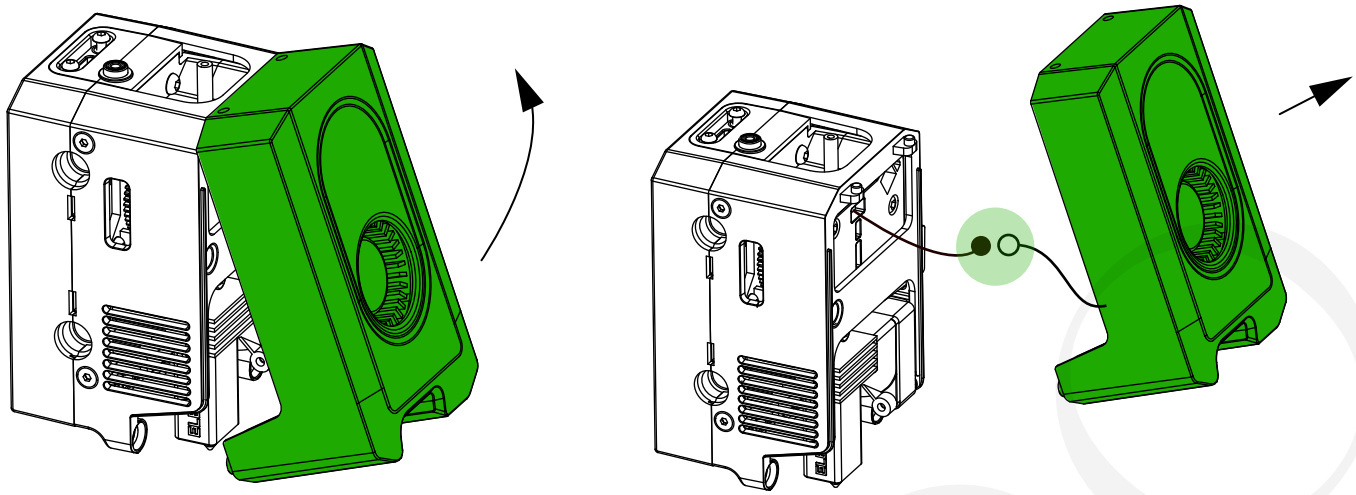
1. Please remove the screws (4 * 4.8 * M3) that fix the drag chain and the screws (M2.5 * 6) that secure the nozzle communication cable first, and then separate the drag chain from the nozzle communication cable



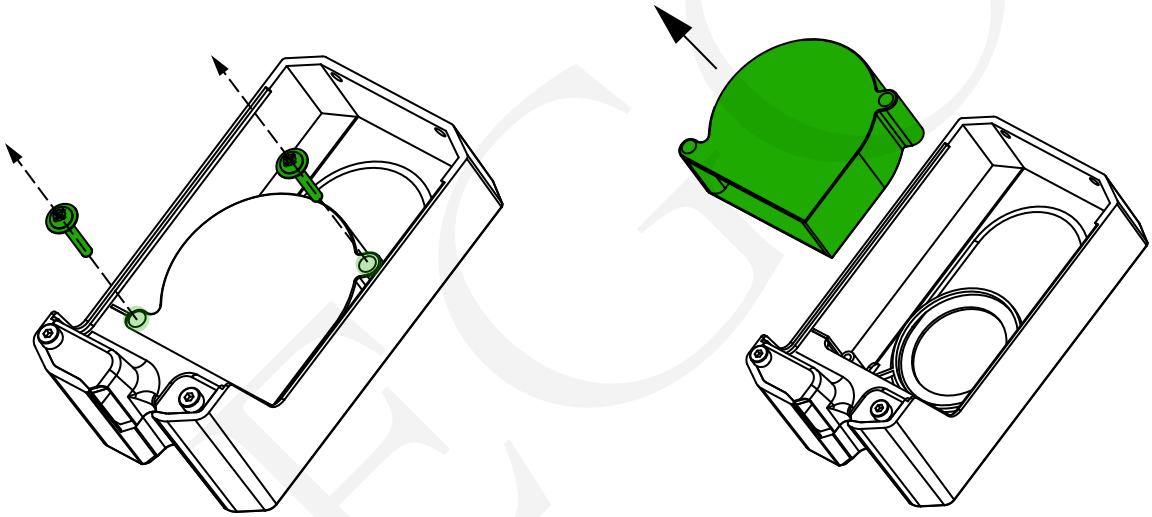


2.Press down on the pneumatic connector buckle and pull out the PTFE tube

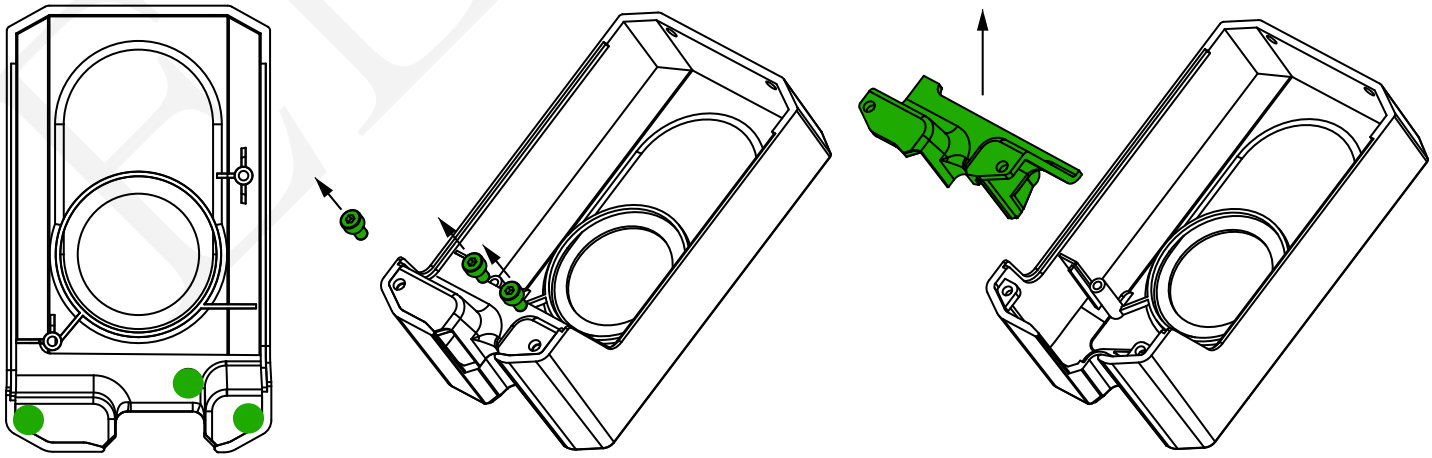
Ⅲ .Disassembly of extruder air duct components



1. Lift up the extruder air duct component from bottom to top, disconnect the connecting wire, and then remove it

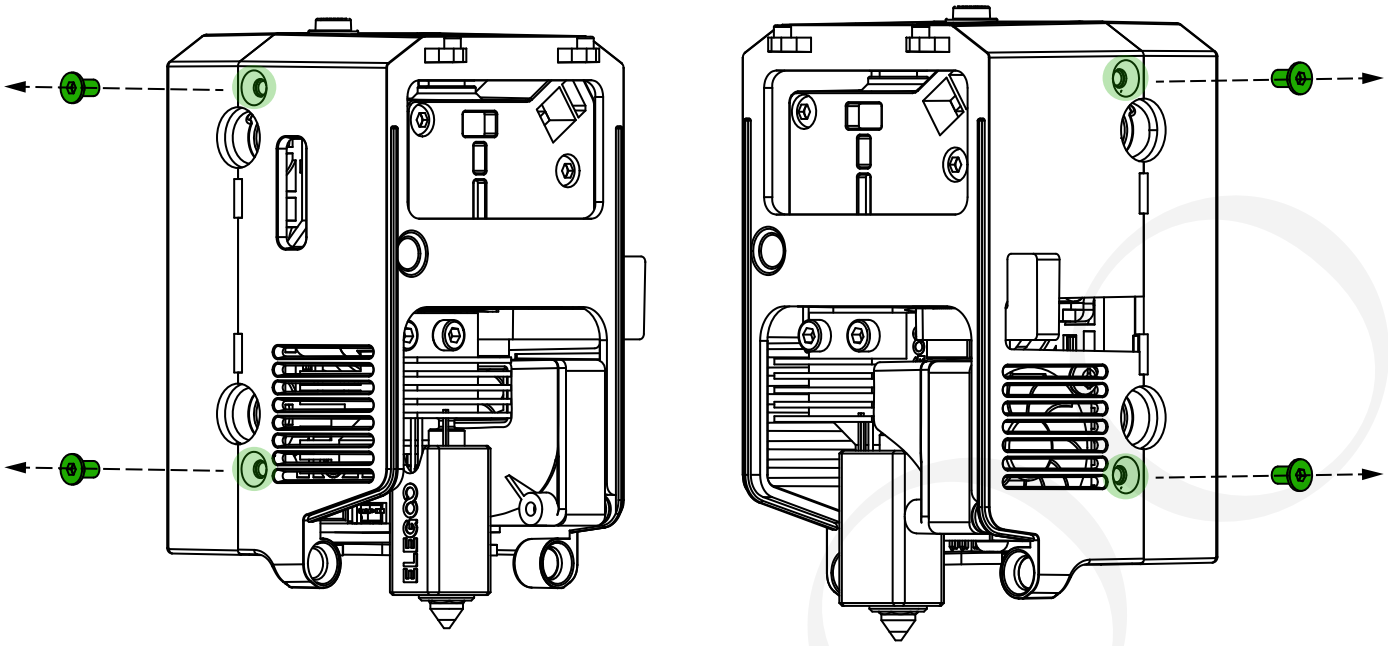


2. Remove the two screws (2.6 * 14) that fix the fan to remove the model's cooling fan

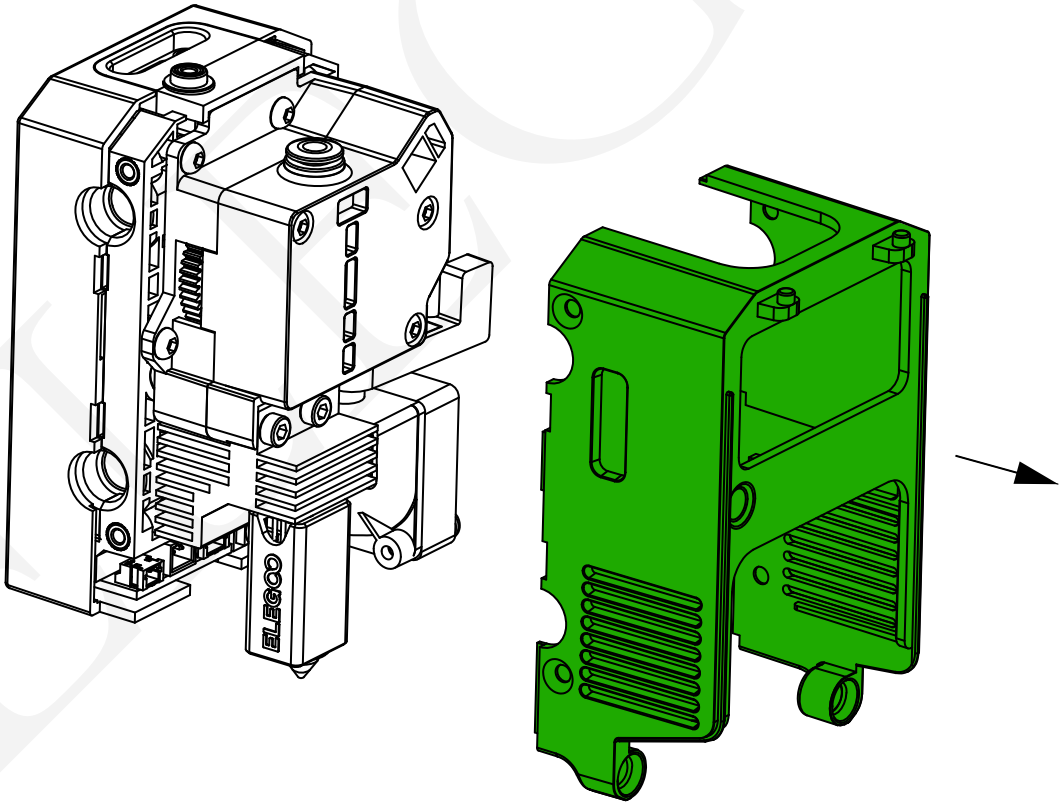


3. Remove the three screws (M3 * 5) here to dismantle the cooling air duct

Ⅳ .Disassembly of the front shell of the extruder

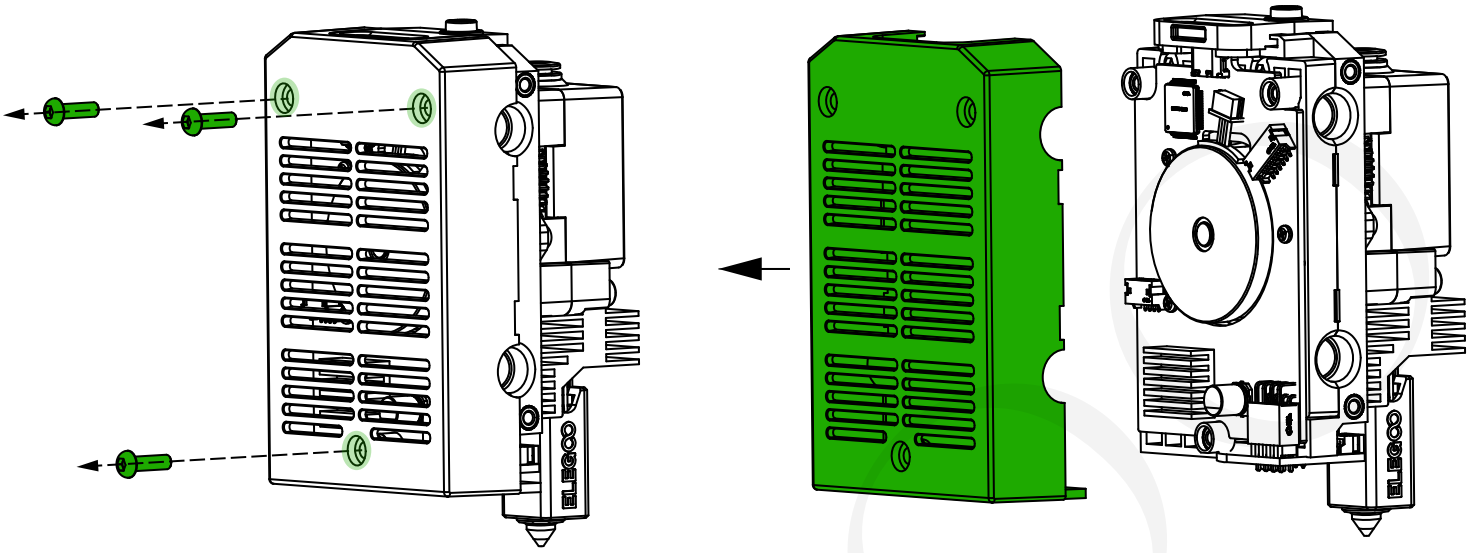


1. Please remove the screws (cone head M3 * 6) that fix the front cover on both sides, totaling four screws



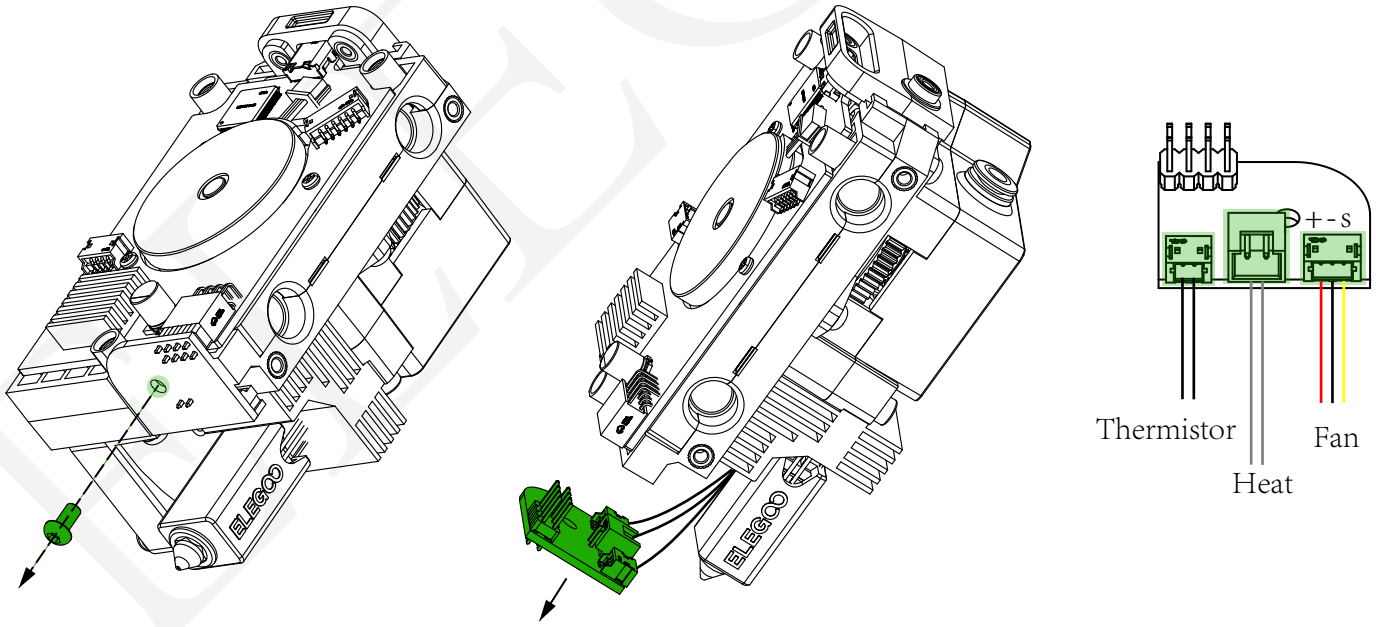
2. Subsequently, the front cover can be removed

Ⅴ .Disassembly of the back cover of the extruder



1. Remove the three screws (M3 * 10) that secure the back cover, and then the back cover can be removed

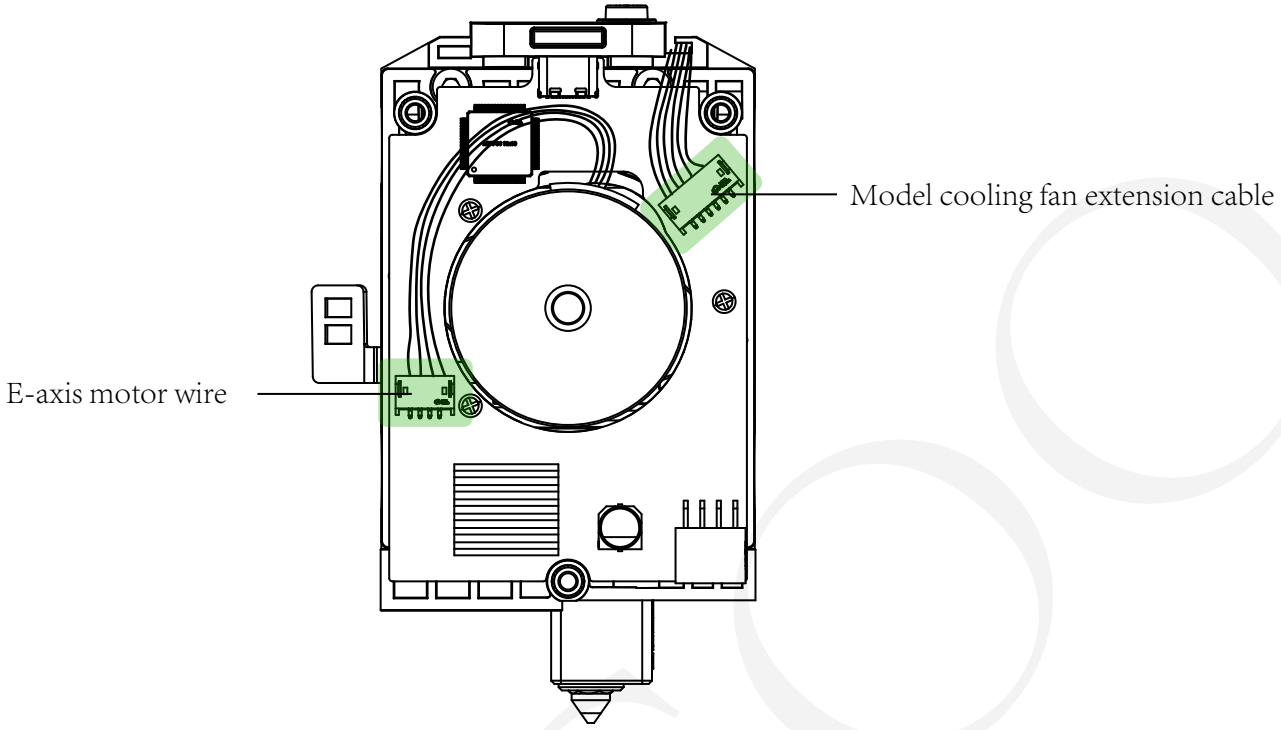
Ⅵ .Disassembly of nozzle heating board



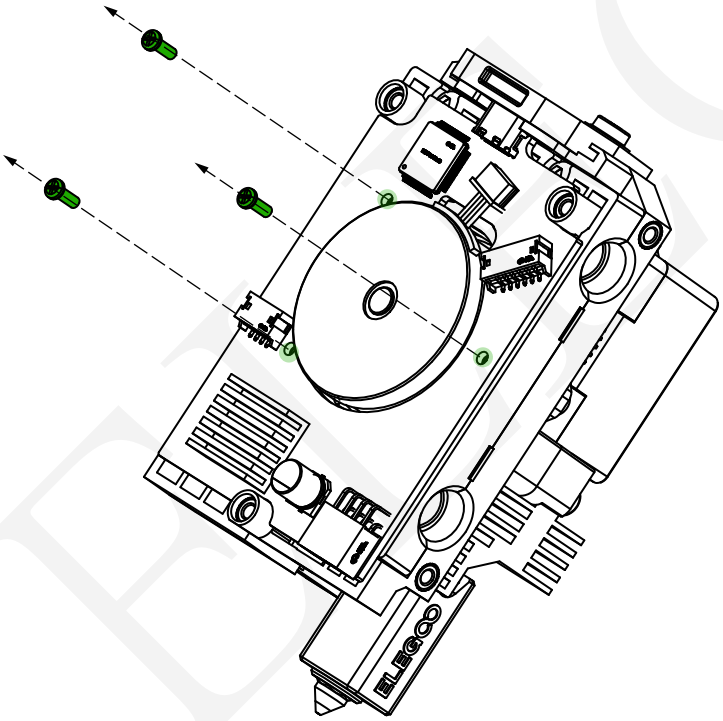
1. Unscrew the screws (M3 * 6) that secure the nozzle heating board and separate the heating board

Tips: At this time, there are still wires connected to the nozzle heating board. Do not pull or damage the wires with force
If the space is narrow and it is inconvenient to remove the cable,
you can skip the operation first and remove the cable in the subsequent steps

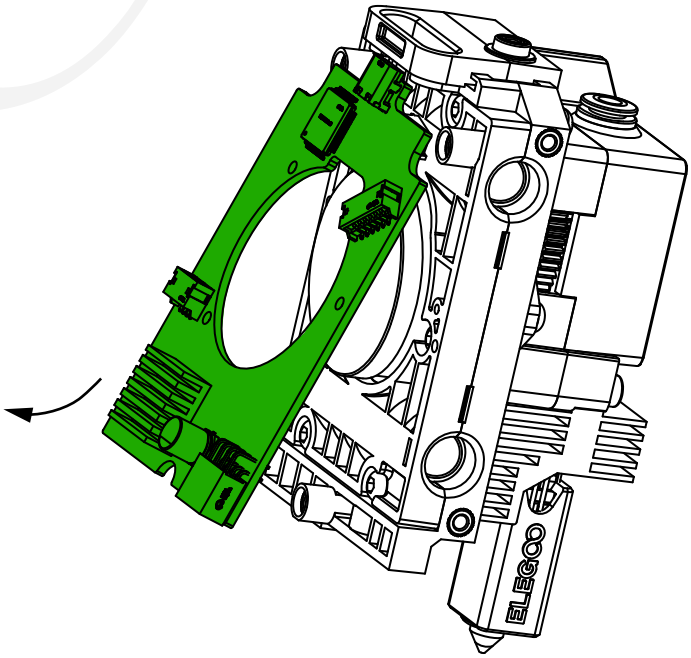
Ⅶ.Disassembly of nozzle communication board



1.Please disconnect from these two locations

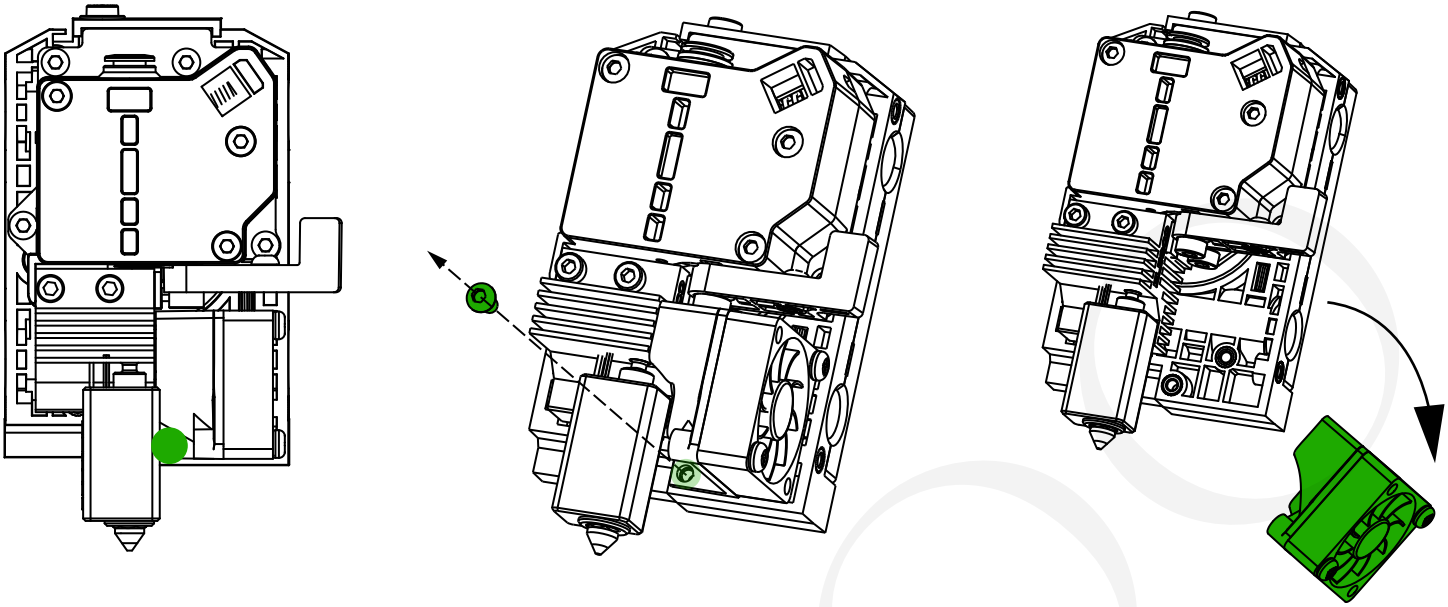


2.Then remove the three screws (PA2 * 6) that secure the nozzle communication board

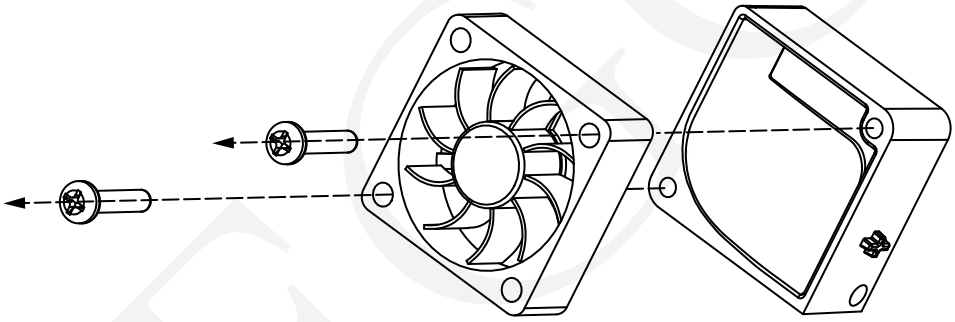


3.Remove the nozzle communication board diagonally downwards

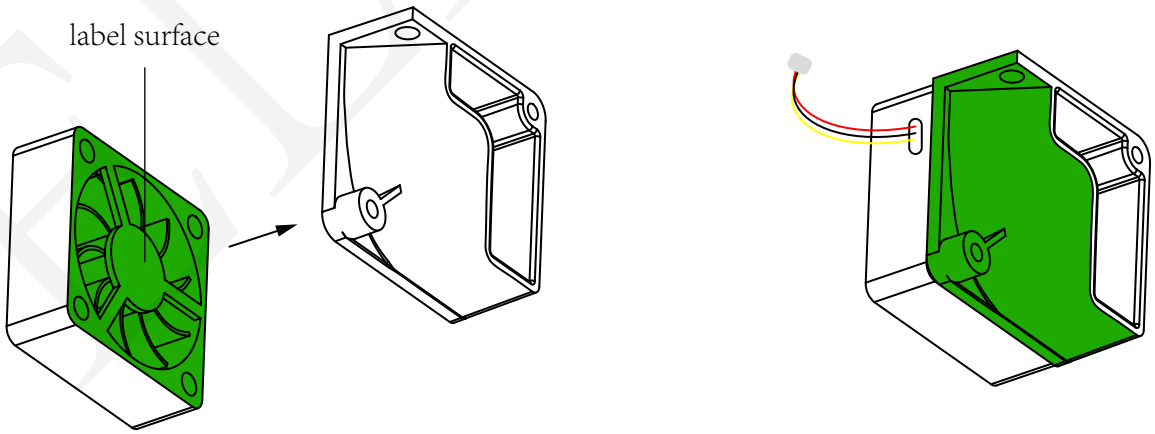
Ⅷ .Disassembly of cooling fan



1. Remove the screws (M3 * 6) that secure the cooling fan component and remove the cooling fan

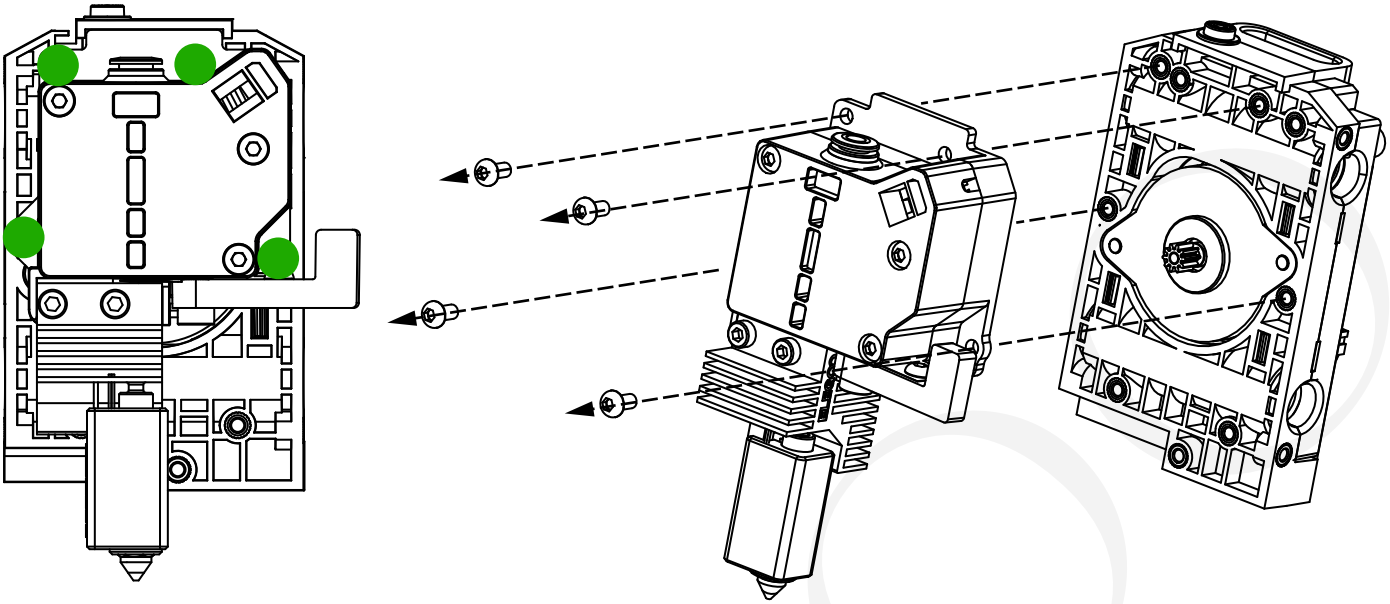


2. Remove the two screws (3 * 14) that secure the cooling fan to separate the cooling fan component



When installing the fan, the label surface should face the air guide, and the position of the fan outlet and the air guide should be as shown in the above figure

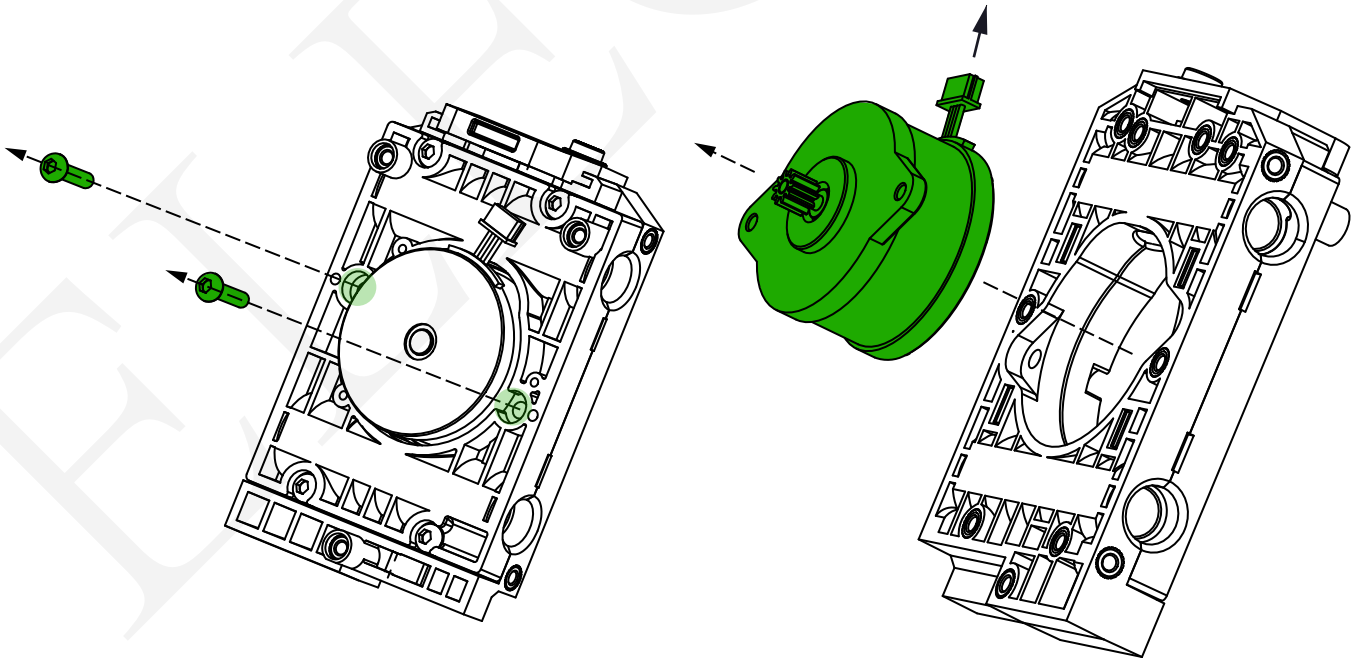
IX .Separation of gearbox and hot end



1. Remove the four screws (M3 * 6) that fix the gearbox and hot end components, and then the gearbox and hot end components can be removed

X .Disassembly of Extrusion Motor

*Please pay attention to the motor wire facing upwards during installation

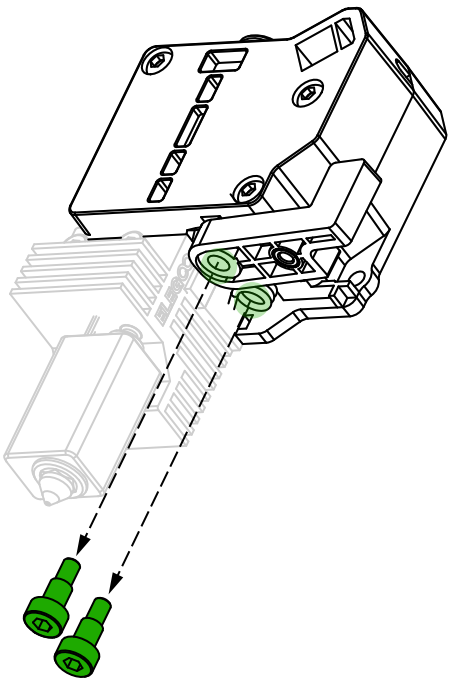


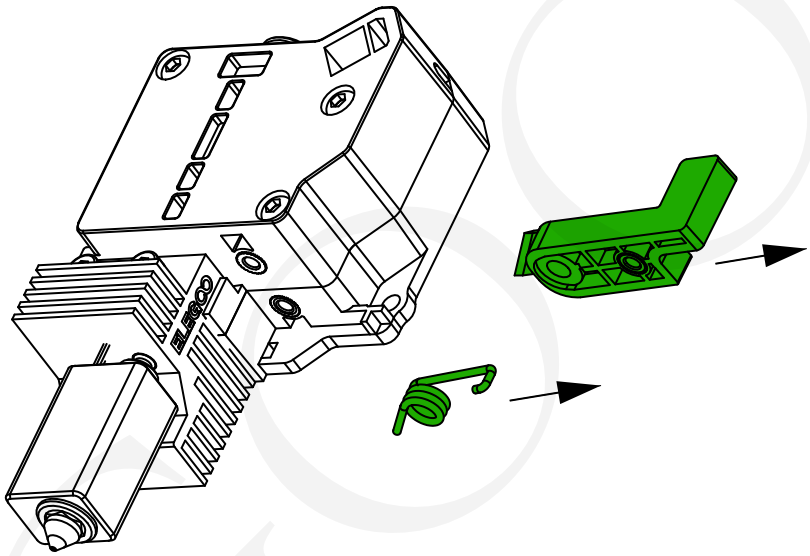
1. Remove the two screws (M3 * 12) that fix the motor.

2. Push the motor towards the gear side

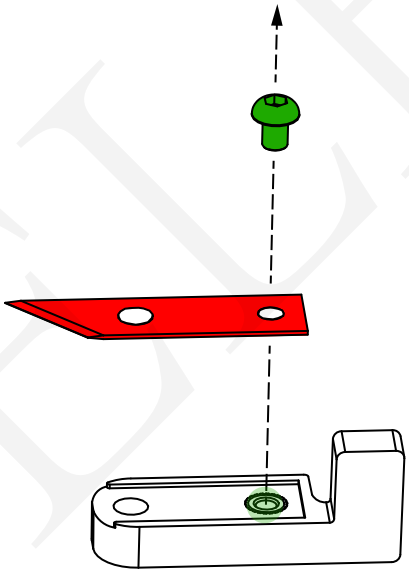
XI .Disassembly of cutting blade components

This component contains sharp blades, please be careful not to scratch the blades when disassembling

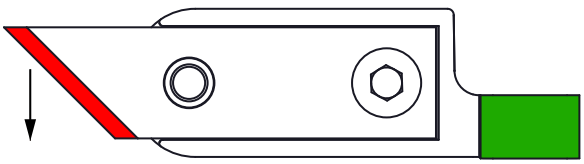




1.Remove the two screws (4 * 5 * M3) that secure the cutter and spring, and then remove the cutter and spring

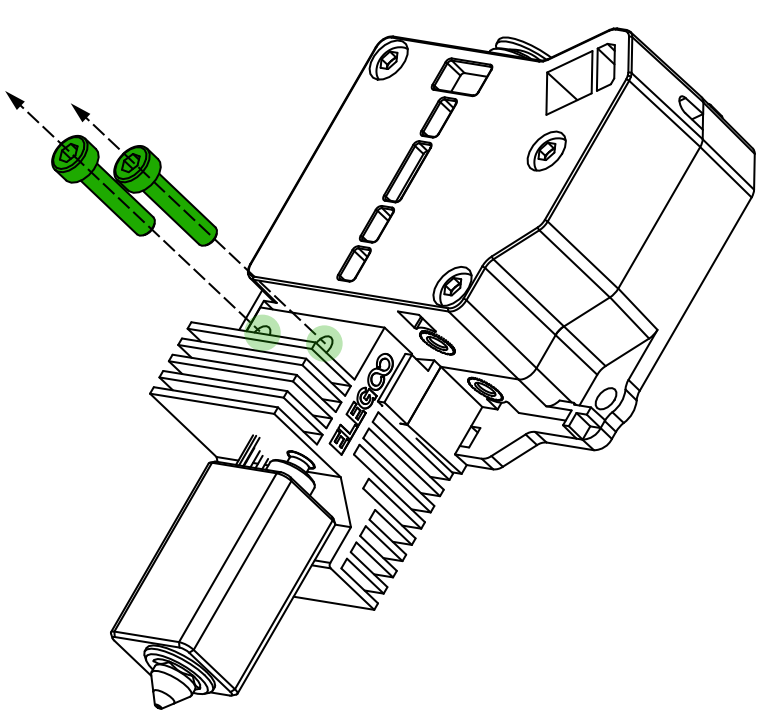


2.Disassemble the screws (M3 * 4) that fix the blade, and then replace the blade

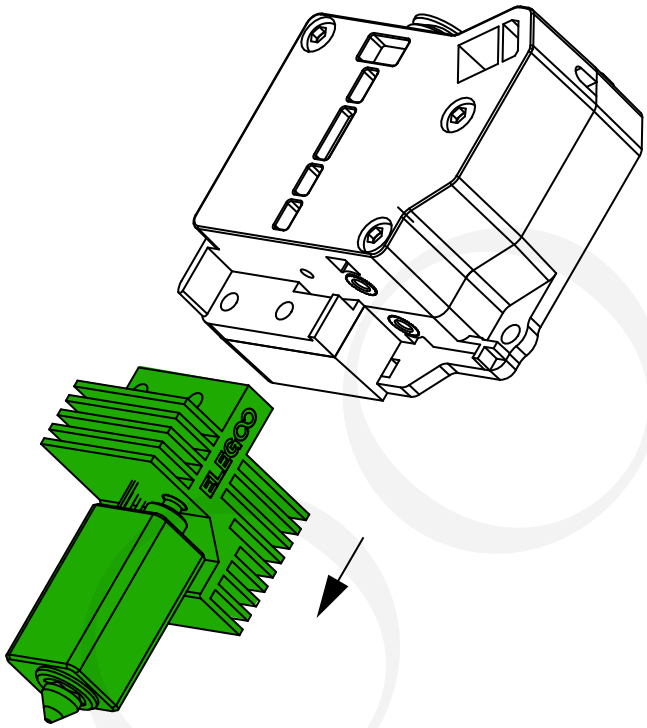


*Please note that the blade should face the handle of the bracket during installation

XII .Separate the gearbox from the hot end

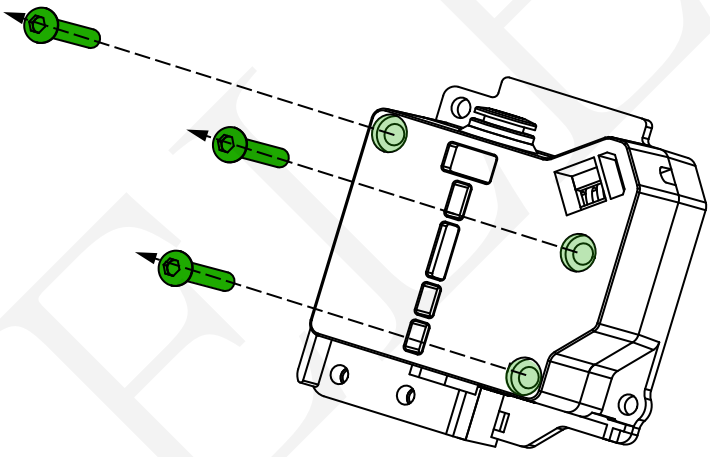


1. Unscrew the two screws (M3 * 14) that secure the hot end.

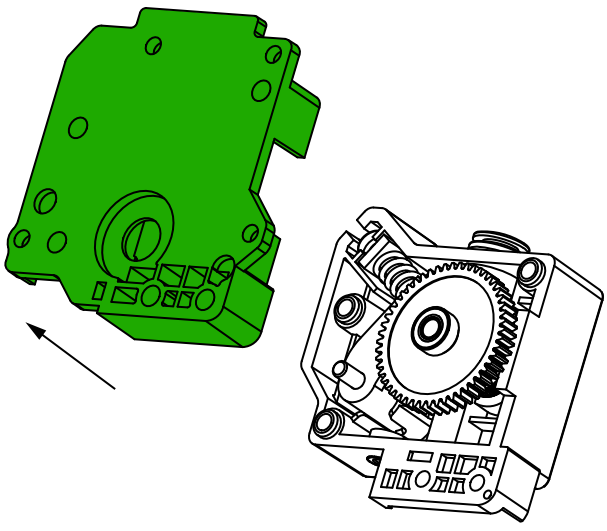


2. Separate the hot end from the gearbox

XIII .Disassembly of gearbox

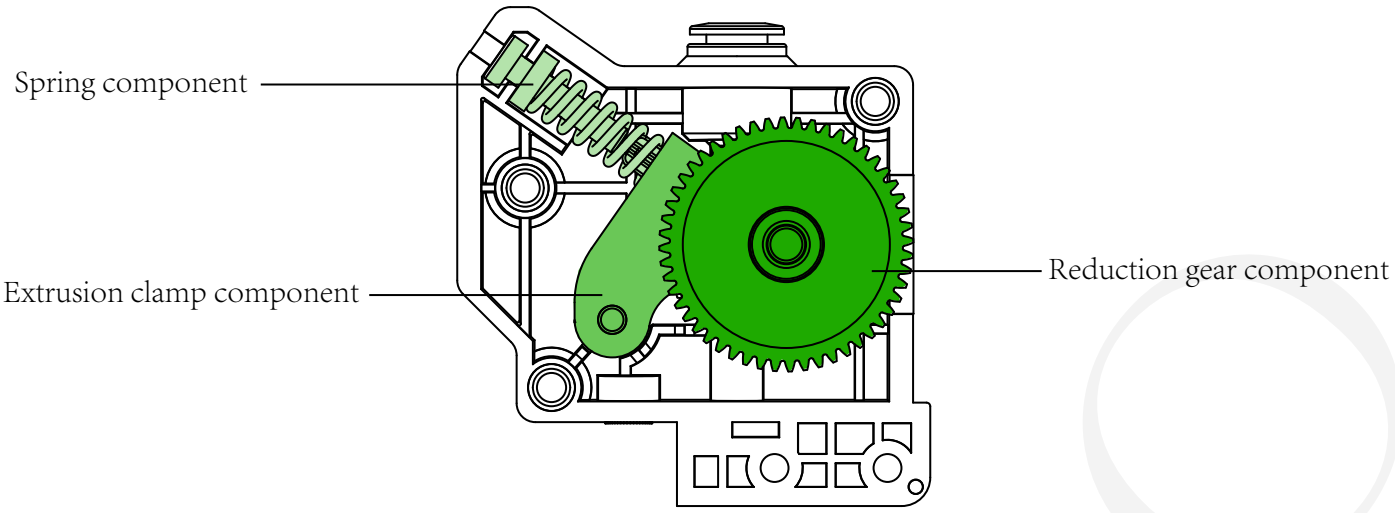


1. Unscrew the three screws (M3 * 20) that fix the upper and lower covers of the gearbox.

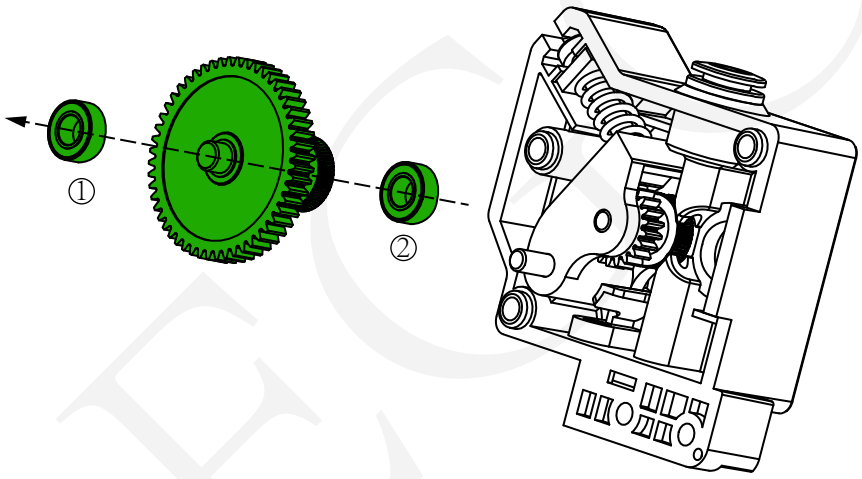


2. It is recommended to remove the lower cover first

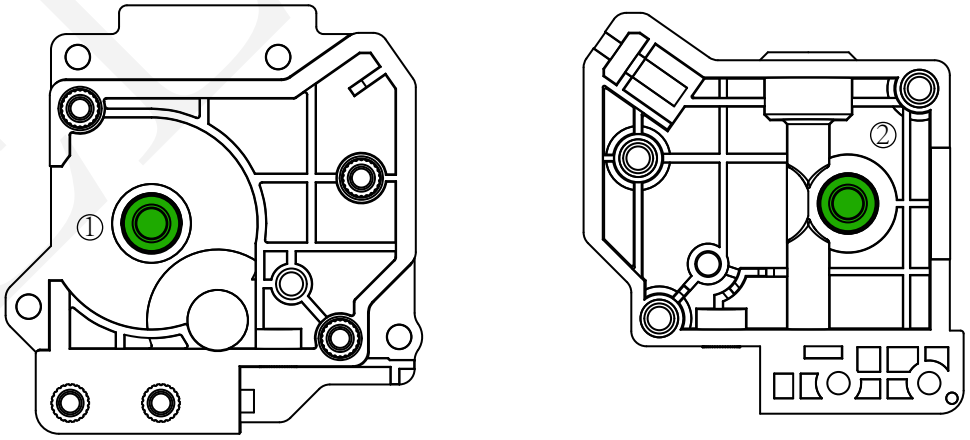
*The internal components are tightly assembled, even if the screws have been removed,
The upper and lower covers may also be difficult to separate, and can be easily separated by twisting them left and right



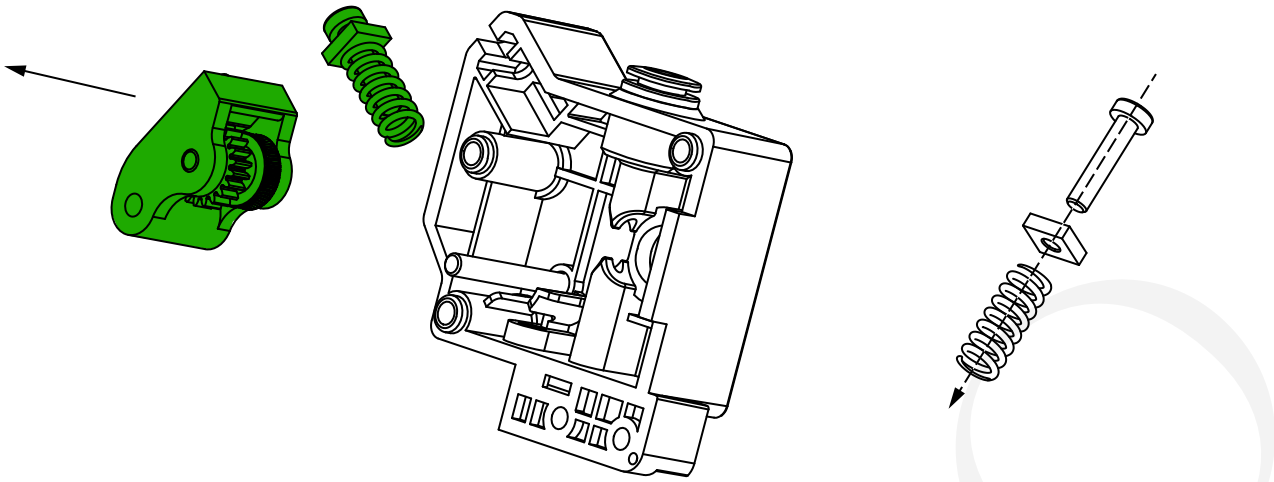
Internal structure display of gearbox



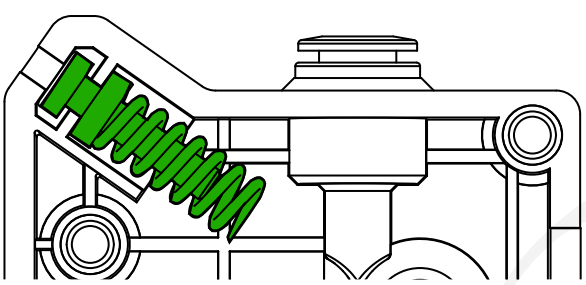
3. Remove the bearing and reduction gear components in sequence



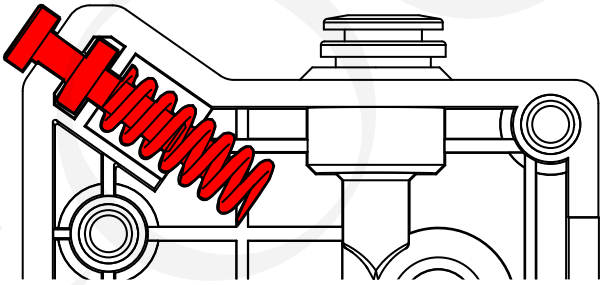
①② Sometimes these two bearings are embedded separately in the upper and lower shells at this location



4. Remove the extrusion clamp component and spring component

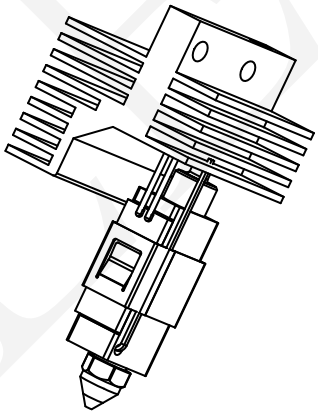


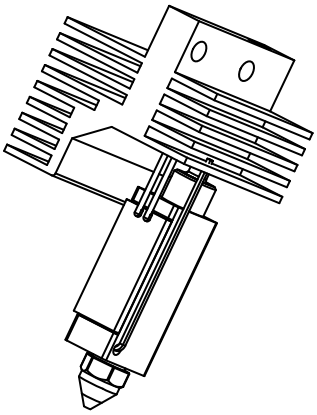
Correct installation method of spring components



Incorrect installation method of spring components

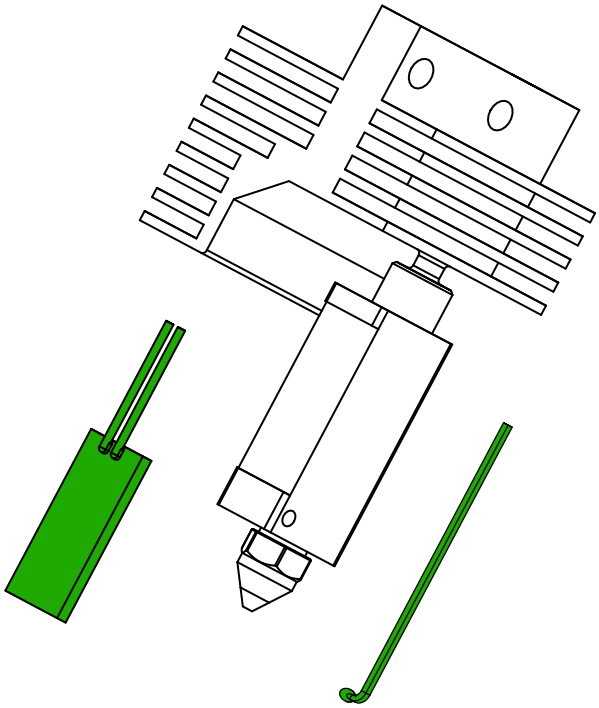
XIV .Disassembly of hot end



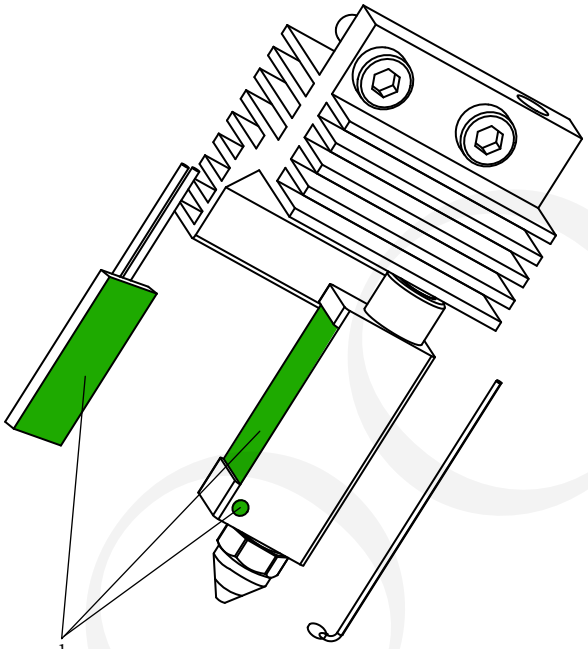


1. Remove the silicone cover

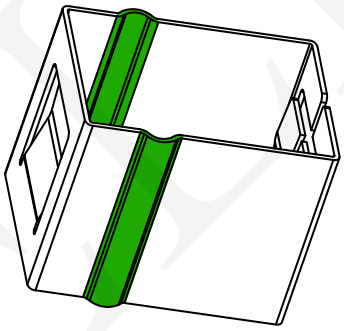
2. Remove the ceramic heating element fixing ring

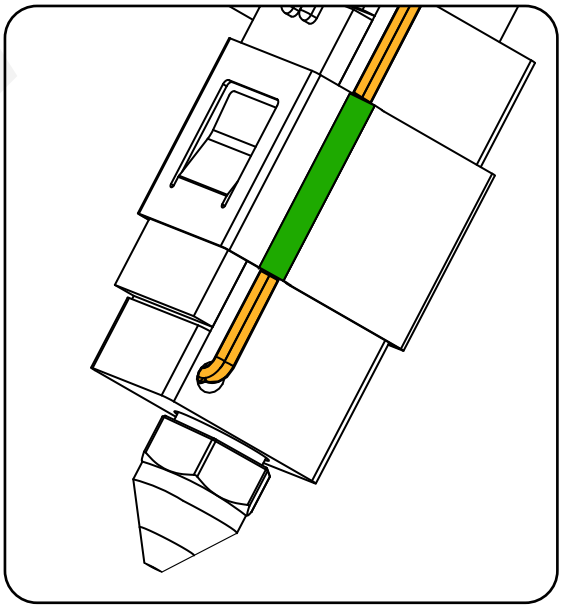


1.Remove ceramic heating element and thermistor



*If ceramic heating elements or thermistors need to be reinstalled in the future
Please check if the thermal grease here is still sufficient
If missing or unevenly covered, please supplement





*Please pay attention to the protrusion of the fixing ring during subsequent installation,
The protrusion here is to avoid compressing the thermistor during subsequent installation