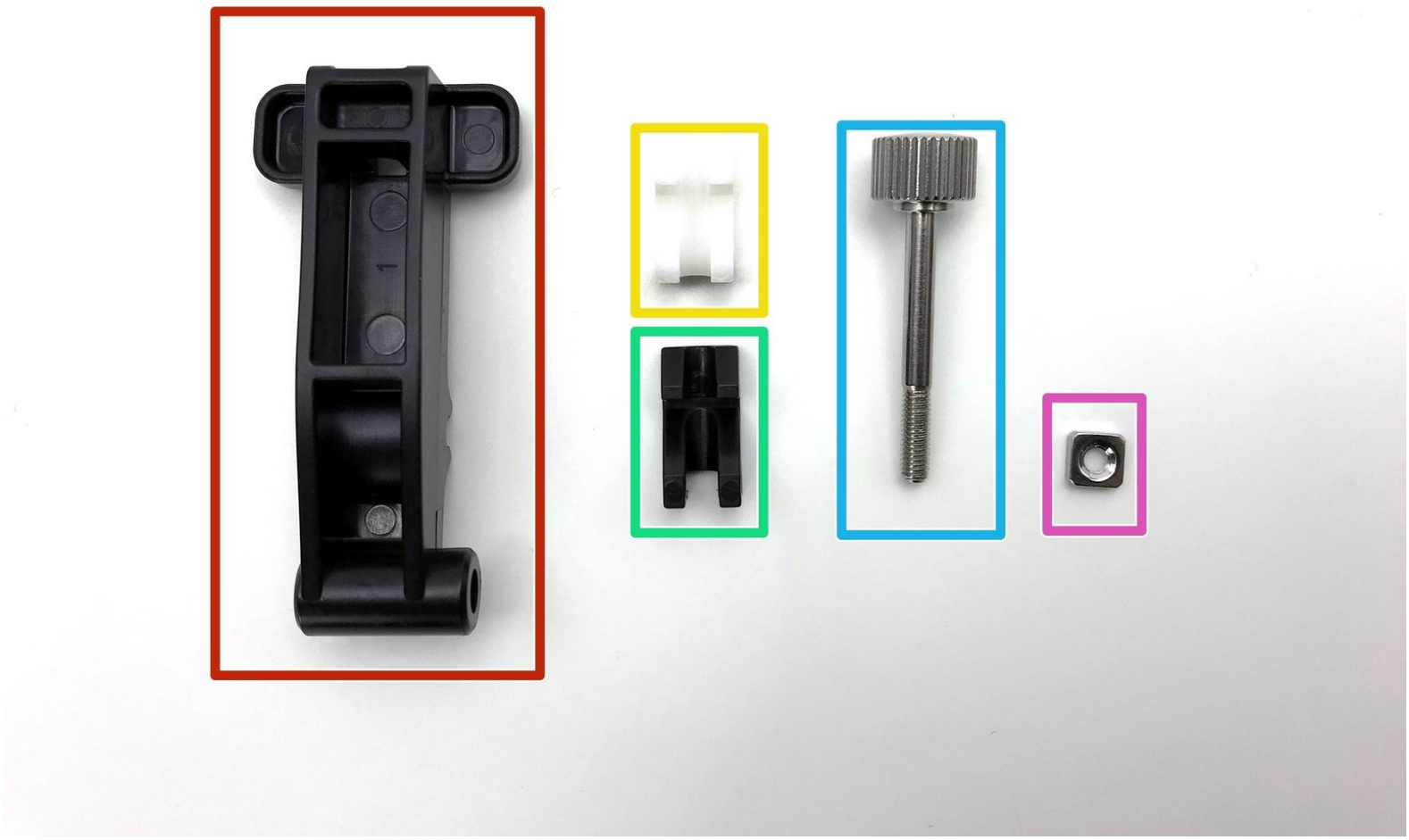
01 - E3D Hemera Core Assembly

Written By: Dan Rock



INTRODUCTION

Hemera is provided either fully or partially assembled, this guide has been written in the event of requiring reassembly post-maintenance

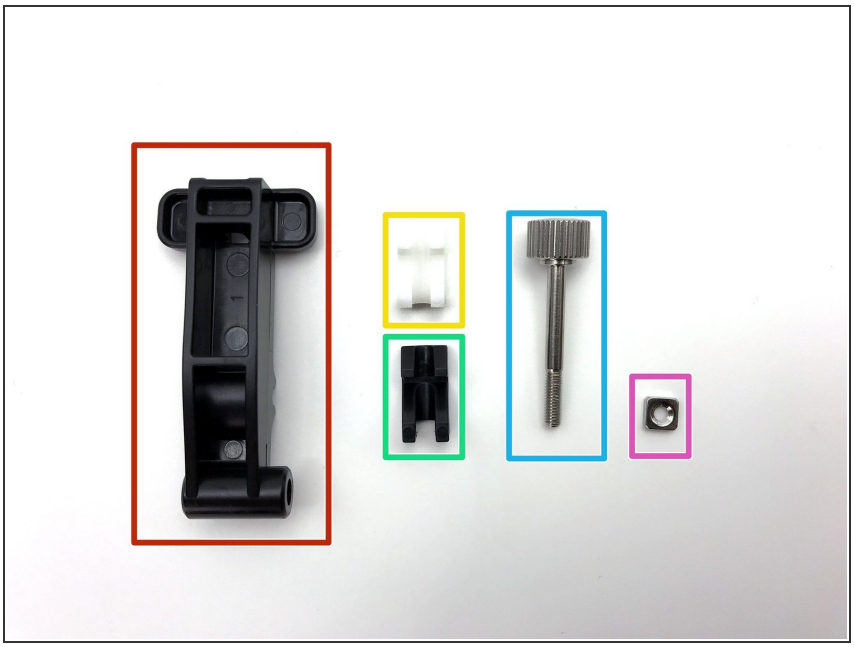
TOOLS:

- 2.5mm Allen Key (1)

PARTS:

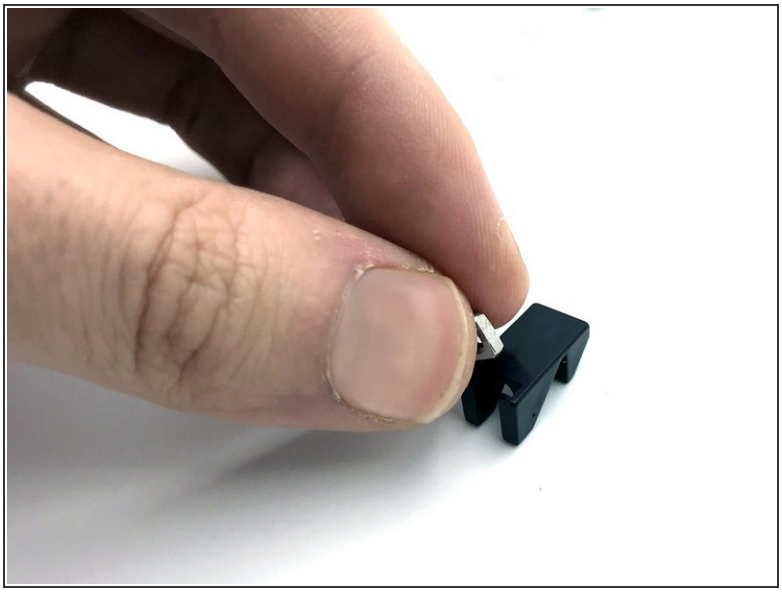
- Hemera 1.75mm heatsink (1)
- Hemera Motor (1)
- 623 Bearing (2)
- Hemera Slide Block (1)
- Hemera Spring Block (1)
- Hemera Thumbwheel (1)
- Dowel (1)
- M3 x 22 Socket Head Screw (2)
- M3 Square Nut (5)

Step 1 — Gather idler parts



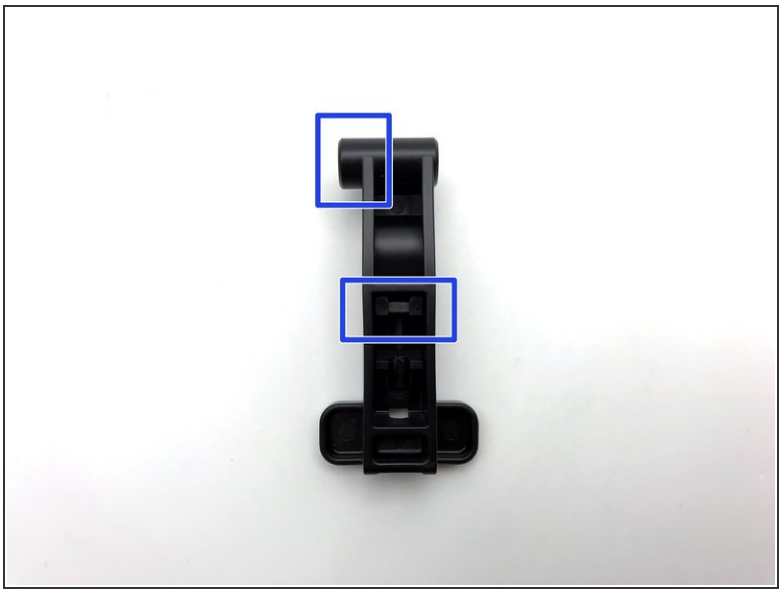
- Gather:
  - x1 Hemera idler main body
  - x1 Hemera slid block (black)
  - x1 Hemera spring block (white)
  - x1 Hemera Thumbwheel
  - x1 M3 Square nut

Step 2 — Prepare slide block



- Insert the square nut into the slide block.

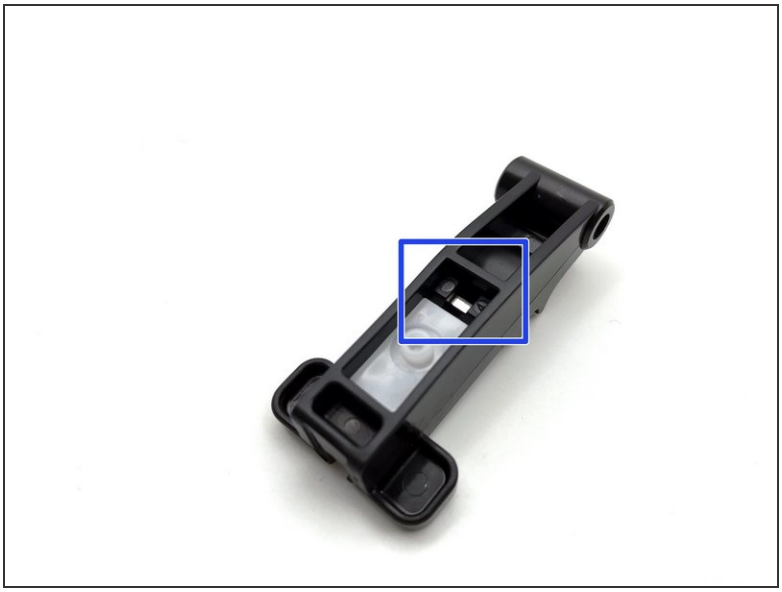
Step 3 — Assembling the idler lever



- Place the sliding block with the square nut into the idler lever.
- Check orientation of the inserted slide block before proceeding.

It is easier to do this part with the Idler held "vertically" so that the square nut doesn't fall out in the act.

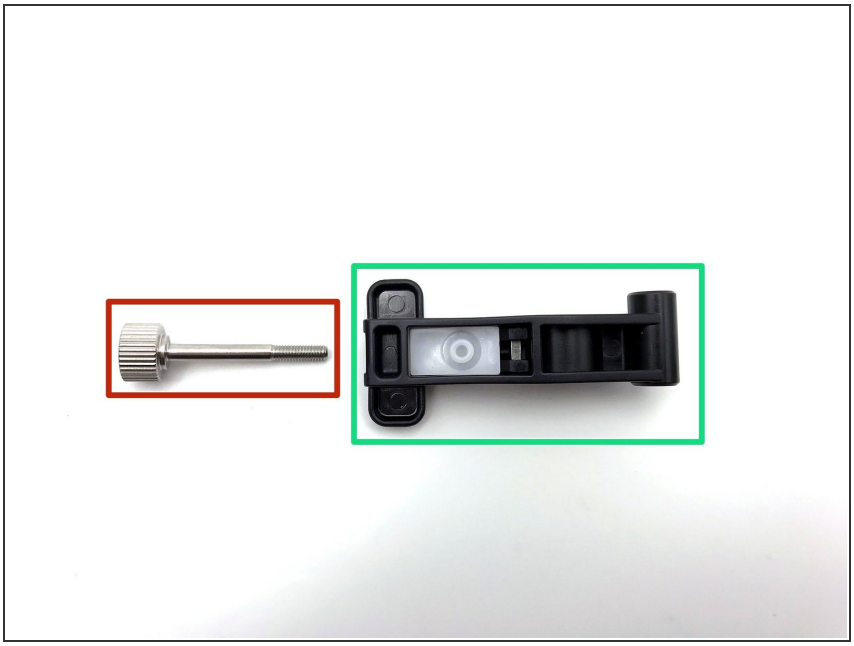
Step 4 — Preparing idler arm



- Place the spring block into the idler arm.
- Check orientation before proceeding.

ⓘ The spring block will fit nicely against the slide block when done right.

Step 5 — Gather thumbscrew and idler assembly



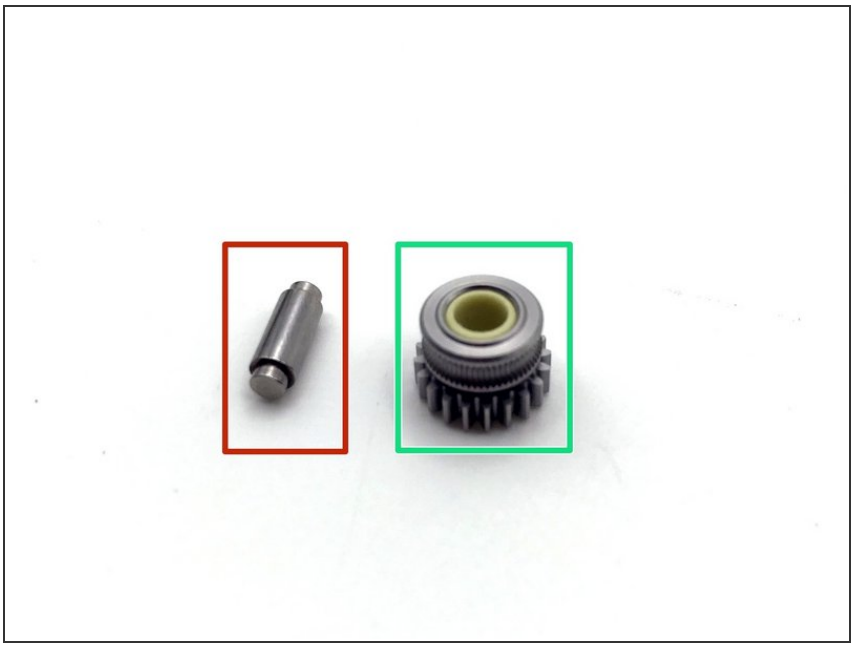
- Gather the thumbscrew
- Gather idler assembly

Step 6 — Insert thumbscrew

- Insert the thumbscrew into the idler assembly.

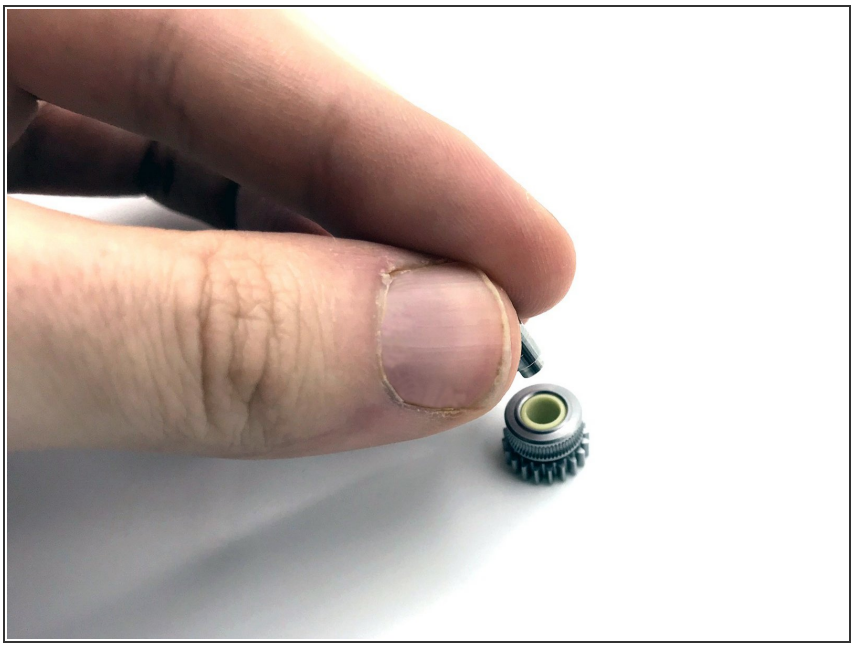
ⓘ Only turn it once or twice when the threads catch. Having low tension will maker later assembly easier.

Step 7 — Gather parts



- Gather:
  - Idler hobb assembly
  - Idler shaft

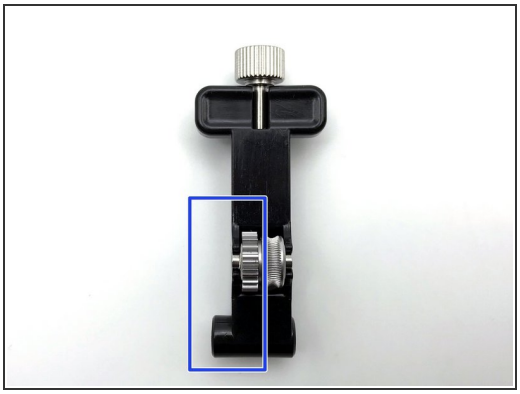
Step 8 — Prepare idler

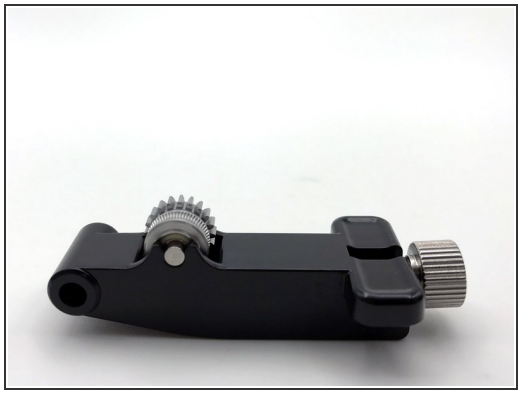


- Place the idler shaft into the idler hobb assembly.

ⓘ This will be a loose fit so be careful when you pick it up again.

Step 9 — Hobb placement



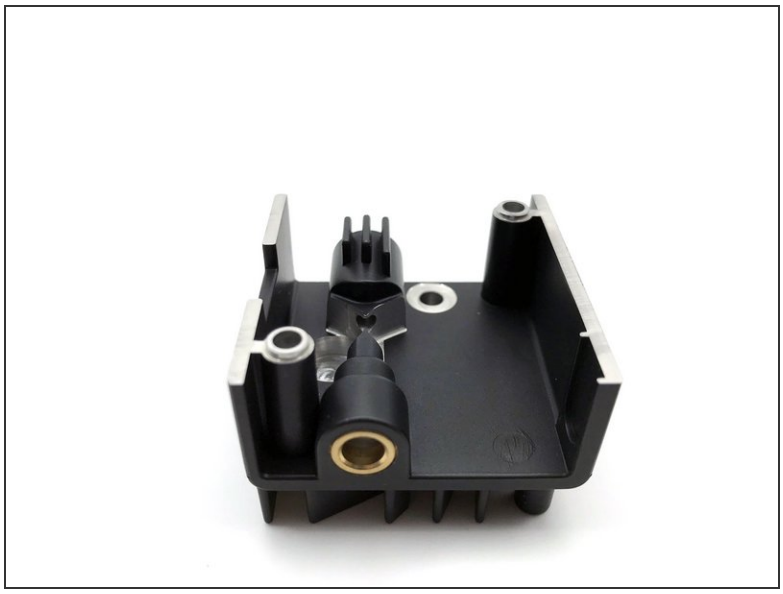


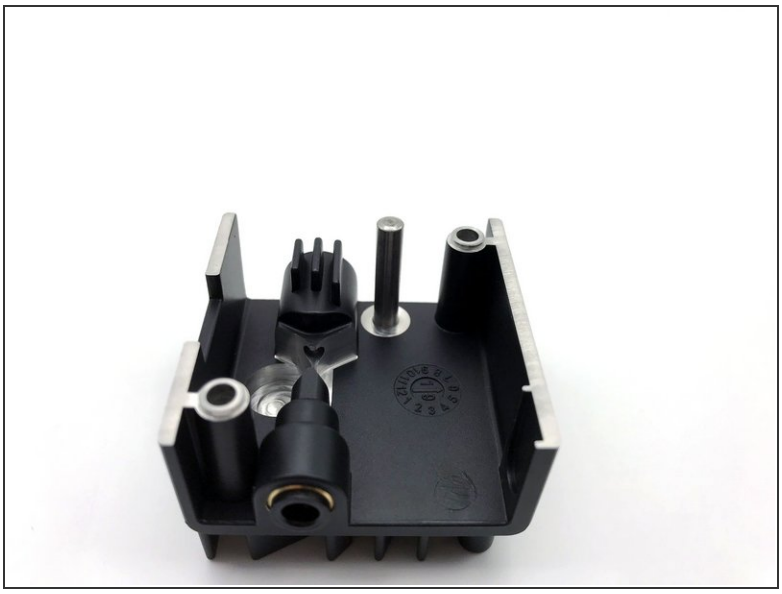
- Place the idler hobb assembly on the idler arm.
- Check orientation before proceeding.

ⓘ Make sure to fully press the idler hobb assembly into the idler arm before proceeding.

ⓘ It should click into place.

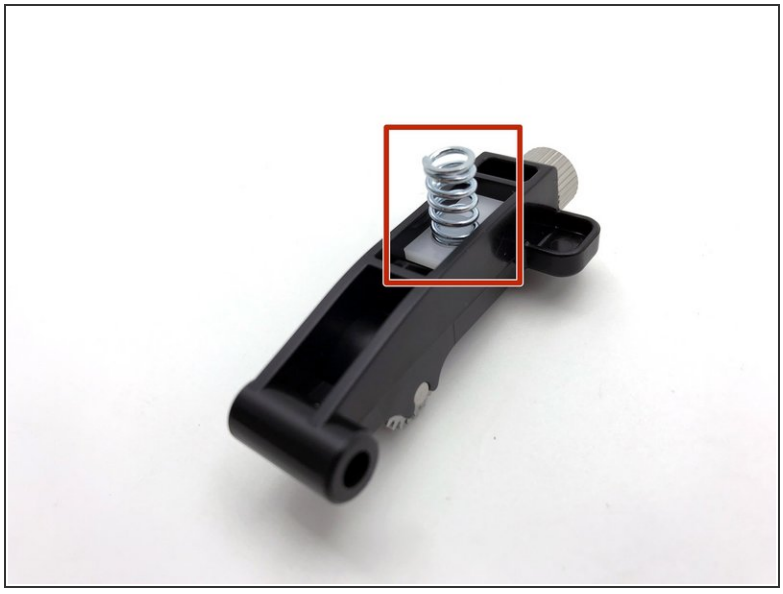
Step 10 — Prepare heatsink





- Place the dowel into the heatsink

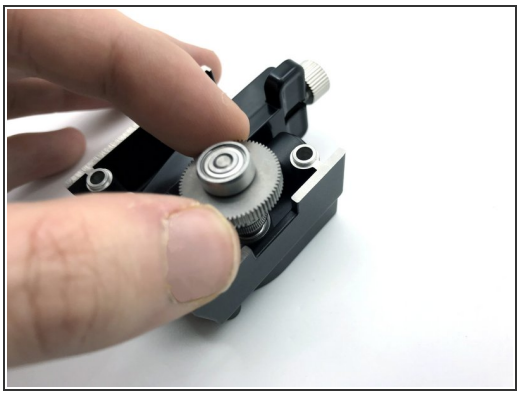
Step 11 — Place spring

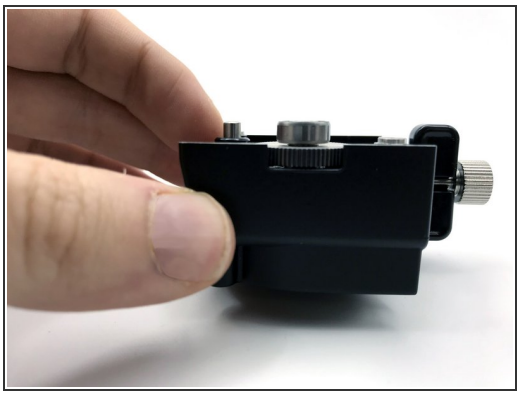


- Place the spring on the spring block.
- Place the Idler arm with spring onto the idler pin.

ⓘ Holding the spring in place will aid the insertion into the groove on the inside of the heatsink.

Step 12 — Insert drive train



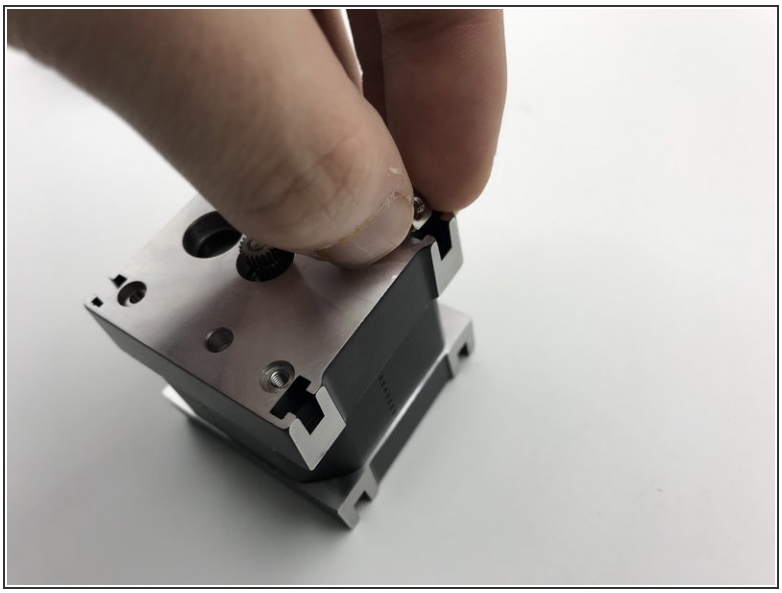


- Place the drive hobb assembly into the bearing pocket in the heatsink.

ⓘ The drive hobb assembly should line up with the slot in the heatsink.

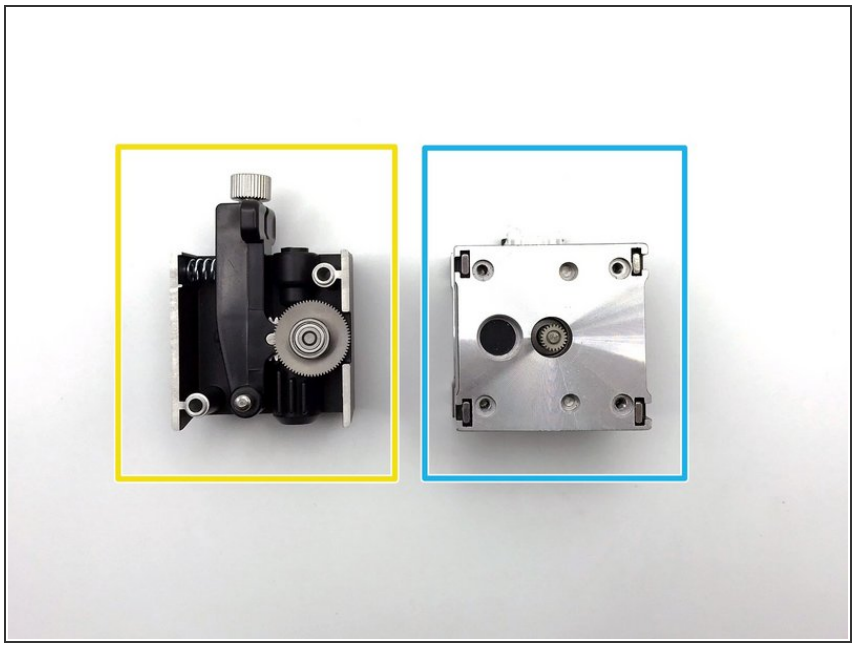
ⓘ If the two bearings are not on the hobb shafts at this point place them on.

Step 13 — Prepare motor



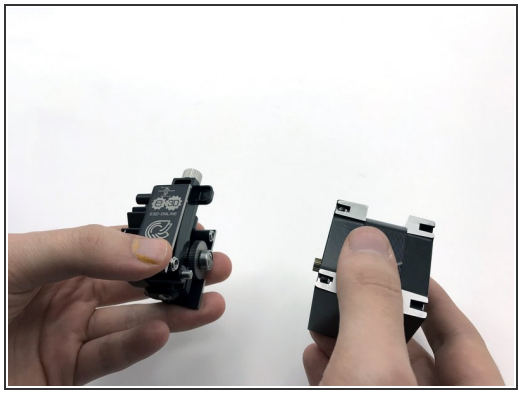

- Place x4 M3 square nuts into the T slots on motor face.

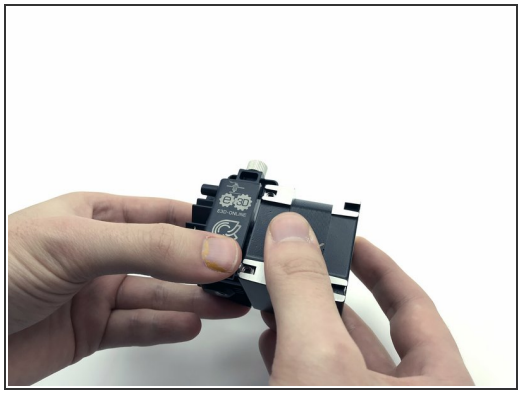
Step 14 — Gather parts

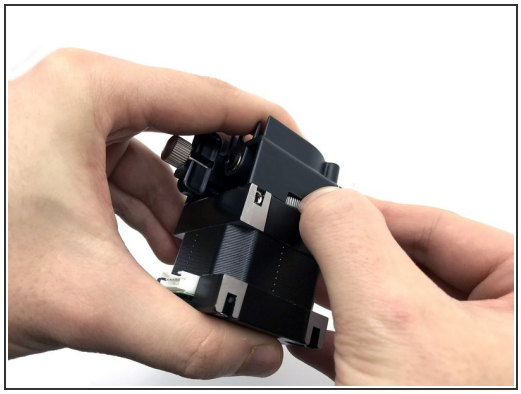


- Gather:
  - Heatsink assembly
  - Motor assembly

Step 15



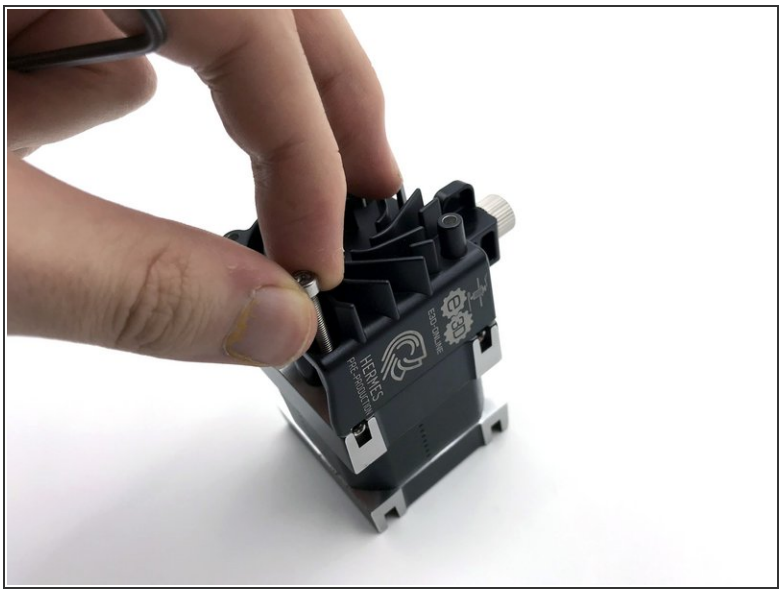
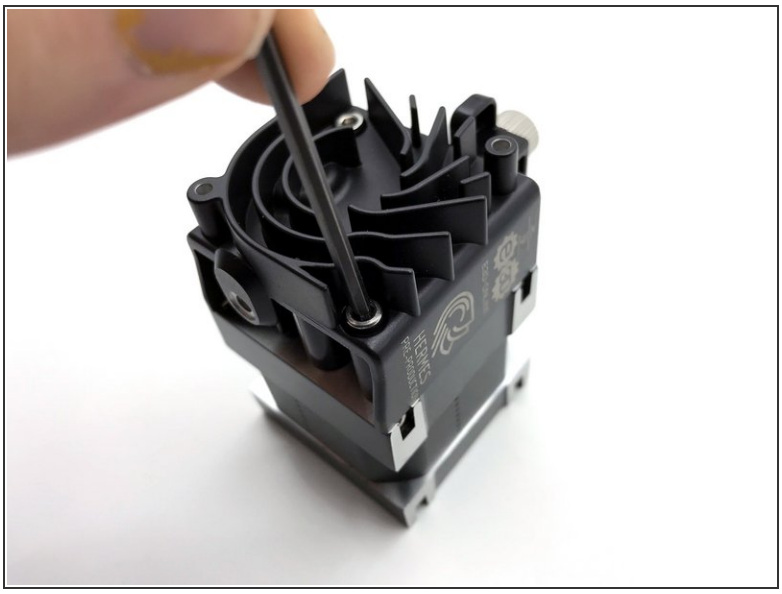




- Place the heatsink onto the motor face.
- The aim is to line up the bearing on the drive hobb assembly with the bearing pocket on the motor face.

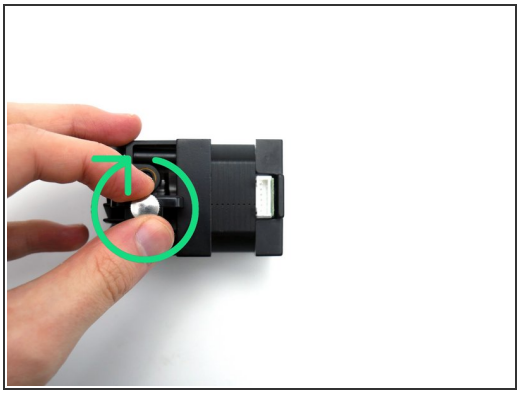
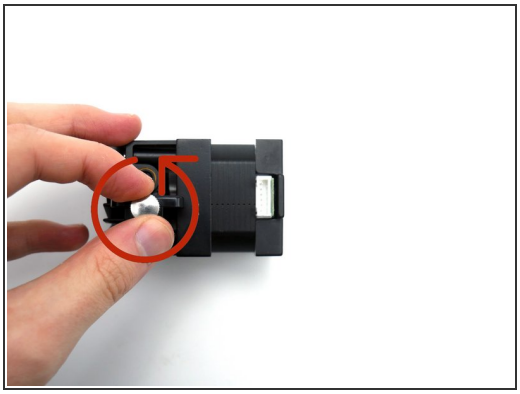
ⓘ Keep the motor facing upwards to prevent the square nuts falling out.

Step 16

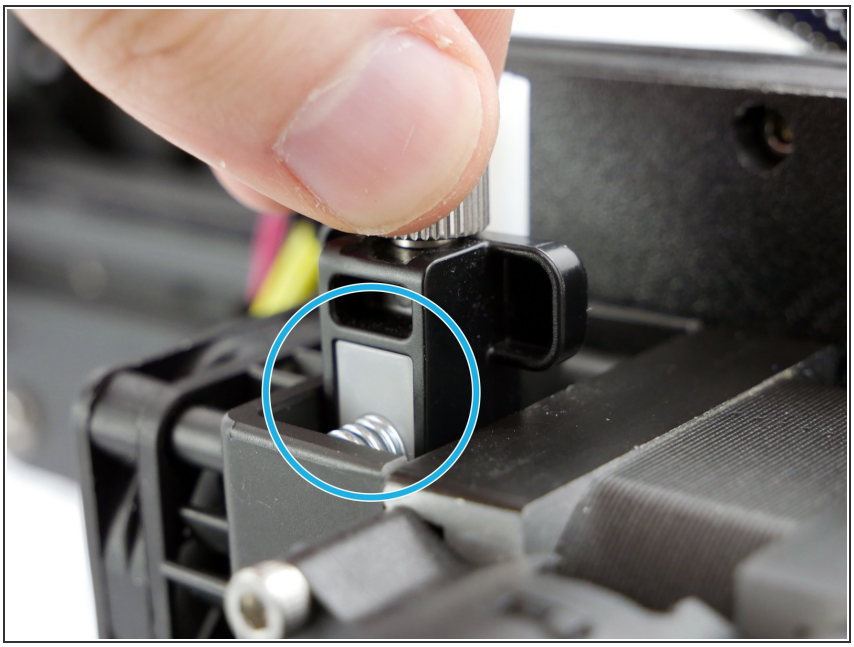
- Place the M3 screws into the two holes on the heatsink.
- Fasten the M3 screws with a 2.5mm Allen key

Step 17 — Idler tension

- To adjust the idler tension, rotate the thumbscrew at the top.
- Rotating clockwise (with the heat sink engraving facing you) increases filament tension.
- Rotating anticlockwise decreases filament tension.

Step 18

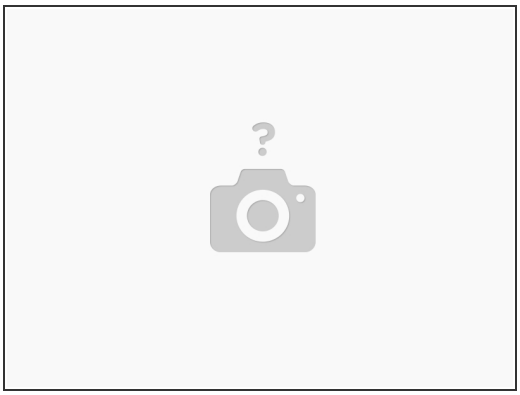


Recommended starting idler lever tension.

- The white spring block should be flush with the front face of the idler lever.

Further adjustment may be required dependant on material being used, for example flexible filaments may require additional tension.

Step 19



- For Direct assembly instructions. Please see: 02 - E3D Hemera Direct Assembly
- For Bowden assembly instructions please see: 03 - E3D Hemera Bowden Assembly
- For mounting instructions please see: 04 - General E3D Hemera Mounting Guide.
- For Current adjustment instructions please see: 05 - E3D Hemera Current Adjustments (VREF)