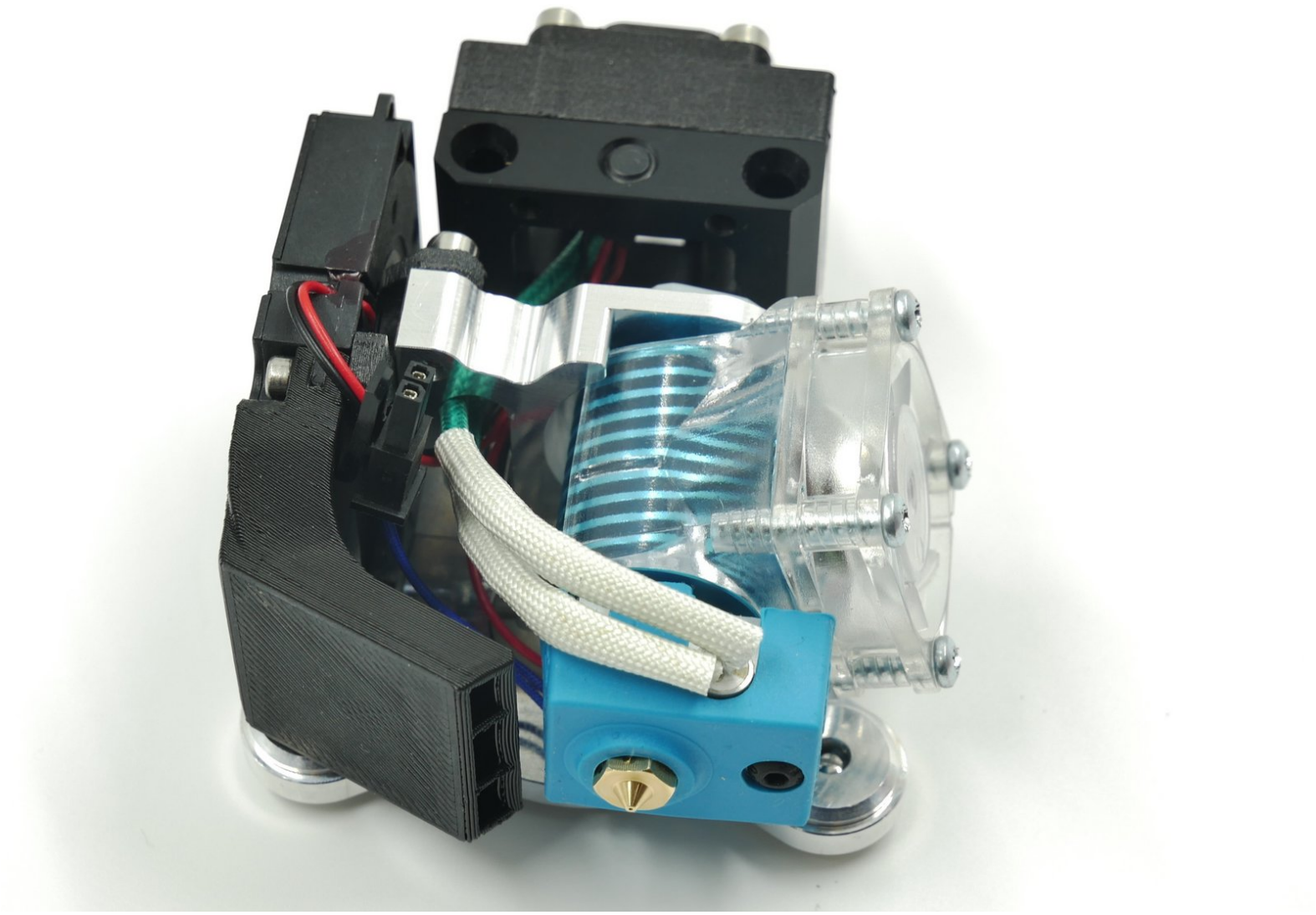
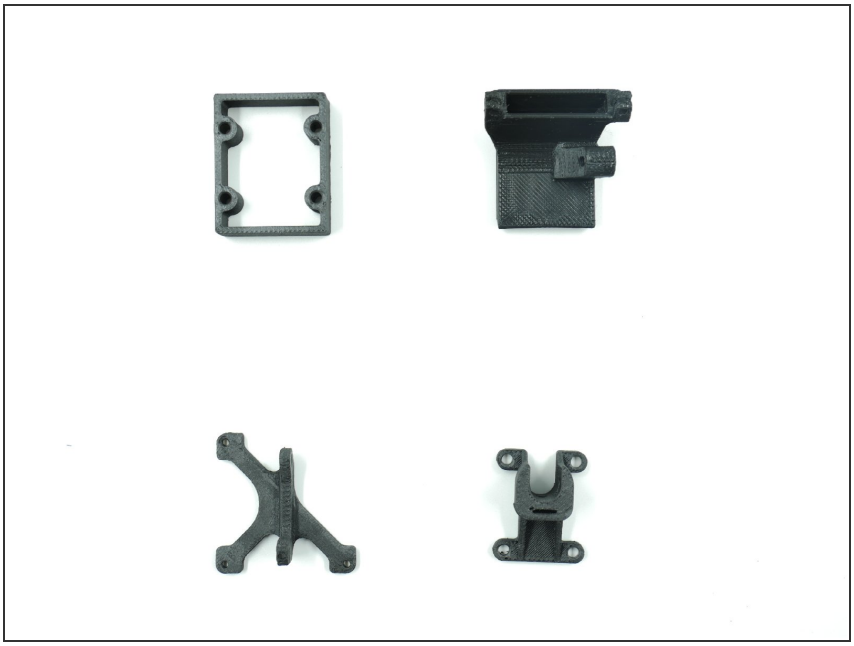
03a - V6 Bowden Tool Assembly.

Written By: Dan Rock



Step 1 — Gather Parts.

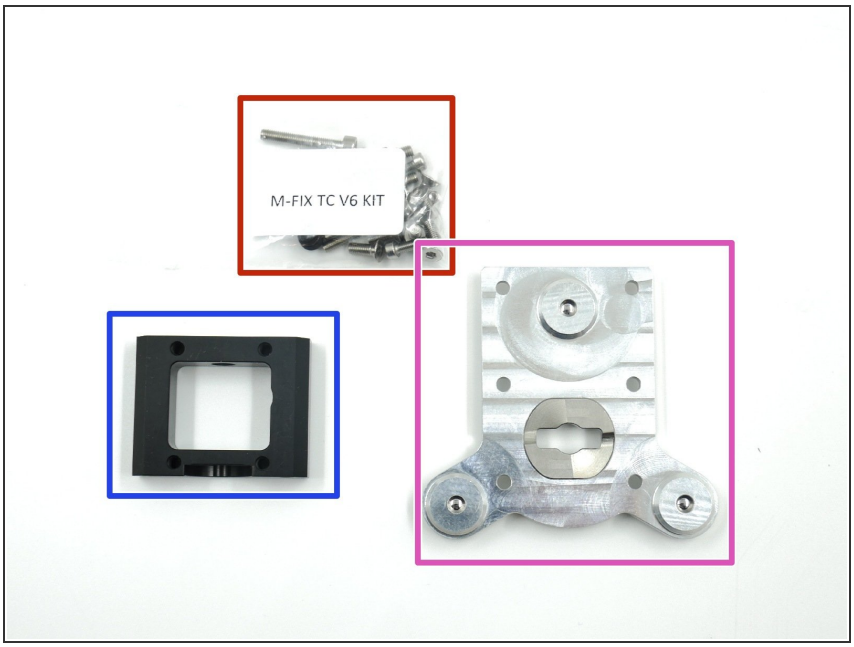


- Gather:
- x1 V6 Receiver Top
- x1 V6 PCF Duct
- x1 V6 PCF Fan Bracket
- x1 V6 Cable Support
- Please note these parts are not included, you will need to print these yourself.
- Download the files from GitHub.

Step 2 — Prepare parts.

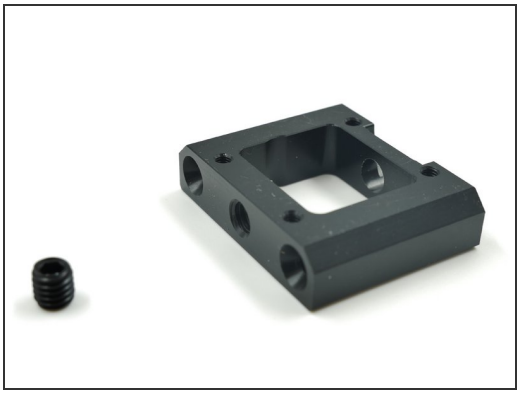
- Tap M2.5 Threads into the three holes in the printed PCF Fan Bracket.
- Tap an M3 thread into the printed Top.

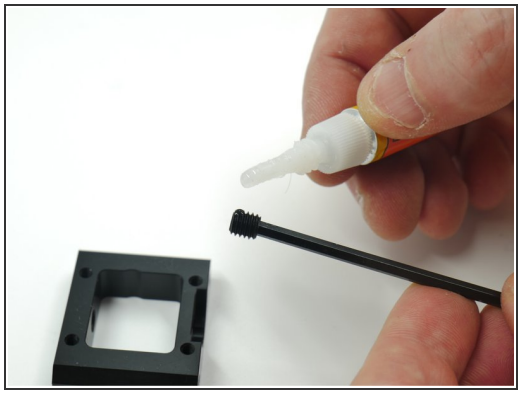
Step 3 — Gather Parts.

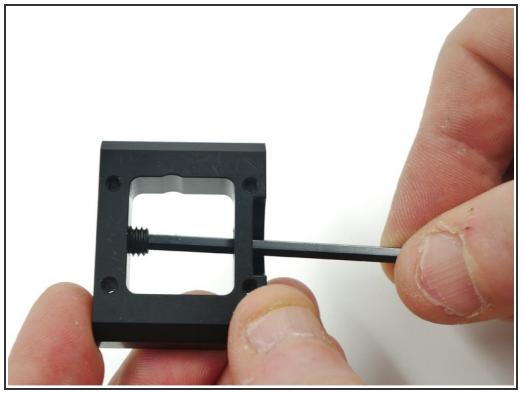


- Gather:
- x1 TC Receiver.
- x1 V6 fixings kit.
- x1 tool plate.

Step 4 — M6

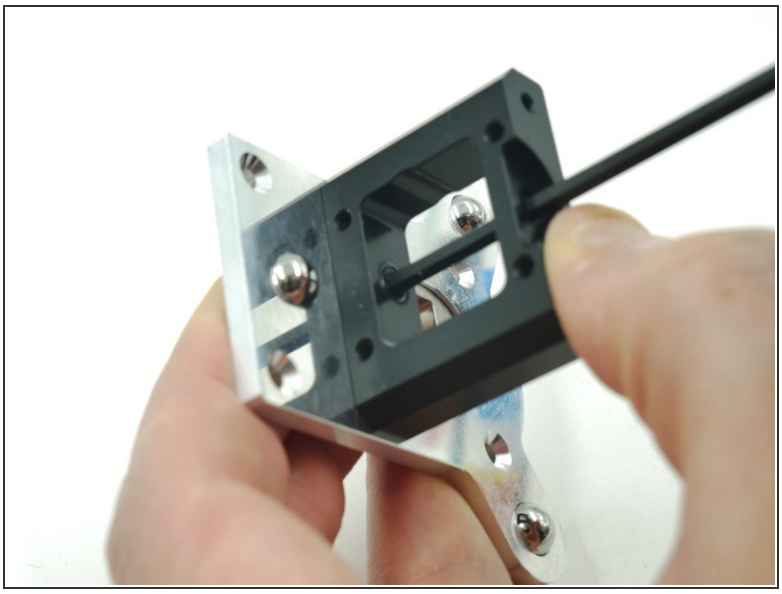


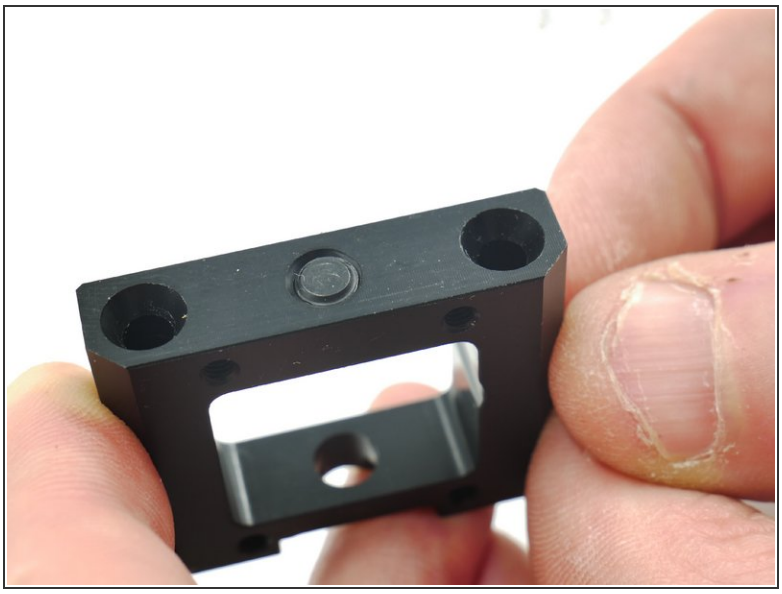




- Apply a drop of super glue to the M6 grub screw.

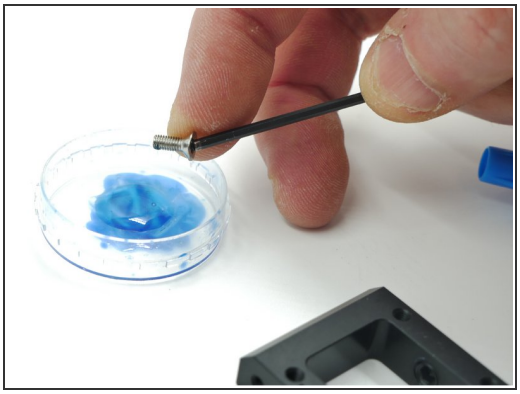
Step 5

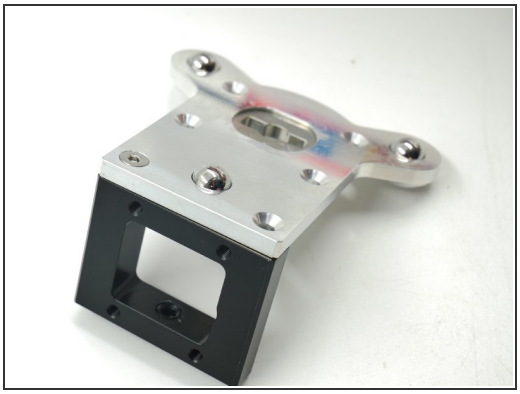




- Using a flat surface (not necessarily a tool plate) make sure the end of the M6 grub screw is flush with the surface of the plastic part.

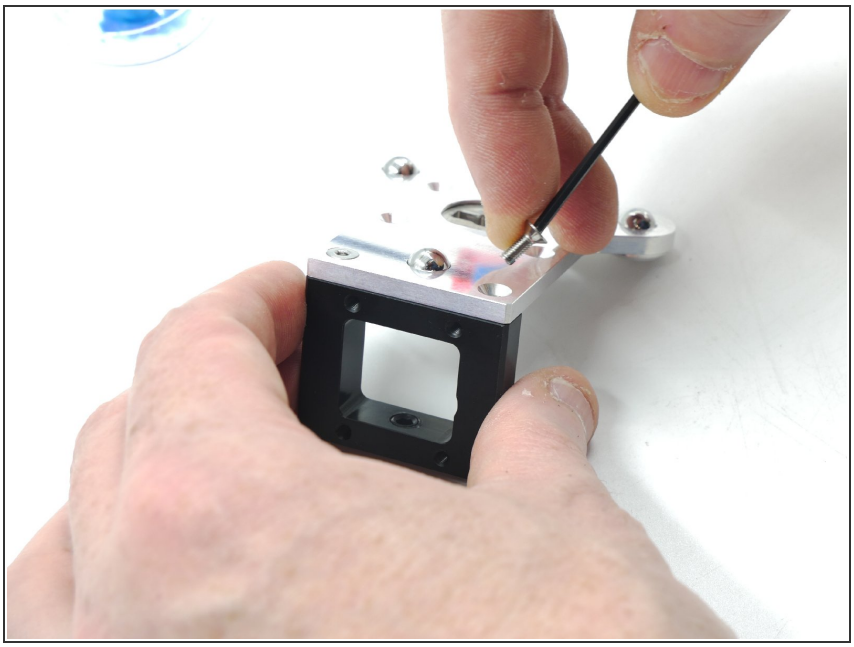
Step 6





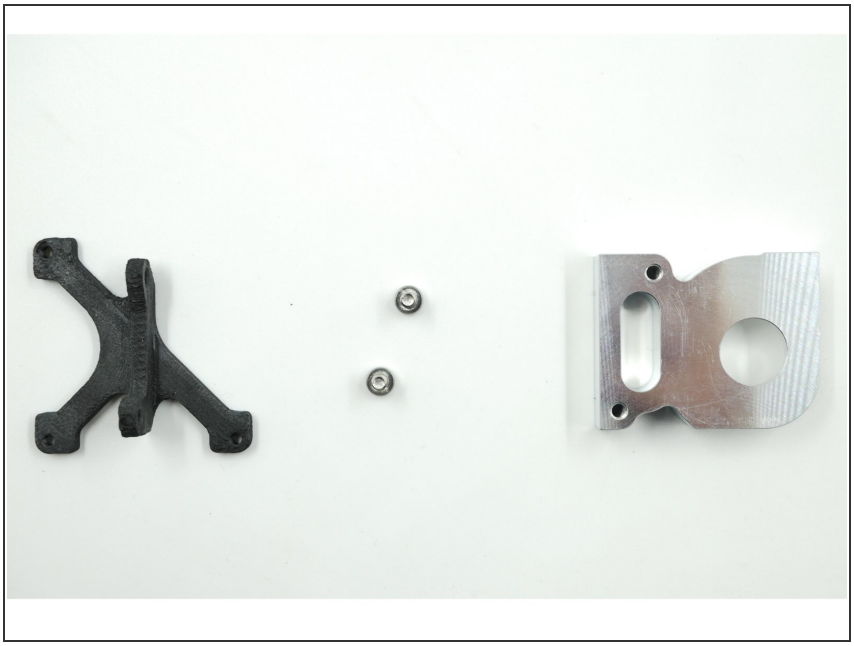
- Apply thread lock to the counter sunk M3x8 Screw.
- Screw the Tool plate onto the TC receiver.

Step 7



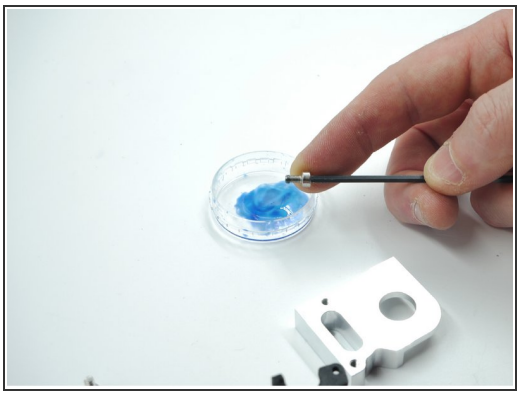
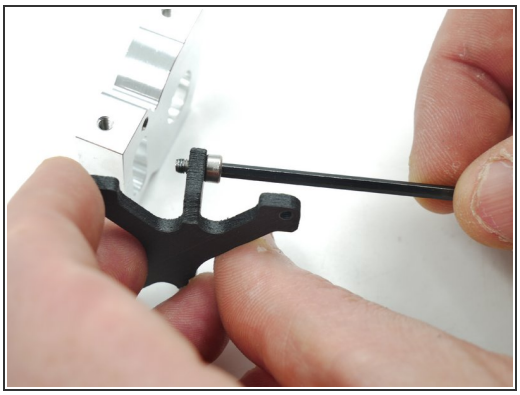
- Fasten the second counter sunk M3x8 screw.
- Also use thread lock for this screw.

Step 8 — Gather Parts.



- Gather:
- x1 V6 PCF Fan Bracket
- x2 Socket Cap Head M3x6 screws.
- x1 TC- HE- V6

Step 9


- Apply thread lock to the end of the M3x8 socket cap screw.
- Screw the bracket onto the aluminium part.

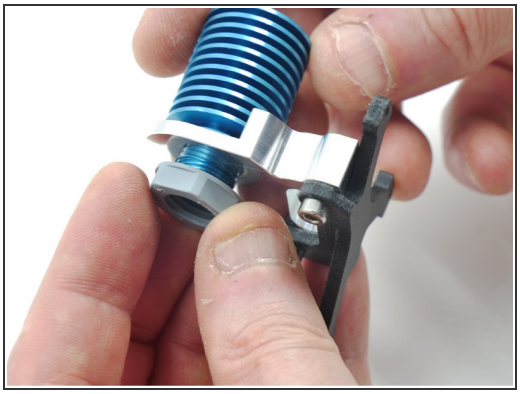
Step 10


- Fasten the second M3x8 socket cap screw

Step 11 — Gather Parts.

- Gather:
- x1 braket assembly. (what you just assembled.)
- x1 V6 threaded heatsink.
- x1 M12 nut.

Step 12

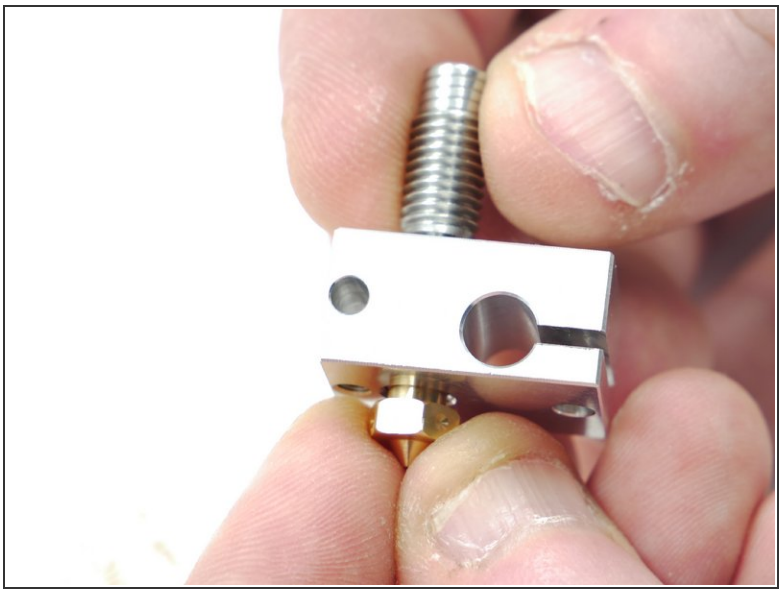


- Place the threaded heat sink through the aluminium
- Screw on the M12 plastic nut.

Step 13 — Gather Parts.

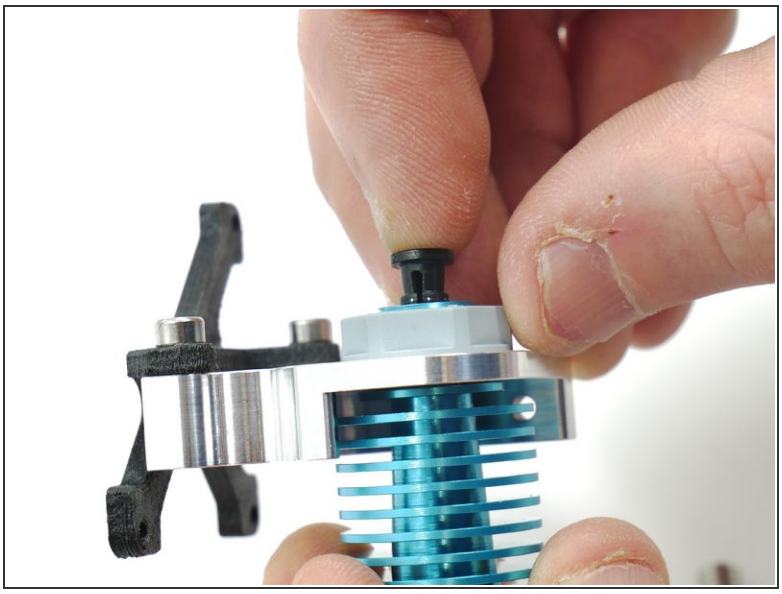
- Gather:
- x1 0.4mm 1.75 brass nozzle.
- x1 Thermal compound.
- x1 1.75mm heat break.
- x1 V6 heater block.
- x1 Collet.
- x1 Collet clip.

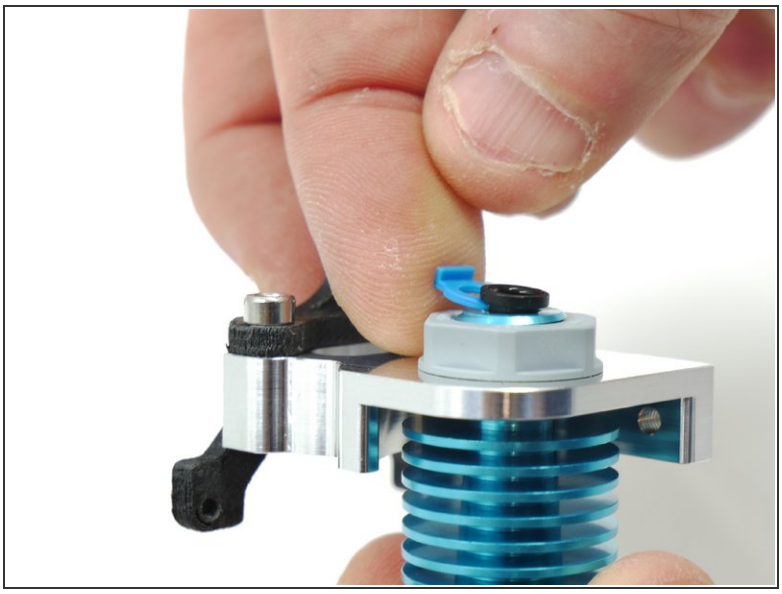
Step 14



- Screw in the heat break.
- Screw in the nozzle.
- Check the nozzle is aligned as shown when the heatbreak is installed.
- Refer to the V6 Assembly Guide if you are unsure.

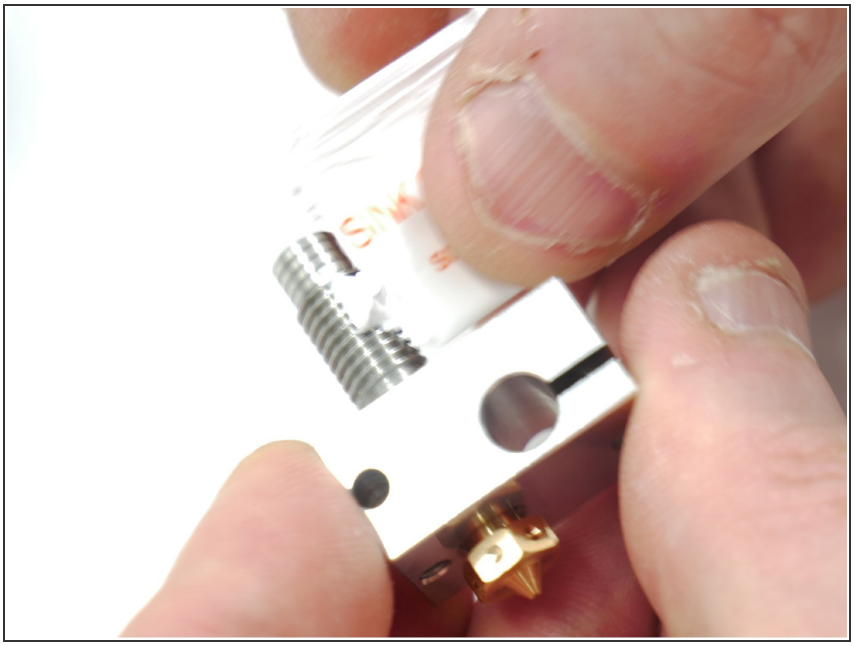
Step 15





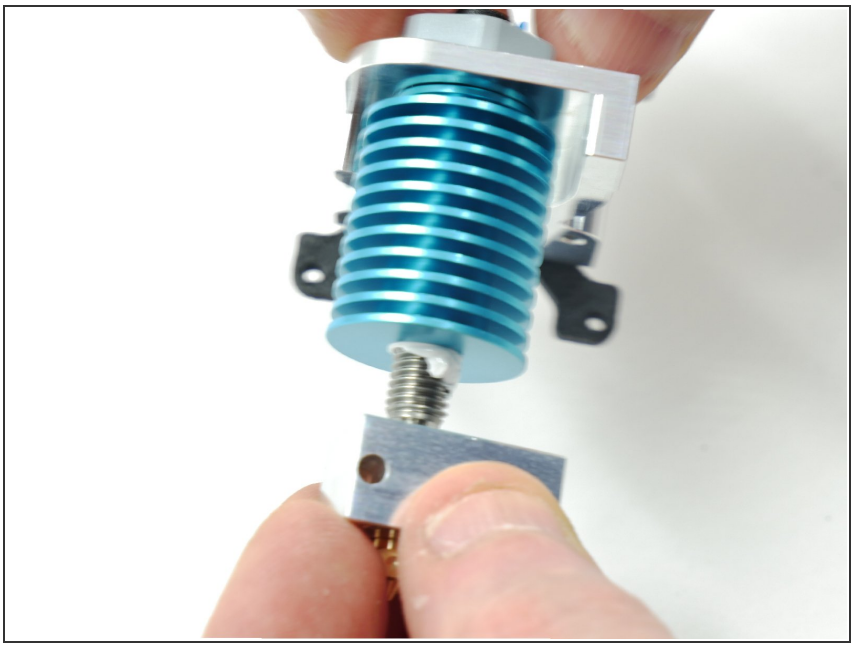
- Press in the collet.
- Slide in the collet clip.

Step 16



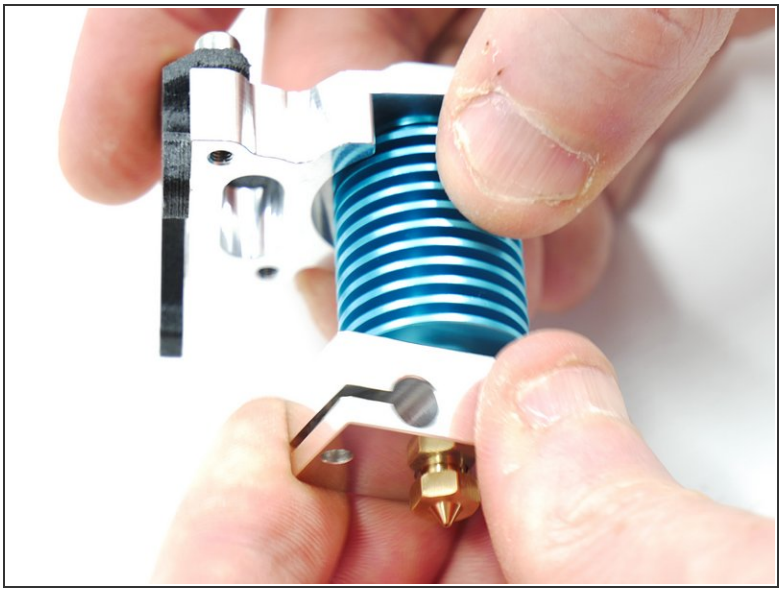
- Apply thermal paste to the long section of the heat break.

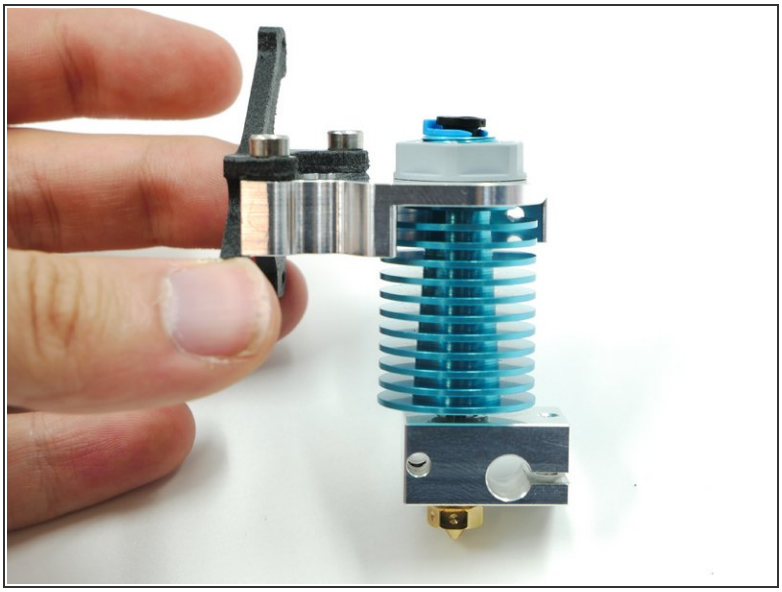
Step 17



- Screw in the heater block assembly into the heatsink.

Step 18



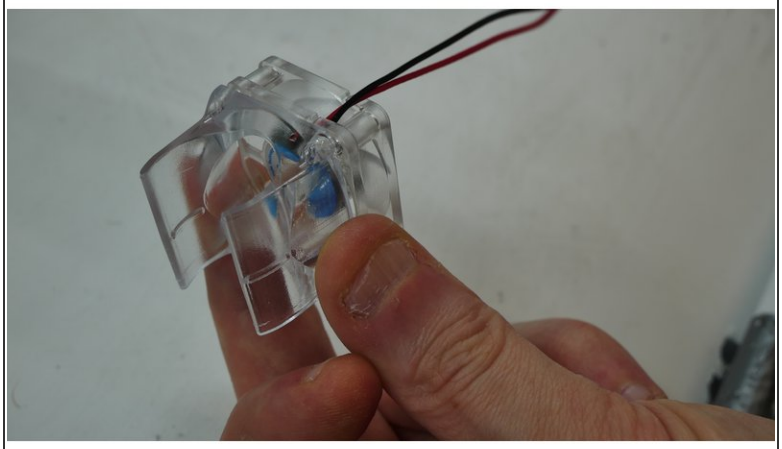


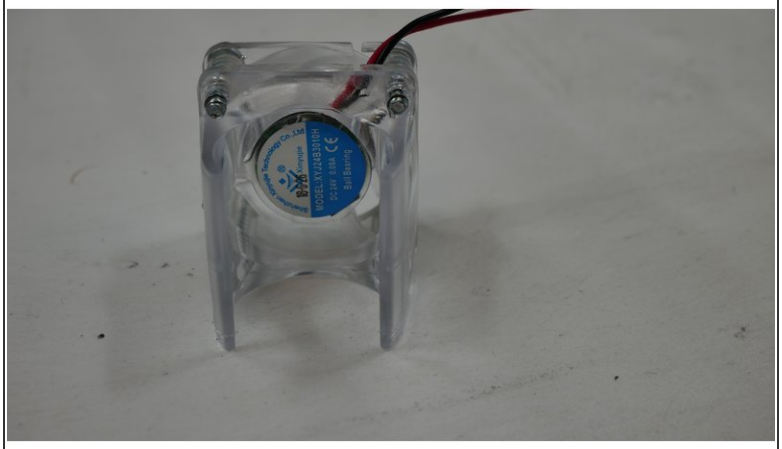
- The assembly should look as follows at this stage.

Step 19

- Gather Parts.

Step 20 — Fasten the fan.

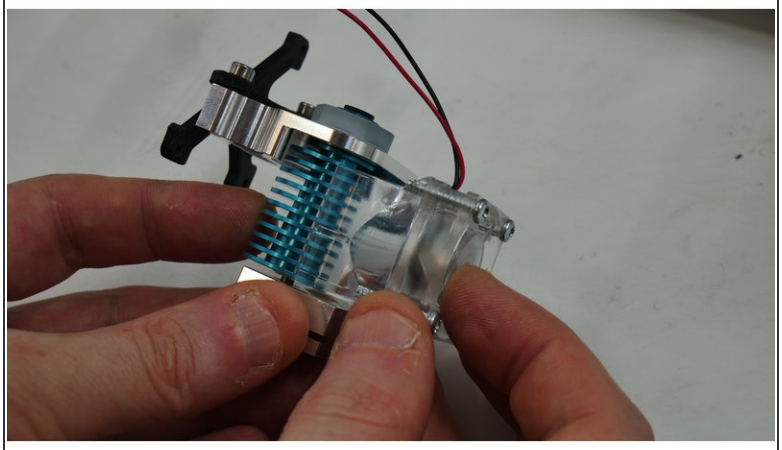


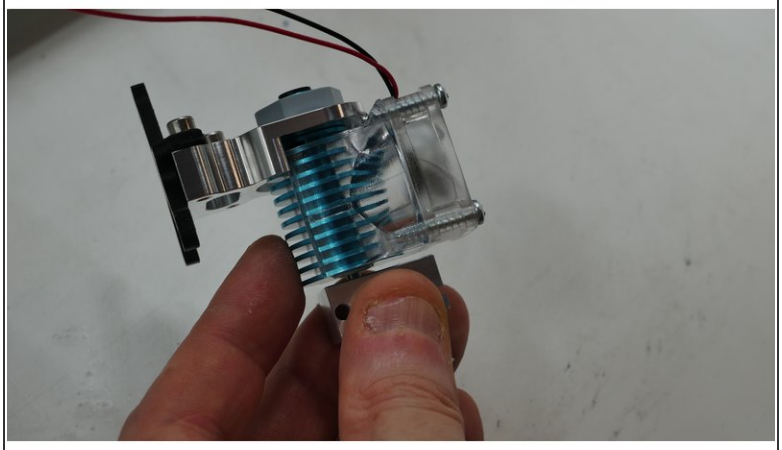


- Screw the x4 plasti fast screws into the fan duct.
- Make sure the sticker will be facing towards the heat sink for correct cooling.

Compare the orientation of the fan duct to the picture to make sure you press it on the correct way round.

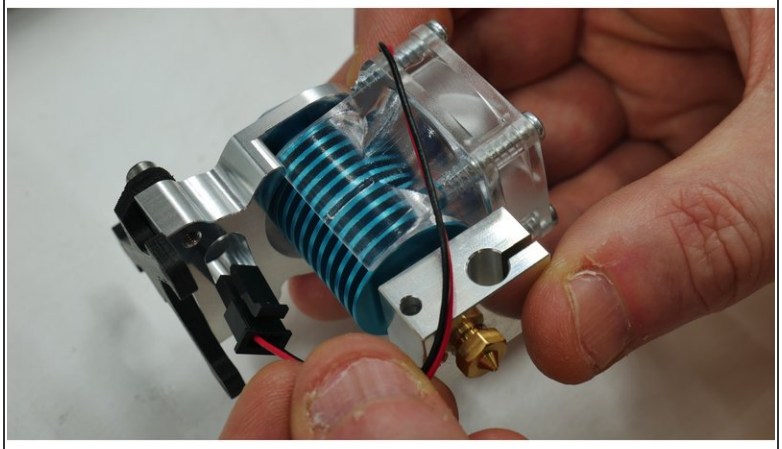
Step 21

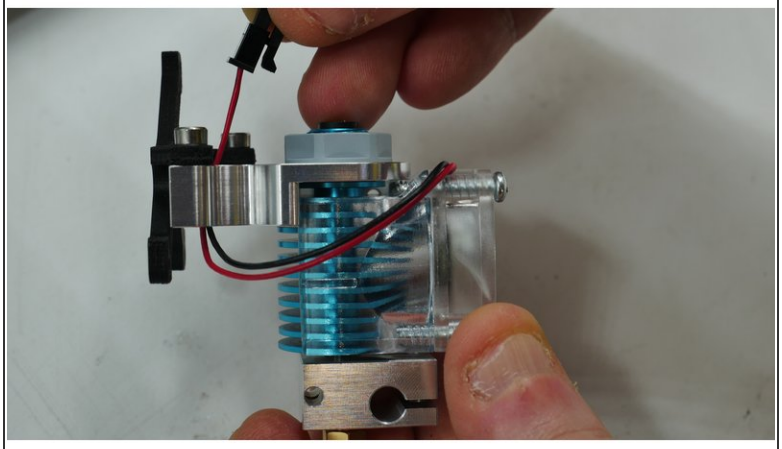




- Press the fan duct onto the heat sink.

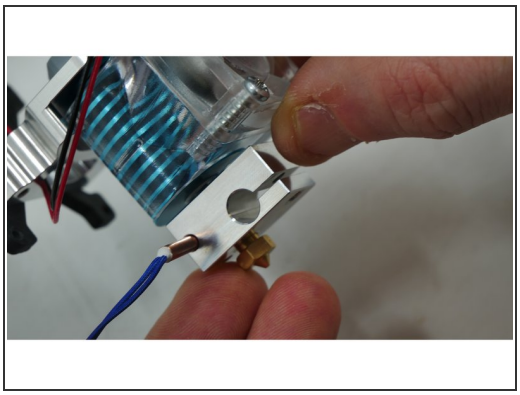
Step 22 — Cable Management

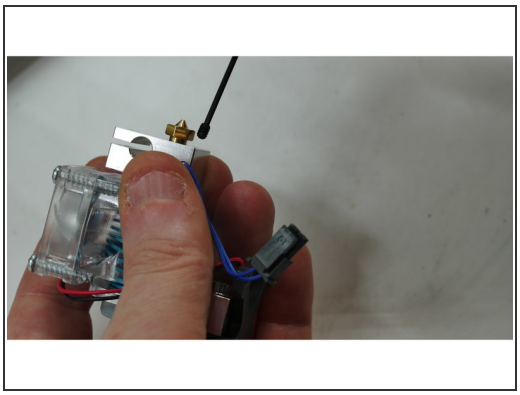


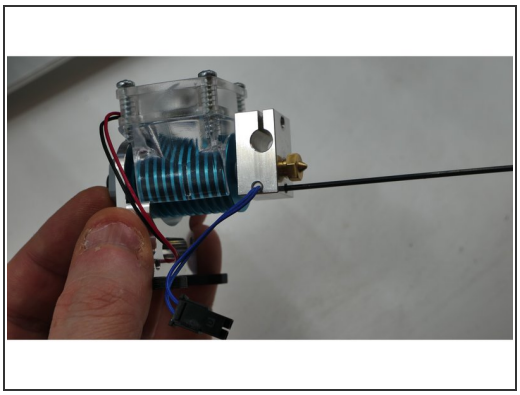


- Slot the fan wires through the slot in the V6 PCF Fan Bracket.

Step 23

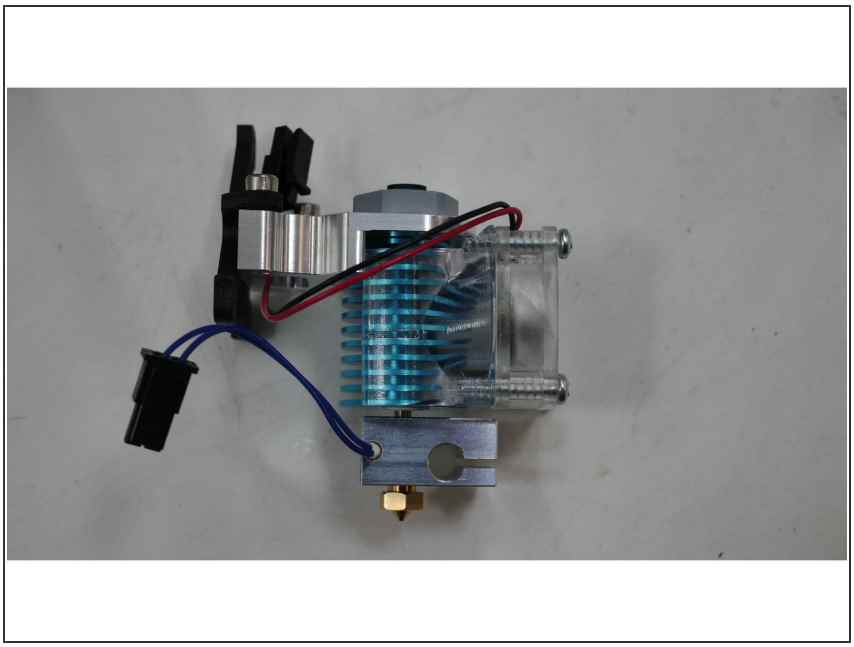






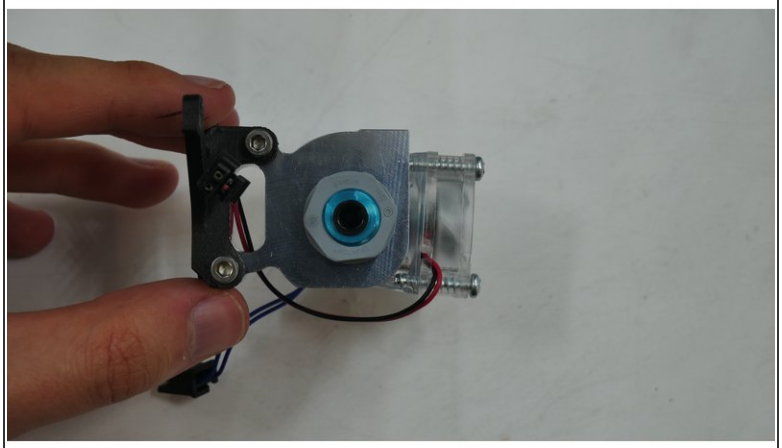
- Slide in the thermistor.
- Fasten the grub screw to hold the thermistor in place.
- Be careful not to over tighten the screw as this will permanently damage the thermsitor.

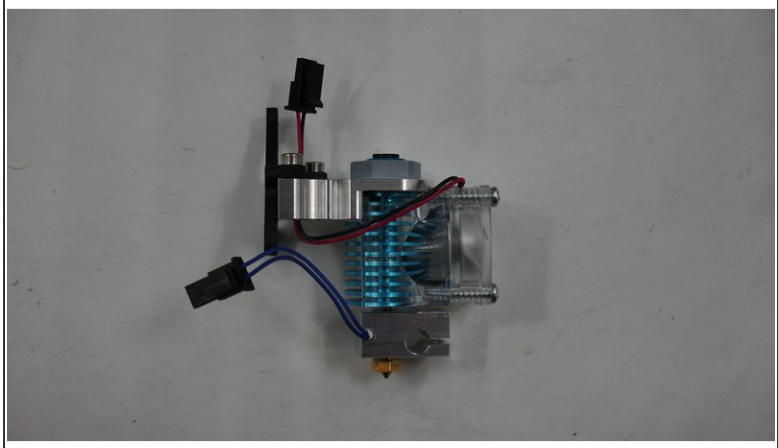
Step 24



- The thermistor wire will not be able to be passed through the slot at this stage so just leave it loose.

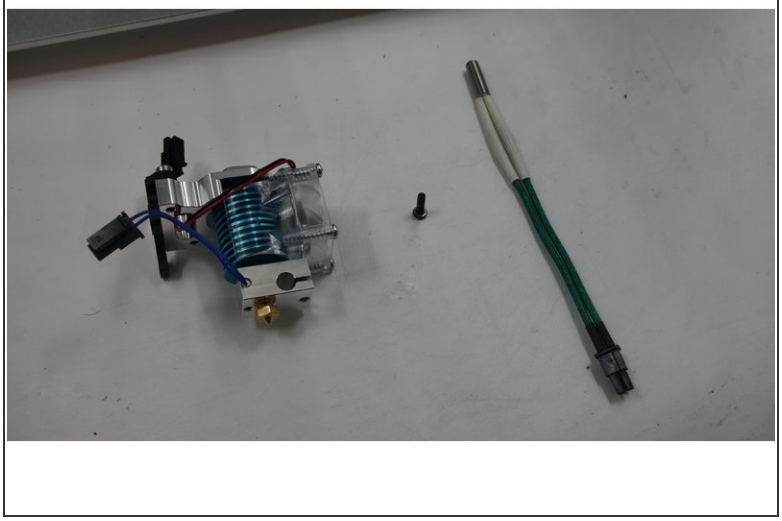
Step 25 — Check orientation.





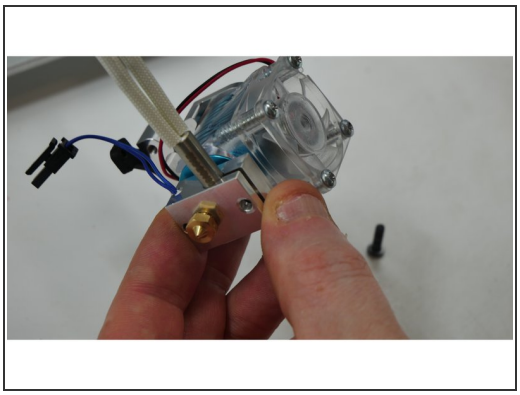
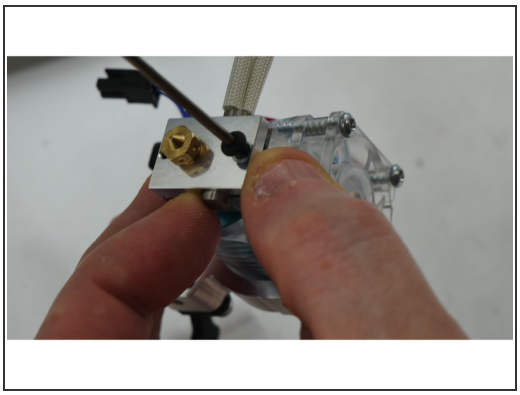
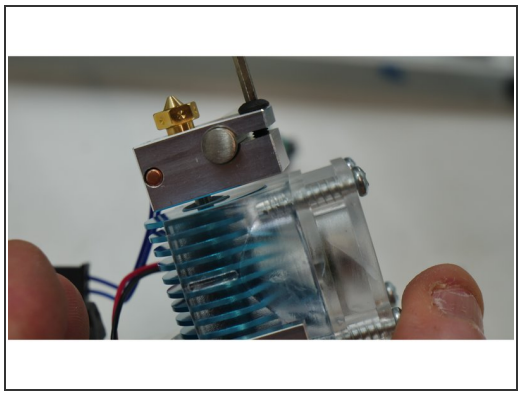
- At this stage the assembly should look as follows.

Step 26 — Gather Parts.



- Gather:
- The tool head assembly.
- Black M3 button head screw
- High precision heater cartridge.

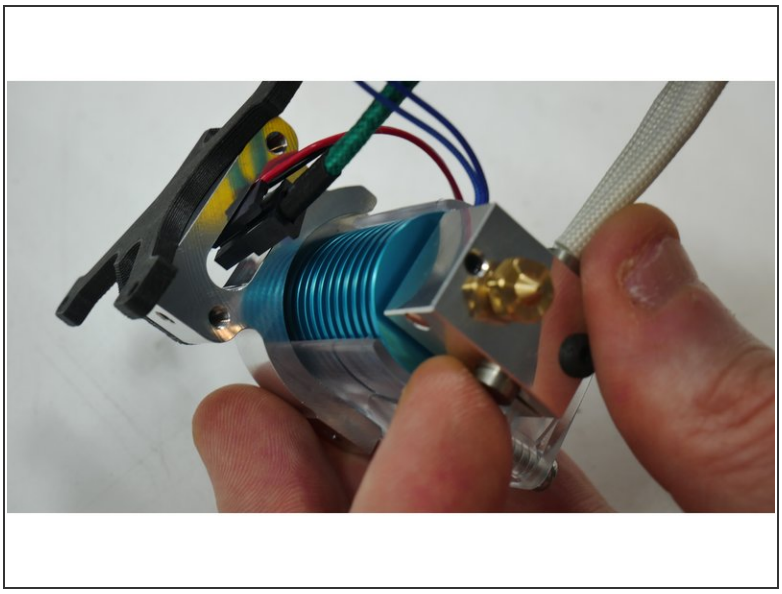
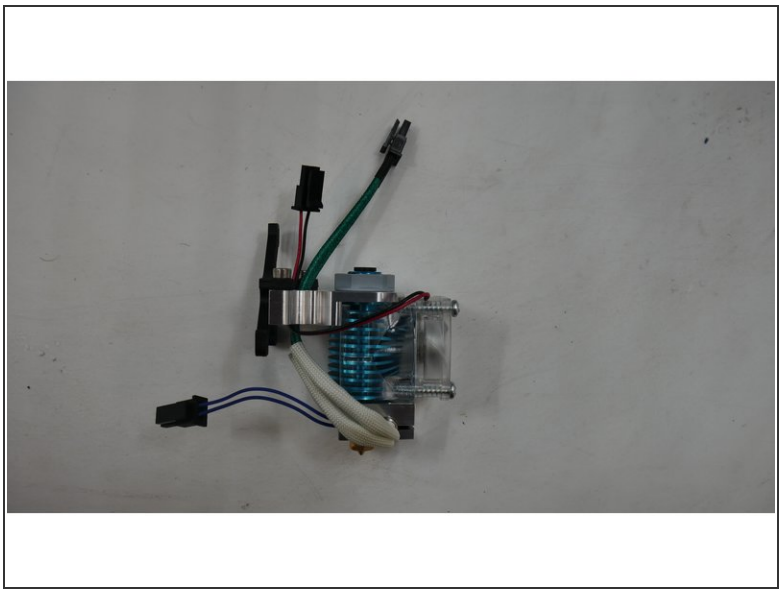
Step 27 — Fasten heater cartridge.

- Slide in the heater cartridge.
- Screw in the black M3 screw to fasten the heater cartridge in place.

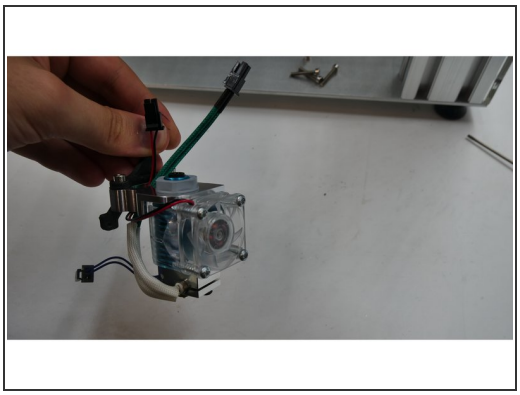
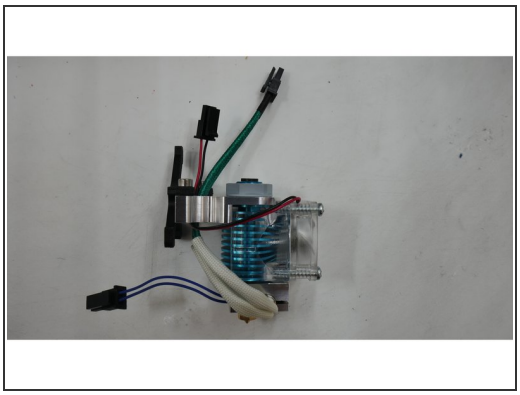
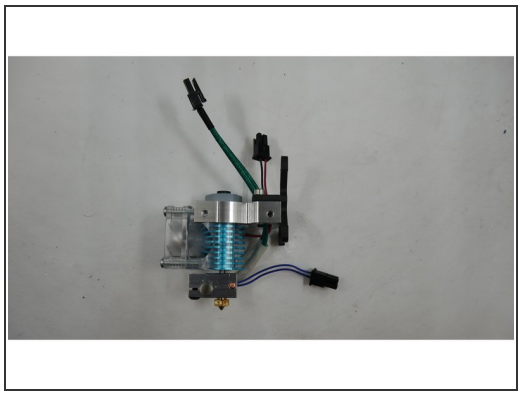
ⓘ It is expected that the aluminium will deform slightly.

Step 28 — Cable Management.

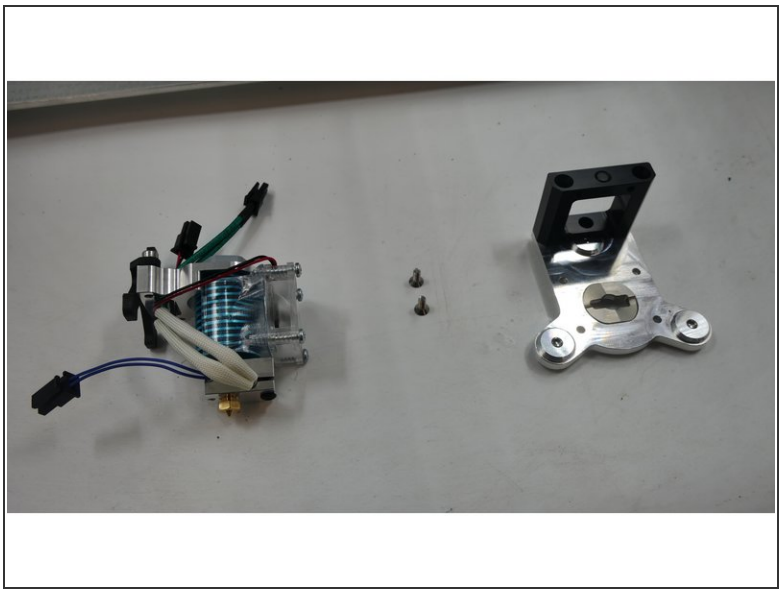
- Slot the heater cartridge wire though the slot in the V6 PCF Fan Bracket.

Step 29 — Check Orientation.

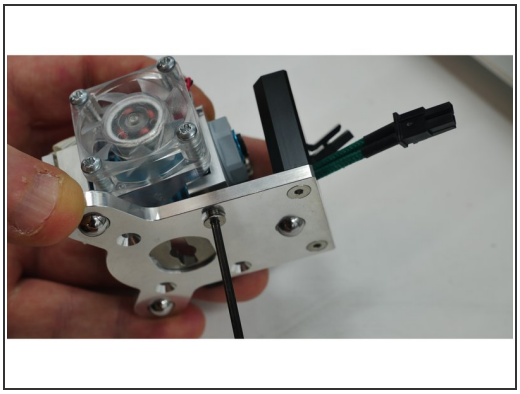
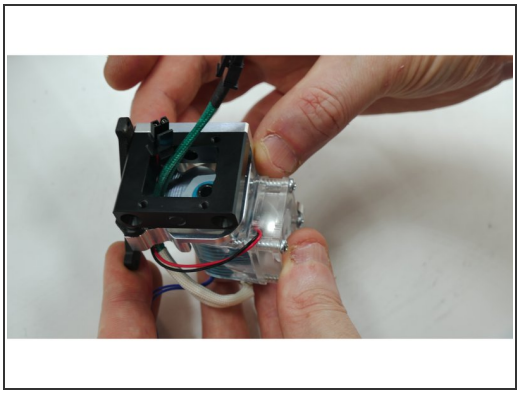
- At this stage the assembly should look like this.

Step 30 — Gather Parts

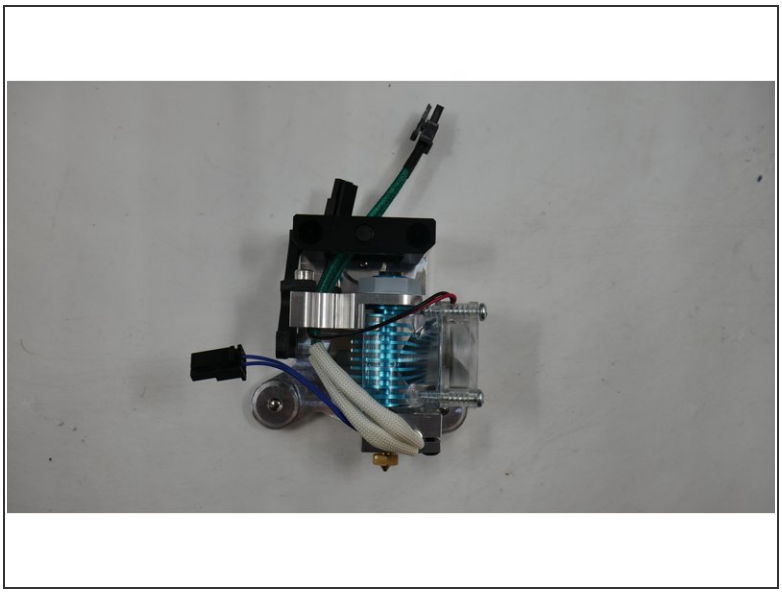
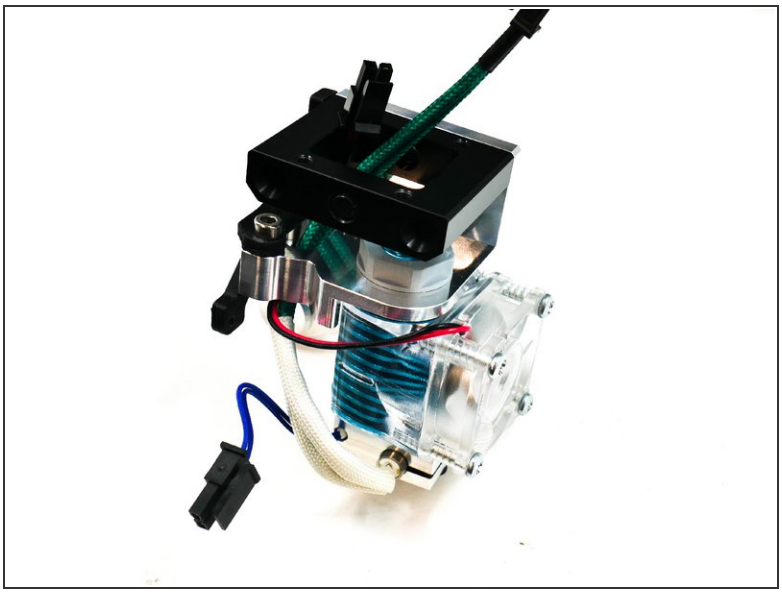
- Gather the tool head assembly.
- The tool plate assembly.
- x2 counter sunk M Screw.

Step 31

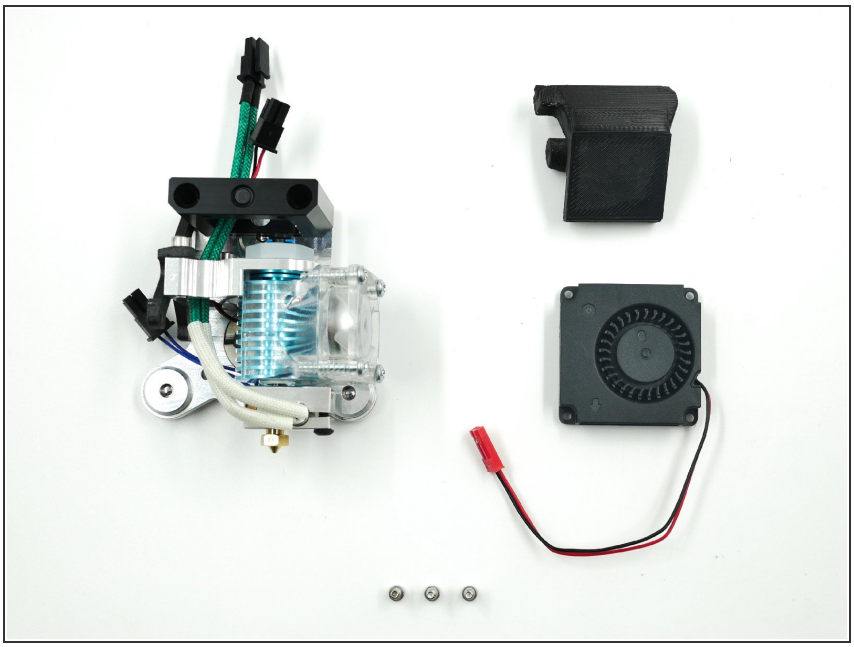
- Apply thread lock to the counter sunk screws.
- Fasten the Tool plate to the Tool Head assembly.

Step 32 — Check Orientation.

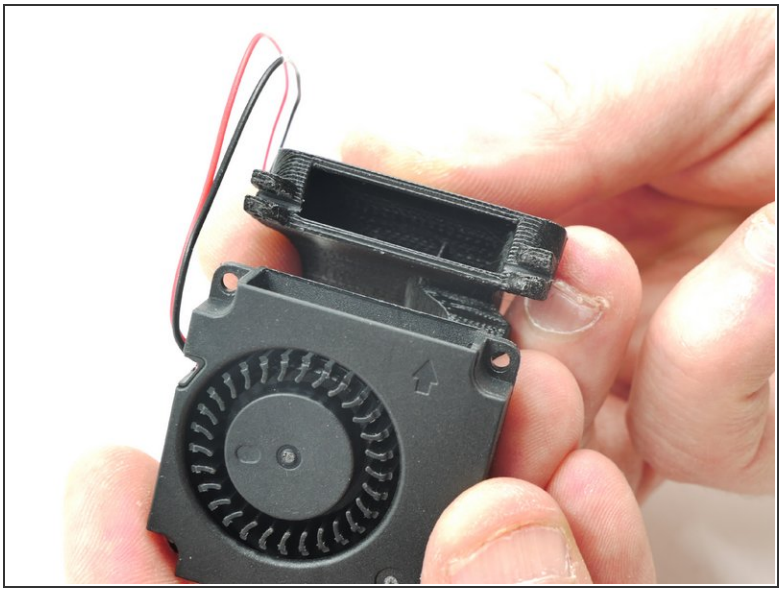
- At this stage the assembly should look as follows.

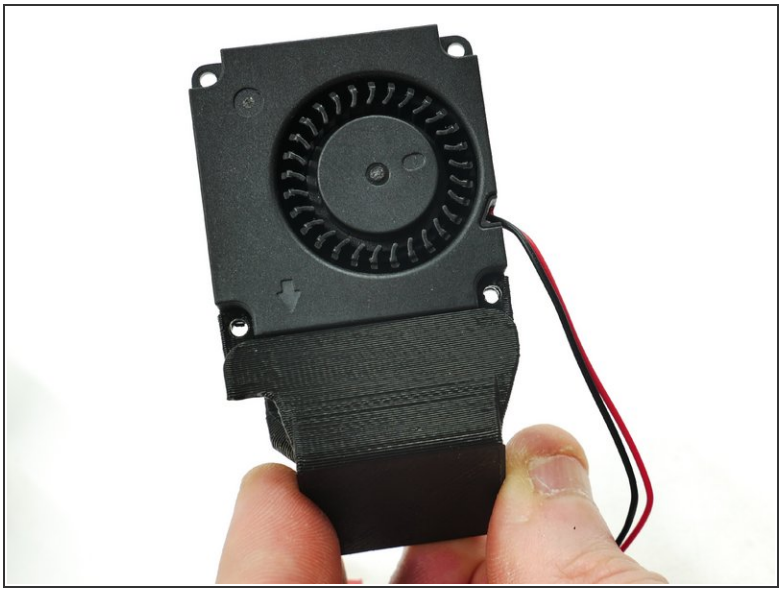
Step 33 — Gather Parts.



- Gather the Tool head assembly.
- Fan duct.
- Part cooling fan.
- x3 screws.

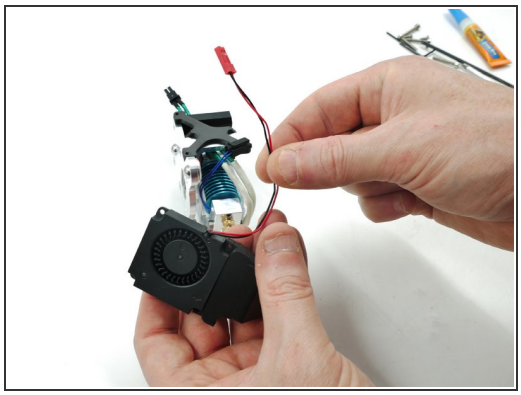
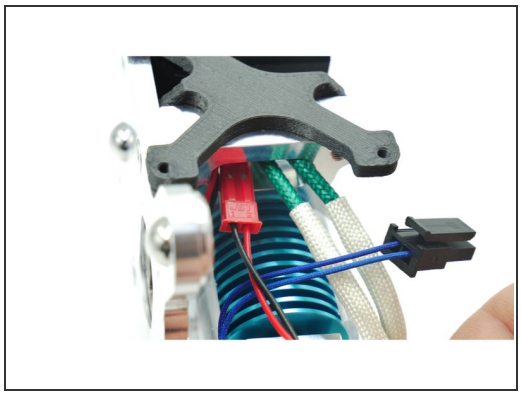
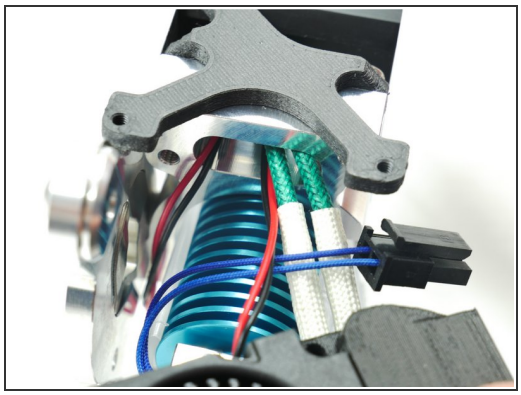
Step 34





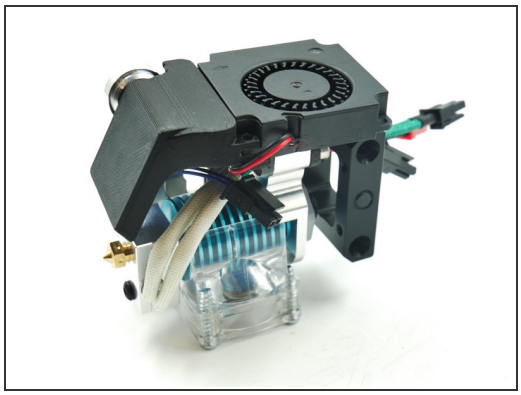
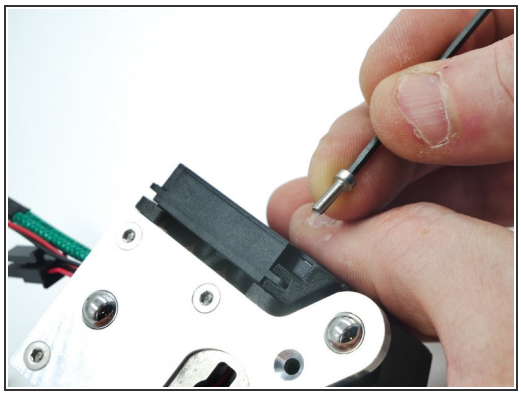
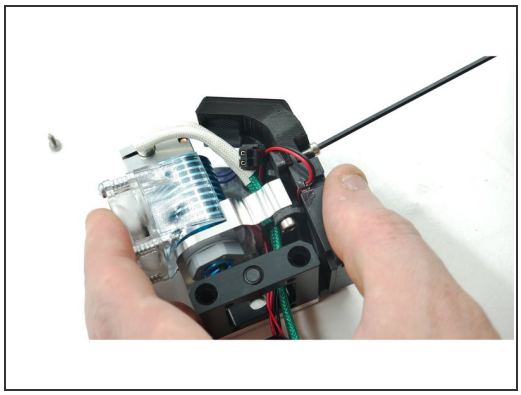
- Slot the fan duct onto the part cooling fan.

Step 35 — Cable Management.

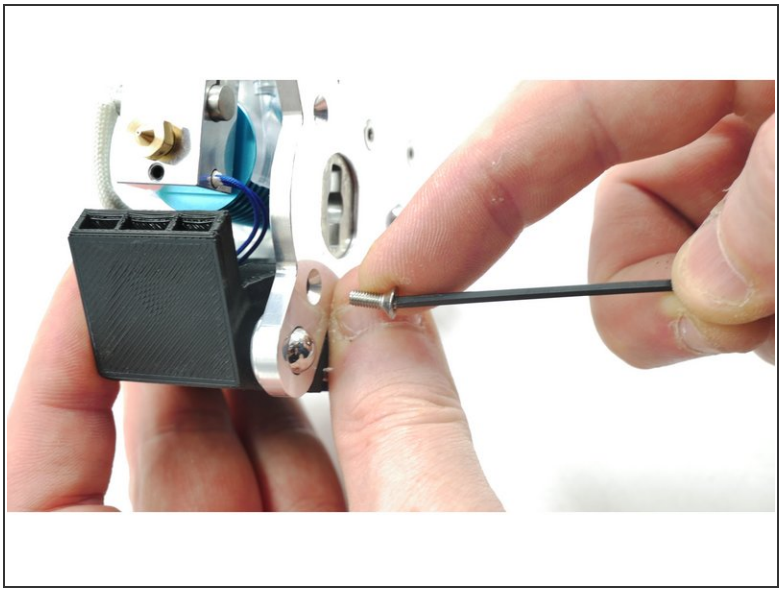
- Take the part cooling fan wire and pass it through the slot in the V6 PCF Fan Bracket.

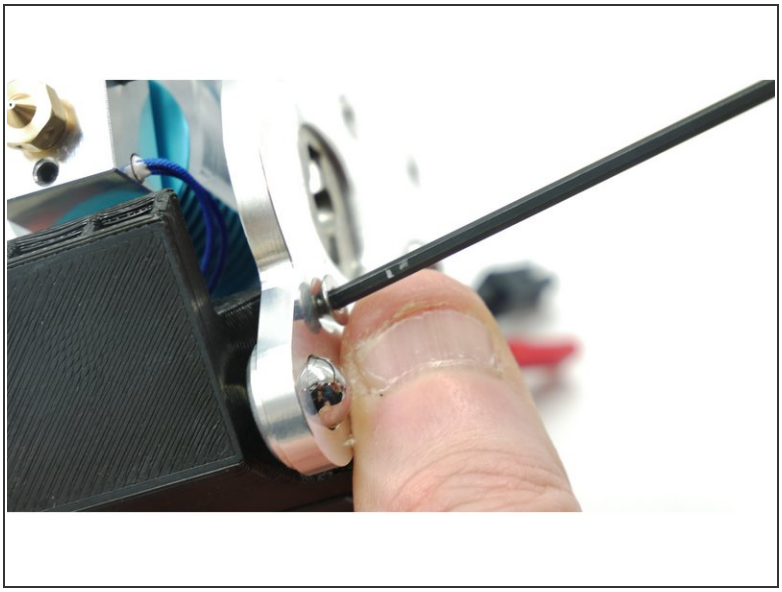
Step 36

- Place the Fan and Duct onto the tool head assembly as shown.

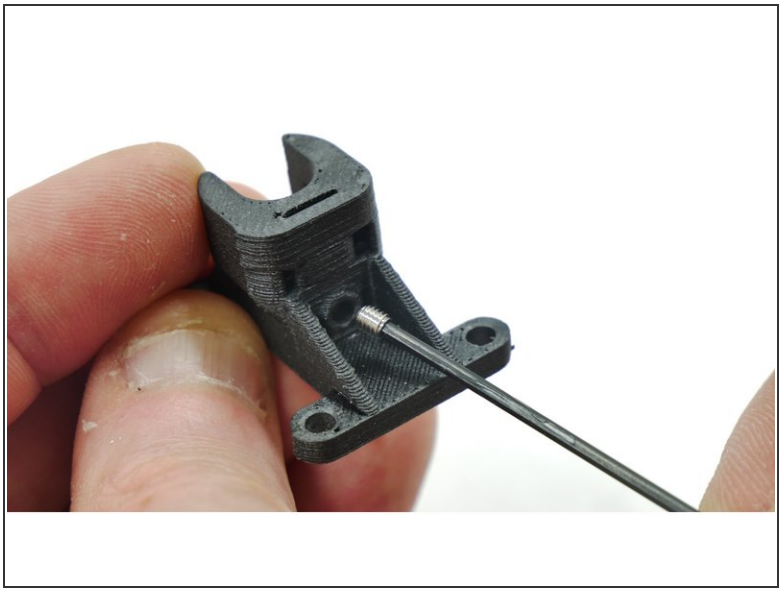
Step 37





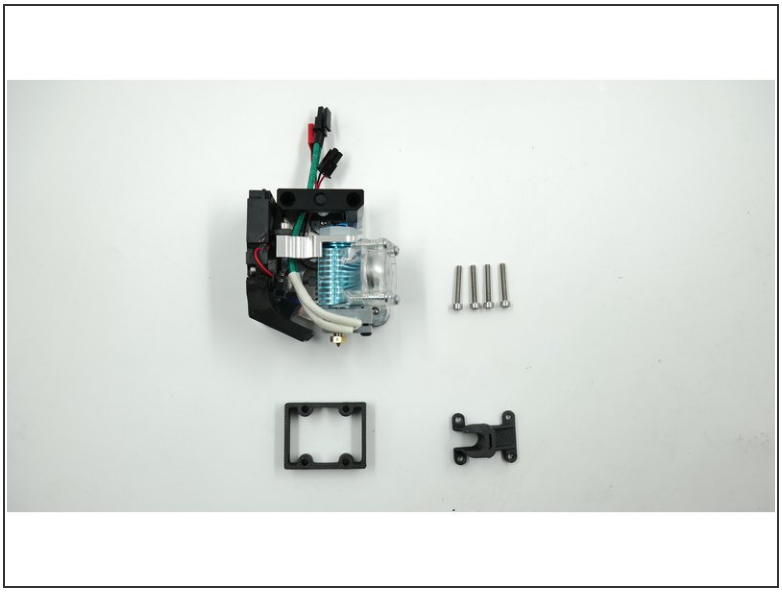
- Secure the fan with an M3 counter sunk screw.

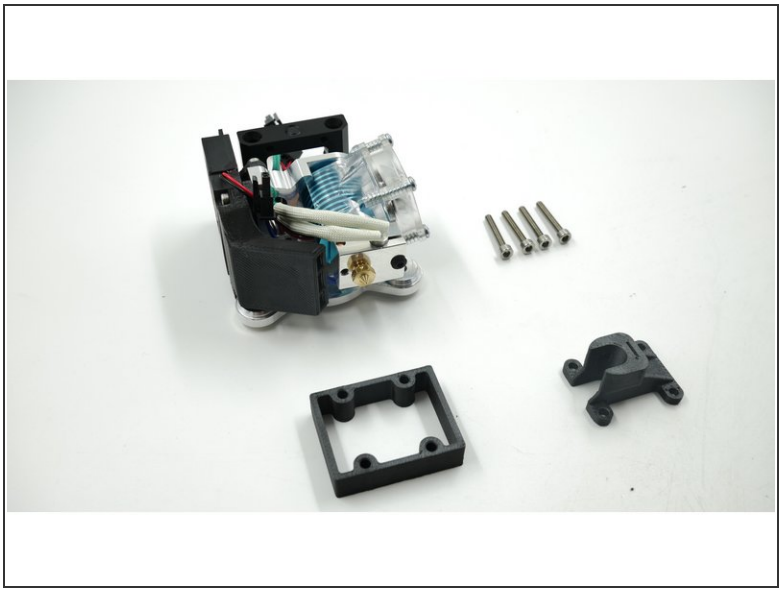
Step 38



- Partially screw the grub screw into the top as shown.

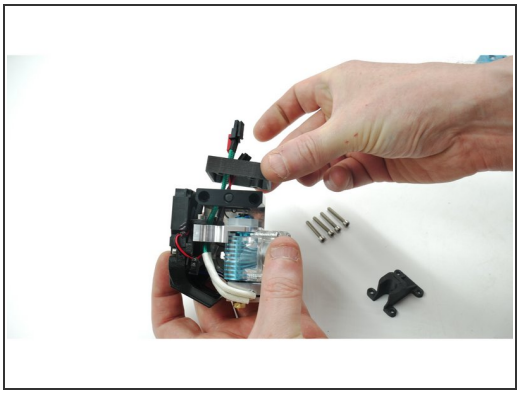
Step 39

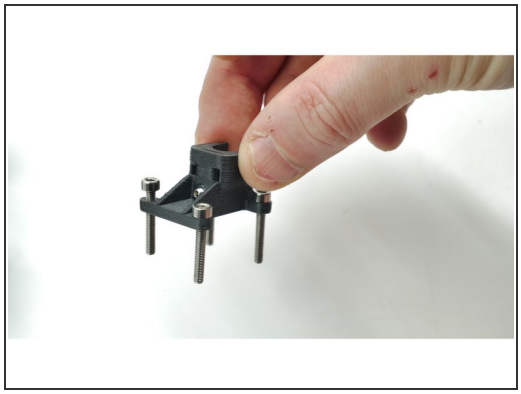


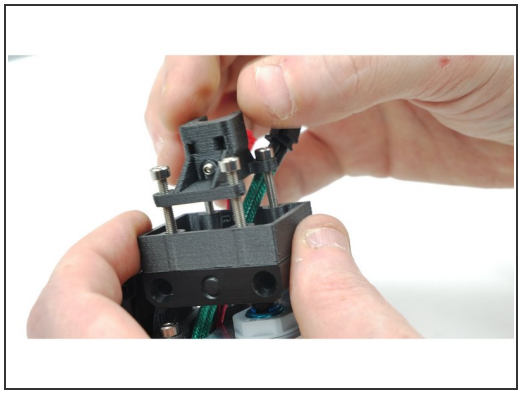


- Gather Parts.

Step 40

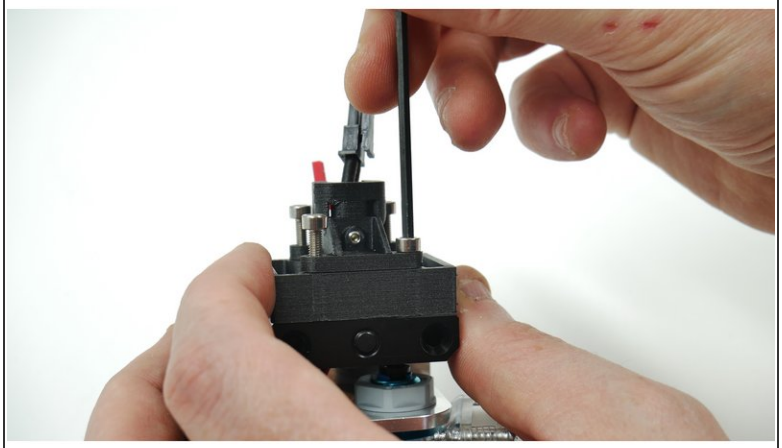


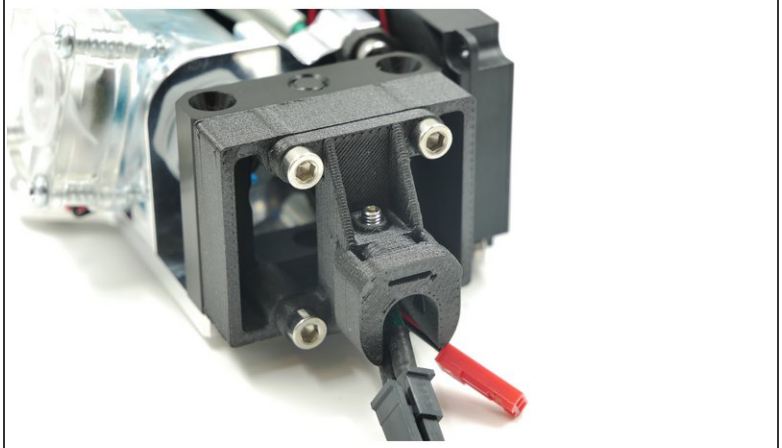




- Place the printed bracket on top.
- Secure using the printed top and four screws.

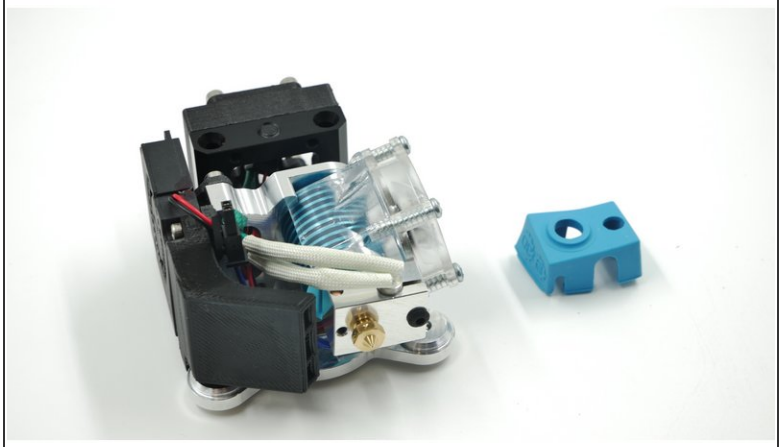
Step 41

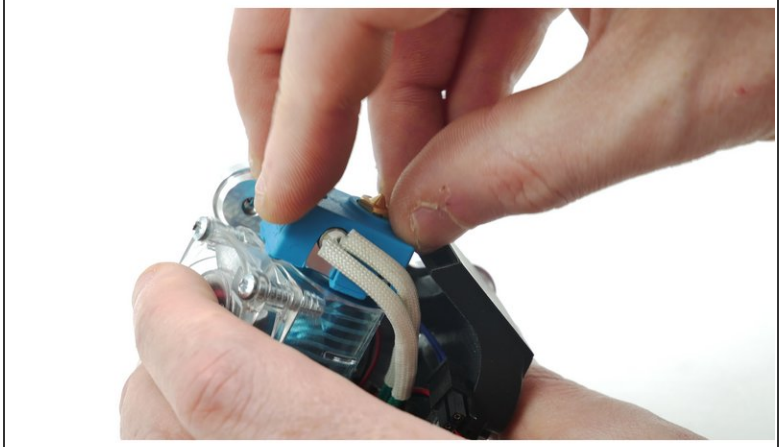




- Tighten the screws.

Step 42 — Sock.





- Fit the sock.