



Troubleshooting  
Loose Printhead Assembly

**Problem:** Thanks to a rough shipment, the two printheads are not parallel aligned anymore. (bolts have vibrated loose)

**Fix:** Disassemble and reassemble the printhead(s) to find out which bolts have come loose.

## TOOLS NEEDED



Allen key set sizes:

- 2.0 mm
- 2.5 mm
- 3.0 mm

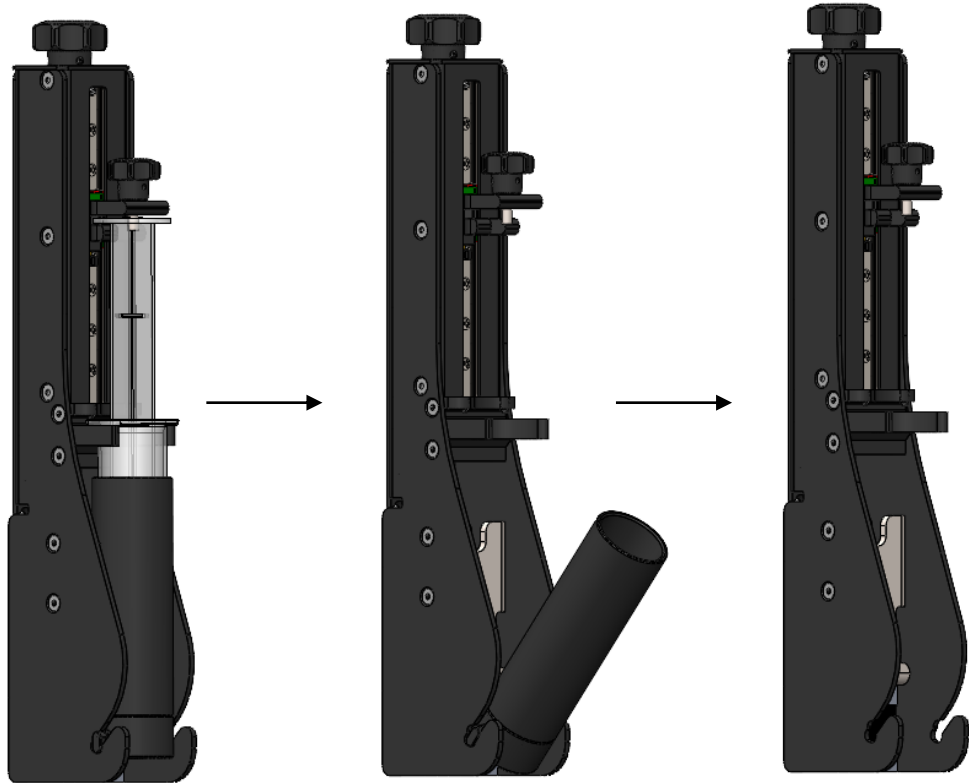
**REMINDER:** You can use excessive force in some bolts. Always tighten bolts with extra care !!

**Step 1:**

- Remove the *tube holders* from the extruders.

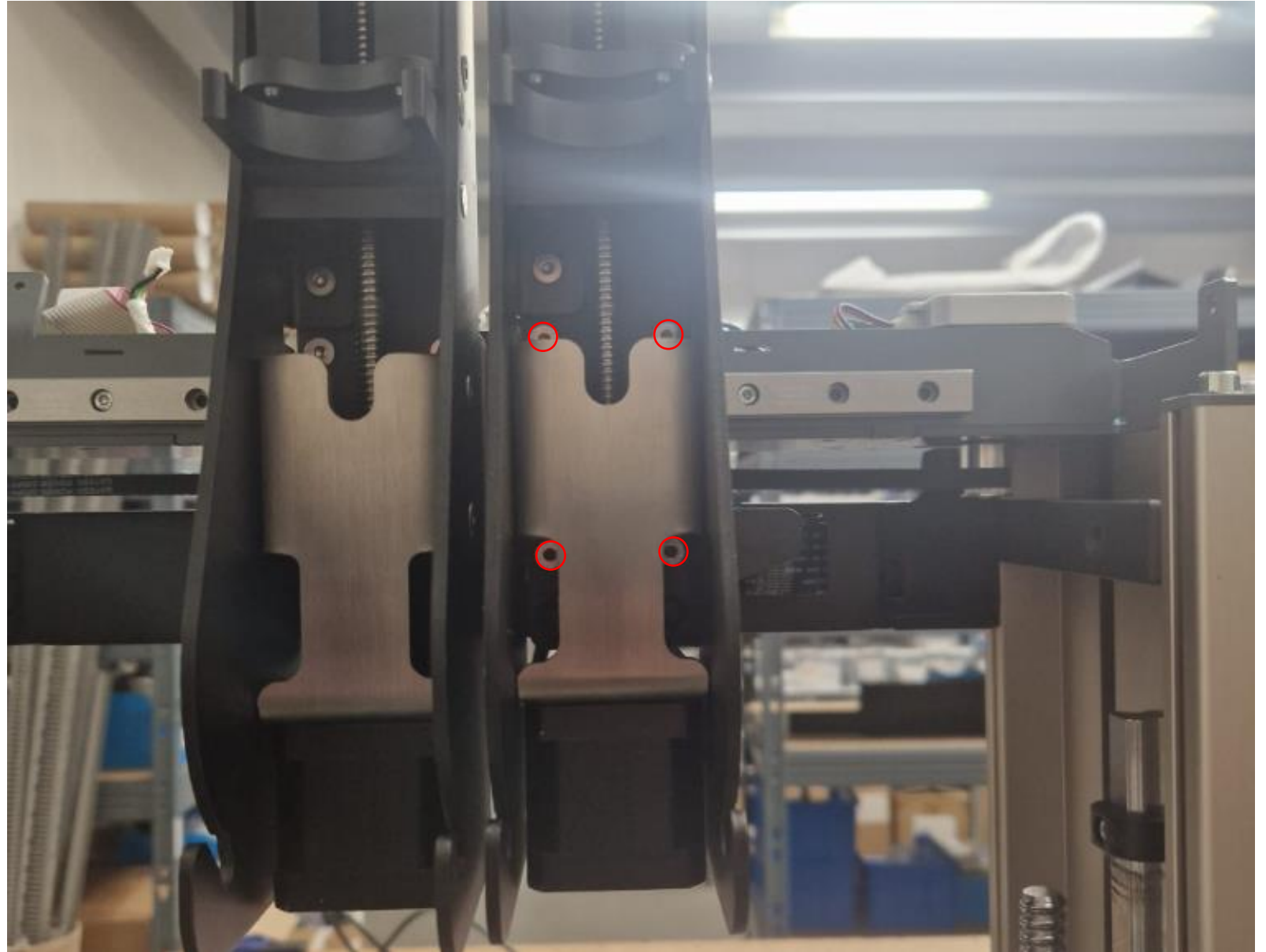
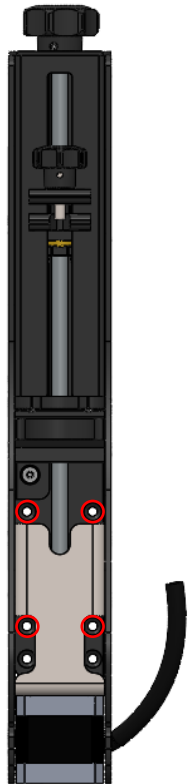


Press the frame to start the video



**Step 2:**

- Locate the four bolts connecting the extruder to the *camhead assembly*.



**Step 3A:**

- Twist the four bolts until they come loose, do not remove them yet!

**Step 3B:**

- Move the bed upwards (turn the spindle while pushing the bed upwards)

**Step 3C:**

- Hold the printhead with one hand, with the other hand twist the bolts loose (easiest with 2 persons)

**Step 3C:**

- Lay down the extruder on the bed.

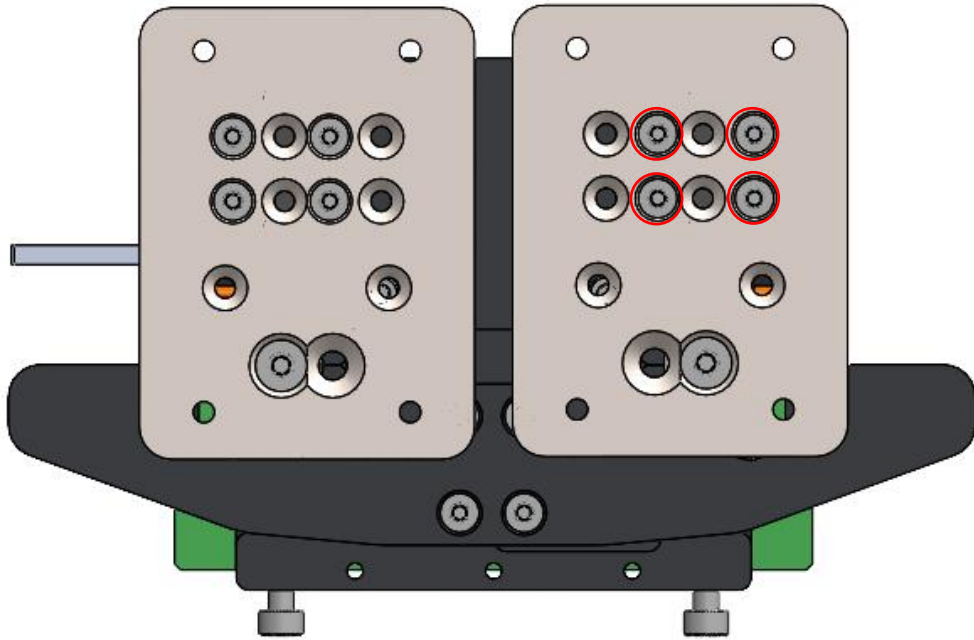


TOOLS: 2.50mm key



**Step 4:**

- Locate the four bolts connecting the *interface plate* to the *camhead assembly*.



**Step 5:**

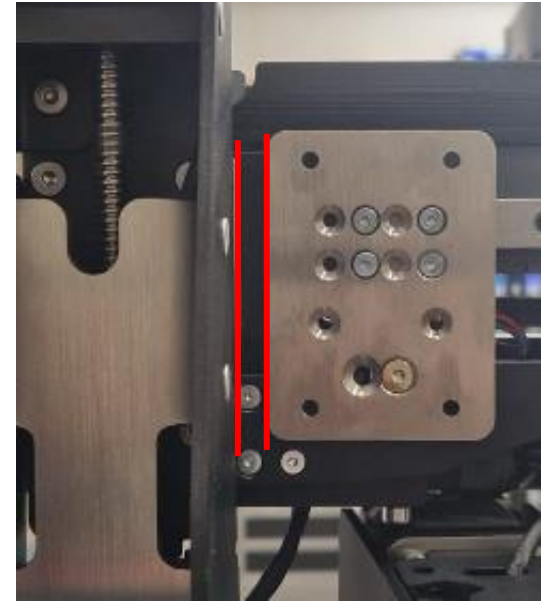
- Check if the interface plates are parallel and check the bolts connecting to the CAM.



**RIGHT**



**WRONG**



Interface plates  
should be parallel

**Step 6:**

- While pushing on the right middle side of the interface plate, fasten the four bolts and check if the interface plates are parallel.



TOOLS: 2.00mm key





**Step 7:**

- Measure if the interface plates are parallel.



**Step 8:**

- Fasten the four bolts to fix the extruder back on the printer.

**DO NOT FULLY TIGHTEN THE BOLTS YET!**



TOOLS: 2.50mm key



**Step 9A:**

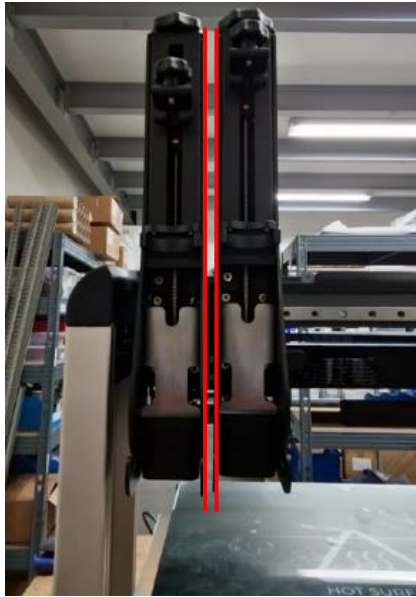
- Check if both extruders are parallel.

**Step 9B:**

- Fully tighten the bolts.

**Step 9C:**

- Check if the cam is running smoothly.



TOOLS: 2.50mm key



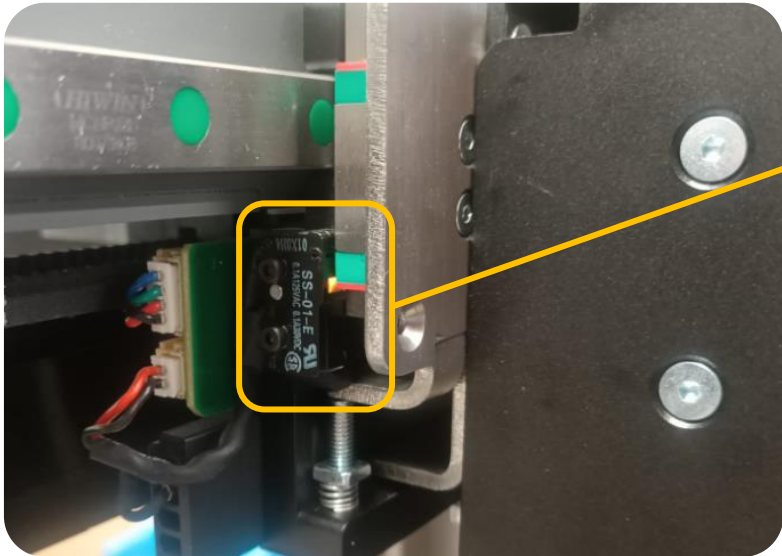


Troubleshooting  
**Z-Sensor Error**

**PROBLEM** | Z-sensor is triggered before printing, which results in a fatal error when printing or bed levelling.

**STEP 1**

Locate the Z-axis endstop switches (left and right)

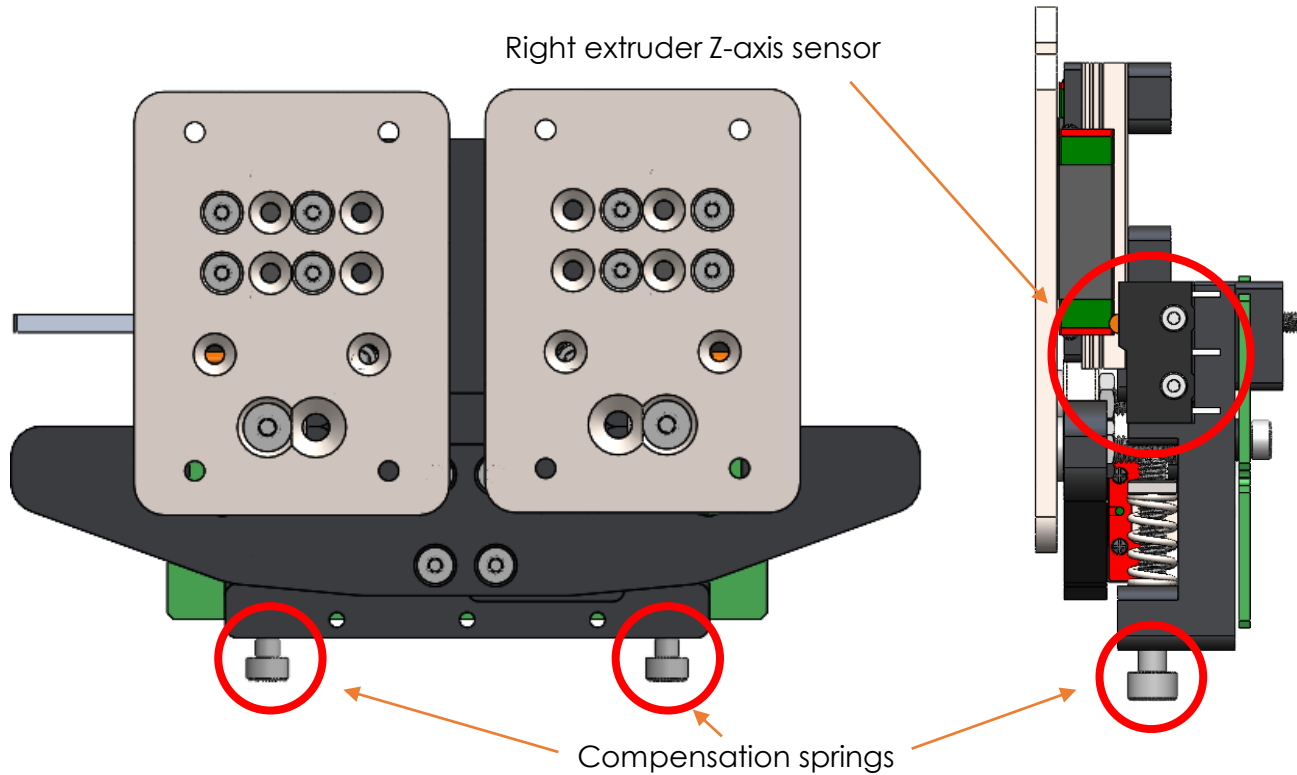


Sensor is **NORMALLY CLOSED** so the sensor is **not** triggered here!

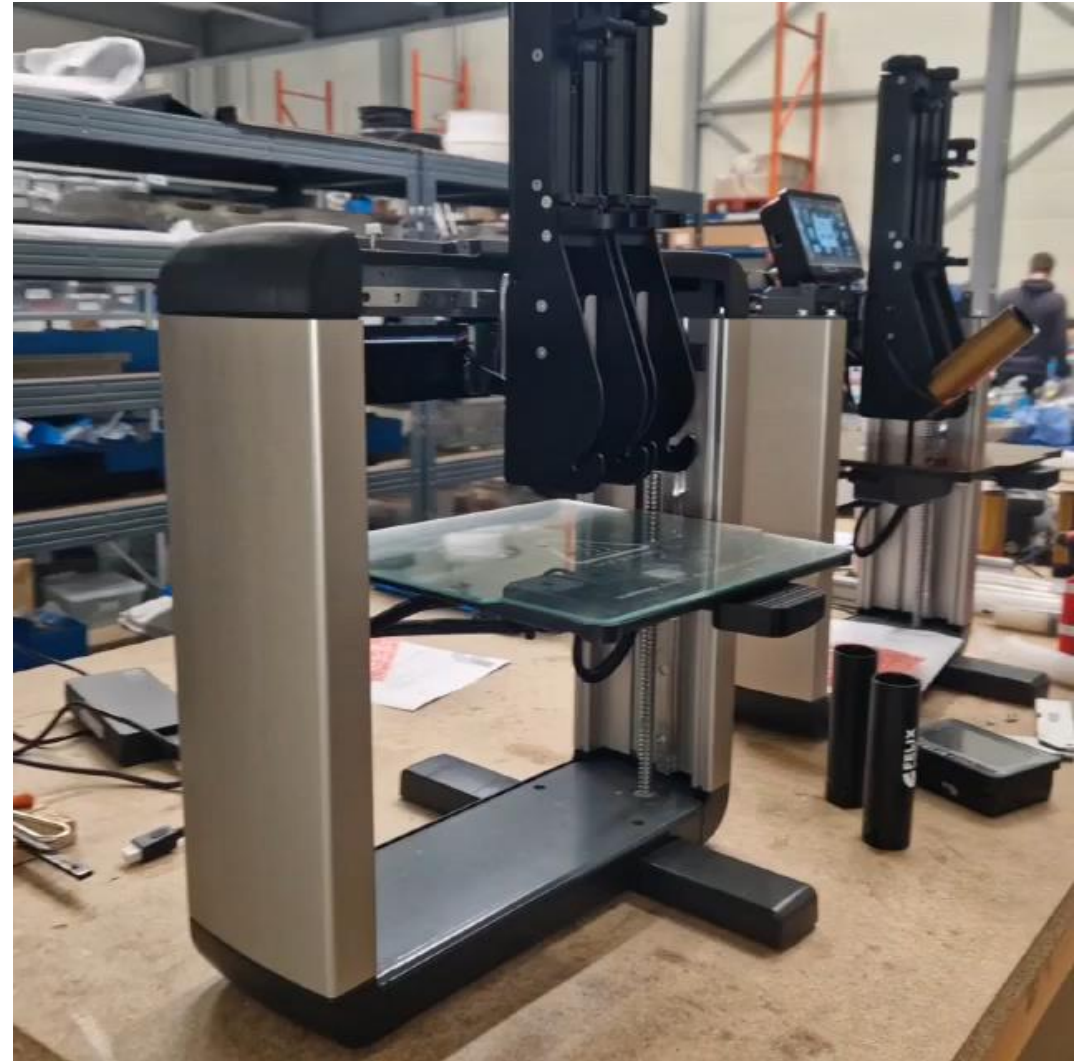


## STEP 2

Locate the extruder weight compensation springs.



Compensator spring: compensates for the weight of the extruder head. Without compensation the needle of the syringe could damage the printbed. (also keep in mind, if the printer head is not compensated properly, this could also result in a incorrect dataset when calibrating).

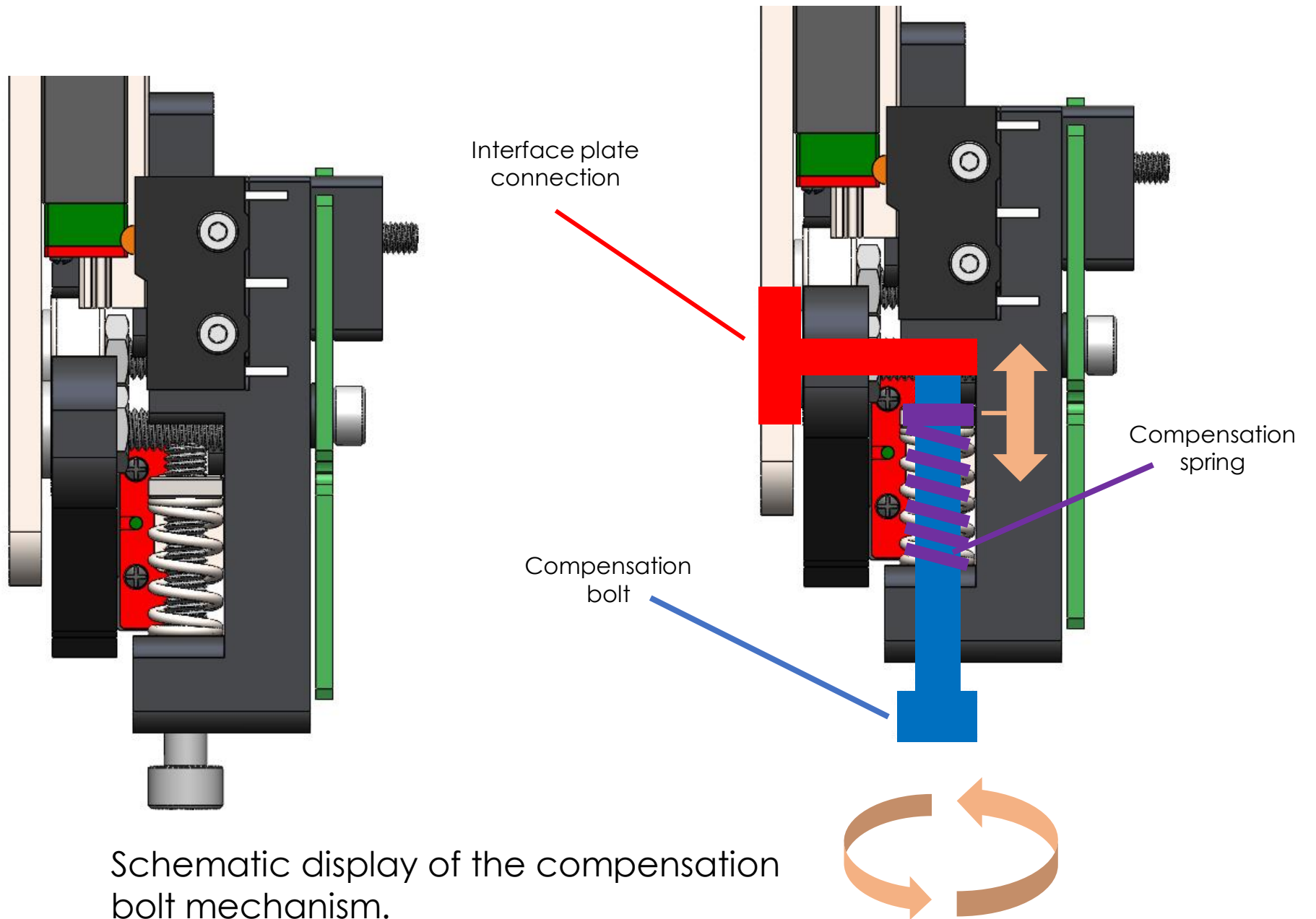




**STEP 3**

Move the printbed down.







## Too little compensation



Too little compensation in the extruder



And thus too little compensation in the camshaft (CAM)

## Perfect compensation

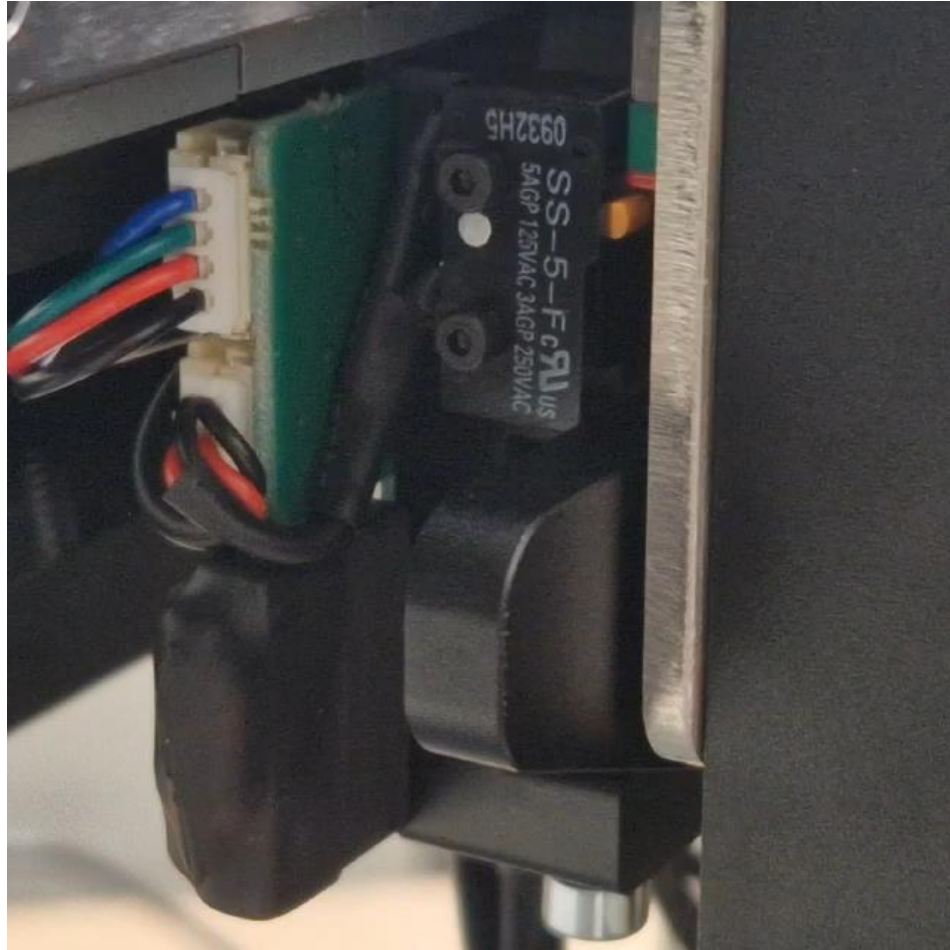


Compensation is adjusted and the z-probing movement goes smoothly again



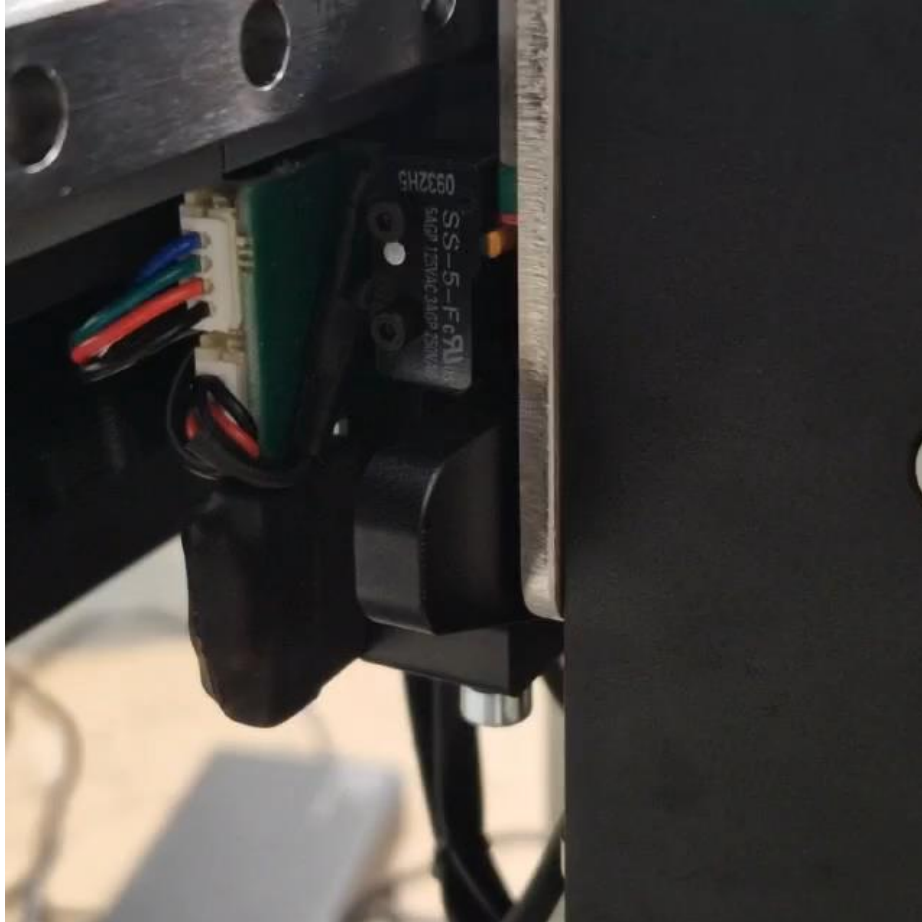
CAM can be manually switched with only 1 finger.

## Too much compensation



The compensation bolt compensates the weight so much that the sensor is not able to “untrigger”. This is the root cause of the bed levelling issues. If the sensor is less compensated it will be untriggered again and the bed levelling should work again.

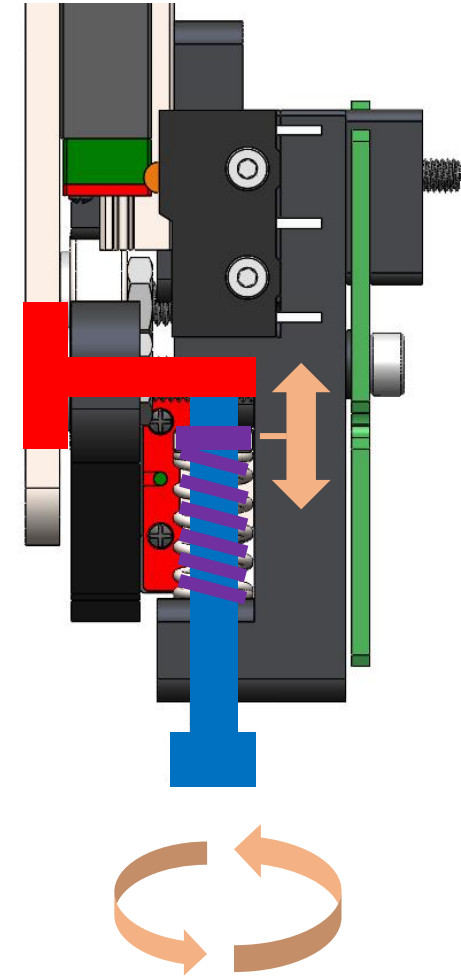




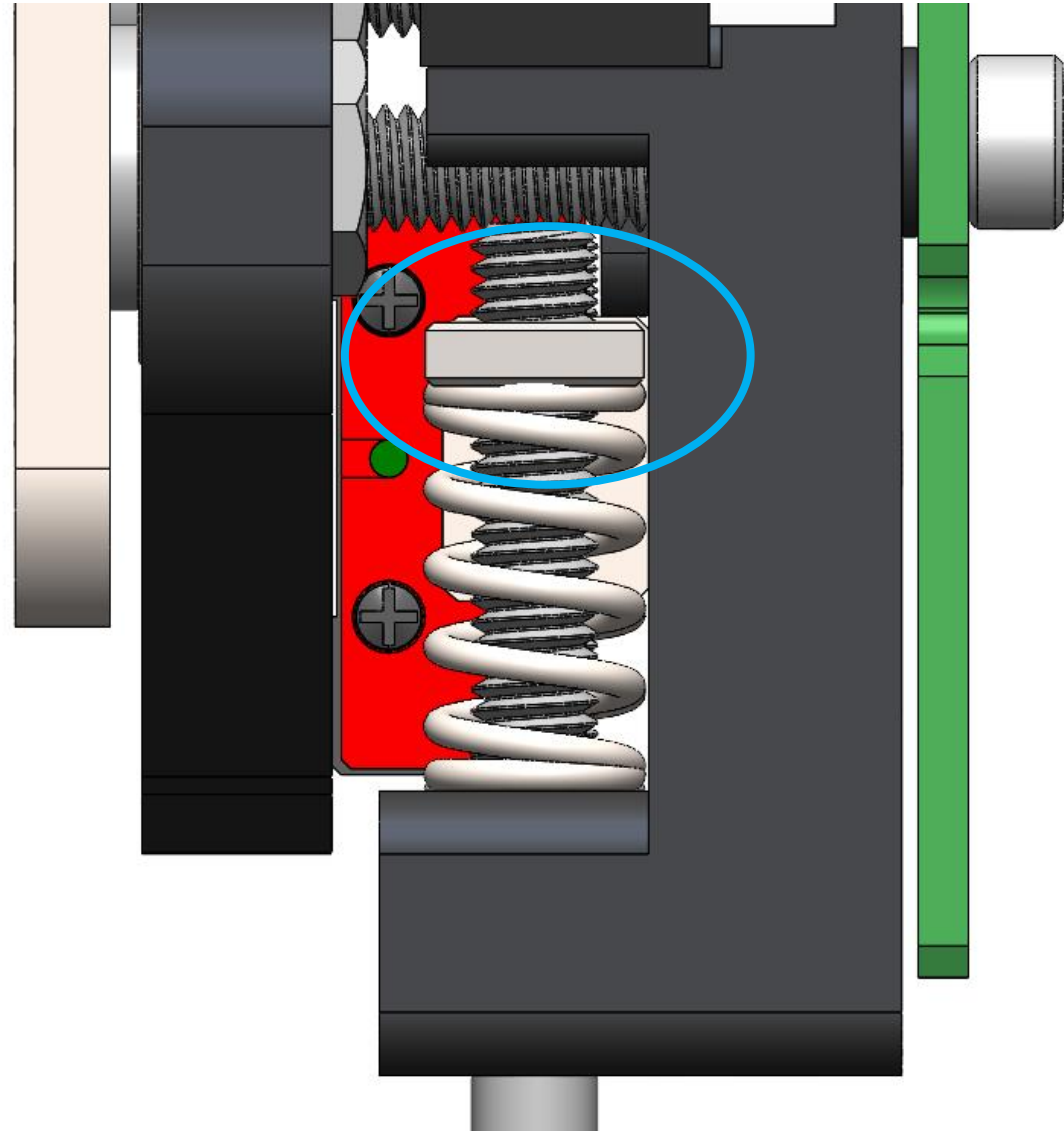
Adjusting the  
compensation bolt



TOOLS: 3.00mm key

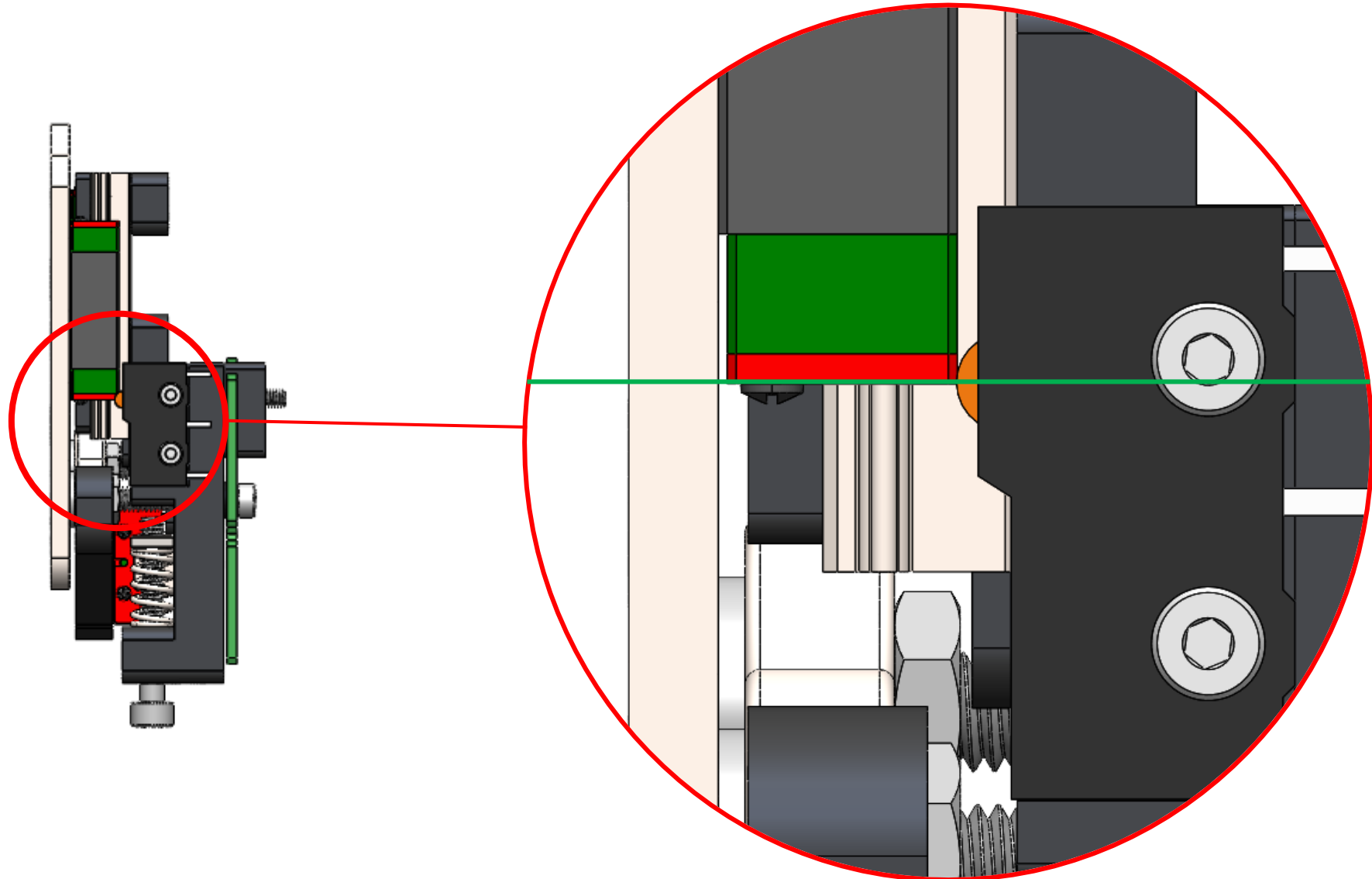


CLOCKWISE: Less compensation  
ANTI CLOCKWISE: More compensation



WATCH OUT YOU DONT ROTATE TOO MUCH, OTHERWISE THE SQUARE NUT CAN COME LOOSE!!!!

Compensation sweet spot



FINISHED!



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