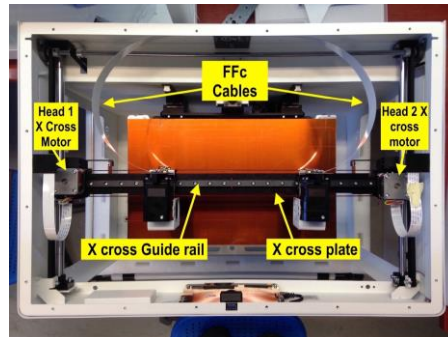


## Idex Flow X cross replacement

There may be a time that you may need to remove and replace the X cross plate from the underside of the X Axis guide rail. This is the process to follow to change the X plate.

Remove the top

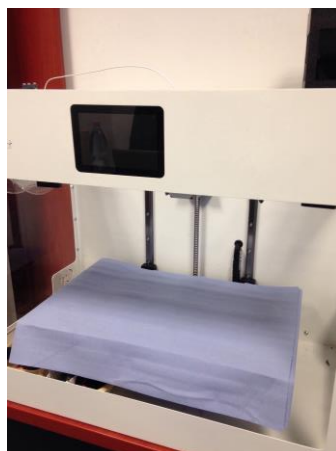


Tools requires for the changing of the Flow X cross Plate.

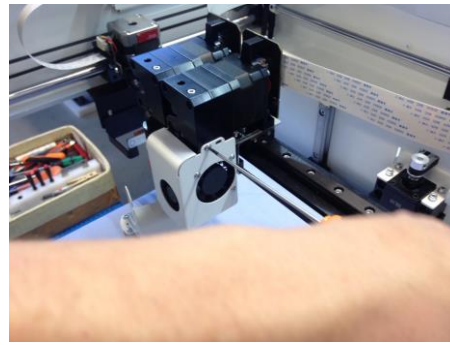
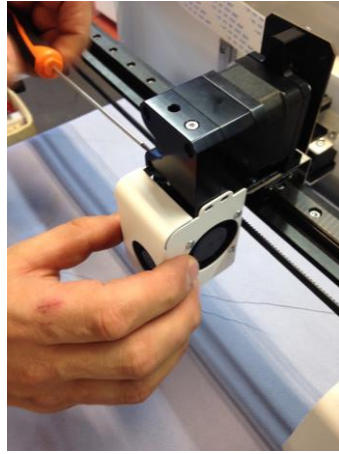
7 mm spanner. 3,2.5, 2 mm Allen Keys



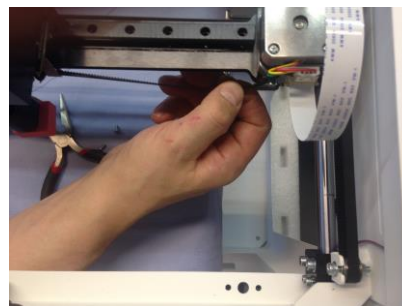
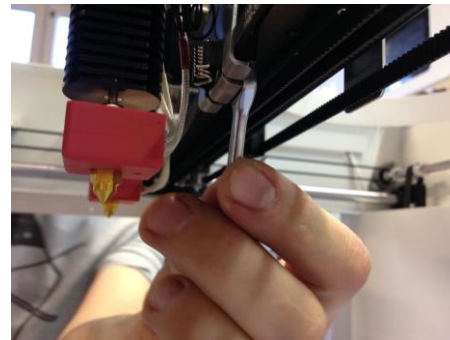
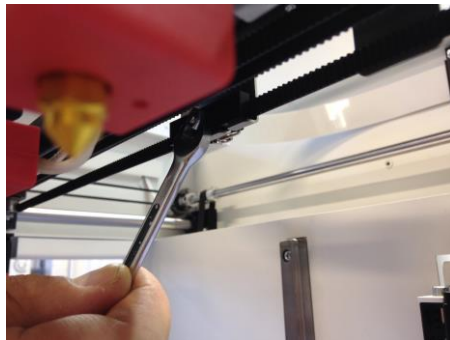
1. Switch on the printer and use the Axis menu to lower the build plate to give you enough room to work under the X cross plate.  
Place a cloth or paper towel over the entire platform to save it from getting damaged in any way.



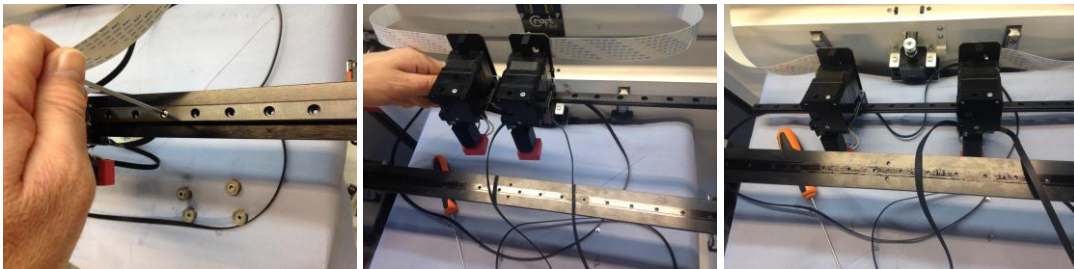
2. Remove the fan sets from both extruders and place them safely to one side. Keep the screws safe to avoid losing them as you will need them in the re assembly process later.



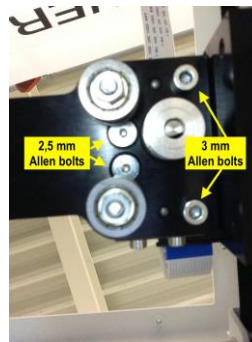
3. Under the X plate Loosen the belt clamp on the back and front of the extruder base mount ( located at the back of bearing cart of head 1 and at the front for head 2. This will give you enough play in the belts to remove the belts from the belt guide bearings and motor pulleys.



4. Loosen and remove all 20 bolts from the top X guide rail. Now with one hand hold the rail and extruder and remove the last screws. To stop it from falling.
  - Now hold both extruders and rail with both hands and lower the rail and both extruders safely onto the build platform. (keeping it level at all times). And be careful not to over stress the FFC cables for both extruders, plus let the rail slide out of the bearing carts.

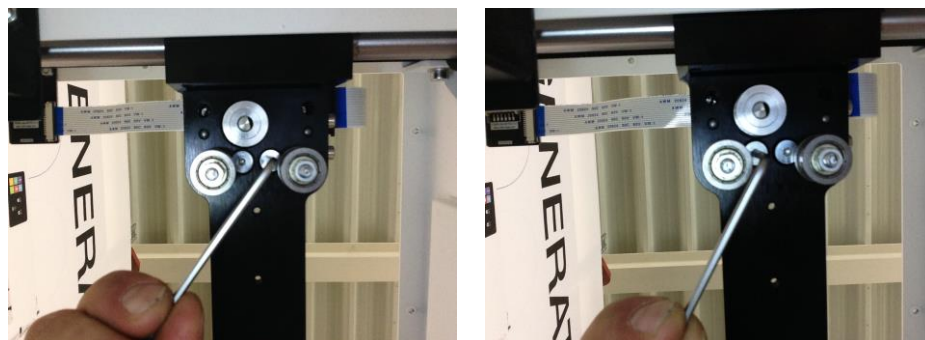


5. Now you will be working more on the underside of the X plate, as you remove it from the Motor mounts at each end of the X plate.



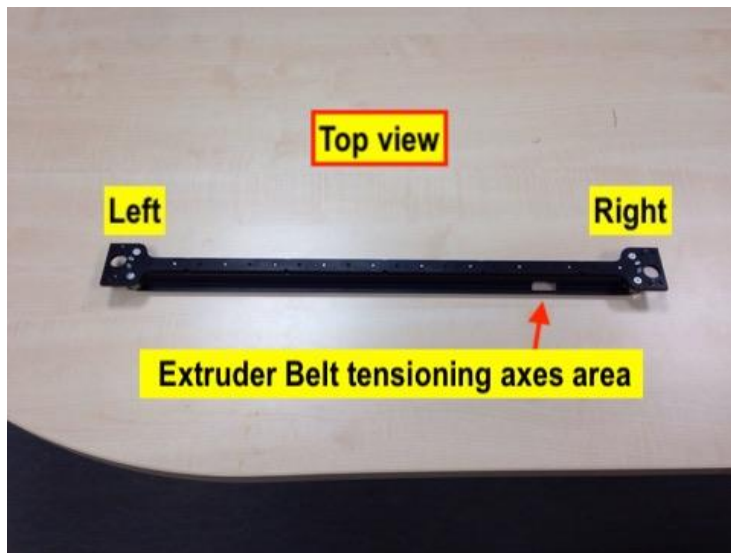
Allen Key sizes

6. Now there are 4 bolts holding the X cross plate to the underside of both motor assembly at both ends. These will all need to be removed.
  1. First using the 3 mm Allen key. Take out bigger bolts at the outer ends of the X plate, ( both ends ).
  2. Then, start to remove the centre Counter sunk bolts with the 2.5 mm Allen Key. These will have to be removed together, turning the screws a bit at a time. Until the X plate is totally removed from the underside of the motor mount. ( Note the heads of these screws will push the bearing and the X plate away from the mounts as you loosen them.
  3. Please hold the X cross plate, at the same time, with one hand. As you do not want to drop and damage the build platform, or the motor pulleys.



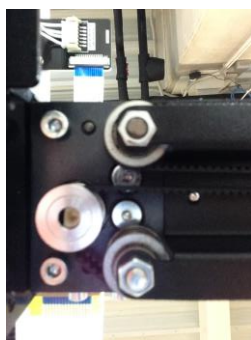
7. Then Just double check that all original location pins are removed from the underside of the motor mount with a pair of grips before attempting any reassembly work.

## [Reassembly](#)



New pre-assembled X plate and support plate with pre-assembled belt bearings, plus 4 x 3mm Allen key bolts.

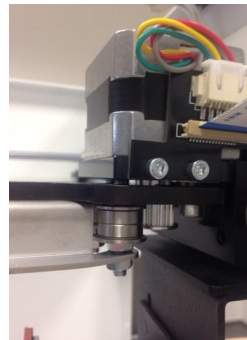
1. With the bearings facing downwards, you will notice the locating pins are sticking up. These are to go into the bottom of the motor mount when you mount the new plate to the underside of motors.
2. Now place the newly assembled X plate onto the build plate making sure to have the open axes hole in the support plate to the right, then move it up to the underside of the motor mounts and hold it in place.
3. Use all 4 bolts at each end to tighten the X plate up evenly this is to make the location pins go in correctly, then tighten it to the bottom of the motor mount.



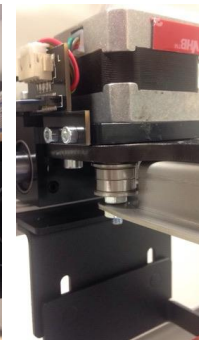
Left motor



right motor

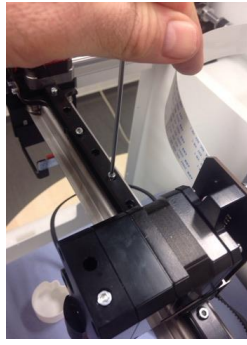


Start



Finish

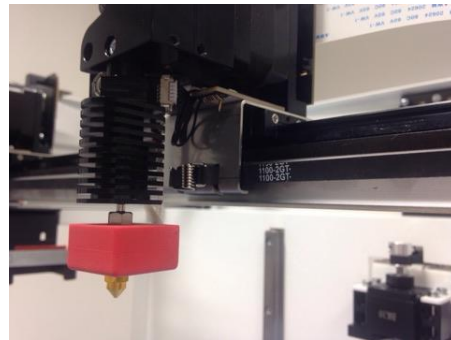
4. Now with both hands place the X guide rail and Extruders to the top of the plate keeping it level at all times. securing it to the X plate again with 10 Allen bolts using the 2.5 mm Allen key. Placing them in every second hole that is not already used. (Be careful not to damage the 2 FFC cables.)



- Now locate "Extruders 2" belt in and around the bearings at both ends then around motor pulley on the ( right ).  
(to make things easier You will have to compress the belt tension spring on the extruder to help fit the Belts more easily).



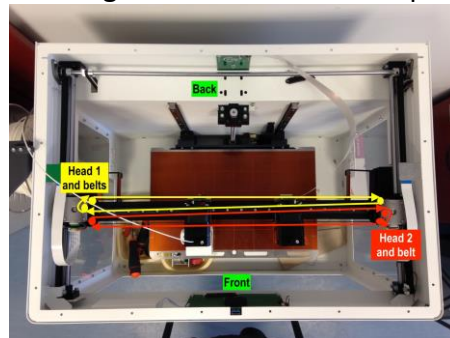
Head 1



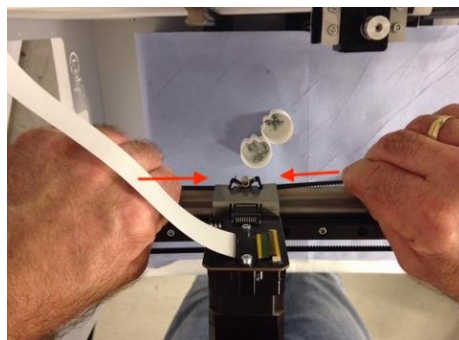
Belt tensioning spring

head 2

- For Head 1 belt. This will go around "left" motor pulley.



- Now go on both sides of the extruder and hold the belt. Now push the belt towards the spring, to get more tension in to the belt. Do this about 3 times. The spring will take up any loose belt tension.

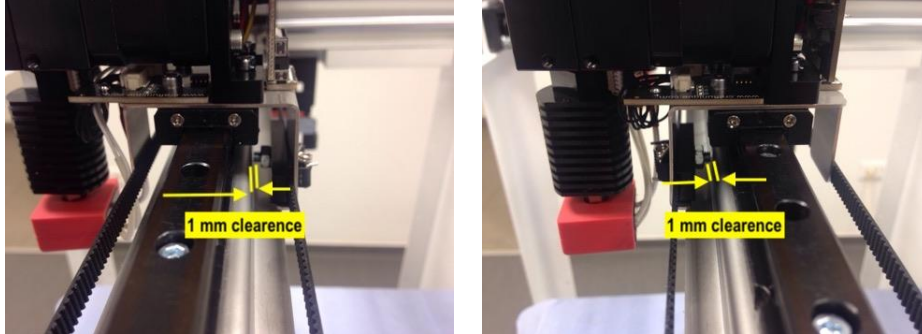


- Re securing the belts to the Extruder mount with the 7 mm spanner. using the new axes cut out on the right of the new support bar but do not over tighten them.

Things to double check for.

Look at the ends of these belt securing bolts you have just tightened on the extruders, make sure that they do not rub on the outside face of the new support bar.

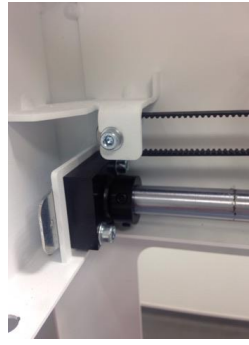
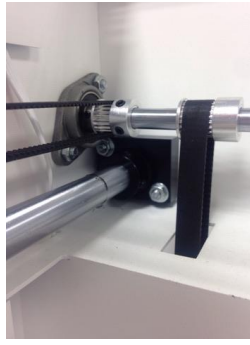
1. You may be needed to loosen the bolts holding the X rail to the X plate to realign it for best central fitting position.



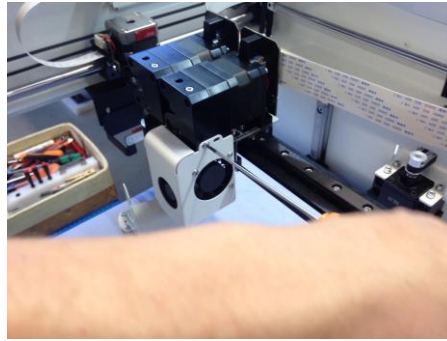
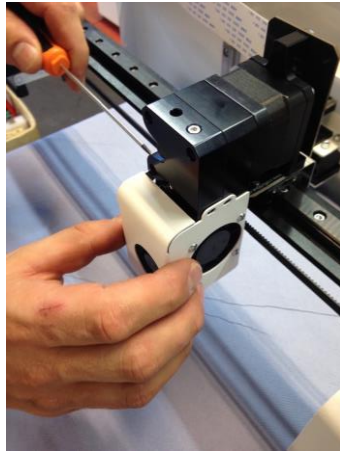
2. Check the limit switches on the back of the Head 1, and 2 FFC panel. make sure that these switches touch and fully compress on the motors for them to work. If this does not work.
3. Please take off the FFC Panels and the Extender boards under both extruders, drill the boards screw holes to 3.5 mm Diameter. To be able to slide it a little more over to one side to enable the limit switch to work correctly.



4. You may need to adjust the Y axis Guide rail mounts on the left side of the printer. This is due to the new X plate length; this may vary from the original X plate length and printer settings at the time of original production.
5. The front mount for this rail, may need to be lifted up to the correct height. For this a spacer will be needed. about 2.3 mm in thickness before re- securing it to the frame. To bring it in line with the build platform.



9. Place the fans back to the extruders. using the 2 mm Allen key.



Now is the time to switch the printer back on and run them all important tests using the Axis menu. If it is all going well run some small test prints to check that everything is ok.