

Gantry Bracket Replacement Instructions for the Replicator 2 and Replicator 2X

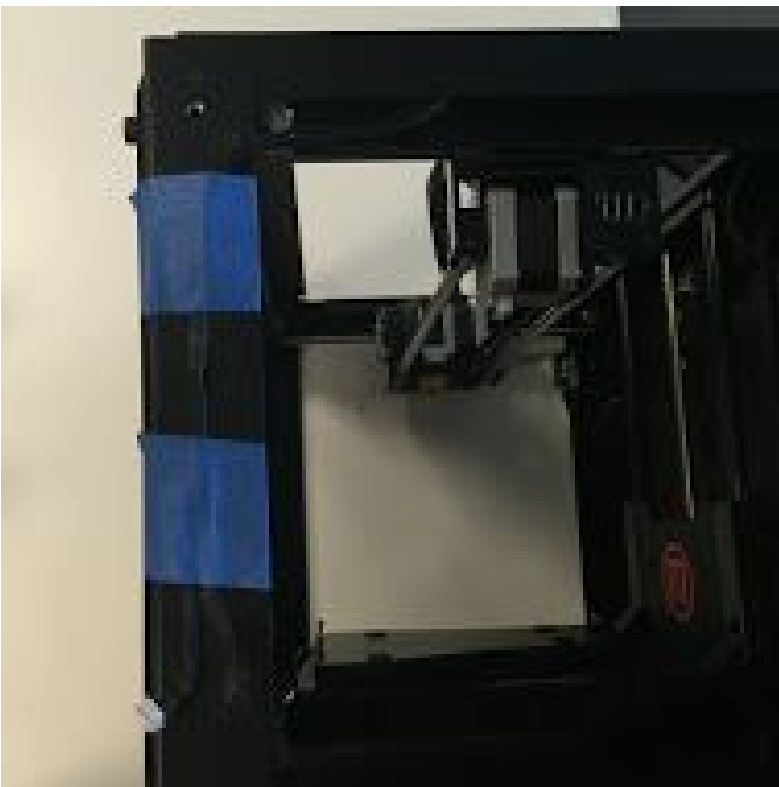
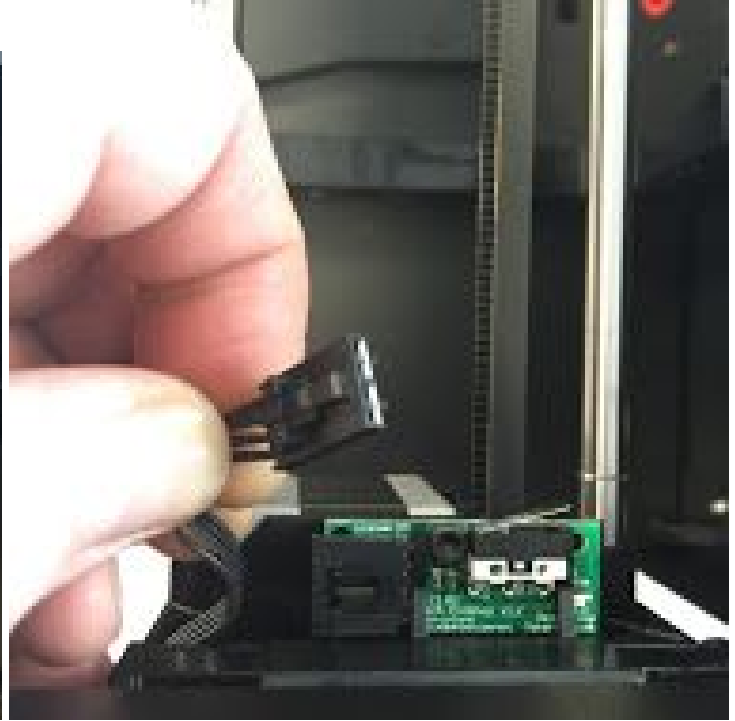
1. Using a 5mm hex key, remove the four bolts from each side panel. Set aside the 8 bolts and 2 panels.



2. Using a small hex key, pry the spring pin out of the gantry primary (the plastic part that holds the x motor)



3. Unplug the X-Axis endstop and motor connections, and tape the wires to the front right leg so they don't hang loose.



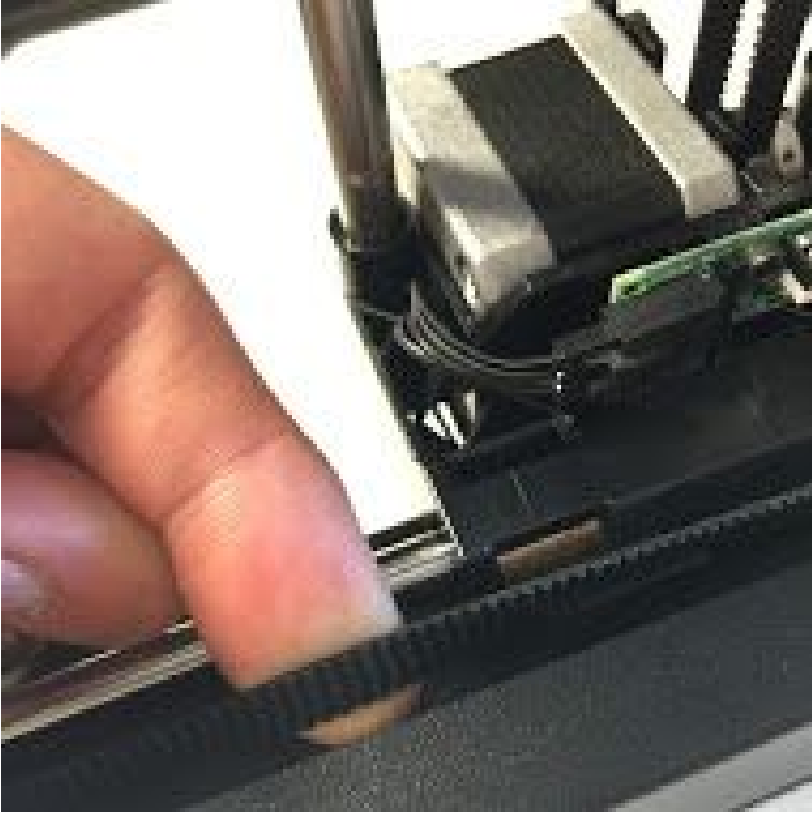
4. Using a 3mm hex driver, loosen the two nuts on the Y-Axis motor mount.



5. With the small Y-Axis belt loose, remove this belt from the Y-Axis motor pulley. Let it hang free for the time being.



6. Pull the belt out of the teeth of the gantry primary and secondary (the plastic part on the left side that the two x gantry rods connect to)



7. Using a rubber mallet and a hex driver, tap the front of the left hand Y-Axis rod until the rod drops/pops out of the gantry bracket.

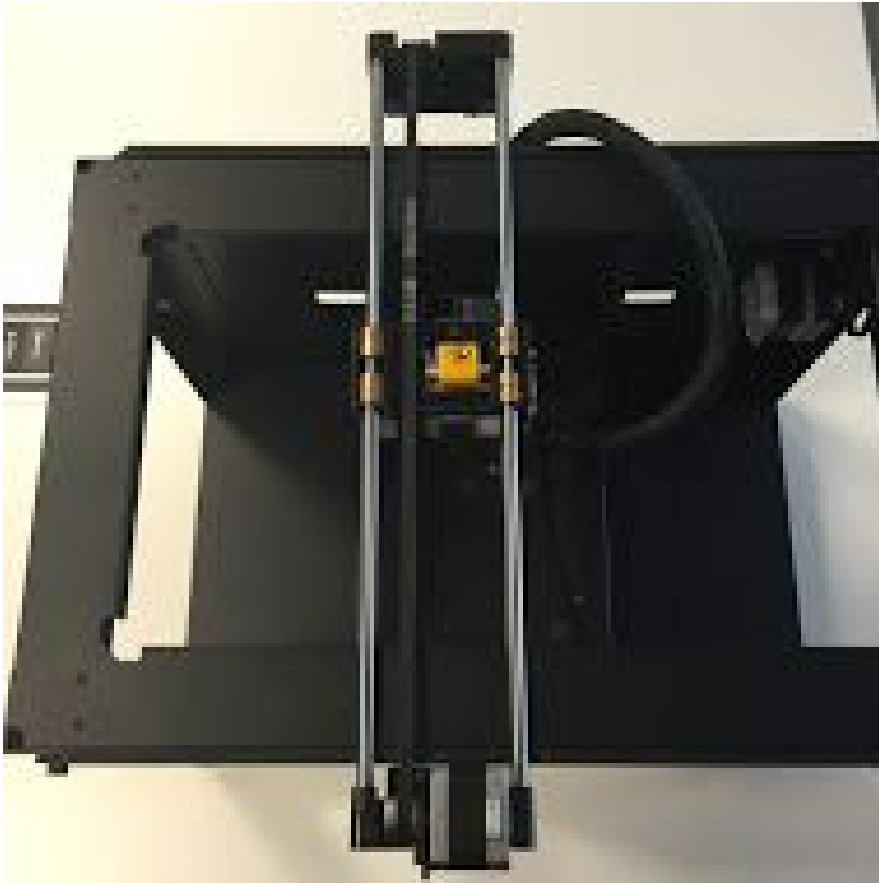


8. Pull the rear portion of the rod out of the rear left gantry bracket. Set the rod aside.



9. Repeat steps 7 and 8 for the remaining Y-Axis rod.

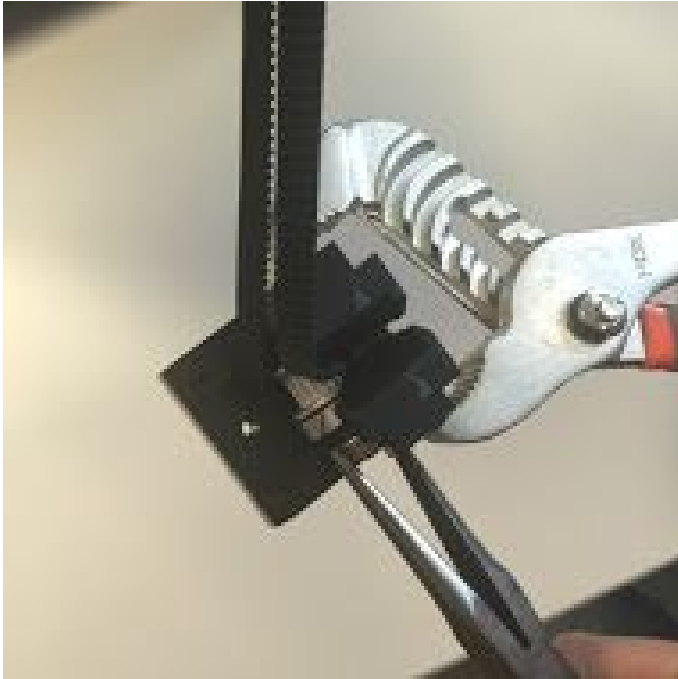
10. Safely place the X-Stage on top of the printer, making sure it won't fall from its resting place.



11. Using a 2mm hex key, remove the 6 bolts above the 2 rear gantry brackets. Once the bolts are removed, the gantry brackets should hang by the belts within the printer.



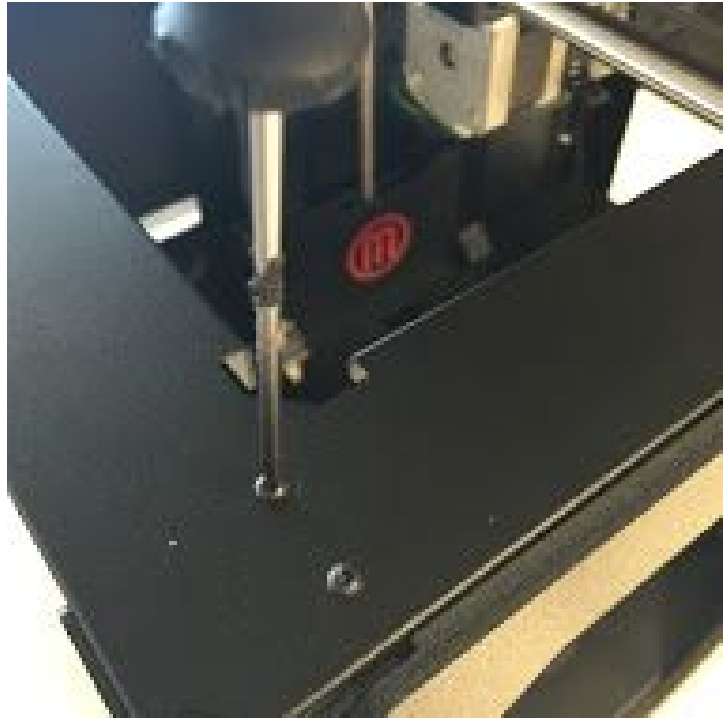
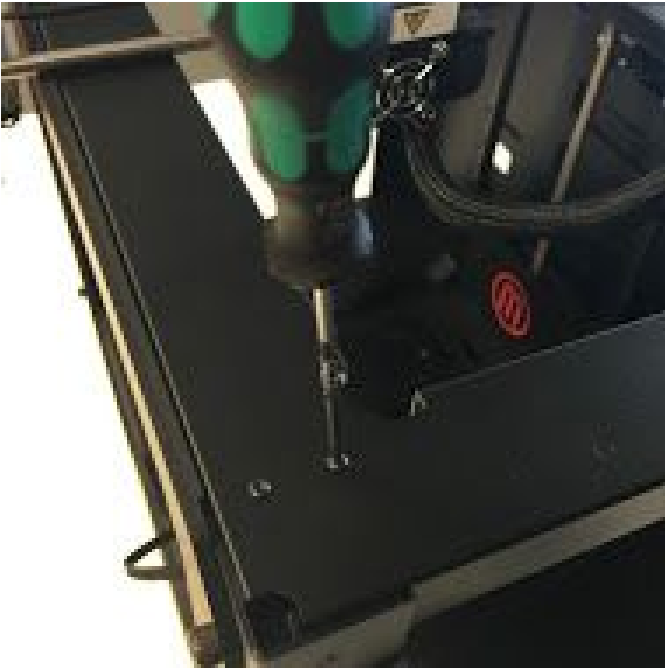
12. Using pliers or channel locks, remove the bearings, spacers and pulley from each hanging bracket.



13. At this stage, reference the photo for step 13 to ensure all the parts have been removed. You should notice that there are two belts hanging inside the printer.



14. Using a 2mm hex key, remove the 4 bolts above the 2 front gantry brackets.



15. Remove the 2 front gantry brackets along with the belts and the connecting rod. See photo labeled step 15 for reference.



16. Using a 1.5mm hex key, loosen but do not remove the set screw inside the two pulleys attached to the long skinny rod that was removed in step 15. Remove the rod from each pulley and set aside.

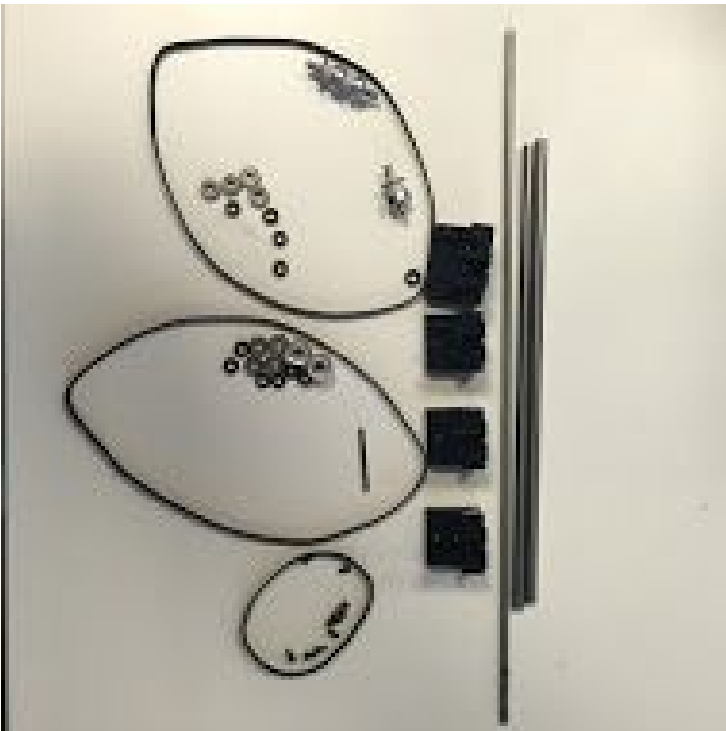


17. Using a pair of pliers, remove the bearings from each gantry bracket that doesn't contain a pulley.





18. Refer to photo labeled step 18 to ensure you have all the correct parts removed.



19. Locate the replacement brackets. There should be three small (single) brackets and one larger (double) bracket.

20. Using 6 spacers, 4 bearings and 2 pulleys, configure these along the skinny rod so that it matches the orientation in the photo labeled step 20. Keep the set screws inside the pulleys loose for the time being.



21. Loop one of the longer Y-Axis belts around the left pulley that was installed in step 20. Apply pressure with a hex driver on the pulley to snap into the new gantry bracket. Repeat for the right side as well.



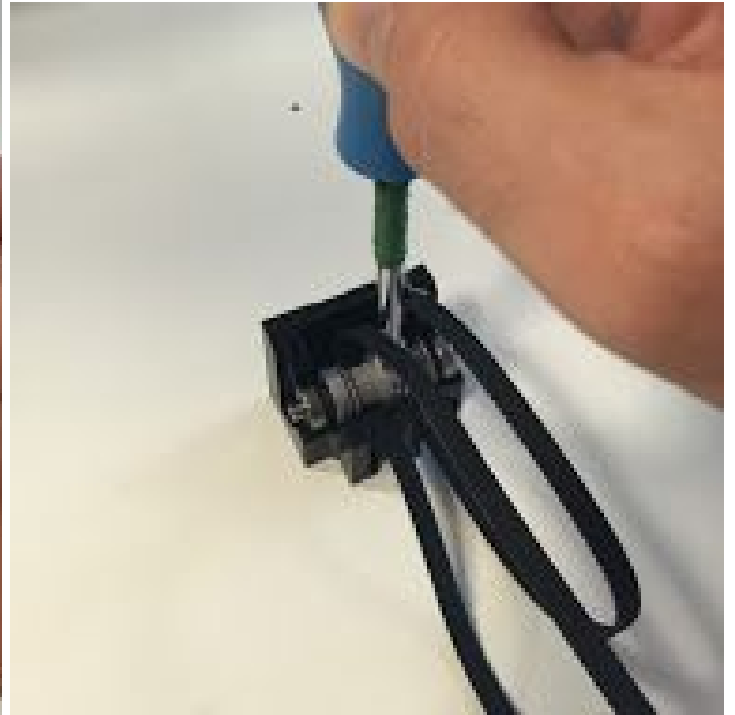
22. Locate the remaining single pulley assembly, and orient the pulley so that the portion with two spacers faces the center of the printer. Loop the rear portion of the left Y-Axis belt around this pulley. Apply pressure with a hex driver on the pulley to snap into the new gantry bracket.



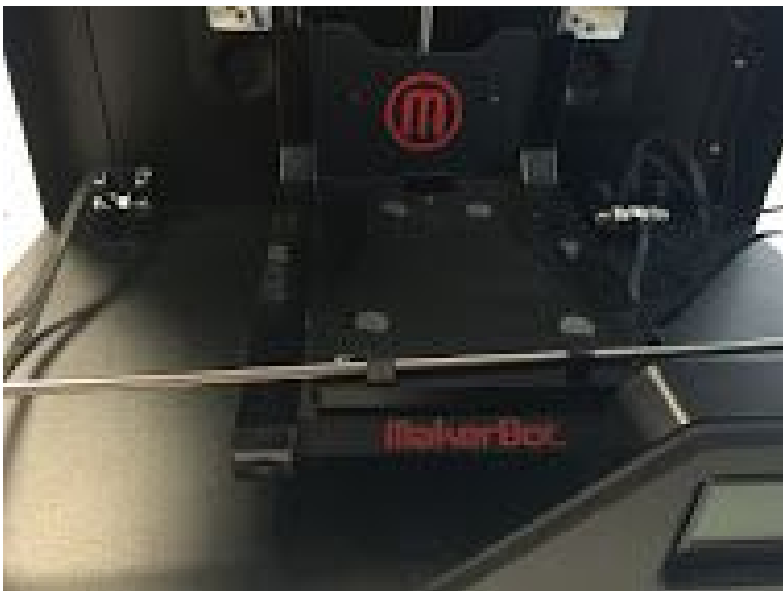
23. Locate the small Y-Axis belt and loop it around the remaining two-pulley assembly as shown in the photo for step 23.



24. Loop the rear portion of the right Y-Axis belt around the other pulley next to the one containing the small Y-Axis belt. Apply pressure with a hex driver on the pulley to snap into the new double gantry bracket.



25. Loosely place the newly assembled four gantry brackets inside the body of the printer.



26. Orient the front gantry brackets so that the holes in the frame line up with the brass inserts inside the gantry brackets. Using a 2mm hex key reattach the four bolts for the front two brackets. Do not fully tighten these bolts.



27. Orient the left rear gantry bracket so that the belt is not twisted. Using a 2mm hex key reattach the two bolts for the rear left bracket. Do not fully tighten these bolts.



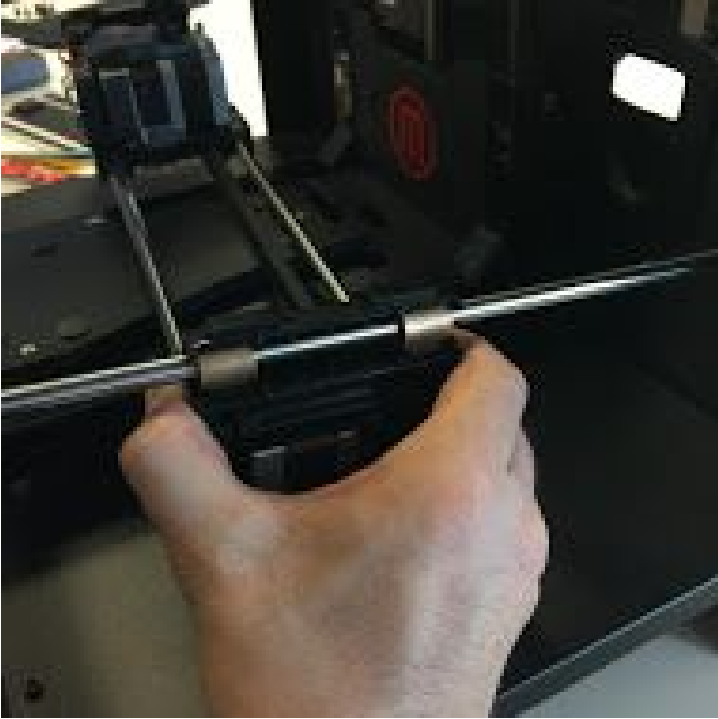
28. Repeat step 27 for the rear right gantry bracket.



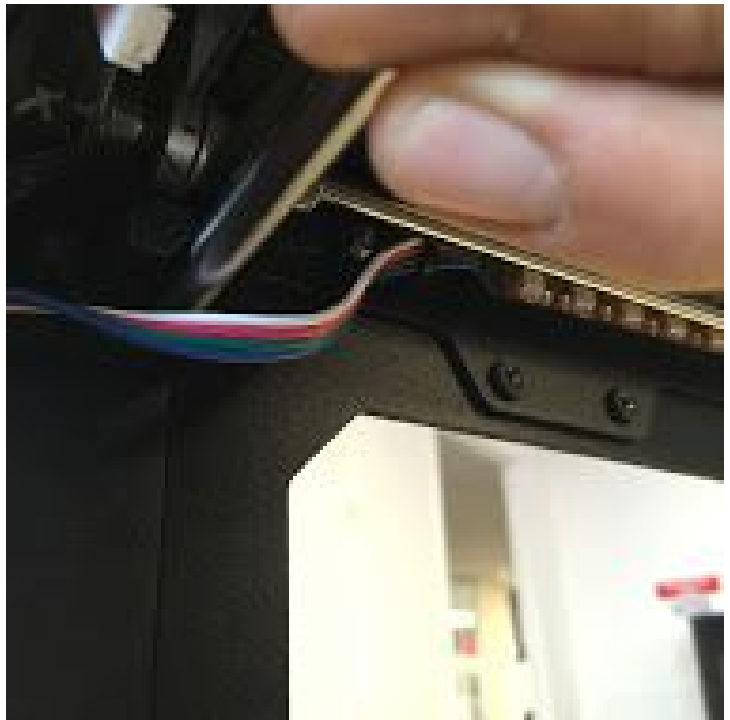
29. Wrap the small Y-Axis belt around the Y-Axis motor pulley. Apply downward pressure on the Y-Axis motor. Using a 3mm hex driver tighten the two nuts on the Y-Axis Motor Mount to tension the small belt.



30. Safely position the X-Stage on top of the Z-Stage, so that its not resting directly on the extruder. Insert the right side Y-Axis rod through the bearings inside the Y-Axis primary.



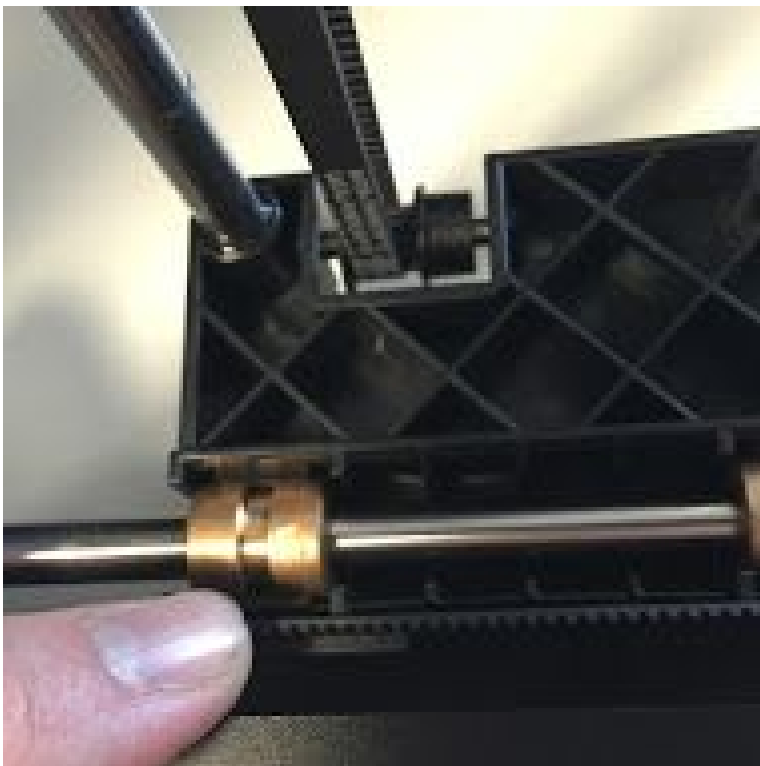
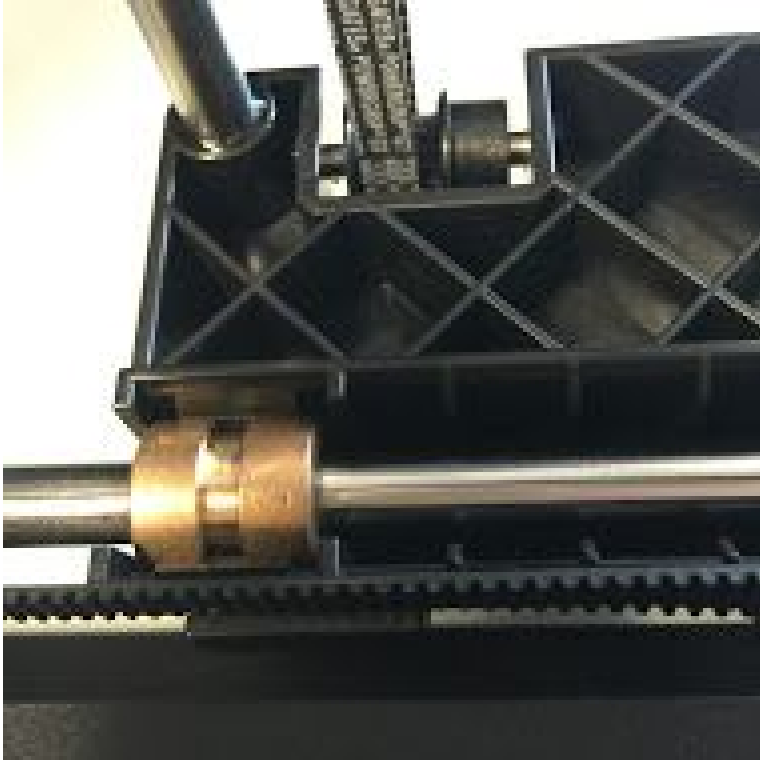
31. Line up the rod to the gantry brackets, and snap into place. Be sure to avoid the LED wire along the front right corner of the printer.



32. Repeat step 31 for the left Y-Axis rod.



33. Install the Y-Axis belts into the teeth of the gantry primary and gantry secondary.



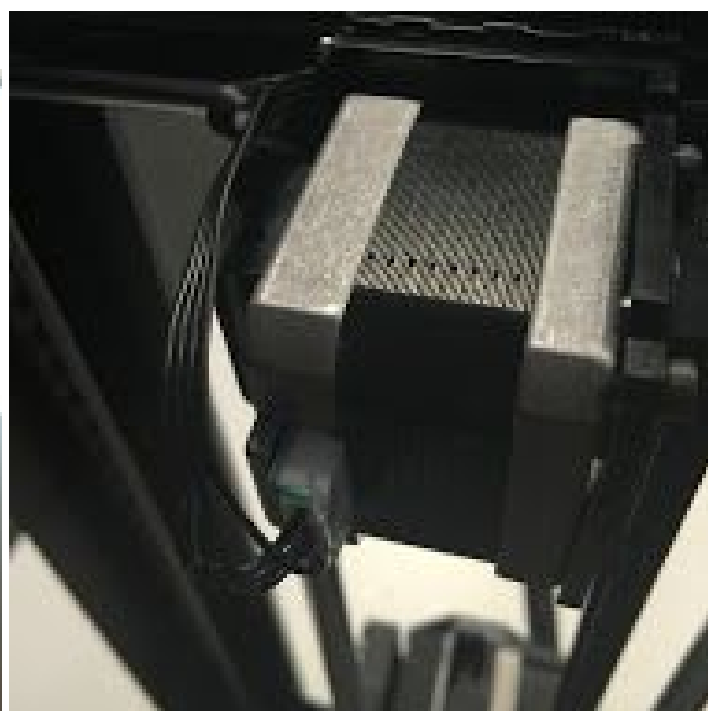
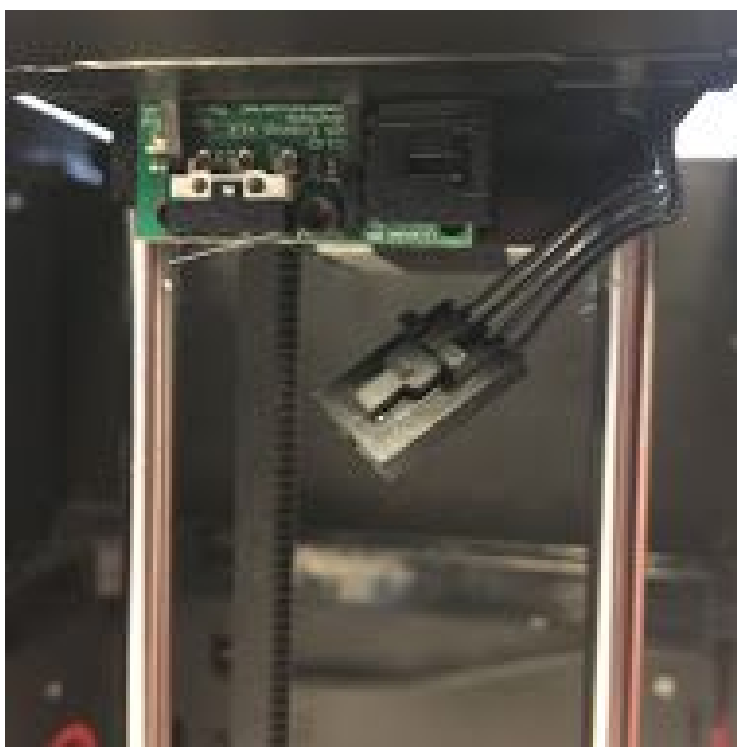
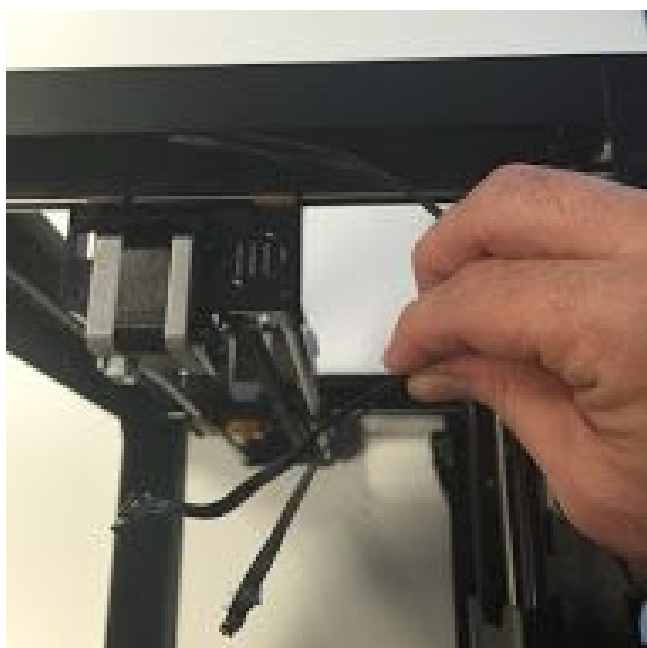
34. Center the skinny rod within the two front brackets. Using a 1.5mm hex key, tighten the two front pulleys.



35. Manually move the gantry front to back along the Y-Axis. Fully tighten the ten bolts on the top of the printer frame, above each of the gantry brackets.



36. Locate and straighten the X-Axis wires. Insert the wires through the gap for the spring pin. Feed the endstop wire through the hole in the gantry primary. Plug the connectors into the Endstop PCB and the X-Axis motor.





37. Insert the spring pin into the primary so that it holds the wires into place.



38. Remove the tape applied in step 3. Using a 5mm hex key, reinstall the side panels and 8 bolts.

