

The material upgrade kit includes a replacement print jet for extruder 2 which has a larger diameter opening. For this upgrade, only print jet 2 should be replaced with the part included in the kit.



WARNING: ONCE PRINT JET 2 HAS BEEN UPGRADED, ABS, PLA AND NYLON BAY 2. THIS BAY IS RESERVED FOR UPGRADED MATERIALS. WHEN PRINTING CURRENTLY INSTALLED MUST BE PROPERLY REMOVED.

Tools Needed

- 2.5 mm Hex Head Driver
- T10 Torx Driver

Replacing An Extruder Assembly Or Print Jet



WARNING: BEFORE SERVICING THESE COMPONENTS, GROUND YOURSELF TO ALL ELECTRICAL COMPONENTS. ESD PROTECTION IS REQUIRED.



WARNING: NEVER PULL WIRES TO DISCONNECT THE CONNECTORS. THIS ACTION WILL VOID THE MANUFACTURER'S WARRANTY.

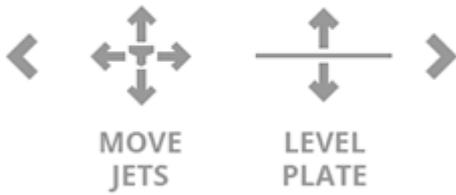
The following procedure is intended to provide instructions about how to replace print jet 2 for the material upgrade kit.

1. Navigate to the [Print Plate Calibration](#) screen and select **LEVEL PLATE**.



NOTE: The print pad will raise and the print jets will maneuver to the left rear of the printer.

Print plate calibration



Level plate

Tap the corners and manually raise or lower the print pad. For more details please refer to the manual.

BACK



2. Select the upper right corner of the triangle on the touchscreen display.



NOTE: The printheads will move to the right rear corner of the print pad.

Level plate



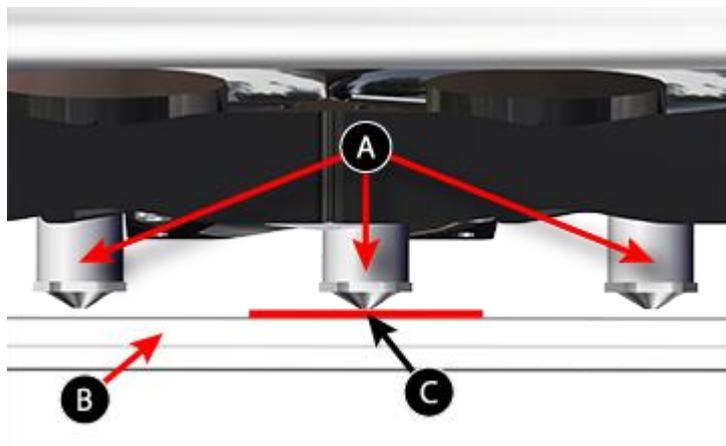
3. Using the designated page from the Setup/Repack instructions, slide the paper between the print jets and the print pad.



NOTE: If there is a slight resistance, proceed to step 5.



NOTE: The red line (C) illustrates the gap between the print jets (A) and the print pad.



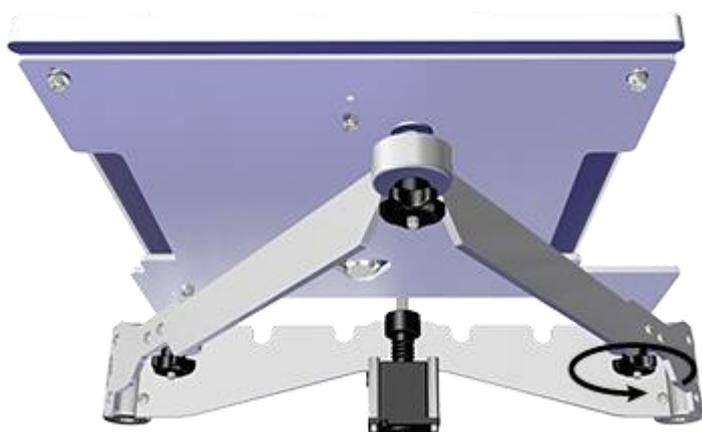
4. If the paper slides easily between the print jets and print pad, rotate the adjustment knob counter-clockwise (from the bottom) until there is a slight resistance.



CAUTION: If the print pad is set too high, damage to the print pad or print jets may occur.



NOTE: If the paper can not be inserted between the print jets and the print pad, there is a slight resistance on the paper.



5. Select the lower middle triangle.
6. Once the print jets have moved to the front center of the print pad, slide the paper between the print jets and the print pad.



NOTE: If there is a slight resistance, proceed to step 8.

Level plate



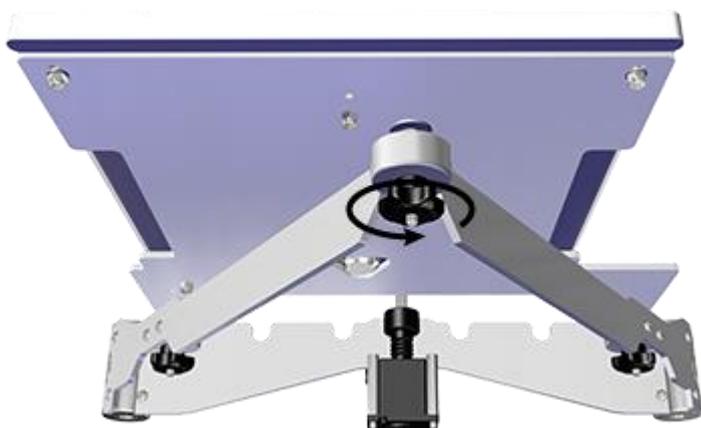
7. If there is no resistance on the paper when sliding it between the print jets and the print pad, rotate the adjustment knob counter-clockwise (from the bottom) until there is a slight resistance.



CAUTION: If the print pad is set too high, damage to the print pad or print jets may occur.



NOTE: If the paper can not be inserted between the print jets and the print pad, there is a slight resistance on the paper.



8. Select the upper left corner of the triangle.
9. Once the print jets have moved to the left rear of the print pad, slide the paper between the print jets and the print pad.



NOTE: If there is a slight resistance, proceed to step 11.

Level plate



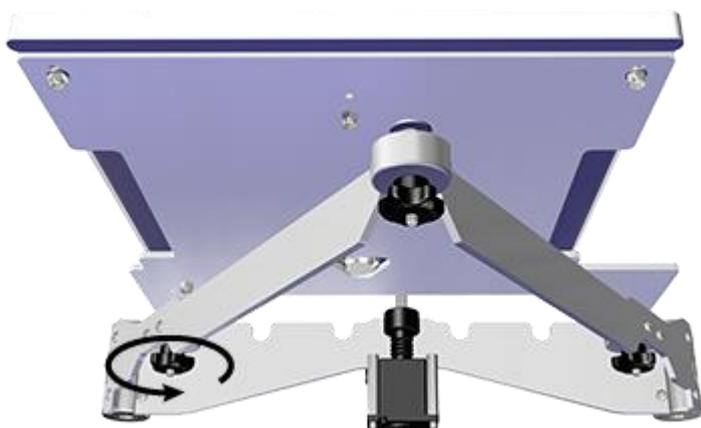
10. If there is no resistance on the paper when sliding it between the print jets and the print pad, rotate the adjustment knob counter-clockwise (from the bottom) until there is a slight resistance.



CAUTION: If the print pad is set too high, damage to the print pad or print jets may occur.



NOTE: If the paper can not be inserted between the print jets and the print pad, there is a slight resistance on the paper.



11. Once completed, select the **checkmark** to exit the utility.

Level plate



12. Properly remove the material cartridges.



NOTE: For more information, refer to the section titled **Replacing a Material Cartridge**.

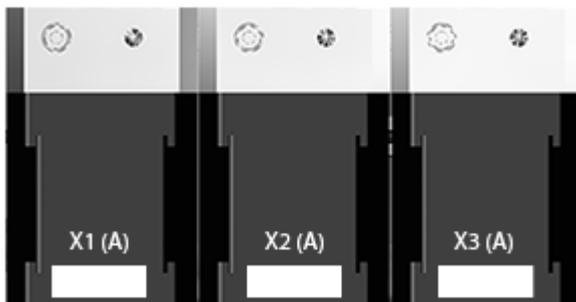
13. Power off the printer and disconnect it from utility power.



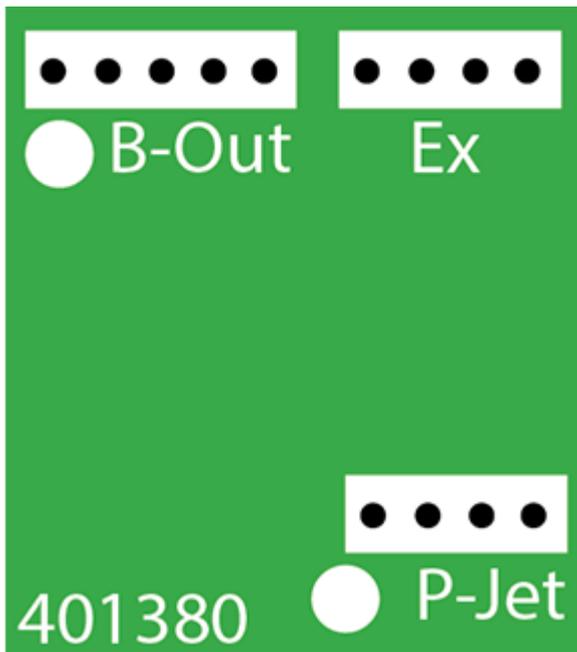
CAUTION: The printer must be powered off and the power cord must be disconnected.

14. Remove the lid from the top of the printer.

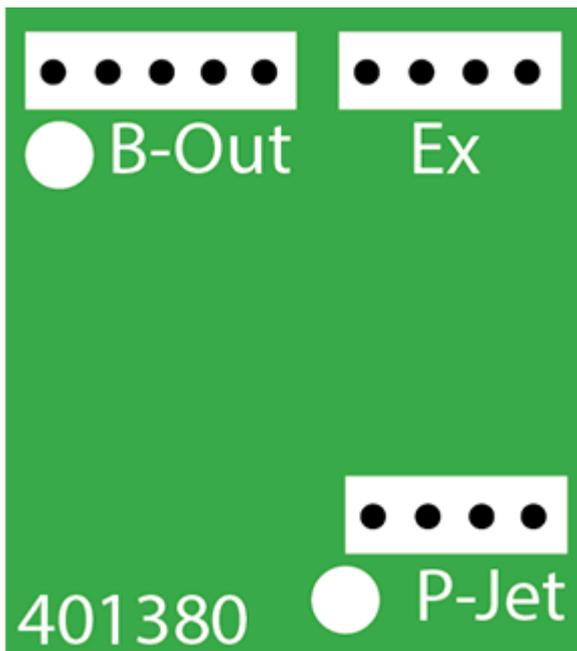
15. Disconnect the cables **X1 (A)**, **X2 (A)** and **X3 (A)** from extruder motors.



16. Disconnect the 5-pin jumper cable from junction **B-Out** of the extruder 2 PCB.



17. Disconnect cable **X (B)** from junction **Ex** of the extruder 2 PCB.



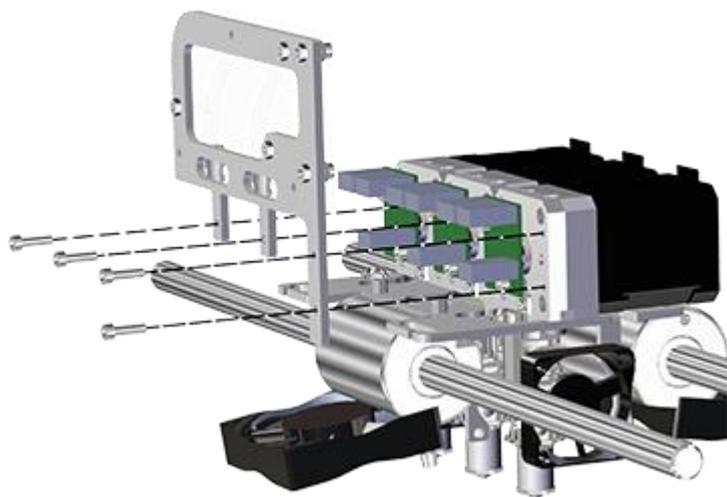
18. Using a 2.5 mm hex head driver, loosen and remove the four 2.5 mm hex head bolts securing the delivery tube bracket and block to the extruders.



NOTE: For printers with 2 extruders, the 2 right side bolts and the center bolt will also need to be removed.



NOTE: For clarity, the main extruder PCB was removed from the illustration. H



19. Move the delivery tube bracket/block aside so that extruder 2 can be removed.

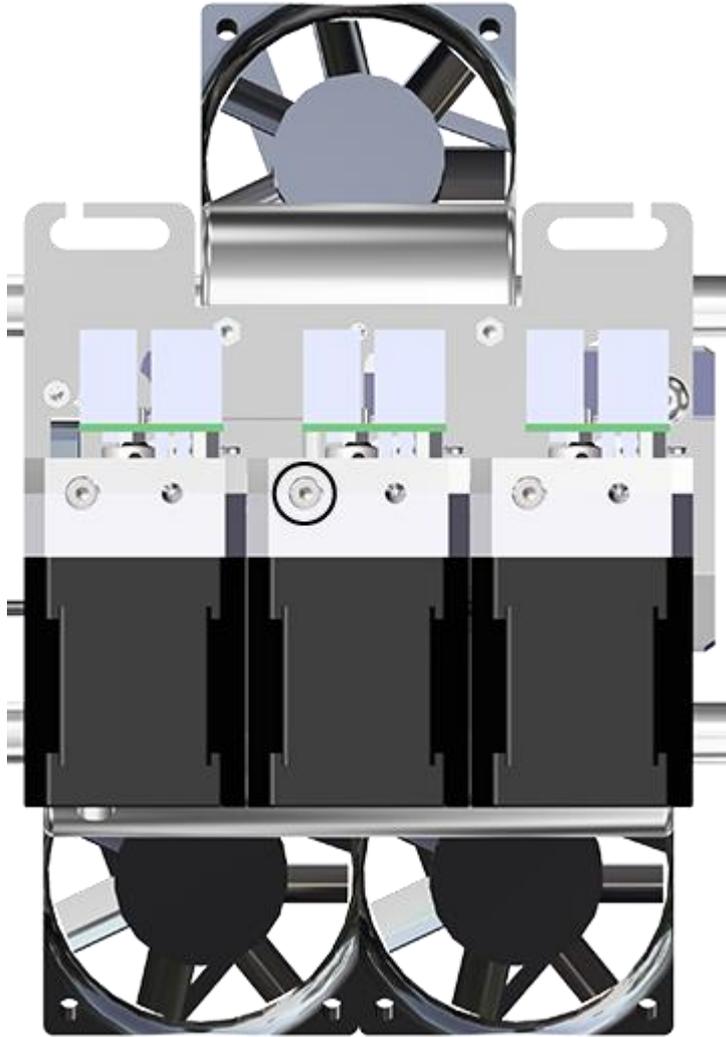
20. Using a 2.5 mm hex head driver, loosen the 2.5 mm hex head screw securing extruder 2 to the carriage plate.



NOTE: The screw will remain loose in the extruder housing.



NOTE: For clarity, the main extruder PCB was removed from the illustration. It



21. Carefully remove the affected extruder assembly from the carriage plate.



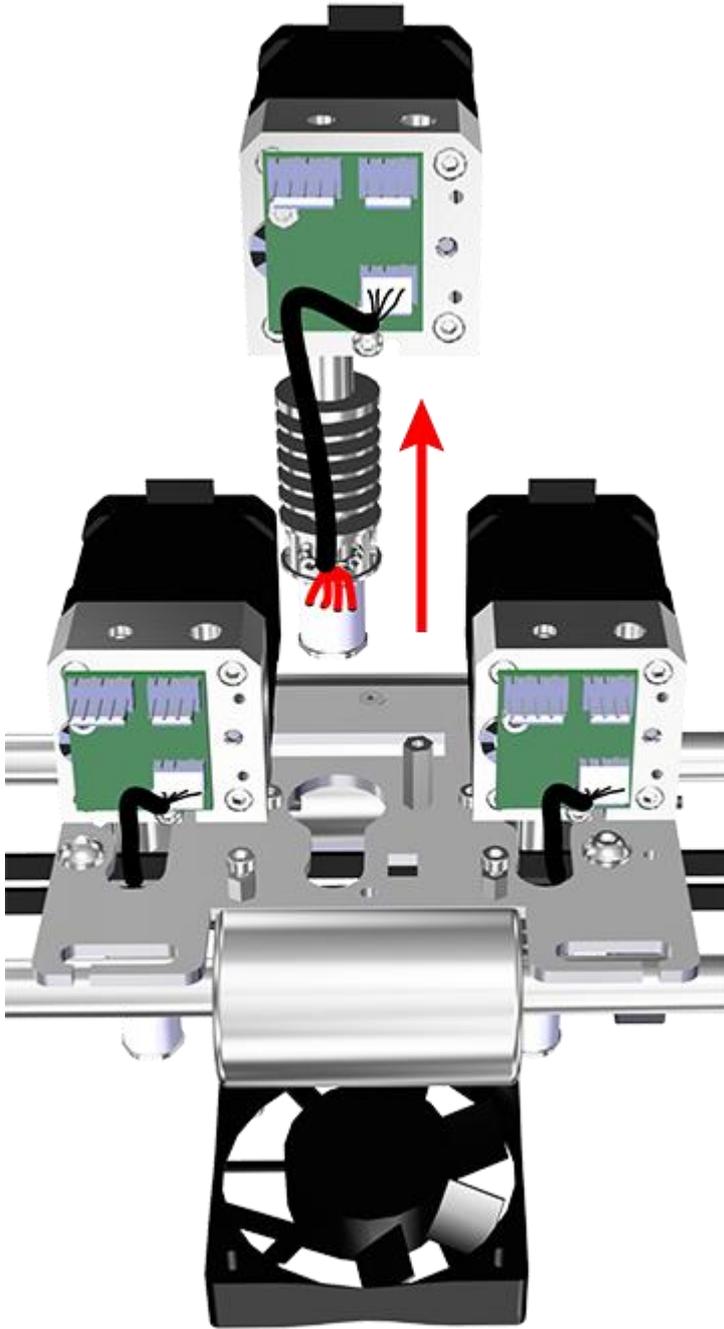
NOTE: Do not lose the screw that was loosened in the previous step.



CAUTION: Be careful not to damage the print jet cable connected to junction P-J.



NOTE: For clarity, the main extruder PCB was removed from the illustration. H



22. Disconnect the print jet cable from junction **P-Jet** of the extruder 2 PCB.



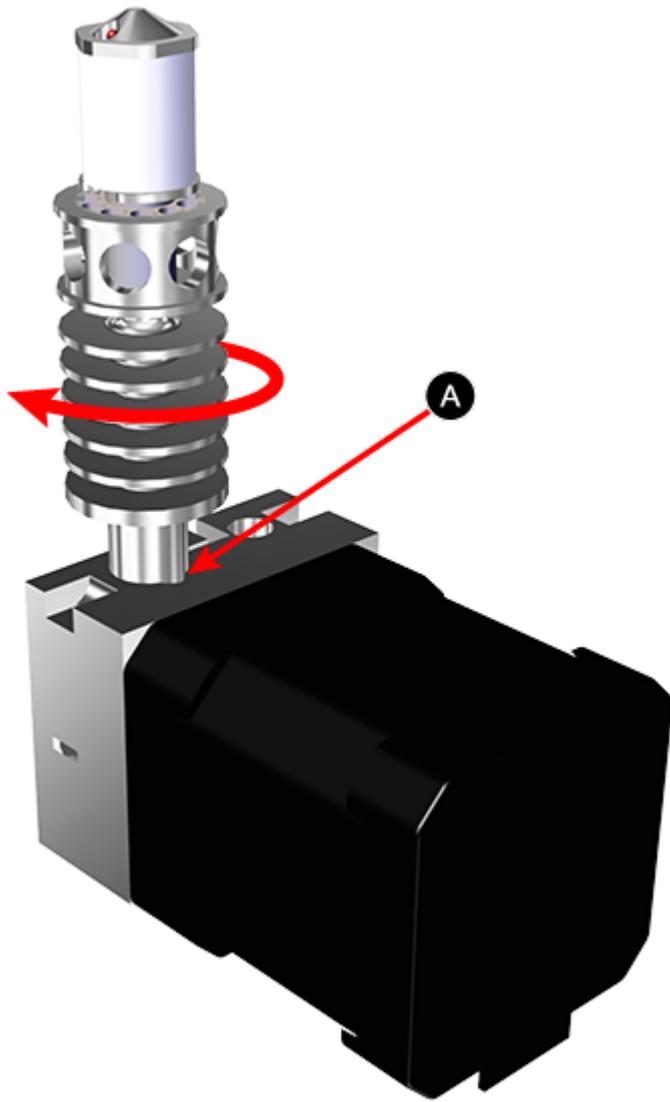
23. Using the T10 torx driver, loosen but **DO NOT** remove the T10 torx screw securing the print jet to the extruder assembly.



24. Rotate the print jet and gently pull upward to remove it from the extruder.



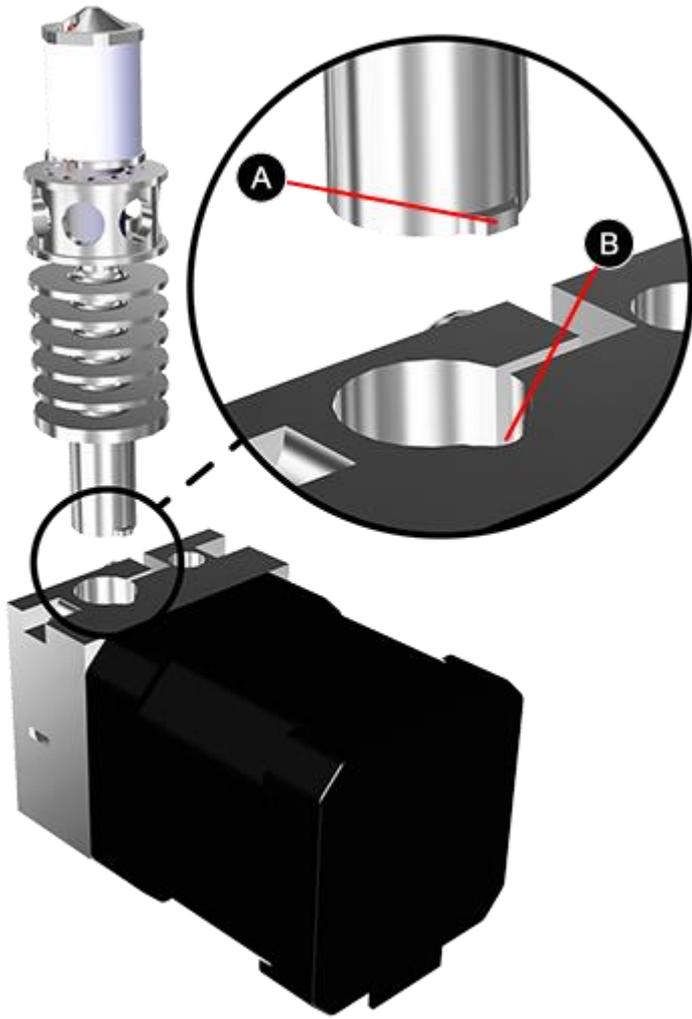
NOTE: There is a tab on the print jet that aligns with a channel (A) in the extruder.



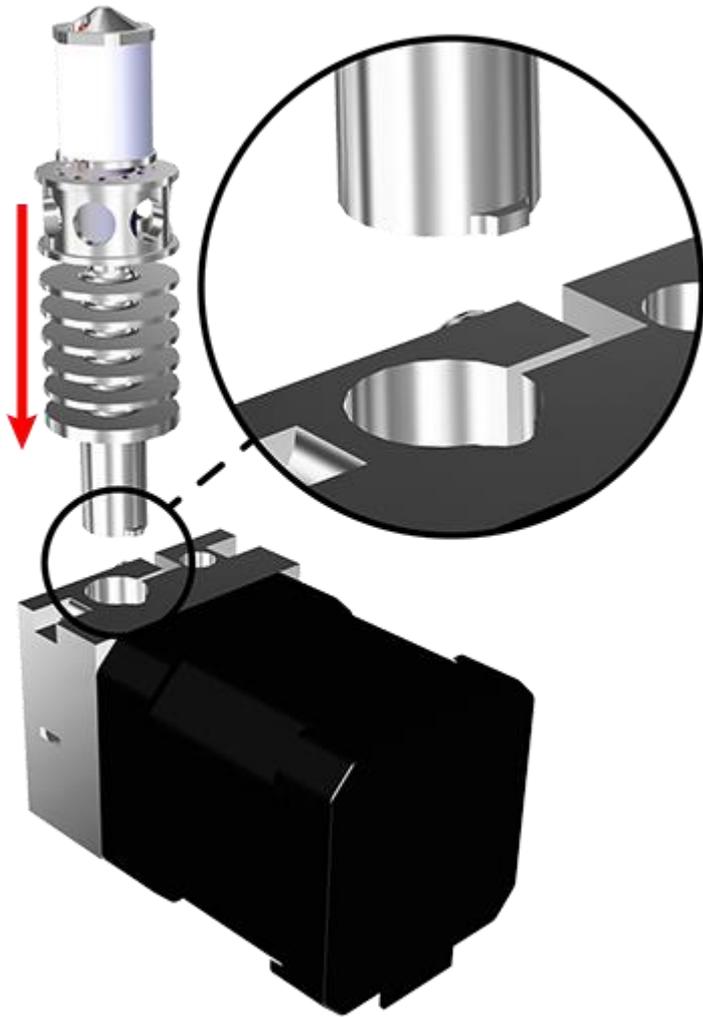
25. Carefully remove the print jet from the extruder.



NOTE: There is a tab (A) on the end of the print jet that aligns with the channel (



26. Insert the new print jet into the extruder.



27. Rotate the print jet counter-clockwise so the cable from the print jet is facing the same direction as the extruder PCB.



28. Vertically center print jet 2 in the pinch clamp of the extruder housing and tighten the T10 torx screw (A) enough that the print jet is securely held.



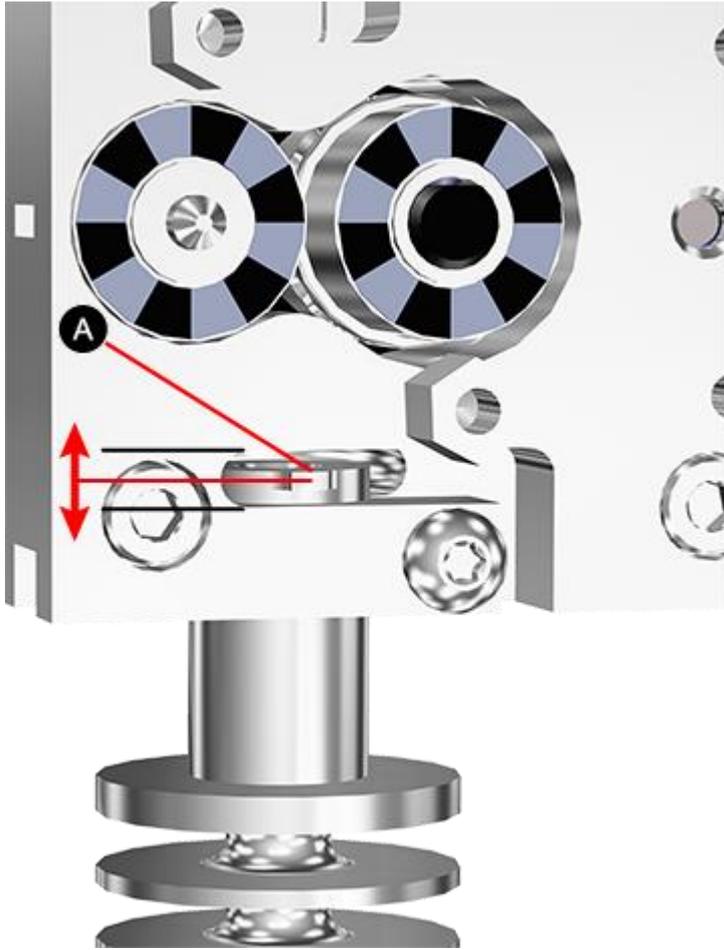
NOTE: For printers with 2 or 3 print jets, the height for print jets 1 and 3 will be assembly has been reinstalled. Tighten the T10 torx screw enough that the print j



CAUTION: If tightened too tight, the threads in the extruder might begin to pull. Exercise caution when tightening the torx screw.



NOTE: For illustration purposes, the board was removed from this image. It is un the print jet.



29. Connect the print jet cable to junction P-Jet on the extruder 2 PCB.



30. Carefully insert extruder assembly 2 into the carriage plate.



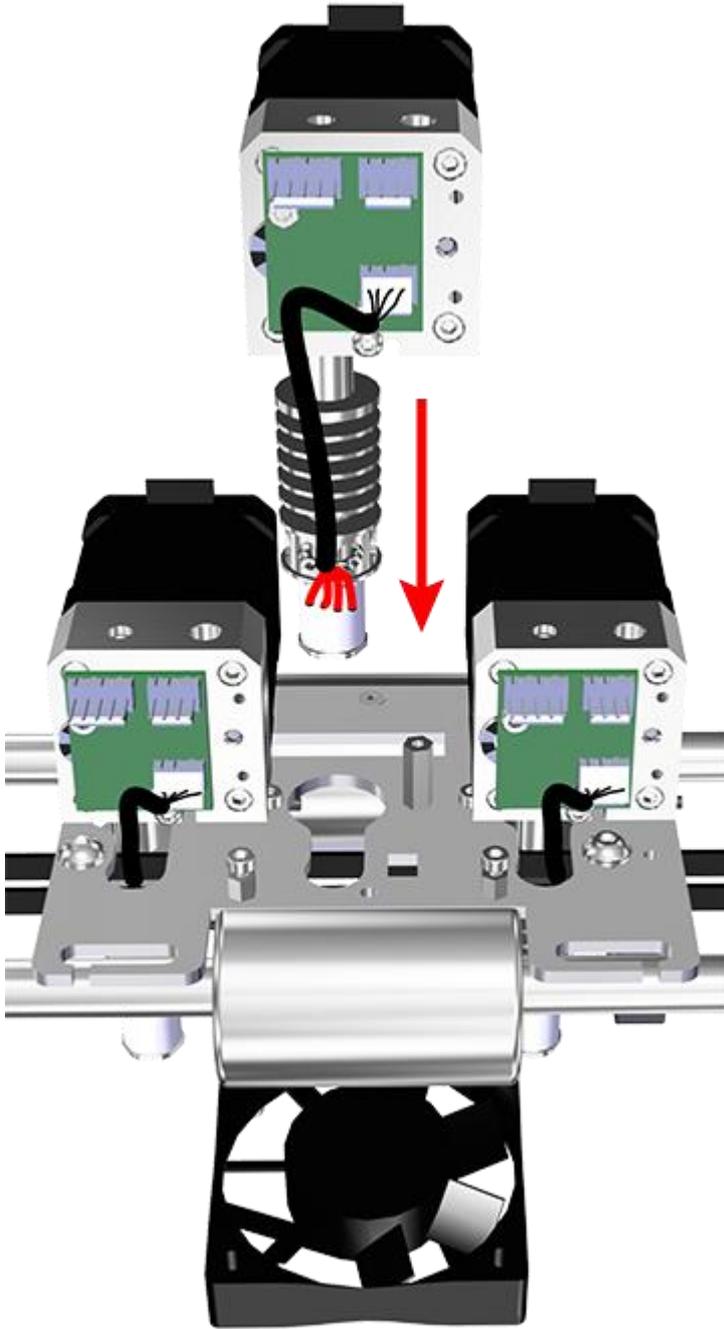
CAUTION: Be careful not to damage the print jet cable connected to junction P-J



NOTE: If necessary, carefully adjust the cable alignment if the extruder assembly



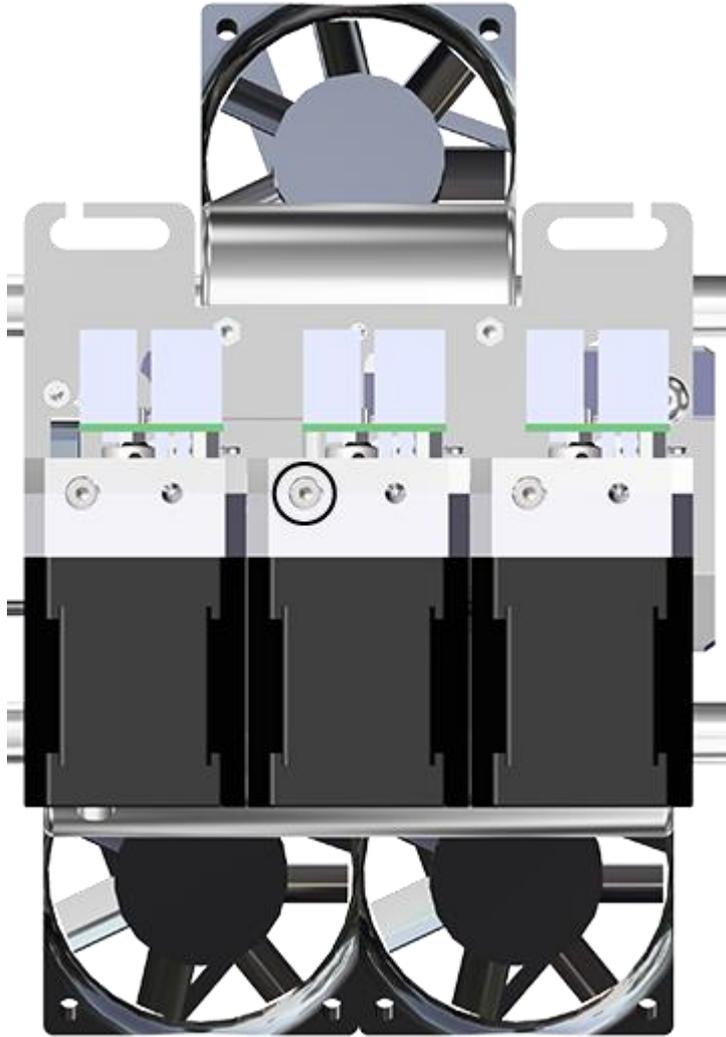
NOTE: For clarity, the main extruder PCB was removed from the illustration. It



31. Using a 2.5 mm hex head driver, tighten the 2.5 mm hex head screw securing the extruder 2 assembly to the carriage plate.



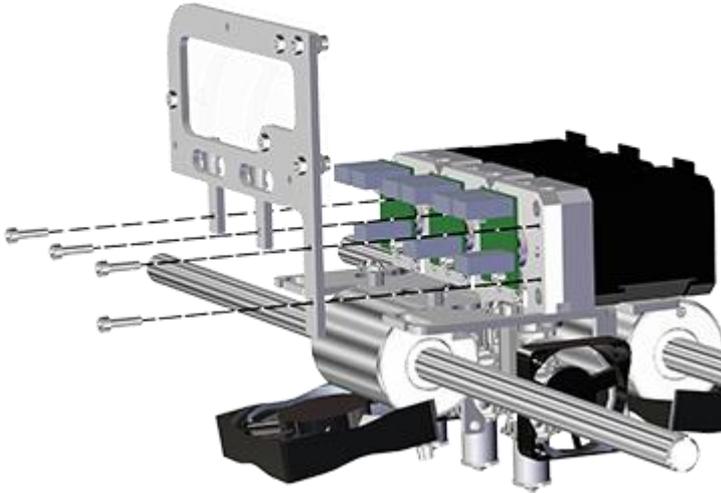
NOTE: For clarity, the main extruder PCB was removed from the illustration. It



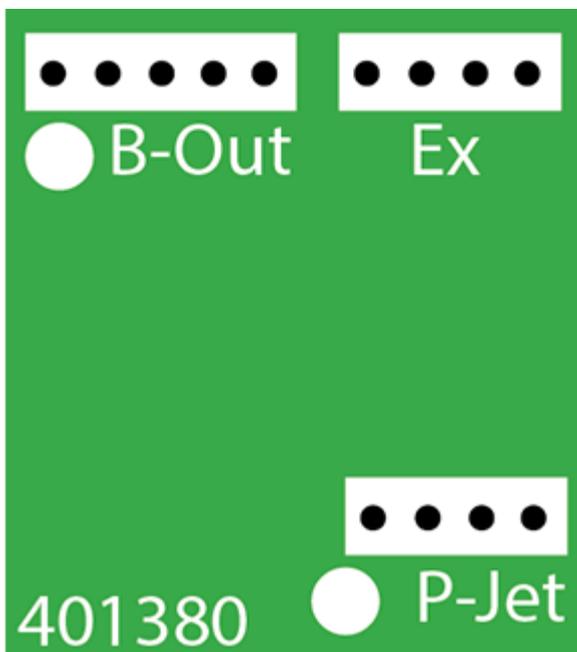
32. Insert the original 2.5 mm hex head screws into the extruder block and secure it to the extruders using a 2.5 mm hex head driver.



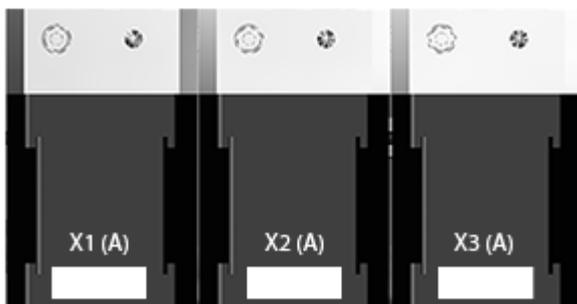
NOTE: For clarity, the main extruder PCB was removed from the illustration. It



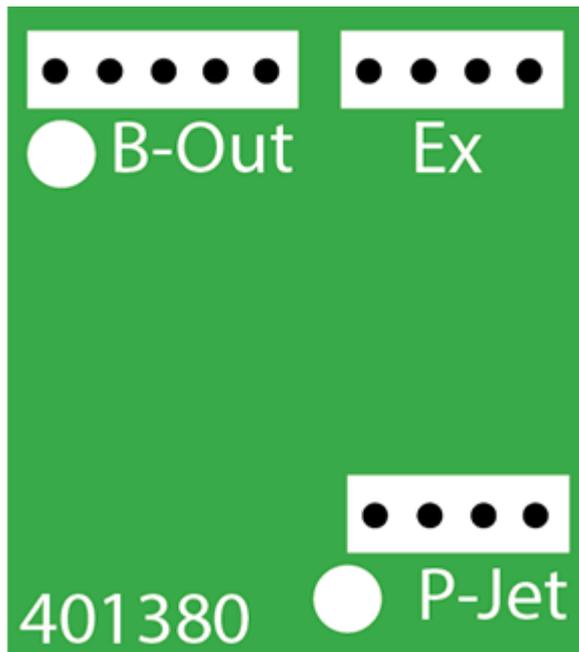
33. Connect cable **X2 (B)** to junction **Ex** of the extruder 2 PCB.



34. Connect cable **X2 (A)** to the junction on the extruder 2 motor.



35. Connect the 5-pin jumper cable to junction **B-Out** of the extruder 2 PCB.



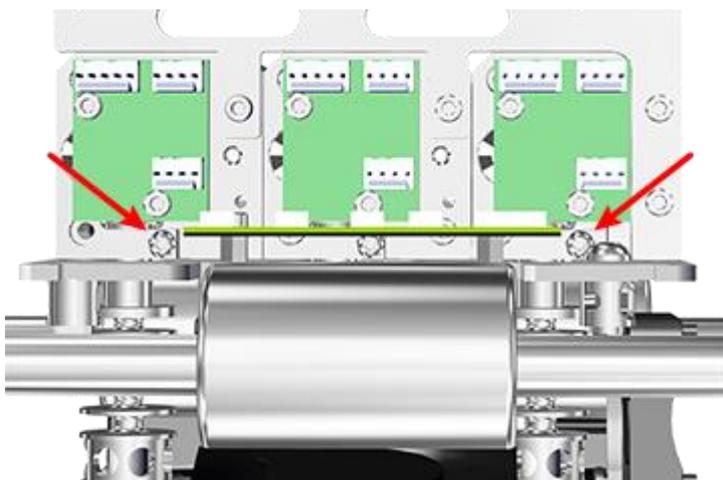
36. For printers with two (2) or three (3) print jets, loosen the T10 torx screws on extruders 1 and 3.



CAUTION: There should be enough access to reach the torx screws using an insulated screwdriver to avoid touching the PCBs.



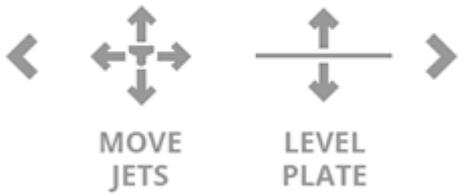
NOTE: Print jet 2 should not need further adjustment.



37. Connect the printer to utility power, turn on the main power switch and then turn on the display.

38. Navigate to the **Print Plate Calibration** screen and select **MOVE JETS**.

Print plate calibration



39. Select the **Z: down arrow** until the display reads -0.50.



NOTE: Visually inspect the gap between the nozzle tip of print jet 2 and the print gap.

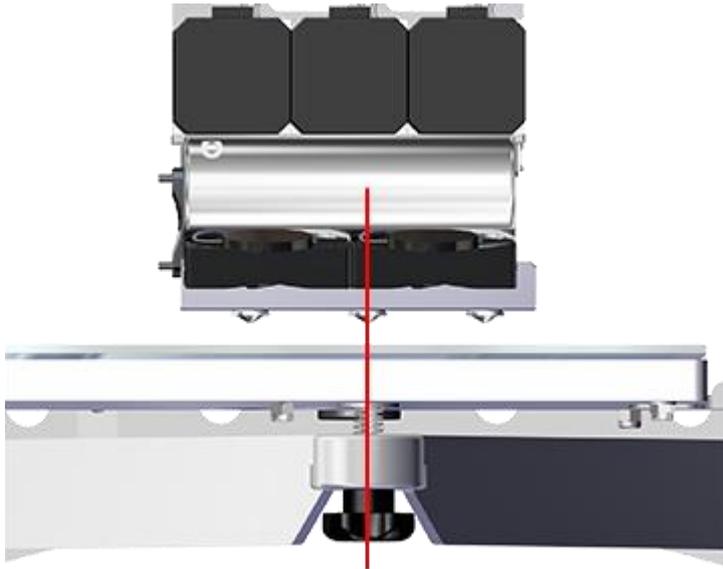
Move print jets



40. Press the X and Y adjustment arrows until print jet 2 is closely aligned above the front print pad adjustment knob.



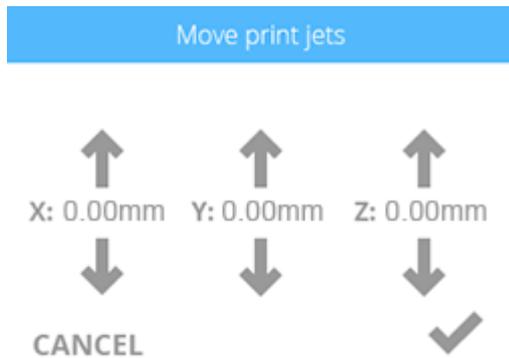
NOTE: The red line in the illustration demonstrates an approximate alignment of



41. Press the **Z: up arrow** until the nozzle of print jet 2 lightly touches the print pad.



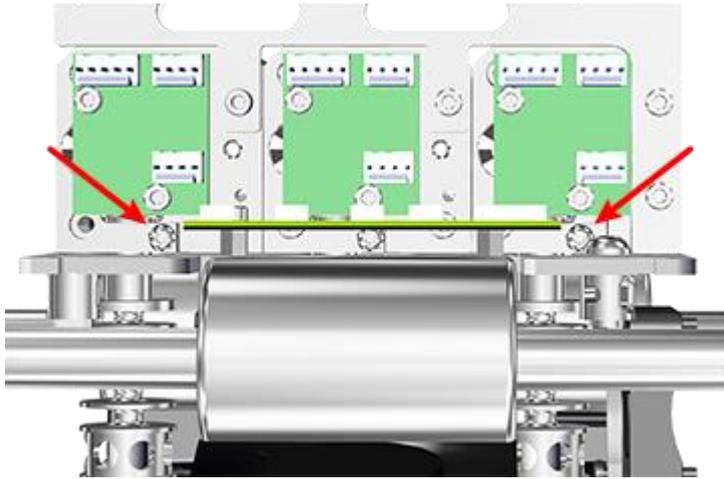
NOTE: If there is still a gap between the nozzle of print jet 2 and the print pad, rotate the front print pad adjustment knob counter-clockwise (from the bottom side).



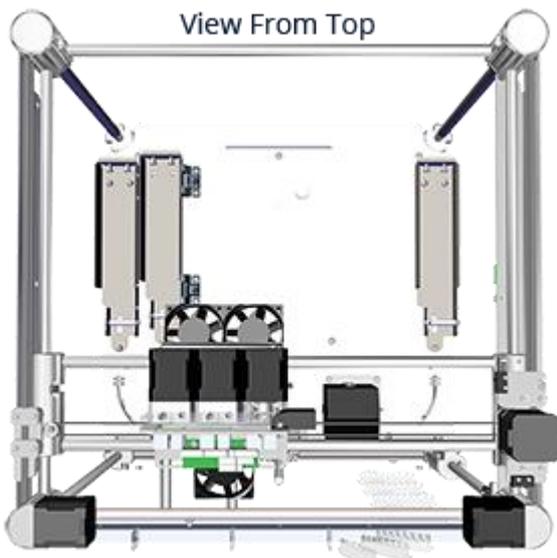
42. Verify that the nozzles of print jet 1 and print jet 3 are also touching the printpad.

43. When all of the print jet nozzles lightly touch the print pad, power off the printer and disconnect it from utility power.

44. Tighten the left and right print jet T10 torx screws using a T10 torx driver.



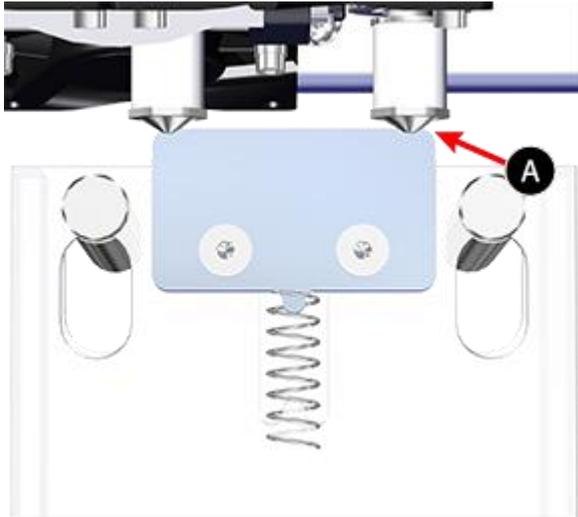
45. Connect the printer to utility power and power on the printer.
46. Ensure the print pad is at its lowest position.
47. Power off the printer and disconnect it from utility power.
48. Holding on to the extruder carriage assembly, gently position it over the jet wiper assembly.



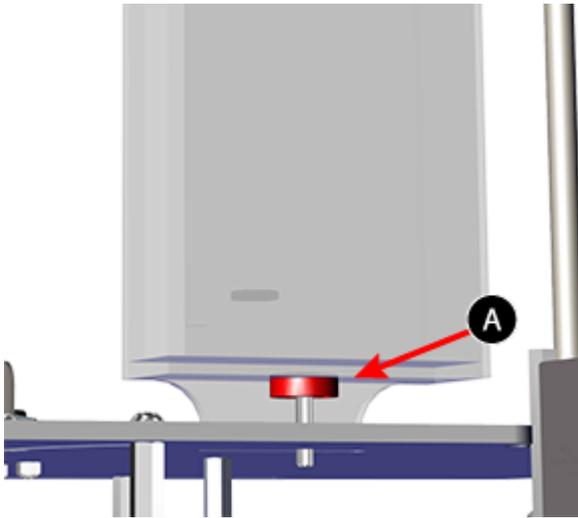
49. Verify the wiper blade meets the tapered portion (A) of the print jet nozzle. If it does, the jet wiper is properly adjusted. Proceed to step 51.



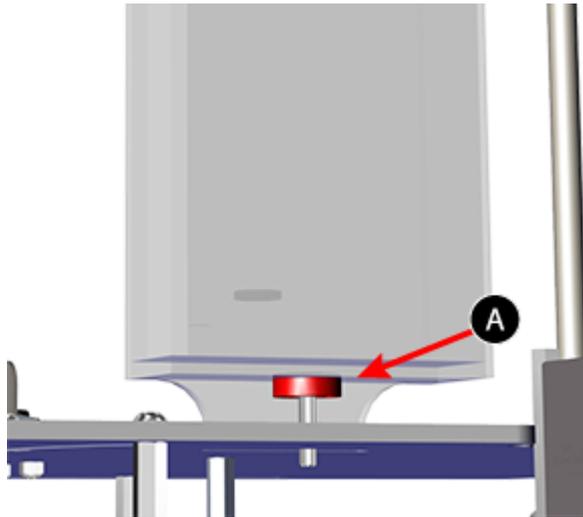
NOTE: If the wiper tip is too high, proceed to the next step. If the wiper tip is too



50. If the wiper blade is too high, remove the jet wiper assembly and turn the adjustment thumbscrew (A) clockwise. Reinstall the jet wiper and return to step 48.



51. If the wiper tip is too low, remove the jet wiper assembly and turn the adjustment thumbscrew (A) counter-clockwise. Reinstall the jet wiper and return to step 48.



52. Once satisfied with the adjustment, connect your printer to utility power and power on the printer.
53. If necessary, repeat steps 1 - 11 to calibrate the print pad.
54. Proceed to the Z-Gap and Level Gap procedure in section 5 of this guide. Once the Z-Gap and Level Gap are correct, refer to section 6 of this guide and calibrate the offset jets.