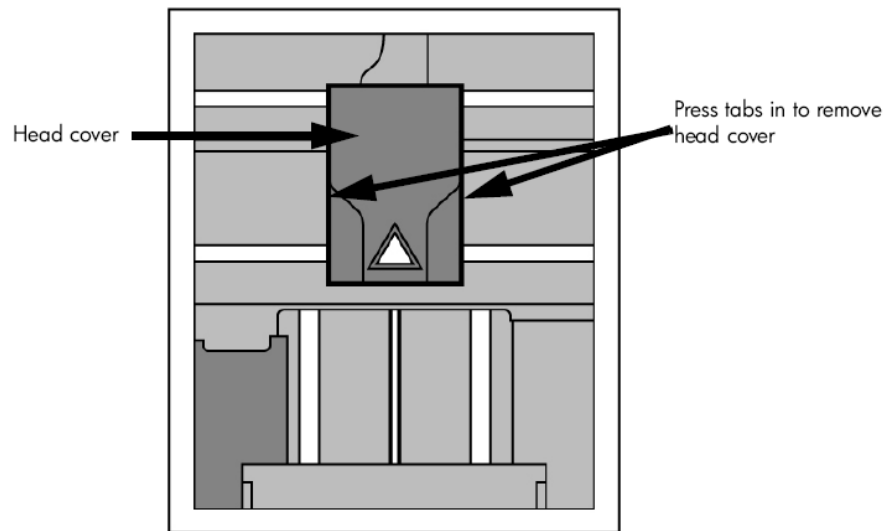


uPrint / uPrint Plus Tip Replacement Procedure

Removing tips:

1. You will need to make sure the printer is powered ON before replacing the extrusion tips.
2. From the display panel press **Maintenance**.
3. Press **Machine**.
4. Press **Tip**.
5. The printer will display **Load Model - Unloading**.
6. After the temperature has stabilized, the printer will display **Tip Maintenance - Replace Tips**. You can now open the printer door and replace the tips - or you can **Cancel** the tip replacement procedure.
7. Remove plastic head cover by squeezing raised pads on sides of cover. See [Figure 39](#)

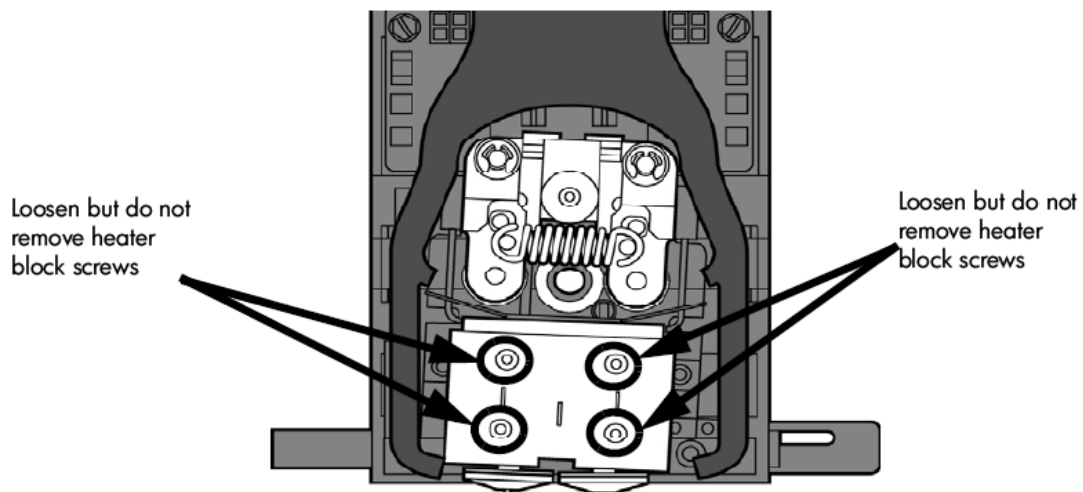
Figure 39: Head cover tab locations



8. Remove tips

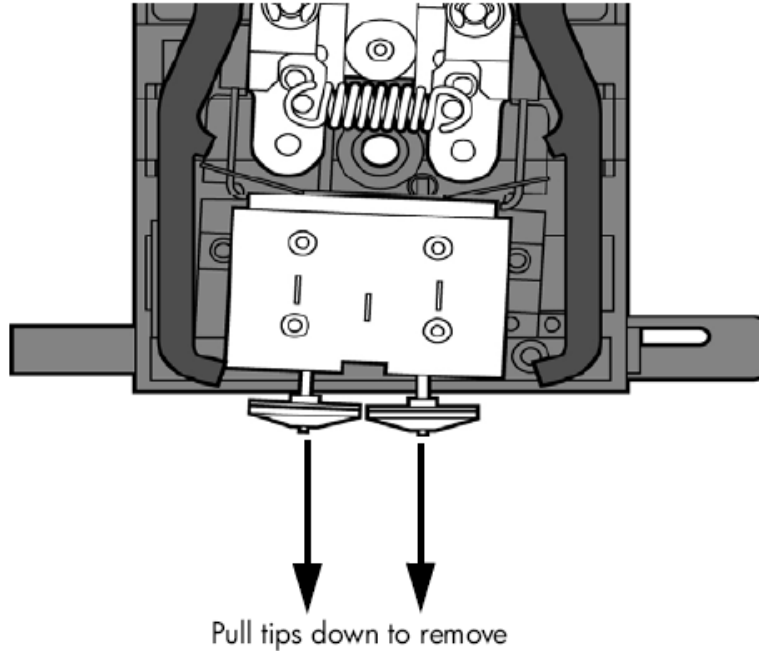
- A. Use 7/64 T-Handle Allen wrench to loosen the heater block screws three to four full turns counterclockwise - or until the top of the screws are flush with the metal cover. **DO NOT** remove the screws entirely. See [Figure 40](#).

Figure 40: Tip Removal



- B. Use needle nose pliers to grasp the stainless steel shield of the tip.
- C. Pull the tip shield toward you, then pull down to remove the tip from the heater block. Discard the used tip. See [Figure 41](#).

Figure 41: Remove the tips

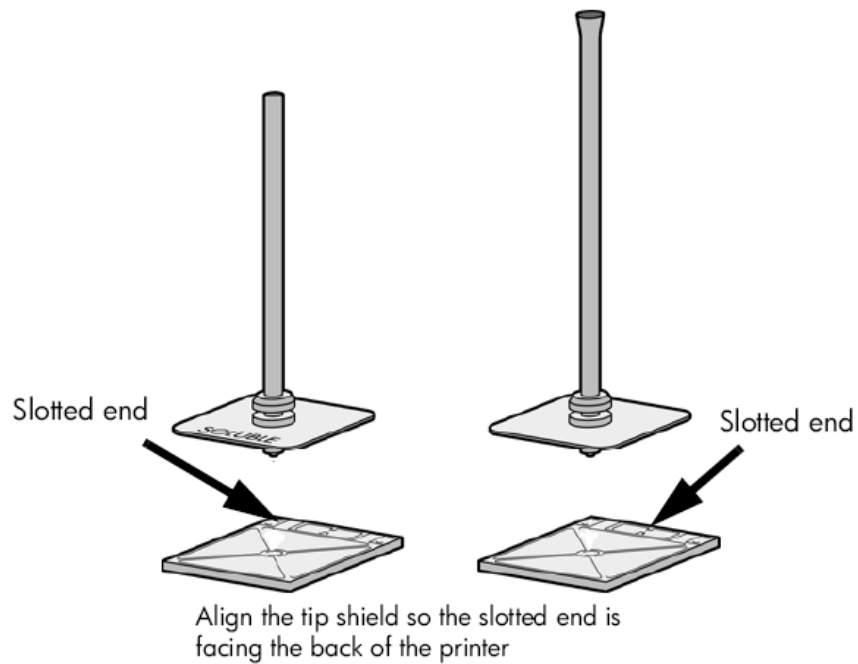


- D. Repeat for second tip if necessary.

Installing tips:

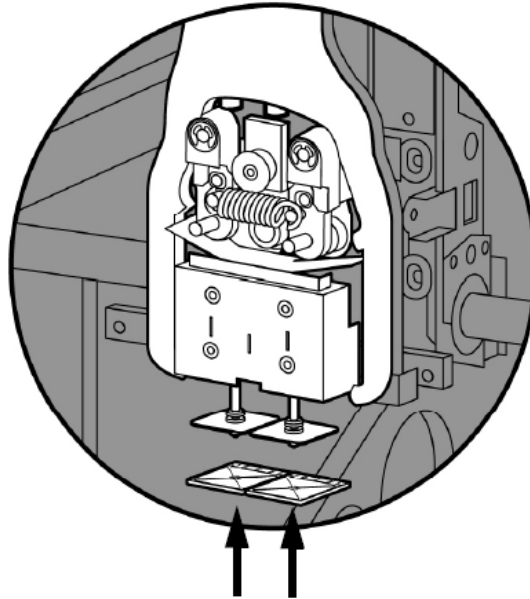
- 1. Place the tip shield on the tip. Be sure to install the proper tip. See [Figure 42](#)

Figure 42: Tip shield alignment



2. With gloved hand, insert the new tip into the heater block. With the slotted side towards the rear of the printer. See [Figure 43](#).

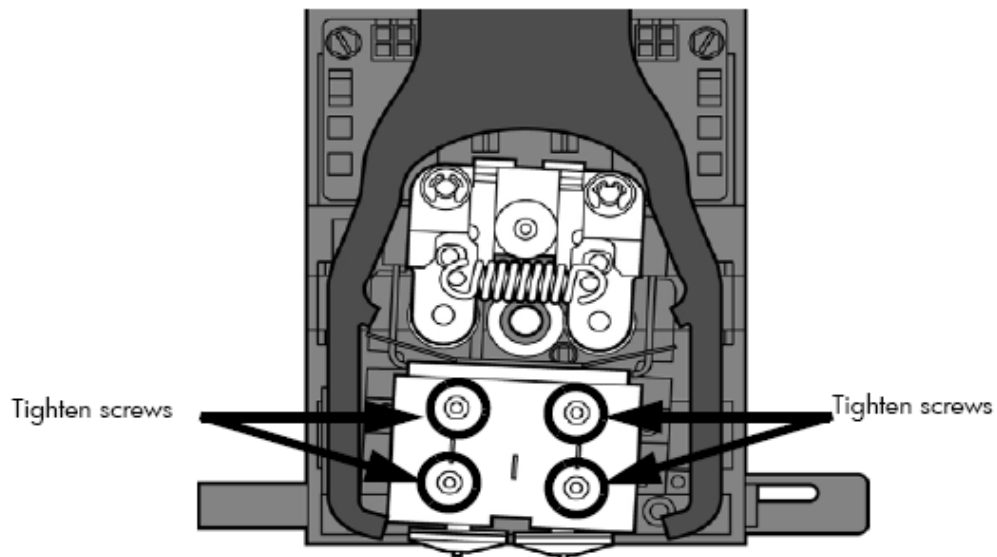
Figure 43: Install the tips



3. Use needle nose pliers to grasp the stainless steel shield of the tip.
4. Pull the tip shield toward you, then lift up to install the tip.
5. Push the tip toward the back of the printer once it is all the way up against the heater block.
6. Verify the tip is fully inserted into the heater block and that the stainless steel shield is aligned. See [Figure 44](#).
7. Use 7/64 T-Handle Allen wrench to firmly tighten the heater block clamp screws. See [Figure 44](#)

Note:
Make sure the tip remains all the way up against the heater block as you tighten the screws.

Figure 44: Tighten heater block clamp screws.



8. Repeat steps 3 through 7 for the other tip if necessary.
9. Replace head cover and close the printer door.

Note:
If the head cover is not replaced the printer may not function properly.

10. The printer will display **Tip Maintenance - Tips Replaced?** - press **Yes** to begin material load.
 - A. The printer will display **Load Model - Replace Both Carriers** (flashing).
 - If you want to replace a material carrier, do so now.
 - If you do NOT want to change a material carrier, you must unlatch and latch the carriers to continue (Push the carrier forward to unlatch, then push it forward again to latch). Because the material 'unloaded' during the tip replacement, the printer is in the material replacement mode. You must unlatch and then latch the carriers to continue. If there is a delay in the unlatch/latch process, the printer will display **Both Carriers Not Replaced Or Invalid**. Select **Retry**, then unlatch and latch the carriers.
 - B. The printer will now begin to load material.
 - C. After material loading is complete the printer will display **Tip Calibration - Install Modeling Base And Build Calibration Part**.

Note:
Make sure a NEW modeling base is installed before starting calibration. Calibration results will be incorrect if a NEW modeling base is not used.

Tip calibration:

Tip replacement requires Tip Calibration.

1. Select **Start Part** (flashing) - the printer will run two calibration parts.

Tighten screws Tighten screws

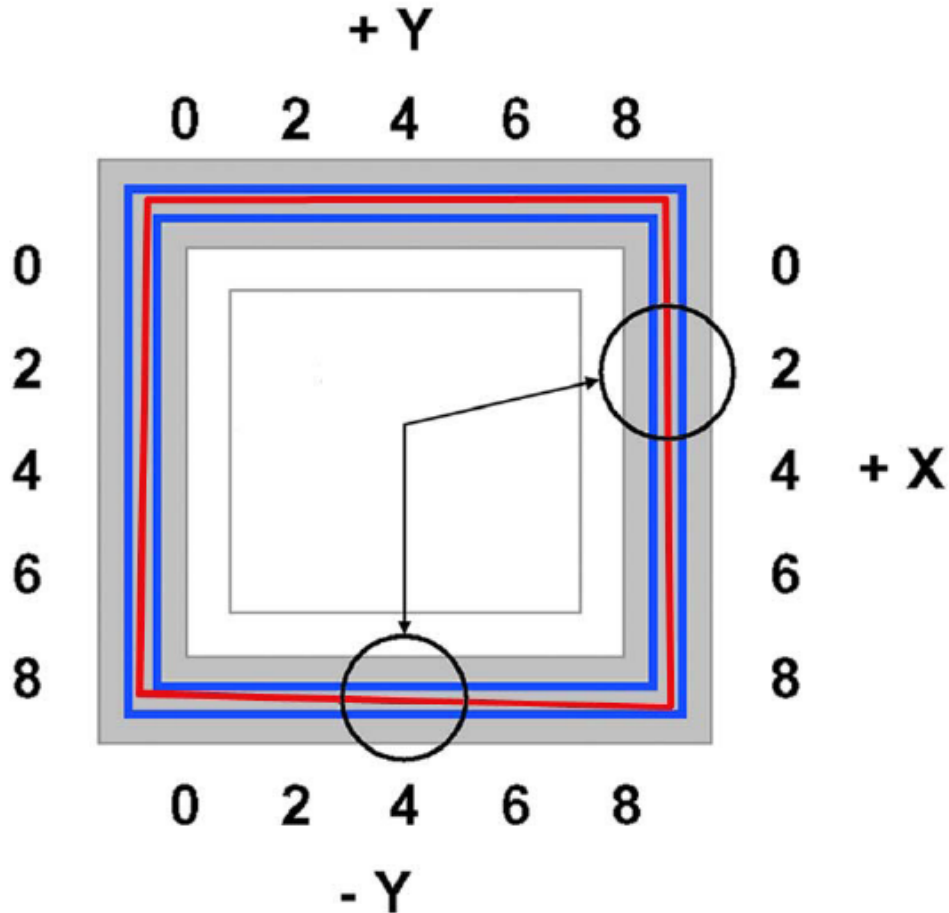
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- The printer will automatically build a Z Calibration part, measure the part and calibrate the Z Axis for tip depth and tip level (approximately 5 minutes). The Z calibration is automatic.
 - The printer will then automatically build an XY Calibration part (approximately 10 minutes). You must inspect the XY Calibration part and calibrate the X and Y axis for tip offset:
2. When the XY Calibration part is complete the printer will display **Remove Part and Select XY Adjustment - X:0, Y:0**
 3. Remove the XY tip calibration part from the printer.
 4. Inspect the part and calibrate the X and Y axis (See [Figure 45](#)).
 - A. Use the magnifier from the Startup kit to view the support road (shown in red).
 - B. Identify the location on the +X **or** -X side of the part where the support road is best centered within the model boundaries (shown in blue).
 - C. Read the number closest to this location. This is the required X Tip Offset adjustment. If the number is on the -X side, a negative offset is required.
 - D. Select **Increment** or **Decrement** to input the X offset adjustment - the value will change in the

upper display window (by default, the printer will be ready to accept the X value).

E. When you are satisfied with your X offset value, **Select Y** and repeat steps A- D to identify and input the required Y Tip Offset adjustment.

Figure 45: Example XY Tip Offset Part.
This example requires an adjustment of $X = + 2$, $Y = - 4$



5. Select **Done** after you have input the X and Y offsets. The printer will return to **Maintenance**. Run the XY calibration a second time to be sure the values changed the offset properly.

6. When finished, press **Done** until back at **Idle**.