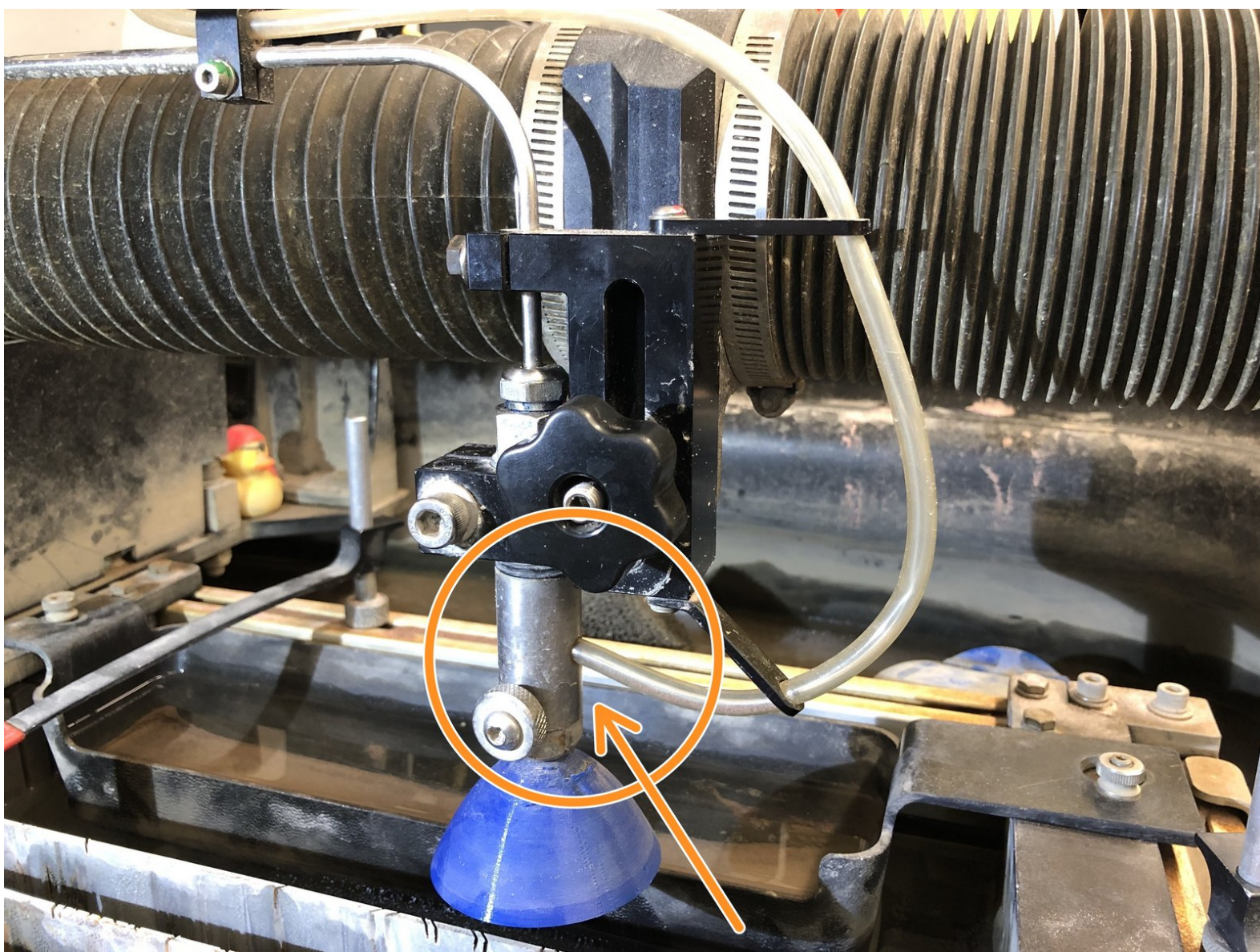




Nozzle Clog

The clogged nozzle forced water up the garnet tub. This guide is how to unclog the nozzle and clear water out of the garnet tube and garnet hopper.

Written By: Kenny Davis Jr



Introduction

How to tell if water jet is clogged

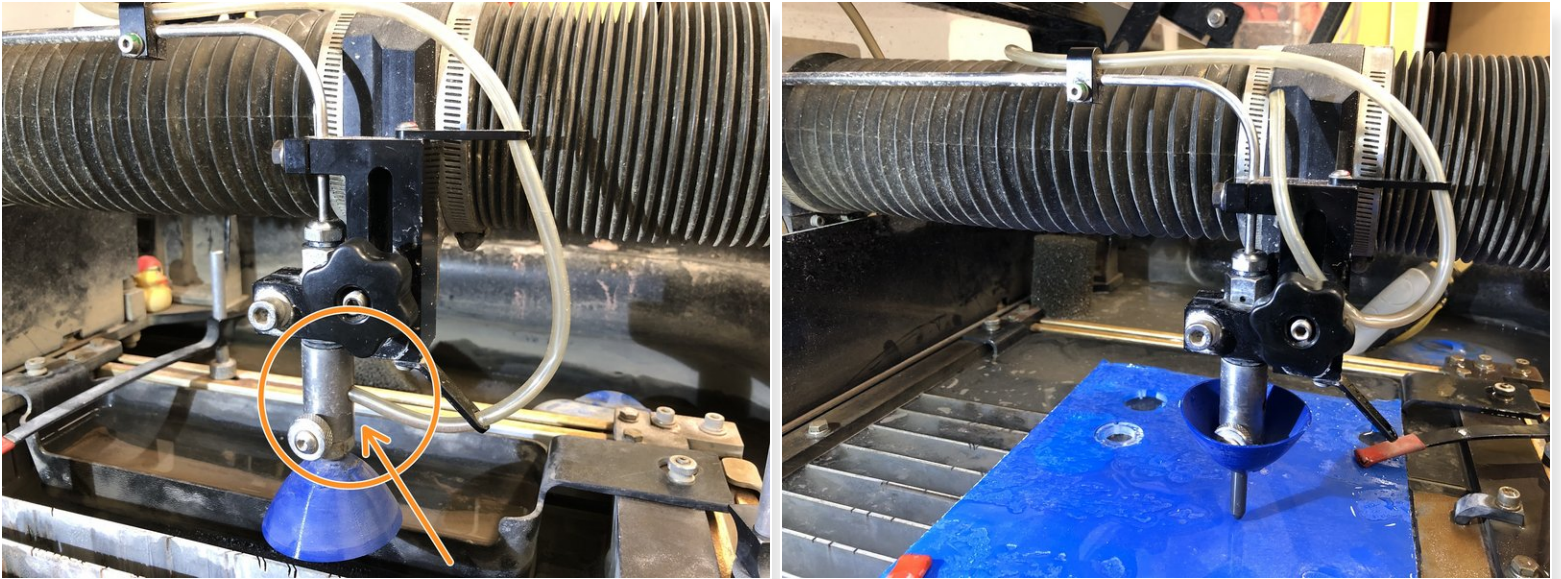
- Water is spraying out of the splash guard
- Water has entered into the tube and is spraying from the cutting head
- The part is not being cut all the way, because the clog has forced water inside the granite tube, and it is no longer using granite while cutting



TOOLS:

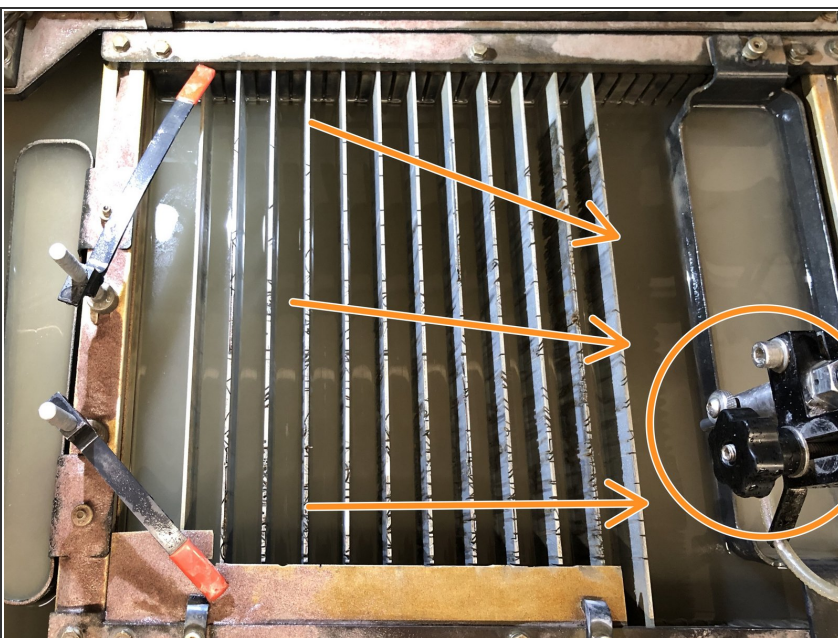
- [Water Hose Nozzle Sprayer](#) (1)
 - [Compressed Air Nozzle](#) (1)
-

Step 1 — Remove Garnet Feed Tube



- Remove garnet feed tube from nozzle assembly.
- Do not let end of tube sit in water, usually roll up as pictured.

Step 2 — Move Cutting Head



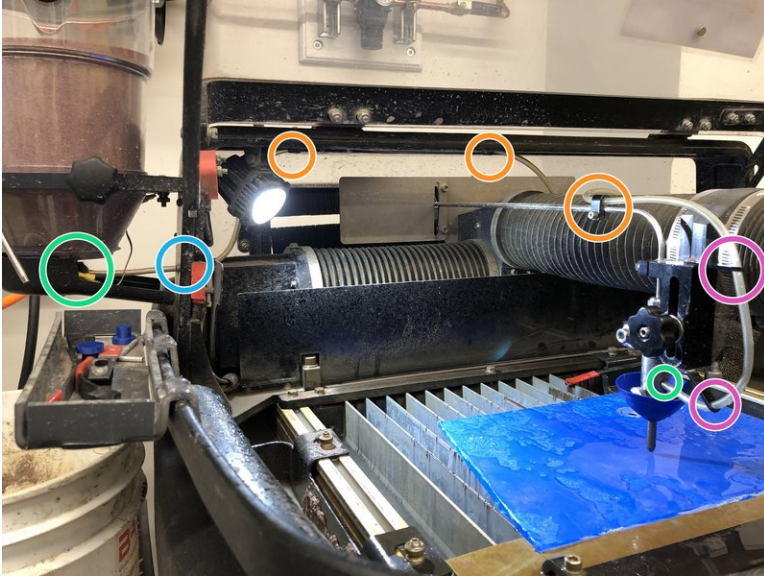
- Move cutting head over open water.
 - The test we conduct later will shoot high pressure water through the nozzle. We must ensure it will not hit any slats.
 - On the laptop in ProtoMAX Make, using the arrow keys*, move the cutting head to the far right.
- i** *Hold shift while using the arrow keys to move the cutting head much faster.

Step 3 — Splash Guard Removal



- Screw off the hopper splash guard nut.
- There will be a washer.
- If needed, give a quick wipedown.

Step 4 — Remove Garnet Tube



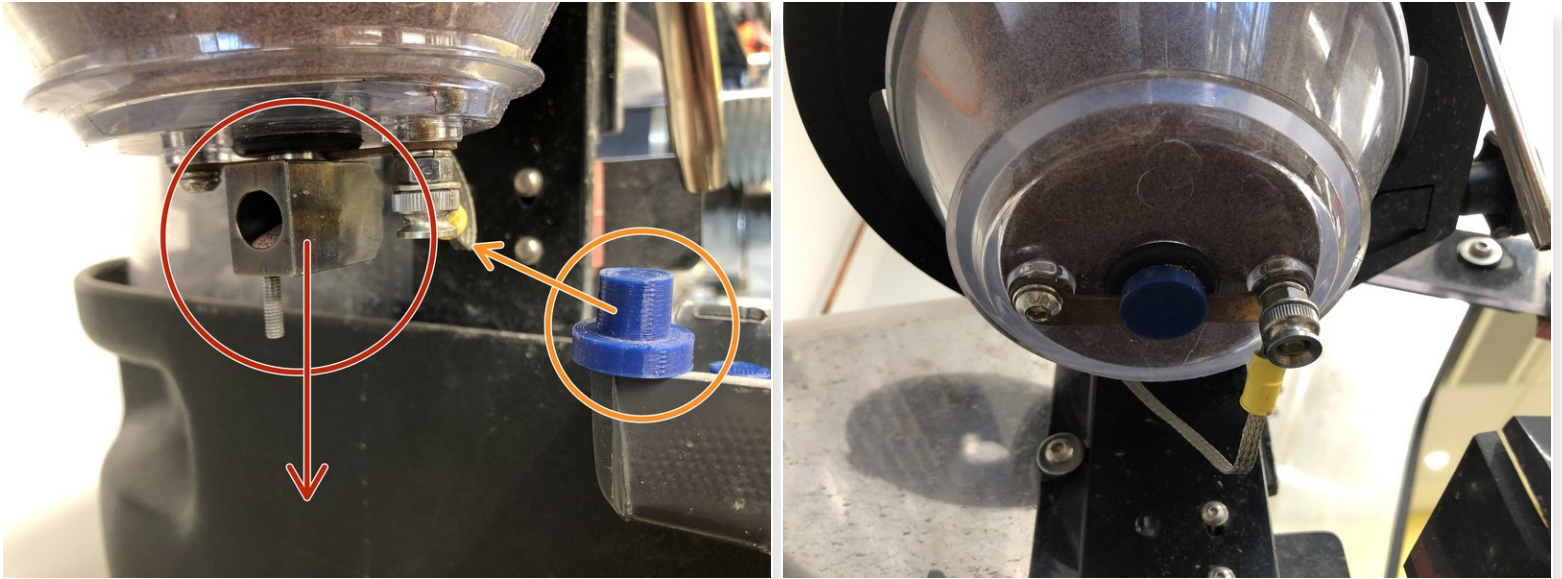
- Every circle in the picture is a spot where the tube is attached.
 - Green Circle - Slid into the grinte block and cutting head, just slides right out
 - Blue Circle - Hole in the side of the water jet that the tube fits in.
 - Purple Circle - Flanges where the tube is connected to the cutting head.
 - Orange Circle - Round connection where tube can slide out.
- Pull tube out of every connection and set aside.

Step 5 — Clean Garnet Tube



- Take garnet tube over to the sink and thoroughly wash out. This will remove an excess garnet.
- ⓘ Turn hose to "Power Wash", and spray down the tube.
- Wipe the outside of the garnet tube with a paper towel.
- Spray the inside of the tub with air, letting the end dangle to ensure no water will get caught up.
- Only finish when you are positive there is no water left (or you will have to repeat this process).

Step 6 — Prepare Abrasive Granite Block



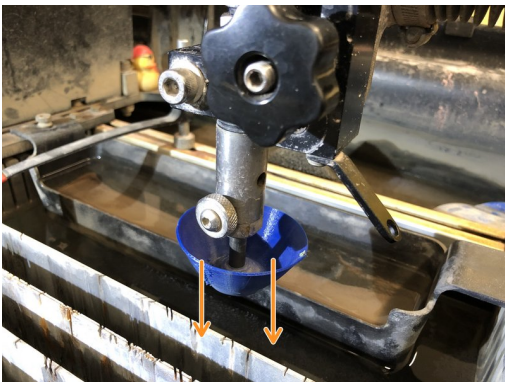
- Make sure to place bad granite bucket under hopper.
- The granite block will simply slide out of the bottom of the hopper.
- Ensure the granite is freely flowing out of the bottom of the hopper.
 - If not flowing: Use a skinny tool (i.e. screwdriver) and stick it inside the bottom of the hopper to free up any stuck granite.
- Replace with blue stopper, which will slide into the same hole the granite block came out of.

Step 7 — Cleaning Abrasive Feed Block



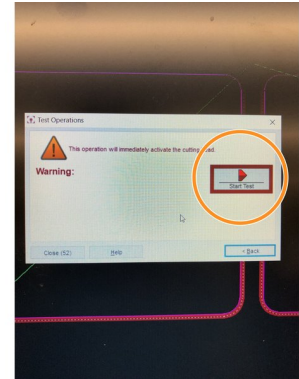
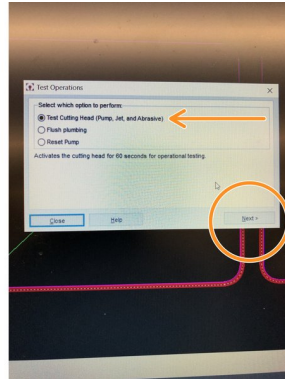
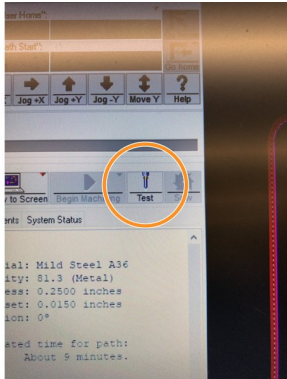
- Unscrew garnet dropping tube from main body of abrasive block.
- Wash abrasive block with water to ensure that no left over garnet is still inside.
- Blow all moisture out of the abrasive block. Only finish when you are positive no water is left (if moisture is left then you will have to repeat this step).

Step 8 — Preparing for Nozzle Test



- Remove blue skirt by simply sliding it off.
- Unscrew bolt and *while holding the nozzle* pull it out from the sprayer.
- Flip nozzle around and insert it back into the sprayer upside-down (like 3rd picture), and re-tighten bolt.

Step 9 — Nozzle Test



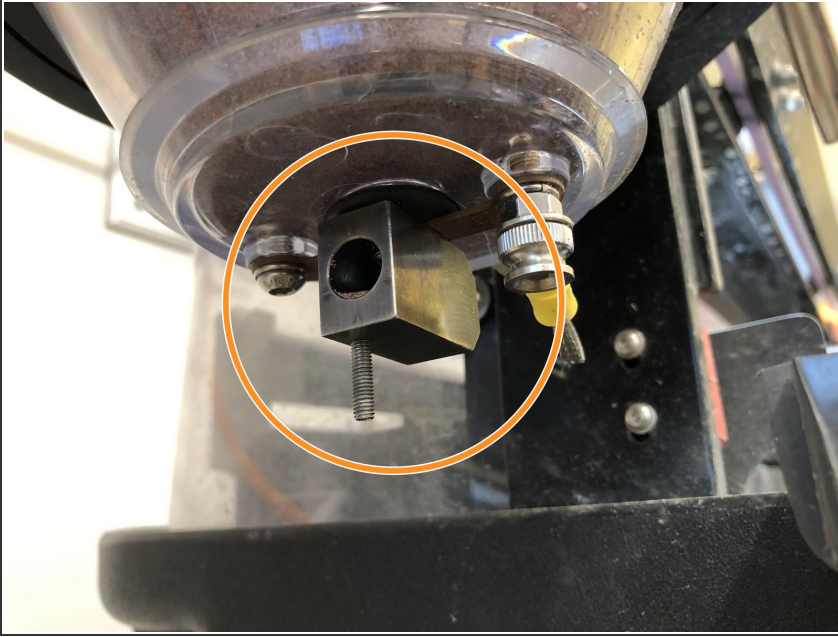
- On ProtoMax Make click test, select "Test Cutting Head" and select next, then click "Start Test".
- Run test anywhere from 5-10 seconds.

Step 10 — Running Nozzle Test



- Be sure to stand clear of the machine as this can look violent.

Step 11 — Replace Abrasive Granite Block



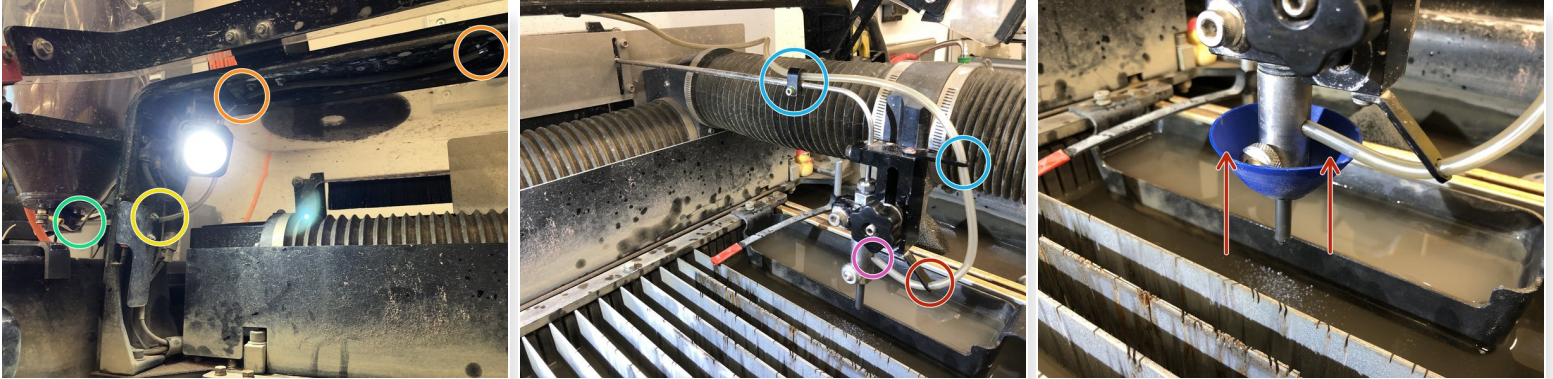
- Remove the temporary blue stopper and replace it with the cleaned, dried, abrasive granite block.
- The granite block should just slide right in just like it was pulled out.

Step 12 — Replace Cover



- Put splash guard back on along with the washer and splash guard nut.

Step 13 — Replace Tubing and Skirt



- Make sure not to get any water inside the tube when completing these steps.

⚠ Note: The slack should be in between the orange and blue circles.

- Start by inserting the tube through the 2 holders (orange circles).
- Then, going behind the light, run the tube through the hole in the side of the waterjet (yellow circle). Then into the end of the abrasive granite block (green circle).
- Next take the other end of the tube and insert it through the cutting head flange holders (blue and red* circles).
 - *Be sure red circle is clear of any bubbles of water.
- Finally, insert the end of the hose into the cutting head (purple circle).
- Slide the skirt back on the nozzle.