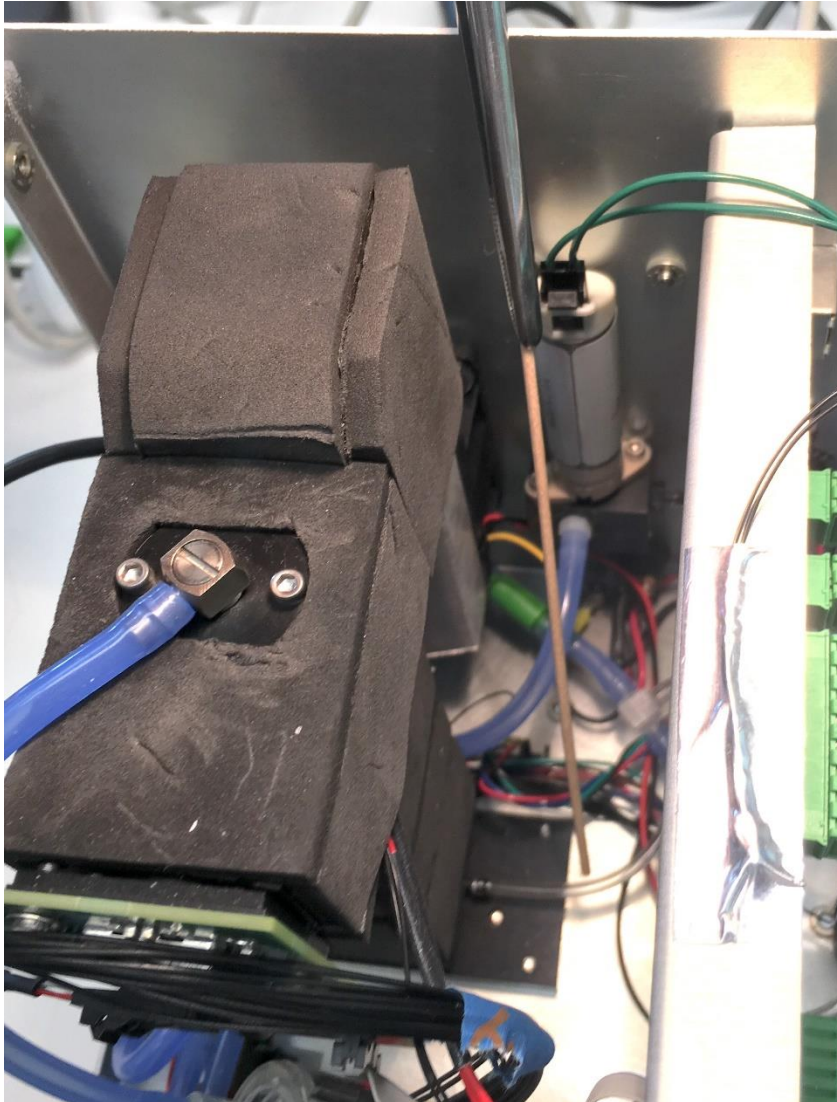


Procedure to test water extraction pump  
MAGIC 200 SN022 through SN050

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1. Remove the lid of the case.
2. Find the thin tygon tube attached to the base of the growth tube (PCB side) leading to the solenoid pump attached to the back panel. This is the water extraction tube.



3. If the tube is not attached to the growth tube, then stop. That needs to be repaired.
4. Power up the unit.
5. Communicate with the unit over the RS-232 or USB port.
6. Turn off the pump by issuing the command "PMP,0"
7. Remove the inlet block and attach the wick wetting fixture, as described in the manual.

8. Put 3 mL of water in a syringe and attach that to the wick fixture tool. It is very important that the air pump remain OFF.
9. With the unit right side up, inject the water and leave the syringe plunger depressed.
10. Once every 60 seconds, the solenoid pump should make a pair of clicks; a loud intake stroke followed one second later by a quieter eject stroke. The GT is filled with water, so each intake click should move a column of water ~20mm further into the tube. And the movement should be sudden; faster than the eye can track.
11. 60 seconds is a long time to wait. If your firmware supports the EJP command you can speed up the process by typing "EJP,4". The pump should start moving water once every 4 seconds.
12. If the water isn't moving, then the solenoid pump needs to be replaced. If the intake is merely sluggish, then allowing water to really fill the pump can bring it back to full operation.
13. When finished testing, pull on the syringe to draw the water back out.
14. Remove the wick wetting tool.
15. Reattach the inlet block.
16. PMP,1
17. EJP,60
18. There might be some gurgling sounds as the liquid water merges with the air pump exhaust.