

Sci-Pump Cleaning and Maintenance

Purpose

If you are experiencing leakage or clogging with the Sci-Pump, this could be a result of worn tubing or corrosion in the tubing. Please follow this guide for troubleshooting and maintenance tips.

Who Should Use This Troubleshooting Guide?

End user

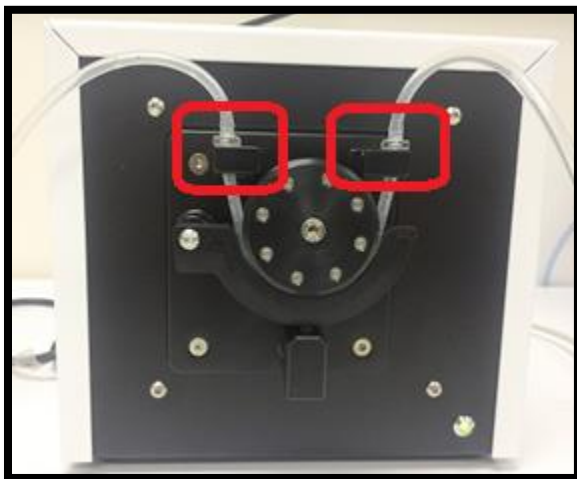
Instructions

1. Worn Tubing Causing Leakage

If your tubing becomes worn, holes will eventually form in the tubing and can cause the medium you are using to leak. When this happens, the medium you are working with will not fill properly into the tubes. We recommend doing a visual check of the tubing weekly. Here are the most common places you will find wearing or holes in the tubing:

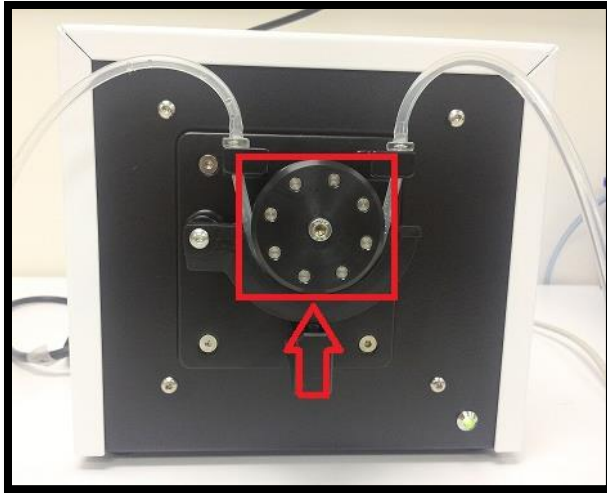
Connectors (or end stops)

The connectors are located on either side at the top of the roller spindle.



Roller Spindle

The Roller Spindle is located on the front and in the center of the pump.



Check the tubing underneath the roller spindle for holes or wearing.

2. Corrosion in Tubing

Over time, the tubing may start to become corroded from repeated use. It does depend on the medium you are working with, however. For example, if you are filling with an aqueous solution, chances are you will not have issues with corrosion. If the medium you are working with is acidic or dries hard, it is possible that your tubing will become corroded.

For the issues stated above, it is necessary to replace the tubing

Here are instructions for removing and replacing the tubing

Removing the Tubing:

1. First, turn off your machine completely and unplug all equipment.
2. Next, remove the black pump tensioner by twisting it either to the right or to the left.
3. Now, slide the connectors (or end stops) out of their slots and remove the tubing.

Now that you have removed the tubing from the Sci-Pump, read the instructions below to assemble and replace the tubing

Replacing the Tubing:

Below you will find the steps for replacing the tubing in your Sci-Pump. ***NOTE* that it is necessary to order new parts in order to replace the tubing. You can either order parts through Scinomix or directly from McMaster.**

Here are a list of the parts along with the part numbers that you will need to order if you choose to order through McMaster:

- Connectors/end stops: McMaster Carr part #5121K121
<http://www.mcmaster.com/#catalog/120/169/=uxrhkr>
- 90 degree fill elbow: McMaster Carr part #5121K902
<http://www.mcmaster.com/#catalog/120/169/=uxrgop>

If you prefer to order through Scinomix, you can contact your account manager to order new supplies:

Jason Lindsey:

jlindsey@scinomix.com

314-298-9800 ext. 203

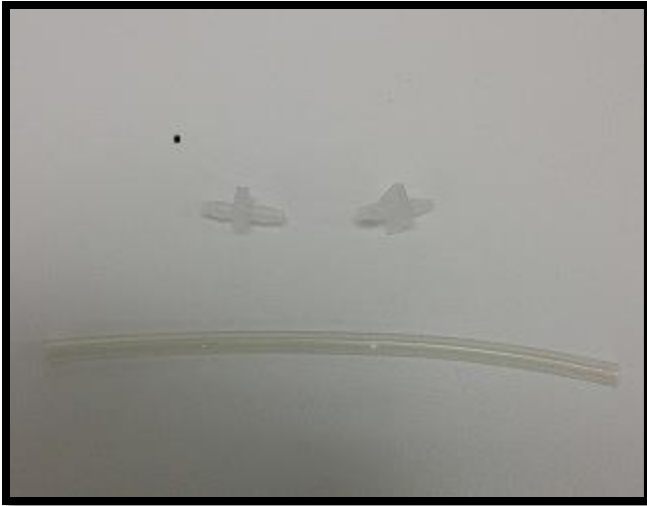
Wes Proffer

wproffer@scinomix.com

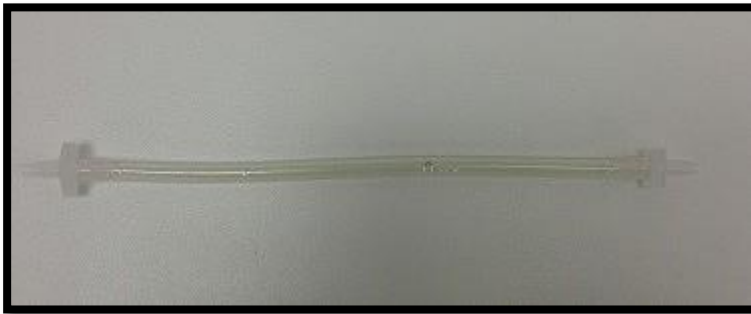
314-298-9800 ext. 211

After you have ordered the appropriate supplies, you can follow the steps below to replace the tubing

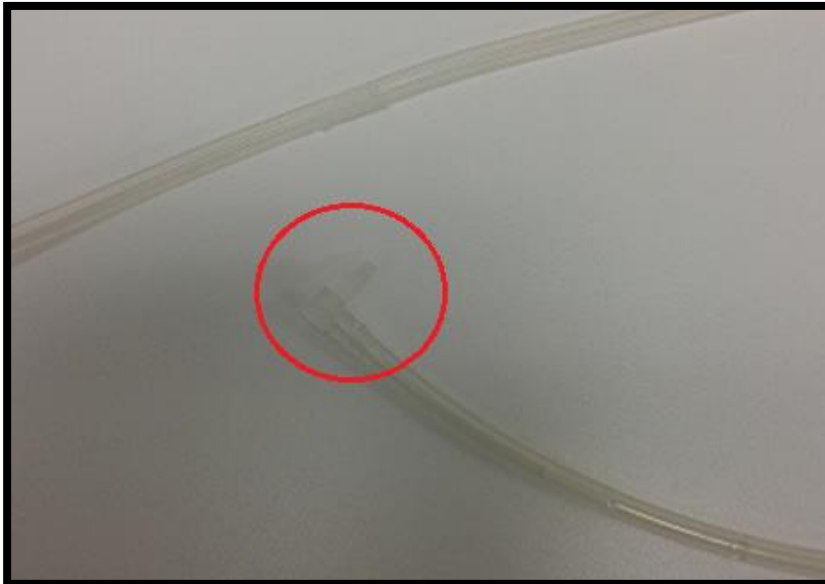
1. Cut a 4.75" length of tubing and use the end stops ([McMaster Carr part #5121K121](#))



2. Attach the end stops to the length of tubing



3. Attach your determined length of tubing to the source, and attach the other end to the fill arm, make sure to include the 90 degree fill elbow ([McMaster part #5121K902](#))



4. On the bottom side of the pump tensioner (that you removed in step #2 under the "Removing the Tubing" section), you will see a ring that can adjust the tension on the tubing. Adjust the ring by using a 2ml Allen wrench. Turn all the way to the bottom until the black knob on the other side is fully extended. Unwind the ring 2 and ½ turns to get the proper tension.



5. Now that you have adjusted the ring on the tensioner, place the tubing in the Sci-Pump.
6. Insert the pump tensioner back into the Sci-Pump and twist either right or left to lock it into place.

3. Corrosion Causing Clogging

If you are filling tubes with an aqueous solution, you most likely will not have to worry about the tubing becoming clogged. However, if you work with a diet solution of some sort, or any substance that dries hard, you may experience frequent clogging in the tubing.

To resolve this issue, it is necessary to clean out the tubing. Below you will find instructions for the proper way to clean the tubing

Cleaning the Tubing:

1. Fill a small bowl with hot water.
2. Place both ends of the tubing in the hot water.
3. Run the pump so that the water cycles through the tubing.
4. Let water cycle until the clogging has stopped.

Preventative Maintenance

Here are a couple simple “checks” and cleaning tips you can do weekly to catch a problem early.

1. Check tubing at the connectors and under the roller spindle for holes and wearing. If you notice the tubing is starting to become worn, it may be beneficial for you to replace the tubing before holes form and cause leaking.
2. Clean the tubing by flushing it with hot water. Refer to the steps above for “Cleaning the Tubing” to properly clean the tubing.

Version Number	Change	Date Effective	Approved by:
A	New	8/2015	