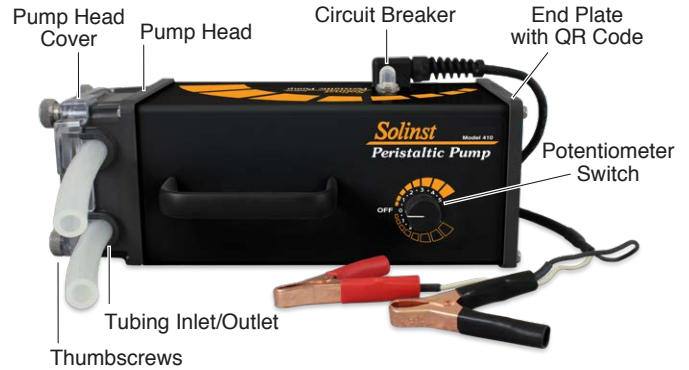


General

1. Are you following the **Peristaltic Pump Operating Instructions**? (QR code on End Plate).
2. Have any product modifications been made?
3. Ensure that the 12V battery is fully charged.
4. What is the product serial number shown on the backside cover?
5. Remove the Pump Head Cover and the silicone tubing (see Peristaltic Operating Instructions).
6. Any physical damage anywhere?
7. Use new silicone tubing. Typical lifespan is 40 to 80 hours of use. Avoid long-term storage of tubing within the Pump Head.



Mk4 Peristaltic Pump (#112981)

Verify the Power Supply

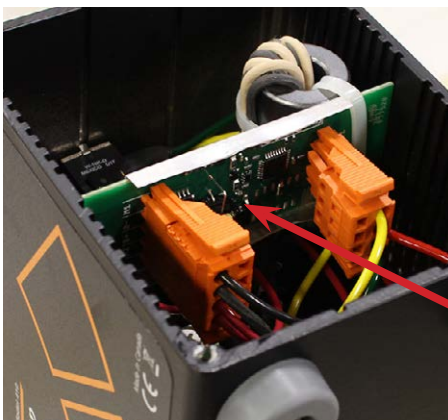
1. Ensure the alligator clips are connected correctly to the 12V battery. Black clip is negative. Red clip is positive.
2. Has the Circuit Breaker tripped (reset button popped out on side of pump)? If so, simply press the reset button to regain operation of the pump.
3. Ensure the wires to each alligator clip are not broken/damaged. Slide back the red and black plastic insulating covers and look for any damage.

Verify the Motor

Remove the silicone tubing from the Pump Head and leave the Pump Head Cover off. Remove the End Plate and slide out the Control Board as far as possible. DO NOT connect to the battery (no power). Unplug the 4-pin orange coloured connector from the Control Board. Insert the leads from the Multimeter into the outer two connector holes on the 4-pin plug. Now, rapidly turn the Head Roller. That should create a voltage measurement on the Multimeter – the faster you turn the Head Roller by-hand, the greater the voltage created/displayed.

Verify the Control Board

Remove the silicone tubing from the Pump Head and reinstall Pump Head Cover. Remove the End Plate and slide out the Control Board as far as possible. Connect to a 12V battery. Turn the Potentiometer Switch to ON. The “Status” label should display a small green light. A red light opposite the “Error” label indicates a Control Board issue.



Error	Status	●
Control Board is OK		
Error	Status	●
Control Board Not OK		



...continued overleaf

Peristaltic Pump Service & Repair Guide

Verify the Potentiometer

Remove the silicone tubing from the Pump Head and reinstall Pump Head Cover. Remove the End Plate and slide out the Control Board as far as possible. Connect to a 12V battery. Turn the Potentiometer Switch to ON. You should measure 5 volts between the red and green wires on the orange coloured 3-pin plug from the Potentiometer, when plugged into the Control Board.



Motor Gear Inspection and Lubrication

If you think that your Peristaltic Pump has been operated for an extended period of time, and/or subject to high heat conditions without sufficient cool down time, then you should inspect the gears on the Pump Motor.

(Use the **Motor Gear Inspection and Lubrication Instructions.**)

History

Four Model 410 Peristaltic Pump Generations:

1. Mk1 (pt# 104028) prior to September 2003, had on/off push button, direction and purge/sample switch, internal fuse. Repair parts are not available through Solinst.
2. Mk2 (pt# #106990) had on/off toggle, direction and purge/sample switch, external fuse. Repair parts are not available through Solinst.
3. Mk3 (pt# 108592) introduced June 14, 2007, has rotating all function Potentiometer. Mk3 parts are available through Solinst, however, are not interchangeable with previous generations.
4. Mk4 (pt#112981) current as of April 2018, has rotating all function Potentiometer. Mk4 parts are available through Solinst, they are interchangeable with the Mk3.

Note: See separate replacement instructions for the Pump Head (Drive Head), Control Board, Potentiometer, Motor, Battery Clips, etc.

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