

Troubleshooting Flow Bench Hoses

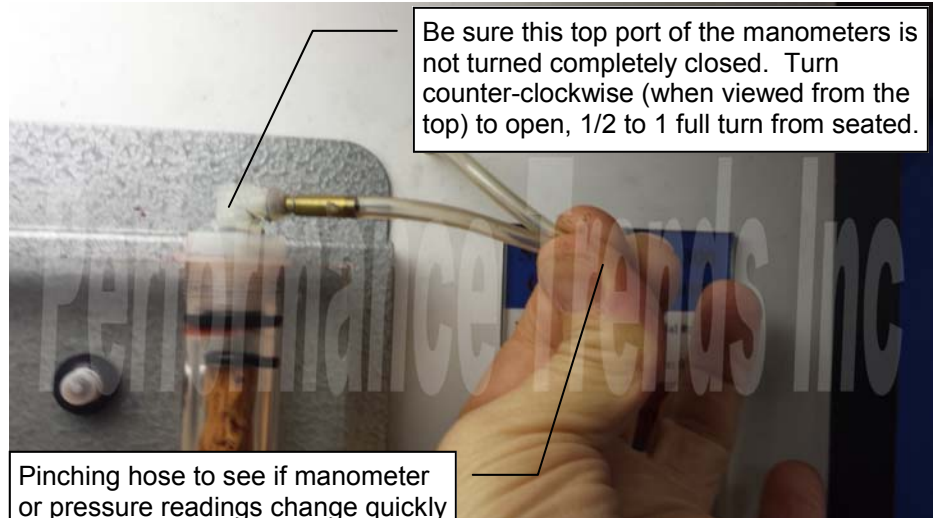
A common problem with flow benches are leaks or blockages on the hoses measuring the pressures. These can be investigated using some simple techniques. These work best when the bench uses fluid manometers or electronics which respond very quickly. A SuperFlow FlowCom can work, but the response is typically quite slow, especially when being read by a computer.

Make sure the ports on the manometers are open. The ports on Dwyer manometers can be screwed down into the acrylic block to close the manometer. This makes it better for shipment because fluid can not leak out of the manometer. However, the manometer will not read correctly until you open these ports about 1 turn. In the manometer in the picture, you will likely have to remove the brass tube insert to turn the threaded plug with the vacuum port to open the manometer.

Check for leaks. One easy to check for leaks is to tightly pinch the hoses as they enter the manometer 1 at a time. See picture above, right. If you pinch a hose and the manometer reading changes very quickly, there is likely a leak between the manometer fluid and where you pinched. A small and/or slow change over several seconds is normal.

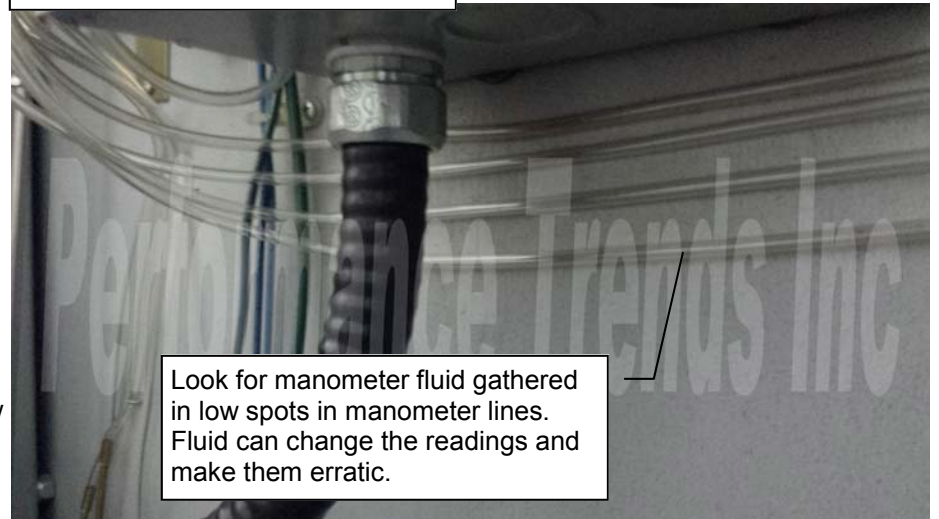
Check for fluid in the lines. Remove the back panel from your flow bench to see if manometer fluid is setting in any of the lines. NOTE: On SuperFlow 110, 120 or 260, this back board must seal well, so be careful to understand how the back is sealed. On larger SuperFlow flow benches, this back panel does not seal, but does open up high voltage connections. Be careful if you expose these high voltage components **Unplug power before opening it up.**

Check low spots in the lines to see if manometer fluid has accumulated and has partially blocked of any hoses. If yes, this could cause erratic and non-repeatable readings. Drain this fluid out of the lines and reassemble.

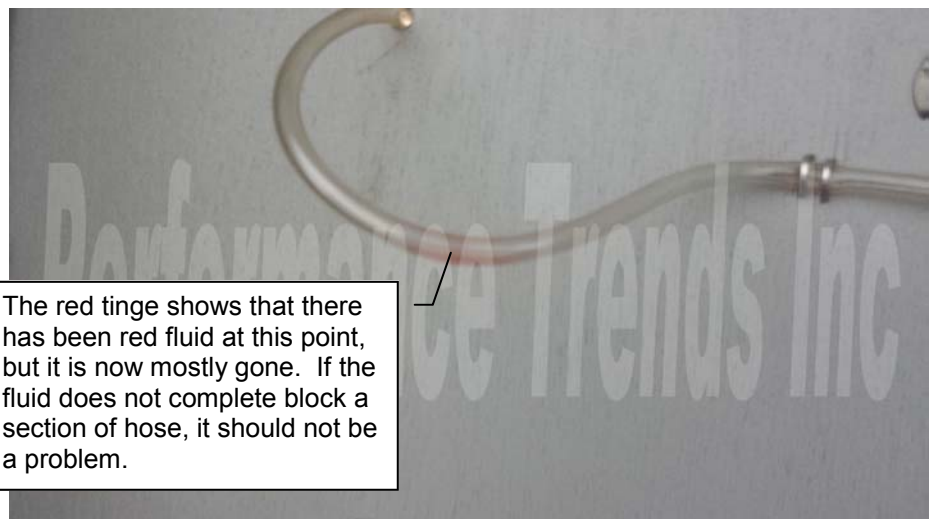


Be sure this top port of the manometers is not turned completely closed. Turn counter-clockwise (when viewed from the top) to open, 1/2 to 1 full turn from seated.

Pinching hose to see if manometer or pressure readings change quickly to check for leaks.



Look for manometer fluid gathered in low spots in manometer lines. Fluid can change the readings and make them erratic.



The red tinge shows that there has been red fluid at this point, but it is now mostly gone. If the fluid does not complete block a section of hose, it should not be a problem.