

Technical Support Bulletin 2009-03	WTS-LV Exhaust Tube	October 2, 2009
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Alert Level: **IMPORTANT**

Instrument: WTS-LV

Software Versions: N/A

Subject: Installing Optional Flow Meter Exhaust Tube

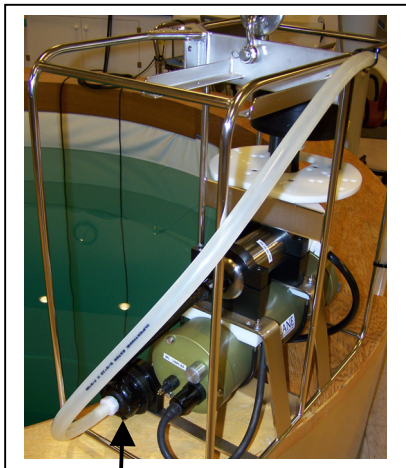
Summary: Attaching tubing to the flow meter exhaust can help keep water in the system after priming and prevent air bubbles from forming that could damage the filter.

Potential Negative Effects: Sample collection or filter function can be affected if air bubbles form under the filter prior to deployment.

Technical Details: Trapped air can form bubbles on the underside of the filter holder if surface water enters the filter holder prior to deployment. If these air bubbles ‘push up’ under the filter, the filter may be damaged.

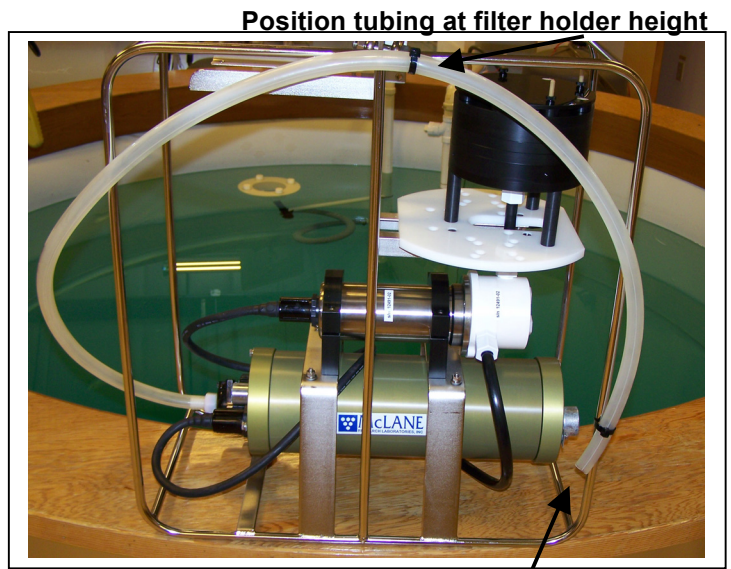
Solution: The WTS-LV toolkit includes a length of large ID tubing that can be connected to the flow meter exhaust. When the system is primed, the tubing fills with water. This tubing helps keep water in the system after priming which minimizes the formation of air bubbles.

Important - Precisely installing and positioning this tubing is critical to minimize flow resistance and prevent obstruction of the filter flow path. Follow the photos and steps in this Technical Support Bulletin to correctly install the flow meter tubing. Do not add elbows, tees, check valves or other plumbing.



Attach tubing to flow meter exhaust

Figure 1: Attach tubing to flow meter



Open end below the filter holder to avoid short-circuit filtering

Figure 2: Attach tubing at filter holder height



Note - The WTS-LV must ship without the flow meter exhaust tubing installed. The tubing is included in the toolkit and if used, should be installed before priming the system. Complete the following steps to attach the tubing, prime the system and load the filter(s).

1. Attach the tubing to the barbed fitting on the flow meter exhaust as shown in Figure 1.
2. Place the open end of the tubing in a bucket of neutral water (such as distilled water or clean sea water).
3. From the Main Menu select Manual Operation. Using <2> Run pump: reverse, pump in reverse until water fills the system and tubing and flows out of the filter holder.
4. Using a zip tie (provided in the toolkit) attach the top of the tubing, matching the height of the filter holder as shown in Figure 2.
5. Attach the end of the tubing to the WTS-LV frame below the filter holder as shown in Figure 2.

Some water will run out from the bottom of the tubing. The water level in the tubing will then equalize to match the water level in the filter holder and remain in the tubing.

6. Follow 'Priming the Pump' steps in Chapter 5 of the WTS-LV User Manual to install the filter in the filter holder.

The water will remain in the system plumbing until the pump turns on for the deployment. The first few seconds of pumping will clear out the neutral water.