



Our **Standard Service** has become very popular with many of our customers. Many Utility Plants take advantage of this service during their scheduled maintenance shutdowns, as a part of their QA/QC and Periodic Maintenance practices. Stack Testing companies also utilize our service to ensure their sample probes are ready for their CEMS test audits.

Our **Standard Service** is the most common, and includes an overall external cleaning of the probe-tip and probe lines, visual inspection of the unit for any defects; cracks or galled threads, and leak-tight testing for the probe lines, housing, and calibration line at tip weld. Our shop then tests for aspirator performance to then complete the initial evaluation of the unit, and determine the appropriate means of repair (if needed) and best method of internal cleaning based on our testing. Special attention is paid to vacuum performance, flow dynamics (unwanted flow oscillations and/or air-flow turbulence). Internal flushing of the aspirator and all internal paths is done with use of special cleaning solutions as part of the service. Special chemical soaks and flush cycles are performed to remove internal blockage or buildup from the aspirator as needed, to bring efficiency back up to factory specs. After the cleaning/chemical solutions have been neutralized and removed from the aspirator, it is then flushed with acetone & dried with purge air. As a final step to ensure that any residual moisture is removed, heated purge-air is run through the aspirator. After the final testing has been completed, the test data is recorded and a *Performance Certificate* accompanies the serviced instruments. If the diluting probe-tip (in-situ) had been sent in with the compact inline filter on the dilution air-line, we will have replaced the filter cartridge. Same is true for the filter cap assembly, we will have replaced the coarse inlet screen as well. We also apply anti-seize compound to the probe tip threads, filter cap threads and internal threads of the front mantle ... hence, it is good to send in those extra parts!



Other Services offered:

We also offer **Repair Services**. These services include of a variety of instrument repairs which are not covered by the *Standard Service*. These repairs may be as basic as probe line repairs (solder joint repairs) to resolve line leakage, or more involved repairs such as a re-weld of the pump housing. As the *Standard Service* is normally a fixed price and is the most common service we conduct, the *Repair Services* are more specialized and prices are therefore based on the specific repair/s needed at time of instrument evaluation. Regardless of the level of repair that may ultimately be needed (if needed), the probe pump section should always include the *Standard Service* (above). This will ensure that the pump is clean, within proper specs, and documented.

Please know that we are always happy to evaluate your instruments and submit a formal quotation for any additional parts needed or repairs beyond the *Standard Service* before proceeding.

Critical Orifice Service includes cleaning, testing and fine-filter replacement. Keep in mind that if the piece is cracked or chipped at the stem tip, we may be able to repair this. If there is blockage, we have a very high success rate in getting them cleared out. If we receive the part and ultimately determine that it is unserviceable, there is no charge for the service and you may decide to purchase a new one at that time. Once serviced, A *Performance Certificate* is also provided to you, noting the nominal flow rate verses the actual tested flow rate after the service. Always remember to remove orifice from probe-tip before shipping, in most instances they WILL break during transit.

Please send us an email if you have any questions or wish to send us instruments for evaluation and service. An RA# will be issued at that time, along with shipping instructions.



TEST & PERFORMANCE CERTIFICATE [EXAMPLE]

Date: 6/25/2004 Customer: ***** Customer PO# *****

Dilution Probe Model: 797.302IB / DP-049-A Serial Number: 12345

Table 1	Table 2	Table 3
DA bar (psi)	Flow liters/min	Vacuum -bar inHg
2 (29)	4.0	- 0.54 15.95
3 (43+)	5.5	- 0.66 19.49
4 (58)	7.0	- 0.69 20.38
5 (72+)	8.6	- 0.64 18.90
6 (87)	10.1	- 0.56 16.54

Remarks:

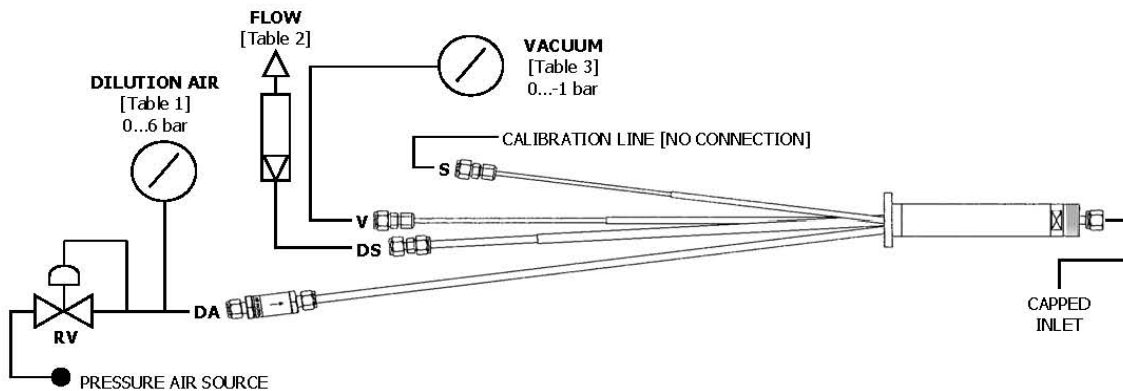
Unit received with major blockage to nozzle and venturi, needed extended cleaning.

Service Performed:

ASI Standard Service [Code: SRVC-PRB-A]

Test procedure for Dilution Probe aspirator:

The data noted above reflects the performance of the aspirator after service. Pressurized air is supplied to DA probe inlet (DA = Dilution Air) Pressure set with RV to the values listed in Table 1. The air flow through the pump is measured with a mass flow meter, calibrated in liters/min. The measured flow is listed in Table 2. The partial vacuum generated by the aspirator is listed in Table 3. The connector for the critical orifice is capped off during this test which is performed at room temperature. Sample suction of the probe is zero during this test because of the stop plug.



"S" = SERVICE LINE (CALIBRATION LINE)
 "V" = VACUUM LINE
 "DS" = DILUTED SAMPLE LINE
 "DA" = DILUTION AIR LINE
 "RV" = REDUCING VALVE (REGULATOR)

Pressure Conversions

bar x 29.53 = inHg (inch of mercury (32° F))
 bar x 401.463 = inH₂O (inch of water (39.2° F))
 bar x 14.5038 = lbf/in² (pound force per square inch)



TEST & PERFORMANCE CERTIFICATE [EXAMPLE]

Date: 6/25/2004 Customer: *****
Cust. PO#: 12345

P/N:	S/N	Table 1. Nom. Flow ml/min	Table 2. Meas. Flow ml/min
01. 2126.047	-	50 ml/min	51.0 ml/min
02. CO-STK1-050ML	-	50 ml/min	51.3 ml/min
03. 2126.064	-	20 ml/min	20.7 ml/min
04. CO-STK1-020ML	-	20 ml/min	22.4 ml/min
05.		-	
06.		-	
07.		-	
08.		-	
09.		-	
10.		-	

Remarks:

Service Performed:

ASI Standard Service [Code: SRVC-CO-A]

Test procedure for Critical Orifice:

The data noted above reflects the performance of the critical orifice after service. The nominal flow of the critical orifice is noted in Table 1. A pump is used to generate a partial vacuum at or below 0.47 bar gauge pressure to maintain sonic air flow through the orifice. The outlet air flow is measured with a mass flow meter, calibrated in ml/min. The measured flow is listed in Table 2. This test is performed at room temperature.

