TELEDYNE
INSTRUMENTS
Advanced Pollution Instrumentation
A Teledyne Technologies Company
9480 Carroll Park Drive, San Diego, CA 92121-5201
Phone (858) 657-9800 Fax: (858) 657-9818 Toll Free 1800 324-5190
E-mail: api-customerservice@teledyne.com http://www.teledyne-api.com

Service Note

05-021A
31 August, 2005

Setting the Pressure Warning in a M108A (6200A) analyzer

I. PURPOSE:

It has been found that if the sample pressure is increased in the analyzer it will cause the dilution flow to reverse itself and go out of the analyzer, cutting off the O2 supply that is needed to convert TRS to SO2. This procedure states how to test and set your Sample Pressure warning to trigger before this event will happen.

II. TOOLS:

9/16th Wrench

III. PARTS:

No parts needed

The electronics used in T-API analyzers are sensitive to Electrostatic Discharge (ESD). When working on any T-API device, please ensure that you are properly grounded prior to handling or touching any electronic circuitry in the analyzers! For more information on how to protect sensitive components from ESD during handling, please contact T-API customer service and ask for the ESD Service note number 03-022A.

IV. PROCEDURE:

1.) Power the analyzer on for 15minutes letting it warm up.

2.) Perform a Pressure calibration on the analyzer. To do this, disconnect the pump in the analyzer. Either electrically or pneumatically. Also make sure you have the sample inlet and the exhaust disconnected. Adjust R1 on the Flow/pressure board until the pressure reading on the front panel reads the ambient pressure as read with a barometer. The Barometer needs to read actual pressure and not be referenced to STP.

3.) Hook the pump back up, keeping the Sample inlet and exhaust disconnected, and watch the sample pressure. It should drop to around 25inHg. Record this reading. Now add 1" to that number. This will be your Sample Pressure High alarm point. In a standard analyzer the pressure reading on the front panel should not change between when the sample line is hooked up to when it is disconnected, if it changes more than 0.2"Hg you are either pressurizing or pulling a vacuum on the sample. See note below.

***NOTE* The sample gas going to the analyzer must vent to atmospheric pressure. If there is any kind of restriction or back pressure in the vent, or sample stream, the analyzer will not work properly. You must make sure that the sample is vented properly.**

4.) Next on the front panel of the analyzer press <SETUP><MORE><VARS> enter 929 for the password <ENTER>. Now scroll through the vars menu until you reach SAMP_PRESS_SET. It will be near the 70th Var. Press EDIT once you have found this variable. You will now want to keep the SET and the LO the same value but you will want to change the HI to the number you calculated in step 3 and press <ENTER> and then exit back to the main menu.

5.) Connect the sample inlet and the exhaust back up to the analyzer. You will now watch the sample pressure and make sure that it doesn't increase more the 1" of Hg. If it does you will need to lower the pressure at the rear panel of the analyzer by adjusting your system.

6.) The pressure alarm will now come on if the sample pressure on the front of the analyzer is 1" above ambient or higher. The flow will normally swap directions at around 1.5"-2" of pressure. This should give warning before this happens.