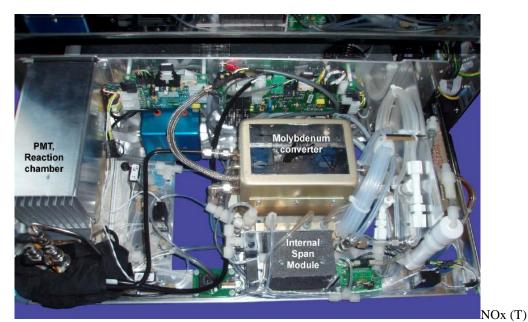
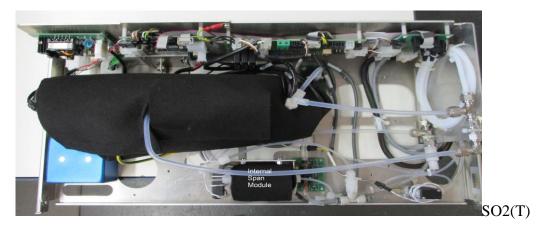
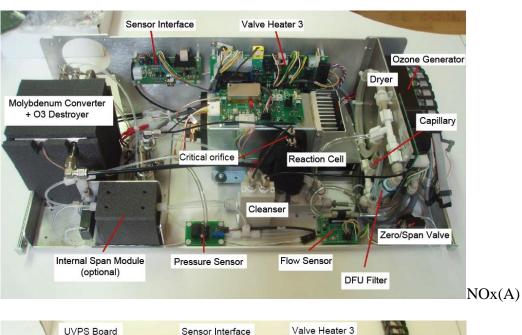
## NOx module (A) – Replacing the permeation tube

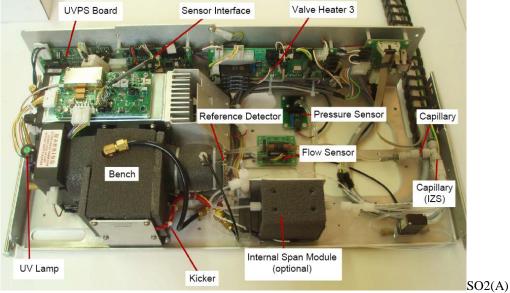
- 1- Tools you need
  - A medium Phillips screwdriver
- 2- Turn off and unplug the airpointer. Slide out the module from which you want to remove the permeation tube. Only NOx, SO2, and H2S modules can have permeation tubes
- 3- Locate the permeation oven in the module (labelled "Internal Span Module" in the pictures below)











4- Unscrew the 4 screws holding the cover of the permeation oven

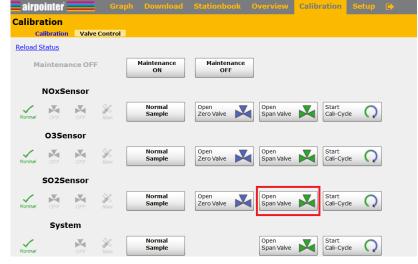




5- Remove the old permeation tube from the permeation oven and install the new one instead. Avoid touching the transparent membrane with bare fingers. Instead, hold it by the smaller end and put it large end first into the oven. Some tubes may have other shapes (e-g: perfectly cylindrical). In this case, hold it by the colored plastic, avoiding touching the transparent membrane



- 6- Screw back the 4 screws holding the cover
- 7- Once the airpointer is turned back on, wait at least 4 hours for the temperature to stabilize before performing a span check
- 8- Calibrate the airpointer with an external standard cylinder, and then in Calibration/Valve Control, open the span valve of the desired module to determine the setpoints for the internal function control



9- Write the obtained concentration in Setup/Configuration/SO2 (or NOx or H2S)/, under "Calibration Setpoints", in the field "SetpointSpan\_SO2 (or NOx or H2S), and click "Save..."

0)	airpointer Graph Download Stationbook Overview Calibration Setup	•
<ul> <li>Rules &amp; Actions</li> <li>System Info</li> <li>System Maintenance</li> <li>Extras</li> <li>Configuration</li> <li>Configuration</li> <li>Configuration</li> <li>System Parameters</li> <li>Calibration Parameters</li> <li>Hardware</li> <li>No Sensor</li> <li>CO Sensor</li> <li>Co Sensor</li> <li>Q Calculation and Timing</li> <li>Custings</li> <li>Alt Settings</li> <li>Time Settings</li> <li>Farameters</li> <li>Spameters</li> <li>Spameters</li> <li>Additional –</li> <li>Parameters</li> <li>Spameters</li> <li>Sandards</li> <li>Cintog</li> <li>Lintog</li> <li>Lintog</li> </ul>	IndependentSpanTiming_S02[on/off] independend timing for span check CaliLintervalSpanS02[Inours] 0 disables automatic span calibration check CaliNextAutoSpanStarIS02[datettime] next.span calibration cycle starts at: Save	On ● Off           23         [0 ≤ value ≤ 744]           2009 ▽ - Jan ▽ - 1 ▽ 00 ▽ : 15 ▽ = 2009-01-01 00:15:00
	Calibration Setpoints	
	SetpointSpan_SO2 [ppb] setpointCaclulation of automatic function check SetpointCaro_SO2 [ppb] setpointCaro_SO2 [ppb] setpointCaro_sO2 [ppb]	400
	Timing           19, ShutterDuration [sec]           ShutterDuration (API Bench)           19, ShutterInterval (API Bench)           19, Souther Statistics [sec]           Shutter Interval (API Bench)           19, SoutherStatistics [sec]           Shutter Interval (API Bench)           Save	30     [10 ≤ value ≤ 300]       300     [60 ≤ value ≤ 3600]       20     [0 ≤ value ≤ 300]
	Control Loops	
	I 9, 502_iLampSet [Hz] Setpont for controlloop I 9, 502_iChangeFactor Change = (Dela - DeltaTimeShould) * ChangeFactor	3000         [2800 ≤ value ≤ 4500]           0.002
	I% 502_iChangeMax [%] maximum change allowed per control step I% 502_iDeltaInterval to calculate delta he value k samoles back will be used	2 2 [0 ≤ value ≤ 100]
Communication     User Administration	IA SO2_iDeltaTimeFactor DetaTimeShodd := Deta/DetaTimeFactor E4_SO2_iDeltaTimeFactor E4_SO2_iDeltaTimeFactor	20