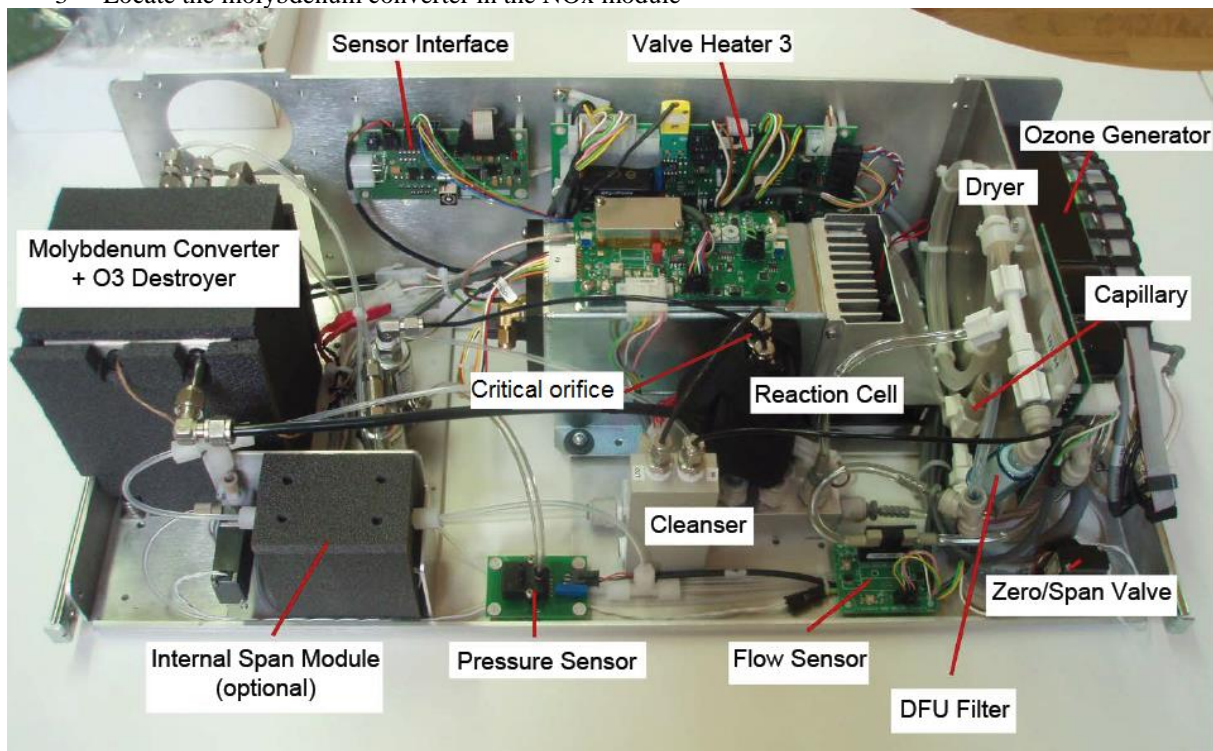


## NOx module (A) – Replacing molybdenum converter

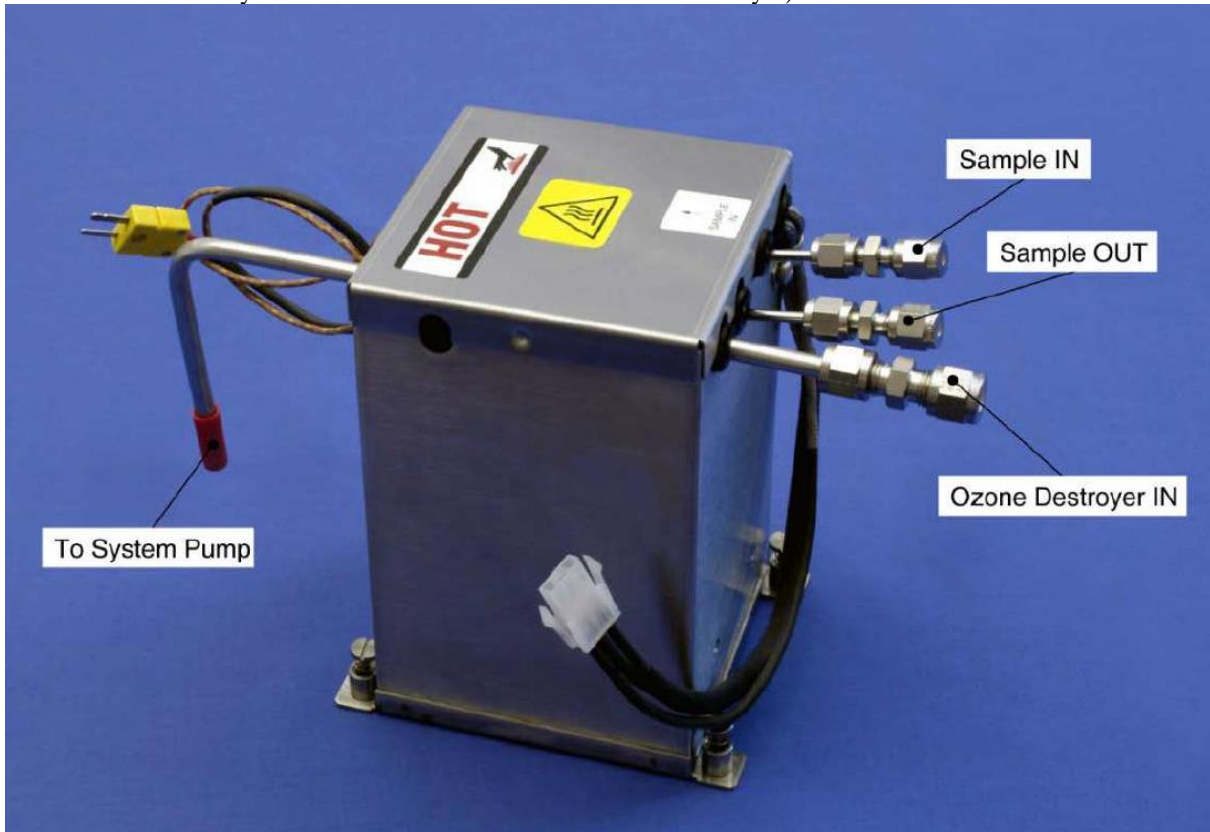
Over time, the molybdenum in the NO<sub>2</sub> converter oxidizes and loses its original capacity of converting NO<sub>2</sub> into NO, eventually resulting in a decreased converter efficiency (CE). Even though we recommend changing the converter if CE drops below 95%, the analyzer's firmware allows to adjust minor deviations of the CE from 1.000 and enables to report the true concentrations of NO<sub>2</sub> and NO<sub>x</sub>. Converter efficiency is stored in the instrument's memory as a decimal fraction that is multiplied with the NO<sub>2</sub> and NO<sub>x</sub> measurements to calculate the final concentrations for each. Periodically, this efficiency factor must be measured and—if it has changed from previous measurements—entered into the analyzer's memory.

- 1- Tools you need
  - Wrenches ½" and 7/16"
  - 1 big flat screwdriver
  
- 2- Turn off and unplug the airpointer. Pull out the NO<sub>x</sub> module drawer
  
- 3- Locate the molybdenum converter in the NO<sub>x</sub> module

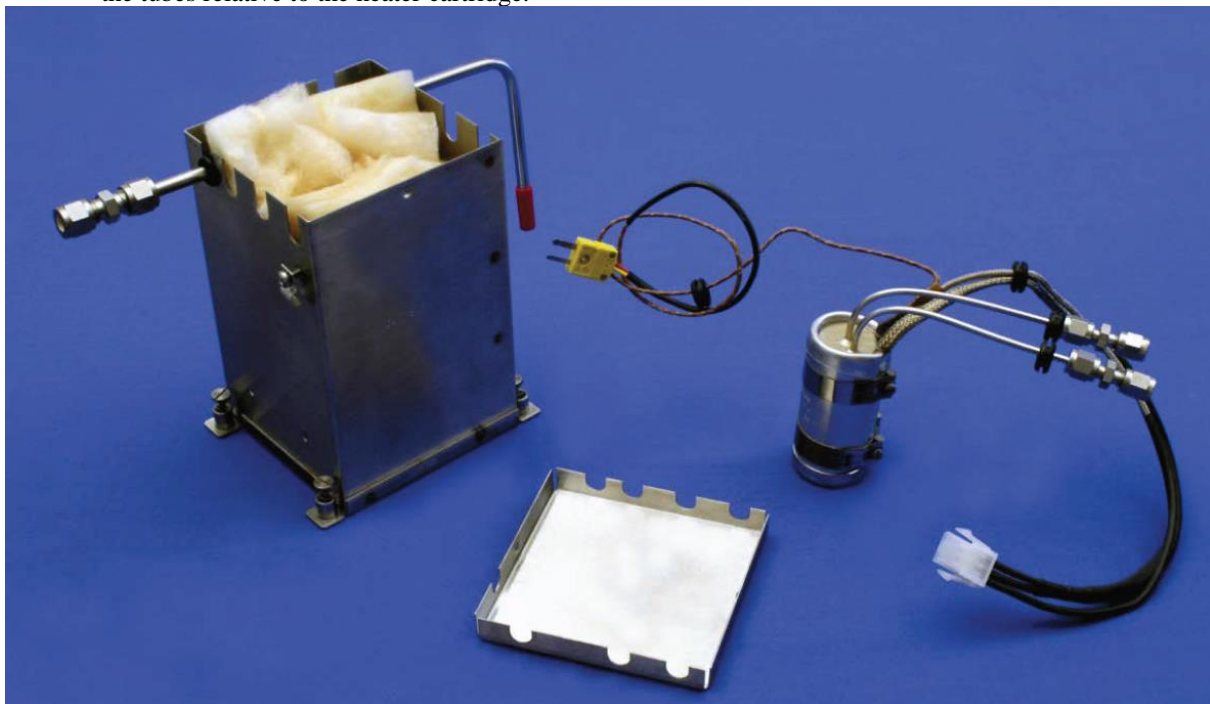


The converter operates at 315°C. Severe burns can result if the assembly is not allowed to cool. Do not handle the assembly until it is at room temperature. This may take several hours.

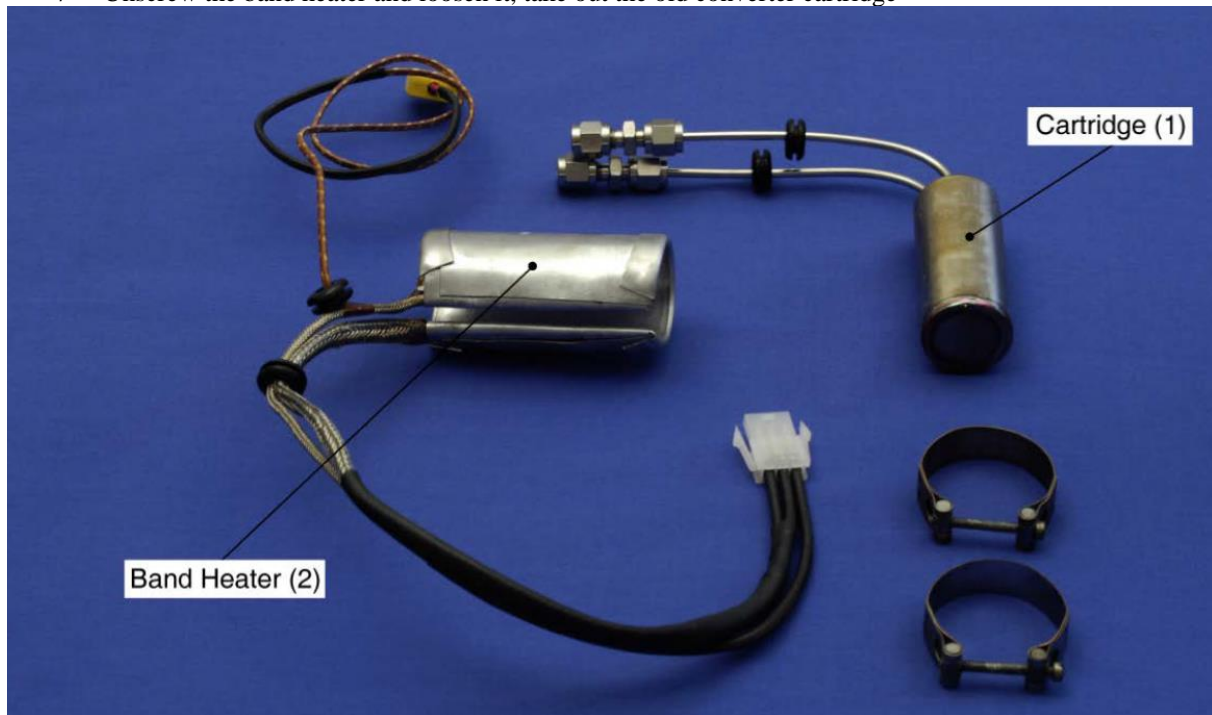
- 4- Disconnect the 2 electrical connections (heater and thermocouple) and the 4 pneumatic connections (2 from the molybdenum converter and 2 from the ozone destroyer)



- 5- Remove the top lid of the converter as well as the top layers of the insulation until the converter cartridge can be seen
- 6- Remove the converter assembly (cartridge + band heater) from the can. Make a note of the alignment of the tubes relative to the heater cartridge.



- 7- Unscrew the band heater and loosen it, take out the old converter cartridge



- 8- Put the band heater in the new replacement cartridge. For easier way of the thread you can grease it with a high-temperature anti-seize agent such as copper paste
- 9- Replace the converter assembly, route the cables through the holes in the can and reconnect them properly. Reconnect the grounding clamp around the heater leads for safe operation
- 10- Reattach the 4 tube fittings to the converter and replace the insulation and top lid of the can
- 11- Slide in the NOx module and power up the airpointer
- 12- Allow the converter to burn-in for 24 hours, then recalibrate the NOx module