



**01-013C  
2 May, 2007**

**Permapure Dryer for Sample Inlet of M200A**

**I. PURPOSE:**

To provide instructions on how to install a Permapure dryer on the sample inlet of the M200A analyzer. The Permapure dryer will remove ammonia (NH<sub>3</sub>) from the sample. This will help to increase the time between RxCell cleaning.

**II. TOOLS:**

7/16" wrench  
9/16" wrench  
Flat tip screwdriver  
Phillips tip screwdriver

**III. PARTS:**

KIT000115

**IV. PROCEDURE:**

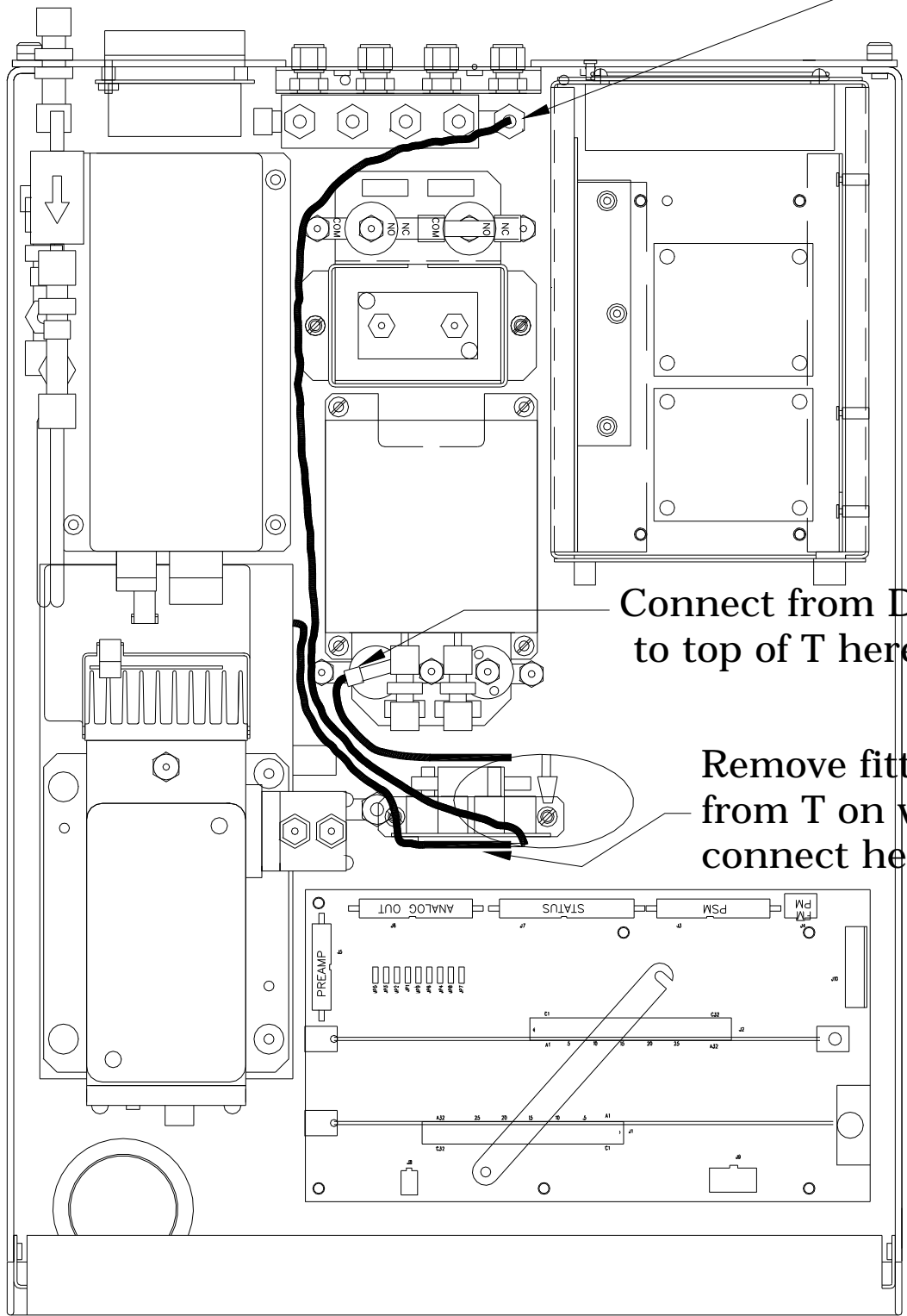
1. Remove power from the analyzer and remove the cover and set to the side.
2. The NOx converter is directly in the middle of the analyzer and is 4" X 4". The converter probably has a sticker on the top of it that says hot.
3. Directly in front of the converter are two valves.
4. One valve has a T on it.
5. One side of the T goes to the converter.
6. The other side of the T goes under the sensor assembly and is a black 1/8" PTFE tube. Remove this fitting and let it hang loose.
7. Put the dryer into the analyzer such that the black PTFE tube is on the bottom and slide it into the space between the flow meter board and the converter so that the tube turns up and meets at the T on the top of the valve where you just disconnected the fitting. (See diagram on page 3)
8. Hook the tube from the dryer to the T on the top of the valve.
9. Hook the 1/8" tube that you just disconnected from the T at the top of the valve to the top of the dryer assembly.

**NOTE: DO NOT LOOSEN ANY FITTINGS ON THE DRYER ASSEMBLY. IF YOU LOOSEN ANY FITTINGS YOU MIGHT DAMAGE THE DRYER. WHEN YOU ARE TIGHTENING THE FITTINGS ON THE DRYER ASSEMBLY MAKE SURE THAT YOU USE TWO WRENCHES SO THAT THE MEMBRANE IN THE DRYER IS NOT BROKEN.**

10. Run the special T fitting that is on the Tygon tubing, to the rear of the analyzer to the vacuum manifold.
11. Fold down the rear panel of the analyzer and loosen the fitting on the inboard side of the vacuum manifold that goes up to the exhaust of the analyzer on the rear panel. (See diagram on page 4).
12. Install the T onto the vacuum manifold so that the open end of the T is pointing up.
13. Install the fitting that you just removed from the vacuum manifold onto the open end of the T fitting.

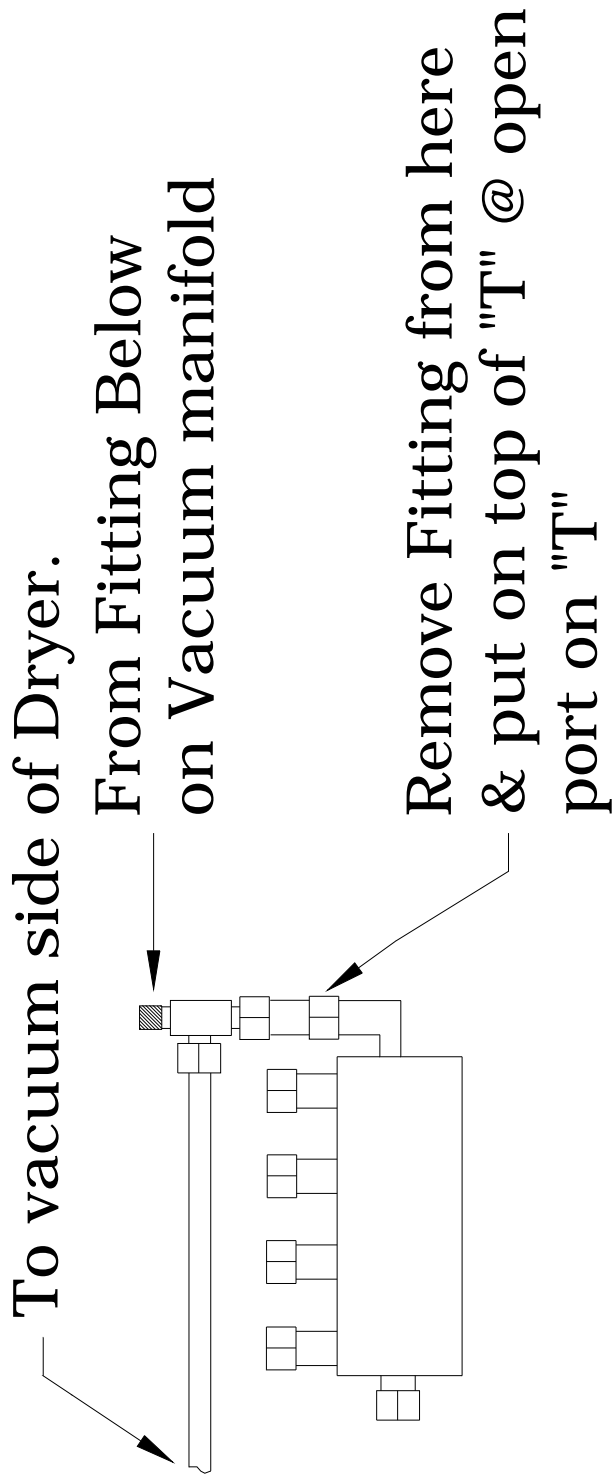
14. Tighten all connections with two wrenches so you don't bend any fittings.
15. Lay the dryer up against the flow meter card so that is it angled towards the front of the analyzer.
16. Leak check the analyzer. When you leak check the analyzer you are now going to have to plug the DFU filter that is on the dryer for the sample (the one that you just installed) and the dryer that is on the outside of the ozone generator that supplies the dry air for the ozone generator. You are also going to have to plug the sample inlet.
17. If the analyzer has any leaks they must be fixed prior to turning on the analyzer and calibrating the analyzer.

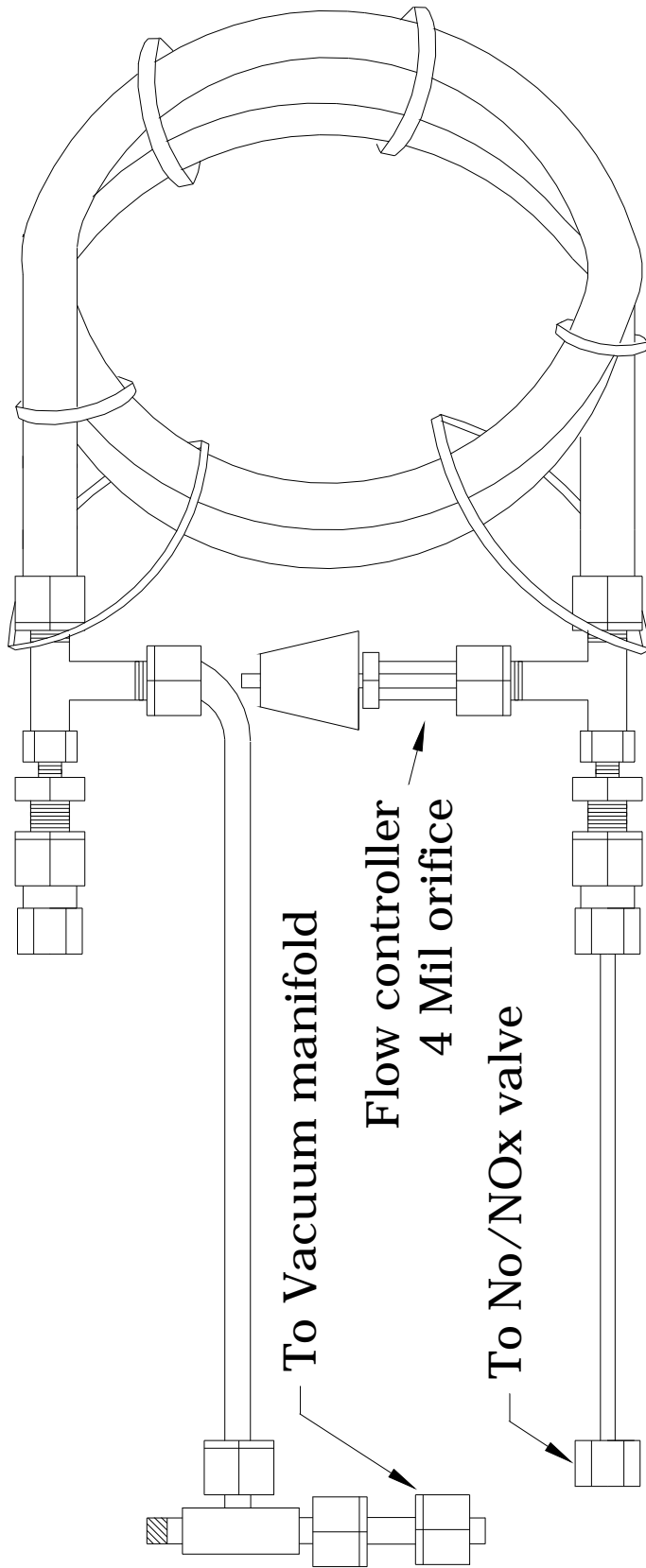
Connect T from KIT to here here on manifold



Connect from Dryer to top of T here.

Remove fitting from T on valve & connect here on Dryer





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