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Service Note

98-011 Rev C
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FIELD INSTALLATION OF ZERO/SPAN VALVE OPTION IN THE M100A ANALYZER

I. SCOPE:

Retrofitting the zero/span valves into an API Model 100A SO_2 analyzer in the field.

II. PARTS:

KIT000045

III. TOOLS:

Exacto knife
Flat blade screwdriver
7/16" wrench
9/16" wrench

IV. PROCEDURE:

A. Drop back panel by loosening 2 captive screws and lowering panel.

NOTE: FOR THE FOLLOWING STEPS, PLEASE REFER TO THE ATTACHED DRAWING # 1100 FOR THE LOCATION OF THE COMPONENTS.

B. Install the zero/span valve assembly behind the sensor assembly. Locate the 4 pin connector that will be covered with heatshrink in the chassis. This connector will mate the connector found on the assembly. Remove the heat shrink with the knife. Insert cable onto zero/span valve bracket connector.
C. Attach the 2 bulkhead fittings (with 1/8" reducers) into the rear panel. Assure the 1/8" reducer end is facing internal to the chassis and the ¼" end is protruding from the rear panel. One union is installed in the zero air in and the second union is installed in the span gas in.
D. Remove tube from sample inlet bulkhead and connect to C port on SMP/CAL valve.
E. Cut three 24" sections of 1/8" tubing. Connect one from the Sample Inlet bulkhead fitting to NO side of SMP/CAL valve. Connect the Span Gas bulkhead fitting to the NC side of the Zero/Span valve and connect the Zero Air bulkhead fitting to the NO side of the Zero/Span fitting.
F. Leak check the analyzer.
G. Power on the analyzer.
H. Press SETUP-MORE-VARS.
I. Change 818 password to 929 and press ENTR.
J. Press JUMP and enter the number 47. Press ENTR.
K. If Factory Options is not displayed, press NEXT until it is.

L. Press EDIT and change the number to 4. Press ENTR.

M. Turn power off. Wait 5 seconds and turn power on. Analyzer should now show CALZ and CALS in addition to CAL.

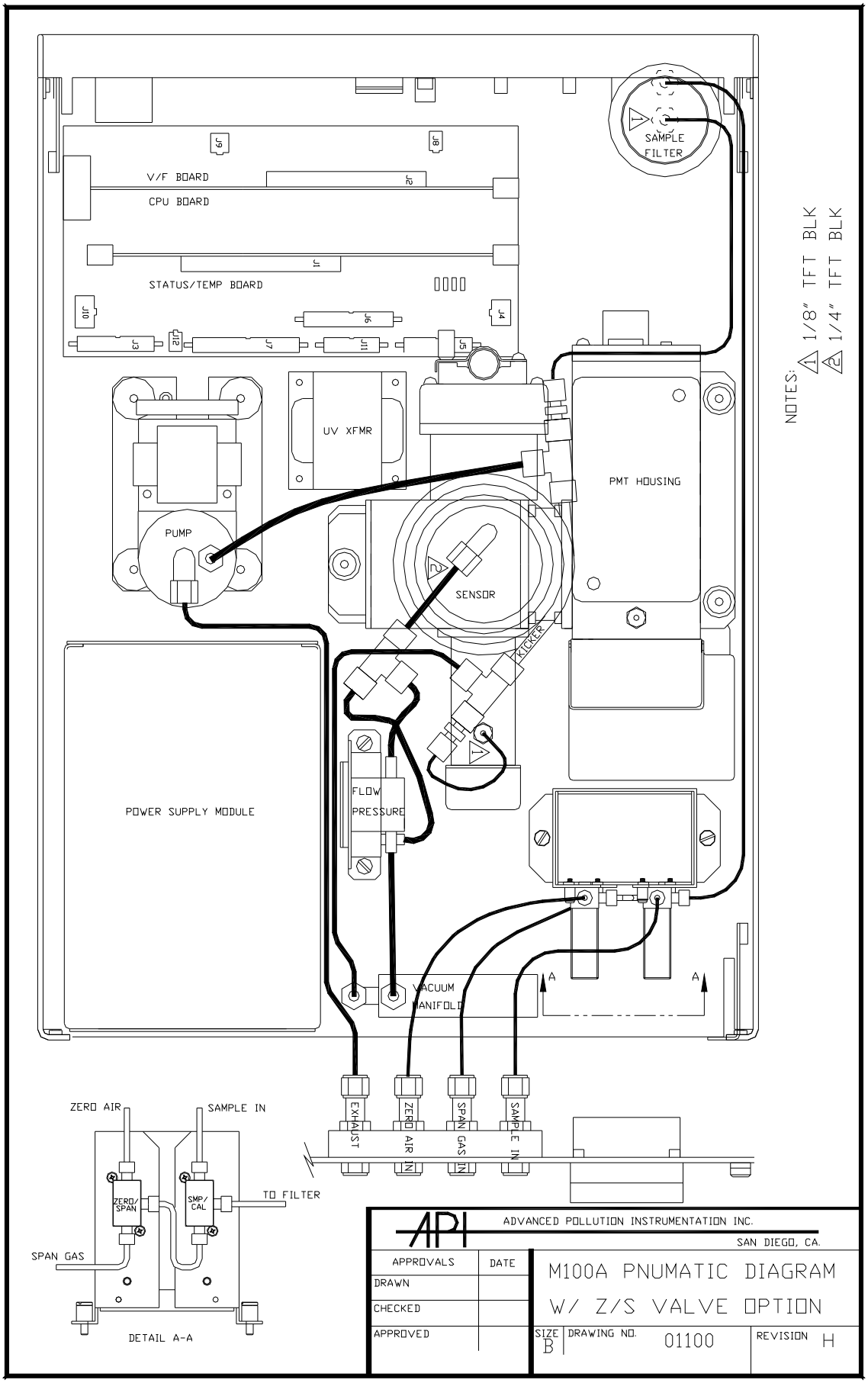


FIGURE 2.

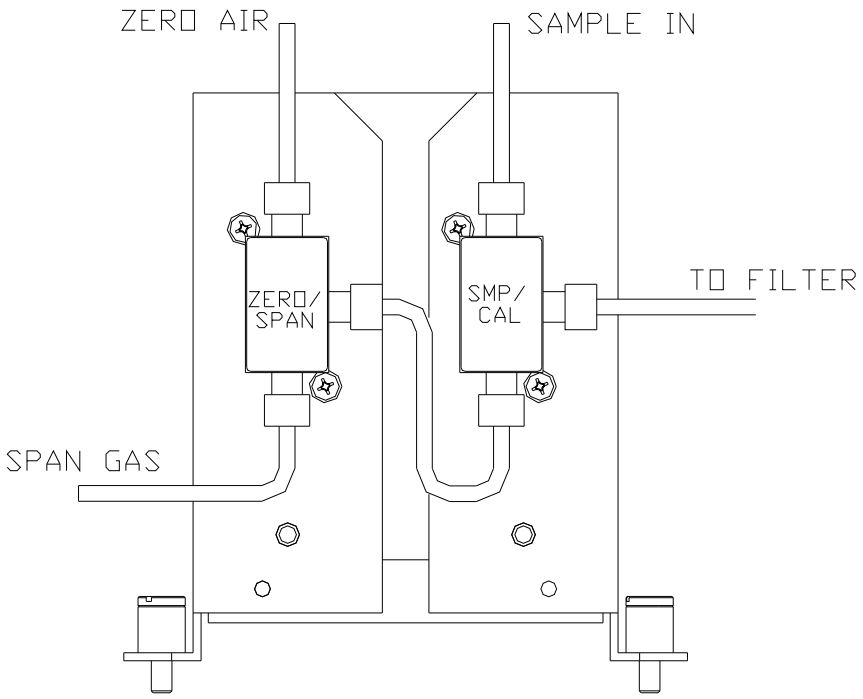
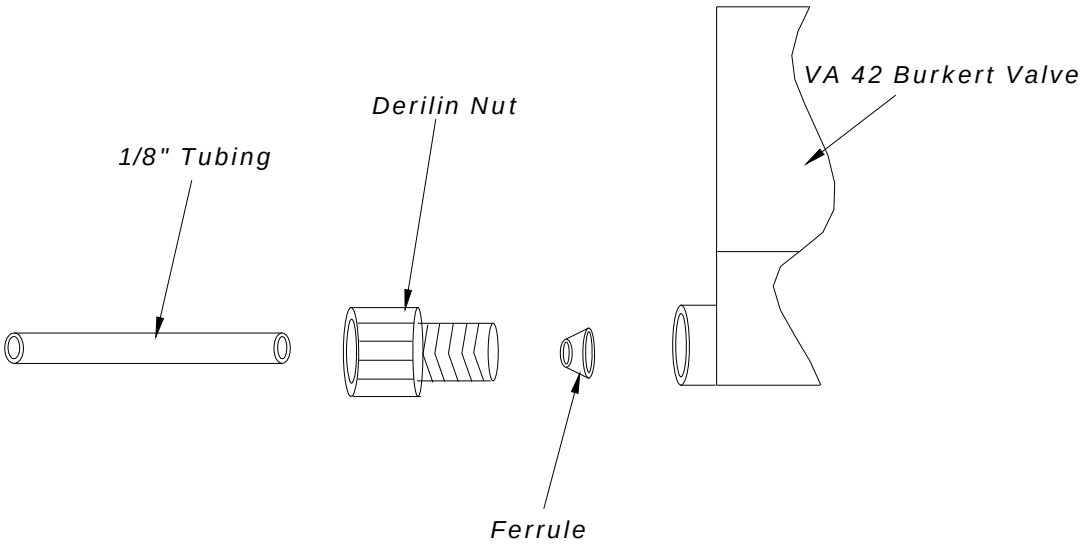


FIGURE 3.

Installing the tubing into the valve



LEAK CHECK PROCEDURE

Z/S OPTION

1. Bypass the pump.
2. Cap the Zero, Span and Sample inlets.
3. Attach a pump and a valve cutoff to the exhaust port.
4. Enter the CALS mode. (Ensure that there isn't a perm tube in the oven.)
5. Monitor the sample pressure reading on the front panel. The pressure should pull down to < 10"HG.
6. Turn the valve on the exhaust port to hold the vacuum in the instrument.
7. Monitor the Sample Pressure on the front panel. The Sample Pressure reading should not increase more than 1" for every 5 minutes. If the pressure increases more than 1" then you have a leak in the IZS system. Find the leak and then repeat steps 5-8 until the Sample Pressure reading meets the above specification.
8. If there are no leaks then exit the CALS mode, disconnect the pump and the valve from the exhaust port and reconnect the internal pump. Remove all the caps.
9. The Z/S valves are ready for use