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Service Note

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UPGRADING M300 TO HIGH FLOW ANALYZER

I. PURPOSE:

To be used as a guide when installing the retrofit kit for upgrading the M300 analyzer to the high flow M300.

II. TOOLS:

7/16" Wrench
9/16" Wrench
Phillips tip screwdriver
Flat tip screwdriver
Tubing cutter

III. PARTS:

KIT000117

IV. PROCEDURE:

1. Turn the analyzer off and remove the power to the rear panel of the analyzer.
2. Remove the cover from the analyzer and set aside.
3. Locate the flow sensor on top of the bench and remove it and the tubes that go to and from the flow sensor.
4. Remove the cable that goes from the flow meter to the motherboard.
5. Install the new cable that comes in the kit onto the motherboard and let the other end of the cable hang aside. This cable should connect to J3 on the motherboard.
6. Locate the flow block in the KIT and install it into the chassis of the analyzer. See diagram. Using the screws that are in the KIT install the one right hand screw though the flow block and through the hole in the chassis. Now mark where the hole for the left side should be and remove the flow block from the analyzer. Now drill a new hole for the other screw.
7. Install the flow block with the two screws and secure them to the chassis.
8. Fold down the front panel of the analyzer.
9. Remove the two fittings that are screwed into the bottom of the particulate filter. Install the two FT12 fittings that are in the KIT into the particulate filter. When applying Teflon tape to the fittings use it sparingly. You should only need 1 ¼ to 1 ½ turns of Teflon tape on the fitting to get it to seal.
10. Remove the fitting that goes into the bench and replace it with the FT17 that is included in the KIT. Again use the Teflon tape sparingly.
11. Remove the sample input fitting from the rear panel and install the FT40 fitting that comes in the KIT. If the new fitting does not fit into the hole that the old fitting came out of either drill out hole to fit the new fitting or put the fitting into the larger hole that is lower than the top hole.
12. Run a new ¼" PTFE tube from the new sample inlet fitting to the most forward fitting on the particulate filter. See diagram.
13. Run a new ¼" PTFE tube from the rear fitting on the particulate filter to the input to the bench.

NOTE: WHEN RUNNING THESE TWO TUBES ENSURE THAT YOU PROVIDE ENOUGH TUBING SO THAT YOU CAN FOLD DOWN THE FRONT PANEL OF THE ANALYZER, AND THAT WHEN YOU FOLD UP THE FRONT PANEL THAT YOU DON'T PINCH OR BIND THE TUBING.

14. Run the new Tygon tube from the output fitting on the bench to the input to the flow block.
15. Remove the flow controller from the input to the pump. This is the hexagonal tube that is connected to the input of the pump.

NOTE: IF YOU DO NOT REMOVE THE FLOW CONTROLLER FROM THE PUMP, THE ANALYZER IS NOT GOING TO HAVE THE PROPER FLOW AND YOU ARE GOING TO HAVE PROBLEMS.

16. Run the new Tygon tube from the output fitting on the flow block to the input to the pump.
17. Connect the cable that comes from J3 on the motherboard to the connector on the flow block.
18. Remove the CPU and V/F card assembly from the analyzer and place so that the CPU assembly is facing up.
19. Remove the EPROM from the CPU assembly noting the direction that the prom goes into the CPU assembly.
20. Install the new prom from the kit into the analyzer.
21. Install the CPU and V/F card assembly back into the analyzer.
22. Leak check the analyzer. If the analyzer fails the leak check then find the leak before continuing on with the service note.
23. Follow the adjustment procedures in section 9.2, 9.3 and 9.4 in the manual.
24. Follow the calibration procedure in section 8.2 of the manual.
25. You are now ready to put the analyzer back into service.