



**99-021 Rev B
2 May, 2007**

REBUILDING THE M200AH RCELL & FLOW CONTROL BLOCK

SCOPE:

This procedure provides instructions for rebuilding the R-cell in the API M200AH NO_x analyzer, during normal annual maintenance.

PARTS:

KIT67 Rebuild kit for M200AH R-cell.

TOOLS:

7/16" Wrench
9/16" Wrench
#2 Phillips Head Screwdriver
Large Flat blade Screwdriver
Small Flat blade Screwdriver
Scribe or similar pointed end tool

PROCEDURE:

1. Remove power and cover from analyzer.
2. Remove the 1/4" and 1/8" tubes from the R-cell. Locate and disconnect the heater/thermistor assy connector. Locate and disconnect any ground wires relating to the R-cell.
3. Loosen the two fittings on top of the R-cell.
4. Remove the 4 screws holding the R-cell into the sensor housing. Place the R-cell onto a work bench. Separate the manifold from the sleeve assy.

NOTE: FOR THE FOLLOWING STEPS, REFER TO ATTACHED DRAWING.

5. Remove the sleeve from the housing. Note that there are two O-rings, one at each end of the sleeve. Remove the O-rings from the sleeve.
6. Inspect the sleeve, nozzles and window for contamination. It is normal for the window to have a light haze or discoloration on it. Some white crystals or powder are also normal.
7. Clean the window and sleeve by spraying distilled water onto them & cleaning them with a clean dry lint free cloth. If that does not clean the window well enough then you can use a solution of 1 tablespoon of baking soda in 6-8 ounces of water. Rinse with distilled water and dry thoroughly. You can also use window cleaner, but it must be AMMONI-FREE window cleaner (this is not usually needed). If you can't get the window clean then replace it with the one in the KIT. If you use any cleaner other than water you must clean the parts with de-ionized water after you use the cleaner.
8. Remove the fittings from the top of the R-cell. Replace the O-rings with the OR-34 included in the KIT.

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9. Remove the sintered filters from the manifold. This unit only has an orifice in the ozone side of the R-cell, the sample sintered filter is in the flow control block behind the converter. Push on the edge of the filter with a small flat-blade screwdriver until the opposite side pops up. The sintered filter will then drop out. Discard the sintered filter.
10. Remove the O-rings from the manifold by prying them out.
11. Remove the orifices from the manifold. (If necessary, you can insert a scribe into the orifice hole and move the orifice around to break the seal to the bottom O-ring).
12. Remove the bottom O-ring from the manifold.
13. Install new O-rings (OR-1 from the KIT) into the manifold. Push them down with the small screwdriver to be sure they are seated flat.
14. Install the new orifices from the KIT. Be sure to insert them with the painted side facing up, in other words with the jewel facing the bottom of the cell.
15. Install new O-rings (OR-1 from the KIT) on top of the orifice.
16. Install new sintered filters (FL-1 from the KIT) on top of the O-ring.
17. Install the spring on top of the sintered filters.
18. Install the fittings you removed in step 9.
19. Assembly is the reverse of disassembly.
20. When you are done with this you are going to have to do the same thing to the orifice in the flow control block behind the converter. You will find that removing the flow control block from the analyzer is going to be the easiest way to remove the orifice & sintered filter.
21. Fold down the rear panel & remove the fittings that go to the flow control block. Remove the electrical connectors that go to the block. Ensure that you note where the pneumatic lines go to on the block, as it is important to the operation of the analyzer that these lines go back to the fittings that they came from.
22. Remove the fitting from the top of the flow block & change the O-ring on the bottom of the fitting.
23. Remove the sintered filter, O-rings & orifice as you did for the R-cell.
24. Change the parts the same as you did for the R-cell & reassemble the unit.
25. Install the flow block back into the analyzer, reverse of removal.
26. Perform a leak check on the analyzer.
27. Calibrate the analyzer per the Factory Calibration (or Quick Cal) procedure appropriate for your analyzer.

If you have questions regarding this procedure or any API equipment, please contact an API Customer Service representative at:

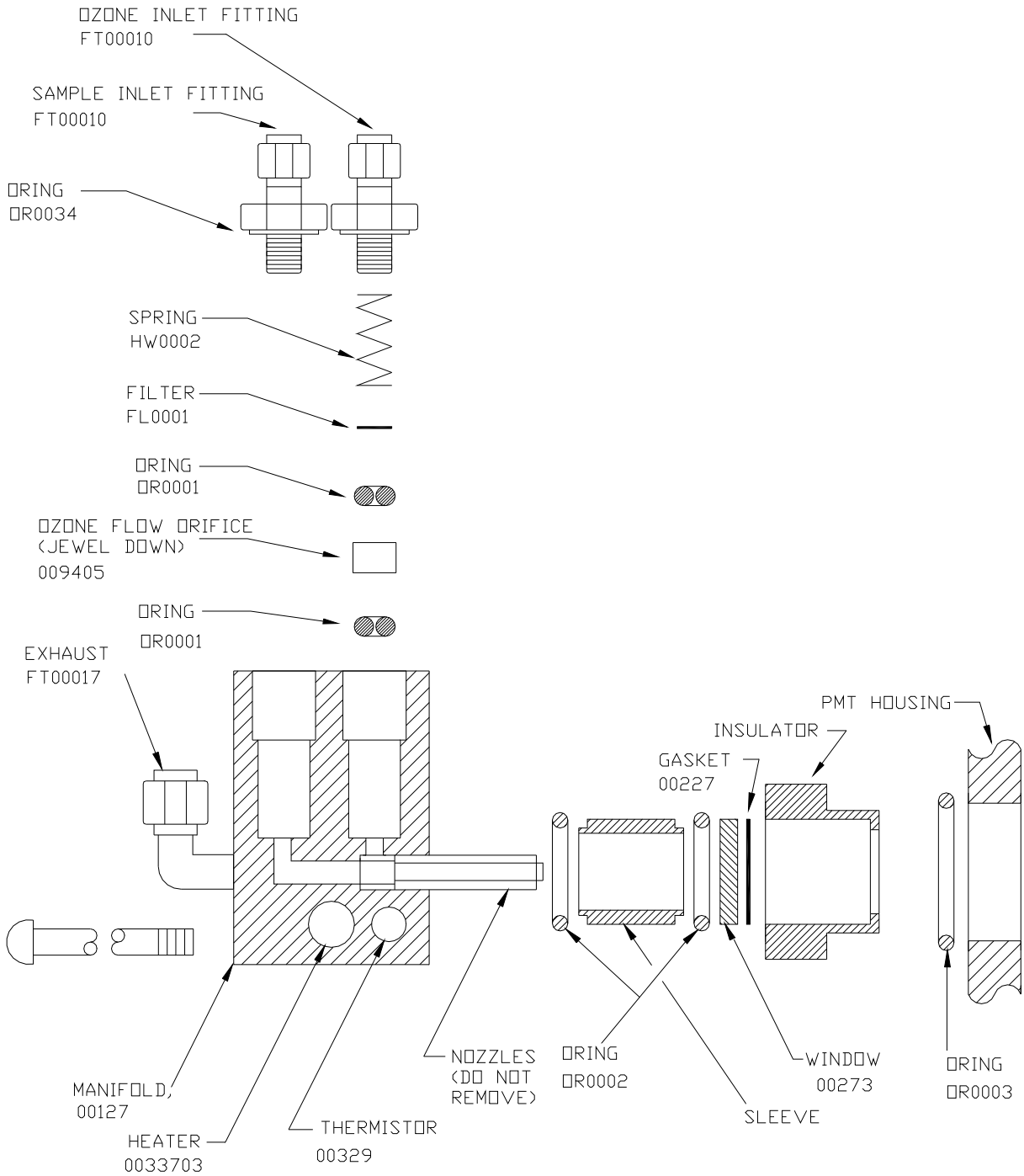
Phone: (858) 657-9800 Email: customerservice@advpol.com

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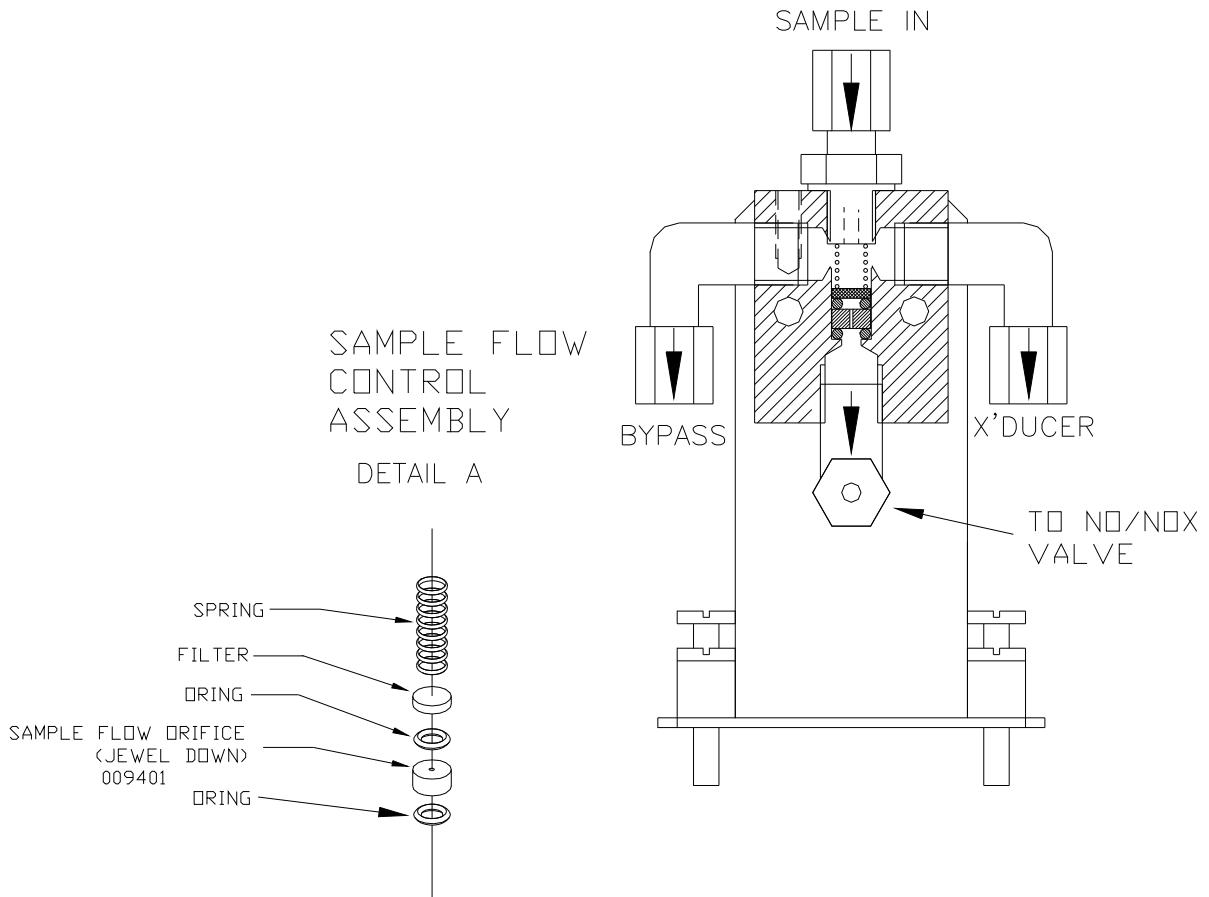


REACTION CELL ASSEMBLY

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SAMPLE/BYPASS FLOW CONTROL BLOCK

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