

Service Note

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> 05-025A 28 February 2006

M200E TROUBLESHOOTING TREE

I. <u>PURPOSE</u>:

This document has the most common failures of the M200E analyzer, with possible problems and solutions

- II. <u>TOOLS</u>: NONE
- III. <u>PARTS</u>: NONE

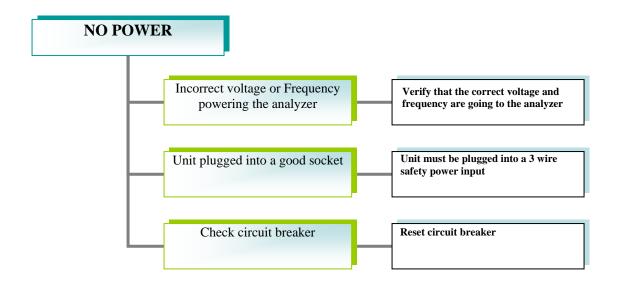
IV. <u>PROCEDURE</u>:

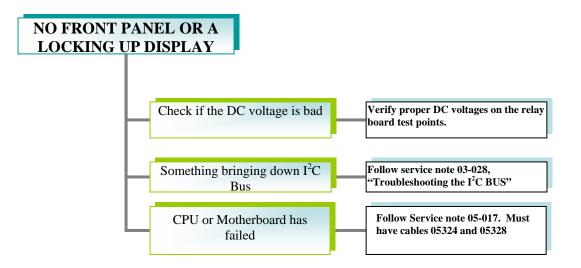
To use this document find the symptom of your analyzer in the list below. Then go to the appropriate page number. The problem could be anything on the list and you will want to start from the top and work your way down going though each possible cause until you find the problem.

Page	Problem
2.)	No Power
2.)	No front panel or locking up Display
3.)	Optical Test bad, Electrical Test OK
3.)	Bad Electrical Test
4.)	Unstable Reading at Zero, Zero noise
5.)	Unstable Reading at Span, Span noise
6.)	Unable to Zero (No Zero Button)
7.)	Unable to Span (No Span button or no response to Span gas)
8.)	Non-Linear Response
9.)	Slow Response to Zero or Span
10.)	HVPS warning, after factory calibration
10.)	Auto-Zero Warning
11.)	No Flow
11.)	No analog or incorrect analog output

12.) Any Temperature Warning

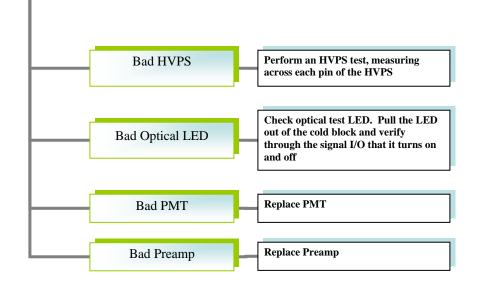
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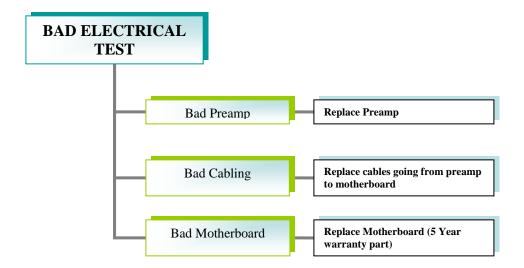




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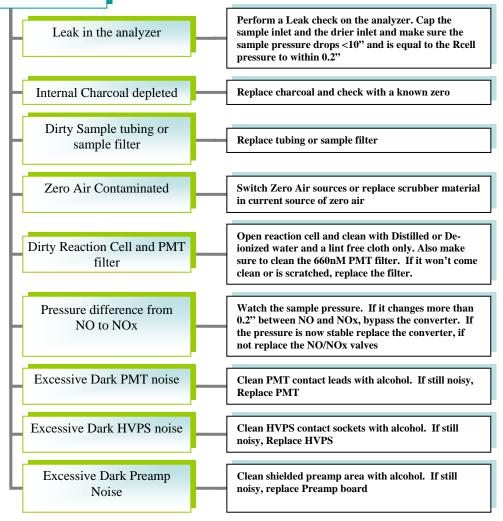
OPTICAL TEST BAD, ELECTRICAL TEST OK





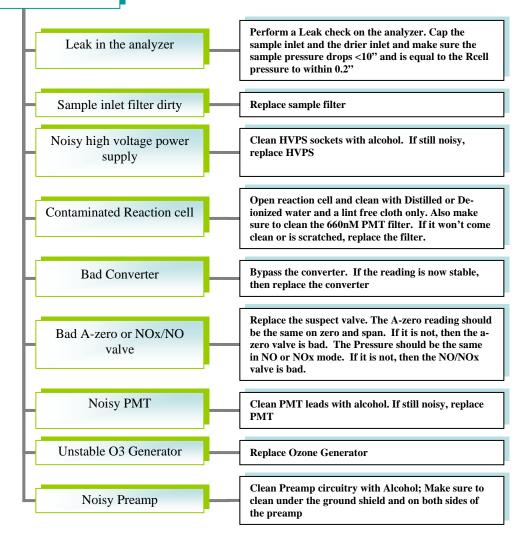
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UNSTABLE READING AT ZERO, ZERO NOISE

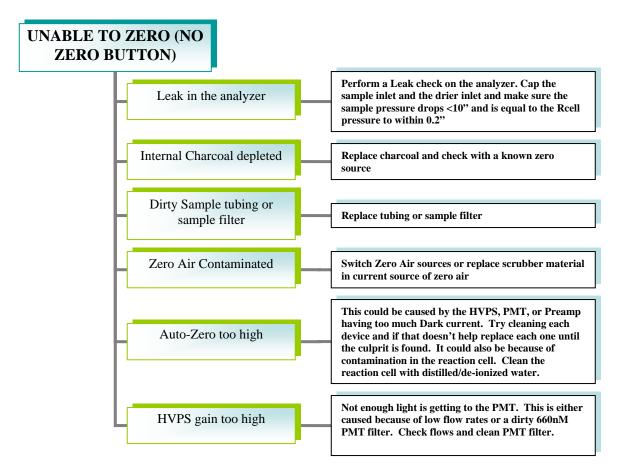


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UNSTABLE READING AT SPAN, SPAN NOISE

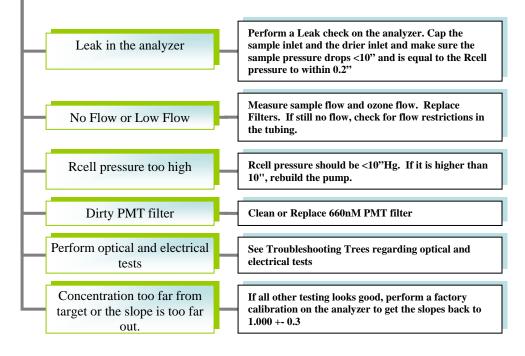


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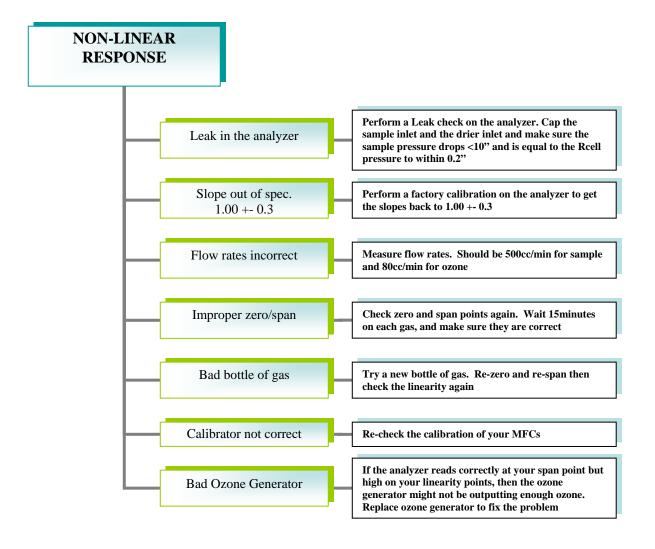


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UNABLE TO SPAN (NO SPAN BUTTON OR NO RESPONSE TO SPAN)



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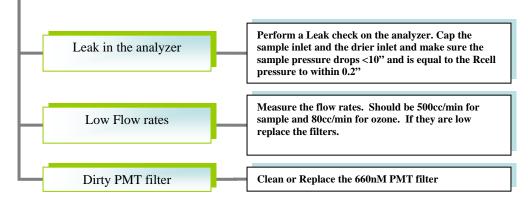
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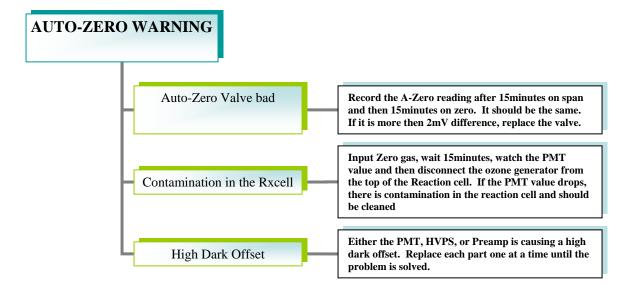
SLOW RESPONSE TO ZERO OR SPAN Perform a Leak check on the analyzer. Cap the Leak in the analyzer sample inlet and the drier inlet and make sure the sample pressure drops <10" and is equal to the Rcell pressure to within 0.2" Measure the Flow with an external flow meter. It Low flow should be 500cc +- 10%. If not replace filters and look for restrictions. Contaminated Sample filter Replace sample particulate filter, taking care not to touch it with your fingers. Use a glove if necessary. **Contaminated Reaction Cell** Clean the reaction cell with distilled/de-ionized water and a lint free cloth. Input span/zero gas and wait until the analyzer is stable. Disconnect the sample inlet to the analyzer Gas to the analyzer is taking but let the cal gas keep flowing. Wait 5 minutes. too long to get to the Reconnect the sample line. If it goes right to the concentration you expect or closer than it was when analvzer you disconnected the tubing, then calibration system

is the problem.

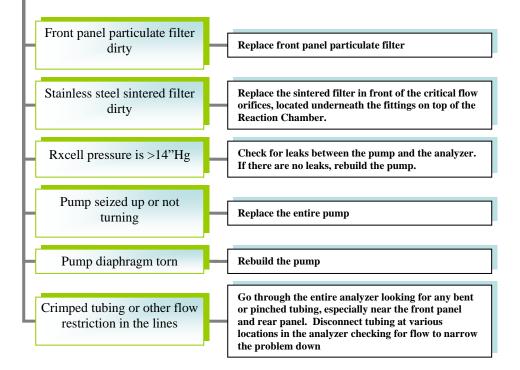
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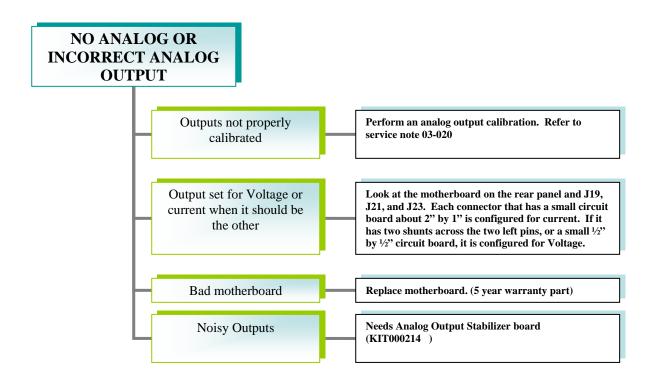
HVPS WARNING AFTER FACTORY CALIBRATION



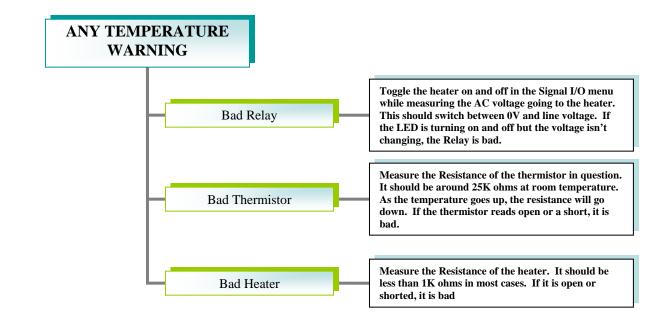


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