



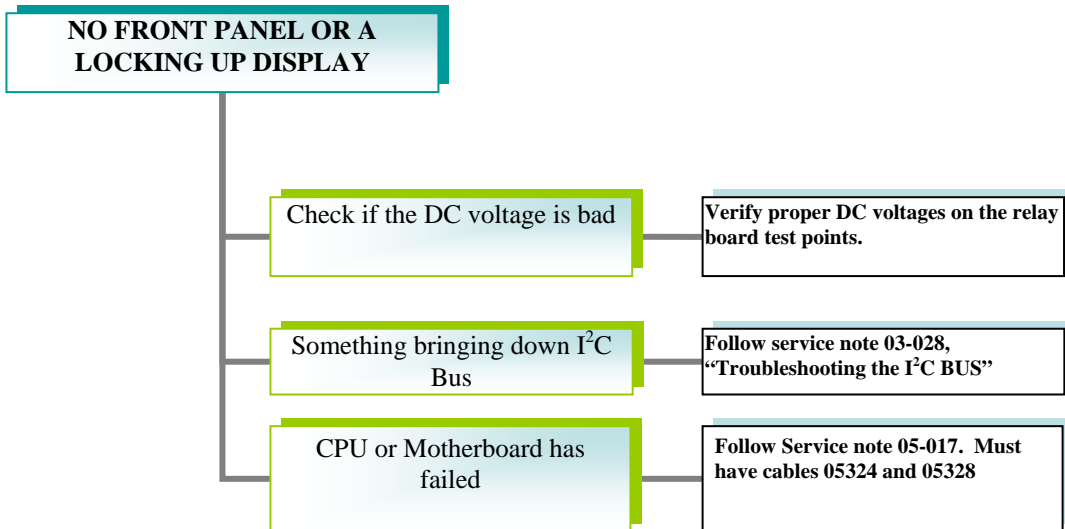
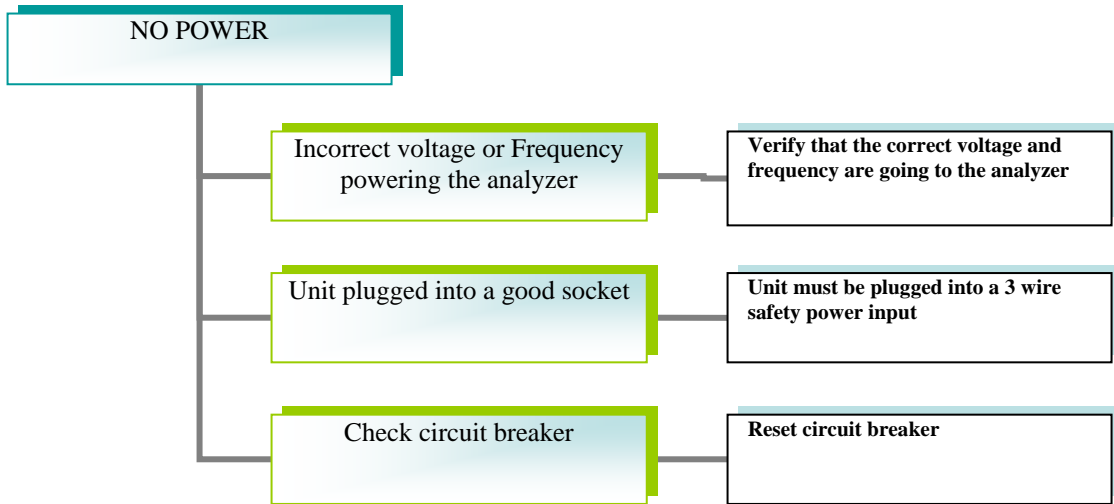
05-024A
28 February 2006

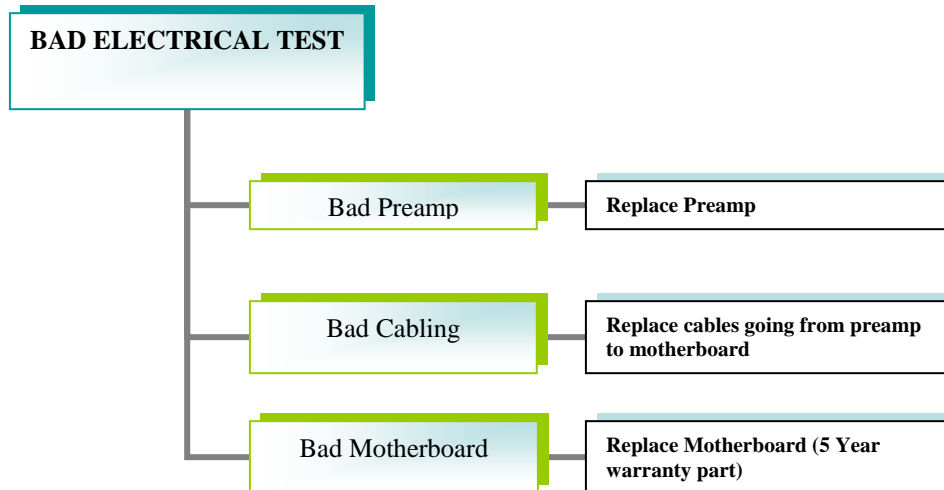
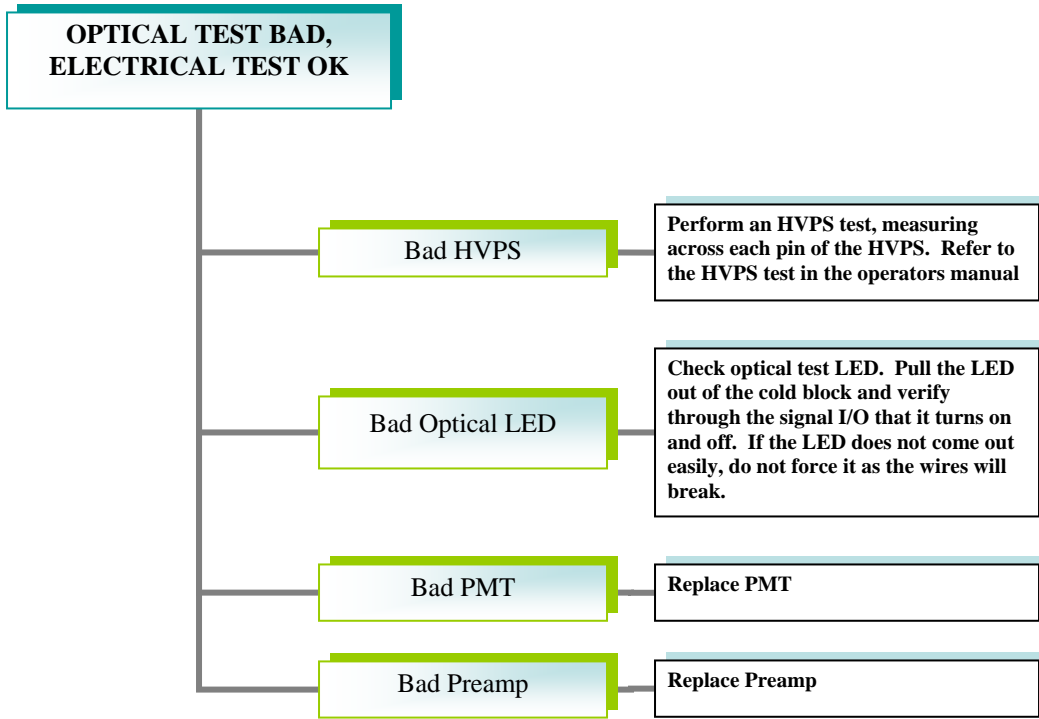
M100E TROUBLESHOOTING TREE

- I. PURPOSE:**
This document has the most common failures of the M100E analyzer, with possible problems and solutions
- II. TOOLS:**
NONE
- III. PARTS:**
NONE
- IV. PROCEDURE:**

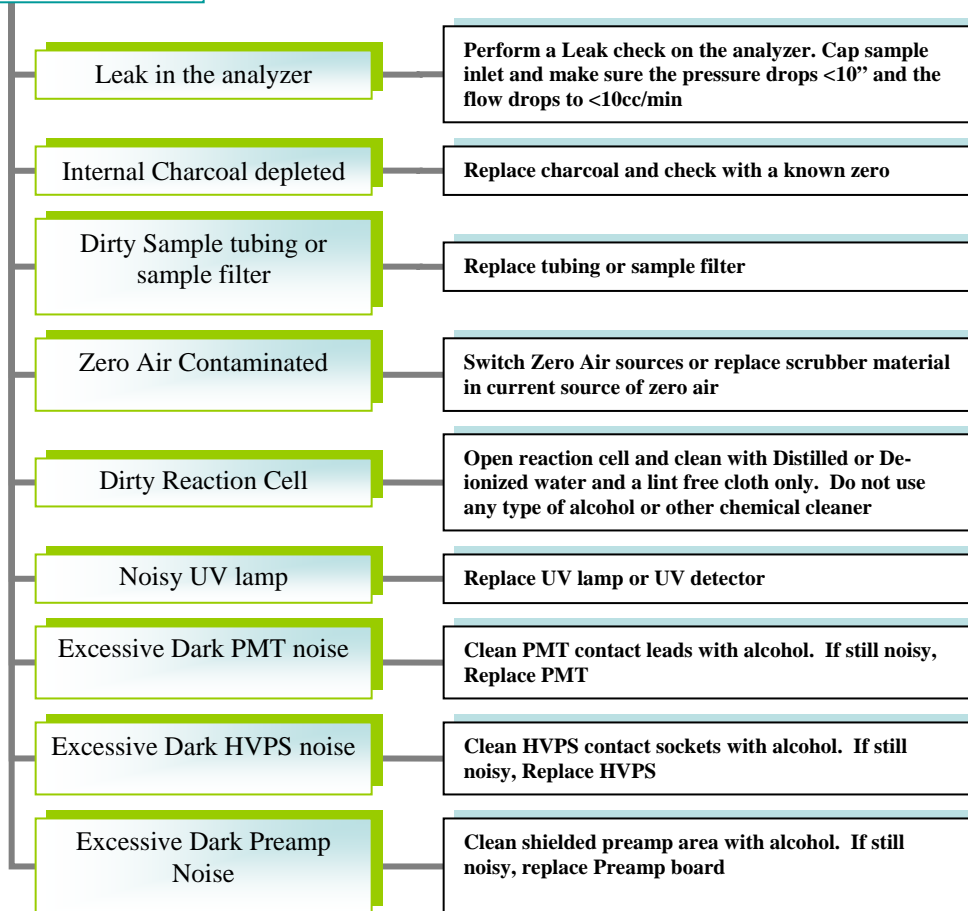
To use this document find the symptom of your analyzer in the list below. Then go to the appropriate page number. The problem could be anything on the list and you will want to start from the top and work your way down going through each possible cause until you find the problem.

<u>Page</u>	<u>Problem</u>
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.)	Shutter Warning
11.)	No Flow
11.)	No analog or incorrect analog output
12.)	Any Temperature Warning

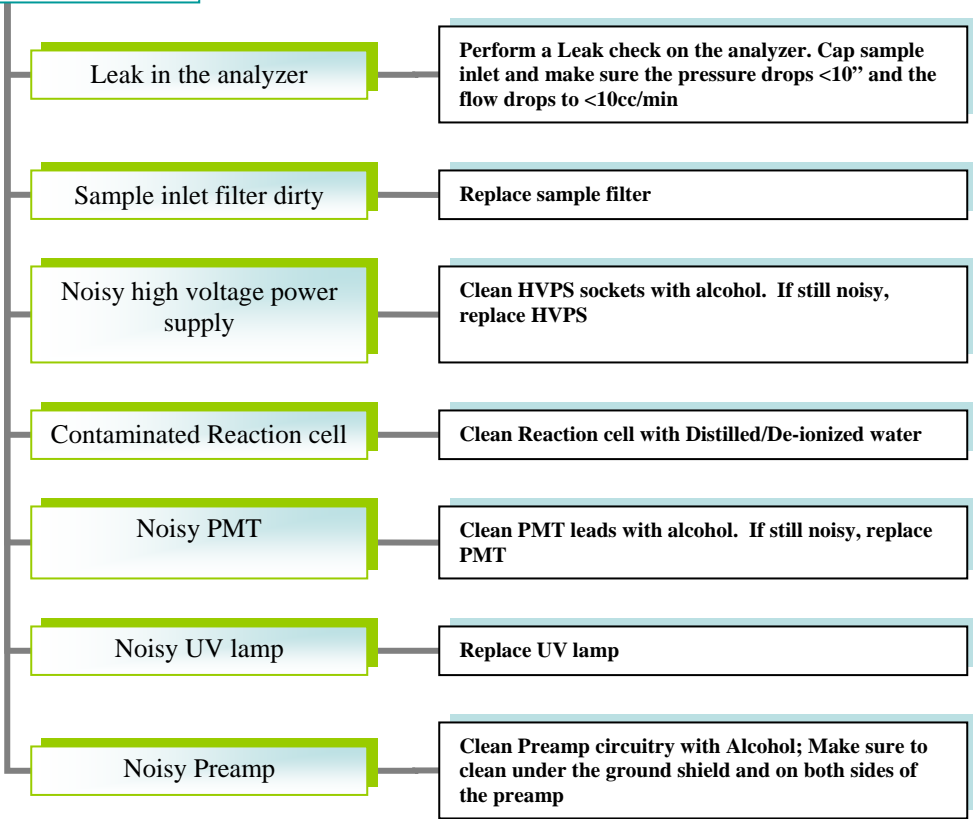




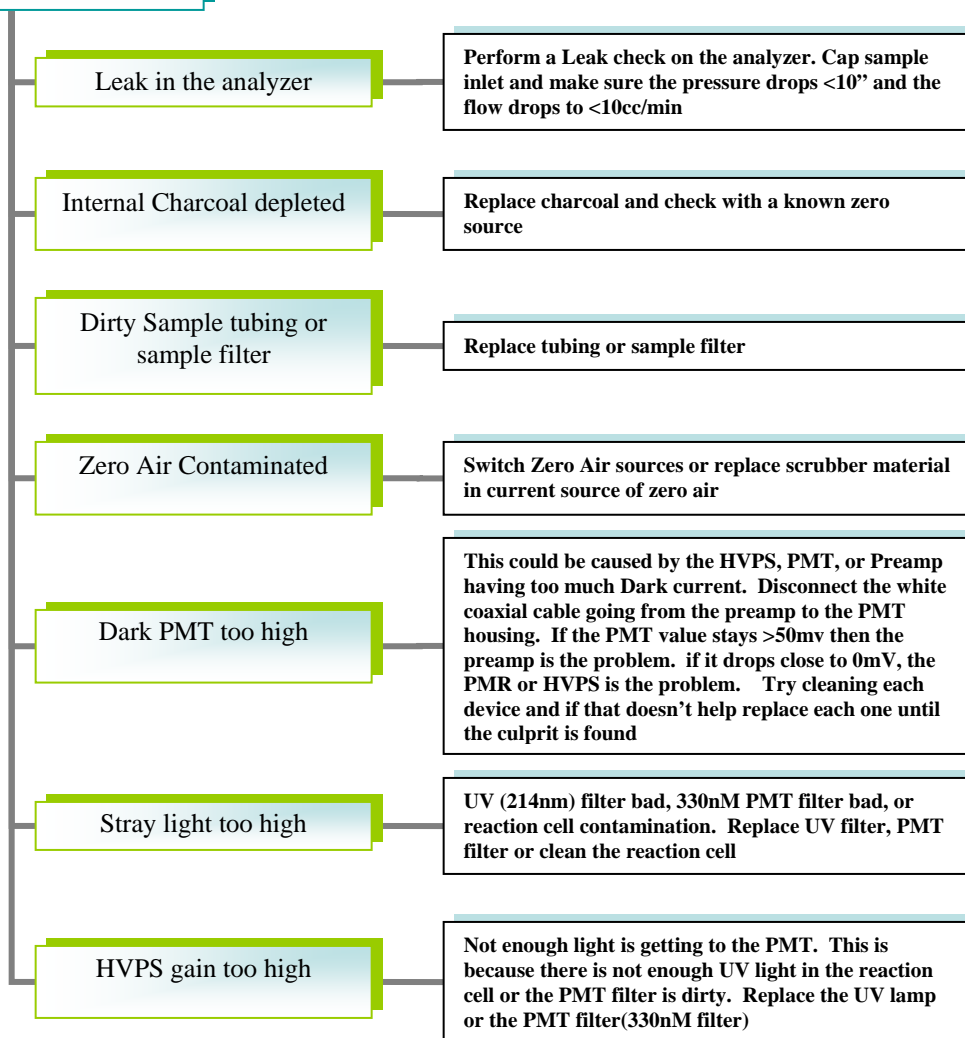
**UNSTABLE READING AT
ZERO, ZERO NOISE**

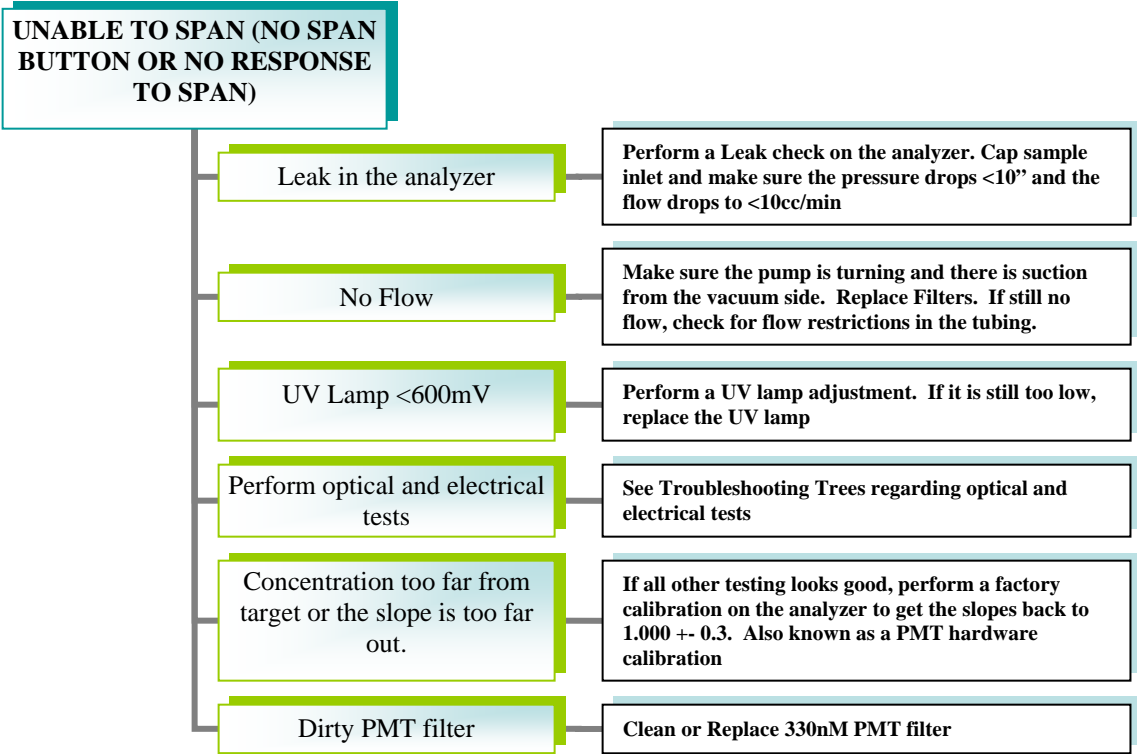


UNSTABLE READING AT SPAN, SPAN NOISE

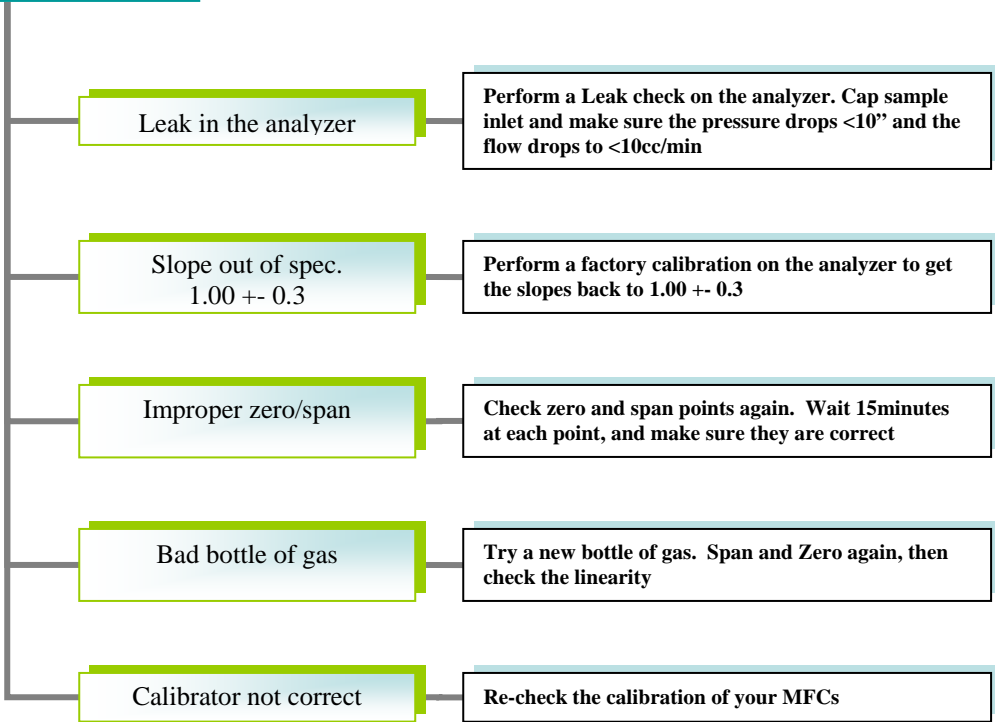


UNABLE TO ZERO (NO ZERO BUTTON)

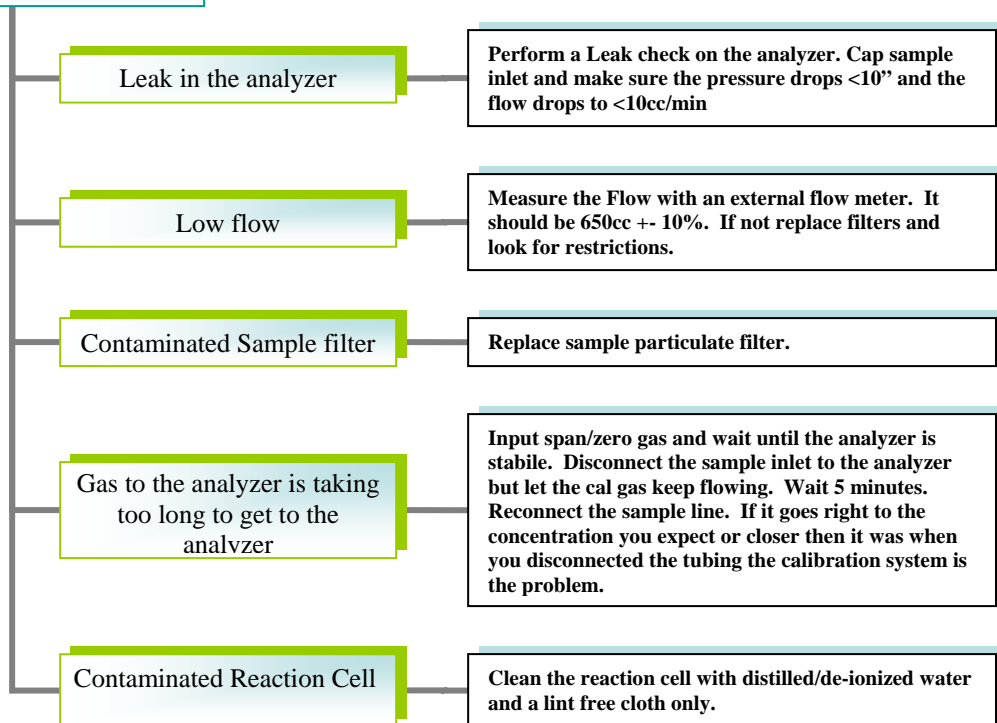




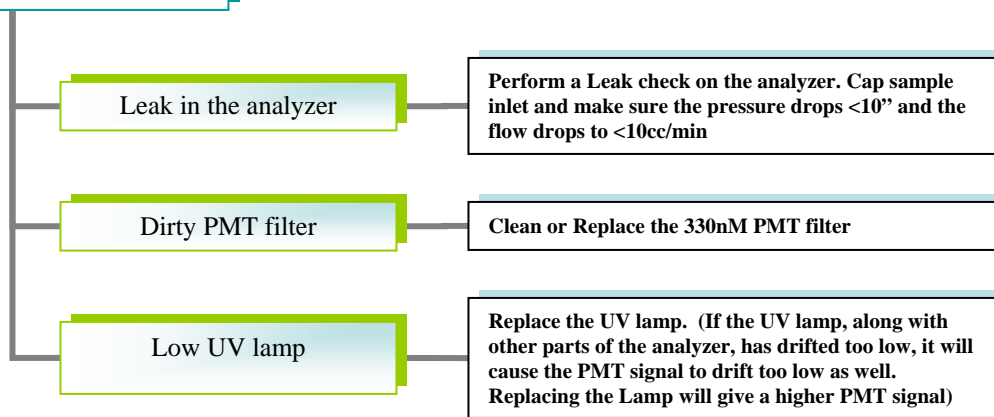
**NON-LINEAR
RESPONSE**



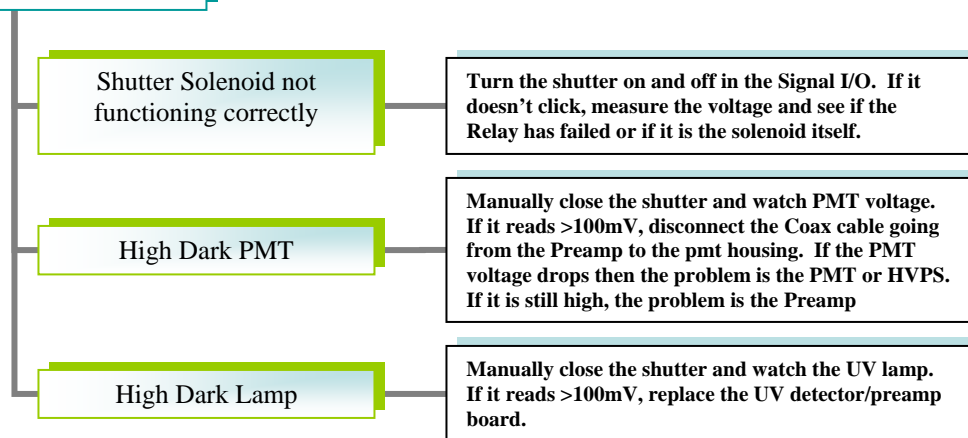
SLOW RESPONSE TO ZERO OR SPAN

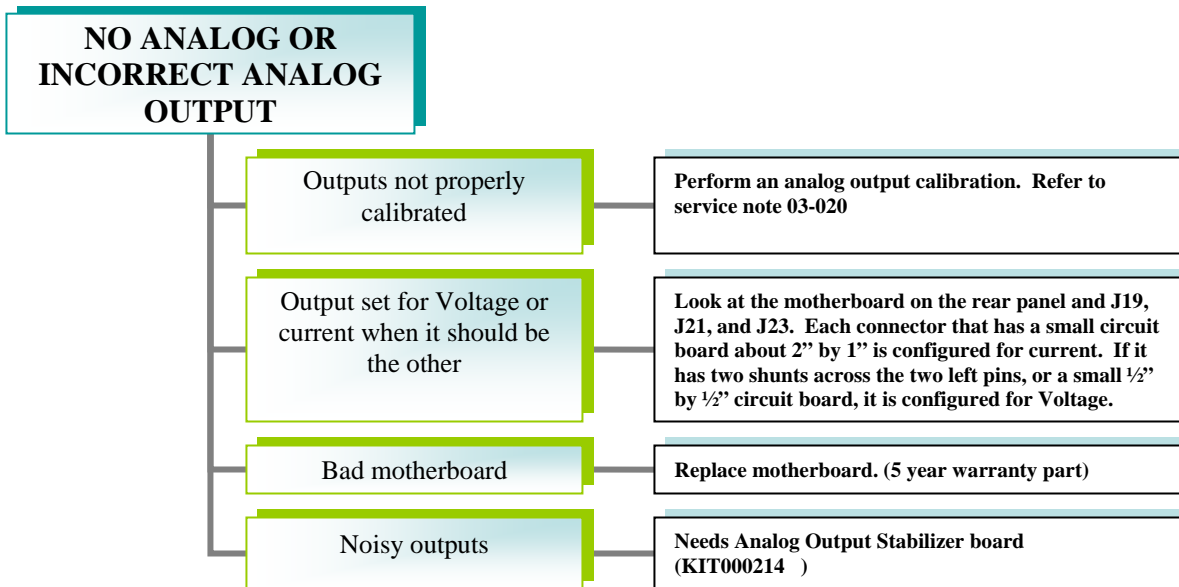
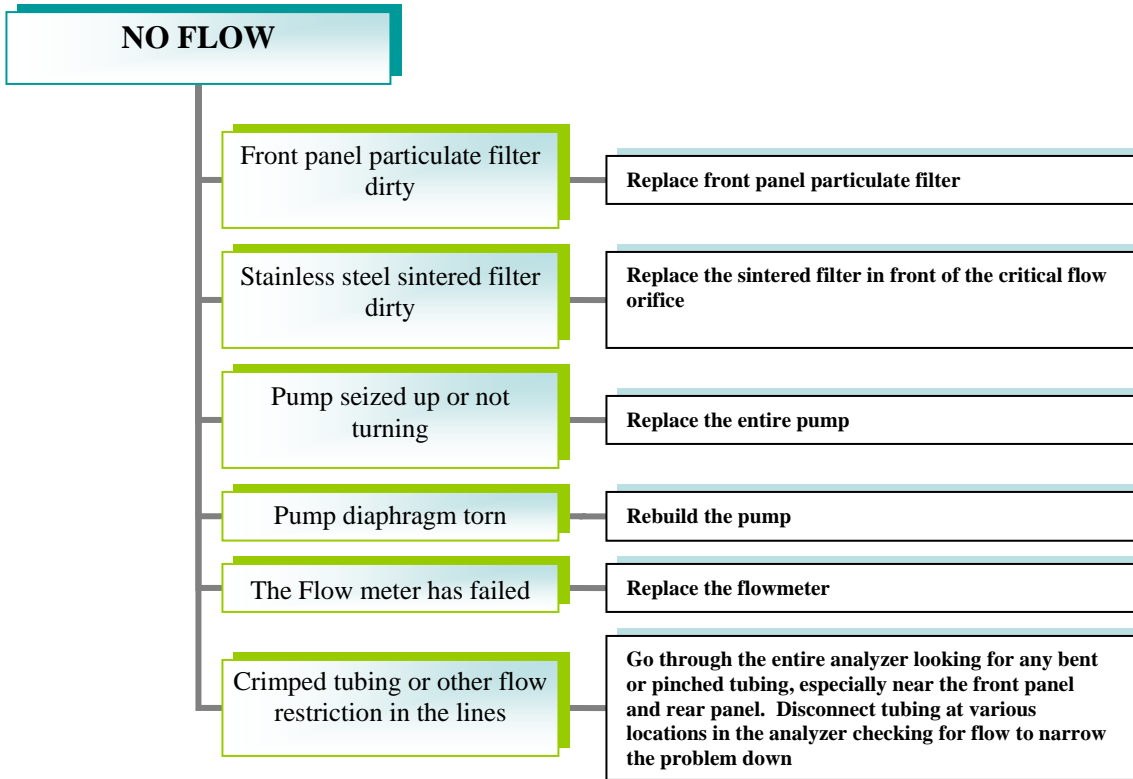


HVPS WARNING AFTER FACTORY CALIBRATION



SHUTTER WARNING





ANY TEMPERATURE WARNING

Bad Relay

Toggle the heater on and off in the Signal I/O menu while measuring the AC voltage going to the heater. This should switch between 0V and line voltage. If the LED is turning on and off on the relay board, but the voltage isn't changing, the Relay is bad.

Bad Thermistor

Measure the Resistance of the thermistor in question. It should be around 25K ohms at room temperature. As the temperature goes up, the resistance will go down. If the thermistor reads open or a short, it is bad.

Bad Heater

Measure the Resistance of the heater. It should be less than 1K ohms in most cases. If it is open or shorted, it is bad