

AMS Users meeting 2009 AMS Hardware

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Recommended AMS Maintenance

Clean fan filters on all electronic components and
Turbo Pump fans

Check and tighten 80/20 fasteners after shipping

Clean the instrument, particularly the raw aluminum
chamber surface. Avoid exposure to elements,
especially sea salt.

Computer HD maintenance

Always keep the vacuum system operational, Don't
leave instrument in the powered down state.



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Questions User's often don't know the answer to...
but should

What are the operating currents for all pumps?

	Gas Load Off (mA)	Gas Load On (mA)	Delta T* (Degrees C) (Closed/Open)
P2	~ 450	~ 850	9/13.3
P3	~ 250	~ 300	9/9.3
P4	~ 200	~ 250	6/5.9
P5	< 200	< 200	6.2/6.5
P6	~ 200	~ 200	9.6/9.6

*Delta T = Pump Temp – Ambient Temp

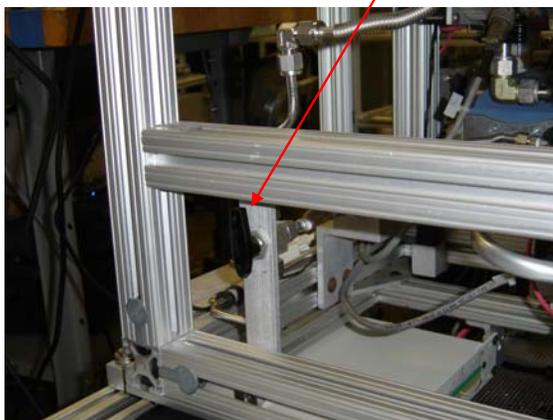


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Questions User's often don't know the answer to...
but should

What is the backing pump pressure?

What is the lens pressure?



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Questions User's often don't know the answer to...
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If one turbo pump fails can I keep
running the system?

A: NO!!



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Questions User's often don't know the answer to...
but should

When should I align the lens?

A: After shipping or if there is reason
to believe that the instrument has been
bumped.



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Questions User's often don't know the answer to...
but should

When can I turn on the MCP after venting?

A: It depends. It is always best to pump overnight, but if the system has only been vented an hour or two, and there is a need to collect data right away the after about 1/1.5 hours.



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Questions User's often don't know the answer to...
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When can I turn on the filaments after venting?

A: About 45 minutes.



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Why is my flow rate so high?

A: The key here is that the AMS does not measure a flow. It is measuring the pressure and a calculation is done in software to give the flow rate. So if you are measuring the backing pump pressure then you will have a flow rate which will be much higher than expected. Simply turn the valve on the front of the AMS to measure the lens pressure and your flow rate will be correct.



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Please be specific

For us to help with the issue we need
as much information as possible

Example:

The AB is low, what should I do?



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AMS Electronics Changes

Chopper circuit upgrade:

- New 14 pin connector, not back compatible (215-073)

HB display is now real (Rev L 215-077)

Improved 24V amperage reading on Pump Box (215-085)

New pump controller firmware features:

- Master Interlock > V4.1 (215-070)
- Selective pump on/off control



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