FAQs

Monday 12:45 – 13:05

FAQS - 1

Q - One of my turbo pumps has stopped. What should I do?

A - Turn off all turbo pumps, do not keep running the system. Keep the diaphragm pump on to protect the MCP. Do not vent the system just because a turbo has failed.
FAQS - 2

Q - My 10 Baratron gauge use to read 0.02 with the valve closed now it reads 0.05, I think I have a leak.

A – Unlikely. The MKS Baratron gauge is rated 0.5% accuracy of full scale (10 torr). So expect +/- 0.05 torr variability.

FAQS - 3

Q - I don’t have a DMA or atomizer, can I align the lens using the AB?

A – No….the AB is too broad. Good beam alignment requires a good point source beam. This is why we use 300-350 nm AN. We know this is a tight beam from the Beam Width Probe measurements.
FAQS - 4

Q - I only have an atomizer, can I align the lens with polydisperse AN?

A – No….for the same reason as above. Different size particles focus with different efficiencies, smaller particles are not well focused.

FAQS - 5

Q - How often should I…
   – Align the lens
   – Do a size calibration
   – Calibrate flow rate
   – Do an IE calibration
   – Check vacuum system

A – see section on Calibrations
   – Check vacuum system….always. Watch this like you watch the AB. Don’t forget the MD1 pump.
FAQS - 6

Q - How many people know pumps currents?
A – With the exception of P2 all pumps should be <300 mA. P2 is ~450 mA no load and ~850 mA with load.

Q - How many people know what the MD1 backing pressure is?
A – if it is >~5 torr consider that there is a problem, perhaps a leak or worn diaphragms.

FAQS - 7

Q - How does the interlock work?
A – See section on AMS Hardware/Pump system
FAQS - 8

Q - Do I need my interlock cable connected?

A – Yes for AMS E-Box, no for TPS..... See section on AMS Hardware/Pump system.

*Running with the TPS interlock cable disconnected is not a good practice.*

FAQS - 9

Q - How can I test to see if my interlock is functioning properly?

A –

1) Shut off the turbos (will test full system).
2) Remove interlock cable from E. Box (will only test vaporizer and vaporizer bias).
3) Removing TPS interlock cable will not test the TPS interlock!
FAQS - 10

Q - How important is it to upgrade my Pump Box so that I have the Master Interlock?
A – Very important

FAQs - 11

Q - How can I tell if the MD1 pump is not performing?
A –
1) Evaluate turbo pump currents.
2) Check MD1 base pressure with no gas load.
FAQs - 12

Q - Pumps are failing frequently, can I determine if this due to a leak somewhere or another problem?

A – Monitor pump currents and pump temperature as well as MD1 backing pressure.