

Re: Varian rotary vane pump lost all its oil through exhaust?

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- *From:* sam@xxxxxxxxxxxxxx (Samuel M. Goldwasser)
 - *Date:* 18 Aug 2008 19:35:49 -0400
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Matthew Karam <mkaram@xxxxxxxxxx> writes:

over the weekend I had a vacuum system fail on me.
In a nutshell, from high to low vac:

vac chamber > turbo pump > electronic safety valve > foreline trap >
rotary pump > oil mist filter > exhaust hose

There were no power surges.

It looks to me like the safety valve overheated and failed.
This introduces a small air leak so the system can slowly vent.

The rotary pump spewed out all its oil through the exhaust. The
filter was full, dripping and there's a puddle on the floor. The RVP
is almost completely empty.
I can't fathom what sort of failure could cause this.

I checked the exhaust filter for little bits of material (to see if
something crumbled inside the pump) but it was clean except for the
oil.

Is there a problem is these pumps are not perfectly level? I can't see
how that would cause this... but that's all I've got right now... it's
not that far off level...

Any ideas? Thanks everybody!

The only thought I have is that if the safety valve failed and the rotary
pump was running near 1 atm for many hours, it could have dumped nearly
all its oil out the exhaust. No problem with pump (or at least there
wasn't). Running with low oil probably didn't do it any good.

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sam | Sci.Electronics.Repair FAQ: <http://www.repairfaq.org/>

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