

5 Quick Checks for Optimal Vacuum Pump Performance

The role of vacuum is often underestimated because it is intangible. Yet, in many labs, the technology is invaluable. In fact, vacuum pumps are laboratory workhorses, providing the conditions needed to run many lab applications. Unfortunately, pumps are often exposed to acid or organic chemical vapors that can cause maintenance issues. Depending on how often a vacuum pump is used, researchers should perform checks monthly, every 2-3 months or every 6 months. Consult this list for five basic checks that can ensure the performance of your instrument.



1



Look

- Is there visible damage, corrosion, or contamination on the pump and its connections?

2



Listen

- Is the pump making a strange/new noise? Eg: humming, rattling, loud, aggressive.

3



Smell

- Is there an abnormal smell? Eg: burning/melting.

4



Check

- Check the ultimate vacuum depth isolated from the application using a precision gauge.
- If oil-sealed, check that the oil is clean.
- If dry diaphragm, check that the diaphragms and valves are undamaged.
- When was service last performed?
- Are all connections tight and secure?
- How is the pump temperature? Is the pump hotter than normal?

5



Change

- Change/replace any broken or damage components and fittings.
- Change dirty oil in oil-filled pumps and install a new maintenance kit if required.
- Change diaphragms and valves in dry diaphragm pumps if required.