

APPLICATION NOTE

Which assets should be screened for vibration?

Not only are the number of assets in facilities increasing, but the types of assets are expanding, too. With a multitude of equipment under your control, route-based maintenance can be difficult to complete while attending to daily activities. It is reported that over 90% of machinery could benefit from some kind of remote monitoring program.

Screening assets for vibration can improve uptime, reduce costs and ensure that you aren't wasting efforts on unnecessary time-based maintenance. Placing one or two triaxial sensors on each asset is sufficient to screen for excessive vibration. Using wirelessly connected, remotely accessible sensors can help you move from preventive maintenance to predictive.

Motors

Motors are some of the most critical assets in any plant. Because they are subjected to wear-causing cyclical forces, they may experience misalignment or looseness that can cause increased mechanical load and decreased output. Bearings may wear and cause faults. For this reason, monitoring asset health with vibration sensors can increase equipment life.

Fans and blowers

Ensuring that machinery stays cool is vital to most, if not all, operations. In many cases, such as HVAC, fans can be hard to reach and bearings difficult to access. Remote monitoring allows your team to take measurements from a distance safely and see the data on their smart device. Common faults include:

- Fan blade rubbing
- Shaft and casing misalignment
- Shaft and fan blade imbalance
- Particulate build-up or erosion of blades

Pumps

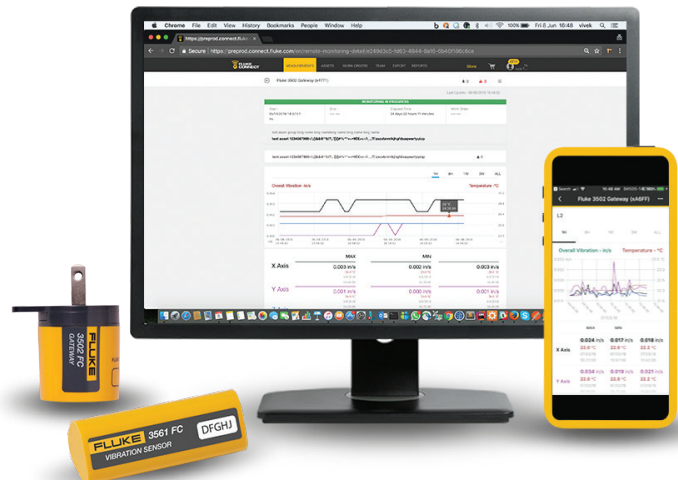
Most facilities have numerous pumps in operation. Shaft misalignment is a leading cause of excessive vibration. This can result when baseplate problems including soft foot, loose bolts, cracks in a frame or improper fit between components occur. Identifying excess vibration is imperative to prevent potentially catastrophic failure.

Gearboxes

Gearboxes are everywhere in industrial applications and usually difficult to reach. Undetected misalignment or bearing wear can cause premature failure. With remote sensors, you'll be notified in time to plan maintenance and allocate resources.

Conveyor systems

Drivetrain misalignment can cause costly downtime in packing and distribution operations. Using remote wireless sensors and cloud-based software, teams can receive alarm notifications on their connected smart devices alerting them to impending breakdowns.



Automated assembly lines

Robotic machinery is a significant component of many plants, especially in the automotive industry. Remotely gathering continuous data from robotic assembly lines with wireless vibration sensors can extend asset operational life and ensure that personnel remain outside dangerous areas.

Chillers

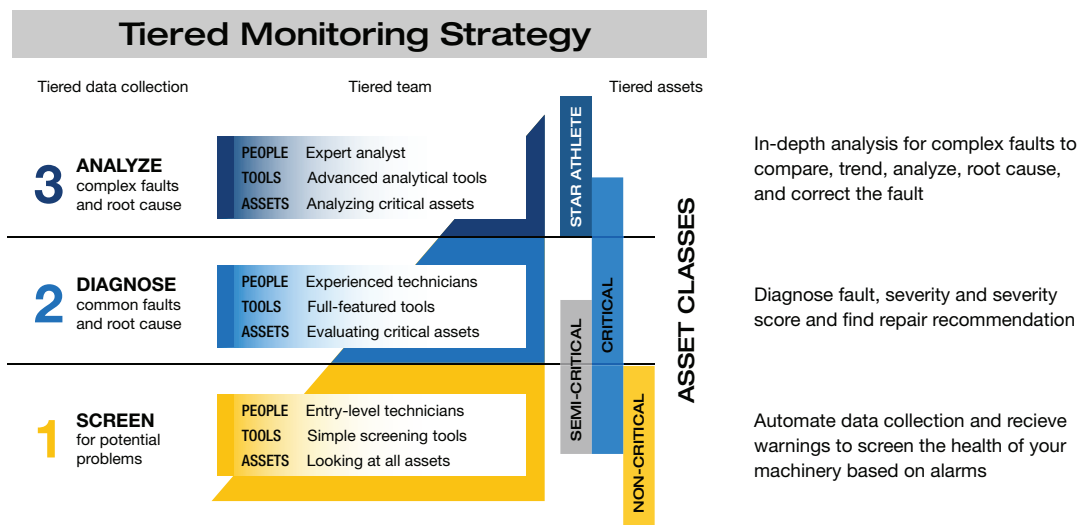
Refrigerants are hazardous materials that are not limited to the health-care industry or food and beverage space. Operations, such as data centers, rely on cooling equipment as well. Ensure that the compressors in your chillers operate at optimal capacity by screening for excess vibration.

Benefits of the 3561 FC & FCCM software

The Fluke 3561 FC Vibration Sensor is wireless and can be easily setup in around an hour. The Fluke Connect™ Condition Monitoring (FCCM) software will send alarms to users when assets experience conditional changes based on the Fluke Overall Vibration Severity scale.

Unlike route-based measurement collection, the 3561 FC sends continuous data to the cloud, enabling you to view data trends. Analyze the data, view on graphs and create customized dashboards to share with your team.

To learn more about the Fluke 3561 FC Vibration Sensor and how it can improve your predictive maintenance program, please call our sales team or visit Fluke.com.



Screening, diagnosing, and analyzing are all forms of vibration monitoring. **Vibration screening** offers the greatest initial value by providing a simple scalable solution to extend asset coverage, reduce routes and minimize labor costs.

Accelix. Connected Reliability.

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