



THE CASE STUDY

Class monitor



The unexpected failure of a bearing, gear or other critical machine element can be expensive, in terms of both repair and downtime. But monitoring systems and components can also be difficult and expensive, too. That's why you'll want to know about Timken's StatusCheck.

StatusCheck measures overall vibration on two axes and consists of a wireless transmitter and receiver. The wireless transmitter, which includes an accelerometer and temperature sensor, can either be permanently or magnetically secured to the target equipment. The collected data is then transmitted to a designated computer, which can be up to a half-mile away. StatusCheck requires very little training, and offers multiple connectivity options, open source data storage and easy data interpretation.

When rotating components such as bearings and gears become worn, contaminated or damaged, they often lead to downtime and costly problems. That's why, increasingly, condition monitoring techniques are being used to keep tabs on such components. By predicting failure and allowing timely corrective action, such techniques maximise uptime, reduce failures and minimise costs.

But which condition monitoring tool should you choose? To select the right product for your needs, you should consider factors such as the number of points to be monitored, your budget, the critical value of the equipment in question, and the expertise of your maintenance staff. You may well find that a portable instrument, ideal for either spot checks or periodic route-based data collection, will suit your requirements perfectly. For more complex applications, you might decide that a hardwired monitoring solution is required, or – if, say, you want to monitor multiple locations – that an on-line system is appropriate. Timken, of course, supplies a full range of these solutions.

Going wireless

But what of the situation where the component that needs to be monitored is in a hard to reach or otherwise dangerous location. Does this make condition monitoring impossible or prohibitively expensive? The answer's an emphatic, No! On

these occasions, you should consider a product such as Timken's StatusCheck, a wireless condition monitoring system designed to detect and report excessive levels of temperature and vibration.

Offering outstanding flexibility, StatusCheck delivers a range of benefits, including ease of installation, and the ability to provide 24/7 monitoring of equipment – including equipment that's in an area too difficult to access with portable equipment. StatusCheck provides data that gives equipment operators and maintenance personnel the ability to establish a baseline for acceptable performance levels of vibration and temperature on a particular piece of equipment. This baseline then is used to establish warning and alarm limit thresholds. If temperature and/or vibration levels exceed the thresholds, operators receive an alert. As time passes and the thresholds are adjusted, wireless monitoring devices become an increasingly accurate and reliable tool to track process fluctuations, provide warnings and therefore prevent unexpected downtime.

- 24/7 monitoring of the equipment
- Monitoring areas that are too difficult to access with portable equipment

Keep on rolling

The StatusCheck system is a wireless system designed to monitor bearing operating conditions and issue alerts when it detects excessive levels of temperature and vibration.

Toyota keeps on rolling

Timken StatusCheck was installed to complement their existing predictive vibration programme.

A defect in the outer race of a fan bearing was detected and the bearing replaced, averting a serious problem that could have caused 16 hours of downtime.

The quick detection of the problem also eliminated costly shaft damage.

*Based on 16 hours of downtime per bearing and an installation of ten bearings.

Savings in downtime

160 hours*