

## CONDITION MONITORING IDENTIFIES BEARING WEAR AND LOOSENESS IN MILLING BLOWER



AVT Reliability® supports this leading distillery in delivering a more reliable and predictable plant operation through condition-based maintenance strategies, enabled by the Machine Sentry® platform. Routine vibration analysis helps to minimise unplanned failures and protect critical production assets.



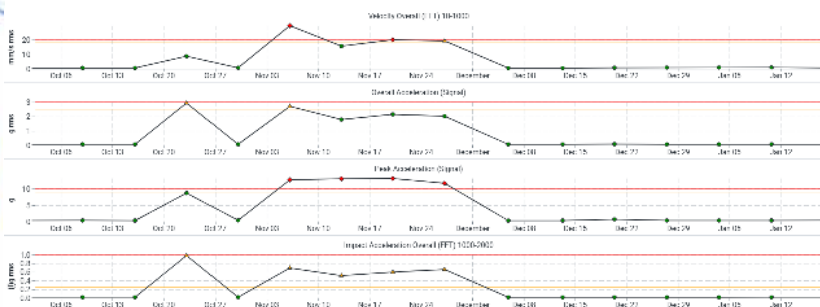
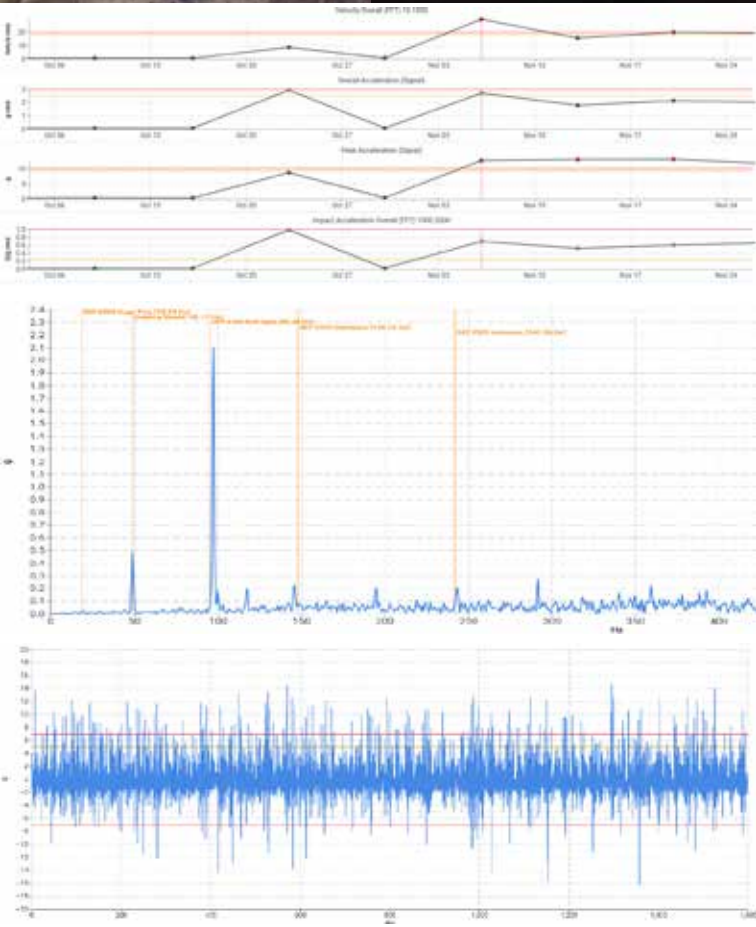
### THE CHALLENGE

The monitored asset was a blower located in the silos area, forming a key part of the milling process. An unexpected failure would result in a production halt, leading to significant financial loss. Delays due to parts availability, labour, or scheduling of emergency repairs could further extend downtime and increase cost.

### OUR APPROACH

AVT Reliability® has provided vibration monitoring services at this site since 2023. Monthly visits are carried out to collect data across critical assets using Machine Sentry® mobile sensors, supported by permanently installed fixed sensors for continuous coverage.

All collected data is analysed by AVT engineers, with abnormal readings escalated via Machine Sentry's reporting tools. In addition to core vibration services, AVT aims to expand its support on-site to include lubrication analysis, ultrasonic inspection, precision alignment, balancing services, and training to deliver a full reliability solution.



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***This was a textbook case of why condition monitoring matters. The vibration data gave us a clear signal early enough to avoid an in-service failure.***

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### OUR FINDINGS

During scheduled condition monitoring in November 2024, AVT observed a sudden step change in the blower's running condition.

Velocity levels spiked to 29 mm/s and acceleration reached 3 g, breaching alarm thresholds. Spectral analysis showed non-synchronous peaks aligning with bearing fault frequencies, and signs of rotating looseness.

Acceleration waveforms showed high crest factors and sharp impacts, with peak-to-peak values exceeding 30 g, clear indicators of bearing deterioration and mechanical instability. An Action Note was immediately raised in Machine Sentry® and the site contact was alerted.

### THE SOLUTION

Following AVT's alert and recommendation, a planned intervention was scheduled during the site's December 2024 shutdown.

An external contractor was brought in to carry out a motor bearing replacement. In addition, the site maintenance team replaced the drive belts and performed belt alignment.

Thanks to early fault detection and effective planning, the corrective work was completed during downtime with no impact on production or additional disruption.

### FOLLOW UP

In the December 2024 monitoring cycle following repairs, AVT confirmed a significant drop in vibration levels. All measurements returned to baseline, confirming that the bearing and belt replacement had resolved the issue.

Had the defect gone unnoticed, bearing failure could have led to extensive motor damage, higher repair costs, and unplanned production losses.

The proactive response prevented secondary damage and avoided a failure event.

### AT A GLANCE

INDUSTRY: Beverage / Distillery

PROCESS: Milling

EQUIPMENT: Blower

PRODUCTS: Machine Sentry® sensors

SERVICES: Condition-based vibration monitoring

### Need help?

**Contact our experts**

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