HI-SPEED INDUSTRIAL SERVICE QualiTest® Diagnostics

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December 31, 2024

Josh Cavitt
Sonoco
Memphis, TN

Josh,

The following is a summary of findings from the quarterly vibration survey performed at your facility on 12/18/24. Please let us know if there are any questions or comments.

***QualiTest***® uses a four step rating system for defects.

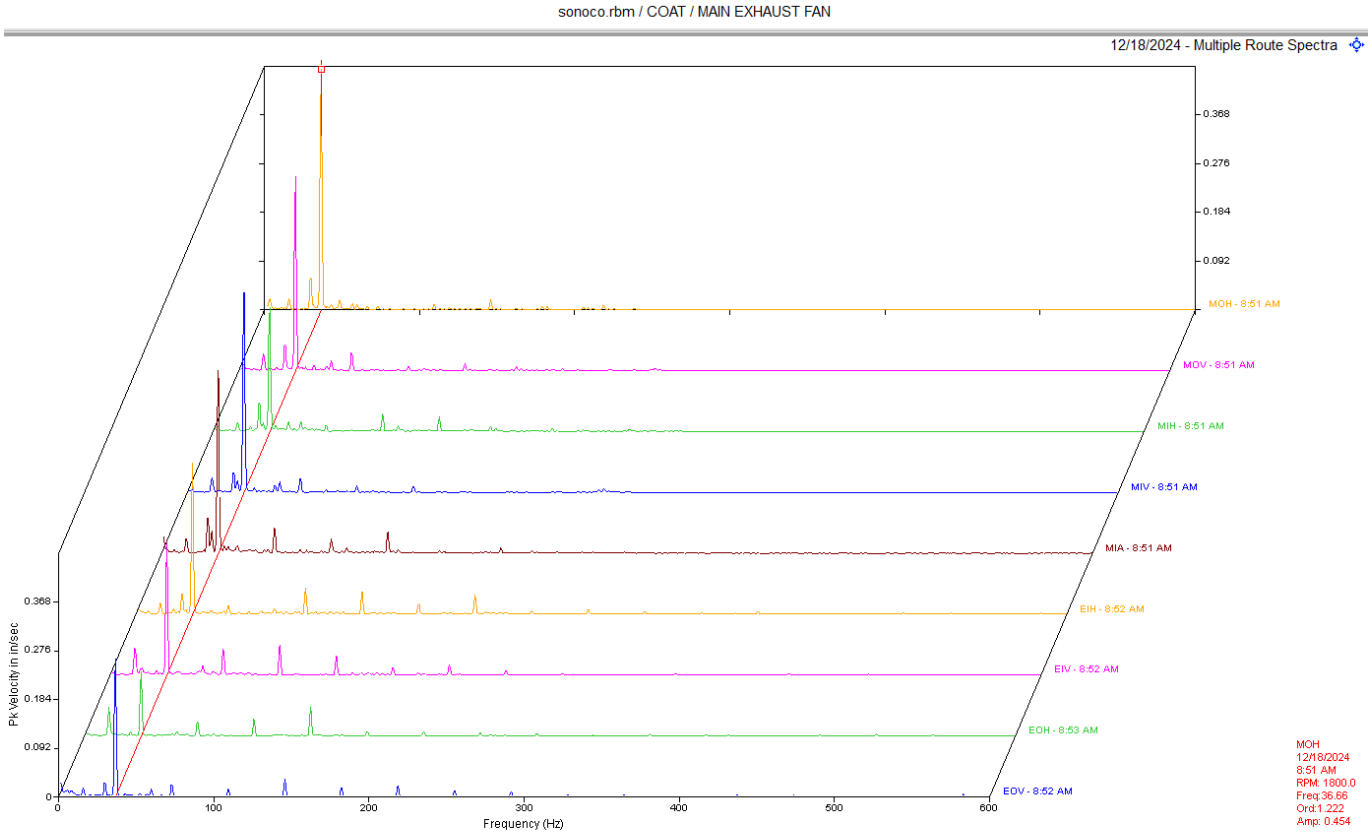
**Class I:** Defect is present, but effect on reliability is not clear; no immediate action is required. Continue to normally monitor.

**Class II:** Defect (s) present that may cause problem in long term (2-6 months). Repair during normal maintenance scheduling. Continue to monitor.

**Class III;** Defect (s) present that may cause failure in short term (less than 2 months). This should be addressed as soon as practical, with a high maintenance priority. Increase monitoring frequency.

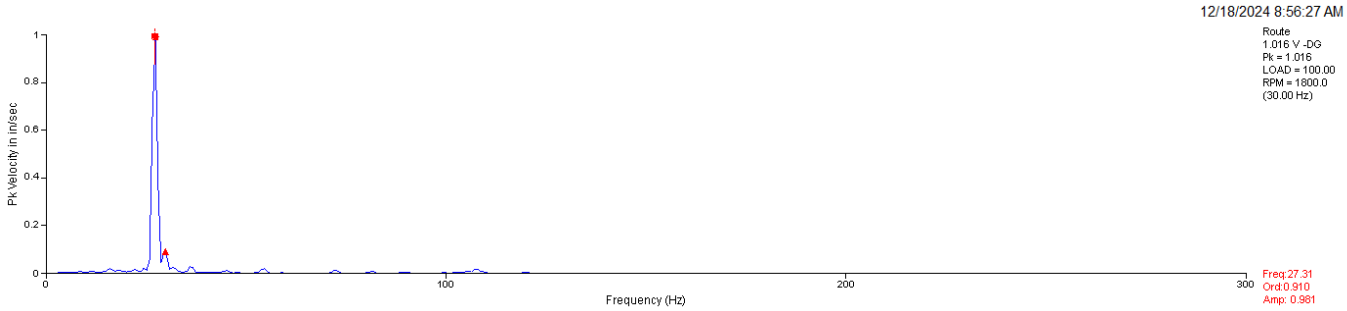
**Class IV;** Defect (s) present that makes continued reliability unpredictable, and possibility of secondary damage is high. Repairs should be made ASAP. An unscheduled shutdown should be considered for repairs

## *Defects*



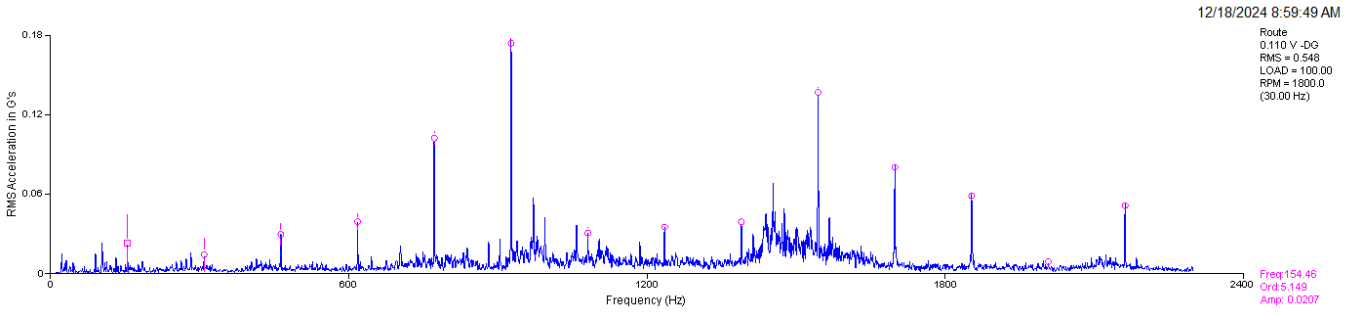

**CLASS II Main Exhaust Fan**

Motor/fan data shows a dominant vibration at 36 HZ. in the motor and the fan with the motor having highest amplitude. This frequency is fan speed. For now, ensure motor/fan base fasteners are tight. Ensure sheaves are properly aligned with minimal face run out.



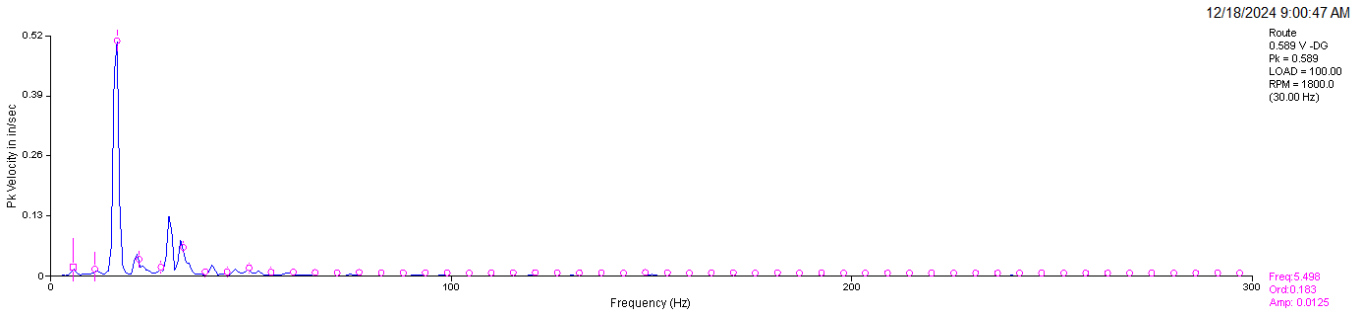

**CLASS II Zone 3 Supply Fan**

Motor axial data shows a dominant vibration at a frequency close to 1 x motor rpm. This peak is actually a harmonic of a sub-synchronous peak. This may be a belt harmonic but could also be a resonant frequency. Motor also has some high frequency vibration and may need lubrication. Check motor bearings for proper lube, check belts for issues, and ensure all motor base fasteners are tight and structure is sound.




**CLASS II Zone 5 Supply Fan**

Fan inboard (DE) bearing data shows non-synchronous harmonics in the spectrum. This is an indication of bearing defects. Inspect fan bearings for defects and wear as scheduling allows.




**CLASS II Exhaust Fan**

Motor has vibration that is sub synchronous and is likely a harmonic of belt frequency. Check belts soon. Ensure sheaves are in good order as well.

As always, it has been a pleasure to serve Sonoco. If there are any comments or questions, do not hesitate to contact us.

Sincerely,

**Senior Reliability Specialist**
**ISO Certified Vibration Analyst, Category III**

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