



**QualiTest® Diagnostics**

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March 4, 2025

Nucor General Recycling

Subject: January vibration survey

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Most of the machines surveyed were found to be in good condition except for the following.

**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

**Hi-Speed Industrial Service** tests and inspects industrial machinery and equipment and makes recommendations concerning maintenance and repairs based on its experience in the field of industrial repair and maintenance. The information contained herein is provided as an opinion only, not as a guaranty or warranty of the matters discussed herein.

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

Sincerely,

ISO Certified Vibration Analyst, Category III

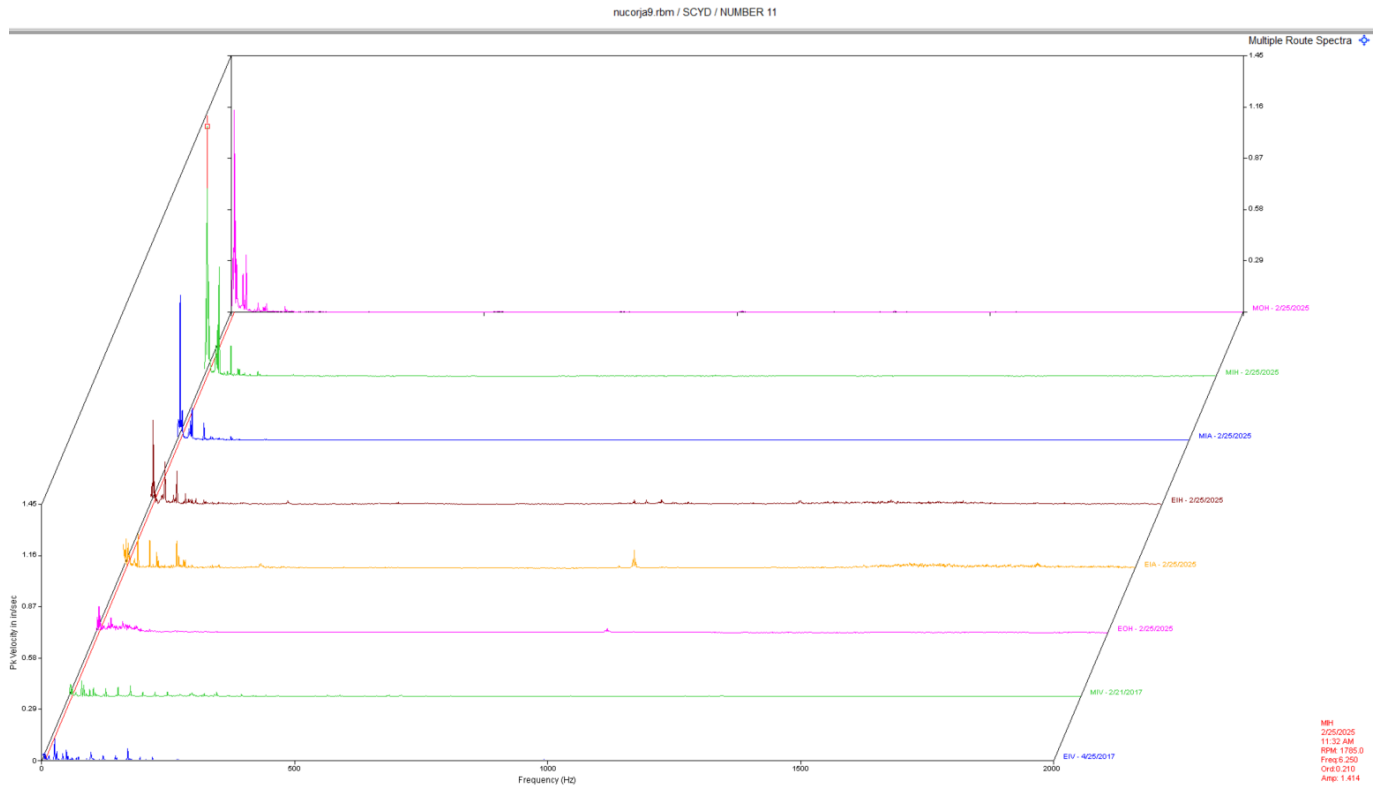


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## Defects



### Conveyor 11

Overall vibration is lower since last survey but still remains above alarm level. Vib appears to be at a low frequency of 6 Hz. This may be belt frequency or output frequency. Ensure sheaves are aligned properly. Ensure conveyor shaft or gear output shaft is not bent. Gearbox data also shows some signs of internal wear. Rated as a **CLASS II** defect.

Abbreviated Last Measurement Summary  
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Database: nucorja9.rbm  
Station: Scrap Yard

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD
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SHREDDER - SHREDDER (25-Feb-25)		
	OVERALL LEVEL	1K-20KHz
MOH	.115 In/Sec	.103 G-s
MOV	.176 In/Sec	.084 G-s
MIV	.242 In/Sec	.175 G-s
MIH	.127 In/Sec	.132 G-s
MIA	.188 In/Sec	.400 G-s
CYCLONE - CYCLONE (25-Feb-25)		
	OVERALL LEVEL	1K-20KHz
MOH	.233 In/Sec	.230 G-s
MIH	.215 In/Sec	.707 G-s
MIA	.281 In/Sec	.310 G-s
EIH	.216 In/Sec	.149 G-s
EOH	.216 In/Sec	.018 G-s
M3 - MAG DRUM (25-Feb-25)		
	OVERALL LEVEL	1K-20KHz
MOH	.095 In/Sec	.241 G-s
MIH	.064 In/Sec	.197 G-s
MIA	.060 In/Sec	.079 G-s
GIH	.047 In/Sec	.096 G-s
GOH	.030 In/Sec	.059 G-s
IDB	.041 In/Sec	.0061 G-s
ODB	.024 In/Sec	.0051 G-s
NUMBER 11 - NUMBER 11 (25-Feb-25)		
	OVERALL LEVEL	1K-20KHz
MOH	1.490 In/Sec	.668 G-s
MIH	1.907 In/Sec	.629 G-s
MIA	.933 In/Sec	.339 G-s
EIH	.704 In/Sec	3.837 G-s
EIA	.633 In/Sec	6.669 G-s
EOH	.375 In/Sec	.288 G-s
NAIRCOMP - NEW SEPARATOR NORTH AIR COMP (25-Feb-25)		
	OVERALL LEVEL	1K-20KHz
MOH	.077 In/Sec	.071 G-s
MIH	.079 In/Sec	.922 G-s
MIA	.076 In/Sec	.964 G-s
EIH	.064 In/Sec	.650 G-s
EIA	.068 In/Sec	.692 G-s
EOH	.064 In/Sec	.474 G-s

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Clarification Of Vibration Units:

Acc --> G-s RMS  
Vel --> In/Sec PK