



**QualiTest® Diagnostics**

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January 21, 2021

General Recycling

Subject: January vibration survey

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Most of the machines surveyed were found to be in good condition with the exception of 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.

## Defects

### Conveyor 11

This unit has high radial and axial vibration that is likely due to the conveyor drum shaft being bent and the motor base being flexible. Inspect conveyor shaft for excessive run-out soon. Ensure belts and sheaves are aligned properly and not excessively worn. Rated as a **CLASS II** defect.

### Mag Drum

This unit has much lower vibration this survey and chain does not appear to be jerking the gear drive. There is still a broken foot on the gear drive. Replace gear drive as time allows. 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 (15-Jan-21)		
	OVERALL LEVEL	1K-20KHz
MOH	.122 In/Sec	.065 G-s
MOV	.081 In/Sec	.068 G-s
MIV	.078 In/Sec	.149 G-s
MIH	.128 In/Sec	.095 G-s
MIA	.063 In/Sec	.096 G-s
CYCLONE - CYCLONE (15-Jan-21)		
	OVERALL LEVEL	1K-20KHz
MOH	.092 In/Sec	.348 G-s
MIH	.124 In/Sec	.111 G-s
MIA	.091 In/Sec	.233 G-s
EIH	.142 In/Sec	.106 G-s
EOH	.177 In/Sec	.294 G-s
M3 - MAG DRUM (15-Jan-21)		
	OVERALL LEVEL	1K-20KHz
MOH	.081 In/Sec	.178 G-s
MIH	.069 In/Sec	.274 G-s
MIA	.062 In/Sec	.098 G-s
GIH	.067 In/Sec	.077 G-s
GOH	.064 In/Sec	.064 G-s
IDB	.046 In/Sec	.0058 G-s
ODB	.054 In/Sec	.0016 G-s
NUMBER 11 - NUMBER 11 (15-Jan-21)		
	OVERALL LEVEL	1K-20KHz
MOH	.573 In/Sec	.277 G-s
MIH	.730 In/Sec	.411 G-s
MIA	.461 In/Sec	.128 G-s
EIH	.465 In/Sec	.836 G-s
EIA	.297 In/Sec	1.431 G-s
EOH	.189 In/Sec	.073 G-s
SAIRCOMP - NEW SEPARATOR SOUTH AIR COMP (15-Jan-21)		
	OVERALL LEVEL	1K-20KHz
MOH	.067 In/Sec	.068 G-s
MIH	.092 In/Sec	.809 G-s
MIA	.073 In/Sec	1.400 G-s
EIH	.081 In/Sec	.959 G-s

EIA	.070 In/Sec	.510 G-s
EOH	.091 In/Sec	1.291 G-s

NAIRCOMP - NEW SEPARATOR NORTH AIR COMP (15-Jan-21)

	OVERALL LEVEL	1K-20KHz
MOH	.082 In/Sec	.206 G-s
MIH	.074 In/Sec	.873 G-s
MIA	.076 In/Sec	.862 G-s
EIH	.078 In/Sec	1.458 G-s
EIA	.069 In/Sec	.718 G-s
EOH	.087 In/Sec	.803 G-s

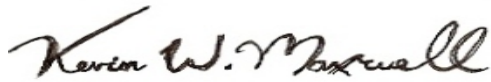
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Clarification Of Vibration Units:

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

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

Sincerely,



ISO Certified Vibration Analyst, Category III



**QualiTest<sup>®</sup> Diagnostics**

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