



**QualiTest® Diagnostics**

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July 1<sup>st</sup>, 2022

General Recycling

Subject: June 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.

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® Diagnostics**

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## Defects

### Conveyor 11

Motor/gear drive base is flexible causing some 1 x rpm motor vibration. Inspect base and structural mounts/fasteners. Rated as a **CLASS II** defect.

### Cyclone Fan

Outboard (opposite drive end) fan bearing continues to show signs of race defects according to the spectral data. We will continue to monitor this closely. Rated as a **CLASS I** defect for now.

#### Abbreviated Last Measurement Summary \*\*\*\*\*

Database: nucorja9.rbm  
Station: Scrap Yard  
Route No. 1: SCRAP YARD

MEASUREMENT POINT -----	OVERALL LEVEL -----	HFD / VHFD -----
SHREDDER - SHREDDER	(29-Jun-22)	
	OVERALL LEVEL	1K-20KHz
MOH - Motor Outboard Horizontal	.220 In/Sec	.076 G-s
MOV - MOTOR OUTBOARD VERTICAL	.049 In/Sec	.082 G-s
MIV - Motor Inboard Vertical	.053 In/Sec	.045 G-s
MIH - Motor Inboard Horizontal	.199 In/Sec	.149 G-s
MIA - Motor Inboard Axial	.069 In/Sec	.167 G-s
CYCLONE - CYCLONE	(29-Jun-22)	
	OVERALL LEVEL	1K-20KHz
MOH - Motor Outboard Horizontal	.083 In/Sec	.206 G-s
MIH - Motor Inboard Horizontal	.123 In/Sec	.080 G-s
MIA - Motor Inboard Axial	.153 In/Sec	.214 G-s
EIH - Equipment Inboard Horizontal	.197 In/Sec	.364 G-s
EOH - Equipment Outboard Horizontal	.225 In/Sec	.412 G-s
M3 - MAG DRUM	(29-Jun-22)	
	OVERALL LEVEL	1K-20KHz
MOH - Motor Outboard Horizontal	.166 In/Sec	.261 G-s
MIH - Motor Inboard Horizontal	.110 In/Sec	.152 G-s
MIA - Motor Inboard Axial	.154 In/Sec	.193 G-s
GIH - GEARBOX Inboard Horizontal	.120 In/Sec	.049 G-s
GOH - GEARBOX OUTBOARD HORIZONTAL	.143 In/Sec	.087 G-s
IDB - INBOARD DRUM BEARING	.044 In/Sec	.0074 G-s
ODB - OUTBOARD DRUM BEARING	.037 In/Sec	.0020 G-s
NUMBER 11 - NUMBER 11	(29-Jun-22)	
	OVERALL LEVEL	1K-20KHz
MOH - Motor Outboard Horizontal	.606 In/Sec	.301 G-s
MIH - Motor Inboard Horizontal	.732 In/Sec	.224 G-s
MIA - Motor Inboard Axial	.425 In/Sec	.161 G-s
EIH - Equipment Inboard Horizontal	.359 In/Sec	1.057 G-s
EIA - Equipment Inboard Axial	.405 In/Sec	.859 G-s
EOH - Equipment Outboard Horizontal	.201 In/Sec	.064 G-s

SAIRCOMP	- NEW SEPARATOR SOUTH AIR COMP	(29-Jun-22)	
		OVERALL LEVEL	1K-20KHz
MOH	- Motor Outboard Horizontal	.095 In/Sec	.044 G-s
MIH	- Motor Inboard Horizontal	.107 In/Sec	.760 G-s
MIA	- Motor Inboard Axial	.093 In/Sec	1.488 G-s
EIH	- Equipment Inboard Horizontal	.125 In/Sec	.773 G-s
EIA	- Equipment Inboard Axial	.082 In/Sec	.955 G-s
EOH	- Equipment Outboard Horizontal	.081 In/Sec	.489 G-s

NAIRCOMP	- NEW SEPARATOR NORTH AIR COMP	(29-Jun-22)	
		OVERALL LEVEL	1K-20KHz
MOH	- Motor Outboard Horizontal	.114 In/Sec	.061 G-s
MIH	- Motor Inboard Horizontal	.113 In/Sec	.816 G-s
MIA	- Motor Inboard Axial	.064 In/Sec	.784 G-s
EIH	- Equipment Inboard Horizontal	.113 In/Sec	1.325 G-s
EIA	- Equipment Inboard Axial	.056 In/Sec	.781 G-s
EOH	- Equipment Outboard Horizontal	.128 In/Sec	.419 G-s

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Clarification Of Vibration Units:

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