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October 21, 2024

North Shelby Plant Millington, TN

The following is a summary of findings from the October 2024 monthly vibration survey at the North Shelby site.

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

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

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

<u>Class III</u>: 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.

**<u>Class IV</u>**; 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

## 301 Flare Blower CLASS II

## **Observations:**

Data above is the motor outboard horizontal. There appear to be several harmonics of a non-synchronous frequency (3.1 orders of rpm) present in the spectra that line up with outer race defect fundamental and its harmonics. This is indication of bearing defects in the motor.

## **Recommendations**:

Motor should be replaced in the next few months. We are monitoring this closely.

## Rinse Compressor CLASS II



#### **Observations:**

Drive motor data shows some high frequency vibration. Motor is also making a squealing type noise. The last reading showed amplitude to be 2.1 g's on average. Spectral data does show peaks that appear to line up with defect harmonics. Spectral data shows a noise floor 1500-5000 hz range. Peak to peak waveform amplitude is near 28 g's.

#### **Recommendations:**

Vibration characteristics indicate a lube issue or bearing wear. Motor likely needs attention during next extended shutdown. We are monitoring this closely. Rated as a **CLASS II** defect for now.

Abbreviated	Last	Measurement	Summary
**********	*****	***********	*******

Area: millington plant	
MEASUREMENT POINT OVERALL LEVEL HFD / VHI	FD
301 FLARE - 301 FLARE BLOWER (15-Oct-24)	
MOH 067 In/Sec 1 271 G-s	
MON .007 III/Sec 1.271 G-S MOV 216 In/Sec 334 G-s	
MIH .081 In/Sec .643 G-s	
MIV .145 In/Sec .114 G-s	
MIA .029 In/Sec .359 G-s	
EIH .126 In/Sec .298 G-s	
EIV .069 In/Sec .449 G-s	
EIA .047 In/Sec .139 G-s	
EOH .098 In/Sec .445 G-s	
EUV .218 IN/Sec .492 G-S	
RINSE COMP - RINSE COMPRESSOR (15-Oct-24) OVERALL LEVEL 1K-20KHz	
MOH .150 In/Sec 3.619 G-s	
M1P .066 In/Sec	
MIH .096 In/Sec 2.348 G-s	
M2P .021 In/Sec	
MIA .095 In/Sec .288 G-s	
11H .0/8 In/Sec .85/ G-s	
11A .150 In/Sec .1/5 G-S	
OIH .093 In/Sec .881 G-s	
OIH .093 In/Sec .881 G-s OIA .096 In/Sec .211 G-s	
OIH   .093 In/Sec   .881 G-s     OIA   .096 In/Sec   .211 G-s     OOH   .090 In/Sec   .759 G-s	
OIH   .093 In/Sec   .881 G-s     OIA   .096 In/Sec   .211 G-s     OOH   .090 In/Sec   .759 G-s	
OIH   .093 In/Sec   .881 G-s     OIA   .096 In/Sec   .211 G-s     OOH   .090 In/Sec   .759 G-s	
OIH   .093 In/Sec   .881 G-s     OIA   .096 In/Sec   .211 G-s     OOH   .090 In/Sec   .759 G-s     VAC COMP   - VACUUM COMPRESSOR   (15-Oct-24)     OVERALL LEVEL   1K-20KHz     MOH   .104 In/Sec   1.185 G-s	
OIH   .093 In/Sec   .881 G-s     OIA   .096 In/Sec   .211 G-s     OOH   .090 In/Sec   .759 G-s     VAC COMP   - VACUUM COMPRESSOR   (15-Oct-24)     OVERALL LEVEL   1K-20KHz     MOH   .104 In/Sec   1.185 G-s     MIH   .122 In/Sec   1.529 G-s	
OIH   .093 In/Sec   .881 G-s     OIA   .096 In/Sec   .211 G-s     OOH   .090 In/Sec   .759 G-s     VAC COMP   - VACUUM COMPRESSOR   (15-Oct-24)     OVERALL LEVEL   1K-20KHz     MOH   .104 In/Sec   1.185 G-s     MIH   .122 In/Sec   1.529 G-s     MIA   .097 In/Sec   .331 G-s	
OIH .093 In/Sec .881 G-s   OIA .096 In/Sec .211 G-s   OOH .090 In/Sec .759 G-s   VAC COMP - VACUUM COMPRESSOR (15-Oct-24)   OVERALL LEVEL 1K-20KHz   MOH .104 In/Sec 1.185 G-s   MIH .122 In/Sec 1.529 G-s   IIH .068 In/Sec .469 G-s	
OIH .093 In/Sec .881 G-s   OIA .096 In/Sec .211 G-s   OOH .090 In/Sec .759 G-s   VAC COMP - VACUUM COMPRESSOR (15-Oct-24)   OVERALL LEVEL 1K-20KHz   MOH .104 In/Sec 1.185 G-s   MIH .122 In/Sec 1.529 G-s   MIA .097 In/Sec .331 G-s   IIH .068 In/Sec .469 G-s   IIA .059 In/Sec .142 G-s	
OIH .093 In/Sec .881 G-s   OIA .096 In/Sec .211 G-s   OOH .090 In/Sec .211 G-s   OOH .090 In/Sec .759 G-s   VAC COMP - VACUUM COMPRESSOR (15-Oct-24)   OVERALL LEVEL 1K-20KHz   MOH .104 In/Sec 1.185 G-s   MIH .122 In/Sec 1.529 G-s   MIA .097 In/Sec .331 G-s   IIH .068 In/Sec .469 G-s   IIA .059 In/Sec .142 G-s   IOH .102 In/Sec .974 G-s   OIH .085 In/Sec .877 G-s	
OIH .093 In/Sec .881 G-s   OIA .096 In/Sec .211 G-s   OOH .090 In/Sec .211 G-s   OOH .090 In/Sec .759 G-s   VAC COMP - VACUUM COMPRESSOR (15-Oct-24)   MOH .104 In/Sec 1.185 G-s   MIH .122 In/Sec 1.529 G-s   MIA .097 In/Sec .331 G-s   IIH .068 In/Sec .469 G-s   IA .059 In/Sec .142 G-s   IOH .102 In/Sec .974 G-s   OIA .066 In/Sec .315 G-s	
OIH .093 In/Sec .881 G-s   OIA .096 In/Sec .211 G-s   OOH .090 In/Sec .211 G-s   OOH .090 In/Sec .759 G-s   VAC COMP - VACUUM COMPRESSOR (15-Oct-24)   MOH .104 In/Sec 1.185 G-s   MIH .122 In/Sec 1.529 G-s   MIA .097 In/Sec .331 G-s   IIH .068 In/Sec .469 G-s   IIA .059 In/Sec .142 G-s   IOH .102 In/Sec .974 G-s   OIH .085 In/Sec .877 G-s   OIA .066 In/Sec .315 G-s   OOH .078 In/Sec .885 G-s	
OIH .093 In/Sec .881 G-s   OIA .096 In/Sec .211 G-s   OOH .090 In/Sec .211 G-s   OOH .090 In/Sec .759 G-s   VAC COMP - VACUUM COMPRESSOR (15-Oct-24)   MOH .104 In/Sec 1.185 G-s   MIH .122 In/Sec 1.529 G-s   MIA .097 In/Sec .331 G-s   IIH .068 In/Sec .469 G-s   IOH .102 In/Sec .142 G-s   OIH .085 In/Sec .877 G-s   OIA .066 In/Sec .315 G-s   OOH .078 In/Sec .885 G-s	
OIH .093 In/Sec .881 G-s   OIA .096 In/Sec .211 G-s   OOH .090 In/Sec .211 G-s   OOH .090 In/Sec .211 G-s   VAC COMP - VACUUM COMPRESSOR (15-Oct-24)   MOH .104 In/Sec 1.185 G-s   MIH .122 In/Sec 1.529 G-s   MIA .097 In/Sec .331 G-s   IIH .068 In/Sec .469 G-s   IOH .102 In/Sec .142 G-s   IOH .059 In/Sec .142 G-s   OIH .085 In/Sec .877 G-s   OIA .066 In/Sec .315 G-s   OOH .078 In/Sec .885 G-s   COOLFAN1 - COOLING FAN 1 (15-Oct-24)   OVERALL LEVEL 1K-20KHz	
OIH .093 In/Sec .881 G-s   OIA .096 In/Sec .211 G-s   OOH .090 In/Sec .211 G-s   OOH .090 In/Sec .211 G-s   VAC COMP - VACUUM COMPRESSOR (15-Oct-24)   MOH .104 In/Sec 1.185 G-s   MIH .122 In/Sec 1.529 G-s   MIA .097 In/Sec .331 G-s   IIH .068 In/Sec .469 G-s   IIA .059 In/Sec .142 G-s   IOH .102 In/Sec .974 G-s   OIH .085 In/Sec .885 G-s   COOLFAN1 - COOLING FAN 1 (15-Oct-24)   OVERALL LEVEL IK-20KHz MOH   MOH .025 In/Sec .402 G-s	
OIH .093 In/Sec .881 G-s   OIA .096 In/Sec .211 G-s   OOH .090 In/Sec .211 G-s   OOH .090 In/Sec .759 G-s   VAC COMP - VACUUM COMPRESSOR (15-Oct-24)   MOH .104 In/Sec 1.185 G-s   MIH .122 In/Sec 1.529 G-s   MIA .097 In/Sec .331 G-s   IIH .068 In/Sec .469 G-s   IIA .059 In/Sec .142 G-s   IOH .102 In/Sec .974 G-s   OIH .085 In/Sec .885 G-s   COOLFAN1 - COOLING FAN 1 (15-Oct-24)   OVERALL LEVEL IK-20KHz   MOH .025 In/Sec .402 G-s   MOH .025 In/Sec .402 G-s   MOH .025 In/Sec .121 G-s	
OIH .093 In/Sec .881 G-s   OIA .096 In/Sec .211 G-s   OOH .090 In/Sec .211 G-s   OOH .090 In/Sec .211 G-s   VAC COMP - VACUUM COMPRESSOR (15-Oct-24)   MOH .104 In/Sec 1.185 G-s   MIH .122 In/Sec 1.529 G-s   MIA .097 In/Sec .331 G-s   IIH .068 In/Sec .469 G-s   IIA .059 In/Sec .142 G-s   IOH .102 In/Sec .974 G-s   OIH .085 In/Sec .885 G-s   COOLFAN1 - COOLING FAN 1 (15-Oct-24)   MOH .025 In/Sec .402 G-s   MOH .025 In/Sec .402 G-s   MOH .025 In/Sec .121 G-s   MOH .022 In/Sec .121 G-s   MOV .028 In/Sec .121 G-s   MOV .022 In/Sec .100 G-s	
OIH .093 In/Sec .881 G-s   OIA .096 In/Sec .211 G-s   OOH .090 In/Sec .211 G-s   OOH .090 In/Sec .211 G-s   VAC COMP - VACUUM COMPRESSOR (15-Oct-24)   MOH .104 In/Sec 1.185 G-s   MIH .122 In/Sec 1.529 G-s   MIA .097 In/Sec .331 G-s   IIH .068 In/Sec .469 G-s   IIA .059 In/Sec .142 G-s   IOH .102 In/Sec .974 G-s   OIH .085 In/Sec .885 G-s   COOLFAN1 - COOLING FAN 1 (15-Oct-24)   MOH .025 In/Sec .402 G-s   MOH .025 In/Sec .402 G-s   MOH .022 In/Sec .121 G-s   MIH .022 In/Sec .139 G-s   MIN .029 In/Sec .139 G-s   MIA .029 In/Sec .102 G-s	
OIH .093 In/Sec .881 G-s   OIA .096 In/Sec .211 G-s   OOH .090 In/Sec .759 G-s   VAC COMP - VACUUM COMPRESSOR (15-Oct-24)   MOH .104 In/Sec 1.185 G-s   MIH .122 In/Sec 1.529 G-s   MIA .097 In/Sec .331 G-s   IIH .068 In/Sec .469 G-s   IIA .097 In/Sec .342 G-s   IOH .102 In/Sec .974 G-s   OIH .085 In/Sec .885 G-s   OIH .066 In/Sec .315 G-s   OH .025 In/Sec .402 G-s   MOH .022 In/Sec .300 G-s   MOV .028 In/Sec .121 G-s   MIH .022 In/Sec .102 G-s   MIA .029 In/Sec .139 G-s   MIA .029 In/Sec .102 G-s   COOLFAN2 - COOLING FAN 2 (15-Oct-24)	
OIH .093 In/Sec .881 G-s   OIA .096 In/Sec .211 G-s   OOH .090 In/Sec .759 G-s   VAC COMP - VACUUM COMPRESSOR (15-Oct-24)   MOH .104 In/Sec 1.85 G-s   MIH .122 In/Sec 1.529 G-s   MIA .097 In/Sec .331 G-s   IIH .068 In/Sec .469 G-s   IIA .059 In/Sec .142 G-s   IOH .102 In/Sec .974 G-s   OIH .066 In/Sec .315 G-s   OH .078 In/Sec .315 G-s   OH .078 In/Sec .121 G-s   MOH .022 In/Sec .121 G-s   MOH .022 In/Sec .139 G-s   MIH .029 In/Sec .139 G-s   MIA .029 In/Sec .102 G-s   MIA .029 In/	
OIH .093 In/Sec .881 G-s   OIA .096 In/Sec .211 G-s   OOH .090 In/Sec .759 G-s   VAC COMP - VACUUM COMPRESSOR (15-Oct-24)   MOH .104 In/Sec 1.185 G-s   MIH .122 In/Sec 1.529 G-s   MIA .097 In/Sec .331 G-s   IIH .068 In/Sec .469 G-s   IIA .059 In/Sec .142 G-s   IOH .102 In/Sec .974 G-s   OIH .066 In/Sec .315 G-s   OIH .025 In/Sec .885 G-s   COOLFAN1 - COOLING FAN 1 (15-Oct-24)   MOH .025 In/Sec .402 G-s   MOH .025 In/Sec .121 G-s   OVERALL LEVEL 1K-20KHz MC22 G-s   MOV .028 In/Sec .121 G-s   MIN .029 In/Sec .102 G-s   MIA .029 In/Sec .102 G-s	
OIH .093 In/Sec .881 G-s   OIA .096 In/Sec .211 G-s   OOH .090 In/Sec .759 G-s   VAC COMP - VACUUM COMPRESSOR (15-Oct-24)   MOH .104 In/Sec 1.185 G-s   MIH .122 In/Sec 1.529 G-s   MIA .097 In/Sec .331 G-s   IIH .068 In/Sec .469 G-s   IIA .059 In/Sec .142 G-s   IOH .102 In/Sec .974 G-s   OIH .085 In/Sec .887 G-s   OIH .026 In/Sec .974 G-s   OIH .025 In/Sec .885 G-s   COOLFAN1 - COOLING FAN 1 (15-Oct-24)   MOH .025 In/Sec .402 G-s   MOV .028 In/Sec .121 G-s   MOV .028 In/Sec .121 G-s   MIH .022 In/Sec .102 G-s   MIA .029 In/	
OIH .093 In/Sec .881 G-s   OIA .096 In/Sec .211 G-s   OOH .090 In/Sec .759 G-s   VAC COMP - VACUUM COMPRESSOR (15-Oct-24)   MOH .104 In/Sec 1.185 G-s   MIH .122 In/Sec 1.529 G-s   MIA .097 In/Sec .331 G-s   IIH .068 In/Sec .469 G-s   IIA .059 In/Sec .142 G-s   IOH .102 In/Sec .974 G-s   OIH .085 In/Sec .885 G-s   OOH .078 In/Sec .150 G-s   OH .025 In/Sec .402 G-s   MOH .025 In/Sec .402 G-s   MOH .025 In/Sec .121 G-s   MOH .025 In/Sec .121 G-s   MOH .025 In/Sec .102 G-s   MOV .028 In/Sec .139 G-s   MIA .029 In/Sec .102 G-s   MIA .029 In/Sec .102 G-s   MOH .029 In/Sec .102 G-s   MIA .029 In/Sec .102 G-s   MIA .029 In/Sec	
OIH .093 In/Sec .881 G-s   OIA .096 In/Sec .211 G-s   OOH .090 In/Sec .759 G-s   VAC COMP - VACUUM COMPRESSOR (15-Oct-24)   MOH .104 In/Sec 1.185 G-s   MIH .122 In/Sec 1.529 G-s   MIA .097 In/Sec .331 G-s   IIH .068 In/Sec .469 G-s   IIA .097 In/Sec .142 G-s   IOH .102 In/Sec .974 G-s   OIA .066 In/Sec .815 G-s   OIA .066 In/Sec .815 G-s   OH .025 In/Sec .402 G-s   OH .025 In/Sec .855 G-s   COOLFAN1 - COOLING FAN 1 (15-Oct-24)   MOH .025 In/Sec .402 G-s   MOV .028 In/Sec .121 G-s   MOH .025 In/Sec .402 G-s   MIH .022 In/Sec .101 G-s   MOV .028 In/Sec .121 G-s   MIA .029 In/Sec .102 G-s   MIA .029 In/Sec .102 G-s   COOLFAN2 - COO	
OIH .093 In/Sec .881 G-s   OIA .096 In/Sec .211 G-s   OOH .090 In/Sec .759 G-s   VAC COMP - VACUUM COMPRESSOR (15-Oct-24)   MOH .104 In/Sec 1.185 G-s   MIH .102 In/Sec .331 G-s   IIH .097 In/Sec .331 G-s   IIH .068 In/Sec .469 G-s   IIA .097 In/Sec .142 G-s   IOH .102 In/Sec .974 G-s   OIH .059 In/Sec .142 G-s   IOH .005 In/Sec .877 G-s   OIA .066 In/Sec .315 G-s   OH .078 In/Sec .885 G-s   COOLFAN1 - COOLING FAN 1 (15-Oct-24)   MOH .025 In/Sec .402 G-s   MOH .025 In/Sec .300 G-s   MIH .022 In/Sec .101 G-s   MOV .028 In/Sec .121 G-s   MIA .029 In/Sec .102 G-s   MIA .029 In/Sec .102 G-s   MOH .480 In/Sec .752 G-s   MOH .480 In/Se	
OIH .093 In/Sec .881 G-s   OIA .096 In/Sec .211 G-s   OOH .090 In/Sec .759 G-s   VAC COMP - VACUUM COMPRESSOR (15-Oct-24)   MOH .104 In/Sec 1.185 G-s   MIH .102 In/Sec .331 G-s   IIH .068 In/Sec .469 G-s   IIA .059 In/Sec .142 G-s   IOH .102 In/Sec .974 G-s   OIH .0066 In/Sec .885 G-s   OIH .0059 In/Sec .122 G-s   IIA .059 In/Sec .885 G-s   OIH .0066 In/Sec .315 G-s   OIH .025 In/Sec .402 G-s   MOH .025 In/Sec .402 G-s   MOH .025 In/Sec .121 G-s   MOH .022 In/Sec .102 G-s   MOV .028 In/Sec .121 G-s   MIN .029 In/Sec .102 G-s   MIN .029 In/Sec .102 G-s   MIA .029 In/Sec .102 G-s   MIA .029 In/Sec .102 G-s   MIA .029 In/Sec	
OIH   .093 In/Sec   .881 G-s     OIA   .096 In/Sec   .211 G-s     OOH   .090 In/Sec   .759 G-s     VAC COMP   - VACUUM COMPRESSOR   (15-Oct-24)     MOH   .104 In/Sec   1.185 G-s     MIH   .122 In/Sec   1.529 G-s     MIA   .097 In/Sec   .142 G-s     IIA   .097 In/Sec   .142 G-s     IIA   .059 In/Sec   .142 G-s     IIA   .059 In/Sec   .142 G-s     IIA   .059 In/Sec   .885 G-s     OIH   .066 In/Sec   .315 G-s     OIH   .066 In/Sec   .315 G-s     OIH   .025 In/Sec   .402 G-s     MOH   .025 In/Sec   .402 G-s     MOV   .028 In/Sec   .121 G-s     MOV   .029 In/Sec   .102 G-s     MIN   .029 In/Sec   .102 G-s     MIA   .029 In/Sec   .102 G-s     COOLFAN2   - COOLING FAN 2   (15-Oct-24)     OVERALL LEVEL   IK-20KHz     MIA	
OIH .093 In/Sec .881 G-s   OIA .096 In/Sec .211 G-s   OOH .090 In/Sec .759 G-s   VAC COMP - VACUUM COMPRESSOR (15-Oct-24)   MOH .104 In/Sec 1.85 G-s   MIH .102 In/Sec .185 G-s   MIA .097 In/Sec .311 G-s   IIH .068 In/Sec .469 G-s   IIA .059 In/Sec .142 G-s   IOH .102 In/Sec .974 G-s   OIH .0085 In/Sec .885 G-s   OIH .078 In/Sec .885 G-s   COOLFAN1 - COOLING FAN 1 (15-Oct-24)   MOH .025 In/Sec .402 G-s   MOV .028 In/Sec .121 G-s   MOH .022 In/Sec .102 G-s   MIN .029 In/Sec .102 G-s   MIX	

101A COMP - 101A FEED COMPRESSOR (15-Oct-24)

	OVERALL LEVEL	1K-20KHz
MOH	.158 In/Sec	.345 G-s
MIH	.123 In/Sec	.239 G-s
MIA	.086 In/Sec	.255 G-s
IIH	.226 In/Sec	1.120 G-s
	.265 In/Sec	1.3/1 G-s
IOH	.2/6 In/Sec	1.141 G-s
OIA	.219 IN/Sec	1.601 G-S
OOH	140 Tp/Sec	2.851 G-S
0011	.140 117 560	1.220 9 3
HX132A FAN - HX132A GAS OIL	COOLER FAN (15	-Oct-24)
	OVERALL LEVEL	1K-20KHz
EIH	.031 In/Sec	.040 G-s
EOH	.041 In/Sec	.060 G-s
	MD (1E	0-+ 04)
451A PUMP - 451A VACCUM PU	OVEDALL LEVEL	-UCT-24)
МОН	077 In/Sec	674 G-s
MOV	.082 In/Sec	.344 G-s
MIH	.091 In/Sec	.311 G-s
MIV	.125 In/Sec	.703 G-s
MIA	.063 In/Sec	.123 G-s
EIH	.226 In/Sec	4.091 G-s
EIV	.218 In/Sec	.523 G-s
EIA	.124 In/Sec	1.463 G-s
EOH	.173 In/Sec	.527 G-s
EOV	.155 In/Sec	.106 G-s
HX453A FAN - HX453A VAC PUM	P OIL COOL FAN (15)	-Oct-24)
	OVERALL LEVEL	1K-20KHz
MOH	.332 In/Sec	.104 G-s
MIH	.217 In/Sec	.064 G-S
451B PUMP - 451B VACCUM PU	MP (15	-Oct-24)
	OVERALL LEVEL	1K-20KHz
MOH	.077 In/Sec	.854 G-s
MOV	.090 In/Sec	.096 G-s
MIH	.086 In/Sec	.483 G-s
MIV	.093 In/Sec	.150 G-s
MIA	.050 In/Sec	.083 G-s
EIH	.305 In/Sec	.390 G-s
EIV	.248 IN/Sec	.0/4 G-s
EIA	.18/ IN/Sec	.090 G-s
EOV	229 In/Sec	202 G-s
HOV	.225 117 560	.202 G 3
HX453B FAN - HX453B VAC PUM	POIL COOL FAN (15	-Oct-24)
	OVERALL LEVEL	1K-20KHz
MOH	.204 In/Sec	.182 G-s
MIH	.130 In/Sec	.100 G-s
451C DIMP - $451C$ VACCIM DI	MD (15	-0at-24)
451C POMP - 451C VACCOM PO	OVERALL LEVEL	1K-20KH-7
MOH	058 Tr/Sec	463 G-s
MOV	.096 In/Sec	.124 G-s
MIH	.083 In/Sec	.597 G-s
MIV	.103 In/Sec	.250 G-s
MIA	.051 In/Sec	.167 G-s
EIH	.135 In/Sec	.739 G-s
EIV	.116 In/Sec	.145 G-s
EIA	.075 In/Sec	.162 G-s
EOH	.147 In/Sec	.616 G-s
EOV	.122 In/Sec	.180 G-s
HX453C FAN - HX453C VAC PUM	P OIL COOL FAN (15	-Oct-24)
NOT	OVERALL LEVEL	IK-20KHz
MOH	.144 IN/Sec	.1/5 G-s
MTU	.143 IN/SeC	.109 G-S

451D PUMP - 451D	VACCUM PUMP	(15-Oct-24)	
	OVERALL LEVE	L 1K-20KHz	
MOH	.065 In/Sec	1.281 G-s	
MOV	.075 In/Sec	.424 G-s	
MIH	.086 In/Sec	1.109 G-s	
MIV	.075 In/Sec	.246 G-s	
MIA	.034 In/Sec	.239 G-s	
EIH	.108 In/Sec	.440 G-s	
EIV	.114 In/Sec	.169 G-s	
EIA	.066 In/Sec	.143 G-s	
EOH	.150 In/Sec	.539 G-s	
EOV	.148 In/Sec	.220 G-s	
HX453D FAN - HX453	3D VAC PUMP OIL COOL FAN	(15-Oct-24)	
	OVERALL LEVE	L 1K-20KHz	
MOH	.238 In/Sec	.117 G-s	
MIH	.269 In/Sec	.084 G-s	
506B COMP - 506B	PRODUCT COMPRESSOR	(15-Oct-24)	
	OVERALL LEVE	L 1K-20KHz	
MOH	.042 In/Sec	.297 G-s	
MIH	.057 In/Sec	.255 G-s	
MIA	.044 In/Sec	.396 G-s	
IIH	.161 In/Sec	.777 G-s	
	.153 In/Sec	1.231 G-s	
IOH	.213 In/Sec	2.169 G-s	
OIH	.264 In/Sec	1.575 G-s	
ALO	.122 In/Sec	.960 G-s	
OOH	.243 In/Sec	.867 G-S	
HX50/B FAN - $HX50$	B GAS COOL FAN	(15-0ct-24)	
Nor	OVERALL LEVE	L IK-ZUKHZ	
MOH	.113 IN/Sec	.036 G-S	
MIH	.159 IN/Sec	.079 G-S	
Clarification Of Vib	ration Units:		
	RMS		
Vel> Tn/9	Sec PK		

As always, it has been a pleasure to serve North Shelby-Archaea Energy. If there are any comments or questions, do not hesitate to contact us.

Sincerely,

Kerin W. Maxuell /

ISO Certified Vibration Analyst, Category III



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