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March 4, 2024

North Shelby Plant Millington, TN

The following is a summary of findings from the February 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

## **Rinse Compressor**

Drive motor data still shows some elevated 1-20 Khz. amplitude. The last reading showed amplitude to be 3 g's. Baseline amplitude was 1.3 g's. Spectral data shows a noise floor starting around the 1500 hz range. This may be a lube issue or early stage bearing wear. For now, ensure motor bearings have clean adequate amounts of grease. We are monitoring this closely. Rated as a **CLASS I** defect for now.

## **101-B Feed Compressor**

*Equipment was not in service during this survey; however, the following still applies:* Compressor data shows some high frequency acceleration amplitude with noise floor. Peaks in spectral data suggest possible wear of internal compressor components. We are watching this closely. Rated as a **CLASS I** defect.

## 506 B Product Compressor

*Equipment was not in service during this survey; however, the following still applies:* Motor data continues to show defects are present in motor bearings. Motor will need to be swapped out as soon as practical. Rated as a **CLASS III** defect.

Database: Clean Energy.rbm Area: millington plant						
MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD				
302 FLARE - 302 FLAF	RE BLOWER (2)	3-Feb-24)				
	OVERALL LEVEL	1K-20KHz				
MOH	.071 In/Sec	1.025 G-s				
MOV	.066 In/Sec	.193 G-s				
MIH	.139 In/Sec	.841 G-s				
MIV	.138 In/Sec					
MIA	.100 In/Sec	.287 G-s				
EIH	.212 In/Sec	.406 G-s				
EIV	.200 In/Sec	.096 G-s				
EIA	.110 In/Sec	.127 G-s				
EOH	.115 In/Sec	.209 G-s				
EOV	.249 In/Sec	.137 G-s				
RINSE COMP - RINSE CO	OMPRESSOR (2	23-Feb-24)				
	OVERALL LEVEL	1K-20KHz				
MOH	.153 In/Sec	3.028 G-s				
MIH	.164 In/Sec	3.917 G-s				
MIA	.131 In/Sec	.390 G-s				
IIH	.092 In/Sec	.752 G-s				
IIA	.098 In/Sec	.215 G-s				
IOH	.143 In/Sec	.726 G-s				
OIH	.088 In/Sec	.670 G-s				
AIO	.132 In/Sec	.115 G-s				
OOH	.110 In/Sec	.711 G-s				
VAC COMP - VACUUM C	COMPRESSOR (2	3-Feb-24)				
	• • • • • • • • • • • • • • • • • • • •	1K-20KHz				
MOH	.089 In/Sec	2.081 G-s				
MIH	.112 In/Sec					
MIA	.071 In/Sec	.165 G-s				
MIA IIH IIA	.071 In/Sec .115 In/Sec .067 In/Sec	.165 G-s .648 G-s .099 G-s				

TOU				
IOH		.118	In/Sec	.935 G-s
OIH		.065	In/Sec	1.190 G-s
OIA		.082	In/Sec	.122 G-s
OOH		.121	In/Sec	.944 G-s
			•	
COOLFAN1 -	- COOLING FAN 1			(23-Feb-24)
		VERAI	L LEVEL	
MOH			In/Sec	
MOV		.255	In/Sec	.109 G-s
MIH			In/Sec	
MIV			In/Sec	
MIA		.029	In/Sec	.152 G-s
101A COMP -	- 101A FEED COMPRESS	OR		(23-Feb-24)
	c	VERAI	L LEVEL	
MOH	-		In/Sec	
		170	In/Sec	.590 G-S
MIH		.170	In/Sec	.282 G-s
MIA			In/Sec	
IIH				1.282 G-s
IIA		.406	In/Sec	1.607 G-s
IOH		.273	In/Sec	1.458 G-s
OIH		346	Tn/Sec	1.012 G-s
OIA				7.327 G-s
OOH		.145	In/Sec	1.201 G-s
HX132A FAN -	- HX132A GAS OIL COC			
	C	VERAI	L LEVEL	1K-20KHz
EIH		.056	In/Sec	.032 G-s
EOH		.082	In/Sec	.041 G-s
			•	
451 A PIIMP -	- 451A VACCUM PUMP			(23-Feb-24)
10111 10111			L LEVEL	
MOH	0		In/Sec	
MOH				
MOV			In/Sec	.388 G-s
MIH			In/Sec	
MIV		.159	In/Sec	.499 G-s
MIA		.063	In/Sec	.442 G-s
		.063	In/Sec In/Sec	
EIH		.063 .175	In/Sec	.266 G-s
EIH EIV		.063 .175 .172	In/Sec In/Sec	.266 G-s .064 G-s
EIH EIV EIA		.063 .175 .172 .158	In/Sec In/Sec In/Sec	.266 G-s .064 G-s .102 G-s
EIH EIV EIA EOH		.063 .175 .172 .158 .161	In/Sec In/Sec In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s
EIH EIV EIA		.063 .175 .172 .158 .161	In/Sec In/Sec In/Sec	.266 G-s .064 G-s .102 G-s
EIH EIV EIA EOH EOV		.063 .175 .172 .158 .161 .148	In/Sec In/Sec In/Sec In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s
EIH EIV EIA EOH EOV	- HX453A VAC PUMP OI	.063 .175 .172 .158 .161 .148	In/Sec In/Sec In/Sec In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24)
EIH EIV EIA EOH EOV	- HX453A VAC PUMP OI	.063 .175 .172 .158 .161 .148	In/Sec In/Sec In/Sec In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24)
EIH EIV EIA EOH EOV	- HX453A VAC PUMP OI	.063 .175 .172 .158 .161 .148 CL COO	In/Sec In/Sec In/Sec In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz
EIH EIV EIA EOH EOV HX453A FAN -	- HX453A VAC PUMP OI	.063 .175 .172 .158 .161 .148 L COO VERAN .237	In/Sec In/Sec In/Sec In/Sec In/Sec DL FAN LL LEVEL In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s
EIH EIV EIA EOH EOV HX453A FAN - MOH	- HX453A VAC PUMP OI	.063 .175 .172 .158 .161 .148 L COO VERAN .237	In/Sec In/Sec In/Sec In/Sec In/Sec DL FAN LL LEVEL	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s
EIH EIV EIA EOH EOV HX453A FAN - MOH MIH	- HX453A VAC PUMP OI	.063 .175 .172 .158 .161 .148 L COO VERAN .237	In/Sec In/Sec In/Sec In/Sec DL FAN LL LEVEL In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s
EIH EIV EIA EOH EOV HX453A FAN - MOH MIH	- HX453A VAC PUMP OI C - 451B VACCUM PUMP	.063 .175 .172 .158 .161 .148 L COO VERAN .237 .146	In/Sec In/Sec In/Sec In/Sec DL FAN LL LEVEL In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s .080 G-s
EIH EIV EIA EOH EOV HX453A FAN - MOH MIH 451B PUMP -	- HX453A VAC PUMP OI C - 451B VACCUM PUMP	.063 .175 .172 .158 .161 .148 L COO VERAN .237 .146	In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s .080 G-s (23-Feb-24) 1K-20KHz
EIH EIV EIA EOH EOV HX453A FAN - MOH MIH 451B PUMP - MOH	- HX453A VAC PUMP OI C - 451B VACCUM PUMP	.063 .175 .172 .158 .161 .148 L COO VERAI .237 .146 VVERAI .048	In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec L LEVEL In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s .080 G-s (23-Feb-24) 1K-20KHz .391 G-s
EIH EIV EIA EOV HX453A FAN - MOH MIH 451B PUMP - MOH MOV	- HX453A VAC PUMP OI C - 451B VACCUM PUMP	.063 .175 .172 .158 .161 .148 L COO VERAI .237 .146 VVERAI .048 .067	In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s .080 G-s (23-Feb-24) 1K-20KHz .391 G-s .106 G-s
EIH EIV EIA EOV HX453A FAN - MOH MIH 451B PUMP - MOH MOV MIH	- HX453A VAC PUMP OI C - 451B VACCUM PUMP	.063 .175 .172 .158 .161 .148 L COO VERAI .237 .146 VVERAI .048 .067 .061	In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s .080 G-s (23-Feb-24) 1K-20KHz .391 G-s .106 G-s .459 G-s
EIH EIV EIA EOV HX453A FAN - MOH MIH 451B PUMP - MOH MOV	- HX453A VAC PUMP OI C - 451B VACCUM PUMP C	.063 .175 .172 .158 .161 .148 CL COO VERAI .237 .146 VERAI .048 .067 .061 .083	In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s .080 G-s (23-Feb-24) 1K-20KHz .391 G-s .106 G-s .459 G-s .217 G-s
EIH EIV EIA EOV HX453A FAN - MOH MIH 451B PUMP - MOH MOV MIH	- HX453A VAC PUMP OI C - 451B VACCUM PUMP C	.063 .175 .172 .158 .161 .148 CL COO VERAI .237 .146 VERAI .048 .067 .061 .083	In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s .080 G-s (23-Feb-24) 1K-20KHz .391 G-s .106 G-s .459 G-s .217 G-s .108 G-s
EIH EIV EIA EOV HX453A FAN - MOH MIH 451B PUMP - MOH MOV MIH MIV	- HX453A VAC PUMP OI C - 451B VACCUM PUMP C	.063 .175 .172 .158 .161 .148 CL COO VERAI .237 .146 VERAI .048 .067 .061 .083 .038 .173	In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s .080 G-s (23-Feb-24) 1K-20KHz .391 G-s .106 G-s .459 G-s .217 G-s .108 G-s .281 G-s
EIH EIV EIA EOV HX453A FAN - MOH MIH 451B PUMP - MOH MOV MIH MIV MIA	- HX453A VAC PUMP OI C - 451B VACCUM PUMP C	.063 .175 .172 .158 .161 .148 CL COO VERAI .237 .146 VERAI .048 .067 .061 .083 .038 .173	In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s .080 G-s (23-Feb-24) 1K-20KHz .391 G-s .106 G-s .459 G-s .217 G-s .108 G-s .281 G-s
EIH EIV EIA EOV HX453A FAN - MOH MIH 451B PUMP - MOH MOV MIH MIV MIA EIH EIV	- HX453A VAC PUMP OI C - 451B VACCUM PUMP C	.063 .175 .172 .158 .161 .148 CL COO VERAI .237 .146 VERAI .048 .067 .061 .083 .038 .173 .144	In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s .080 G-s (23-Feb-24) 1K-20KHz .391 G-s .106 G-s .459 G-s .217 G-s .108 G-s .281 G-s .081 G-s
EIH EIV EIA EOV HX453A FAN - MOH MIH 451B PUMP - MOH MOV MIH MIV MIA EIH EIV EIA	- HX453A VAC PUMP OI C - 451B VACCUM PUMP C	.063 .175 .172 .158 .161 .148 CL COO VERAI .237 .146 VERAI .048 .067 .061 .083 .038 .173 .144 .136	In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s .080 G-s (23-Feb-24) 1K-20KHz .391 G-s .106 G-s .459 G-s .217 G-s .108 G-s .281 G-s .081 G-s .090 G-s
EIH EIV EIA EOV HX453A FAN - MOH MIH 451B PUMP - MOH MOV MIH MIV MIA EIH EIV EIA EOH	- HX453A VAC PUMP OI C - 451B VACCUM PUMP C	.063 .175 .172 .158 .161 .148 CL COO VERAI .237 .146 VERAI .048 .067 .061 .083 .038 .173 .144 .136 .178	In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s .080 G-s (23-Feb-24) 1K-20KHz .391 G-s .106 G-s .459 G-s .217 G-s .108 G-s .281 G-s .081 G-s .090 G-s .611 G-s
EIH EIV EIA EOV HX453A FAN - MOH MIH 451B PUMP - MOH MOV MIH MIV MIA EIH EIV EIA	- HX453A VAC PUMP OI C - 451B VACCUM PUMP C	.063 .175 .172 .158 .161 .148 CL COO VERAI .237 .146 VERAI .048 .067 .061 .083 .038 .173 .144 .136 .178	In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s .080 G-s (23-Feb-24) 1K-20KHz .391 G-s .106 G-s .459 G-s .217 G-s .108 G-s .281 G-s .081 G-s .090 G-s .611 G-s
EIH EIV EIA EOV HX453A FAN - MOH MIH 451B PUMP - MOH MOV MIH MIV MIA EIH EIV EIA EOH EOV	- HX453A VAC PUMP OI C - 451B VACCUM PUMP C	.063 .175 .172 .158 .161 .148 L COO VERAI .237 .146 VERAI .048 .067 .061 .083 .038 .173 .144 .136 .178 .160	In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s .080 G-s (23-Feb-24) 1K-20KHz .391 G-s .106 G-s .459 G-s .217 G-s .108 G-s .281 G-s .081 G-s .090 G-s .611 G-s .154 G-s
EIH EIV EIA EOV HX453A FAN - MOH MIH 451B PUMP - MOH MOV MIH MIV MIA EIH EIV EIA EOH EOV	- HX453A VAC PUMP OI C - 451B VACCUM PUMP C	.063 .175 .172 .158 .161 .148 L COO VERAI .237 .146 VERAI .048 .067 .061 .083 .038 .173 .144 .136 .178 .160 L COO	In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s .080 G-s (23-Feb-24) 1K-20KHz .391 G-s .106 G-s .459 G-s .217 G-s .108 G-s .281 G-s .081 G-s .090 G-s .611 G-s .154 G-s
EIH EIV EIA EOV HX453A FAN - MOH MIH 451B PUMP - MOH MOV MIH MIV MIA EIH EIV EIA EOH EOV	- HX453A VAC PUMP OI C - 451B VACCUM PUMP C	.063 .175 .172 .158 .161 .148 L COO VERAI .237 .146 VERAI .048 .067 .061 .083 .038 .173 .144 .136 .178 .160 L COO	In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s .080 G-s (23-Feb-24) 1K-20KHz .391 G-s .106 G-s .459 G-s .217 G-s .108 G-s .281 G-s .081 G-s .081 G-s .090 G-s .611 G-s .154 G-s
EIH EIV EIA EOV HX453A FAN - MOH MIH 451B PUMP - MOH MOV MIH MIV MIA EIH EIV EIA EOH EOV	- HX453A VAC PUMP OI C - 451B VACCUM PUMP C	.063 .175 .172 .158 .161 .148 CL COO VERAI .237 .146 VERAI .048 .067 .061 .083 .038 .173 .144 .136 .178 .160 VERAI .145	In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s .080 G-s (23-Feb-24) 1K-20KHz .391 G-s .106 G-s .459 G-s .217 G-s .108 G-s .281 G-s .081 G-s .081 G-s .090 G-s .611 G-s .154 G-s
EIH EIV EIA EOV HX453A FAN - MOH MIH 451B PUMP - 451B PUMP - MOH MOV MIH EIH EIV EIA EOH EOV	- HX453A VAC PUMP OI C - 451B VACCUM PUMP C	.063 .175 .172 .158 .161 .148 CL COO VERAI .237 .146 VERAI .048 .067 .061 .083 .038 .173 .144 .136 .178 .160 VERAI .145	In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s .080 G-s (23-Feb-24) 1K-20KHz .391 G-s .106 G-s .459 G-s .217 G-s .108 G-s .281 G-s .081 G-s .081 G-s .090 G-s .611 G-s .154 G-s
EIH EIV EA EOV HX453A FAN - MOH 451B PUMP - 451B PUMP - MOH MOV MIH EIH EIV EIA EOH EOV	- HX453A VAC PUMP OI C - 451B VACCUM PUMP C	.063 .175 .172 .158 .161 .148 CL COO VERAI .237 .146 VERAI .048 .067 .061 .083 .038 .173 .144 .136 .178 .160 VERAI .145	In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s .080 G-s (23-Feb-24) 1K-20KHz .391 G-s .106 G-s .459 G-s .217 G-s .108 G-s .281 G-s .081 G-s .081 G-s .090 G-s .611 G-s .154 G-s
EIH EIV EIA EOV HX453A FAN - MOH MIH 451B PUMP - 451B PUMP - MOH MIH EIV EIA EOH EOV HX453B FAN - MOH	- HX453A VAC PUMP OI C - 451B VACCUM PUMP C - HX453B VAC PUMP OI C	.063 .175 .172 .158 .161 .148 CL COO VERAI .237 .146 VERAI .048 .067 .061 .083 .038 .173 .144 .136 .178 .160 VERAI .145	In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s .080 G-s (23-Feb-24) 1K-20KHz .391 G-s .106 G-s .459 G-s .217 G-s .108 G-s .281 G-s .081 G-s .081 G-s .154 G-s (23-Feb-24) 1K-20KHz .150 G-s .087 G-s
EIH EIV EIA EOV HX453A FAN - MOH MIH 451B PUMP - 451B PUMP - MOH MIH EIV EIA EOH EOV HX453B FAN - MOH	<ul> <li>HX453A VAC PUMP OI C</li> <li>451B VACCUM PUMP C</li> <li>HX453B VAC PUMP OI C</li> <li>451C VACCUM PUMP</li> </ul>	.063 .175 .172 .158 .161 .148 L COO VERAI .237 .146 VERAI .048 .067 .061 .083 .038 .173 .144 .136 .178 .160 L COO VERAI .145 .111	In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s .080 G-s (23-Feb-24) 1K-20KHz .391 G-s .106 G-s .459 G-s .217 G-s .108 G-s .281 G-s .081 G-s .090 G-s .611 G-s .154 G-s (23-Feb-24) 1K-20KHz .150 G-s .087 G-s
EIH EIV EA EOV HX453A FAN - MOH MIH 451B PUMP - MOH MIN EIH EIV EIA EOV EIA EOV EIA EOV EIA EOV EIA EOV	<ul> <li>HX453A VAC PUMP OI C</li> <li>451B VACCUM PUMP C</li> <li>HX453B VAC PUMP OI C</li> <li>451C VACCUM PUMP</li> </ul>	.063 .175 .172 .158 .161 .148 CL COO VERAI .237 .146 VERAI .048 .067 .061 .083 .038 .173 .144 .136 .178 .160 VERAI .145 .111 VERAI	In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s .080 G-s (23-Feb-24) 1K-20KHz .391 G-s .106 G-s .459 G-s .217 G-s .108 G-s .281 G-s .081 G-s .090 G-s .611 G-s .154 G-s (23-Feb-24) 1K-20KHz .150 G-s .087 G-s
EIH EIV EIA EOV HX453A FAN - MOH MIH 451B PUMP - 451B PUMP - MOH MIH EIV EIA EOH EOV HX453B FAN - MOH	<ul> <li>HX453A VAC PUMP OI C</li> <li>451B VACCUM PUMP C</li> <li>HX453B VAC PUMP OI C</li> <li>451C VACCUM PUMP</li> </ul>	.063 .175 .172 .158 .161 .148 CL COO VERAI .237 .146 VERAI .048 .067 .061 .083 .136 .173 .144 .136 .178 .160 VERAI .145 .111 VERAI .077	In/Sec In/Sec	.266 G-s .064 G-s .102 G-s .372 G-s .077 G-s (23-Feb-24) 1K-20KHz .125 G-s .080 G-s (23-Feb-24) 1K-20KHz .391 G-s .106 G-s .459 G-s .217 G-s .108 G-s .281 G-s .081 G-s .081 G-s .090 G-s .611 G-s .154 G-s (23-Feb-24) 1K-20KHz .150 G-s .087 G-s (23-Feb-24) 1K-20KHz .493 G-s

MIH	.086 In/Sec		
MIV	.134 In/Sec	.130 G-s	
MIA	.055 In/Sec	.087 G-s	
EIH	.146 In/Sec	.821 G-s	
EIV	.102 In/Sec	.199 G-s	
EIA	.101 In/Sec .120 In/Sec	.238 G-s	
EOH	.120 In/Sec	.526 G-s	
EOV	.132 In/Sec	.157 G-s	
WAEDO DAN WYAEDO WAG	NING OT COOL ENN (2	2 Tab 04)	
HX453C FAN - HX453C VAC	OVERALL LEVEL	-	
МОН	.100 In/Sec		
MIH	.083 In/Sec		
MIH	.065 11/560	.131 G-8	
451D PUMP - 451D VACCUM	I PUMP (2	3-Feb-24)	
MOH	OVERALL LEVEL .099 In/Sec	.771 G-s	
MOV	.104 In/Sec	.306 G-s	
MIH	.124 In/Sec	1.421 G-s	
MIV	.146 In/Sec	.350 G-s	
MIA	.060 In/Sec	.442 G-s	
EIH	.185 In/Sec	.459 G-s	
EIV	.086 In/Sec	.111 G-s	
EIA	.106 In/Sec	.112 G-s	
EOH	.186 In/Sec		
EOV	.169 In/Sec	.112 G-s	
HX453D FAN - HX453D VAC			
МОН	OVERALL LEVEL .213 In/Sec	.103 G-s	
MIH	.223 In/Sec		
H111	.225 117560	.057 8 3	
506C COMP - 506C PRODUC	T COMPRESSOR (2	3-Feb-24)	
	OVERALL LEVEL	1K-20KHz	
MOH	.082 In/Sec	.495 G-s	
MIH			
MIA	.045 In/Sec	1.375 G-s .834 G-s	
IIH	.185 In/Sec	.675 G-s	
IIA	164 7-10	COO 0 -	
IOH	.197 In/Sec	1.348 G-s	
OIH	.223 In/Sec	.647 G-s	
ООН	.222 In/Sec	.661 G-s	
	COOL TINK (0	2 Hab 04)	
HX507C FAN - HX507C GAS	COOL FAN (2) OVERALL LEVEL		
МОН	.220 In/Sec	.050 G-s	
MOH MIH	.343 In/Sec	.050 G-s	
міп	.343 III/SeC	.050 G-8	
Clarification Of Vibration	Units:		
Acc> G-s F	MS		
Vel> In/Sec H	ĸ		

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. Maxwell

ISO Certified Vibration Analyst, Category III



QualiTest Diagnostics Cell: 901-486-4565 Email: <u>kwilliam@gohispeed.com</u>