

December 10, 2021

Arkema

Subject: December week 1 service report

Critical equipment and monthly equipment with issues are discussed in this report.

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.

This completes our assessment of your equipment for this survey. Thank you for your business and don't hesitate to call if you have any comments or questions.

Sincerely,

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# H2O2 Weekly Route Critical Equipment Observations

#### C Concentrator Vacuum Pump 2130-1

The motor has the highest vibration amplitude of about 0.21"/second velocity peak overall in the inboard axial measurement. Vibration still consists of multiple low amplitude shaft speed harmonics with a dominant 4x RPM peak. **Rated a Class I Defect.** 

### Agitator, Hydrogenator C 7001-01

Data still shows a low amplitude 3x RPM vibration in the motor drive end measurements. This usually indicates some misalignment. Adjust only as time allows. **Rated a Class I Defect.** 

# A/B Concentrator Vacuum Pump 57

The unit vibration overall is 0.32"/sec peak velocity for the outboard pump bearing and is dominated by a possible vane pass. We will continue to watch for changes. **Rated a Class I Defect.** 

# Flash Vacuum Pump 2130-1

Data shows all vibrations are under 0.1"/second velocity peak overall. No issues of note.

# Air Compressor C-201

Rotor bar vibrations are normal for this motor's history. The trend clearly shows that the vibrations vary considerably over time. We still believe these motors have possible weak rotor bar end connections that cause the vibrations to fluctuate higher due to loading. There are still blower case vibrations around 2.5-3 KHz with a low noise floor. Synchronous and non-synchronous harmonic vibration peaks are evident in the data. Overall acceleration is 6.2 g's RMS at 1 point. We will continue to monitor this unit closely for changes **Rated a Class I Defect**.

#### Air Compressor C-202

Rotor bar vibrations are normal for this motor's history. The trend clearly shows that the vibrations vary considerably over time. We still believe these motors have possible weak rotor bar end connections that cause the vibrations to fluctuate higher due to loading. There are still blower case vibrations around 2.5-3 KHz with a low noise floor. Synchronous and non-synchronous harmonic vibration peaks are evident in the data. Overall acceleration is 5.3 g's RMS at 1 point. We will continue to monitor this unit closely for changes **Rated a Class I Defect**.

#### Air Compressor C-203

Rotor bar vibrations are normal for this motor's history. The trend clearly shows that the vibrations vary considerably over time. We still believe these motors have possible weak rotor bar end connections that cause the vibrations to fluctuate higher due to loading. There are still blower case vibrations around 2.5-3 KHz with a low noise floor. Synchronous and non-synchronous harmonic vibration peaks are evident in the data. Overall acceleration is 5.0 g's RMS at 1 point. We will continue to monitor this unit closely for changes. **Rated a Class I Defect.** 

### Instrument Air Compressor

The male and female shaft vibrations still seem to show gear mesh and lobe pass harmonics as well as a beat vibration occasionally. They continue to vary over time. Both shafts have between 5 and 12 g's RMS overall acceleration. Harmonics of 4.3X and 6.9X input speed are evident in the data. The dominant vibration appears to be at near 2500 Hz and is a harmonic. We are still watching this unit closely and will be going forward. **Rated a Class I Defect.** 

# Air Compressor NASH A 201-08A

Vibrations are at 0.17"/sec velocity peak for the outboard vertical. The vibration spectrum is still dominated by a 20-order vibration, which is thought to be vane pass. **Rated a Class I Defect**. It appears some work was done to the unit seals. A gray substance (grease?) is puking out from the input bearing housing. Please inspect.

# D Hydrogenator Agitator 9002

Highest overall vibration is at 0.35"/sec velocity peak for the gearbox output top E/W. Dominant vibrations are at about 10.5 Hx and 14 orders of the input speed. They appear to be a resonant, but the one of them could be a gear mesh. The time waveform shows they are most likely periodically beating (going into and out of phase). Ensure all fasteners are at proper torque values and inspect support structures for any signs of stress cracks, broken welds, or metal fatigue. Perform periodic oil analysis on the gearbox for signs of internal wear. **Rated a Class I Defect.** 

# H2O2 Monthly Route Equipment

No immediate concerns at this time.

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Database: Arkema.rbm Station: PEROXIDE Route No. 3: ARK WK 1 Report Date: 10-Dec-21 13:03

MEASUREMEN	T POINT	OVERALI	LEVEL	HFD / VHFD	MACHINE SPEED
2130-1o1d		ntrator N	Vacuum Pur	mp (10-Dec-21)	
2150 1014	e concer	OVERAI	T. T.EVET.	1-20 KHz	
11		058	In/Sec	455 G-s	1200 0 RPM
21		062	In/Sec	432 G-s	1200.0 1011
23		.212	In/Sec	.181 G-s	
71		.175	In/Sec	1.099 G-s	
81		.168	In/Sec	.832 G-s	
83		.075	In/Sec	1.445 G-s	
7000-01	- AGITATO	R, HYDROGH	ENATOR C	(10-Dec-21)	
		OVERAI	LL LEVEL	1-20 KHZ	
02		.045	In/Sec	.031 G-s	45.00 RPM
03		.048	In/Sec	.032 G-s	
11		.086	In/Sec	.651 G-s	1400.0 RPM
12		.079	In/Sec	.749 G-s	
13		.127	In/Sec	.329 G-s	
21		.094	In/Sec	.264 G-s	
22		.133	In/Sec	.088 G-s	
23		.115	In/Sec	.827 G-s	
31		.081	In/Sec	.403 G-s	
32		.083	In/Sec	.448 G-s	
33		.046	In/Sec	.268 G-s	
41		.070	In/Sec	.441 G-s	
42		.083	In/Sec	.531 G-s	
51		.073	In/Sec	.325 G-s	375.0 RPM
53		.091	In/Sec	.241 G-s	
61		.044	In/Sec	.094 G-s	
71		.052	In/Sec	.284 G-s	45.00 RPM
81		.027	In/Sec	.189 G-s	
83		.050	In/Sec	.228 G-s	
57	- A/B Cond	centr Vac	e Pmp-var	RPM (10-Dec-21)	
		OVERAI	LL LEVEL	1-20 KHz	
11		.065	In/Sec	.297 G-s	900.0 RPM
12		.075	In/Sec	.359 G-s	
21		.074	In/Sec	.221 G-s	
23		.068	In/Sec	.218 G-s	
71		.145	In/Sec	.534 G-s	
81		. 328	In/Sec	.435 G-s	
83		.043	In/Sec	.806 G-s	
2130-1	- FLASH VA	AP VAC PU	JMP-var s	peed (10-Dec-21)	
		OVERAI	LL LEVEL	1-20 KHz	1000 0
11		.064	in/Sec	.124 G-s	1200.0 RPM
12		.033	In/Sec	.342 G-s	

2	21	.046 In/Sec	.474 G-s	
2	22	.045 In/Sec	.490 G-s	
2	23	.047 In/Sec	.375 G-s	
7	71	.064 In/Sec	.447 G-s	
7	72	.072 In/Sec	.493 G-s	
8	31	.079 In/Sec	.474 G-s	
8	32	.086 In/Sec	.967 G-s	
8	33	.040 In/Sec	.603 G-s	
236-06	_	HYDRO FD PIMP N 236-06 -2	FLR (10-Dec-21)	
230 00		OVERALL LEVEL	1-20 KHz	
1	11	.107 In/Sec	.109 G-s	3600.0 RPM
2	21	.063 In/Sec	.180 G-s	
2130-6	-	ABC SEC FILT FEED PUMP-NO	RTH (10-Dec-21)	
		OVERALL LEVEL	1-20 KHz	
1	11	.033 In/Sec	.675 G-s	1800.0 RPM
2	21	.042 In/Sec	.530 G-s	
2	23	.046 In/Sec	.253 G-s	
7	71	.210 In/Sec	.699 G-s	
7	72	.126 In/Sec	.720 G-s	
9001-1	-	EAST OXIDIZER FEED PUMP	(10-Dec-21)	
		OVERALL LEVEL	1-20 KHz	
1	11	.043 In/Sec	.079 G-s	1800.0 RPM
2	21	.080 In/Sec	.449 G-s	
2	23	.049 In/Sec	.212 G-s	
7	71	.126 In/Sec	.490 G-s	
7	72	.128 In/Sec	.353 G-s	
0001-2	_	MIDDLE OVIDIZED FEED DIME	(10 - Doc - 21)	
9001-2		OVERALL LEVEL	1-20 KH7	
1	11		117 G-s	1800 0 RPM
-	21	056 In/Sec	462 G-s	1000.0 1014
-	23	065 In/Sec	257 G-s	
-	71	078 Tn/Sec	225 G-s	
	72	.121 In/Sec	.278 G-s	
7016-11	-	WEST OXIDIZER FEED PUMP	(10-Dec-21)	
_		OVERALL LEVEL	1-20 KHz	
1	11	.025 In/Sec	.206 G-s	1800.0 RPM
2	21	.019 In/Sec	.963 G-s	
2	23	.016 In/Sec	.479 G-s	
7	71	.095 In/Sec	.643 G-s	
7	72	.080 In/Sec	.597 G-s	
234-01	-	CHILL WATER PUMP 234-01	(10-Dec-21)	
		OVERALL LEVEL	1-20 KHz	
1	11	.041 In/Sec	.757 G-s	1790.0 RPM
2	21	.040 In/Sec	1.336 G-s	
2	23	.068 In/Sec		
7	71	.070 In/Sec	.342 G-s	
7	72	.101 In/Sec	.303 G-s	
C-203	_	C-203 Comp	(10-Dec-21)	
		OVERALL LEVEL	1-20 KHz	
1	11	.103 In/Sec	3.612 G-s	3588.0 RPM

	12		.062 In/Sec	2.875 G-s	
	21		.048 In/Sec	1.981 G-s	
	22		.063 In/Sec	2.411 G-s	
	23		.016 In/Sec	.295 G-s	
			OVERALL LEVEL	1-20 KHZ	
	71M		.032 In/Sec	.727 G-s	
	72M		.051 In/Sec	2.483 G-s	
	7.3M		.071 In/Sec	3.184 G-s	
	81M		069 Tn/Sec	4 187 G-s	
	82M		061 TR/Soc	5 044 G-s	
	71 5		053 Tr/Sec	1 607 6-8	
	725			1.007 G-S	
	725				
	735		.082 11/560	2.048 G-S	
	STF.		.058 In/Sec	2.358 G-s	
	821		.04/ 1n/Sec	1.48/ G-s	
9000-02	2	_	D HYDDOCENATOR ED DIMB-	FAST (10-Doc-21)	
5000 02	_		OVERALL LEVEL	1-20 KHg	
	11				1900 0 DDM
	21		.04/ III/Sec	.294 G-S	1000.0 RPM
	21		.030 11/560	.285 G-S	
	23		.029 In/Sec	.276 G-s	
	/1		.120 In/Sec	.603 G-s	
	72		.084 In/Sec	.532 G-s	
236-042	A	_	HYDROGNTOR PRECOOLER FD	PUMP (10-Dec-21)	
			OVERALL LEVEL	1-20 KHz	
	11		058 Tn/Sec	249 G-s	1800 0 RPM
	21		070 In/Sec	791 C-s	1000.0 1014
	23		036 Tr/Sec	.751 G S	
	23 71		122 Tr/Sec	261 C-2	
	71		.133 11/360	.201 G-S	
	12		.057 IN/Sec	.202 G-S	
C-202		-	C-202 Comp	(10-Dec-21)	
			OVERALL LEVEL	1_20 88-	
	11			1-20 KHZ	
	ΤT		.119 In/Sec	4.426 G-s	3588.0 RPM
	12		.119 In/Sec .113 In/Sec	4.426 G-s 1.093 G-s	3588.0 RPM
	11 12 21		.119 In/Sec .113 In/Sec .067 In/Sec	4.426 G-s 1.093 G-s .765 G-s	3588.0 RPM
	12 21 22		.119 In/Sec .113 In/Sec .067 In/Sec .126 In/Sec	4.426 G-s 1.093 G-s .765 G-s 3.183 G-s	3588.0 RPM
	12 21 22 23		.119 In/Sec .113 In/Sec .067 In/Sec .126 In/Sec .065 In/Sec	4.426 G-s 1.093 G-s .765 G-s 3.183 G-s 1.516 G-s	3588.0 RPM
	11 12 21 22 23		.119 In/Sec .113 In/Sec .067 In/Sec .126 In/Sec .065 In/Sec OVERALL LEVEL	4.426 G-s 1.093 G-s .765 G-s 3.183 G-s 1.516 G-s 1-20 KHZ	3588.0 RPM
	11 12 21 22 23 71M		.119 In/Sec .113 In/Sec .067 In/Sec .126 In/Sec .065 In/Sec OVERALL LEVEL .038 In/Sec	4.426 G-s 1.093 G-s .765 G-s 3.183 G-s 1.516 G-s 1-20 KHZ 1 144 G-s	3588.0 RPM
	11 12 21 22 23 71M 72M		.119 In/Sec .113 In/Sec .067 In/Sec .126 In/Sec .065 In/Sec OVERALL LEVEL .038 In/Sec .047 In/Sec	4.426 G-s 1.093 G-s .765 G-s 3.183 G-s 1.516 G-s 1-20 KHZ 1.144 G-s 1 369 G-s	3588.0 RPM
	11 12 21 22 23 71M 72M 73M		.119 In/Sec .113 In/Sec .067 In/Sec .126 In/Sec .065 In/Sec OVERALL LEVEL .038 In/Sec .047 In/Sec	4.426 G-s 1.093 G-s .765 G-s 3.183 G-s 1.516 G-s 1-20 KHZ 1.144 G-s 1.369 G-s 4.570 G-s	3588.0 RPM
	11 12 21 22 23 71M 72M 73M		.119 In/Sec .113 In/Sec .067 In/Sec .126 In/Sec .065 In/Sec OVERALL LEVEL .038 In/Sec .047 In/Sec .071 In/Sec	4.426 G-s 1.093 G-s .765 G-s 3.183 G-s 1.516 G-s 1-20 KHZ 1.144 G-s 1.369 G-s 4.570 G-s 2.894 C-c	3588.0 RPM
	11 12 21 22 23 71M 72M 73M 81M		.119 In/Sec .113 In/Sec .067 In/Sec .126 In/Sec .065 In/Sec OVERALL LEVEL .038 In/Sec .047 In/Sec .071 In/Sec .053 In/Sec	4.426 G-s 1.093 G-s .765 G-s 3.183 G-s 1.516 G-s 1-20 KHZ 1.144 G-s 1.369 G-s 4.570 G-s 3.894 G-s 2.045 C-c	3588.0 RPM
	11 12 21 22 23 71M 72M 73M 81M 82M		.119 In/Sec .113 In/Sec .067 In/Sec .126 In/Sec .065 In/Sec OVERALL LEVEL .038 In/Sec .047 In/Sec .053 In/Sec .053 In/Sec	4.426 G-s 1.093 G-s .765 G-s 3.183 G-s 1.516 G-s 1-20 KHZ 1.144 G-s 1.369 G-s 4.570 G-s 3.894 G-s 2.045 G-s 5.216 G-s	3588.0 RPM
	11 12 21 22 23 71M 72M 73M 81M 82M 71F		.119 In/Sec .113 In/Sec .067 In/Sec .126 In/Sec .065 In/Sec OVERALL LEVEL .038 In/Sec .047 In/Sec .053 In/Sec .053 In/Sec .025 In/Sec	4.426 G-s 1.093 G-s .765 G-s 3.183 G-s 1.516 G-s 1-20 KHZ 1.144 G-s 1.369 G-s 4.570 G-s 3.894 G-s 2.045 G-s 5.316 G-s	3588.0 RPM
	11 12 21 22 23 71M 72M 73M 81M 82M 71F 72F		.119 In/Sec .113 In/Sec .067 In/Sec .126 In/Sec .065 In/Sec OVERALL LEVEL .038 In/Sec .047 In/Sec .053 In/Sec .053 In/Sec .025 In/Sec .060 In/Sec	4.426 G-s 1.093 G-s .765 G-s 3.183 G-s 1.516 G-s 1-20 KHZ 1.144 G-s 1.369 G-s 4.570 G-s 3.894 G-s 2.045 G-s 5.316 G-s 1.509 G-s	3588.0 RPM
	11 12 21 22 23 71M 72M 73M 81M 82M 71F 72F 73F		.119 In/Sec .113 In/Sec .067 In/Sec .126 In/Sec .065 In/Sec OVERALL LEVEL .038 In/Sec .047 In/Sec .053 In/Sec .053 In/Sec .055 In/Sec .060 In/Sec .057 In/Sec	4.426 G-s 1.093 G-s .765 G-s 3.183 G-s 1.516 G-s 1-20 KHZ 1.144 G-s 1.369 G-s 4.570 G-s 3.894 G-s 2.045 G-s 5.316 G-s 1.509 G-s 2.411 G-s	3588.0 RPM
	11 12 21 22 23 71M 72M 73M 81M 82M 71F 72F 73F 81F		.119 In/Sec .113 In/Sec .067 In/Sec .126 In/Sec .065 In/Sec OVERALL LEVEL .038 In/Sec .047 In/Sec .053 In/Sec .053 In/Sec .055 In/Sec .060 In/Sec .057 In/Sec .032 In/Sec	4.426 G-s 1.093 G-s .765 G-s 3.183 G-s 1.516 G-s 1.516 G-s 1.20 KHZ 1.144 G-s 1.369 G-s 4.570 G-s 3.894 G-s 2.045 G-s 5.316 G-s 1.509 G-s 2.411 G-s 3.938 G-s	3588.0 RPM
	11 12 21 22 23 71M 72M 73M 81M 82M 71F 72F 73F 81F 82F		.119 In/Sec .113 In/Sec .067 In/Sec .126 In/Sec .065 In/Sec OVERALL LEVEL .038 In/Sec .047 In/Sec .053 In/Sec .053 In/Sec .055 In/Sec .057 In/Sec .032 In/Sec .048 In/Sec	4.426 G-s 1.093 G-s .765 G-s 3.183 G-s 1.516 G-s 1-20 KHZ 1.144 G-s 1.369 G-s 4.570 G-s 3.894 G-s 2.045 G-s 5.316 G-s 1.509 G-s 2.411 G-s 3.938 G-s 1.010 G-s	3588.0 RPM
C-201	11 12 21 22 23 71M 72M 72M 73M 81M 82M 71F 72F 73F 81F 82F	_	.119 In/Sec .113 In/Sec .067 In/Sec .126 In/Sec .065 In/Sec OVERALL LEVEL .038 In/Sec .047 In/Sec .053 In/Sec .053 In/Sec .053 In/Sec .057 In/Sec .032 In/Sec .048 In/Sec	4.426 G-s 1.093 G-s .765 G-s 3.183 G-s 1.516 G-s 1-20 KHZ 1.144 G-s 1.369 G-s 4.570 G-s 3.894 G-s 2.045 G-s 5.316 G-s 1.509 G-s 2.411 G-s 3.938 G-s 1.010 G-s	3588.0 RPM
C-201	11 12 21 22 23 71M 72M 72M 73M 81M 82M 71F 72F 73F 81F 82F	_	.119 In/Sec .113 In/Sec .067 In/Sec .126 In/Sec .065 In/Sec OVERALL LEVEL .038 In/Sec .047 In/Sec .053 In/Sec .053 In/Sec .053 In/Sec .057 In/Sec .032 In/Sec .048 In/Sec C-201 Comp	4.426 G-s 1.093 G-s .765 G-s 3.183 G-s 1.516 G-s 1.20 KHZ 1.144 G-s 1.369 G-s 4.570 G-s 3.894 G-s 2.045 G-s 5.316 G-s 1.509 G-s 2.411 G-s 3.938 G-s 1.010 G-s (10-Dec-21) 1-20 KHZ	3588.0 RPM
C-201	11 12 21 22 23 71M 72M 72M 72M 73M 81M 82M 71F 72F 73F 81F 82F	_	.119 In/Sec .113 In/Sec .067 In/Sec .126 In/Sec .065 In/Sec OVERALL LEVEL .038 In/Sec .047 In/Sec .053 In/Sec .053 In/Sec .053 In/Sec .057 In/Sec .032 In/Sec .048 In/Sec C-201 Comp OVERALL LEVEL .126 In/Sec	4.426 G-s 1.093 G-s .765 G-s 3.183 G-s 1.516 G-s 1.20 KHZ 1.144 G-s 1.369 G-s 4.570 G-s 3.894 G-s 2.045 G-s 5.316 G-s 1.509 G-s 2.411 G-s 3.938 G-s 1.010 G-s (10-Dec-21) 1-20 KHz 3.742 G-s	3588.0 RPM
C-201	11 12 21 22 23 71M 72M 72M 73M 81M 71F 72F 73F 81F 82F	_	.119 In/Sec .113 In/Sec .067 In/Sec .126 In/Sec .065 In/Sec OVERALL LEVEL .038 In/Sec .047 In/Sec .047 In/Sec .053 In/Sec .053 In/Sec .055 In/Sec .057 In/Sec .048 In/Sec C-201 Comp OVERALL LEVEL .126 In/Sec .148 In/Sec	4.426 G-s 1.093 G-s .765 G-s 3.183 G-s 1.516 G-s 1.20 KHZ 1.144 G-s 1.369 G-s 4.570 G-s 3.894 G-s 2.045 G-s 5.316 G-s 1.509 G-s 2.411 G-s 3.938 G-s 1.010 G-s (10-Dec-21) 1-20 KHz 3.742 G-s 4.397 G-s	3588.0 RPM 3588.0 RPM
C-201	11 12 21 22 23 71M 72M 73M 81M 82M 71F 72F 81F 82F 11 12 21	_	.119 In/Sec .113 In/Sec .067 In/Sec .126 In/Sec .065 In/Sec OVERALL LEVEL .038 In/Sec .047 In/Sec .047 In/Sec .053 In/Sec .053 In/Sec .055 In/Sec .057 In/Sec .048 In/Sec .048 In/Sec .126 In/Sec .148 In/Sec .055 In/Sec	4.426 G-s 1.093 G-s .765 G-s 3.183 G-s 1.516 G-s 1-20 KHZ 1.144 G-s 1.369 G-s 4.570 G-s 3.894 G-s 2.045 G-s 5.316 G-s 1.509 G-s 2.411 G-s 3.938 G-s 1.010 G-s (10-Dec-21) 1-20 KHZ 3.742 G-s 4.397 G-s 2.656 G-s	3588.0 RPM 3588.0 RPM
C-201	11 12 21 22 23 71M 72M 72M 73M 81M 82M 71F 72F 73F 81F 82F 11 12 21 22 23	_	.119 In/Sec .113 In/Sec .067 In/Sec .126 In/Sec .065 In/Sec OVERALL LEVEL .038 In/Sec .047 In/Sec .047 In/Sec .053 In/Sec .053 In/Sec .055 In/Sec .048 In/Sec .048 In/Sec .148 In/Sec .055 In/Sec .055 In/Sec	4.426 G-s 1.093 G-s .765 G-s 3.183 G-s 1.516 G-s 1-20 KHZ 1.144 G-s 1.369 G-s 4.570 G-s 3.894 G-s 2.045 G-s 5.316 G-s 1.509 G-s 2.411 G-s 3.938 G-s 1.010 G-s (10-Dec-21) 1-20 KHZ 3.742 G-s 4.397 G-s 2.656 G-s 1.553 C-s	3588.0 RPM 3588.0 RPM

2	3	.124	In/Sec	4.180 G-s		
		OVERAI	L LEVEL	1-20 KHZ		
7	1M	.047	In/Sec	3.811 G-s		
7:	2М	.047	In/Sec	1.751 G-s		
7	3м	.066	In/Sec	1.801 G-s		
8	1M	.034	In/Sec	5.119 G-s		
8:	2М	.050	In/Sec	2.225 G-s		
7	1F	.036	In/Sec	6.287 G-s		
7:	2F	.050	In/Sec	1.607 G-s		
7	3F	.031	In/Sec	1.513 G-s		
8	1F	.046	In/Sec	7.238 G-s		
8:	2F	.045	In/Sec	1.109 G-s		
new AC	-	INSTRUMENT AIR C	COMPRESSOR	(10-Dec-	21)	
		OVERAI	L LEVEL	1-20 KHz		
1	1	.141	In/Sec	.983 G-s	1780.0 RPM	
1:	2	.104	In/Sec	.770 G-s		
1	3	.063	In/Sec	.498 G-s		
2	1	.137	In/Sec	1.310 G-s		
2	2	.134	In/Sec	.342 G-s		
2	3	.043	In/Sec	.544 G-s		
		OVERAI	L LEVEL	1-20 KHZ		
7	1F	.179	In/Sec	7.150 G-s		
7:	2F	.143	In/Sec	1.624 G-s		
7.	3F	.141	In/Sec	3.418 G-s		
8	1F	.131	In/Sec	2.753 G-s		
8:	2F	.236	In/Sec	7.351 G-s		
8	3F	.168	In/Sec	3.870 G-s		
7	1M	.096	In/Sec	7.482 G-s		
7:	2M	.198	In/Sec	12.79 G-s		
7	ЗМ	.119	In/Sec	4.841 G-s		
8	1M	.175	In/Sec	5.508 G-s		
8	2M	.281	In/Sec	10.12 G-s		
8.	3M	. 182	In/Sec	6.933 G-s		
201-08A	-	COMPRESSOR, NASH	A 201-08A	(10-Dec-	21)	
	_	OVERAI	LL LEVEL	1-20 KHz		
1	1	.051	In/Sec	.083 G-s	506.3 RPM	
1:	2	.045	In/Sec	.154 G-s		
1	3	.096	In/Sec	.099 G-s		
2	1	.044	In/Sec	.083 G-s		
2	2	.054	In/Sec	.085 G-s		
2	3	.104	In/Sec	.050 G-s		
7	1 1	.119	In/Sec	.230 G-S		
7.	2	.140	In/Sec	.107 G-S		
7.	3 1	.110	In/Sec	.039 G-S		
0	1 2	.113	In/Sec	.084 G-S		
8	2 3	.121	In/Sec In/Sec	.115 G-s		
					<b>61</b>	
9002-10	-	D-HYDROGENATOR A	AGITATOR	(10-Dec-	21)	
-	-	OVERAI	L LEVEL	1-20 KHz		
1	1	.078	In/Sec	.084 G-s	1185.0 RPM	
2	2 T	.087	In/Sec	.144 G-s		
2	ک	.047	IN/Sec	.036 G-S		
~	-	OVERAL	LL LEVEL	1-20 KHZ		
3.	T	.215	ru/sec	.02/G-S		

31L	.181	In/Sec	.594 G-s	3		
	OVERA	LL LEVEL	1-20 KHz			
51	. 352	In/Sec	.190 G-s	3		
51L	.257	In/Sec	.185 G-s	s 100.0	RPM	
52	.214	In/Sec	.200 G-s	3		
52L	.254	In/Sec	.214 G-s	3		
53	.103	In/Sec	.416 G-s	3		
53L	.037	In/Sec	.437 G-s	3		
61	.171	In/Sec	.087 G-s	3		
61L	.159	In/Sec	.099 G-s	3		
81	.031	In/Sec	.029 G-s	3		
82	.035	In/Sec	.031 G-s	3		
83	.018	In/Sec	.037 G-s	3		
Clarification Of Vibration Units:						
Acc	> G-s	PK				
Vel	> In/Sec	PK				