

August 13, 2021

Arkema

Subject: August week 2 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,

David W. Shook Senior Reliability Specialists *Hi-Speed* Industrial Service dshook@gohispeed.com

> 7030 Ryburn Drive Millington, TN 38053 P. 901-873-5300 F. 901-873-5301

# H2O2 Weekly Route Critical Equipment Observations

### C Concentrator Vacuum Pump 2130-1

The motor has the highest vibration amplitude of about 0.16"/second velocity peak overall in the outboard axial measurement. Vibration still consists of multiple low amplitude shaft speed harmonics with a dominant 4x RPM component we suspect is impeller pass. **Rated a Class I Defect.** 

# Agitator, Hydrogenator C 7001-01

Data shows the highest vibration is in the motor inboard horizontal at 0.15"/second velocity peak overall which is dominated by 2x and 3x RPM peaks. Possible alignment or coupling issue. **Rated a Class I Defect.** 

# A/B Concentrator Vacuum Pump 57

The unit vibration overall is 0.1"/sec peak velocity for the inboard pump bearing and is dominated by a 11 Hz vibration which we believe to be shaft speed. We will continue to watch for changes. No immediate concern.

# 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 wide noise floor. Overall acceleration is 4 g's RMS at 1 point. Synchronous and non-synchronous harmonic vibration peaks are evident in the data. All 3 compressors have the same non-synchronous peaks but vary in amplitude. We will continue to monitor this unit closely for changes. **Rated a Class I Defect.** 

# Air Compressor C-202

Rotor bar vibrations are low 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 wide noise floor. Overall acceleration is 6 g's RMS at 1 point. **Rated a Class I Defect**.

#### Air Compressor C-203

Rotor bar vibrations are low for this motor's history and could indicate higher loading 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 wide noise floor. Overall acceleration is 3.7 g's RMS at 1 point. **Rated a Class I Defect**.

#### Instrument Air Compressor

The male and female shaft vibrations still seem to show gear mesh and harmonics as well as a beat vibration occasionally. They continue to vary over time. Both shafts have between 6 and 9 g's RMS overall in the data. The dominant vibration appears to be the second gear mesh harmonic at near 2500 Hz. We are still watching this unit closely and will be going forward. **Rated a Class I Defect.** 

### Air Compressor NASH A 201-08A

Vibrations have dropped to 0.19"/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.** 

### D Hydrogenator Agitator 9002

Lightning in the area prevented safe data collection.

#### **Centac Compressor**

The unit was not in operation during the survey.

### H2O2 Monthly Route Equipment

No Issues of note.

Abbreviated Last Measurement Summary						
	Database: Ark Station: PER Route No. 4: Report Date:	ema.rbm OXIDE ARK WK 2 13-Aug-21	14:44			
MEASUREMENT PO	INT OVERAL	L LEVEL	HFD /	VHFD	MACHINE	SPEED
2130-1old - C	Concentrator OVERA	Vacuum Pump LL LEVEL	(13- 1-20 F	-Aug-21) KHz		
11	.072	In/Sec	. 323	G-s	1200.0 F	RPM
21	.063	In/Sec	.417	G-s		
23	.165	In/Sec	.280	G-s		
71	.106	In/Sec	.798	G-s		
81	.151	In/Sec	. 693	G-s		

	83	.079 In	/Sec 1.131	G-s
7000 01		ACTENED UNDDOCENT	<b>TOD C</b> (12)	<b>N</b>
/000-01	L	- AGIIAIOR, HIDROGENA	10K C (13- 1 EVET 1-20 K	Hug-21)
	02	038 Tp		G-S 45.00 PPM
	02	.038 III 050 In	/Sec 011	G-S 45.00 RFM
	11	.030 III 072 In	/Sec 678	G-s 1400 0 RPM
	12	057 In	/Sec 739	G-s
	13	.067 In	/Sec .215	G-s
	21	088 Tn	/Sec 300	G-8
	22	.152 In	/Sec .306	G-s
	23	.085 In	/Sec .472	G-s
	31	.073 In	/Sec .545	G-s
	32	.065 In	/Sec .594	G-s
	33	.079 In	/Sec .231	G-s
	41	.084 In	/Sec .639	G-s
	42	.071 In	/Sec .742	G-s
	51	.076 In	/Sec .264	G-s 375.0 RPM
	53	.180 In	/Sec .357	G-s
	61	.034 In	/Sec .274	G-s
	71	.058 In	/Sec .293	G-s 45.00 RPM
	81	.021 In	/Sec .163	G-s
	83	.046 In	/Sec .332	G-s
57		- A/B Concentr Vac P	mp-var RPM (13-	Aug-21)
		OVERALL	LEVEL 1-20 K	Hz
	11	.075 In	/Sec .780	G-s 900.0 RPM
	12	.064 In	/Sec .309	G-s
	21	.077 In	/Sec .160	G-s
	23	.044 In	/Sec .505	G-s
	71	.104 In	/Sec .256	G-s
	81	.096 In	/Sec .918	G-s
	83	.036 In	/Sec .554	G-S
2130-1		- FLASH VAP VAC PUMP	-var speed (13-	Aug-21)
		OVERALL	LEVEL 1-20 K	Hz
	11	.045 In	/Sec .316	G-s 1200.0 RPM
	12	.036 In	/Sec .291	G-s
	21	.037 In	/Sec .232	G-s
	22	.035 In	/Sec .551	G-s
	23	.063 In	/Sec .277	G-s
	71	.051 In	/Sec .397	G-s
	72	.061 In	/Sec .519	G-s
	81	.066 In	/Sec .316	G-s
	82	.070 In	/Sec .786	G-s
	83	.040 In	/Sec .611	G-s
C-202		- C-203 Comp	/12_	Aug-21)
C-203		OVERALL	1-20 K	Aug-zi)
	11	019 Tn	/Sec 136	G-s 3588 0 RPM
	12	.047 Tn	/Sec 1.114	G-s
	21	.021 Tn	/Sec	 G-s
	22	.026 In	/Sec .457	 G-s
	23	.021 In	/Sec .208	G-s
	-	OVERALL	LEVEL 1-20 K	HZ
	71M	.043 In	/Sec 2.576	G-s
	72M	.028 In	/Sec 1.560	G-s

	73M	.082 In/Se	ec 1.955 G-s	
	81M	.043 In/Se	c 1.968 G-s	
	82M	.057 In/Se	c 3.718 G-s	
	71F	.062 In/Se	2.619 G-s	
	725	040 Tp/Se	907 6-8	
	725	.040 IN/Se	1 965 C-2	
	/JE 01 E	.083 11/50		
	STF.	.067 In/Se	2.416 G-S	
	82F	.057 In/Se	ec 2.221 G-s	
C-202	-	C-202 Comp	(13-Aug-21)	
		OVERALL LEV	7EL 1-20 KHz	
	11	.065 In/Se	ec .796 G-s	3588.0 RPM
	12	.112 In/Se	ec .995 G-s	
	21	.056 In/Se	ec .275 G-s	
	22	.103 In/Se	c.738 G-s	
	23	.043 In/Se	.085 G-s	
		OVEBALL LEY	ит. 1-20 кня	
	71M	038 Tn/Se	1 400 G-s	
	72M	.050 IN/Se		
	721	.052 II/Se	1 297 C =	
	/ 3M	.0/9 IN/Se	2C 1.287 G-S	
	81M	.046 In/Se	ec 1.023 G-s	
	82M	.046 In/Se	ec 1.488 G-s	
	71F	.029 In/Se	c 1.795 G-s	
	72F	.060 In/Se	ec .717 G-s	
	73F	.089 In/Se	ec 6.038 G-s	
	81F	.038 In/Se	c 2.354 G-s	
	82F	.045 In/Se	c.927 G-s	
C-201	_	C-201 Comp	(13-Aug-21)	
			( y ,	
		OVERALL LEV	7EL 1-20 KHz	
	11	OVERALL LEV	TEL 1-20 KHz	3588 0 RPM
	11 12	OVERALL LEV .092 In/Se	7EL   1-20 KHz     ac   1.520 G-s     bc   1.508 G-s	3588.0 RPM
	11 12	OVERALL LEV .092 In/Se .062 In/Se	ZEL   1-20 KHz     ac   1.520 G-s     ac   1.508 G-s     ac   0.51 C c	3588.0 RPM
	11 12 21	OVERALL LEV .092 In/Se .062 In/Se .092 In/Se	TEL   1-20 KHz     ac   1.520 G-s     ac   1.508 G-s     ac   .951 G-s	3588.0 RPM
	11 12 21 22	OVERALL LEV .092 In/Se .062 In/Se .092 In/Se .050 In/Se	TEL   1-20 KHz     ac   1.520 G-s     ac   1.508 G-s     ac   .951 G-s     ac   .222 G-s	3588.0 RPM
	11 12 21 22 23	OVERALL LEV .092 In/Se .062 In/Se .092 In/Se .050 In/Se .055 In/Se	TEL   1-20 KHz     ac   1.520 G-s     ac   1.508 G-s     ac   .951 G-s     ac   .222 G-s     ac   .640 G-s	3588.0 RPM
	11 12 21 22 23	OVERALL LEV .092 In/Se .062 In/Se .092 In/Se .050 In/Se .055 In/Se OVERALL LEV	TEL   1-20 KHz     ac   1.520 G-s     ac   1.508 G-s     ac   .951 G-s     ac   .222 G-s     ac   .640 G-s     TEL   1-20 KHZ	3588.0 RPM
	11 12 21 22 23 71M	OVERALL LEV .092 In/Se .062 In/Se .092 In/Se .050 In/Se .055 In/Se OVERALL LEV .044 In/Se	TEL   1-20 KHz     ac   1.520 G-s     ac   1.508 G-s     ac   .951 G-s     ac   .222 G-s     ac   .640 G-s     TEL   1-20 KHZ     ac   .645 G-s	3588.0 RPM
	11 12 21 22 23 71M 72M	OVERALL LEV .092 In/Se .062 In/Se .092 In/Se .050 In/Se .055 In/Se OVERALL LEV .044 In/Se .042 In/Se	TEL 1-20 KHz   ac 1.520 G-s   ac 1.508 G-s   ac .951 G-s   ac .222 G-s   ac .640 G-s   TEL 1-20 KHZ   ac 2.665 G-s   ac 2.298 G-s	3588.0 RPM
	11 12 21 22 23 71M 72M 73M	OVERALL LEV .092 In/Se .062 In/Se .092 In/Se .050 In/Se .055 In/Se OVERALL LEV .044 In/Se .042 In/Se .069 In/Se	TEL 1-20 KHz   ac 1.520 G-s   ac 1.508 G-s   ac .951 G-s   ac .222 G-s   ac .640 G-s   TEL 1-20 KHZ   ac 2.665 G-s   ac 2.298 G-s   ac 1.714 G-s	3588.0 RPM
	11 12 21 22 23 71M 72M 73M 81M	OVERALL LEV .092 In/Se .062 In/Se .092 In/Se .055 In/Se OVERALL LEV .044 In/Se .042 In/Se .069 In/Se	TEL 1-20 KHz   ac 1.520 G-s   ac 1.508 G-s   ac .951 G-s   ac .222 G-s   ac .640 G-s   TEL 1-20 KHZ   ac 2.665 G-s   ac 1.714 G-s   ac 4.073 G-s	3588.0 RPM
	11 12 21 22 23 71M 72M 73M 81M 82M	OVERALL LEV .092 In/Se .062 In/Se .092 In/Se .055 In/Se OVERALL LEV .044 In/Se .042 In/Se .069 In/Se .039 In/Se	TEL 1-20 KHz   ac 1.520 G-s   ac 1.508 G-s   ac .951 G-s   ac .222 G-s   ac .640 G-s   TEL 1-20 KHZ   ac 2.665 G-s   ac 1.714 G-s   ac 2.728 G-s	3588.0 RPM
	11 12 21 22 23 71M 72M 73M 81M 82M 71F	OVERALL LEV .092 In/Se .062 In/Se .092 In/Se .055 In/Se OVERALL LEV .044 In/Se .042 In/Se .069 In/Se .039 In/Se .046 In/Se	TEL 1-20 KHz   ac 1.520 G-s   ac 1.508 G-s   ac .951 G-s   ac .222 G-s   ac .640 G-s   TEL 1-20 KHZ   ac 2.665 G-s   ac 1.714 G-s   ac 2.728 G-s   ac 2.728 G-s   ac 2.467 G-s	3588.0 RPM
	11 12 21 22 23 71M 72M 73M 81M 82M 71F 72F	OVERALL LEV .092 In/Se .062 In/Se .092 In/Se .055 In/Se OVERALL LEV .044 In/Se .044 In/Se .042 In/Se .046 In/Se .052 In/Se	TEL 1-20 KHz   ac 1.520 G-s   ac 1.508 G-s   ac .951 G-s   ac .222 G-s   ac .640 G-s   TEL 1-20 KHZ   ac 2.665 G-s   ac 1.714 G-s   ac 2.728 G-s   ac 2.467 G-s   ac 2.401 G-s	3588.0 RPM
	11 12 21 22 23 71M 72M 73M 81M 82M 71F 72F 73F	OVERALL LEV .092 In/Se .062 In/Se .092 In/Se .055 In/Se OVERALL LEV .044 In/Se .042 In/Se .042 In/Se .046 In/Se .052 In/Se .063 In/Se	TEL 1-20 KHz   ac 1.520 G-s   ac 1.508 G-s   ac .951 G-s   ac .222 G-s   ac .640 G-s   TEL 1-20 KHZ   ac 2.665 G-s   ac 2.298 G-s   ac 1.714 G-s   ac 2.728 G-s   ac 2.467 G-s   ac 2.401 G-s   ac 2.401 G-s	3588.0 RPM
	11 12 21 22 23 71M 72M 73M 81M 82M 71F 72F 73F 81F	OVERALL LEV .092 In/Se .062 In/Se .092 In/Se .055 In/Se OVERALL LEV .044 In/Se .042 In/Se .042 In/Se .046 In/Se .052 In/Se .063 In/Se .055 In/Se	TEL 1-20 KHz   AC 1.520 G-s   AC 1.508 G-s   AC .951 G-s   AC .222 G-s   AC .640 G-s   TEL 1-20 KHZ   AC 2.665 G-s   AC 2.298 G-s   AC 1.714 G-s   AC 2.728 G-s   AC 2.467 G-s   AC 2.401 G-s   AC 2.540 G-s   AC 2.540 G-s	3588.0 RPM
	11 12 21 22 23 71M 72M 73M 81M 82M 71F 72F 73F 81F 82F	OVERALL LEV .092 In/Se .062 In/Se .092 In/Se .055 In/Se OVERALL LEV .044 In/Se .042 In/Se .042 In/Se .046 In/Se .052 In/Se .065 In/Se .050 In/Se	ZEL 1-20 KHz   AC 1.520 G-s   AC 1.508 G-s   AC .951 G-s   AC .222 G-s   AC .640 G-s   ZEL 1-20 KHZ   AC 2.665 G-s   AC 2.298 G-s   AC 1.714 G-s   AC 2.728 G-s   AC 2.467 G-s   AC 2.401 G-s   AC 2.540 G-s   AC 2.540 G-s   AC 2.640 G-s   AC 2.640 G-s	3588.0 RPM
	11 12 21 22 23 71M 72M 73M 81M 82M 71F 72F 73F 81F 82F	OVERALL LEV .092 In/Se .062 In/Se .092 In/Se .055 In/Se OVERALL LEV .044 In/Se .042 In/Se .046 In/Se .052 In/Se .065 In/Se .050 In/Se .050 In/Se	TEL 1-20 KHz   AC 1.520 G-s   AC 1.508 G-s   AC .951 G-s   AC .222 G-s   AC .640 G-s   TEL 1-20 KHZ   AC 2.665 G-s   AC 2.298 G-s   AC 1.714 G-s   AC 2.728 G-s   AC 2.467 G-s   AC 2.401 G-s   AC 2.540 G-s   AC 2.540 G-s   AC 2.540 G-s   AC 3.30 G-s   AC 1.109 G-s	3588.0 RPM
	11 12 21 22 23 71M 72M 73M 81M 82M 71F 72F 73F 81F 82F	OVERALL LEV .092 In/Se .062 In/Se .092 In/Se .055 In/Se OVERALL LEV .044 In/Se .042 In/Se .046 In/Se .046 In/Se .052 In/Se .065 In/Se .050 In/Se	ZEL 1-20 KHz   AC 1.520 G-s   AC 1.508 G-s   AC .951 G-s   AC .222 G-s   AC .640 G-s   ZEL 1-20 KHZ   AC 2.665 G-s   AC 2.298 G-s   AC 1.714 G-s   AC 2.728 G-s   AC 2.467 G-s   AC 2.401 G-s   AC 2.540 G-s   AC 3.30 G-s   AC 1.109 G-s	3588.0 RPM
new AC	11 12 21 22 23 71M 72M 73M 81M 82M 71F 72F 73F 81F 81F 82F	OVERALL LEV .092 In/Se .062 In/Se .092 In/Se .055 In/Se OVERALL LEV .044 In/Se .042 In/Se .046 In/Se .046 In/Se .063 In/Se .051 In/Se .050 In/Se .044 In/Se	ZEL 1-20 KHz   AC 1.520 G-s   AC 1.508 G-s   AC .951 G-s   AC .222 G-s   AC .640 G-s   ZEL 1-20 KHZ   AC 2.665 G-s   AC 2.298 G-s   AC 1.714 G-s   AC 2.467 G-s   AC 2.467 G-s   AC 2.401 G-s   AC 2.540 G-s   AC 3.30 G-s   AC 1.109 G-s	3588.0 RPM
new AC	11 12 21 22 23 71M 72M 73M 81M 82M 71F 72F 73F 81F 82F -	OVERALL LEV .092 In/Se .062 In/Se .092 In/Se .055 In/Se OVERALL LEV .044 In/Se .042 In/Se .042 In/Se .046 In/Se .046 In/Se .052 In/Se .065 In/Se .050 In/Se .044 In/Se	ZEL 1-20 KHz   AC 1.520 G-s   AC 1.508 G-s   AC .951 G-s   AC .222 G-s   AC .640 G-s   ZEL 1-20 KHZ   AC 2.665 G-s   AC 2.298 G-s   AC 2.728 G-s   AC 2.467 G-s   AC 2.467 G-s   AC 2.401 G-s   AC 2.540 G-s   AC 2.540 G-s   AC 2.640 G-s   AC 2.540 G-s   AC 3.30 G-s   AC 1.109 G-s   AC 1.20 KHz   AC 2.540 G-s	3588.0 RPM
new AC	11 12 21 22 23 71M 72M 73M 81M 82M 71F 72F 73F 81F 82F - 11	OVERALL LEV .092 In/Se .062 In/Se .092 In/Se .055 In/Se OVERALL LEV .044 In/Se .044 In/Se .042 In/Se .046 In/Se .046 In/Se .052 In/Se .063 In/Se .050 In/Se .050 In/Se .044 In/Se INSTRUMENT AIR COMPRE OVERALL LEV .145 In/Se	TEL 1-20 KHz   AC 1.520 G-s   AC 1.508 G-s   AC .951 G-s   AC .222 G-s   AC .640 G-s   TEL 1-20 KHZ   AC 2.665 G-s   AC 2.298 G-s   AC 2.728 G-s   AC 2.467 G-s   AC 2.467 G-s   AC 2.401 G-s   AC 2.540 G-s   AC 2.650 G-s   AC 2.667 G-s   AC 2.667 G-s   AC 2.667 G-s   AC 2.640 G-s   AC 2.540 G-s   AC 2.540 G-s   AC 2.540 G-s   AC 2.647 G-s   AC 2.647 G-s   AC 2.640 G-s   AC 2.640 G-s   AC 2.640 G-s   AC 3.30 G-s   AC 1.109 G-s   AC .668 G-s   AC .668 G-s	3588.0 RPM 1780.0 RPM
new AC	11 12 21 22 23 71M 72M 73M 81M 82M 71F 72F 73F 81F 82F - 11 12	OVERALL LEV .092 In/Se .062 In/Se .092 In/Se .050 In/Se .055 In/Se OVERALL LEV .044 In/Se .042 In/Se .042 In/Se .046 In/Se .046 In/Se .052 In/Se .063 In/Se .050 In/Se .050 In/Se .044 In/Se .050 In/Se .044 In/Se .044 In/Se	TEL 1-20 KHz   AC 1.520 G-s   AC 1.508 G-s   AC .951 G-s   AC .222 G-s   AC .640 G-s   TEL 1-20 KHZ   AC 2.665 G-s   AC 2.728 G-s   AC 2.467 G-s   AC 2.467 G-s   AC 2.401 G-s   AC 2.540 G-s   AC 2.665 G-s   AC 1.714 G-s   AC 2.467 G-s   AC 2.467 G-s   AC 2.540 G-s   AC 2.665 G-s   AC 2.467 G-s   AC 2.467 G-s   AC 2.666 G-s   AC 3.30 G-s   AC 1.109 G-s   C .668 G-s   AC .472 G-s	3588.0 RPM 1780.0 RPM
new AC	11 12 21 22 23 71M 72M 73M 81M 82M 71F 72F 73F 81F 82F - 11 12 13	OVERALL LEV .092 In/Se .062 In/Se .092 In/Se .050 In/Se .055 In/Se OVERALL LEV .044 In/Se .042 In/Se .046 In/Se .046 In/Se .052 In/Se .063 In/Se .050 In/Se .050 In/Se .044 In/Se .050 In/Se .044 In/Se .051 In/Se .044 In/Se .044 In/Se .051 In/Se .045 In/Se .051 In/Se .051 In/Se	TEL 1-20 KHz   AC 1.520 G-s   AC 1.508 G-s   AC .951 G-s   AC .222 G-s   AC .640 G-s   TEL 1-20 KHZ   AC 2.665 G-s   AC 2.728 G-s   AC 2.467 G-s   AC 2.467 G-s   AC 2.401 G-s   AC 2.540 G-s   AC 2.665 G-s   AC 1.714 G-s   AC 2.667 G-s   AC 2.467 G-s   AC 2.640 G-s   AC 2.540 G-s   AC 2.540 G-s   AC 2.668 G-s   AC .668 G-s   AC .668 G-s   AC .376 G-s	3588.0 RPM 1780.0 RPM
new AC	11 12 21 22 23 71M 72M 73M 81M 82M 71F 72F 73F 81F 82F - 11 12 13 21	OVERALL LEV .092 In/Se .062 In/Se .092 In/Se .050 In/Se .055 In/Se OVERALL LEV .044 In/Se .042 In/Se .042 In/Se .046 In/Se .046 In/Se .052 In/Se .063 In/Se .050 In/Se .044 In/Se .050 In/Se .044 In/Se .044 In/Se .050 In/Se .044 In/Se .045 In/Se .061 In/Se .098 In/Se	TEL 1-20 KHz   ac 1.520 G-s   ac 1.508 G-s   ac .951 G-s   ac .222 G-s   ac .640 G-s   TEL 1-20 KHZ   ac 2.665 G-s   ac 2.298 G-s   ac 1.714 G-s   ac 2.467 G-s   ac 2.467 G-s   ac 2.401 G-s   ac 2.540 G-s   ac 2.655 G-s   ac 2.728 G-s   ac 2.401 G-s   ac 2.640 G-s   ac 2.540 G-s   ac 2.540 G-s   ac 3.30 G-s   ac 1.109 G-s   SSOR (13-Aug-21)   TEL 1-20 KHz   ac .668 G-s   ac .472 G-s   ac .376 G-s   ac .167 G-s	3588.0 RPM 1780.0 RPM
new AC	11 12 21 22 23 71M 72M 73M 81M 82M 71F 72F 73F 81F 82F - 11 12 13 21 22	OVERALL LEV .092 In/Se .062 In/Se .092 In/Se .055 In/Se OVERALL LEV .044 In/Se .044 In/Se .042 In/Se .046 In/Se .046 In/Se .046 In/Se .052 In/Se .063 In/Se .065 In/Se .050 In/Se .044 In/Se .050 In/Se .044 In/Se .050 In/Se .044 In/Se .051 In/Se .044 In/Se	TEL 1-20 KHz   AC 1.520 G-s   AC 1.508 G-s   AC .951 G-s   AC .222 G-s   AC .640 G-s   TEL 1-20 KHZ   AC 2.665 G-s   AC 2.298 G-s   AC 1.714 G-s   AC 2.728 G-s   AC 2.467 G-s   AC 2.401 G-s   AC 2.540 G-s   AC 2.668 G-s   AC 1.109 G-s   AC .668 G-s   AC .472 G-s   AC .376 G-s   AC .635 G-s	3588.0 RPM 1780.0 RPM
new AC	11 12 21 22 23 71M 72M 73M 81M 82M 71F 72F 73F 81F 82F - 11 12 13 21 22 23	OVERALL LEV .092 In/Se .062 In/Se .092 In/Se .055 In/Se OVERALL LEV .044 In/Se .044 In/Se .042 In/Se .046 In/Se .046 In/Se .046 In/Se .052 In/Se .063 In/Se .065 In/Se .050 In/Se .044 In/Se .044 In/Se .050 In/Se .044 In/Se .044 In/Se .044 In/Se .044 In/Se .050 In/Se .061 In/Se .061 In/Se .070 In/Se .047 In/Se	TEL 1-20 KHz   AC 1.520 G-s   AC 1.508 G-s   AC .951 G-s   AC .222 G-s   AC .640 G-s   TEL 1-20 KHZ   AC 2.665 G-s   AC 2.298 G-s   AC 1.714 G-s   AC 2.728 G-s   AC 2.467 G-s   AC 2.401 G-s   AC 2.540 G-s   AC 2.668 G-s   AC 4.330 G-s   AC 1.109 G-s   CSSOR (13-Aug-21)   TEL 1-20 KHz   AC .668 G-s   AC .376 G-s   AC .376 G-s   AC .635 G-s   AC .748 G-s	3588.0 RPM 1780.0 RPM
new AC	11 12 21 22 23 71M 72M 73M 81M 82M 71F 72F 73F 81F 82F - 11 12 13 21 22 23	OVERALL LEV     .092 In/Se     .062 In/Se     .092 In/Se     .092 In/Se     .055 In/Se     .055 In/Se     OVERALL LEV     .044 In/Se     .042 In/Se     .043 In/Se     .046 In/Se     .052 In/Se     .063 In/Se     .065 In/Se     .065 In/Se     .065 In/Se     .050 In/Se     .050 In/Se     .065 In/Se     .065 In/Se     .065 In/Se     .065 In/Se     .061 In/Se     .061 In/Se     .061 In/Se     .070 In/Se     .070 In/Se     .047 In/Se	ZEL 1-20 KHz   AC 1.520 G-s   AC 1.508 G-s   AC .951 G-s   AC .222 G-s   AC .640 G-s   ZEL 1-20 KHZ   AC 2.665 G-s   AC 2.298 G-s   AC 2.728 G-s   AC 2.467 G-s   AC 2.467 G-s   AC 2.401 G-s   AC 2.540 G-s   AC 2.668 G-s   AC .668 G-s   AC .472 G-s   AC .376 G-s   AC .635 G-s   AC .748 G-s   AC .748 G-s	3588.0 RPM 1780.0 RPM

72F	.192	In/Sec	6.380 G-s			
73F	.141	In/Sec	2.870 G-s			
81F	.137	In/Sec	2.929 G-s			
82F	.347	In/Sec	8.630 G-s			
83F	.170	In/Sec	3.430 G-s			
71M	.098	In/Sec	3.044 G-s			
72M	.152	In/Sec	4.732 G-s			
73M	.121	In/Sec	4.767 G-s			
81M	.155	In/Sec	3.330 G-s			
82M	.262	In/Sec	3.622 G-s			
83M	.169	In/Sec	2.692 G-s			
201-08A -	COMPRESSOR, NASH	A 201-08A	(13-Aug-21)			
	OVERAL	L LEVEL	1-20 KHz			
11	.051	In/Sec	.112 G-s	506.3 RPM		
12	.044	In/Sec	.133 G-s			
13	.091	In/Sec	.086 G-s			
21	.040	In/Sec	.055 G-s			
22	.059	In/Sec	.091 G-s			
23	.078	In/Sec	.089 G-s			
71	.107	In/Sec	.846 G-s			
72	.154	In/Sec	.821 G-s			
73	.116	In/Sec	.421 G-s			
81	.130	In/Sec	.442 G-s			
82	.193	In/Sec	.272 G-s			
83	.113	In/Sec	.368 G-s			
202-05 -	NASH SEAL LIQUII	D PUMP-A	(13-Aug-21)			
	OVERAL	L LEVEL	1-20 KHz			
11	.020	In/Sec	.051 G-s	1800.0 RPM		
21	.036	In/Sec	.082 G-s			
23	.041	In/Sec	.059 G-s			
71	.036	In/Sec	.047 G-s			
72	.022	In/Sec	.048 G-s			
Clarificat	Clarification Of Vibration Units:					
Acc	> G-s H	?K				
Vel	> In/Sec H	PK .				