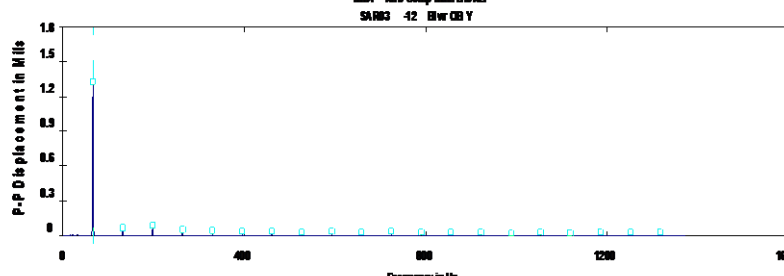
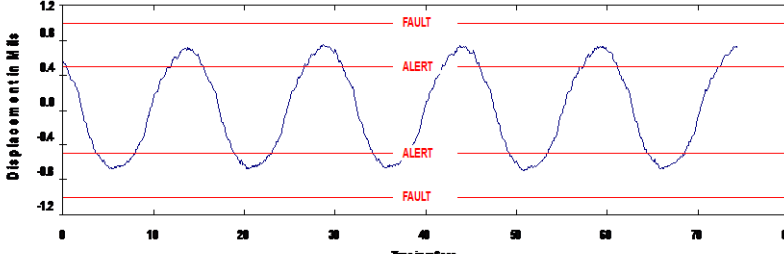
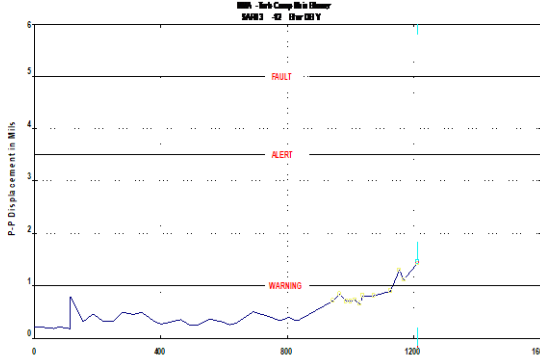




Client	Lucite	Survey Date	10-1-20
Location	Memphis, TN	Report Date	10-2-20
Machine	SAR 03 Turbine Compressor Blower	QMS No.	143471
Component	Shaft vibration	Analyst	DWS

Defect Rating for this machine	Class II
Defect Rating System	
Class I: Defect is present, but effect on reliability is not clear; no immediate action is required. Continue normal monitoring.	Class III: Defect (s) present that may cause failure in short term (less than 2 mos.). Should be addressed as soon as practical, with a high maintenance priority. Increase monitoring frequency.
Class II: Defect (s) present that may cause problem in long term (2-6 mos.). Repair during normal maintenance scheduling. Continue to monitor.	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.

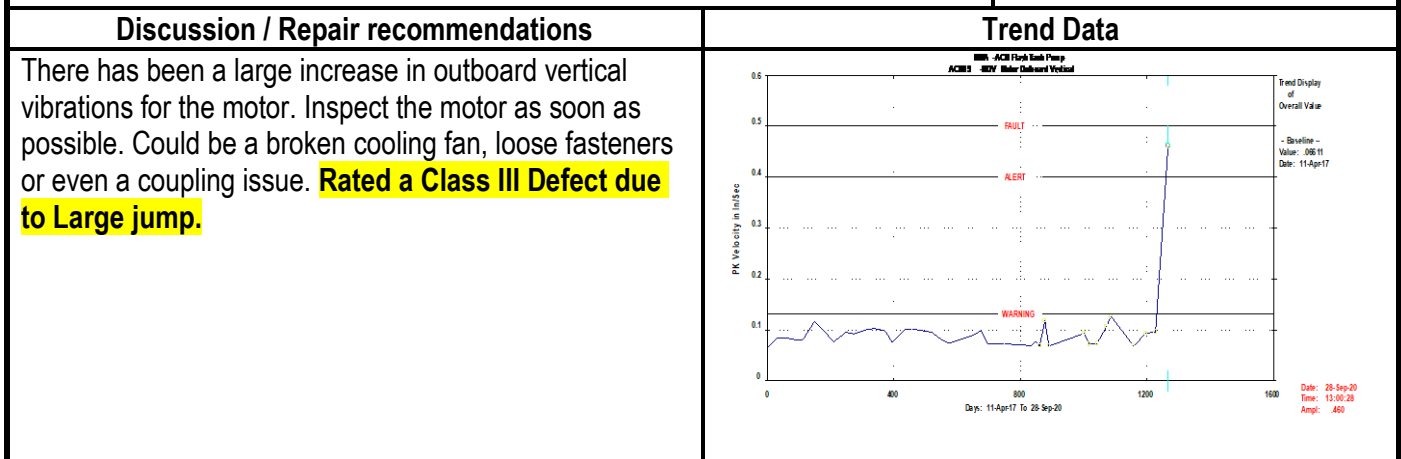
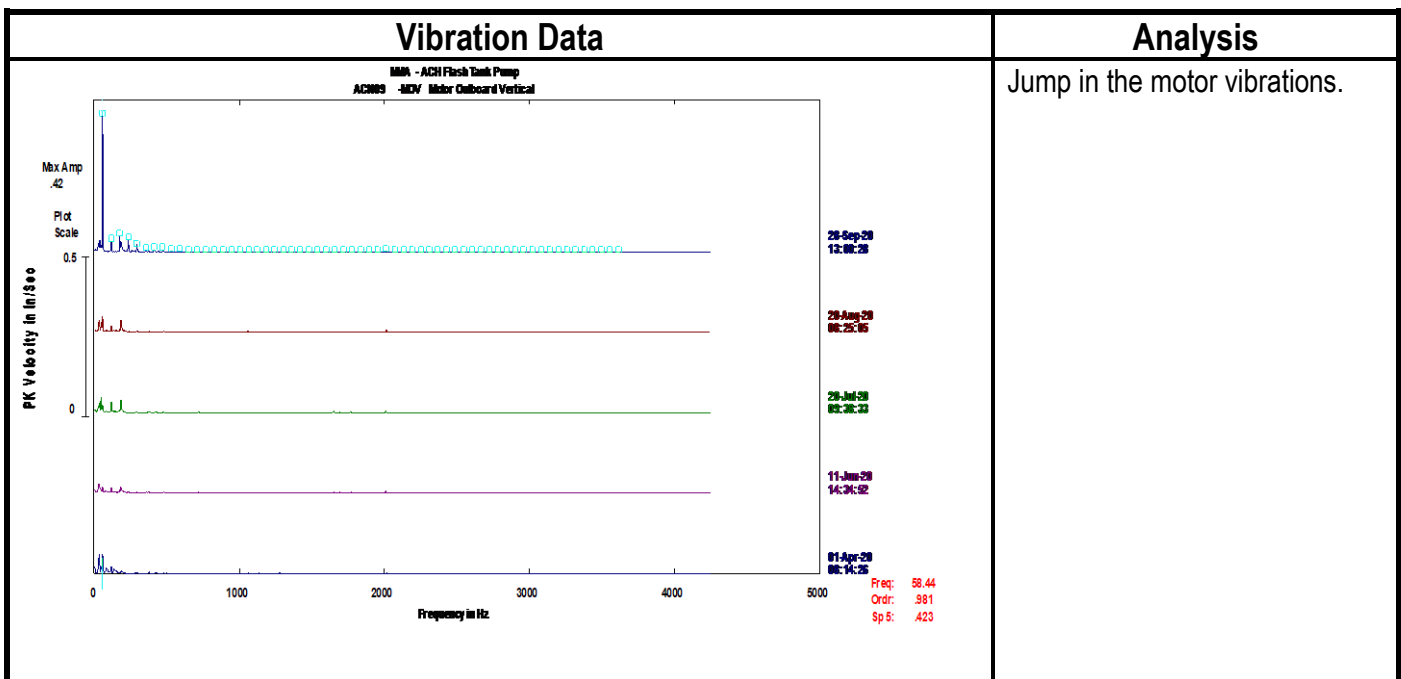
Vibration Data	Analysis
<p>MMN - Turb Comp Main Blower SAR03 - 42 Blwr CR Y</p>  <p>Route Spectrum 28-Sep-20 09:34:03 OVERALL= 1.43 D-OG P-P = 1.43 LOAD = 100.0 RPM = 3951, (65.86 Hz)</p>  <p>Route Waveform 28-Sep-20 09:34:03 P-P = 1.42 PK(Hz) = 7515/7006 CRE STF= 1.50</p> <p>Freq: 65.86 Ordr: 1.000 Spec: 1.422</p>	<p>1X vibration at 3591 RPM. Trend shows gradual increase over time.</p>

Discussion / Repair recommendations	Trend Data
<p>The unit 1x RPM vibration has increased slightly. Unit speed will most likely have some influence on vibration amplitude. Inspection of unit near the compressor end is still recommended. Our motion amplification camera system could help to identify if there are any structural issues. Rated a Class II Defect.</p>	 <p>Trend Display of Overall Value - Baseline - Value: .221 Date: 07-Jun-17</p> <p>Date: 28-Sep-20 Time: 09:34:06 Ampl: 1.430</p>



Client	Lucite	Survey Date	10-1-20
Location	Memphis, TN	Report Date	10-2-20
Machine	ACN 09 ACH Flash Tank Pump	QMS No.	143471
Component		Analyst	DWS

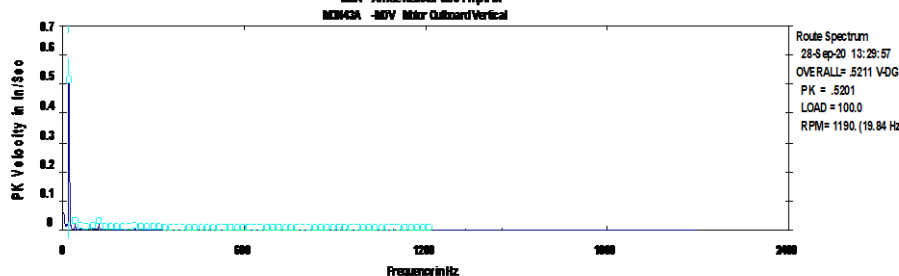
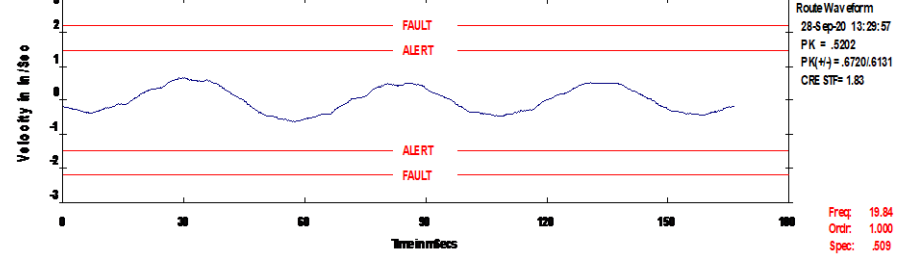
Defect Rating for this machine	Class III
Defect Rating System	
Class I: Defect is present, but effect on reliability is not clear; no immediate action is required. Continue normal monitoring.	Class III: Defect (s) present that may cause failure in short term (less than 2 mos.). Should be addressed as soon as practical, with a high maintenance priority. Increase monitoring frequency.
Class II: Defect (s) present that may cause problem in long term (2-6 mos.). Repair during normal maintenance scheduling. Continue to monitor.	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.

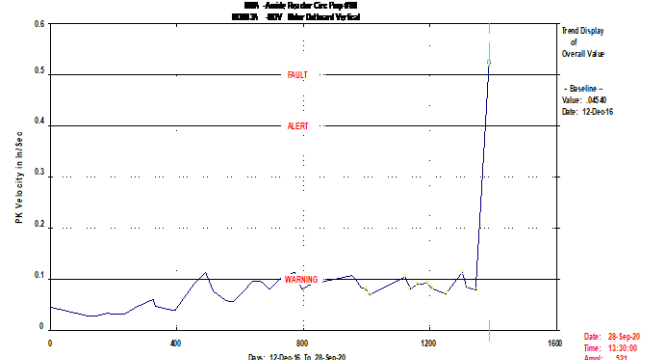




Client	Lucite	Survey Date	10-1-20
Location	Memphis, TN	Report Date	10-2-20
Machine	MON 43A Amide Reactor Circulation Pump 1N	QMS No.	143471
Component		Analyst	DWS

Defect Rating for this machine	Class III
Defect Rating System	
Class I: Defect is present, but effect on reliability is not clear; no immediate action is required. Continue normal monitoring.	Class III: Defect (s) present that may cause failure in short term (less than 2 mos.). Should be addressed as soon as practical, with a high maintenance priority. Increase monitoring frequency.
Class II: Defect (s) present that may cause problem in long term (2-6 mos.). Repair during normal maintenance scheduling. Continue to monitor.	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.

Vibration Data	Analysis
<p>MON 43A - Amide Reactor Circ Pump 1N MON 43A - MOV Motor Outboard Vertical</p>  <p>Route Spectrum 28-Sep-20 13:29:57 OVERALL = .5211 VDG PK = .5201 LOAD = 100.0 RPM = 1190 (19.84 Hz)</p>  <p>Route Waveform 28-Sep-20 13:29:57 PK = .5202 PK(Hz) = 6720/6131 CRE STF = 1.83</p> <p>Freq: 19.84 Ord: 1.000 Spec: .509</p>	<p>Large jump in vibrations this survey.</p>

Discussion / Repair recommendations	Trend Data
<p>There has been a large increase in outboard vertical vibrations for the motor. Inspect the motor as soon as possible. Could be a broken cooling fan, loose fasteners or even a coupling issue. Rated a Class III Defect due to Large jump.</p>	 <p>Trend Display of Overall Value Baseline Value: .0458 Date: 12-Dec-19</p> <p>Date: 28-Sep-20 Time: 13:30:00 Ampl: .521</p>