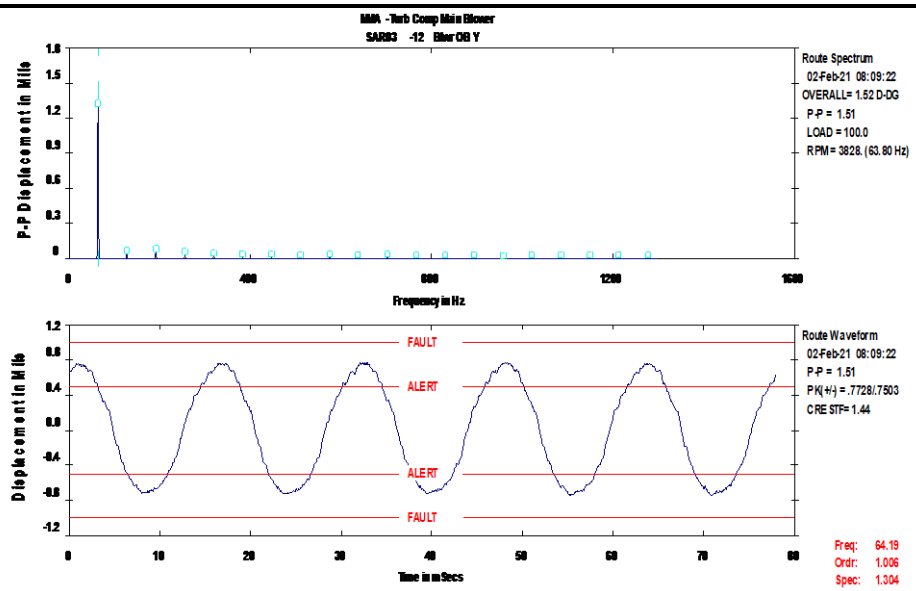
HI-SPEED PREDICTIVE MAINTENANCE

Machinery Vibration Report

Client	Lucite	**Survey Date**	2-1-21
Location	Memphis, TN	**Report Date**	2-3-21
Machine	SAR 03 turbine compressor main blower	**QMS No.**	133393
Component		**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

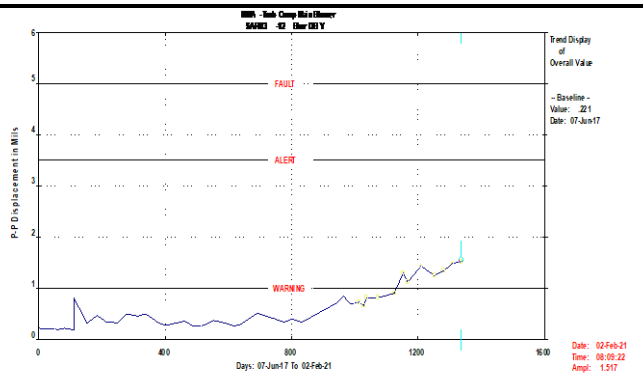
Point 12 proximity probe vibration continues to slowly climb in amplitude.

Discussion / Repair recommendations

Proximity probe 12 data shows a shaft speed vibration. The vibration amplitude continues to slowly increase in amplitude. The impeller is scheduled to be cleaned at this time so we will compare the readings next survey.

Rated a Class II Defect.

Trend Data



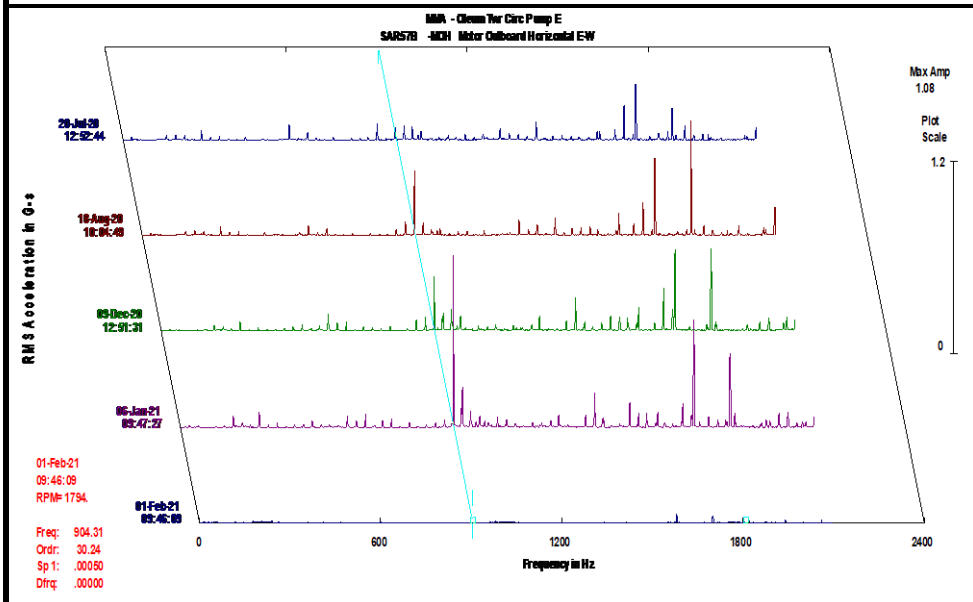
HI-SPEED PREDICTIVE MAINTENANCE

Machinery Vibration Report

Client	Lucite	**Survey Date**	2-1-21
Location	Memphis, TN	**Report Date**	2-3-21
Machine	SAR 57B Oleum Tower Circ Pump East	**QMS No.**	133393
Component	Motor	**Analyst**	DWS

Defect Rating for this machine	**NR**
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



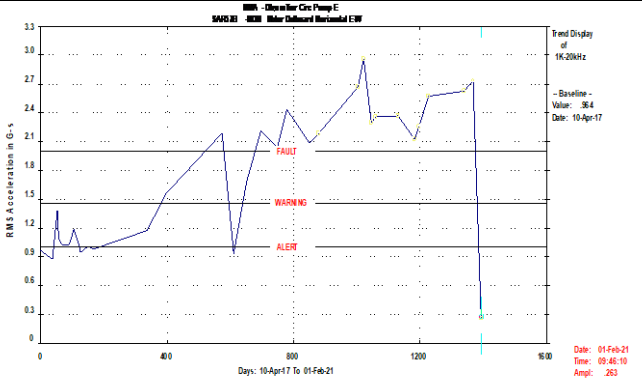
Analysis

Large drop in vibrations associated with fluting (electrical discharge).

Discussion / Repair recommendations

Current vibration data indicates motor replacement due to the elimination of defect frequencies seen in the previous survey. No further actions are required at this time. **Non-Rated**.

Trend Data



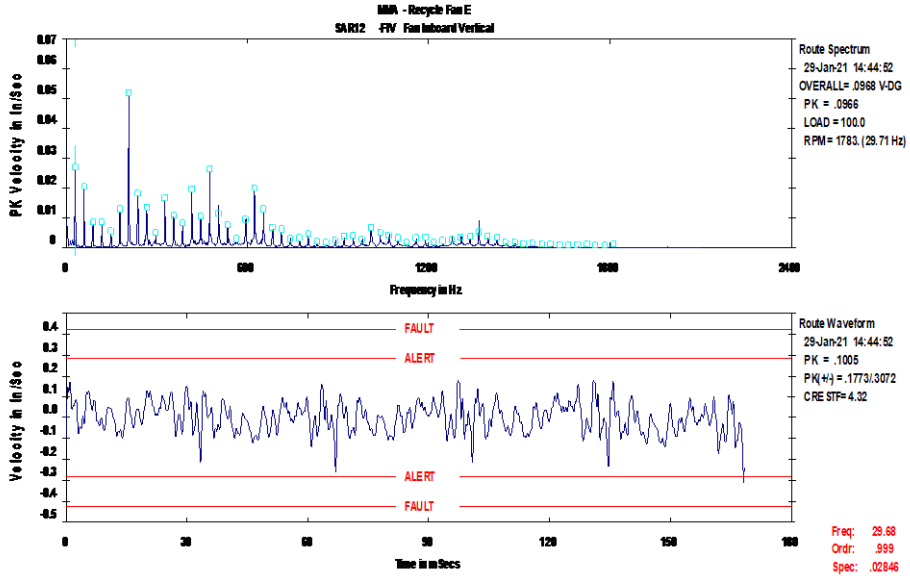
HI-SPEED PREDICTIVE MAINTENANCE

Machinery Vibration Report

Client	Lucite	**Survey Date**	2-1-21
Location	Memphis, TN	**Report Date**	2-3-21
Machine	SAR 12 MMA Recycle Fan E	**QMS No.**	133393
Component	Fan bearings	**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



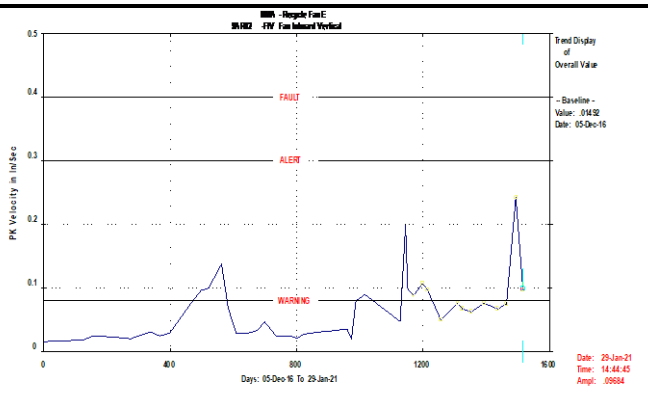
Analysis

Drop in vibrations after bearing adjustment.

Discussion / Repair recommendations

The fan shaft was serviced a few months ago. Fan vibrations increased after that maintenance. The bearing caps were adjusted which subsequently dropped the vibration. Harmonics are still present and are indicative of excessive clearances (looseness) or structure/fastener issue. We will watch for changes. **Rated a Class II Defect.**

Trend Data



HI-SPEED PREDICTIVE MAINTENANCE

Machinery Vibration Report

Client	Lucite	**Survey Date**	2-1-21
Location	Memphis, TN	**Report Date**	2-3-21
Machine	ACN13B #2 Kettle Circulation Pump.	**QMS No.**	133393
Component	Motor	**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.
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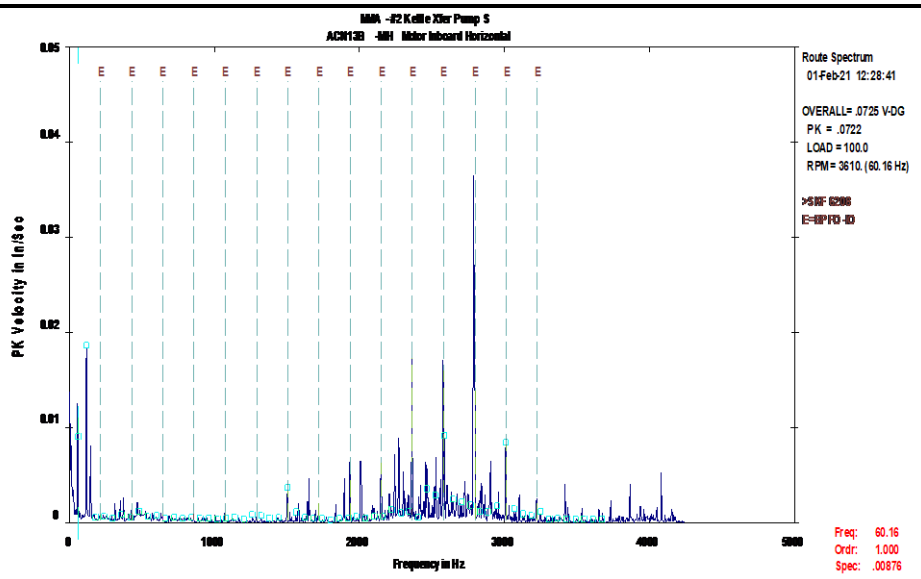
Vibration Data



Analysis

Outer race defect and harmonics are marked.

Discussion / Repair recommendations

Motor bearing data shows outer race defects in the inboard bearing. The vibrations have not changed much recently. We will watch this carefully going forward; however, in might be prudent to change this unit out as time allows. **Rated a Class II Defect.**

Trend Data