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August 18, 2021

Milwaukee Tools Greenwood, MS

The following is a summary of findings from the August 2021 monthly vibration survey of the Heat Treat Quench Motors. Please let us know if there are any questions or comments.

**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.

### **Heat Treat Motors**

#### **Heat Treat Motor 1**

. Vibration appeared to be within acceptable limits this survey. No actions necessary at this time

### **Heat Treat Motor 2**

Vibration appeared to be within acceptable limits this survey. No actions necessary at this time.

# Abbreviated Last Measurement Summary

Database: Milwaukee Tools.rbm Area: HEAT TREAT SYSTEMS Route No. 1: HEAT TREAT Report Date: 18-Aug-21 13:43

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD
MOTOR #1 - HEAT TREAT MOTOR #1 OVERALL LE MOH - MOTOR OUTBOARD HORIZON MOV - MOTOR OUTBOARD VERTICAL MIH - MOTOR INBOARD HORIZONTAL MIV - MOTOR INBOARD VERTICAL MIA - MOTOR INBOARD AXIAL	TAL .040 In/Sec .048 In/Sec	.173 G-s .127 G-s .107 G-s .122 G-s .197 G-s
MOTOR #2 - HEAT TREAT MOTOR #2 OVERALL LE MOH - MOTOR OUTBOARD HORIZONT MOV - MOTOR OUTBOARD VERTICAL MIH - MOTOR INBOARD HORIZONTAL MIV - MOTOR INBOARD VERTICAL MIA - MOTOR INBOARD AXIAL	EVEL 1K-20KHz TAL .130 ln/Sec .083 ln/Sec	.092 G-s .098 G-s .316 G-s .382 G-s .140 G-s

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Clarification Of Vibration Units:

Acc --> G-s RMS Vel --> In/Sec PK As always, it has been a pleasure to serve Milwaukee Tools Greenwood, MS. If there are any comments or questions, do not hesitate to contact us.

Sincerely,

# Chris Senter

ISO Certified Vibration Analyst, Category I



## QualiTest<sub>®</sub> Diagnostics

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