

Infrared Thermography Report

Warren Oil April 2020

All electrical panels were scanned using a  P60 infrared camera. The following report only contains defects that were found during the survey. Below is our classification system for each defect included in this report. If there are any questions or comments, please feel free to contact us at any time.

We want to bring a plant wide issue to your attention. Most of the panels had considerable accumulation of dust and cob webs in and around the electrical equipment. This could cause an arc flash during maintenance by just opening a panel. We highly recommend performing a thorough cleaning periodically on your electrical service equipment during shutdowns with all power removed by qualified individuals.



employs a three-tier defect rating system:

CLASS I: A defect or defects are present that are likely to cause a problem in the long term (2-6 months). Should be addressed in the normal course of maintenance scheduling.

CLASS II: A defect or defects are present that are likely to cause a failure in the short term (less than 2 months). Should be addressed as soon as practical, on a high maintenance priority. Consideration should be given to increase monitoring frequency.

CLASS III: A defect or defects are present that make continued component reliability unpredictable and likelihood of secondary damage is high. Consideration should be given to an unscheduled shutdown to correct.

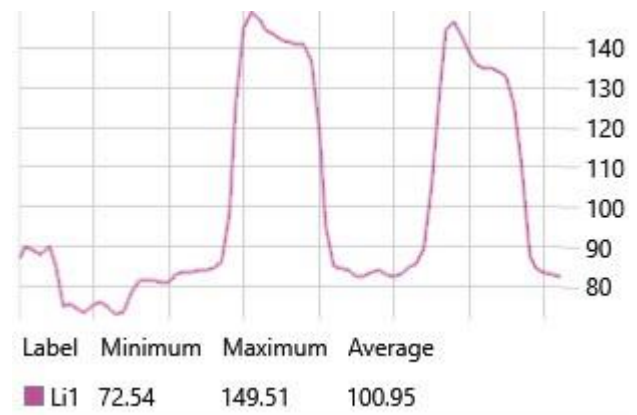


tests and inspects industrial machinery and equipment and makes recommendations concerning maintenance and repairs based on its experience in the field of industrial repair and maintenance. The information contained herein is provided as an opinion only, not as a guaranty or warranty of the matters discussed herein.

Component	Fuse
Equipment/Bucket ID	Blow Mold MCC Bucket P-3



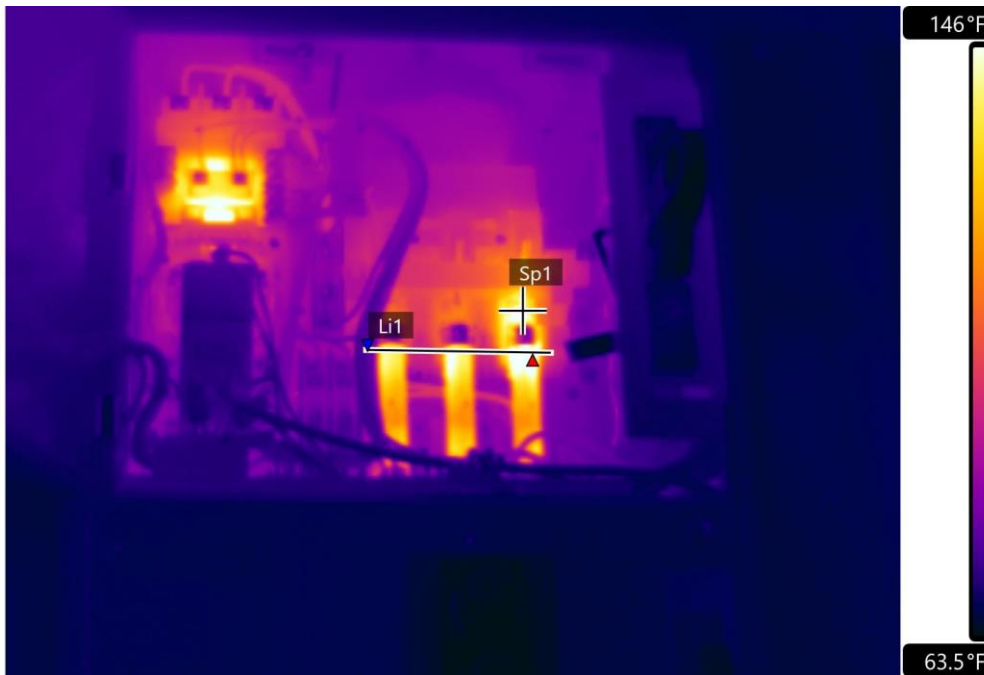
Sp1	141.5 °F
Sp2	129.3 °F
Li1 Minimum	72.5 °F
Li1 Maximum	149.5 °F
Areas	-



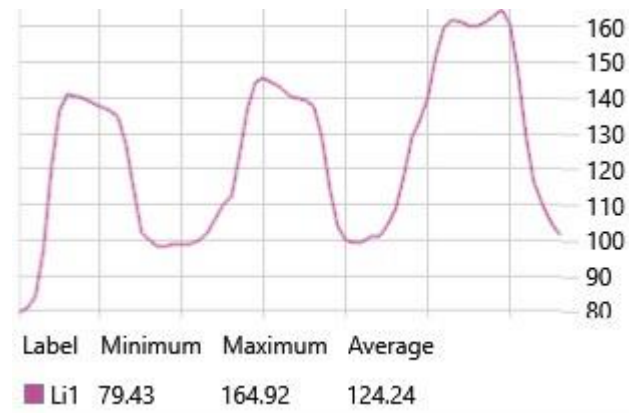
Fault	Weak Fuse Clips
Defect Rating	Class I

Recommendations
Inspect the fuse block clips. Clean and repair or replace the block. Replace all fuses with like kind sized correctly.

Component	Fuse/Fuse Block
Equipment/Bucket ID	Blow Mold MCC Bucket P-1



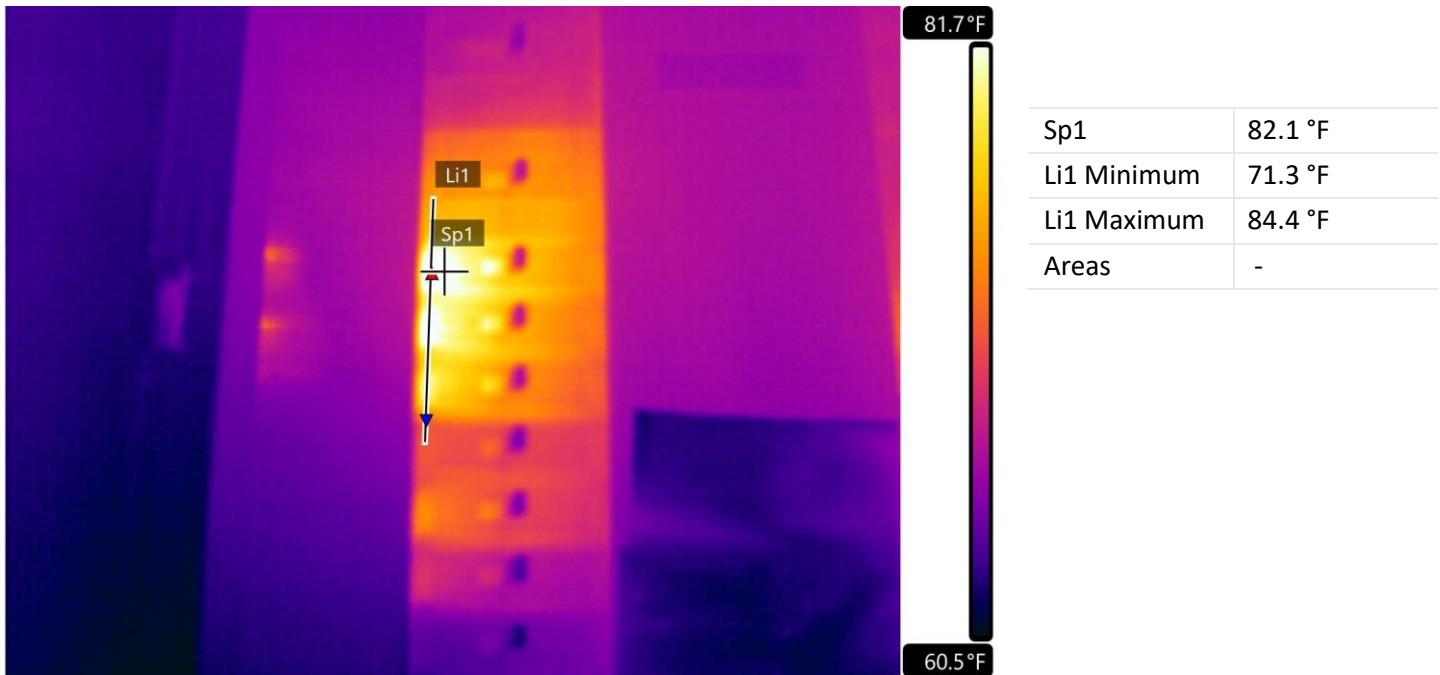
Sp1	144.8 °F
Li1 Minimum	79.4 °F
Li1 Maximum	164.9 °F
Areas	-



Fault	Weak fuse clip and or lug connection/switch knife blade
Defect Rating	Class II

Recommendations	The switch and fuse block assembly shows excessive heat at the C phase top near the switch blade. Inspect and repair the switch and fuse block or replace with new. Change all the fuses with like kind and sized correctly.
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Component	Circuit Breakers
Equipment/Bucket ID	Pail Building Main Panel A



Fault	Loose connections
Defect Rating	Class I

Recommendations
Tighten all connections.

Summary

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This concludes our survey report. Please feel free to contact us at any time for question or comments.

Thank you for your business,

David W. Shook



ITC Certified Level I Infrared Thermographer

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