HI-SPEED INDUSTRIAL SERVICE

Chemours

Infrared Thermography Report

Chemours NaCN September 23, 2020

All electrical panels were scanned using a FLIR 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. The following pages reflect issues found during the survey.

HI-SPEED employs a three-tier defect rating system:

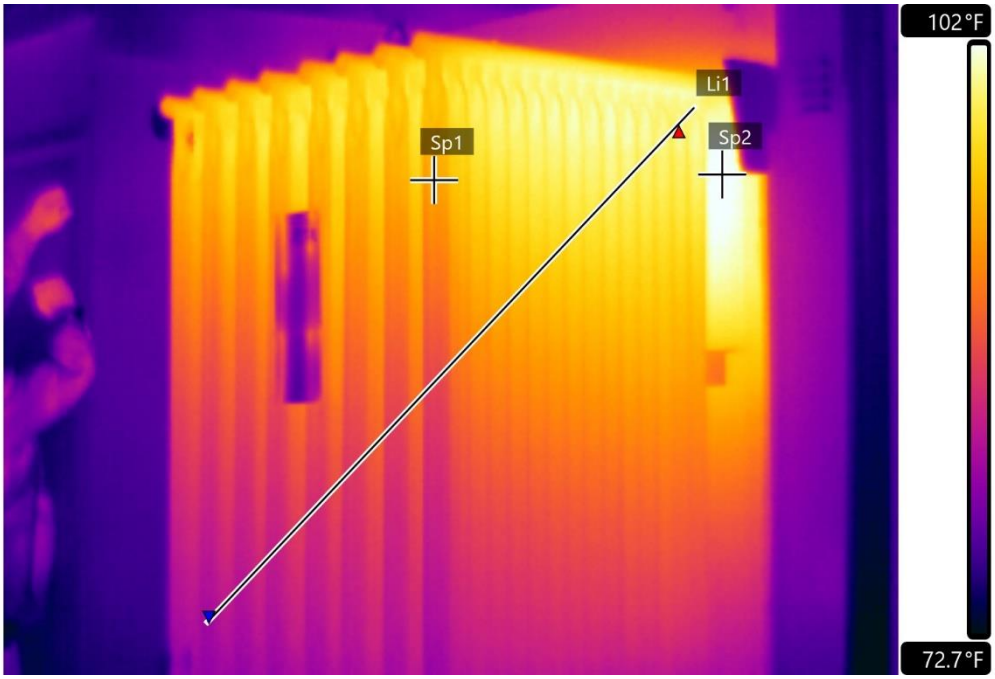
CLASS I: A defect or defects are present that are likely to cause a problem in the long term (2-6 months). Should be addressed in the normal course of maintenance scheduling.

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.

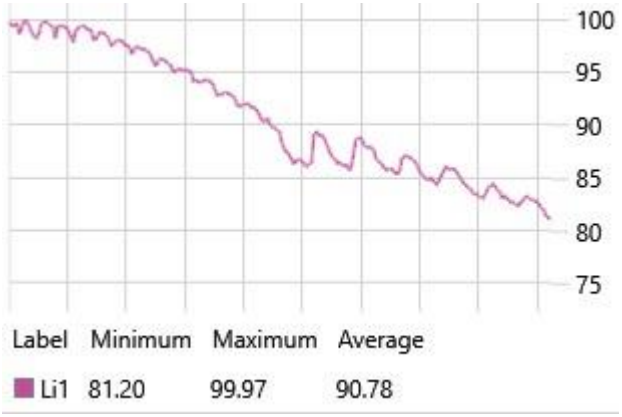
CLASS III: A defect or defects are present that make continued component reliability unpredictable and likelihood of secondary damage is high. Consideration should be given to an unscheduled shutdown to correct.

HI-SPEED *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	North side cooling fins and transformer body
Equipment/Bucket ID	Sub 252-B



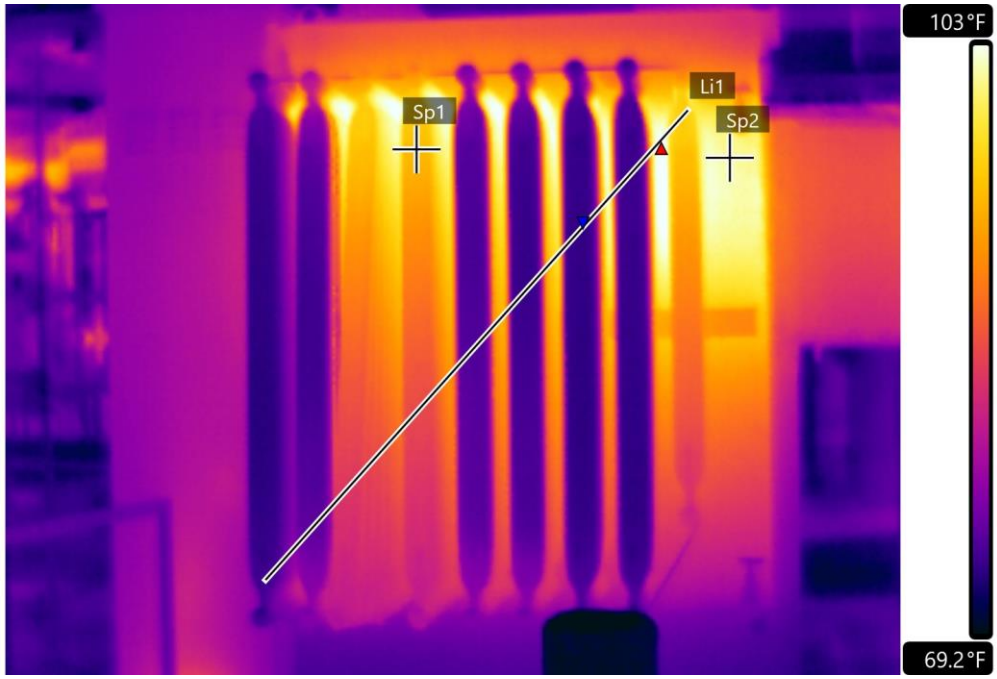
Sp1	92.8 °F
Sp2	101.7 °F
Li1 Minimum	81.2 °F
Li1 Maximum	100.0 °F
Areas	-



Fault	None
Defect Rating	NA

Recommendations
None

Component	South side cooling fins and transformer body
Equipment/Bucket ID	Sub 252-B



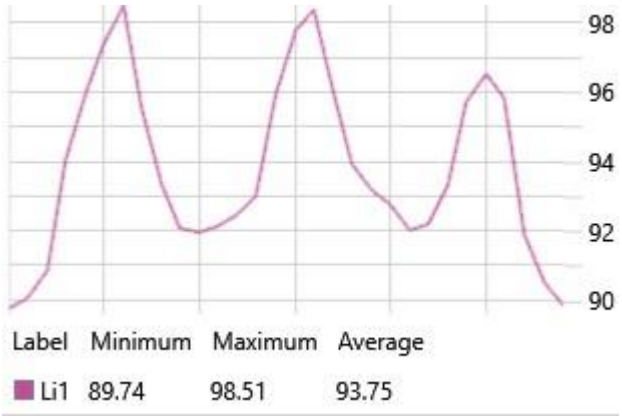
Sp1	93.9 °F
Sp2	100.9 °F
Li1 Minimum	73.0 °F
Li1 Maximum	102.7 °F
Areas	-

Fault	Multiple non-functional cooling fins
Defect Rating	Class I

Recommendations
Check the coolant level and fins for plugging. Replace damaged fin section.

Component	Left (East) door connections
Equipment/Bucket ID	Sub 252-B

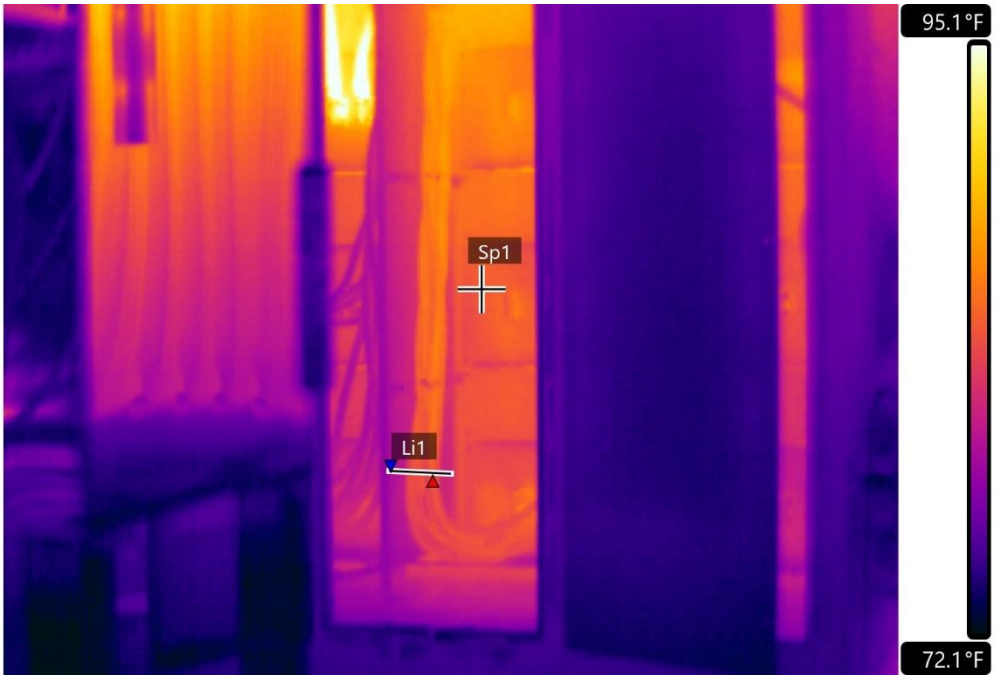
Sp1	85.0 °F
Li1 Minimum	89.7 °F
Li1 Maximum	98.5 °F
Areas	-



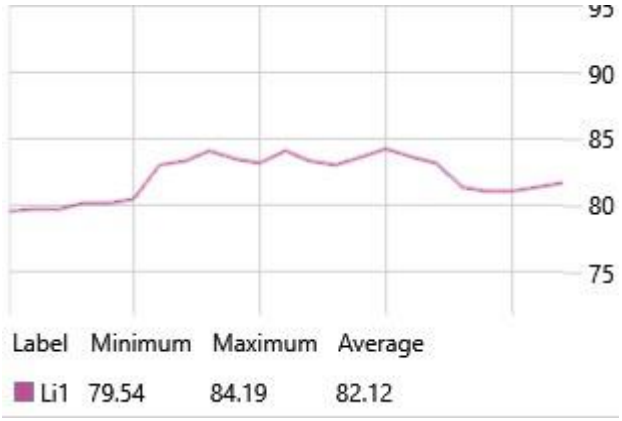
Fault	None
Defect Rating	NA

Recommendations
None

Component	Middle door connections
Equipment/Bucket ID	Sub 252-B



Sp1	84.4 °F
Li1 Minimum	79.5 °F
Li1 Maximum	84.2 °F
Areas	-

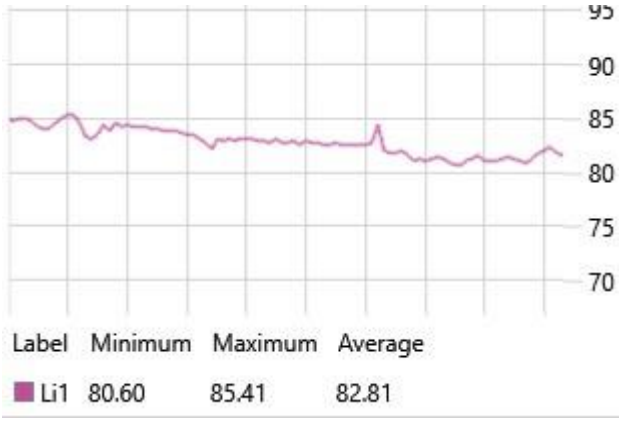


Fault	None
Defect Rating	NA

Recommendations
None

Component	Right (West) door connections
Equipment/Bucket ID	Sub 252-B

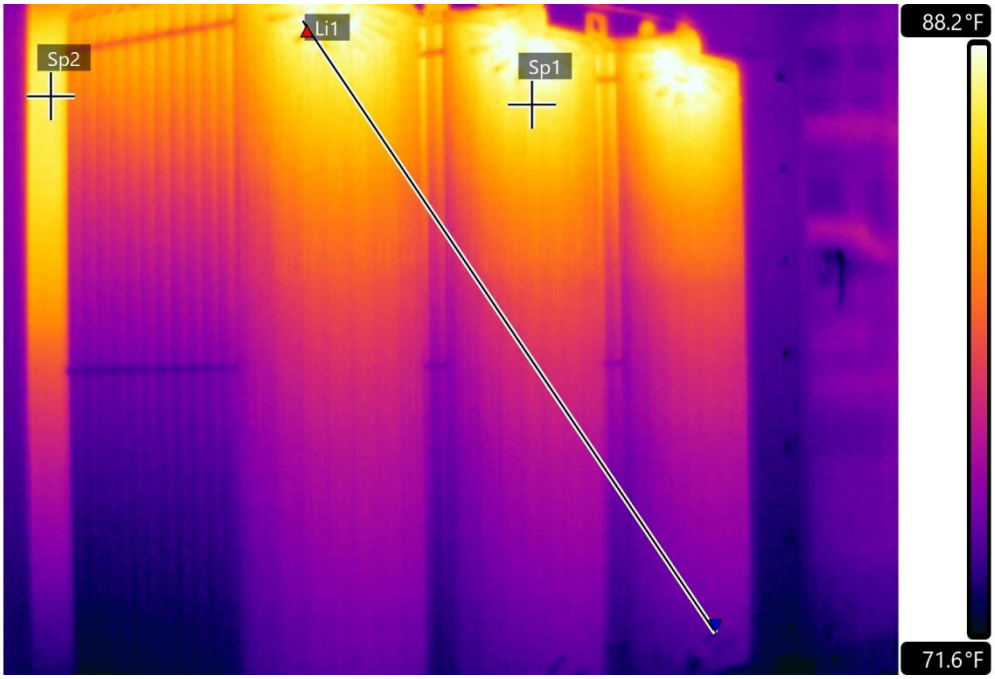
Sp1	84.4 °F
Li1 Minimum	80.6 °F
Li1 Maximum	85.4 °F
Areas	-



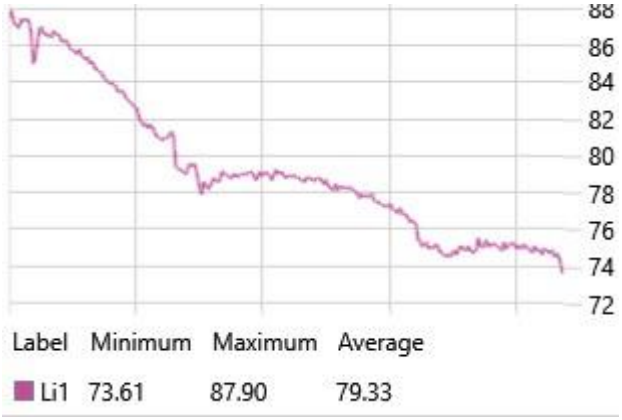
Fault	None
Defect Rating	NA

Recommendations
None

Component	North side cooling fins
Equipment/Bucket ID	Sub 231



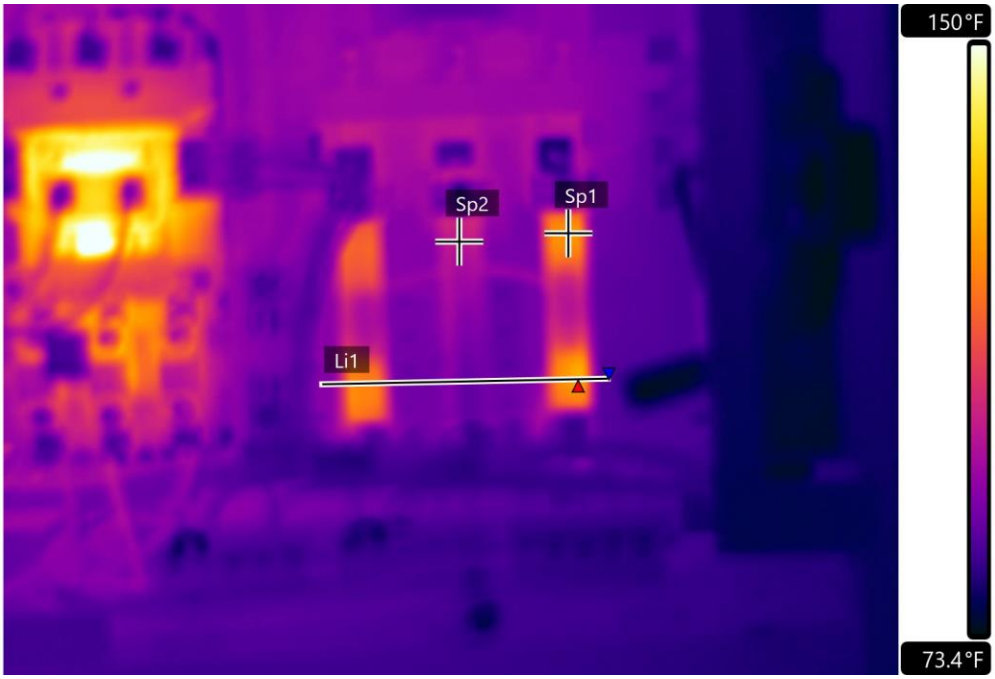
Sp1	86.7 °F
Sp2	86.7 °F
Li1 Minimum	73.6 °F
Li1 Maximum	87.9 °F
Areas	-



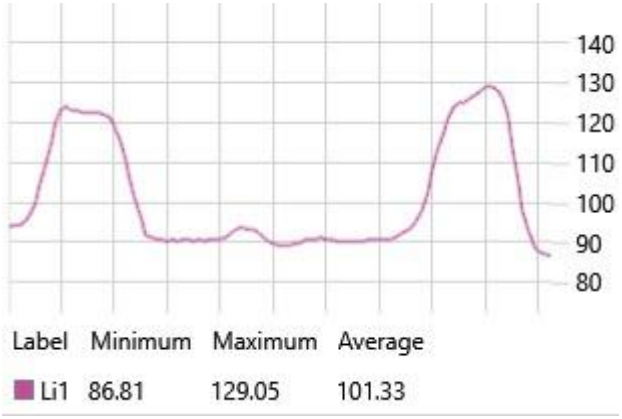
Fault	None
Defect Rating	NA

Recommendations
None

Component	Fuse clips
Equipment/Bucket ID	ECR MCC 1R 4th floor vent fan South



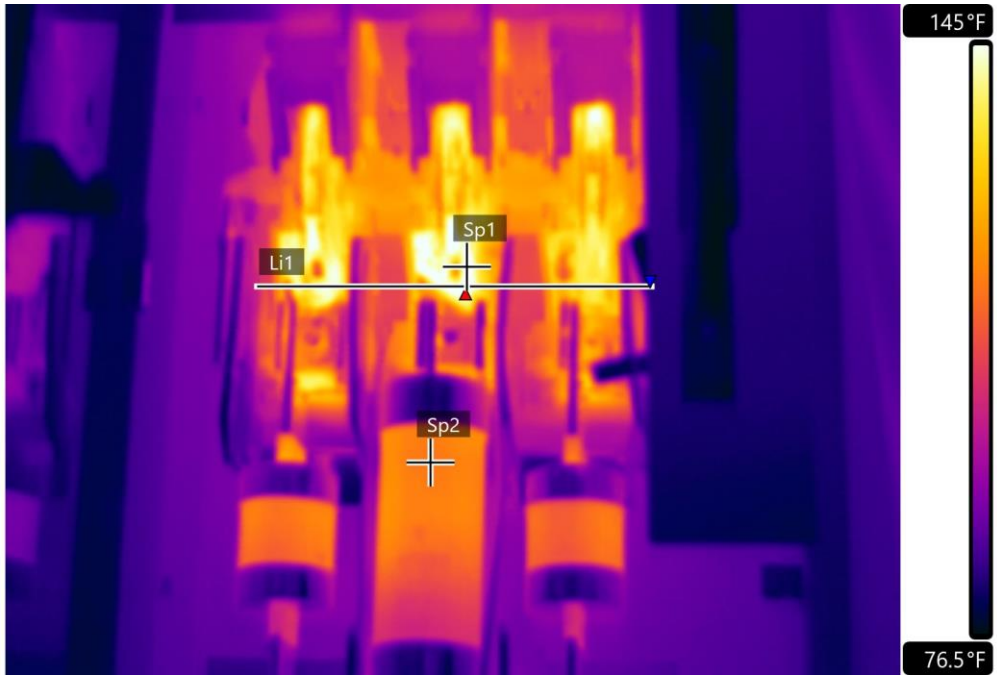
Sp1	125.6 °F
Sp2	101.7 °F
Li1 Minimum	86.8 °F
Li1 Maximum	129.1 °F
Areas	-



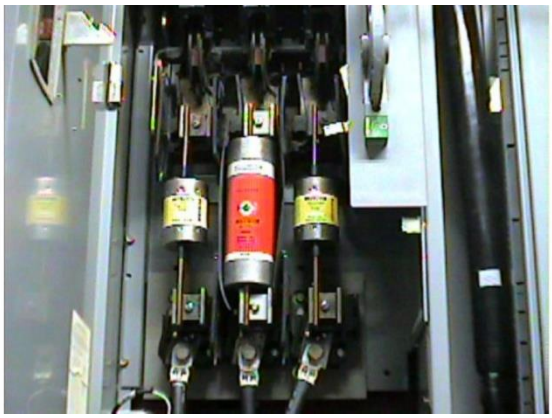
Fault	Weak fuse clips
Defect Rating	Class I

Recommendations
Inspect the fuse block clips for tension and surface wear, as well as the fuses. Check for load balance. Replace worn components as time allows.

Component	Switch
Equipment/Bucket ID	ECR MCC 2F Recycle Scrubber Blower



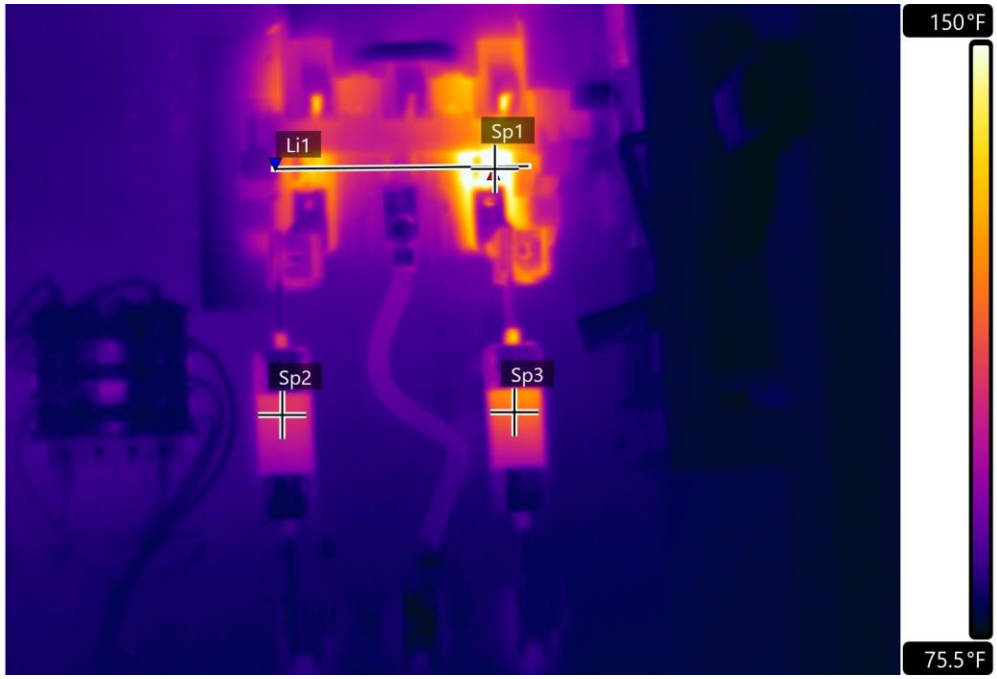
Sp1	146.7 °F
Sp2	118.5 °F
Li1 Minimum	83.3 °F
Li1 Maximum	146.1 °F
Areas	-



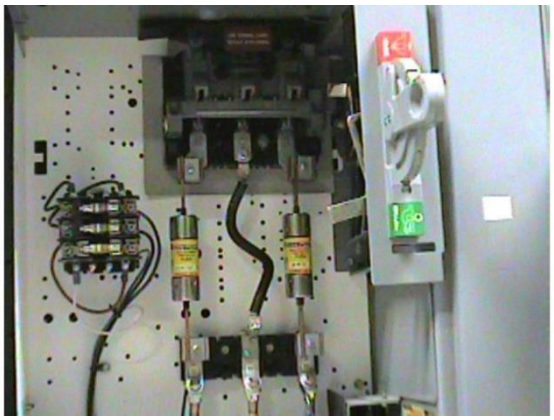
Fault	Poor contact at switch
Defect Rating	Class I

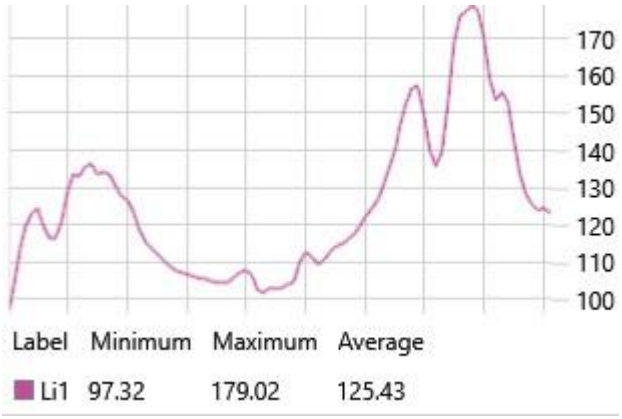
Recommendations
Large temperature delta between fuse body and switch contact area leads us to believe the switch contacts are worn. Inspect the switch. Service or replace by years end.

Component	Switch
Equipment/Bucket ID	ECR MCC 4 HVAC RTU #1 North Side



Sp1	178.5 °F
Sp2	108.4 °F
Sp3	119.2 °F
Li1 Minimum	97.3 °F
Li1 Maximum	179.0 °F
Areas	-

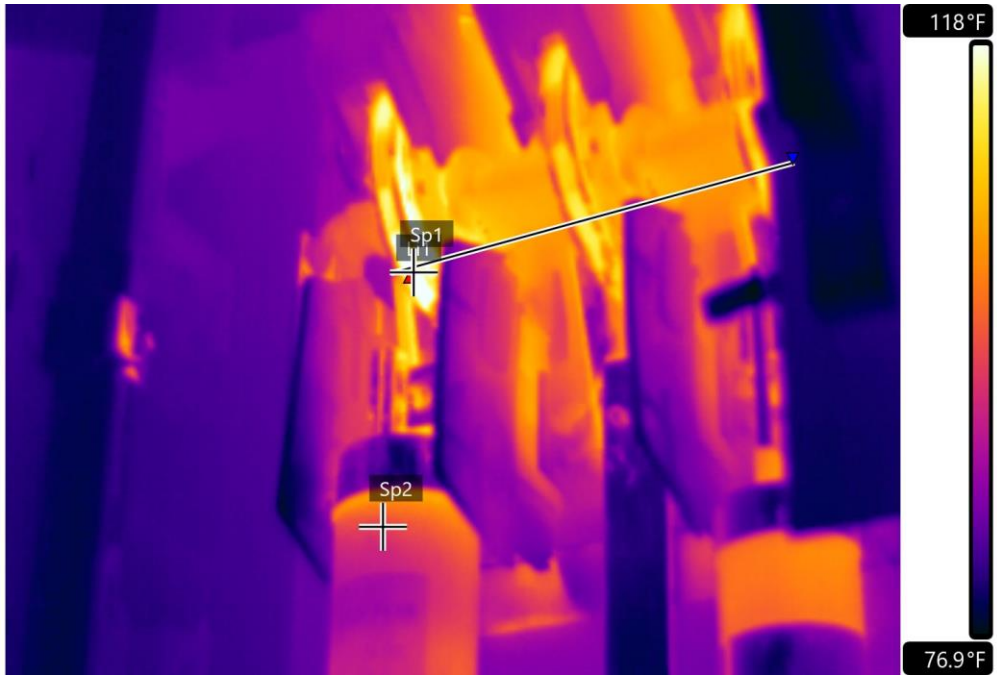




Fault	Poor connection at switch contacts or lugs on C phase
Defect Rating	Class II

Recommendations
Excessive heat is being generated at the C phase contact or just adjacent to it in a lug connection. Inspect the switch for defects as well as adjacent components. Service or replace the switch at the next opportunity.

Component	Switch
Equipment/Bucket ID	ECR MCC 6 Vacuum Pump #2



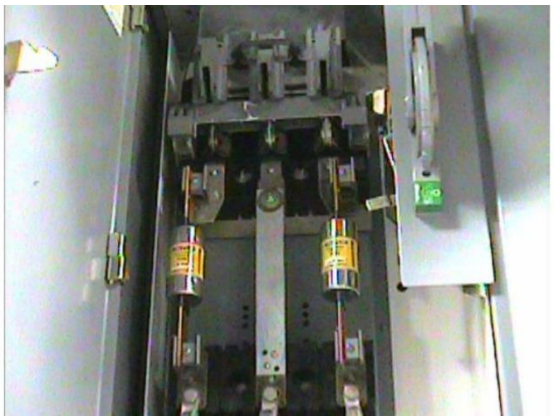
Sp1	120.3 °F
Sp2	96.6 °F
Li1 Minimum	80.7 °F
Li1 Maximum	120.3 °F
Areas	-

Fault	Poor contact at switch A phase
Defect Rating	Class I

Recommendations
Small hot spot On the A phase of the switch indicates a poor connection there. Inspect the switch. Repair or replace. Check all adjacent connections. Perform as time allows.

Component	Switch
Equipment/Bucket ID	ECR MCC 3 Dust and Fume Blower

Sp1	130.8 °F
Sp2	107.0 °F
Li1 Minimum	95.0 °F
Li1 Maximum	127.8 °F
Areas	-

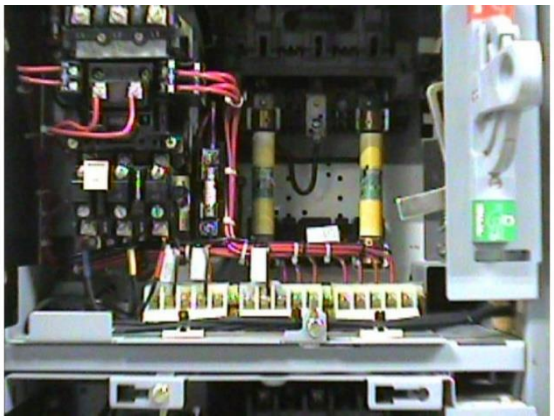


Fault	Poor contact at switch C phase
Defect Rating	Class I

Recommendations
Hot spot On the C phase of the switch indicates a poor connection there. Inspect the switch and adjacent components. Repair or replace. Check all adjacent connections. Perform as time allows.

Component	Fuse clip
Equipment/Bucket ID	ECR MCC 3 4th Floor Exhaust Fan Middle

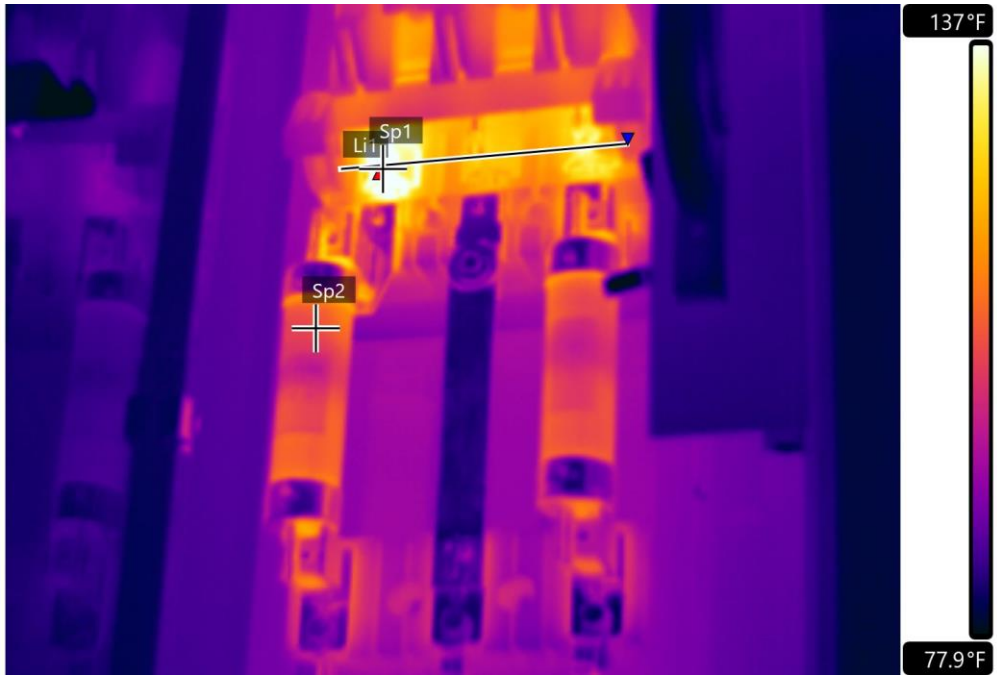
Sp1	130.0 °F
Sp2	105.1 °F
Li1 Minimum	86.4 °F
Li1 Maximum	130.1 °F
Areas	-



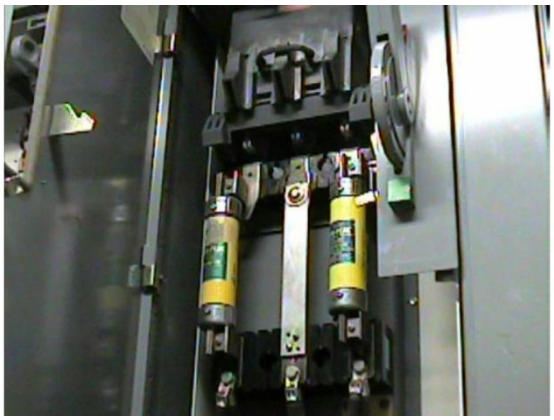
Fault	Weak fuse clip or loose lug connection
Defect Rating	Class I

Recommendations
Inspect the fuse block clips for tension and surface wear, as well as the fuses. Check for load balance. Replace worn components as time allows.

Component	Switch
Equipment/Bucket ID	ECR MCC7 Crystallizer Circulation Pump



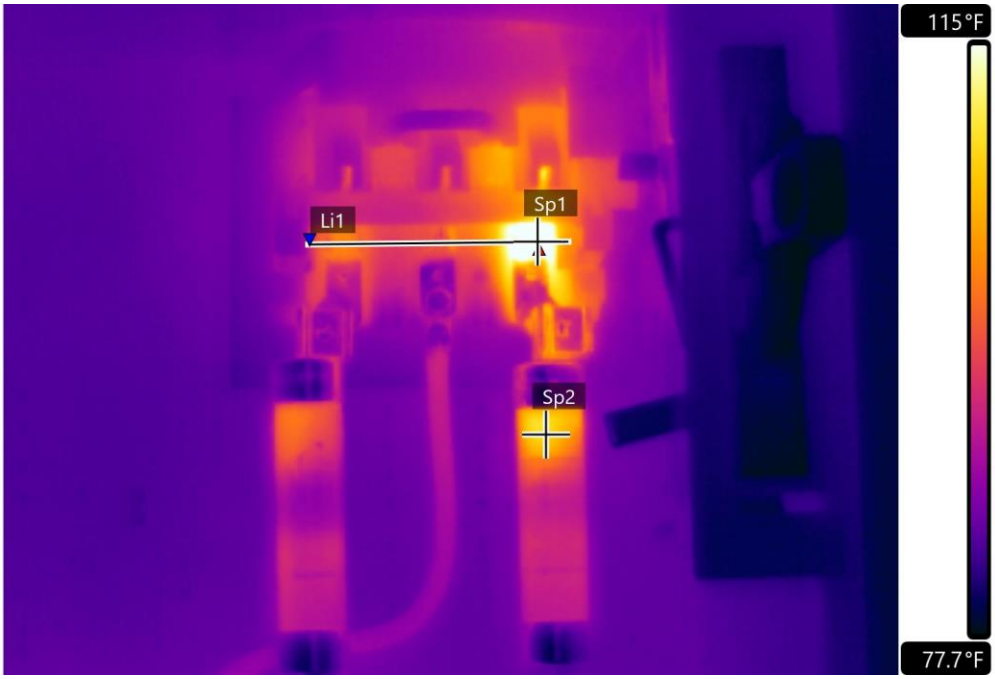
Sp1	144.8 °F
Sp2	108.6 °F
Li1 Minimum	107.8 °F
Li1 Maximum	144.7 °F
Areas	-



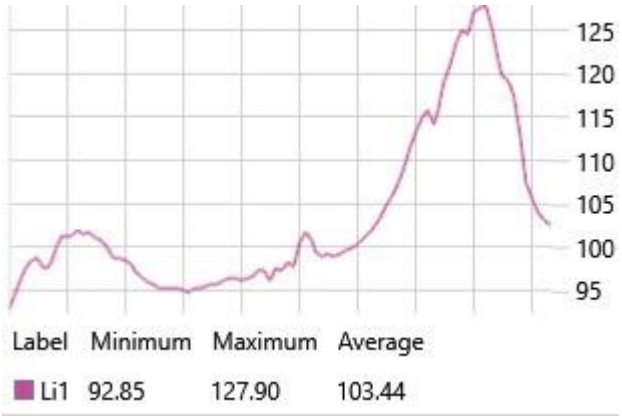
Fault	Weak connection at switch
Defect Rating	Class I

Recommendations
Hot spot On the A phase of the switch indicates a poor connection there. Inspect the switch and adjacent components. Repair or replace. Check all adjacent connections. Perform as time allows.

Component	Switch
Equipment/Bucket ID	ECR MCC 7 Filter Feed Pump



Sp1	127.9 °F
Sp2	108.4 °F
Li1 Minimum	92.9 °F
Li1 Maximum	127.9 °F
Areas	-

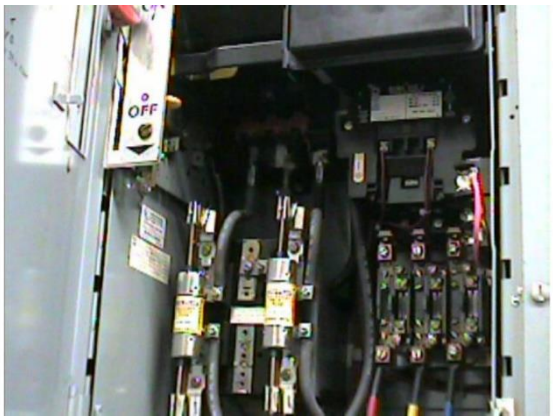


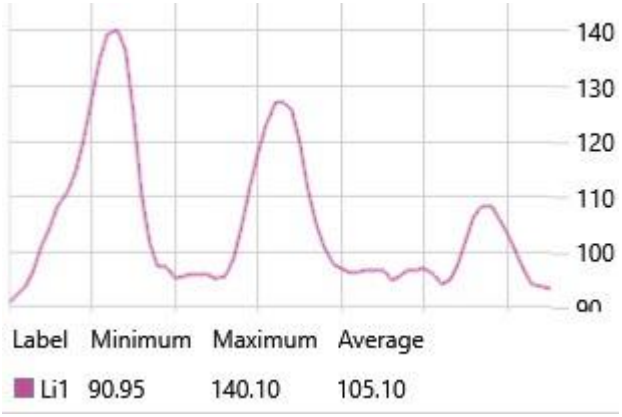
Fault	Poor connection at switch or adjacent lug
Defect Rating	Class I

Recommendations
Hot spot On the C phase of the switch indicates a poor connection there. Inspect the switch and adjacent components. Repair or replace. Check all adjacent connections. Perform as time allows.

Component	Switch
Equipment/Bucket ID	Caustic Unloading Middle Caustic Transfer Pump

Sp1	140.1 °F
Sp2	117.5 °F
Li1 Minimum	91.0 °F
Li1 Maximum	140.1 °F
Areas	-

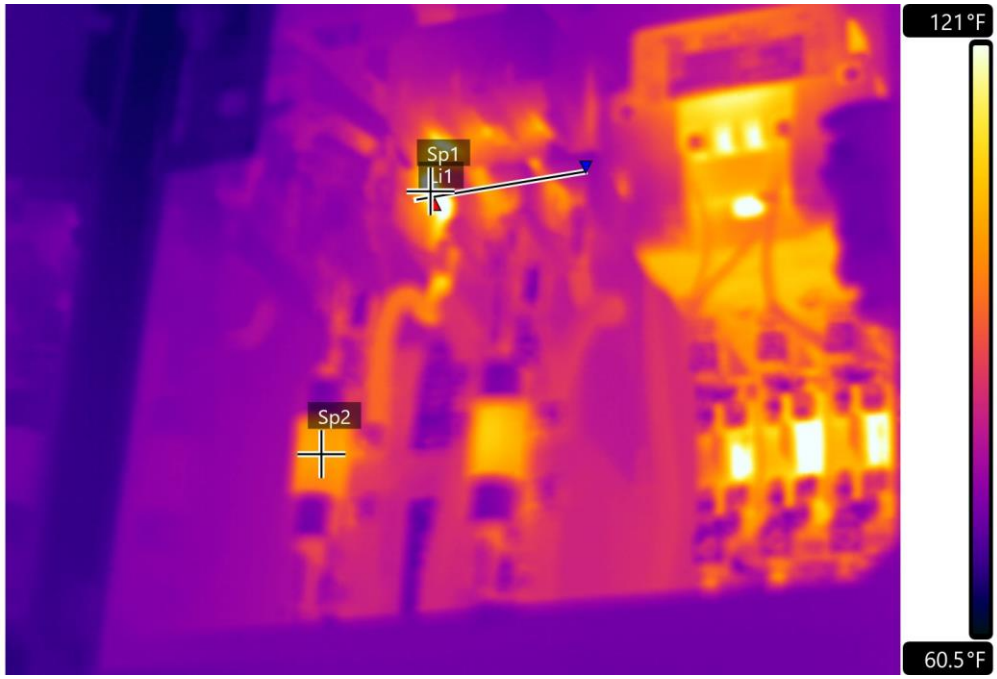




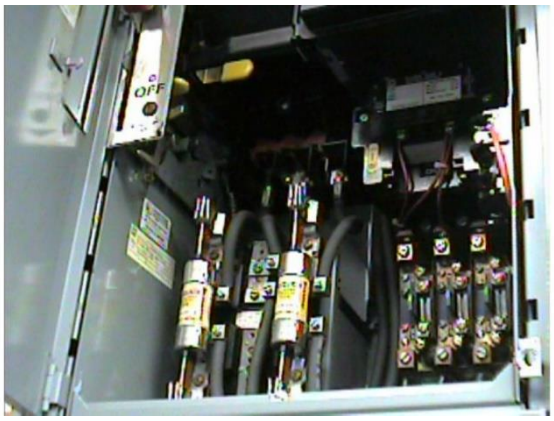
Fault	Poor connections at switch or adjacent lugs.
Defect Rating	Class I

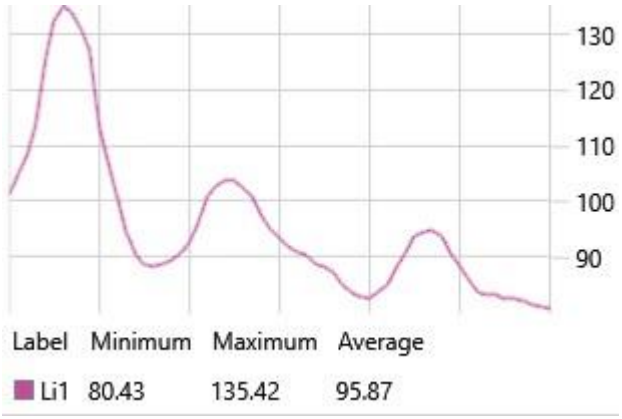
Recommendations
Hot spot On the A phase of the switch indicates a poor connection there. Inspect the switch and adjacent components. B phase also shows some heat. Repair or replace. Check all adjacent connections. Perform as time allows.

Component	Switch
Equipment/Bucket ID	Caustic Unloading East Caustic Pump



Sp1	136.5 °F
Sp2	102.7 °F
Li1 Minimum	80.4 °F
Li1 Maximum	135.4 °F
Areas	-

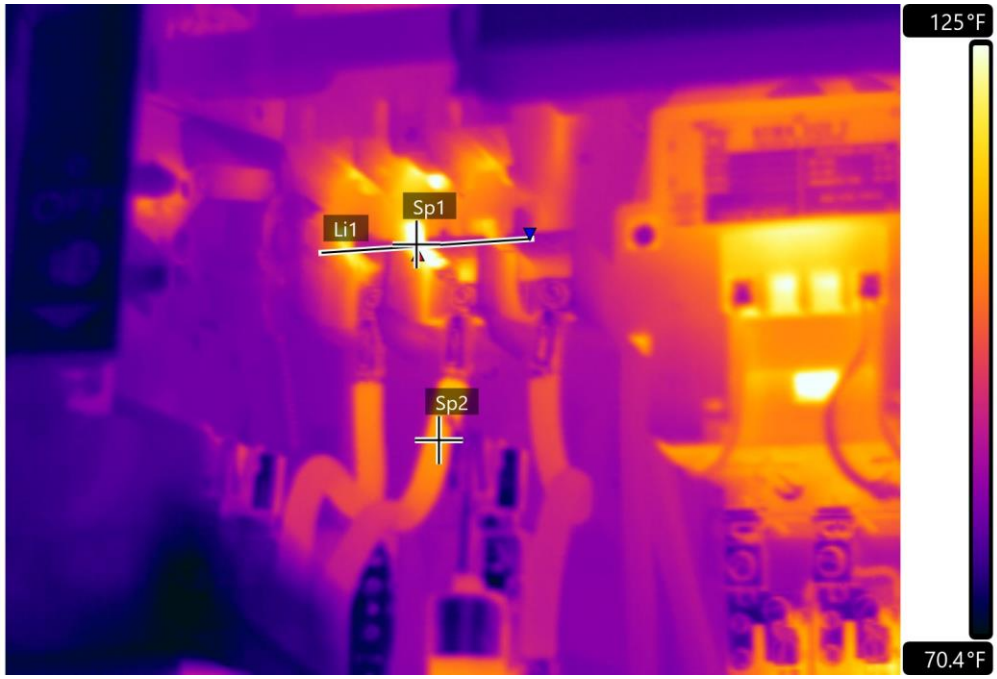




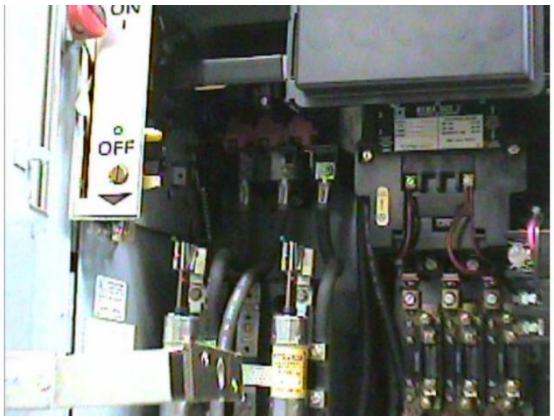
Fault	Poor switch contact
Defect Rating	Class I

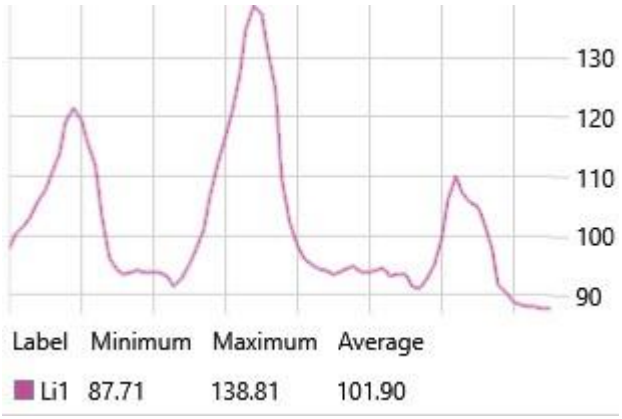
Recommendations
Hot spot On the A phase of the switch indicates a poor connection there. Inspect the switch and adjacent components. Repair or replace. Check all adjacent connections. Perform as time allows.

Component	Switch
Equipment/Bucket ID	Caustic Unloading West Caustic Pump



Sp1	137.6 °F
Sp2	108.7 °F
Li1 Minimum	87.7 °F
Li1 Maximum	138.8 °F
Areas	-





Fault	Poor connections at switch
Defect Rating	Class I

Recommendations
Hot spot On the B phase of the switch indicates a poor connection there. Inspect the switch and adjacent components. A phase also shows some heat. Repair or replace. Check all adjacent connections. Perform as time allows.

Summary

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9/18/2020 6:27:00 AM	8
9/18/2020 7:42:07 AM	9
9/23/2020 8:08:51 AM	10
9/18/2020 7:54:00 AM	11
9/23/2020 8:08:51 AM	12
9/18/2020 8:04:35 AM	13
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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

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