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QualiTest IR Radiometric Survey Report



Chemours
NaCN

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Job Number	141056
Survey Date	10-29-19
Report Date	10-29-19

QualiTest IR Radiometric Survey Report



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 contained in this report. If there are any questions or comments, please feel free to contact us at any time.

Hi-Speed Industrial Service QualiTest Diagnostics employs a three-step 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; continue to monitor.

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 is practical, on a high maintenance priority. Consideration should be given to increased 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.

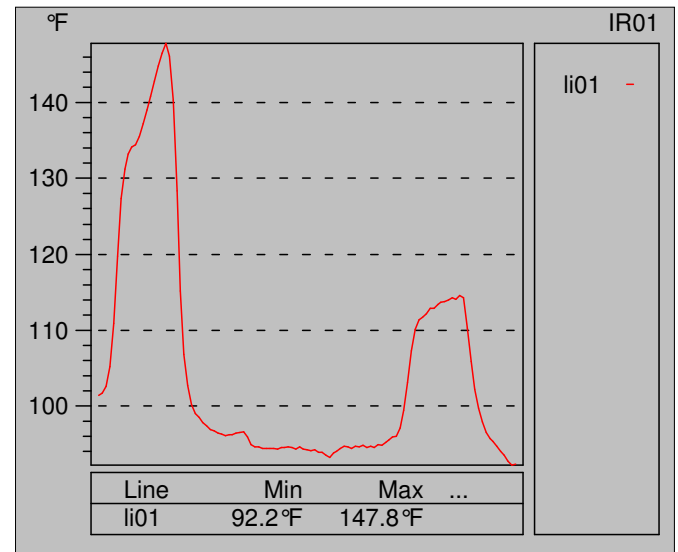
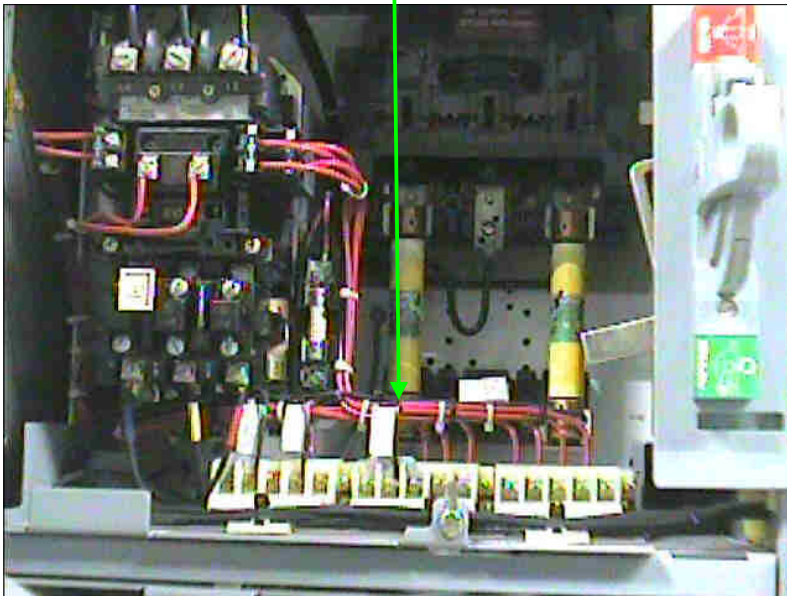
Hi-Speed Industrial Service tests and inspects industrial and equipment and makes recommendations concerning maintenance and repairs based on its experience in the field of industrial repair and maintenance. The information provided herein is provided as an opinion only, not as a guaranty or warranty of.



Component	Equipment/Bucket ID	Plant/Area	Date
Fuse Clip	4th Floor Exhaust Fan	NaCN MCC 3	10-29-19



Label	Value
IR : max	173.5°F
IR : min	82.0°F
SP01	144.7°F
SP02	115.4°F
SP03	113.7°F
LI01 : max	147.8°F
LI01 : min	92.2°F



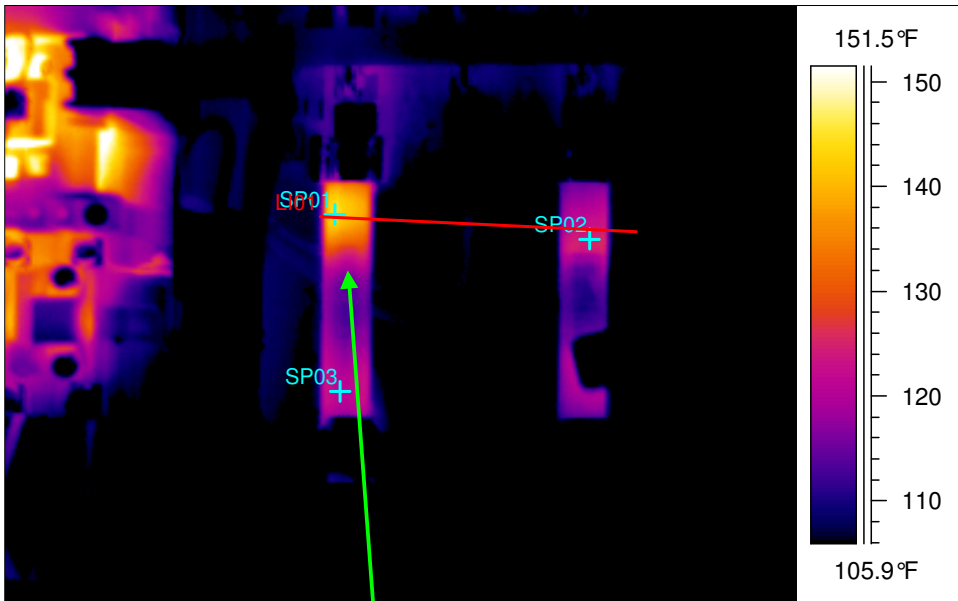
Fault	Weak connection
Defect Rating	Class I

Recommendation

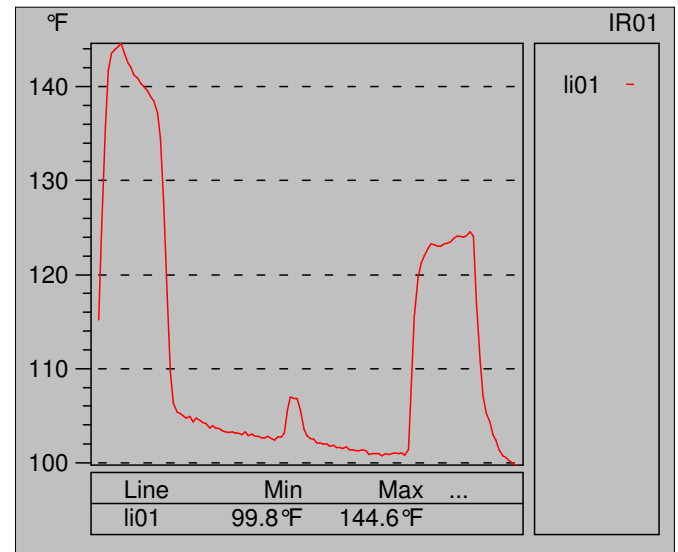
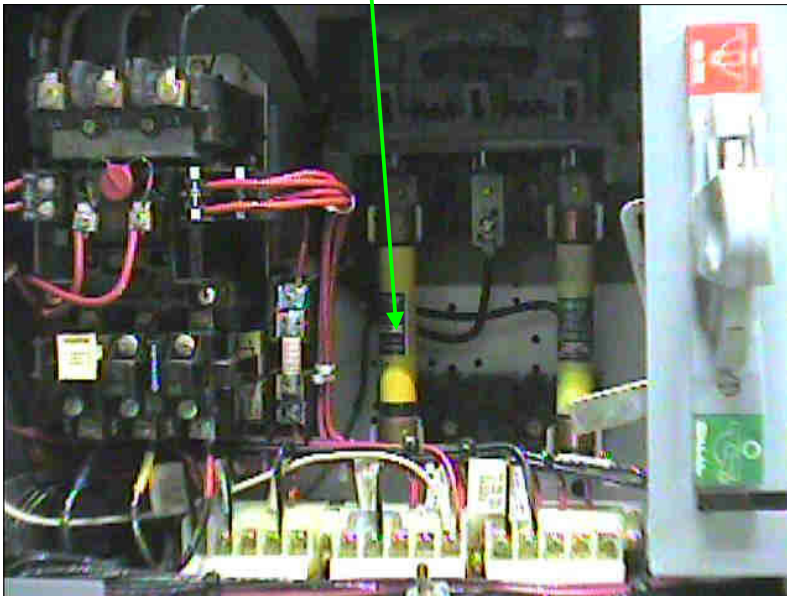
Temperure delta across fuses indicates a possible weak fuse clip/poor connection at the bottom of A phase. Clean and inspect, repair or replace as required.



Component	Equipment/Bucket ID	Plant/Area	Date
Fuse Clip	Filter Air Blower	NaCN MCC	10-29-19



Label	Value
IR : max	164.3°F
IR : min	83.5°F
SP01	144.6°F
SP02	124.8°F
SP03	121.0°F
LI01 : max	144.6°F
LI01 : min	99.8°F



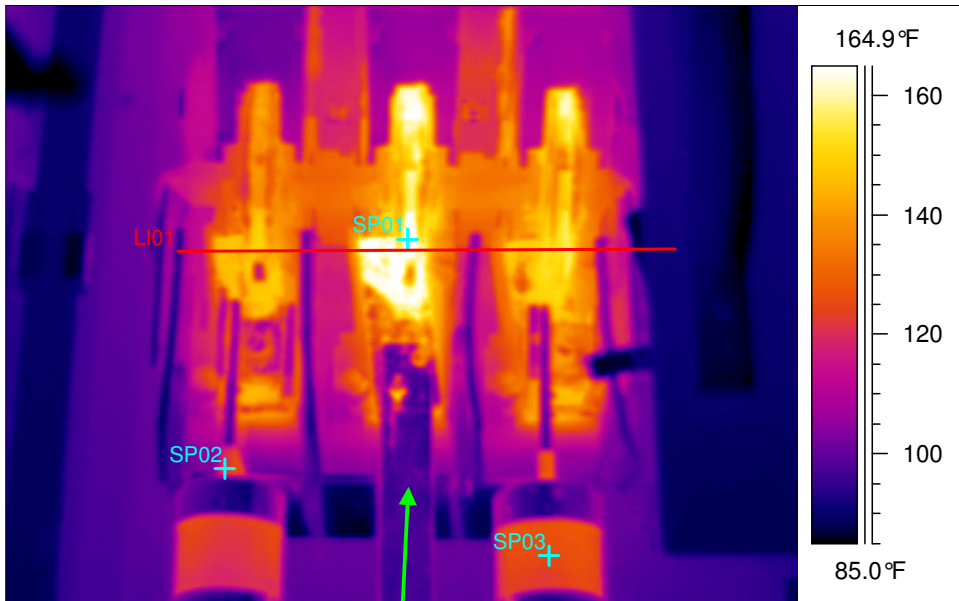
Fault	Weak Fuse Clip
Defect Rating	Class I

Recommendation

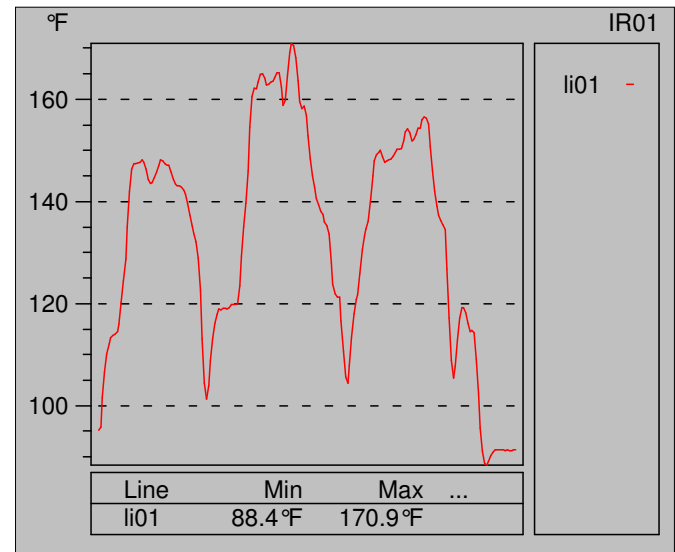
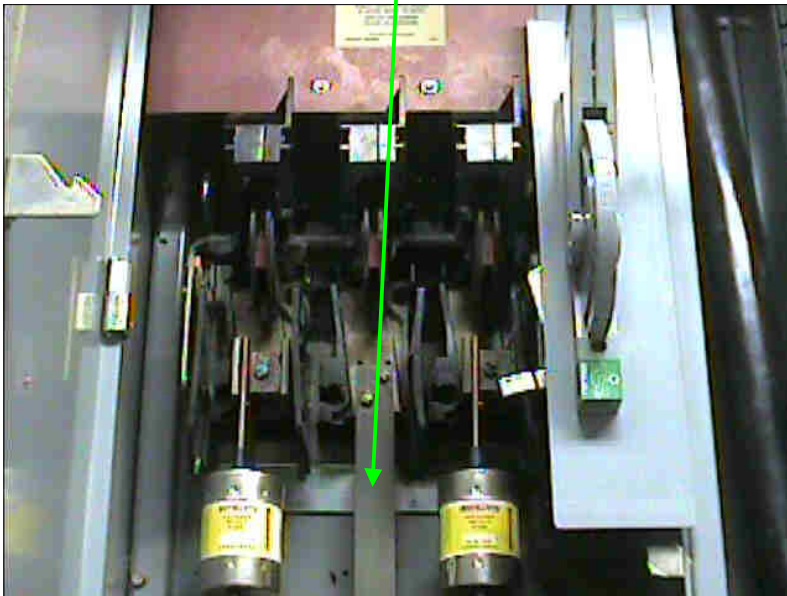
Temperature delta across fuses could indicate a weak fuse clip/poor contact on the A phase of the upper switch body. Inspect the switch fuses and fuse clips. Repair or replace items as needed.



Component	Equipment/Bucket ID	Plant/Area	Date
Disconnect Switch	Recycle Scrubber Blwr	NaCN MCC 2F	10-29-19



Label	Value
IR : max	173.6°F
IR : min	84.5°F
SP01	172.8°F
SP02	122.7°F
SP03	125.5°F
LI01 : max	170.9°F
LI01 : min	88.4°F



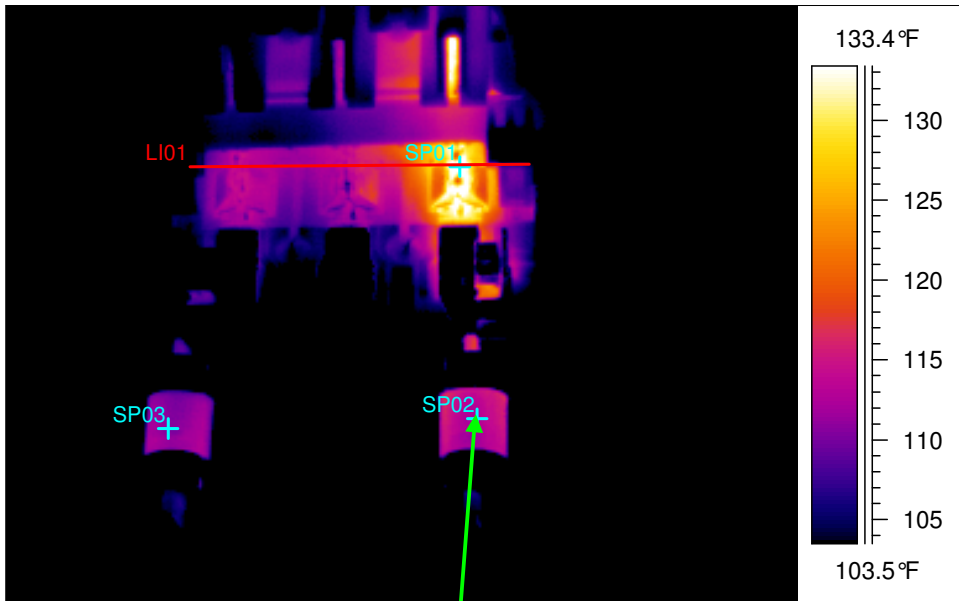
Fault	Poor contact at switch
Defect Rating	Class II

Recommendation

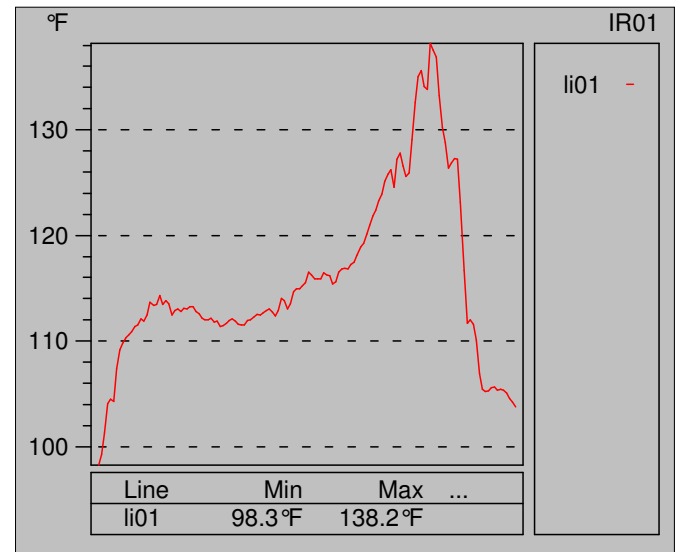
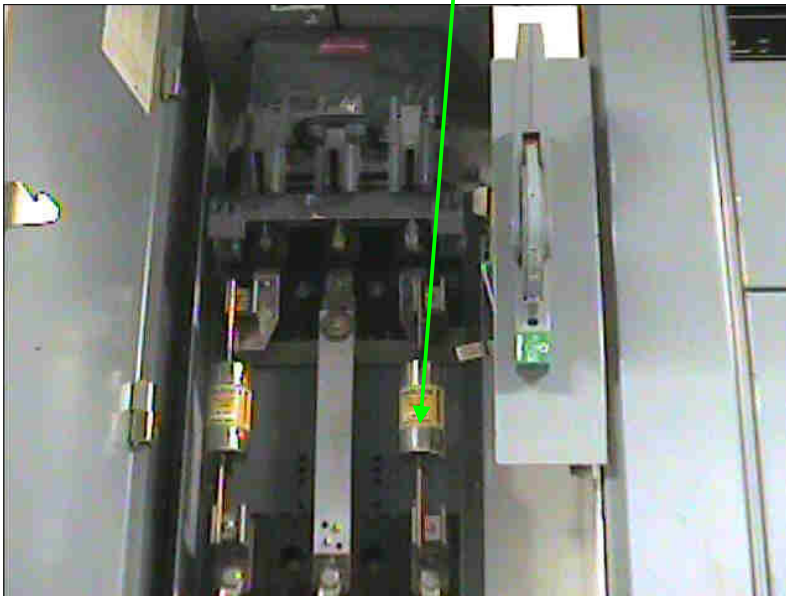
Temperature delta at B phase of the switch, as well as excessive temperature.
Clean and inspect switch. Repair or replace the switch as needed.



Component	Equipment/Bucket ID	Plant/Area	Date
Disconnect Switch	Dust and Fume Blower	NaCN MCC 3	10-29-19



Label	Value
IR : max	138.2°F
IR : min	82.6°F
SP01	137.6°F
SP02	112.9°F
SP03	111.0°F
LI01 : max	138.2°F
LI01 : min	98.3°F



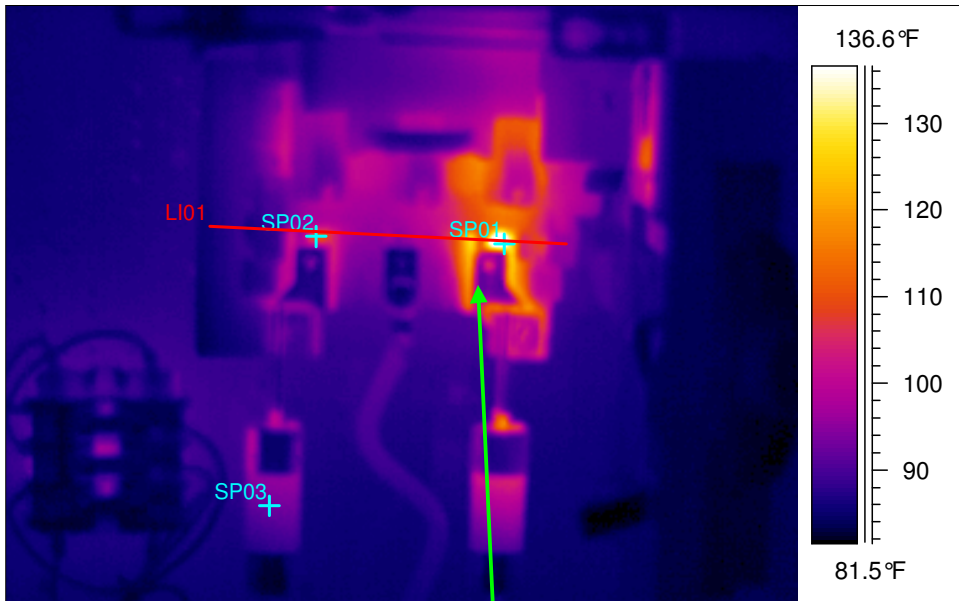
Fault	Poor contact at switch
Defect Rating	Class I

Recommendation

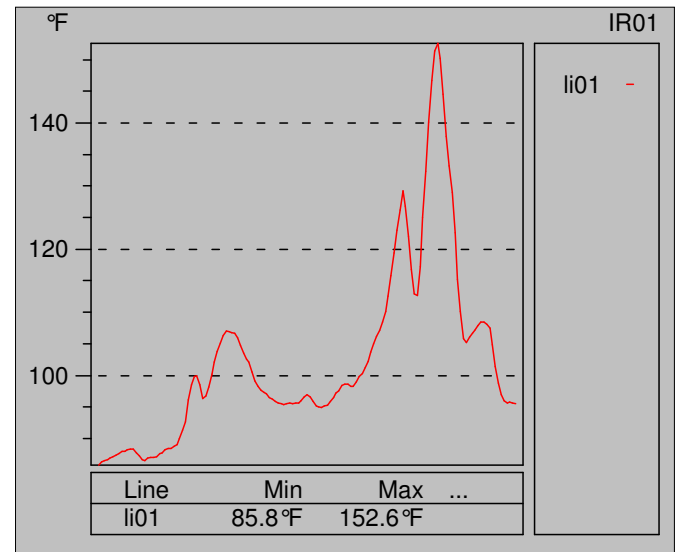
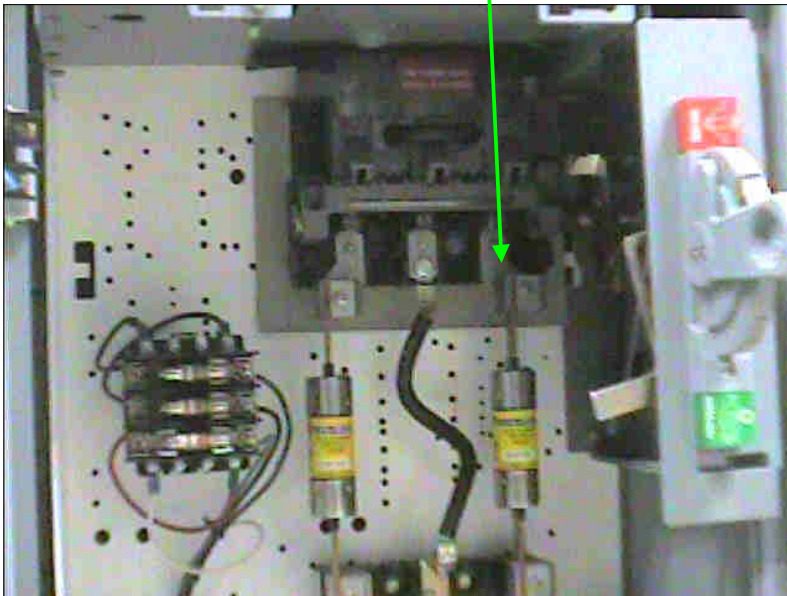
Temperature delta at disconnect switch indicates poor contact at C phase.
Clean and inspect. Repair or replace switch as needed.



Component	Equipment/Bucket ID	Plant/Area	Date
Disconnect Switch	ECR HVAC RTU 1 N	NaCN MCC 4	10-29-19



Label	Value
IR : max	152.6°F
IR : min	81.5°F
SP01	141.8°F
SP02	109.6°F
SP03	92.8°F
LI01 : max	152.6°F
LI01 : min	85.8°F



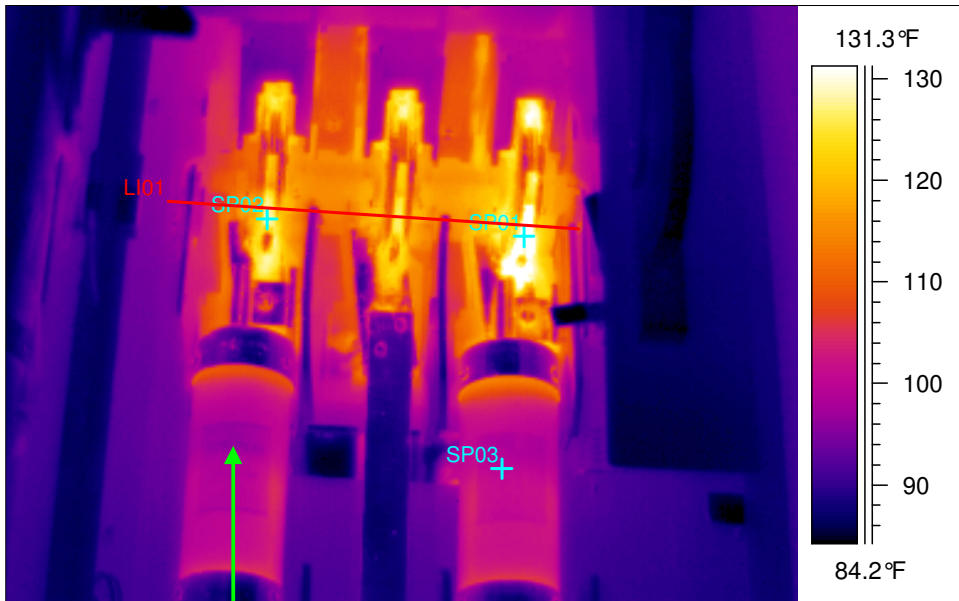
Fault	Poor contact at switch
Defect Rating	Class II

Recommendation

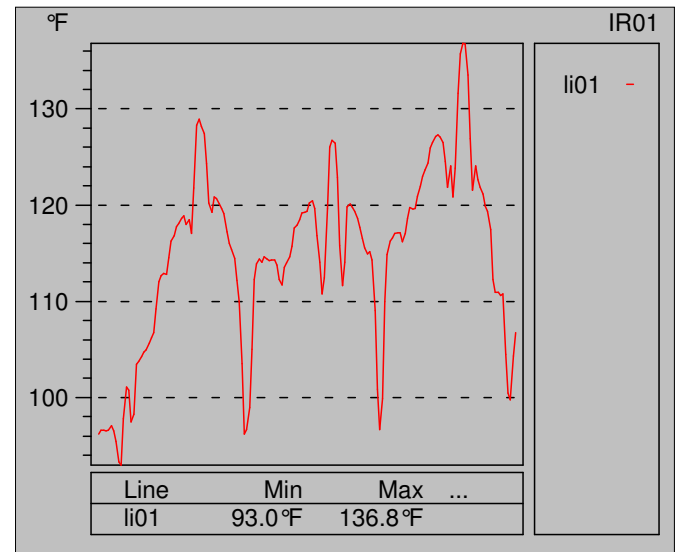
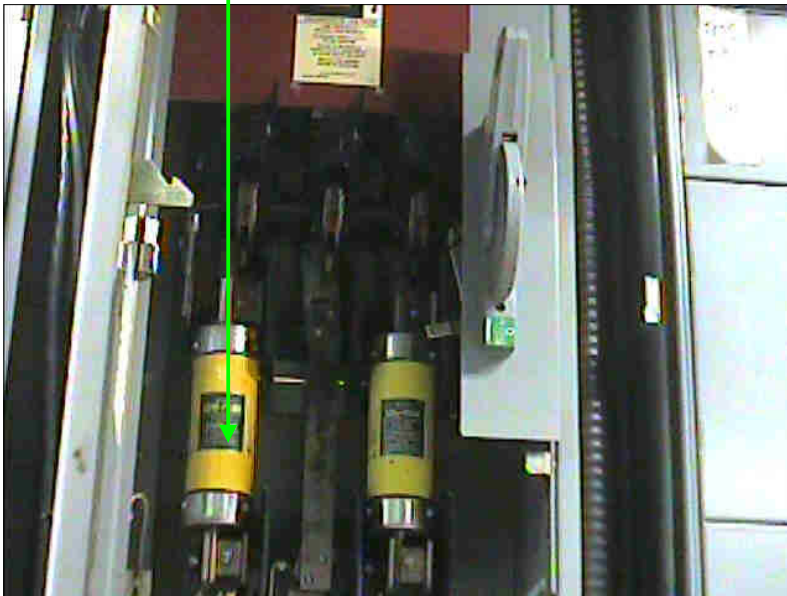
Large temperature delta at C phase of switch. Clean and inspect. Repair or replace the Switch as needed.



Component	Equipment/Bucket ID	Plant/Area	Date
Disconnect Switch	Vacuum Pump 5	NaCN MCC 5	10-29-19



Label	Value
IR : max	137.5°F
IR : min	82.9°F
SP01	136.6°F
SP02	129.1°F
SP03	100.3°F
LI01 : max	136.8°F
LI01 : min	93.0°F



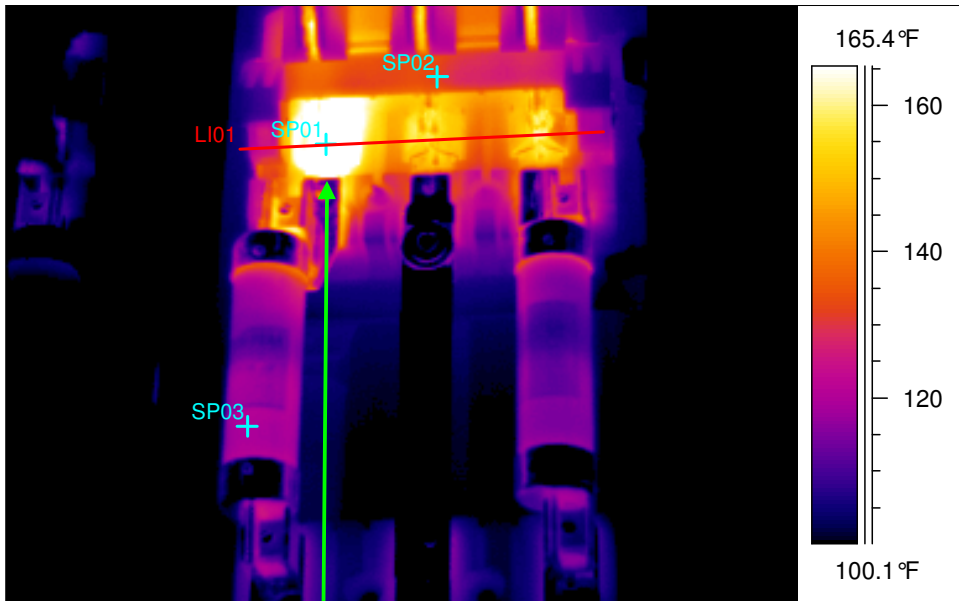
Fault	Slight issue at switch contacts
Defect Rating	Class I

Recommendation

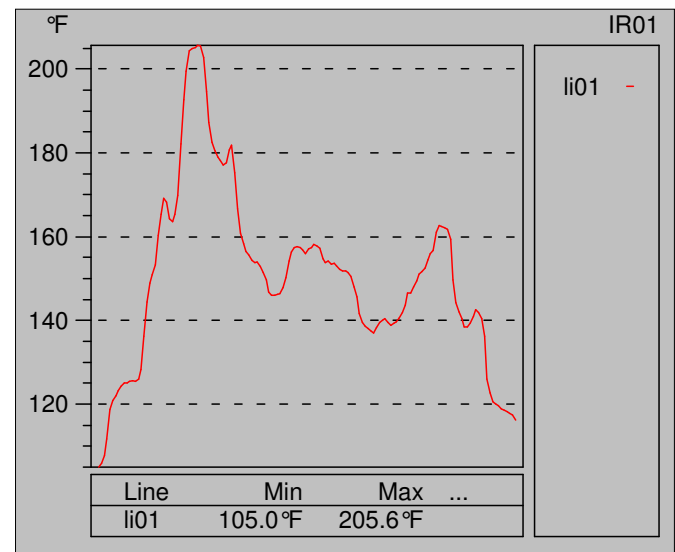
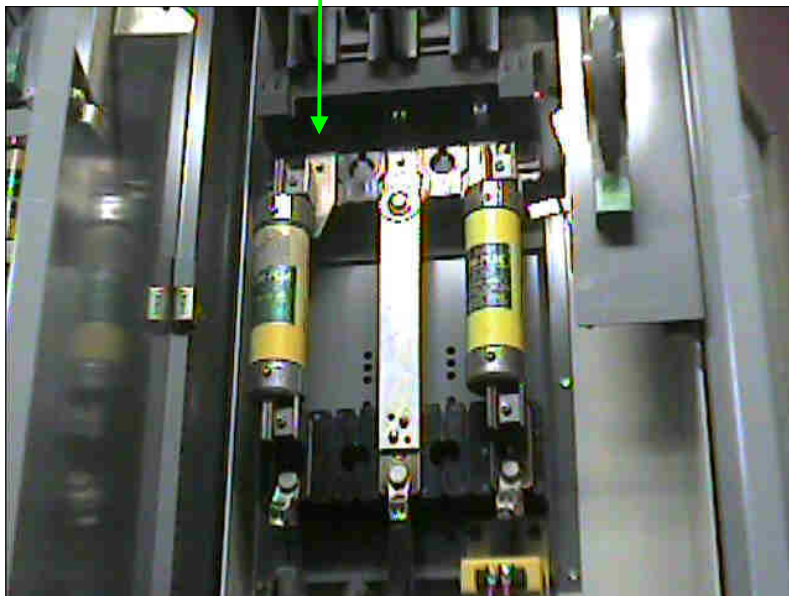
Temperature delta between fuse and switch contacts. Clean and inspect the switch. Repair or replace if required.



Component	Equipment/Bucket ID	Plant/Area	Date
Disconnect Switch	Crystalizer Circ Pump	NaCN MCC 7	10-29-19



Label	Value
IR : max	205.9°F
IR : min	84.5°F
SP01	205.6°F
SP02	132.4°F
SP03	119.8°F
LI01 : max	205.6°F
LI01 : min	105.0°F



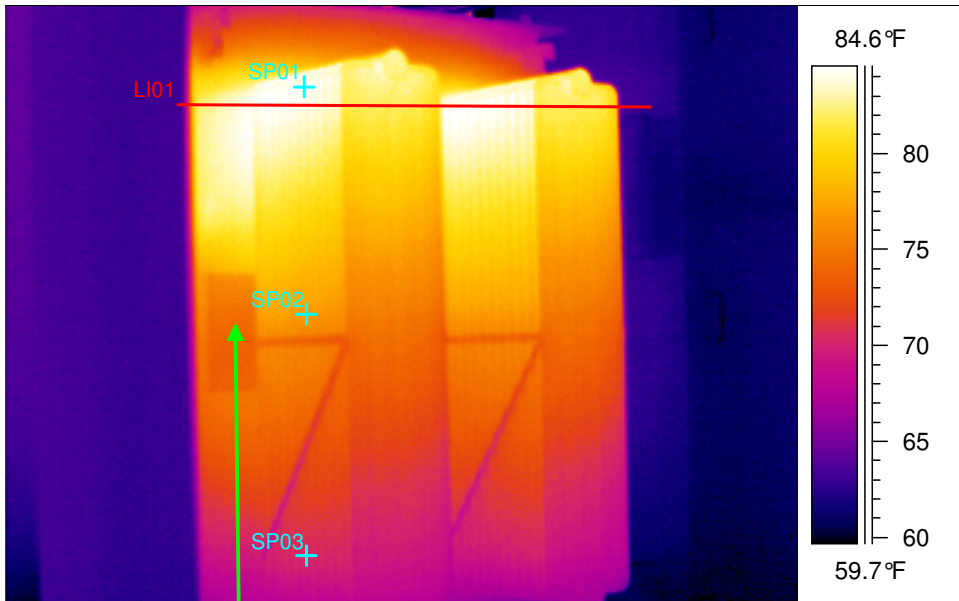
Fault	Poor Connection at switch
Defect Rating	Class III

Recommendation

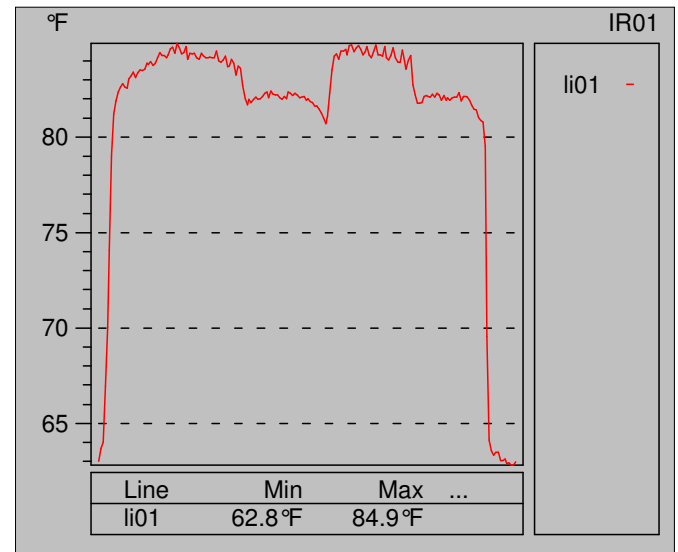
Large temperature delta between A phase top side switch contact to B and C.
Large delta also to A phase fuse body. Excessive heat. Clean and inspect. Repair or replace switch as soon as possible.



Component	Equipment/Bucket ID	Plant/Area	Date
North Radiator	Transformer 252A	NaCN	10-29-19



Label	Value
IR : max	85.0°F
IR : min	55.7°F
SP01	84.5°F
SP02	77.1°F
SP03	70.5°F
LI01 : max	84.9°F
LI01 : min	62.8°F



Fault	None
Defect Rating	NA

Recommendation

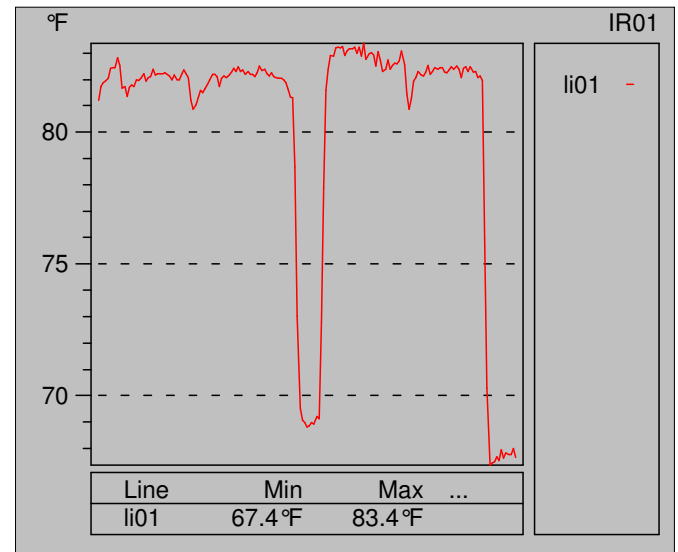
Unit appears to be operating normally. Check oil level just as a precaution.



Component	Equipment/Bucket ID	Plant/Area	Date
South Radiator	Transformer 252A	NaCN	10-29-19



Label	Value
IR : max	112.9°F
IR : min	58.7°F
SP01	83.1°F
SP02	76.5°F
SP03	70.6°F
LI01 : max	83.4°F
LI01 : min	67.4°F



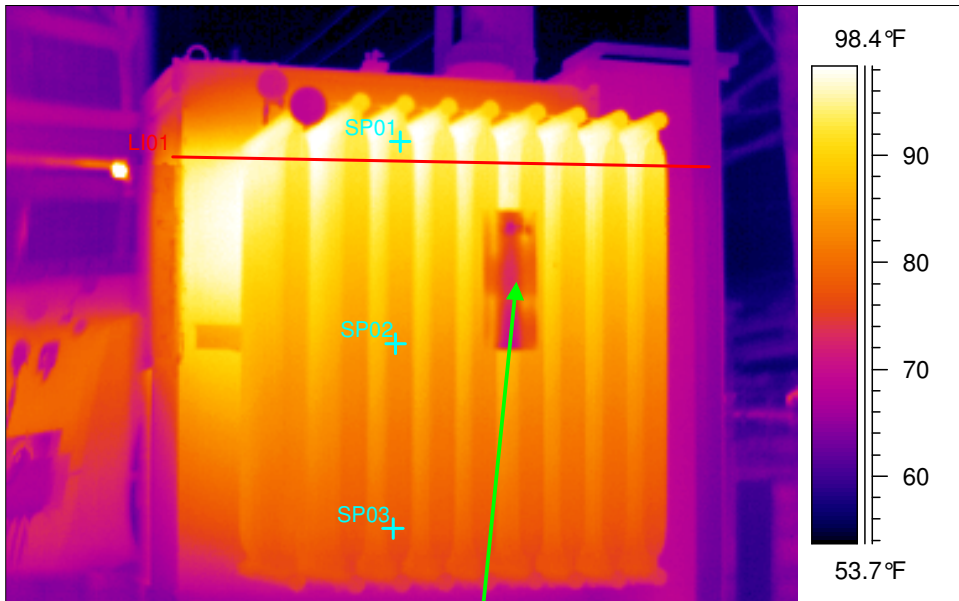
Fault	None
Defect Rating	NA

Recommendation

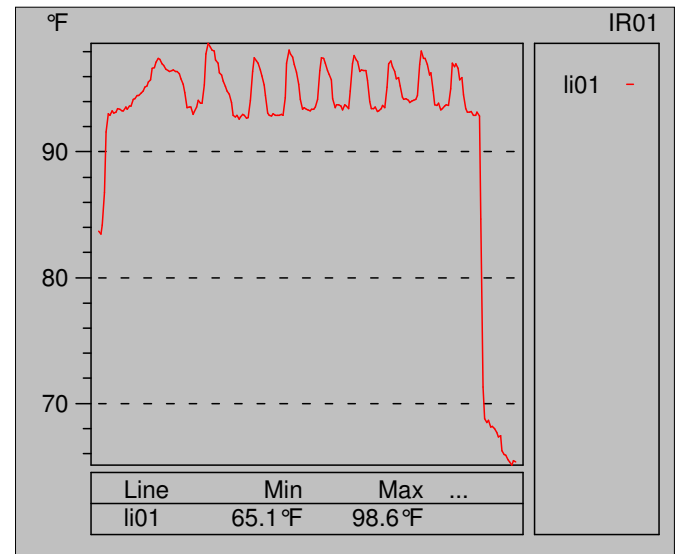
Unit appears to be operating normally. Check oil level just as a precaution.



Component	Equipment/Bucket ID	Plant/Area	Date
North Radiator	Transformer 252B	NaCN	10-29-19



Label	Value
IR : max	120.9°F
IR : min	53.2°F
SP01	93.8°F
SP02	84.3°F
SP03	77.6°F
LI01 : max	98.6°F
LI01 : min	65.1°F



Fault	None
Defect Rating	NA

Recommendation

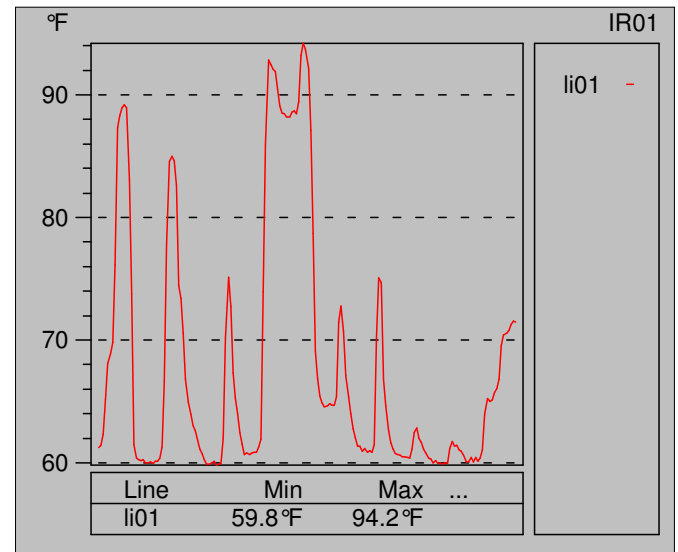
Unit appears to be operating normally. Check oil level as a precaution.



Component	Equipment/Bucket ID	Plant/Area	Date
South Radiator	Transformer 252B	NaCN	10-29-19



Label	Value
IR : max	97.2°F
IR : min	55.6°F
SP01	89.1°F
SP02	74.2°F
SP03	60.4°F
LI01 : max	94.2°F
LI01 : min	59.8°F



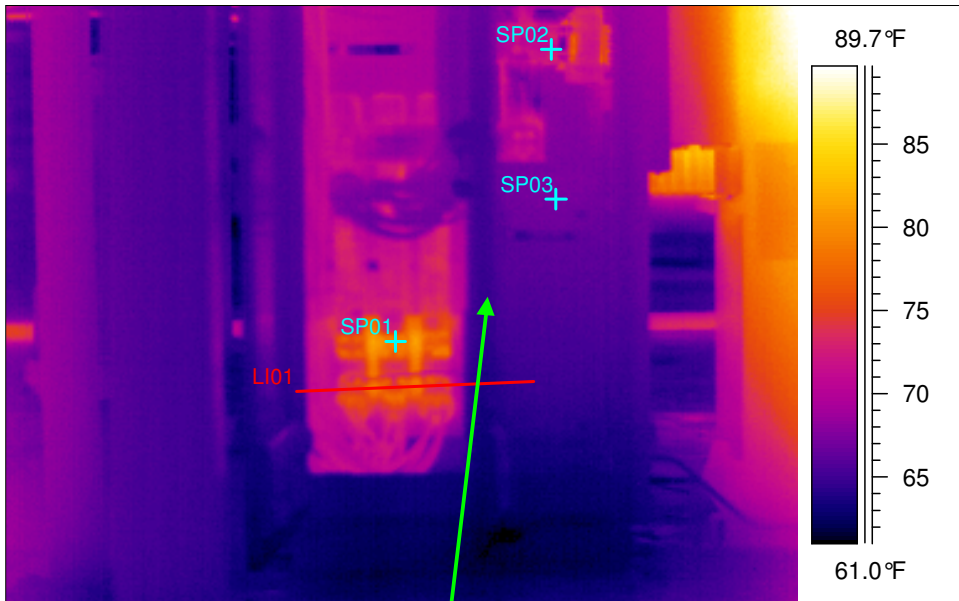
Fault	Blocked fins or low oil level and mechanical damage
Defect Rating	Class II

Recommendation

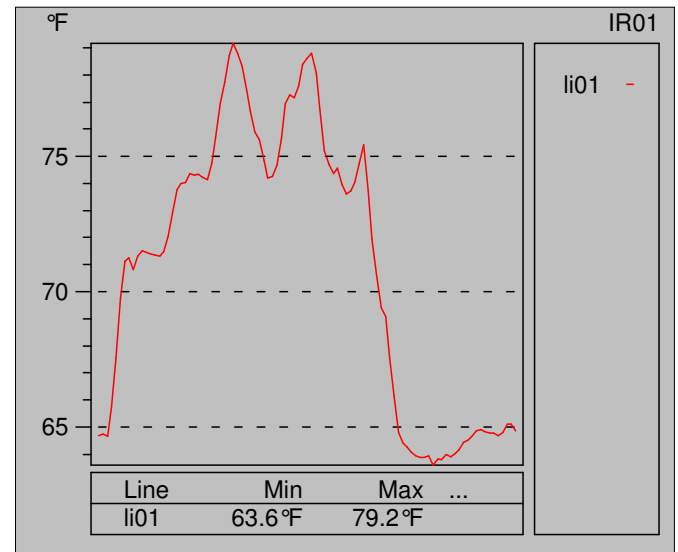
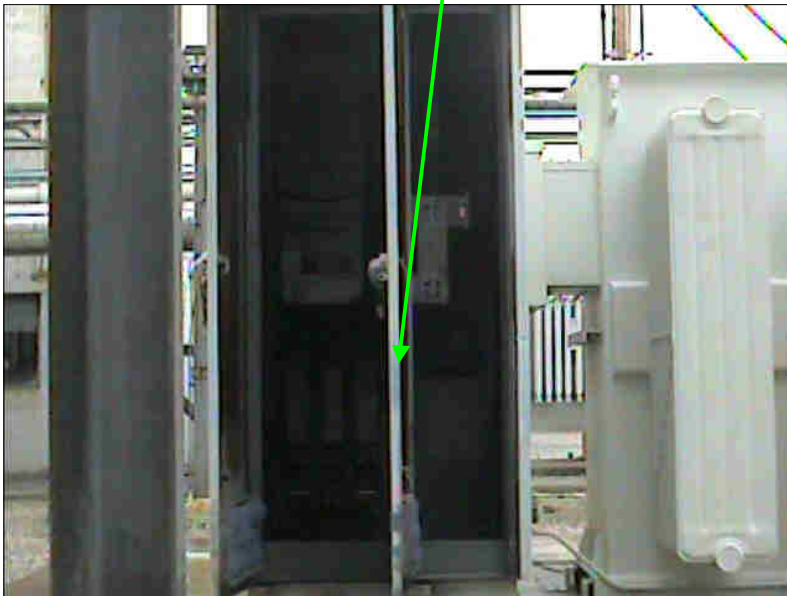
The South radiator appears to have contact damage as well as either plugged cooling fins, or low oil level, preventing convection flow.



Component	Equipment/Bucket ID	Plant/Area	Date
Load Side	Transformer 252A	NaCN	10-29-19



Label	Value
IR : max	90.1°F
IR : min	60.9°F
SP01	79.0°F
SP02	71.7°F
SP03	67.6°F
LI01 : max	79.2°F
LI01 : min	63.6°F



Fault	None
Defect Rating	NA

Recommendation

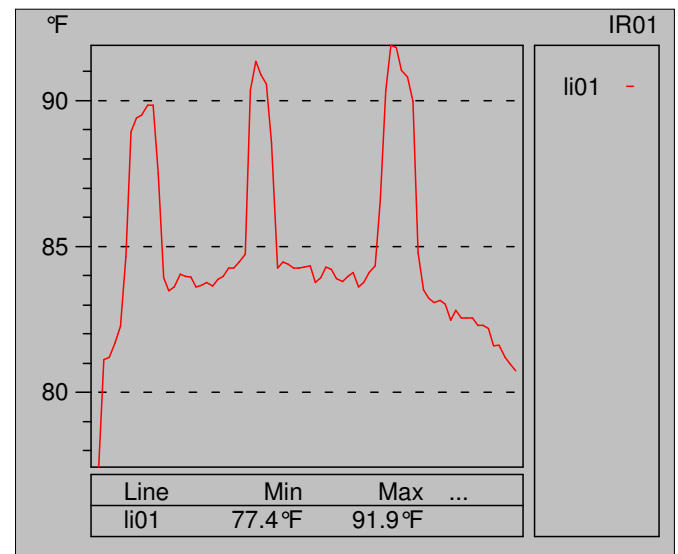
No Immediate issues.



Component	Equipment/Bucket ID	Plant/Area	Date
Load Side Left Panel	Transformer 252B	NaCN	10-29-19



Label	Value
IR : max	94.9°F
IR : min	60.6°F
SP01	90.0°F
SP02	91.7°F
SP03	91.7°F
LI01 : max	91.9°F
LI01 : min	77.4°F



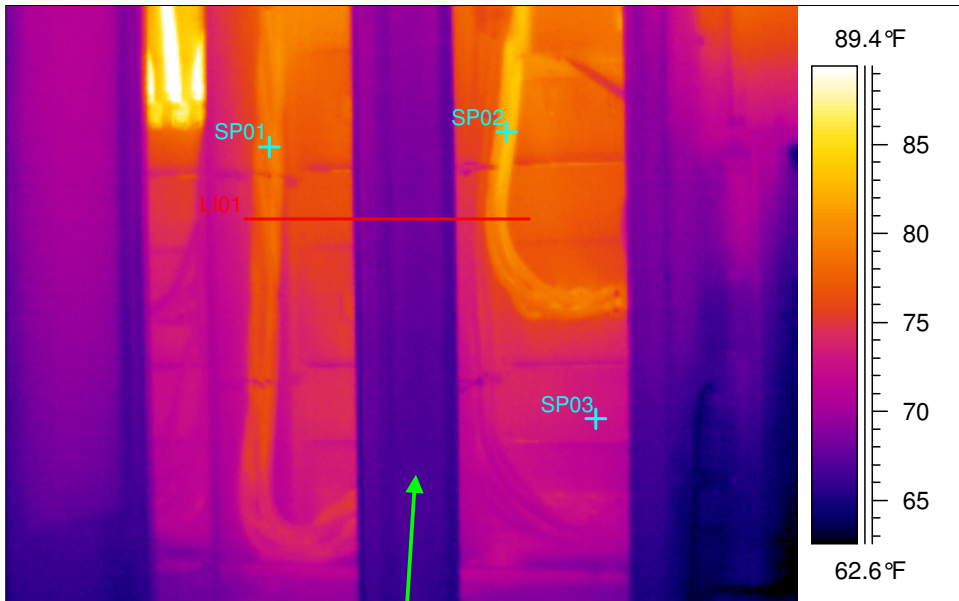
Fault	None
Defect Rating	NA

Recommendation

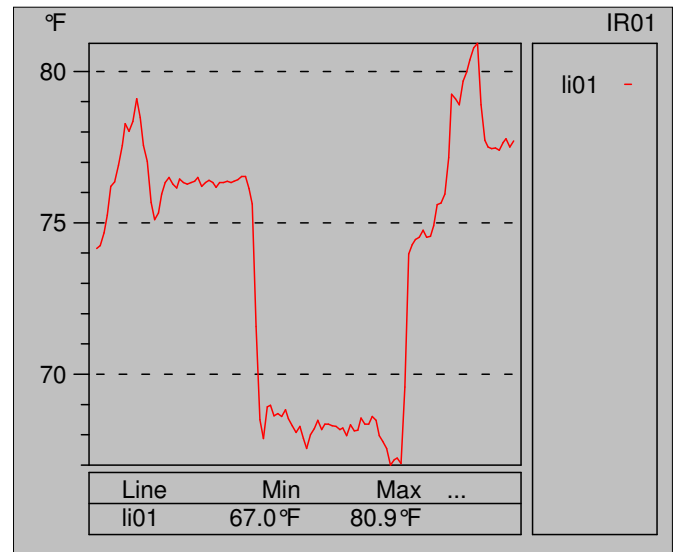
No immediate issues.



Component	Equipment/Bucket ID	Plant/Area	Date
Load Side Center/Right	Transformer 252B	NaCN	10-29-19



Label	Value
IR : max	92.9°F
IR : min	61.3°F
SP01	79.0°F
SP02	83.0°F
SP03	73.0°F
LI01 : max	80.9°F
LI01 : min	67.0°F



Fault	None
Defect Rating	NA

Recommendation

No immediate issues.