LUCIDE CONDITION MONITORING LTD. CERTIFIED THERMOGRAPHER A.I.R. #12-01-243

THERMOGRAPHY REPORT

ELECTRICAL

Thermographic inspection at: NZ site
Inspected by: David Lambert
Inspection date: 21.02.2022

LCM
LUCIDE CONDITION MONITORING LTD

www.lcm.kiwi.nz
david@lcm.kiwi.nz

Customer	Client Site
Address	Client
Contact person	Site Engineer
Phone	021123456
E-mail	Client

Delta	**Repair Priority Table**
"AAA"	Severe Overheating Immediate Attention
"A"	Acute Overheating As Soon As Possible
"B"	Developed Overheating Attend to at the first Opportunity
"C"	Second Stage Overheating Schedule when possible
"D"	Next Scheduled Maintenance

Survey Intention:

It is the intention of this survey to inspect all operating electrical equipment in the below listed areas with the Testo 890 Infrared imaging Radiometer to identify any potential problems. The areas of high resistance caused by loose connections Etc. or overload conditions will appear as a "hot spot" on the infrared display. These anomalies will be digitally recorded and presented in this report.
The switchboards were tested with an SDT 170 ultrasound meter to check for tracing or arcing associated with contact or insulation failure to establish that the equipment is safe for purpose.

The areas inspected were:

- DB1 DB2 DB3
- DB4 DB5 DB6
- DB7 DB8 DB9
- DB10 DB11 DB12
- DB13 DB14 DB15

Inspection details and Chronology:

The inspection was a part of our regular maintenance and is performed in these areas on an six monthly basis.

The inspection was carried out over a period of one day on the 2022-02-21with a completion of the report on the 2022-02-24.
The inspection was performed by David Lambert-Lucide Condition Monitoring Ltd.

Results:

The results have been listed in the order of severity according to their temperature rise from adjacent components at similar load. Each anomaly has loading information where available. The following repair priority table is a guideline only. Responsibility for any repair rests with the area supervisor or maintenance manager. Any remedial repairs should be inspected to test for effective repair.

List of items reoccurring from previous visits:

Repair priority table:

"B" Developed Overheating, Attend to at first Opportunity.

- The DB13 MCC isolator blue phase fuse connection is overheating.

"C" Second Stage Overheating, Scheduled when possible

- The DB1 switchboard Cabinet; pump motor-overload red phase connection is overheating.
- The DB3, C3 contactor white phase cable termination is overheating.
- The DB12 cabinet, the isolator white phase connection is overheating.
- The DB7 cabinet, Distribution board blue phase way 5
- The DB2; Distribution board red phase way 10 cable termination
- The DB5, contactor white phase cable termination is overheating.
- The DB4 cabinet, the isolator white phase cable termination is overheating.

"D" Next Scheduled Maintenance

- The DB3 switch room, the power factor bank #5 contactor white phase cable termination is overheating.

Disclaimer:
The infrared images taken during this routine inspection are only an indication of the thermal characteristics at the time of the inspection and no responsibility for changes in the electrical loading after the visit are implied.

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Inspection Summary

Number	Date	Recommendation	Page
1	20.02.2019	Re-terminate cable, repair as required.	7
2	20.02.2019	Re-terminate and clean connection.	6
3	20.02.2019	Re-terminate cable, repair as required.	9
4	20.02.2019	Re-terminate cable, repair as required.	10
5	20.02.2019	Re-terminate cable, repair as required.	11
6	20.02.2019	Re-terminate cable, repair as required.	11
7	20.02.2019	Re-terminate cable, repair as required.	11
8	20.02.2019	Reduce cable duct temperature	12

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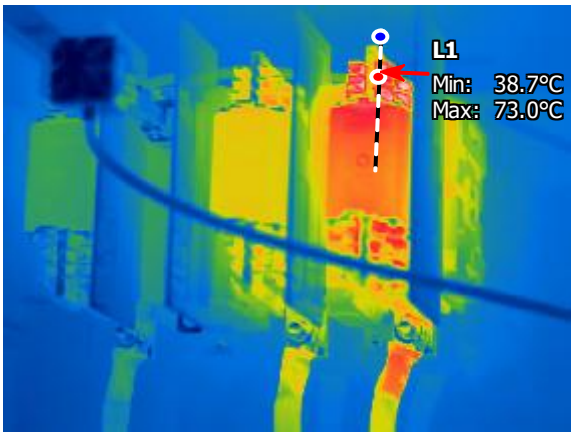
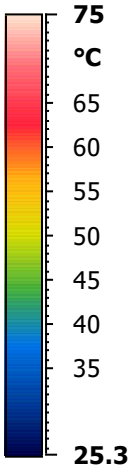
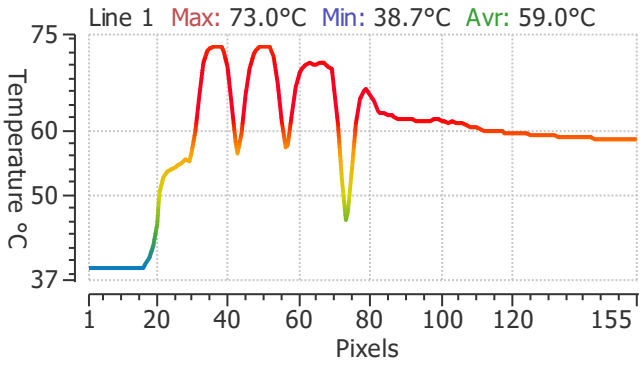
Inspection	***Analysis***





Emissivity	0.96
Line 1 Max	73.0°C
Date /camera	21.02.2022



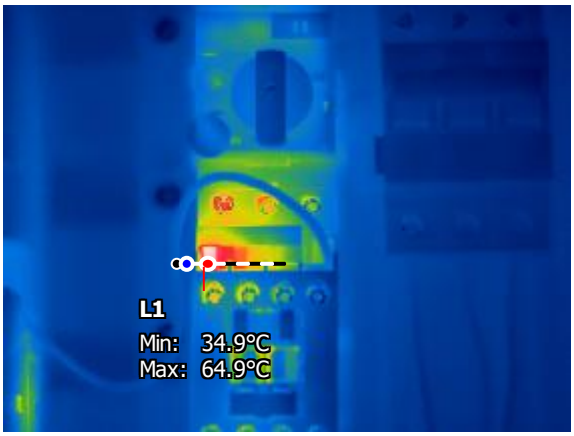
Severity: "B" Developed Overheating, Attend to at first Opportunity.

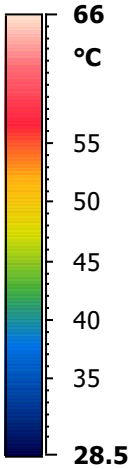
Recommendations

The DB13 MCC isolator blue phase fuse connection is overheating. The connected load is 87 amperes and 31 degrees above AV.

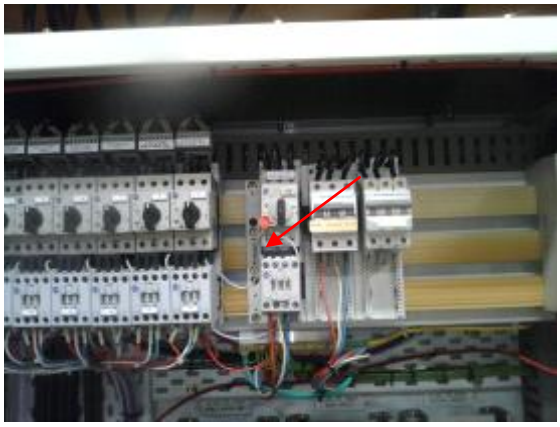
Inspected by:	DWL	Signature:	Date: 21.02.2022
Repaired by:		Signature:	Date:
Comments:			

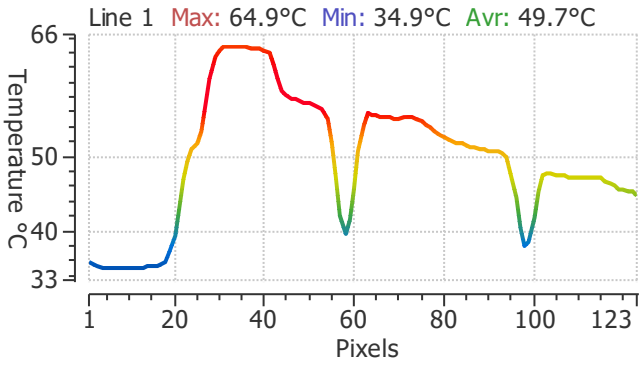
Inspection	Analysis





Emissivity	0.96
Line 1 Max	64.9°C
Date /camera	21.02.2022





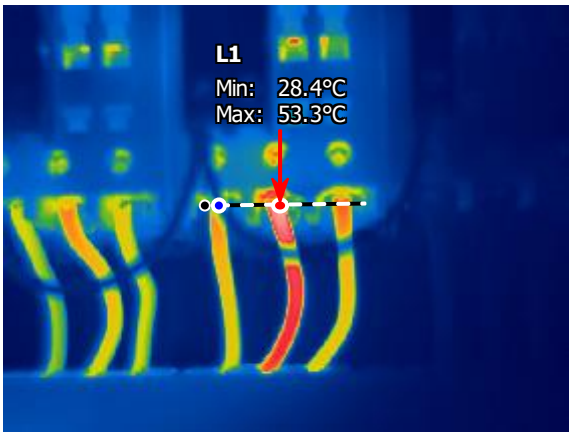
Severity: "C" Second Stage Overheating, Schedule when possible.

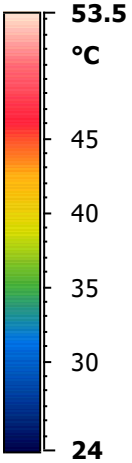
Recommendations

The DB1 switchboard Cabinet; pump motor-overload red phase connection is overheating. The connected load is 7 amperes and 22 degrees above AV.

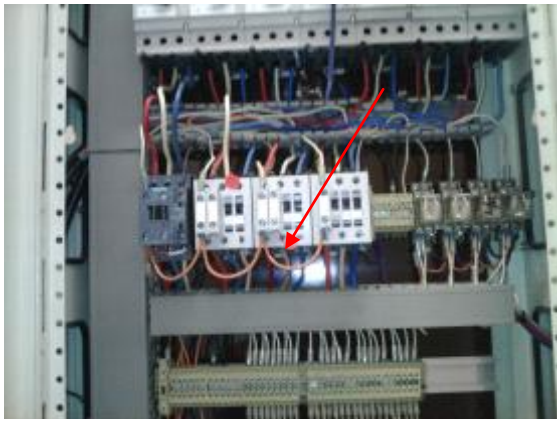
Inspected by:	DWL	Signature:	Date: 21.02.2022
Repaired by:		Signature:	Date:
Comments:			

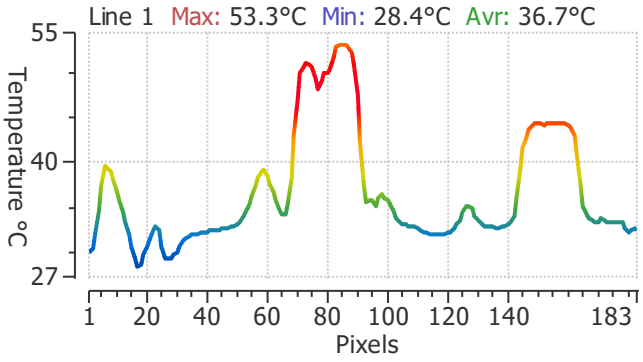
Inspection ***Analysis***





Emissivity	0.95
Line 1 Max	53.3°C
Date /camera	21.02.2022





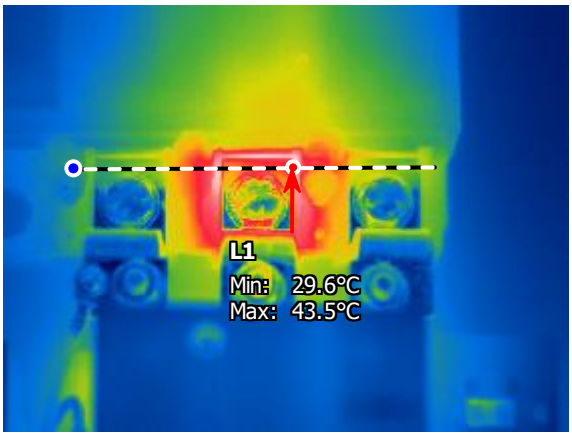
Severity: "C" Second Stage Overheating, Schedule when possible.

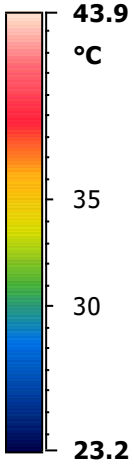
Recommendations

The DB3, C3 contactor white phase cable termination is overheating. The connected load is 25 amperes and 13 degrees above AV.

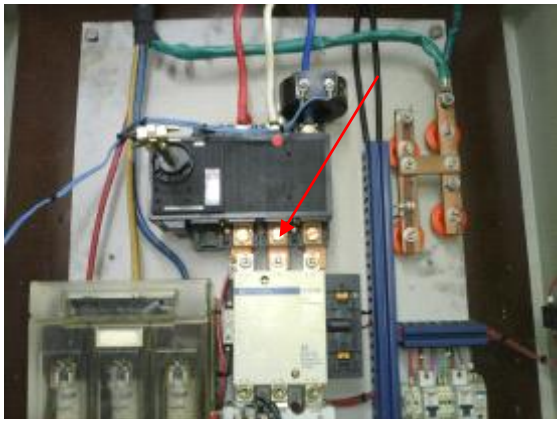
Inspected by:	DL	Signature:	Date: 21.02.2022
Repaired by:		Signature:	Date:

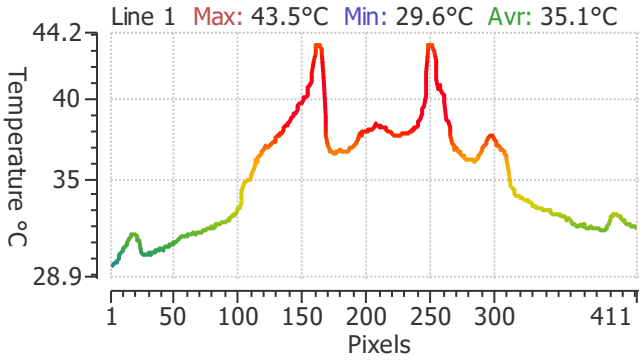
Inspection	Analysis





Emissivity	0.95
Line 1 Max	43.5°C
Date /camera	21.02.2022





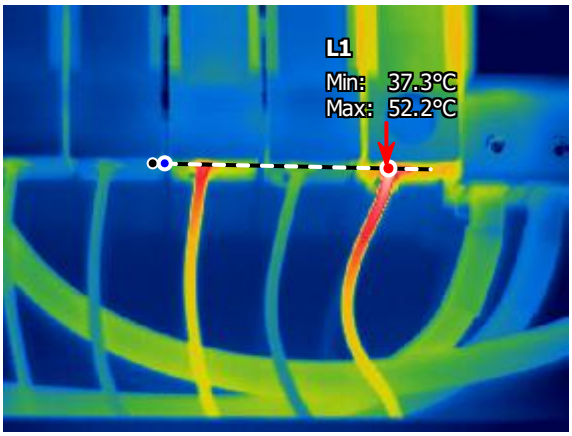
Severity: "C" Second Stage Overheating, Schedule when possible.

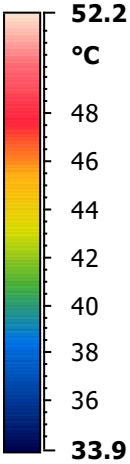
Recommendations

Jogger control cabinet, the isolator white phase connection is overheating. The connected load is 26 amperes and 12 degrees above AV.

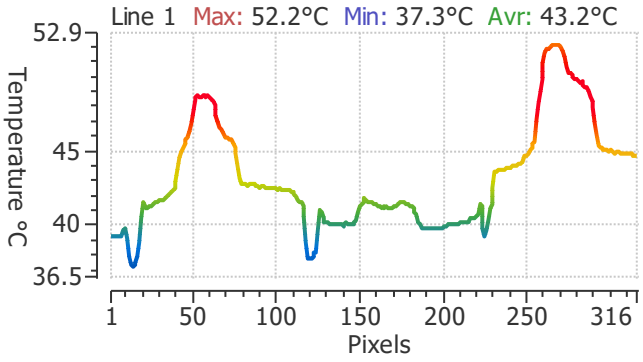
Inspected by:	DL	Signature:	Date: 21.02.2022
Repaired by:		Signature:	Date:

Inspection ***Analysis***





Emissivity	0.95
Line 1 Max	52.2°C
Date /camera	21.02.2022



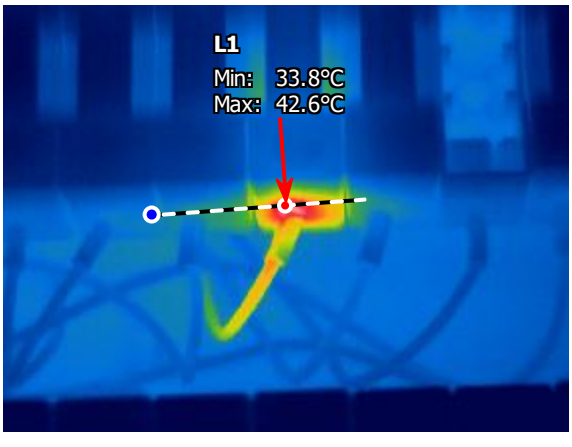
Severity: "C" Second Stage Overheating, Schedule when possible.

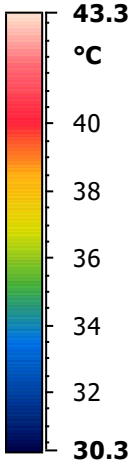
Recommendations

The DB7 cabinet, Distribution board blue phase way 5 fuse cable termination is overheating. The connected load is 16 amperes and 11 degrees above AV.

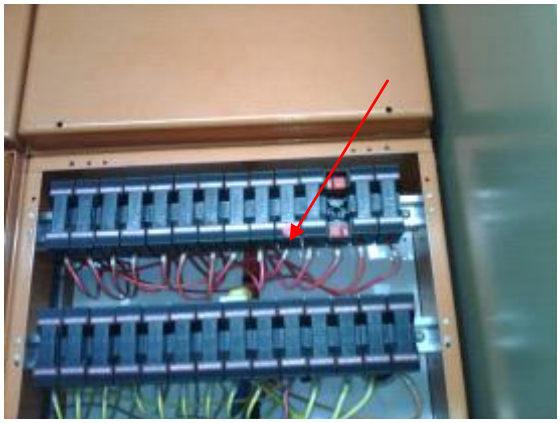
Inspected by:	DL	Signature:	Date: 21.02.2022
Repaired by:		Signature:	Date:

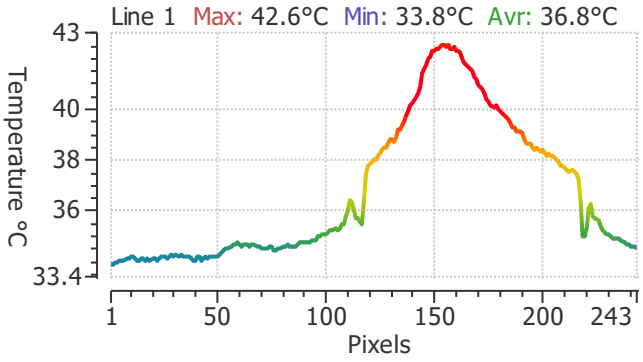
Inspection	***Analysis***





Emissivity	0.95
Line 1 Max	42.6°C
Date /camera	21.02.2022





Severity: "C" Second Stage Overheating, Schedule when possible.

Recommendations

The DB2, Distribution board red phase way 10 cable termination is overheating. The connected load is 2.6 amperes and 11 degrees above AV.

Inspected by:	DL	Signature:	Date: 21.02.2022
Repaired by:		Signature:	Date:

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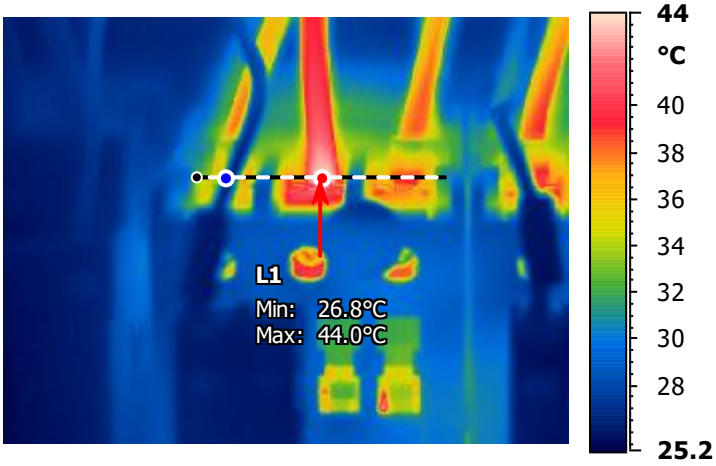
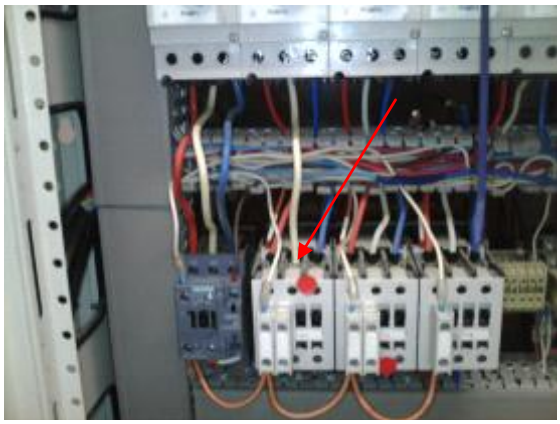
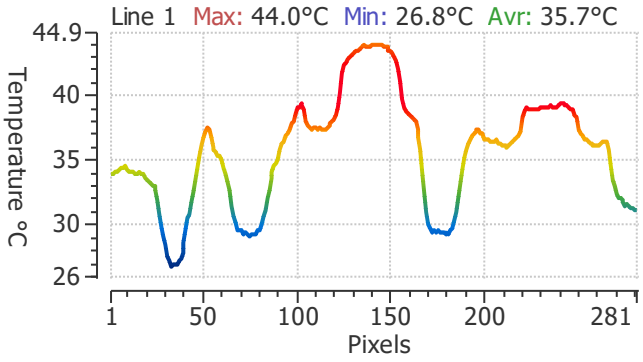
Inspection	***Analysis***



Emissivity	0.95
Line 1 Max	44.0°C
Date /camera	21.02.2022





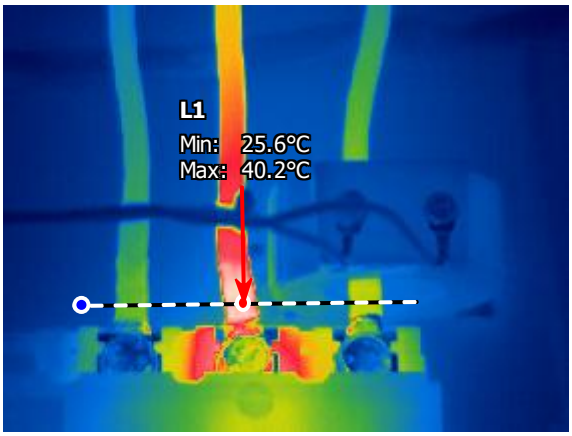
Severity: "C" Second Stage Overheating, Schedule when possible.

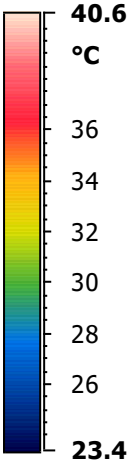
Recommendations

The DB5, contactor white phase cable termination is overheating. The connected load is 26 amperes and 10 degrees above AV.

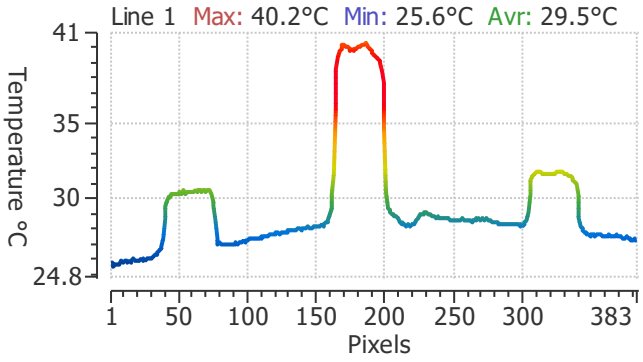
Inspected by:	DL	Signature:	Date: 21.02.2022
Repaired by:		Signature:	Date:

Inspection ***Analysis***





Emissivity	0.95
Line 1 Max	40.2°C
Date /camera	21.02.2022



Severity: "C" Second Stage Overheating, Schedule when possible.

Recommendations

The DB4, the isolator white phase cable termination is overheating. The connected load is 26 amperes and 10 degrees above AV.

Inspected by:	DL	Signature:	Date: 21.02.2022
Repaired by:		Signature:	Date:

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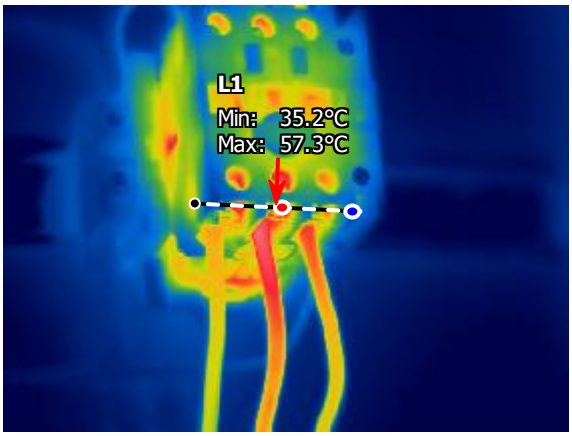
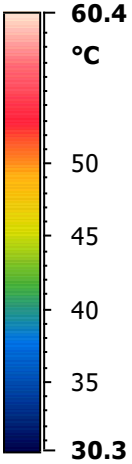
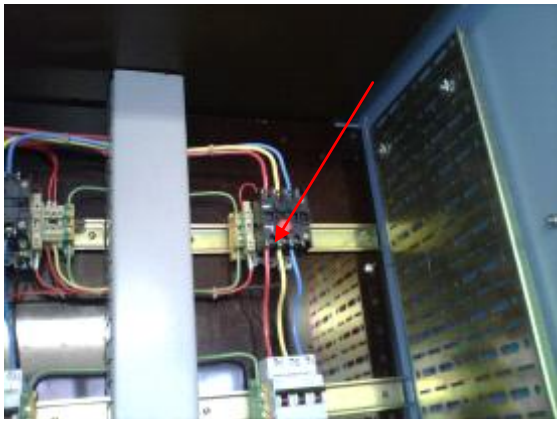
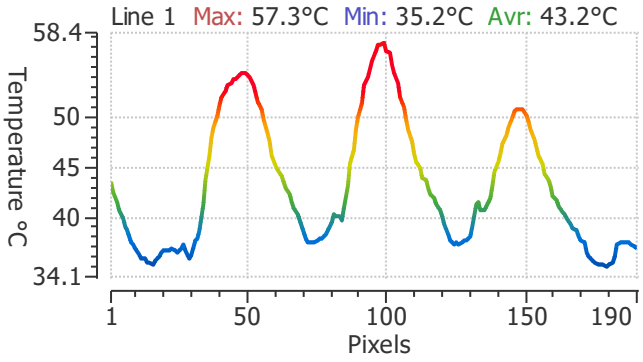
Inspection ***Analysis***





Emissivity	0.95
Line 1 Max	57.3°C
Date /camera	21.02.2022





Severity: "D" Next Scheduled Maintenance.

Recommendations

The DB3, the power factor bank #5 contactor white phase cable termination is overheating. The connected load is 20 amperes and 9 degrees above AV.

Inspected by:	DL	Signature:	Date: 21.02.2022
Repaired by:		Signature:	Date: