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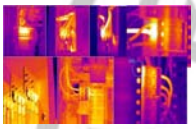
Infrared Thermographic Survey of Nominated Electrical Equipment



Sample Report P/L
3/42 Burgess Road, Bayswater Vic 3153

Prepared By: - Protect Thermal Inspections	
Inspection Date	Wednesday, October 26, 2016
Address	3/42 Burgess Road, Bayswater Vic 3153
Contact person	The Manager
Phone number	03 9832 0806
E-mail address	sample@neservices.com.au
Thermographer	Dave Lambert
Electrician/s	Dave Lambert
Test Equipment Used	Flir, T420, Thermal Imaging Camera
Prothermal Reference	

About our Thermal Imaging Service

Thermal Image scanning is a preventative maintenance process which assists in the reduction of emergency maintenance costs, providing asset protection and life preservation on electrical and mechanical equipment, it is an excellent condition monitoring tool used to carry out Non Destructive Testing. While the equipment is online and running under normal load, you are able to monitor temperatures and thermal patterns allowing for early detection of faults indicated by a rise in temperature.

Infrared thermal imaging can be used on a wide variety of electrical and mechanical equipment unlike most other test methods. Faults detected at an early stage can be investigated or repaired as part of your routine maintenance program or as a planned shutdown, thus reducing the risk of unnecessary and costly breakdowns.

Infrared thermal inspections can differ for all types of industry and are usually recommended every 12 months, although more frequent inspections may be required depending on environmental conditions.

Benefits of your Thermal Inspection Service

- Preventing unexpected downtime repairing equipment that can be avoided.
- Reducing the loss of revenue if machinery or electrical equipment fails.
- Reduce risk of personal harm to you, your staff and your customers.
- Reduction in expensive repair costs of faulted and connected equipment.

Report Guidelines

This report has been prepared in accordance within the Guidelines for *Infraspection Institute Standard for Infrared Inspection of Electrical Systems and Rotating Equipment***,** 2011 Edition, Copyright 2011, Infraspection Institute. The subsequent delta T *(temperature difference)* criteria applied to evaluate the temperature severity of an exception is the – *Experienced Based* criteria for Electrical and/or Mechanical Equipment. *Experienced Based* criteria are to be used as a guideline only. For high absolute temperature measurements, also for critical equipment the priority may be altered.

All Thermographs are taken using emissivity of 1.0 unless otherwise noted. This report is designed to caution against temperature anomalies and/or exceptions that may indicate the possible deterioration or failure of a component or system.

It is not a guarantee against failure. It is not quantitative measure of deterioration or malfunction. This report serves only as an indication of an exception which may or may not lead to deterioration or failure.

It is the responsibility of the contracted end user to resolve the diagnosis and determine any corrective measures-if required.

PTI - will not be responsible for determining fault diagnosis or rectification procedures. It is recommended that all faults be investigated by qualified personnel of the end user.
In no event shall PTI be liable to anyone for special, collateral, incidental or consequential damages in conjunction with or arising from the use of this survey
Should you have any queries regarding this report or require additional copies of this report please feel free to call Dave on 0408 250 302.
Alternatively you can email us. info@neservices.com.au

Overview of Fault Rating:

0: None	No Fault Identified	No action required
1: Rectified	Loose Connections	Tightened at time of Inspection
2: Non Thermal	Fault Identified	Advise to repair when available
3: Low	Temp rise 5-10 °C	To be monitored – Observe at next inspection
4: Medium grade	Temp rise 10-35 °C	Repair at scheduled shut down
5: Severe	Temp rise >35 °C	Repair immediately - Arrange Electrician

Electrical Equipment Inspection List

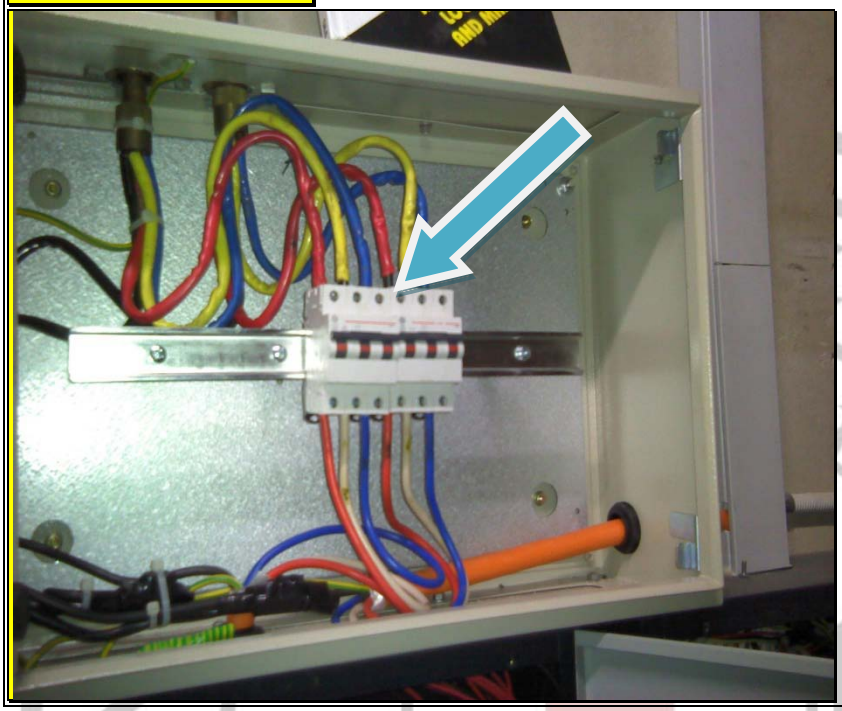
Sample Report P/L

Switchboard Identification	Fault Rating If Applicable	Location
Main Switchboard Tiers 1,2,3,4,5 & 6		Main Switchroom, Basement
Distribution Board		1st Floor
Distribution Board , L1A	**Medium, Page 5**	1st Floor
Distribution Board , L1B		1st Floor
Tenancy Boards 202 - 205		2nd Floor
Public Area Switchboard..		2nd Floor
Mains Isolator Board		2nd Floor
Public Area Switchboard		3rd Floor
Mains Isolator Board	**Rectified, Page 6**	3rd Floor
Main Board		3rd Floor
Panel B Dist. Board		3rd Floor
Tenancy Boards 301 - 308		3rd Floor
Public Area Switchboard	**Non Thermal, Page 7**	4th Floor
Tenancy Boards 401 - 407		4th Floor
Public Area Switchboard		5th Floor
Tenancy Isolator Board		5th Floor
Public Area Switchboard		6th Floor
Meter Panel DB1		6th Floor
Take off Box Fuses	**High, Page 8**	7th Floor
Tenancy Boards 601 - 605		7th Floor
Public Area Switchboard	**Medium / Non Thermal, Page 9**	8th Floor

All inspected sections have no corrective action required unless otherwise noted above. **Rating and Page No's are noted in Red.**

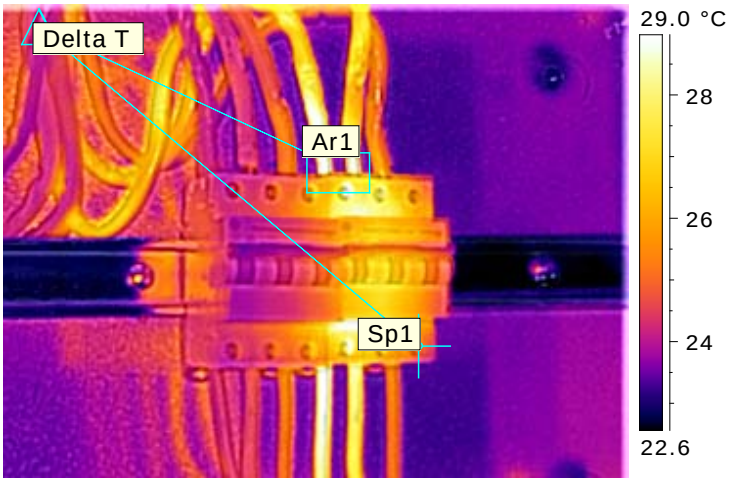
Customer :-	Sample Report P/L	**Equipment Description :-**	Distribution Board , L1A
Address :-	3/42 Burgess Road, Bayswater Vic 3153	**Priority Description :-**	Medium, loose connection at red phase of circuit breaker 2.

Photo and Identification



Date	25/10/2016
Image Time	10:37:04 AM
Max. Temperature	29.9 °C
Min. Temperature	22.4 °C
Image Camera Type	FLIR T420
Image Compass	W
Emissivity	1.00
File name	FLIR0336.jpg

Thermogram 25/10/2016



Ar1 Max. Temperature	29.9 °C
Sp1 Temperature	25.3 °C
Delta T Value	4.6 °C

Possible Cause & Additional Comments:

Loose connection , recommend to shut down inspect and rectify.

Corrective Action Taken By:…… date:

Comment:……..

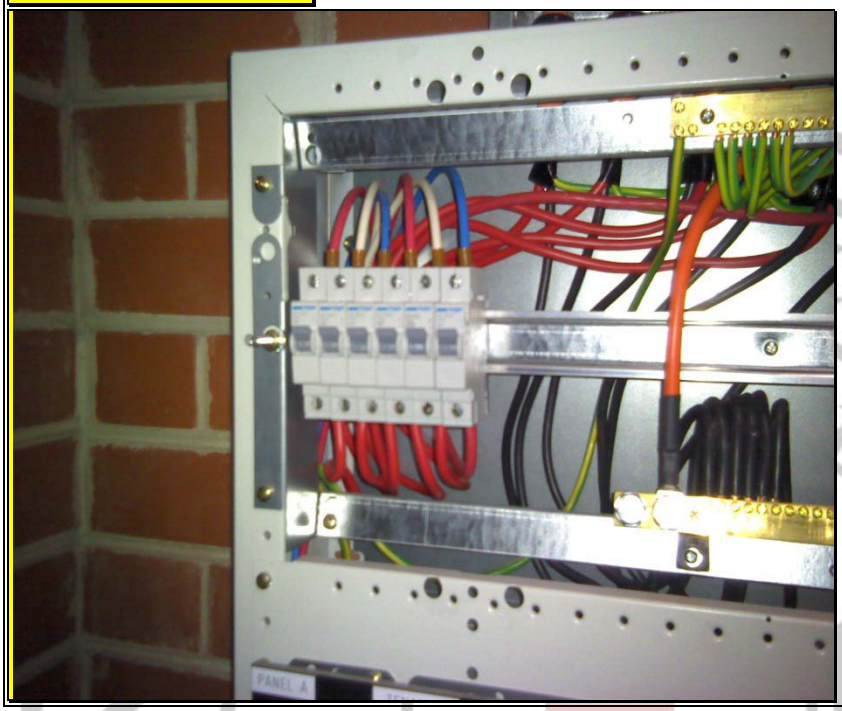
Customer :- Sample Report P/L

Equipment Description :- 3rd Floor, Main Isolator Panel

Address :- 3/42 Burgess Road, Bayswater Vic 3153

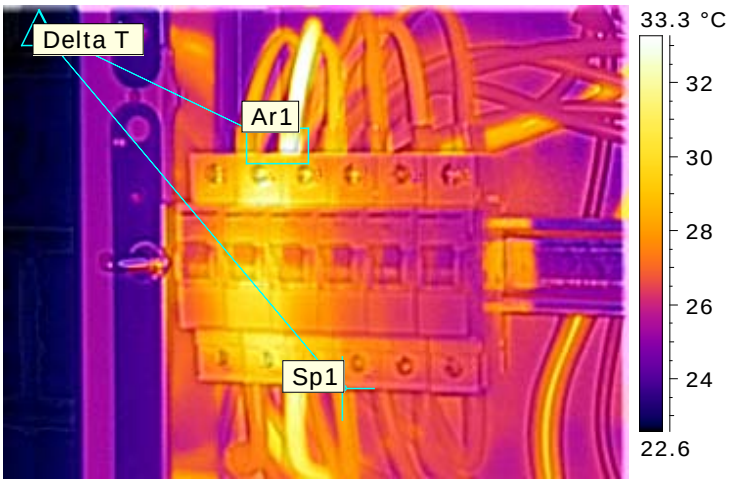
Priority Description :- Rectified, Loose connection was tightened at time of inspection.

Photo and Identification



Date	25/10/2016
Image Time	11:55:52 AM
Max. Temperature	34.2 °C
Min. Temperature	22.5 °C
Image Camera Type	FLIR T420
Image Compass	N
Emissivity	1.00
File name	FLIR0348.jpg

Thermogram 25/10/2016



Ar1 Max. Temperature	34.2 °C
Sp1 Temperature	27.1 °C
Delta T Value	7.0 °C

Possible Cause & Additional Comments:

No thermal abnormalities detected at time of inspection, components appear to be within normal operating temperature limits. Tightness of connections were inspected and or checked at time of survey. Photos are for reference only.

Corrective Action Taken By:…… date:

Comment:……..

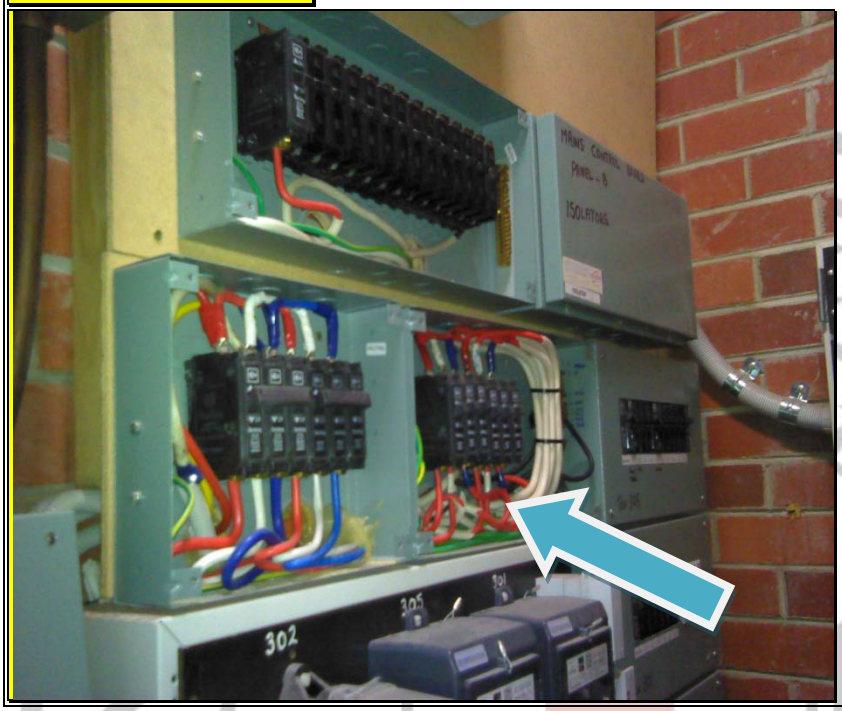
Customer :- Sample Report P/L

Address :- 3/42 Burgess Road, Bayswater Vic 3153

Equipment Description :- 4th Level, Public Area Switchboard

Priority Description :- Non Thermal, board requires fire stop sealant around cables

Photo and Identification



Date	25/10/2016
Image Time	11:12:01 AM
Max. Temperature	30.7 °C
Min. Temperature	23.9 °C
Image Camera Type	FLIR T420
Image Compass	W
Emissivity	1.00
File name	FLIR0343.jpg

Thermogram 25/10/2016

Ar1 Max. Temperature	30.7 °C
Sp1 Temperature	25.7 °C
Delta T Value	4.9 °C

Possible Cause & Additional Comments:

No thermal abnormalities detected at time of inspection, components appear to be within normal operating temperature limits. Tightness of connections were inspected and or checked at time of survey. Photos are for reference only.

Corrective Action Taken By:…… date:

Comment:……..

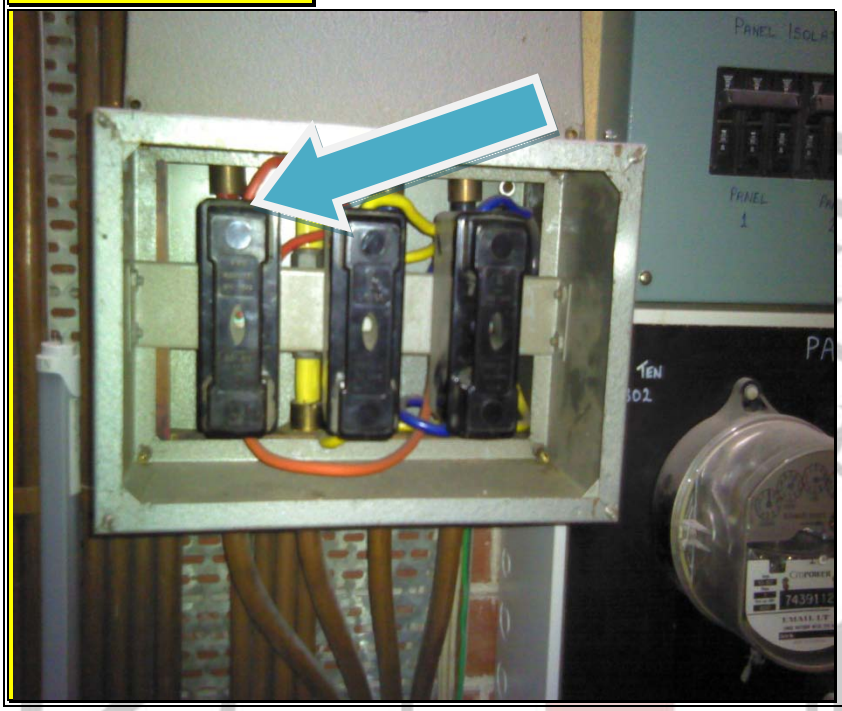
Customer :- Sample Report P/L

Equipment Description :- Level 7, Take off box fuses.

Address :- 3/42 Burgess Road, Bayswater Vic 3153

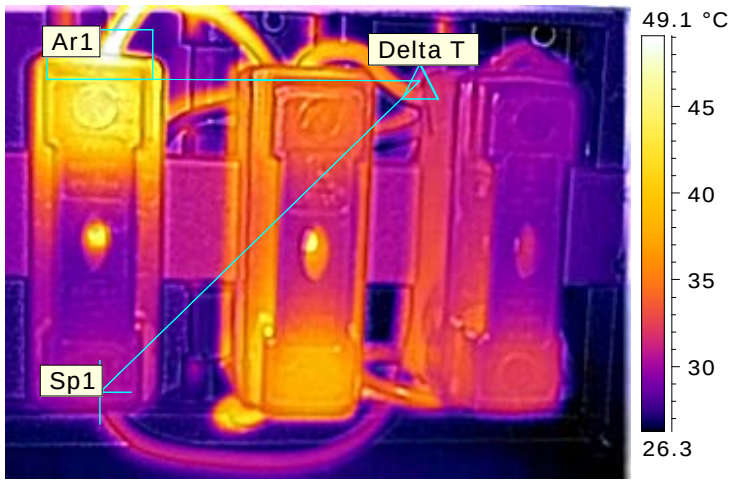
Priority Description :- High, Contact electrician and rectify

Photo and Identification



Date	25/10/2016
Image Time	12:50:27 PM
Max. Temperature	56.9 °C
Min. Temperature	26.0 °C
Image Camera Type	FLIR T420
Image Compass	W
Emissivity	1.00
File name	FLIR0357.jpg

Thermogram 25/10/2016



Ar1 Max. Temperature	56.9 °C
Sp1 Temperature	30.4 °C
Delta T Value	26.5 °C

Possible Cause & Additional Comments:

Localized heat source shown at top of fuse, shut down and inspect further.

Corrective Action Taken By:…… date:

Comment:……..

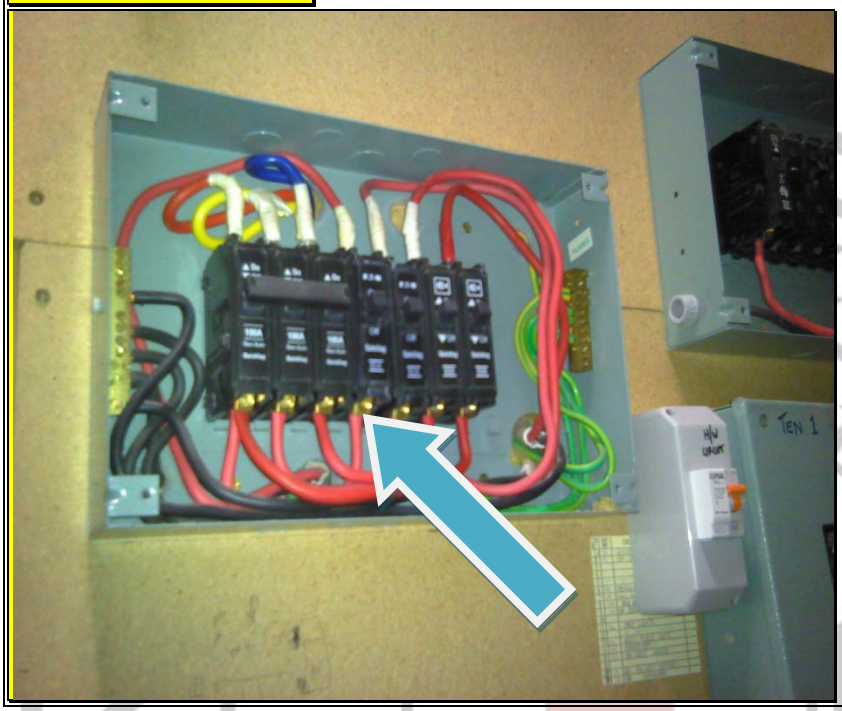
Customer :- Sample Report P/L

Address :- 3/42 Burgess Road, Bayswater Vic 3153

Equipment Description :- Level 8, Public Light and power

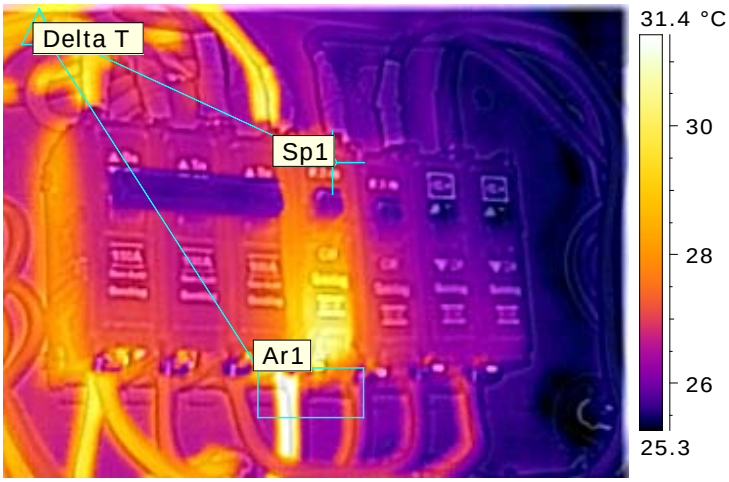
Priority Description :- Medium, Non Thermal

Photo and Identification



Date	25/10/2016
Image Time	2:37:17 PM
Max. Temperature	32.2 °C
Min. Temperature	25.1 °C
Image Camera Type	FLIR T420
Image Compass	W
Emissivity	1.00
File name	FLIR0371.jpg

Thermogram 25/10/2016



Ar1 Max. Temperature	32.2 °C
Sp1 Temperature	27.0 °C
Delta T Value	5.2 °C

Possible Cause & Additional Comments:

Load side of breaker is showing heat source, tightness of connection was inspected, possible worn components.

Protective barriers are also required to be fitted to switchboard cover.

Corrective Action Taken By:…… date:

Comment:……..