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Infrared Inspection Report

AI Lectric Electrical Contracting Corp

New York, NY 10013



Report date:

3/28/16

Foreword

This Report of Infrared Inspection provides complete documentation of thermal patterns detected in your equipment, structure or system. It uses a subjective evaluation to help you prioritize repairs to provide the greatest return from this inspection and your maintenance. This Report of Infrared Inspection meets the documentation requirements of the Infraspection Institute Standard for Infrared Inspection of Electrical Systems and Rotating Equipment, as well as standards, practices and specifications published by NFPA and NETA.

How Infrared Thermography Works

Infrared imagers “see” the heat radiated from your equipment in real time, just like a video camera sees visible light. When thermograms are in color, colors in the scene are matched to the reference bar. Colors appearing closer to the top of the reference bar indicate higher temperatures. Colors appearing closer to the bottom of the reference bar indicate lower temperatures.

Infrared thermography falls within a group of diagnostic tools classified as nondestructive testing. That is - it neither damages nor alters that material or component which it is evaluating. The fundamental advantage of IR inspection is it's ability to identify previously unavailable operating information pertaining to critical component and equipment by measuring the temperature surface temperature. Some of the components which can benefit from an Infrared inspection are high voltage electrical equipment, switches, conductors and connections, or mechanical rotating body or piece of equipment which exists in an inaccessible location. Because IR operates from a safe distance and without any physical contact, it is possible to survey any physical condition having a thermal differential and not interfere in the operation of the subject equipment.

Repair Priority Ratings

Each thermogram is given a Subjective Repair Priority Rating which is based upon your qualified assistant's opinion of how critical the subject item is to the safe and profitable operation of your overall system.

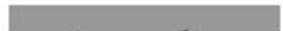
The Inspection Summary section of this report explains how to use this Subjective Repair Priority Rating to help you determine how quickly you need to investigate and correct the potential problem.

Overheating can cause premature deterioration and costly, unplanned failure of your equipment. Overheating connectors, conductors and components will never get better. In fact, the temperature and rate of deterioration will increase with time.

No one can predict when a failure will occur. As a result, we suggest that you use the Subjective Repair Priority Ratings as a guide but that you investigate and take appropriate corrective measures as soon as possible.

Report Summary

Inspection date: 3/27/16
Report Date: 3/28/16
Type of Inspection: 
Purpose of Inspection: PPM
End User: 
Project Location: New York, NY 10013

Thermographer: 
Certification Number: 
Certification Level : 
Qualified Assistant(s): 

Equipment Used: FLIR P640 S/N 404000447

Weather Data: Day: Highs: 55F Night: lows: 44F
Sunny Mostly Cloudy

Last Precipitation Date: 3/21/16

of Items Inspected 97
of Thermograms 20

Comments:

We base our opinions and forgo conclusions to a reasonable degree of scientific (Thermographic) certainty. All items on the inventory list were surveyed using infrared . Only items with an infrared exception (problem) are contained in this report. **No one can predict when a failure will occur. As a result, we recommend investigating and repairing all problem areas regardless of priority number.** All equipment and components in which we are requested to scan, but do not have a clear line-of-site visibility will be noted as "Limited Visibility" , or "Not Inspected" in this final report.

Load appeared to be lighting in the building. In switchgear section #7 all the screws on the "B" phase switches (items 17-20) looked burnt. Something systematic must have happened to this section of gear.



Disclaimers

Non-destructive testing conducted by AI-Lectric Electrical Contracting is no substitute for adequate customer resources, time, and formal program processes, and even when delivered by trained and experienced inspection professionals with the support of management dedicated to customer satisfaction, Infrared Imaging Services LLC will never completely identify all defects, avoid all problems, or stop obsolescence.

All testing conducted by AI-Lectric Electrical Contracting is conducted using the test equipment noted in your quote and/or final report. Inspection procedures were performed to the best of our ability. All data and inspection results presented in your report document the equipment's characteristics which were analyzed and/or calculated at that specific point in time. All inspection data and results presented are only a partial representation of the total system which was inspected. **THE RESULTS SHOULD NOT BE CONSIDERED A TRUE REPRESENTATION OF THE COMPLETE SYSTEM.**

Electrical and mechanical equipment are always dynamic in nature – always changing due to requested conditions of the facilities operational demands as well as outside sources such as utilities and environment. These varied demands and/or outside source disturbances/anomalies play a significant role in the reliability of the electrical and/or mechanical infrastructure in the operation of a facility. As reliable and complex as today's power and/or mechanical systems have become, no system can operate 100% indefinitely. Every system component, no matter how well designed will eventually achieve a failure rate of 100%.

Predictive testing is not 'crystal ball maintenance,' and under the current state of the art, it is unreliable and ineffective as an advance indicator of all electrical/mechanical fatigue failures. Non-destructive/predictive testing will not do away with the need for regular preventive maintenance and direct inspection. By itself, without a core commitment to addressing anomalies, defects and chronic difficulties regardless of reported priority levels, predictive testing cannot reduce equipment failure, reduce personnel or produce a major decrease in lifetime maintenance costs.

The "Inventory list" in this report should not be considered a complete list of all your electrical and/or mechanical equipment within your facility - it is only an inventory list of equipment which was brought to our attention by the Qualified Assistant supplied by your facility to escort the Infrared Technician throughout your facility. Also, data and test results presented in this report document the equipment's characteristics at that specific point in time.

THE SERVICES PERFORMED, AND THIS REPORT DO NOT CONSTITUTE A WARRANTY, AN INSURANCE POLICY, OR A GUARANTEE OF ANY KIND; NOR DO THEY SUBSTITUTE FOR ANY DISCLOSURE STATEMENT AS MAY BE REQUIRED BY LAW. THERE ARE NO WARRANTIES MADE. YOU AGREE NOT TO HOLD US RESPONSIBLE FOR FUTURE FAILURE AND REPAIR, OR FOR THE NON-DISCOVERY OF ANY PATENT OR LATENT DEFECTS IN MATERIAL, WORKMANSHIP, OR OTHER CONDITIONS OF THE PROPERTY WHICH MAY OCCUR OR BECOME EVIDENT AFTER THE DATE THE SERVICES WERE PERFORMED; YOU AGREE TO ASSUME ALL THE RISKS FOR CONDITIONS WHICH ARE CONCEALED FROM VIEW OR INACCESSIBLE TO US AT THE TIME THAT THE SERVICES WERE PERFORMED

Inspection Summary

For the equipment inspected, we have recorded a total of 20 thermogram(s) or daylight photograph(s) documenting conditions found during our inspection. These thermograms and/or photographs appear on the Image Pages found at the end of this report.

As a reference, each Image Page contains Evaluation Priority Ratings. Subjective Evaluation Ratings are based upon the Qualified Assistant's opinion of the subject item's importance to the safe and continuous operation of the facility. Objective Evaluation Ratings found on Electro/Mechanical Image Pages are based upon temperature rise criteria as specified by NFPA, NETA and the Infraspection Institute Standard for Infrared Inspection of Electrical Systems and Rotating Equipment.

Depending upon Image Page format, Subjective and/or Objective Priority Ratings may be found. When both are listed, an Average Repair Priority Rating will also be displayed. This Average Repair Priority Rating is the mean value of the Subjective and Objective Priorities. When appropriate, the Average Repair Priority is rounded up to the next highest whole number.

Potential problems documented in this report are grouped and listed according to the following Average Repair Priority or Subjective Evaluation Ratings.

The following Delta T (temperature difference) is reported as the temperature rise of the exception above a defined reference, which is typically ambient air or a similar component under the same conditions or the maximum allowable temperature rise of the component, Tmax.

	NETA	Experience
Basis of Objective Priority (X):	x	

Quantity

- 2 **Priority 1:** Major discrepancy; repair immediately
- 1 **Priority 2:** Monitor until corrective measures can be accomplished, fix ASAP
- 7 **Priority 3:** Indicated probable deficiency; repair as time permits
- 10 **Priority 4:** Possible deficiency; warrants investigation

Equipment Inventory list

Sequence Number	Location 1	Equipment	Equip#	In Service	Avg Priority	Visual
1	Main Electric Room	Switchgear - 400A Fused DS	9th Floor	Y		P
2	Main Electric Room	Switchgear - 400A Fused DS	8th Floor	Y		P
3	Main Electric Room	Switchgear - 400A Fused DS	7th Floor	Y		P
4	Main Electric Room	Switchgear - 400A Fused DS	6th Floor	Y		P
5	Main Electric Room	Switchgear - 400A Fused DS	5th Floor	Y		P
6	Main Electric Room	Switchgear - 400A Fused DS	4th Floor	Y		P
7	Main Electric Room	Switchgear - 400A Fused DS	3rd Floor	Y		P
8	Main Electric Room	Switchgear - 400A Fused DS	2nd Floor	Y		P
9	Main Electric Room	Switchgear - 600A Fused DS	3,9,17 Floor	Y		F
10	Main Electric Room	Switchgear - 600A Fused DS	7th Floor	Y		P
11	Main Electric Room	Switchgear - 600A Fused DS	8,9, 10 Floor	Y		P
12	Main Electric Room	Switchgear - 4000A Fused DS	DP 2A & 2B	Y		P
13	Main Electric Room	Switchgear - 4000A Fused DS	SW #1	Limited visibility		P
14	Main Electric Room	Switchgear - 400A Fused DS	10th Floor	Y		P
15	Main Electric Room	Switchgear - 400A Fused DS	11th Floor	Y		P
16	Main Electric Room	Switchgear - 400A Fused DS	12th Floor	Y		P
17	Main Electric Room	Switchgear - 400A Fused DS	14th Floor	Y	4	F
18	Main Electric Room	Switchgear - 400A Fused DS	16th Floor	Y	4	F
19	Main Electric Room	Switchgear - 400A Fused DS	15th Floor	Y	4	F
20	Main Electric Room	Switchgear - 400A Fused DS	17th Floor	Y	4	F
21	Main Electric Room	Switchgear Busswork Rear	Section 1	Limited visibility		P
22	Main Electric Room	Switchgear Busswork Rear	Section 2	Limited visibility		P
23	Main Electric Room	Switchgear Busswork Rear	Section 3	Limited visibility		P
24	Main Electric Room	Switchgear Busswork Rear	Section 4	Limited visibility		P
25	Main Electric Room	Switchgear Busswork Rear	Section 5	Limited visibility		P
26	Main Electric Room	Switchgear Busswork Rear	Section 6	Limited visibility		P
27	Main Electric Room	Switchgear Busswork Rear	Section 7	Limited visibility	4	F
28	Main Electric Room	Switchgear - 2000A Fused DS	SW #2	Y	3	F
29	Main Electric Room	Switchgear Fuse Board	SWBD #1	Y	3	P
30	Main Electric Room	Switchgear Fuse Board	SWBD #1	Y	3	P
31	Main Electric Room	Switchgear Fuse Board	SWBD #1	Y	4	P
32	Main Electric Room	Switchgear Fuse Board	SWBD #2	Y		P
33	Main Electric Room	60A Fused Disconnect Switch	MPNL -1A	N		P
34	Main Electric Room	400A Fused Disconnect Switch	Tamarind	Y		P
35	Boiler Room	60A Disconnect Switch	Pump 1	Y	4	P

36	Boiler room	60A Disconnect Switch	Pump 2	Y	4	P
37	Elevator Room #2	200A Fused Disconnect Switch	Car 3	Y	3	F
38	Elevator Room #2	200A Fused Disconnect Switch	Car 4	Y		P
39	Elevator Room #2	Control Cabinet	Car 3	Y		P
40	Elevator Room #2	Control Cabinet	Car 4	Y		P
41	Elevator Room #1	100A Fused Disconnect Switch	Car #1	Y		P
42	Elevator Room #1	100A Fused Disconnect Switch	Car #2	Y		P
43	Elevator Room #1	Control Cabinet	Car #1	Y	1	P
44	Elevator Room #1	Control Cabinet	Car #2	Y		P
45	17th Floor Electric Closet	Circuit Breaker Panel	PP-17-A	Y		P
46	17th Floor Electric Closet	Circuit Breaker Panel	RP-17-B	Y		P
47	16th Floor Electric Closet	Circuit Breaker Panel	PP-16-A	Y		P
48	16th Floor Electric Closet	Circuit Breaker Panel	RP-16-B	Y		P
49	15th Floor Electric Closet	Circuit Breaker Panel	PP-15-A	Y		P
50	15th Floor Electric Closet	Circuit Breaker Panel	RP-15-A	Y		P
51	15th Floor Electric Closet	200A Fused Disconnect Switch	MAIN	Y	3	F
52	14 Floor Electrical Closet	Circuit Breaker Panel	Panel #1	Y		P
53	14 Floor Electrical Closet	Circuit Breaker Panel	Panel #2	Y		P
54	14 Floor Electrical Closet	CT Cabinet		Y		P
55	14 Floor Electrical Closet	200A Fused Disconnect Switch	Panel #3	Y	4	F
56	12th Floor Electrical Closet	CT Cabinet		Y		P
57	12th Floor Electrical Closet	200A Fused Disconnect Switch	AC1	Y	3	P
58	12th Floor Electrical Closet	Circuit Breaker Panel	Panel A	Y		P
59	12th Floor Electrical Closet	Circuit Breaker Panel	Panel B	Y		P
60	12th Floor Electrical Closet	Circuit Breaker Panel	Panel C	Y		P
61	12th Floor Electrical Closet	100A Fused Disconnect Switch	AC 2	Y		P
62	11th Floor Electrical Closet	CT Cabinet		Y		P
63	11th Floor Electrical Closet	400A Fused Disconnect Switch		Y		P
64	11th Floor Electrical Closet	Circuit Breaker Panel	Panel A	Y		P
65	11th Floor Electrical Closet	Circuit Breaker Panel	Panel B	Y		P
66	10th Floor Electrical Closet	CT Cabinet		Y		P
67	10th Floor Electrical Closet	400A Fused Disconnect Switch		Y		P
68	10th Floor Electrical Closet	Circuit Breaker Panel	LP10 A	Y		P
69	10th Floor Electrical Closet	Circuit Breaker Panel	LP10 B	Y		P
70	9th Floor Electrical Closet	Circuit Breaker Panel	9A	Y		P
71	9th Floor Electrical Closet	Circuit Breaker Panel	9B	Not insp.- Bad cover		P
72	9th Floor Electrical Closet	400A Fused Disconnect Switch		Y		P

73	8th Floor Electrical Closet	Circuit Breaker Panel	LP 4A	Not insp.- Bad cover		P
74	8th Floor Electrical Closet	Circuit Breaker Panel	LP 4	Not insp.- Bad cover		P
75	8th Floor Electrical Closet	Circuit Breaker Panel	1	Y		P
76	8th Floor Electrical Closet	200A Fused Disconnect Switch		Y		P
77	8th Floor Electrical Closet	100A Fused Disconnect Switch		Y		P
78	7th Floor Electrical Closet	400A Fused Disconnect Switch	AC 1&2	Y		P
79	7th Floor Electrical Closet	Circuit Breaker Panel	1	Y		P
80	7th Floor Electrical Closet	Circuit Breaker Panel	2	Not insp.- Bad cover		P
81	6th Floor Electrical Closet	CT Cabinet		Y		P
82	6th Floor Electrical Closet	400A Fused Disconnect Switch		Y		P
83	7th Floor Electrical Closet	Circuit Breaker Panel	PP1	Y	2	P
84	8th Floor Electrical Closet	Circuit Breaker Panel	PP2	Y		P
85	5th Floor Electrical Closet	400A Fused Disconnect Switch		Y		P
86	5th Floor Electrical Closet	Circuit Breaker Panel	PL-1	Y		P
87	6th Floor Electrical Closet	Circuit Breaker Panel	PL-2	Y	1	P
88	4th Floor Electrical Closet	CT Cabinet		Y		P
89	4th Floor Electrical Closet	400A Fused Disconnect Switch		Y		P
90	5th Floor Electrical Closet	Circuit Breaker Panel	A	Y	4	F
91	6th Floor Electrical Closet	Circuit Breaker Panel	B	Y		P
92	3rd Floor Electrical Closet	400A Fused Disconnect Switch		Y		P
93	3rd Floor Electrical Closet	Circuit Breaker Panel	A	Y		P
94	3rd Floor Electrical Closet	Circuit Breaker Panel	B	Y		P
95	2nd Floor Electrical Closet	CT Cabinet		Y		P
96	2nd Floor Electrical Closet	Circuit Breaker Panel	A	Y	3	F
97	2nd Floor Electrical Closet	Circuit Breaker Panel	B	Y		P

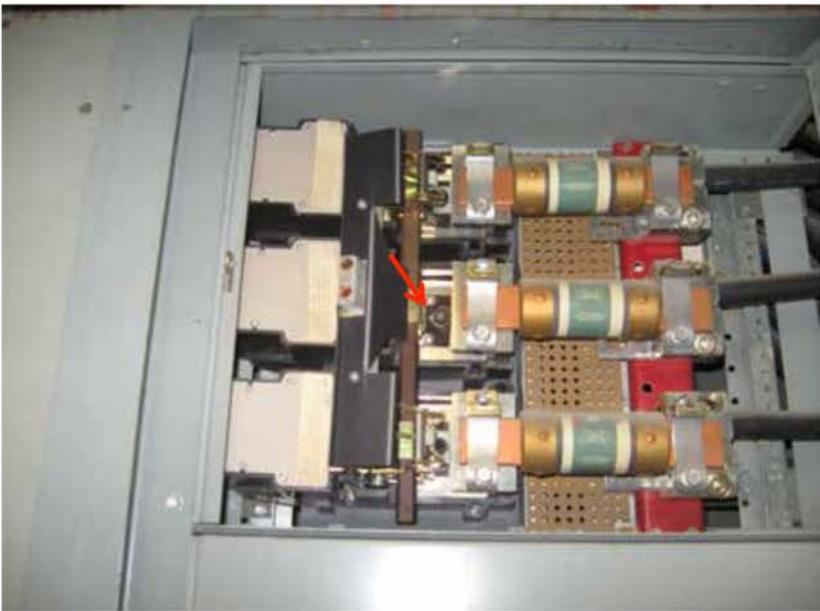
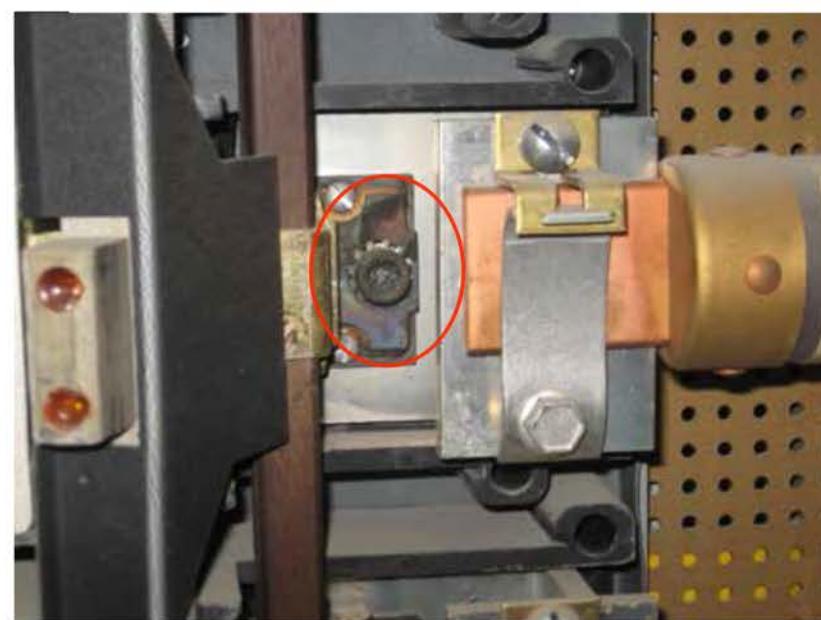
Image summary

Picture #	Location	Equipment #	Equipment Description	Priority
17	Main Electric Room	14th Floor	Switchgear - 400A Fused DS	4
18	Main Electric Room	16th Floor	Switchgear - 400A Fused DS	4
19	Main Electric Room	15th Floor	Switchgear - 400A Fused DS	4
20	Main Electric Room	17th Floor	Switchgear - 400A Fused DS	4
27	Main Electric Room	Section 7	Switchgear Busswork Rear	4
28	Main Electric Room	SW #2	Switchgear - 2000A Fused DS	3
29	Main Electric Room	SWBD #1	Switchgear Fuse Board	3
30	Main Electric Room	SWBD #1	Switchgear Fuse Board	3
31	Main Electric Room	SWBD #1	Switchgear Fuse Board	4
35	Boiler Room	Pump 1	60A Disconnect Switch	4
36	Boiler room	Pump 2	60A Disconnect Switch	4
37	Elevator Room #2	Car 3	200A Fused Disconnect Switch	3
43	Elevator Room #1	Car #1	Control Cabinet	1
51	15th Floor Electric Closet	MAIN	200A Fused Disconnect Switch	3
55	14 Floor Electrical Closet	Panel #3	200A Fused Disconnect Switch	4
57	12th Floor Electrical Closet	AC1	200A Fused Disconnect Switch	3
83	7th Floor Electrical Closet	PP1	Circuit Breaker Panel	2
87	6th Floor Electrical Closet	PL-2	Circuit Breaker Panel	1
90	5th Floor Electrical Closet	A	Circuit Breaker Panel	4
96	2nd Floor Electrical Closet	A	Circuit Breaker Panel	3

No.	17	Job Number			Equip #	14th Floor	
Location	Main Electric Room				Wind Speed	Indoor	
Equipment	Switchgear - 400A Fused DS				From		
Lens	1X	Filter	None				
Rated Load (Amps)			Meas. (Amps)			% load	
						Degree Rise (C°)	
						Rise Over	Ambient
Amps "A"=							
Amps "B"=							
Amps "C"=	<p>"B" phase screw appeared to once have been overheated, same for all "B" screws in this section of Switchgear equipment, not hot at time of Infrared inspection</p>						
Obj Priority NETA	<input type="checkbox"/>	Subj. Priority	4	Avg Priority	4		
Obj Pr. Ex-Based	<input type="checkbox"/>	Subj. Priority		Avg Priority			

Repair Chk Date Rise Over

CORRECTIVE ACTION
Possible deficiency; warrants investigation

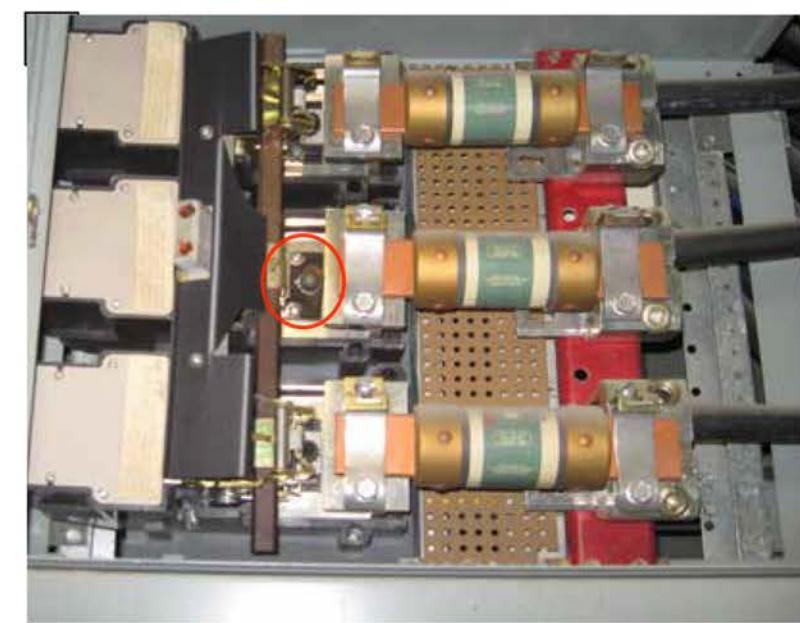


RESERVED FOR THERMOGRAM AFTER COMPONENT REPAIR

No.	18	Job Number			Equip #	16th Floor	
Location	Main Electric Room				Wind Speed	Indoor	
Equipment	Switchgear - 400A Fused DS				From		
Lens	1X	Filter	None				
Rated Load (Amps)			Meas. (Amps)			% load	
Degree Rise (C°)			Rise Over			Ambient	
Amps "A"=							
Amps "B"=							
Amps "C"=			"B" phase screw appeared to once have been overheated, same for all "B" screws in this section of Switchgear equipment, not hot at time of Infrared inspection				
Obj Priority NETA			Subj. Priority	4		Avg Priority	4
Obj Pr. Ex-Based			Subj. Priority			Avg Priority	

Repair Chk Date Rise Over

CORRECTIVE ACTION
Possible deficiency; warrants investigation



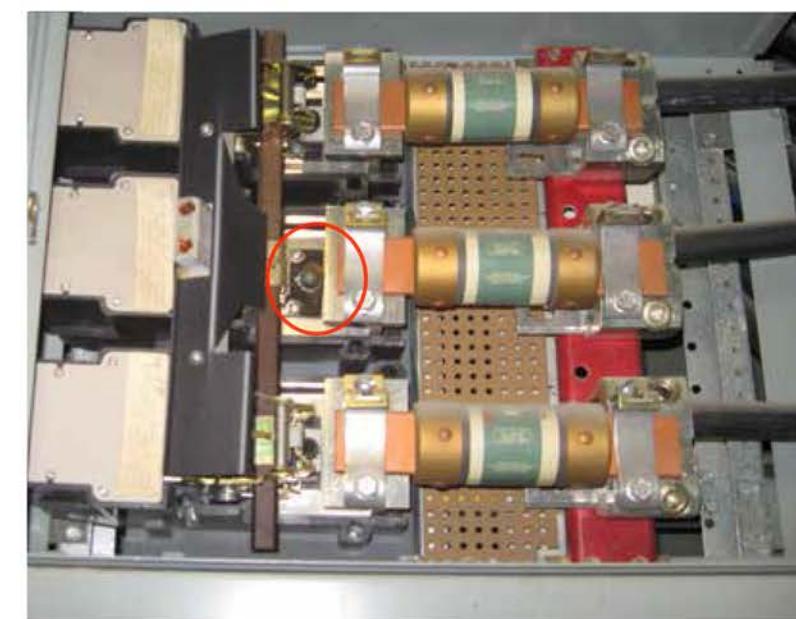
RESERVED FOR THERMOGRAM AFTER COMPONENT REPAIR

No.	19	Job Number			Equip #	15th Floor	
Location	Main Electric Room				Wind Speed	Indoor	
Equipment	Switchgear - 400A Fused DS				From		
Lens	1X	Filter	None				
Rated Load (Amps)			Meas. (Amps)			% load	
						Degree Rise (C°)	
						Rise Over	Ambient
Amps "A"=							
Amps "B"=							
Amps "C"=					<p>"B" phase screw appeared to once have been overheated, same for all "B" screws in this section of Switchgear equipment, not hot at time of Infrared inspection</p>		

Obj Priority NETA		Subj. Priority	4	Avg Priority	4
Obj Pr. Ex-Based		Subj. Priority		Avg Priority	

Repair Chk Date

CORRECTIVE ACTION
Possible deficiency; warrants investigation



RESERVED FOR THERMOGRAM AFTER COMPONENT REPAIR

No.	20	Job Number			Equip #	17th Floor	
Location	Main Electric Room				Wind Speed	Indoor	
Equipment	Switchgear - 400A Fused DS				From		
Lens	1X	Filter	None				
Rated Load (Amps)			Meas. (Amps)			% load	
						Degree Rise (C°)	Rise Over
Amps "A"=							
Amps "B"=							
Amps "C"=					<p>"B" phase screw appeared to once have been overheated, same for all "B" screws in this section of Switchgear equipment, not hot at time of Infrared inspection</p>		
Obj Priority NETA			Subj. Priority	4		Avg Priority	4
Obj Pr. Ex-Based			Subj. Priority			Avg Priority	

Repair Chk Date

CORRECTIVE ACTION
Possible deficiency; warrants investigation



RESERVED FOR THERMOGRAM AFTER COMPONENT REPAIR

No.	27	Job Number		Equip #	Section 7
Location	Main Electric Room			Wind Speed	
Equipment	Switchgear Busswork Rear			From	
Lens	1X	Filter	None		
Rated Load (Amps)			Meas. (Amps)		% load
Degree Rise (C°) Rise Over					
Amps "A"=					
Amps "B"=					
Amps "C"=	Rust and corrosion on buss work and bolts, rust on top of cabinet, did water once drip down onto this gear?				

Obj Priority NETA Subj. Priority 4 Avg Priority 4
 Obj Pr. Ex-Based Subj. Priority Avg Priority 4

Repair Chk Date Rise Over

CORRECTIVE ACTION
 Possible deficiency; warrants investigation



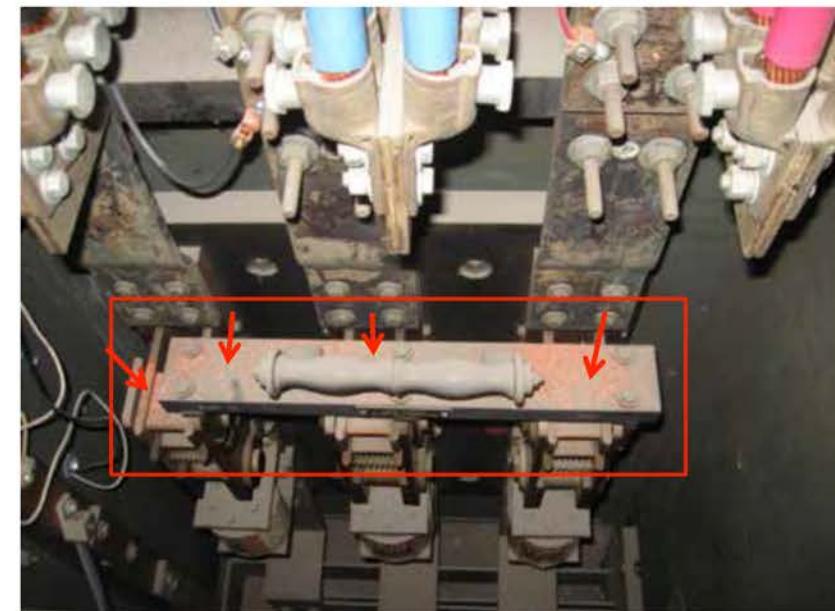
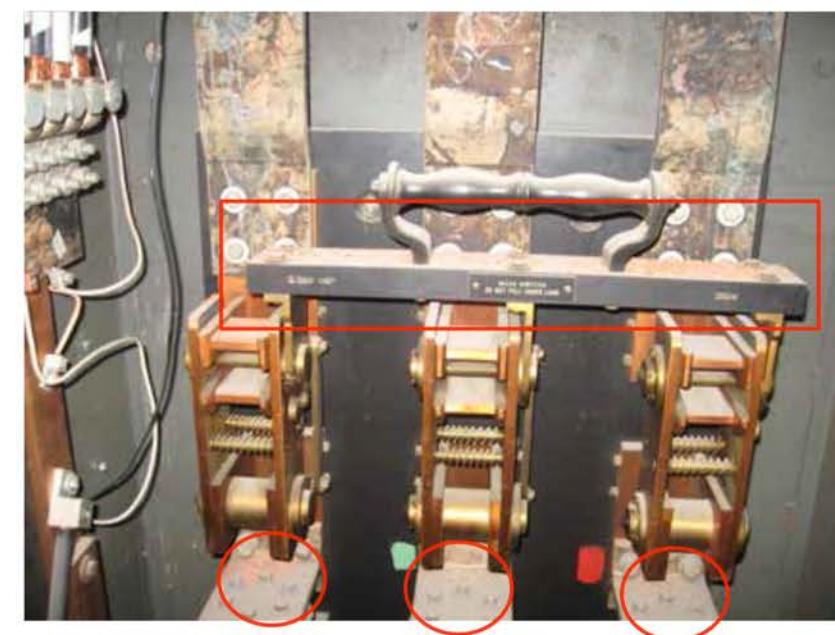
No.	28	Job Number		Equip #	SW #2
Location	Main Electric Room			Wind Speed	Indoor
Equipment	Switchgear - 2000A Fused DS			From	
Lens	1X	Filter	None		
Rated Load (Amps)		Meas. (Amps)		% load	
Degree Rise (C°)		Rise Over			
Amps "A"=					
Amps "B"=					
Amps "C"=					

Copper shavings on switch, these could cause an arc flash when opening the switch. Recommend not operating switch until shavings are removed.

Obj Priority NETA		Subj. Priority	3	Avg Priority	3
Obj Pr. Ex-Based		Subj. Priority		Avg Priority	

Repair Chk Date		Rise Over	
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CORRECTIVE ACTION
Indicates probable deficiency; repair as time permits

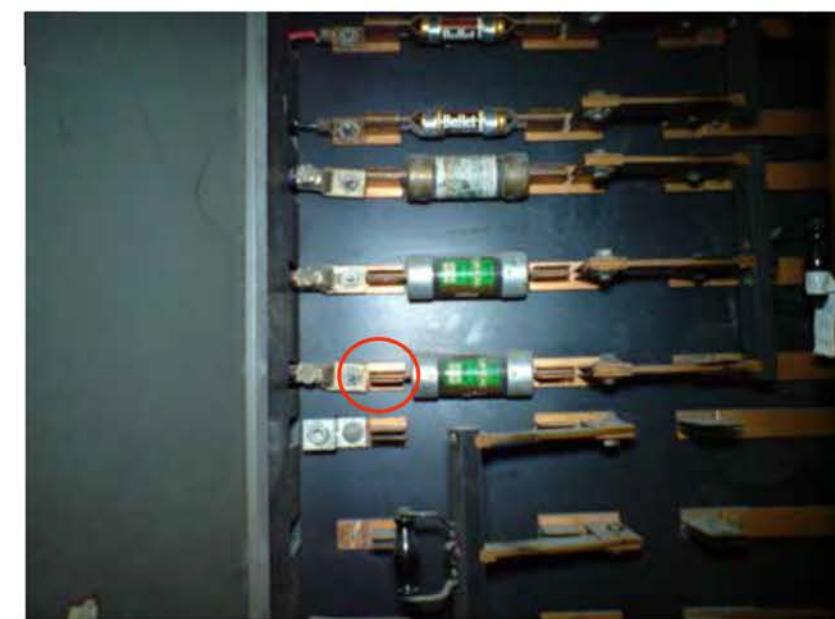


No.	29	Job Number			Equip #	SWBD #1
Location	Main Electric Room			Wind Speed	Indoor	
Equipment	Switchgear Fuse Board			From		
Lens	1X	Filter	None			
Rated Load (Amps)	100A	Meas. (Amps)	NA	% load		
Degree Rise (C°)		3.1	Rise Over	Similar component/load		
Amps "A" =	NA	Possible issue with fuse clip or connection on "B" phase, check and confirm repair.				
Amps "B" =						
Amps "C" =						

Obj Priority NETA	3	Subj. Priority			Avg Priority	3
Obj Pr. Ex-Based		Subj. Priority			Avg Priority	

Repair Chk Date		Rise Over	
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CORRECTIVE ACTION
Indicates probable deficiency; repair as time permits



RESERVED FOR THERMOGRAM AFTER COMPONENT REPAIR

No.	30	Job Number			Equip #	SWBD #1
Location	Main Electric Room			Wind Speed	Indoor	
Equipment	Switchgear Fuse Board			From		
Lens	1X	Filter	None			
Rated Load (Amps)	200A	Meas. (Amps)	NA	% load		
Degree Rise (C°)		11.3	Rise Over	Similar component/load		
Amps "A"=	NA	Possible issue with fuse clip, or connection on "A" phase", check and confirm repair.				
Amps "B"=						
Amps "C"=						

Obj Priority NETA	3	Subj. Priority			Avg Priority	3
Obj Pr. Ex-Based		Subj. Priority			Avg Priority	

Repair Chk Date _____ Rise Over _____

CORRECTIVE ACTION
Indicates probable deficiency; repair as time permits



No.	31	Job Number			Equip #	SWBD #1
Location	Main Electric Room			Wind Speed	Indoor	
Equipment	Switchgear Fuse Board			From		
Lens	1X	Filter	None			
Rated Load (Amps)	200A	Meas. (Amps)	NA	% load		
Degree Rise (C°)		3.2	Rise Over	Ambient		
Amps "A" =	Possible issue with fuse clip, or connection on "A" phase", check and confirm repair.					
Amps "B" =						
Amps "C" =	Possible issue with switch contact (red arrow).					
Obj Priority NETA Obj Pr. Ex-Based	4	Subj. Priority Subj. Priority			Avg Priority Avg Priority	4

Repair Chk Date _____ Rise Over _____

CORRECTIVE ACTION
Possible deficiency; warrants investigation



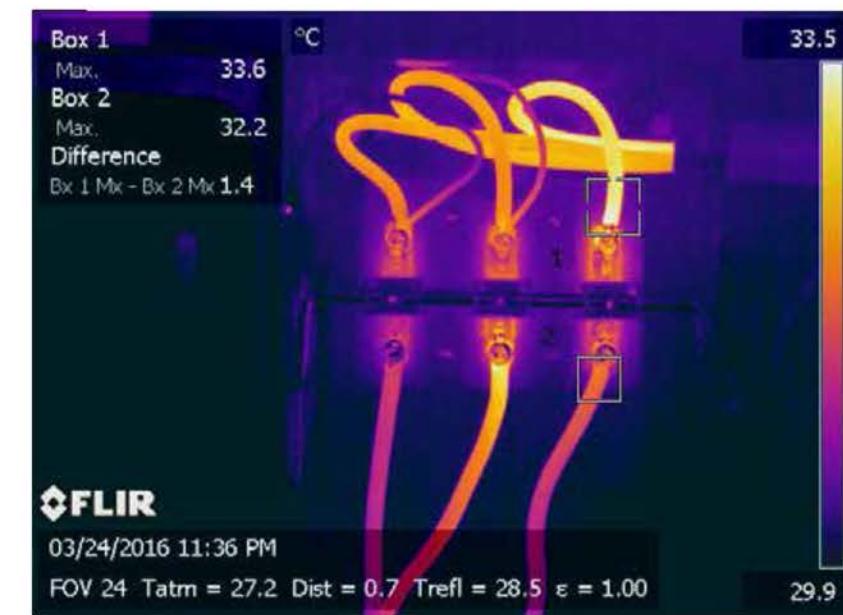
RESERVED FOR THERMOGRAM AFTER COMPONENT REPAIR

No.	35	Job Number				
Location	Boiler Room			Wind Speed	Indoor	
Equipment	60A Disconnect Switch			From		
Lens	1X	Filter	None			
Rated Load (Amps)	60	Meas. (Amps)	36	% load	60.00%	
Degree Rise (C°)		1.4	Rise Over	Similar component/load		
Amps "A"=	36	Enter comment				
Amps "B"=	36					
Amps "C"=	36	Temp rise is small, but could not run pumps for adequate time to allow switch to heat up. Recommend to tighten all connections and clean switch.				
Obj Priority NETA	4	Subj. Priority			Avg Priority	4
Obj Pr. Ex-Based		Subj. Priority			Avg Priority	

Repair Chk Date Rise Over

CORRECTIVE ACTION

Possible deficiency; warrants investigation

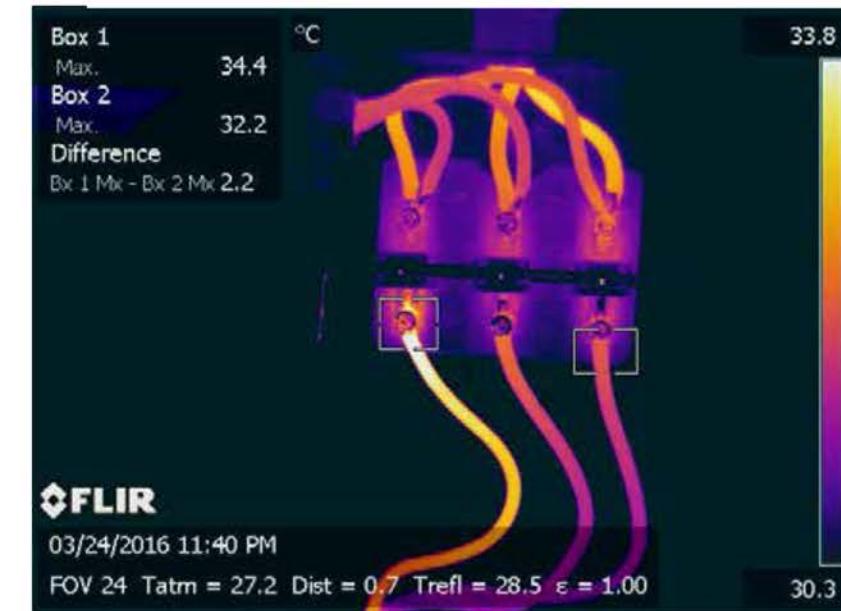


No.	36	Job Number				
Location	Boiler room			Wind Speed	Indoor	
Equipment	60A Disconnect Switch			From		
Lens	1X	Filter	None			
Rated Load (Amps)	60	Meas. (Amps)	33	% load	55.00%	
Degree Rise (C°)		2.2	Rise Over	"C" Phase		
Amps "A"=	33	Enter comment				
Amps "B"=	33					
Amps "C"=	33	Temp rise is small, but could not run pumps for adequate time to allow switch to heat up. Recommend to tighten all connections and clean switch.				
Obj Priority NETA	4	Subj. Priority			Avg Priority	4
Obj Pr. Ex-Based		Subj. Priority			Avg Priority	4

Repair Chk Date Rise Over

CORRECTIVE ACTION

Possible deficiency; warrants investigation



RESERVED FOR THERMOGRAM AFTER COMPONENT REPAIR

No.	37	Job Number			Equip #	Car 3	
Location	Elevator Room #2				Wind Speed	Indoor	
Equipment	200A Fused Disconnect Switch				From		
Lens	1X	Filter	None				
Rated Load (Amps)			Meas. (Amps)			% load	
Degree Rise (C°) _____ Rise Over _____							
Amps "A"=	150	Enter comment					
Amps "B"=	150						
Amps "C"=	200	Mismatched fuse on "C". "A" and "B" are 150A. "C" should be 150A, is 200A. "C" also looked burnt, recommend correct fuse and clean/service switch					

Obj Priority NETA		Subj. Priority	3	Avg Priority	3
Obj Pr. Ex-Based		Subj. Priority		Avg Priority	
Repair Chk Date			Rise Over		

CORRECTIVE ACTION
Indicates probable deficiency; repair as time permits

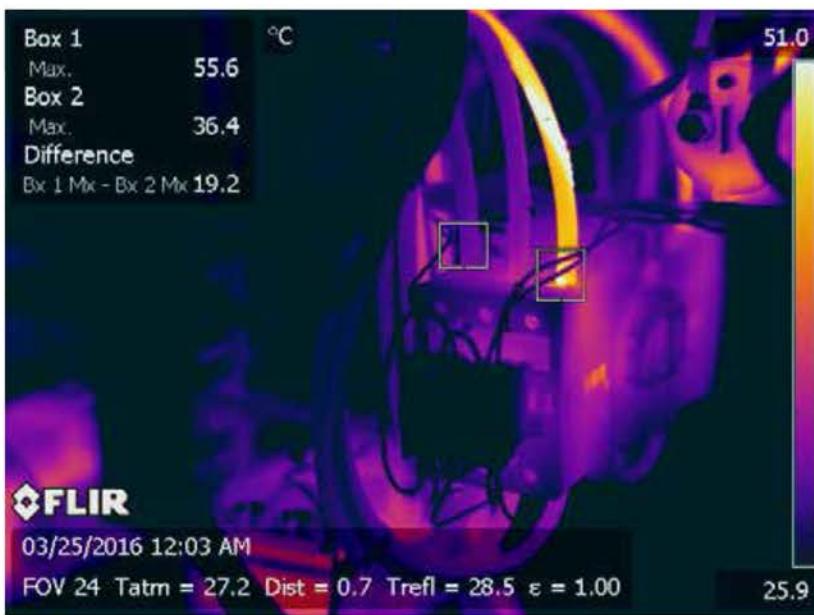
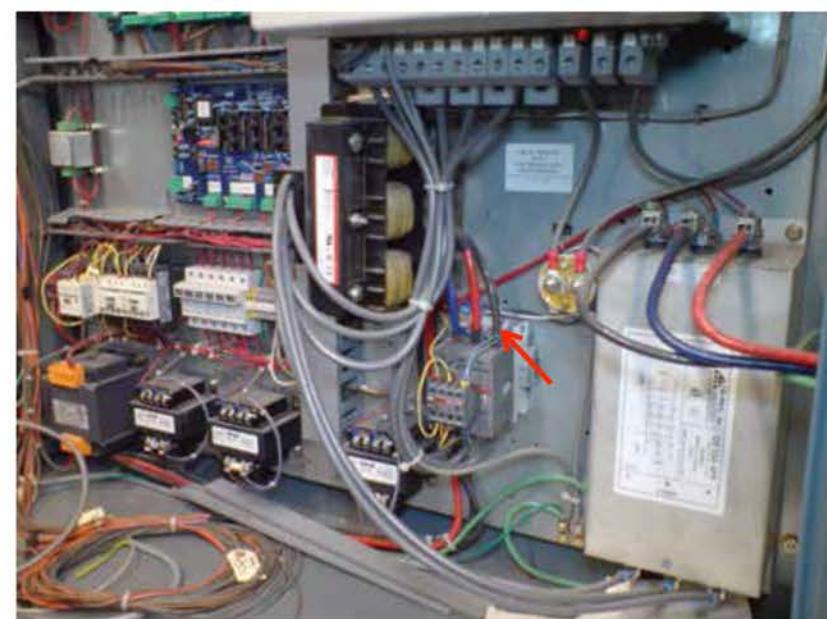


RESERVED FOR THERMOGRAM AFTER COMPONENT REPAIR

No.	43	Job Number			Equip #	Car #1		
Location	Elevator Room #1				Wind Speed	Indoor		
Equipment	Control Cabinet				From			
Lens	1X	Filter	None					
Rated Load (Amps)			Meas. (Amps)			% load		
Degree Rise (C°)		19.2		Rise Over	"A" Phase			
Amps "A" =	Enter comment							
Amps "B" =								
Amps "C" =	NA	Warm connection on "C" phase (Ctrl cabinet on the right)						
Obj Priority NETA	1	Subj. Priority			Avg Priority	1		
Obj Pr. Ex-Based		Subj. Priority			Avg Priority			

Repair Chk Date Rise Over

CORRECTIVE ACTION
Major discrepancy; repair immediately



RESERVED FOR THERMOGRAM AFTER COMPONENT REPAIR

No.	51	Job Number			Equip #	MAIN	
Location	15th Floor Electric Closet				Wind Speed	Indoor	
Equipment	200A Fused Disconnect Switch				From		
Lens	1X	Filter	None				
Rated Load (Amps)			Meas. (Amps)			% load	
Degree Rise (C°)				Rise Over			
Amps "A"=	<input type="text"/> Enter comment						
Amps "B"=	<input type="text"/>						
Amps "C"=	<input type="text"/> Missing ground. "B" phase wire corroded.. "B" phase fuse discolored. This switch appeared to have been overheated. Not hot at time of infrared inspection, recommend servicing switch.						
Obj Priority NETA	<input type="text"/>	Subj. Priority	3	Avg Priority	3		
Obj Pr. Ex-Based	<input type="text"/>	Subj. Priority		Avg Priority			

Repair Chk Date Rise Over

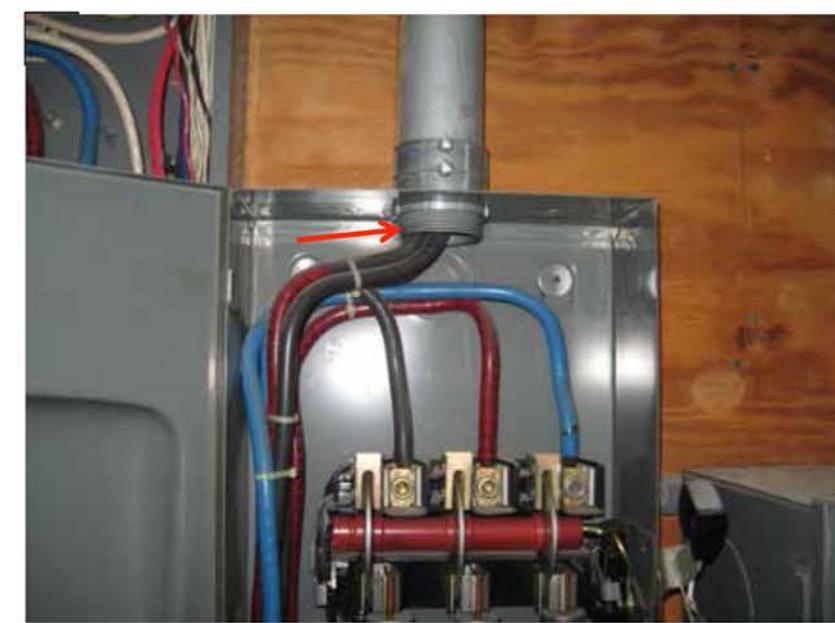
CORRECTIVE ACTION

Indicates probable deficiency; repair as time permits



No.	55	Job Number			Equip #	Panel #3
Location	14 Floor Electrical Closet			Wind Speed	Indoor	
Equipment	200A Fused Disconnect Switch			From		
Lens	1X	Filter	None			
Rated Load (Amps)			Meas. (Amps)			% load
Degree Rise (C°)				Rise Over		
Amps "A"=	<input type="text"/> <input type="text"/> <input type="text"/>					
Amps "B"=						
Amps "C"=	<input type="text"/> <p>Enter comment</p> <p>No Bushing, Electrician says this is a safety violation</p>					
Obj Priority NETA Obj Pr. Ex-Based	<input type="text"/>	Subj. Priority Subj. Priority	<input type="text"/> 4	Avg Priority Avg Priority	<input type="text"/> 4	
Repair Chk Date			Rise Over			

CORRECTIVE ACTION
Possible deficiency; warrants investigation

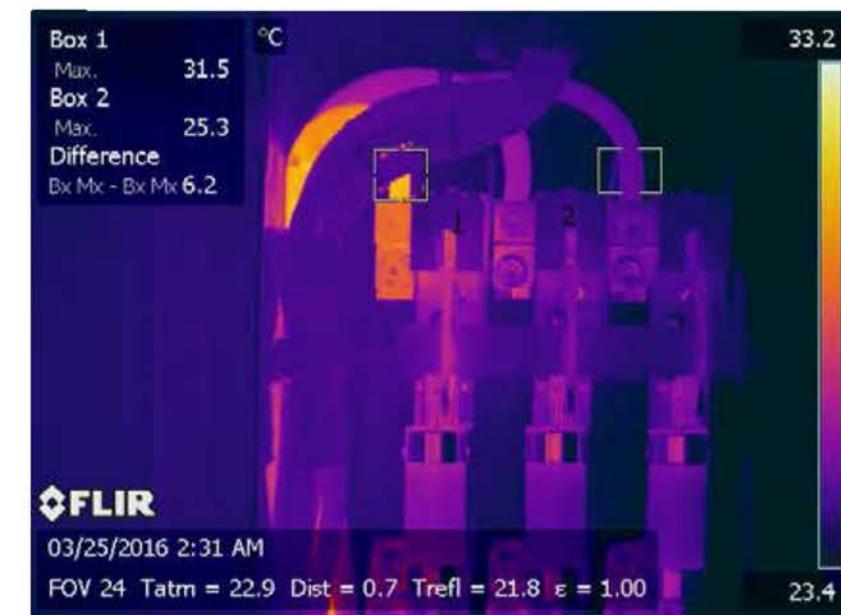


RESERVED FOR THERMOGRAM AFTER COMPONENT REPAIR

No.	57	Job Number			Equip #	AC1	
Location	12th Floor Electrical Closet				Wind Speed	Indoor	
Equipment	200A Fused Disconnect Switch				From		
Lens	1X	Filter	None				
Rated Load (Amps)	200	Meas. (Amps)	11	% load	5.50%		
Degree Rise (C°)		6.2	Rise Over	"C" Phase			
Amps "A"=	11	Enter comment					
Amps "B"=	11						
Amps "C"=	12	Possible loose connection on "A" phase					
Obj Priority NETA	3	Subj. Priority			Avg Priority	3	
Obj Pr. Ex-Based		Subj. Priority			Avg Priority	3	

Repair Chk Date Rise Over

CORRECTIVE ACTION
Indicates probable deficiency; repair as time permits



RESERVED FOR THERMOGRAM AFTER COMPONENT REPAIR

No.	83	Job Number			Equip #	PP1
Location	7th Floor Electrical Closet			Wind Speed	Indoor	
Equipment	Circuit Breaker Panel			From		
Lens	1X	Filter	None			
Rated Load (Amps)	30	Meas. (Amps)			% load	
Degree Rise (C°)				Rise Over		
Amps "A"=	<input type="text"/> <input type="text"/> <input type="text"/>					
Amps "B"=						
Amps "C"=	<input type="text"/> <input type="text"/> <input type="text"/>					
Obj Priority NETA	<input type="text"/>	Subj. Priority	2	Avg Priority	2	
Obj Pr. Ex-Based	<input type="text"/>	Subj. Priority	<input type="text"/>	Avg Priority	<input type="text"/>	
Repair Chk Date	<input type="text"/>		Rise Over	<input type="text"/>		

CORRECTIVE ACTION
 Monitor until corrective measures can be accomplished

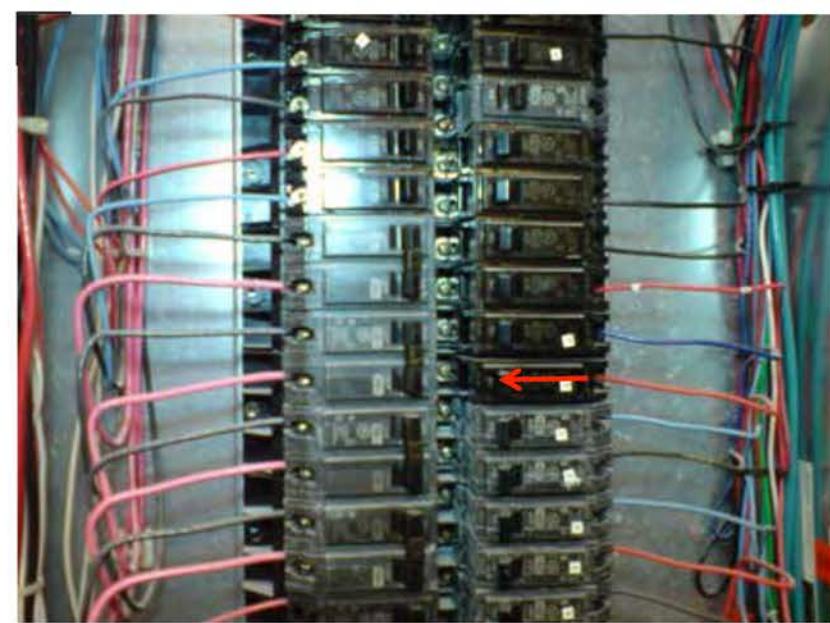


RESERVED FOR THERMOGRAM AFTER COMPONENT REPAIR

No.	87	Job Number			Equip #	PL-2
Location	6th Floor Electrical Closet			Wind Speed	Indoor	
Equipment	Circuit Breaker Panel			From		
Lens	1X	Filter	None			
Rated Load (Amps)	20	Meas. (Amps)	4.7	% load	23.50%	
Degree Rise (C°)	47.2	Rise Over	Ambient			
Amps "A"=						
Amps "B"=						
Amps "C"=	Possible issue with connection to backplane or internal breaker issue #20, recommend replace breaker.					
Obj Priority NETA Obj Pr. Ex-Based	1	Subj. Priority Subj. Priority			Avg Priority Avg Priority	1

Repair Chk Date Rise Over

CORRECTIVE ACTION
Major discrepancy; repair immediately

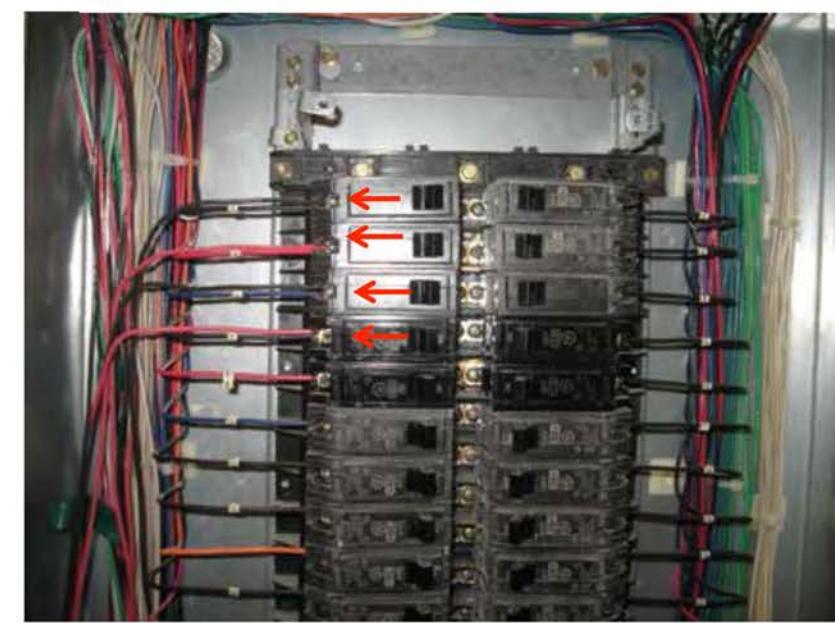


RESERVED FOR THERMOGRAM AFTER COMPONENT REPAIR

No.	90	Job Number			Equip #	A		
Location	5th Floor Electrical Closet			Wind Speed	Indoor			
Equipment	Circuit Breaker Panel			From				
Lens	1X	Filter	None					
Rated Load (Amps)			Meas. (Amps)			% load		
Degree Rise (C°)			Rise Over					
Amps "A"=	Enter comment Two wires on one breaker - Electrician states this is a code violation							
Amps "B"=								
Amps "C"=								
Obj Priority NETA	<input type="checkbox"/>	Subj. Priority	4	Avg Priority	4			
Obj Pr. Ex-Based	<input type="checkbox"/>	Subj. Priority		Avg Priority				

Repair Chk Date Rise Over

CORRECTIVE ACTION
Possible deficiency; warrants investigation



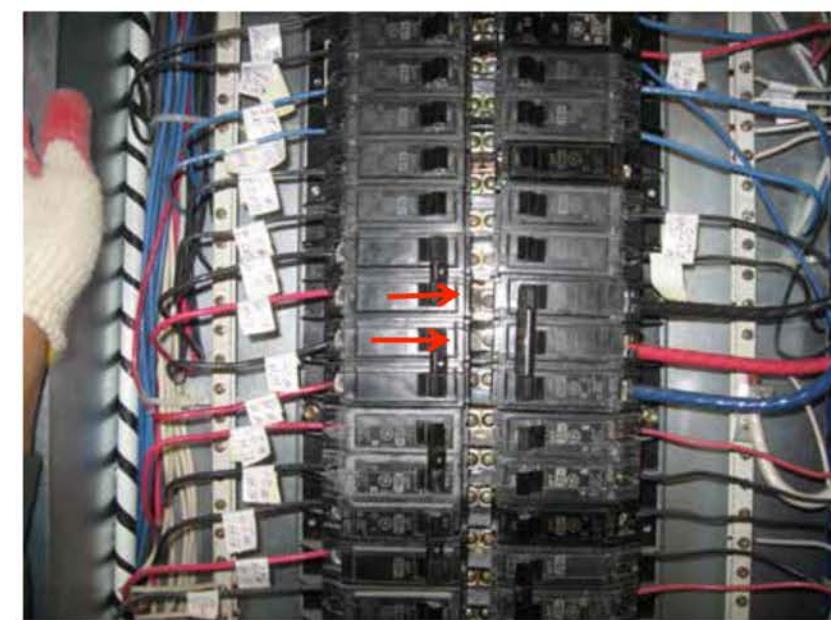
RESERVED FOR THERMOGRAM AFTER COMPONENT REPAIR

No.	96	Job Number			Equip #	A		
Location	2nd Floor Electrical Closet			Wind Speed	Indoor			
Equipment	Circuit Breaker Panel			From				
Lens	1X	Filter	None					
Rated Load (Amps)			Meas. (Amps)			% load		
Degree Rise (C°)				Rise Over				
Amps "A"=	<input type="text"/>							
Amps "B"=	<input type="text"/>							
Amps "C"=	<input type="text"/>							
Enter comment	<input type="text"/>							
Burnt backplane screws on #15 and #17, not hot at time of infrared inspection, recommend replace breaker	<input type="text"/>							

Obj Priority NETA	<input type="text"/>	Subj. Priority	<input type="text" value="3"/>	Avg Priority	<input type="text" value="3"/>
Obj Pr. Ex-Based	<input type="text"/>	Subj. Priority	<input type="text"/>	Avg Priority	<input type="text"/>

Repair Chk Date	<input type="text"/>	Rise Over	<input type="text"/>
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CORRECTIVE ACTION
Indicates probable deficiency; repair as time permits



RESERVED FOR THERMOGRAM AFTER COMPONENT REPAIR