Infrared Thermal Inspection

Electrical Distribution Equipment



Inspection Dates:	June 28th & June 29th, 2022
Date of Report:	July 7th, 2022
Inspection Type:	IR Inspection of Electrical Distribution
Client Information:	Confidential client
Project Location:	Sample Multifamily Property Location withheld
Thermographer:	Confidential
Certification Number:	Withheld
Training Level:	
Assisting at Inspection:	Licensed electrician (name withheld) Property maintenance personnel
Equipment Utilized:	FLIR E40bx with standard lens
Items/Equipment Inspected:	Building A Interior Units and Exerior Electrical Distribution Systems

Objective Repair Priority Rating

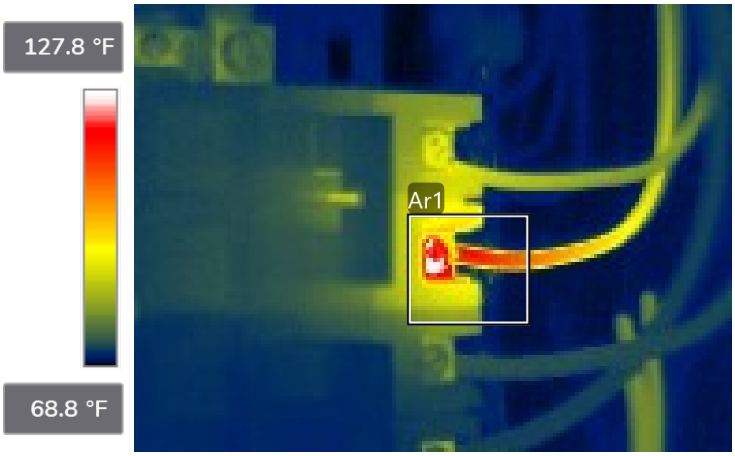
Each Thermogram is given an Objective Repair Priority Rating (where applicable) which is based on temperature rise criteria as specified by NFPA, NETA and the Infraspection Institute Standard for Infrared Inspection of Electrical Systems and Rotating Equipment. This Objective Repair Priority Rating is intended to help you determine how quickly you need to investigate and correct the potential concern. Overheating connections, conductors or such components will never get better. In fact, the temperature and rate of deterioration will increase with time. No one can predict when failure will occur. As a result, we strongly suggest that you use the Objective Repair Priority Ratings as a guide and that you investigate or take appropriate corrective measures as soon as possible.

Objective Repair Priority Guide	
Priorty 1	Major Concern Item. Corrective Measures Required Immediately
Priorty 2	Corrective Measures Required As Soon As Possible
Priorty 3	Corrective Measures Needed As Time Permitts
Priorty 4	Corrective Measures/Investigation At Next Maintenance Period

Scope of the Inspection

Only one building building A was chosen) and all available interior apartment units within the building. There were 4 four apartment units out of the 20 apartments not accessible. Infrared Inspection of all electrical service panels inside the interior apartment units. Perform a thermal inspection of all potential electrical points of interest which we deem a potential fire risk. Perform infrared inspection of all accessible electrical components, as well as, the walls and ceilings. Perform infrared inspection of exterior electrical distribution equipment such as main service conductors, meter bases, main service disconnects, and house panels.

6/28/2022 4:26:05 AM



IR_1633.jpg



49030062

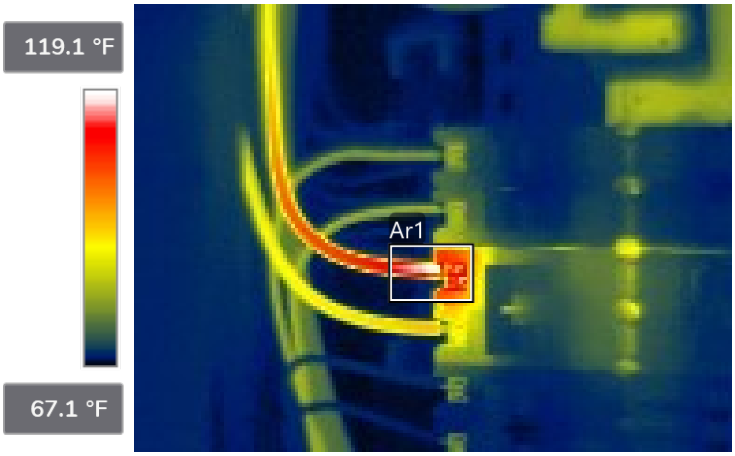
File information	
File name	IR_1633.jpg
Maximum temp.	128.0 °F
Minimum temp.	68.7 °F

Measurements	
Ar1	
Max	128.0 °F
Avg	87.4 °F
Min	69.3 °F

Note		
Note	Apartment A Service Panel.	Electrical

Comments:Priority 1. Poor wire connection to top right 30A breaker terminal. 73 F Delta-T. Recommend immediate correction by a licensed electrician.

6/28/2022 4:53:07 AM



IR_1651.jpg



49030062

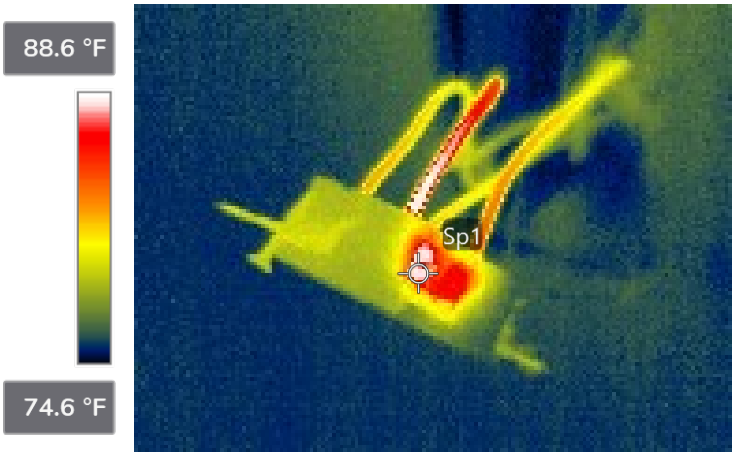
File information	
File name	IR_1651.jpg
Maximum temp.	120.7 °F
Minimum temp.	67.1 °F

Measurements	
Ar1	
Max	120.7 °F
Avg	89.5 °F
Min	67.6 °F

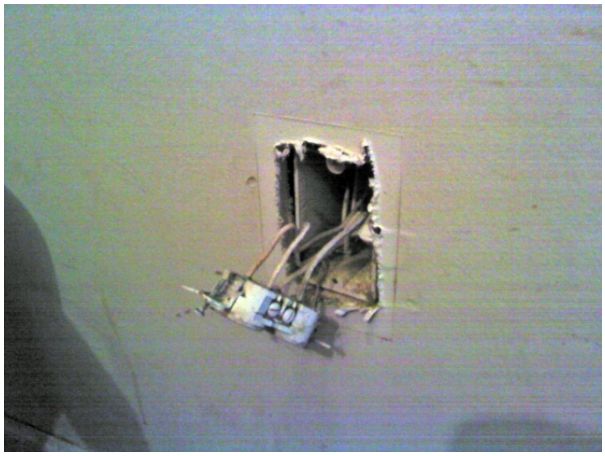
Note		
Note	Apartment B service panel.	Electrical

Comments: Priority 2. Poor wire connection at left 25A breaker terminal. 26.8 F Delta-T. This is a 2 pole 240V breaker and may create a power imbalence. Recommend immediate correction by a licensed electrician.

6/28/2022 5:09:06 AM



IR_1693.jpg



49030062

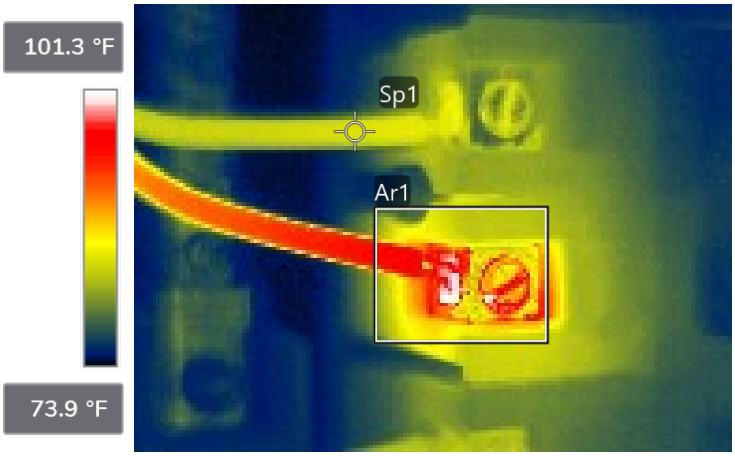
File information	
File name	IR_1693.jpg
Maximum temp.	89.0 °F
Minimum temp.	74.4 °F

Measurements	
Sp1	88.4 °F

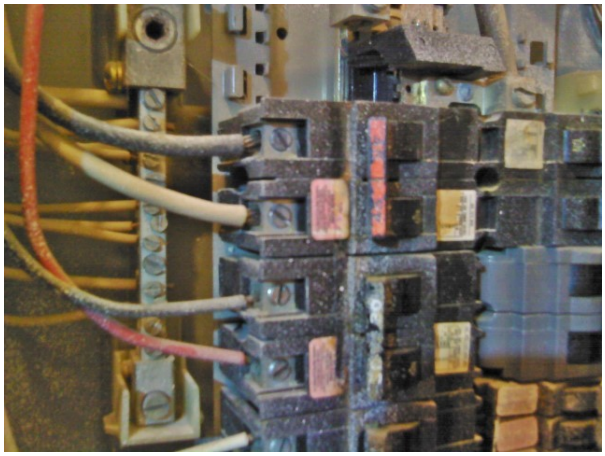
Note	
Note	Apartment C View of receptacle device.

Comments: Priority 1. This anomaly indicates a poor electrical connection due to back-stabbing of wiring into the receptacle device terminal. This can result in overheating, which may be associated with potential fire risks. Recommend immediate correction by a licensed electriican.

6/28/2022 6:14:16 AM



IR_1705.jpg



49030062

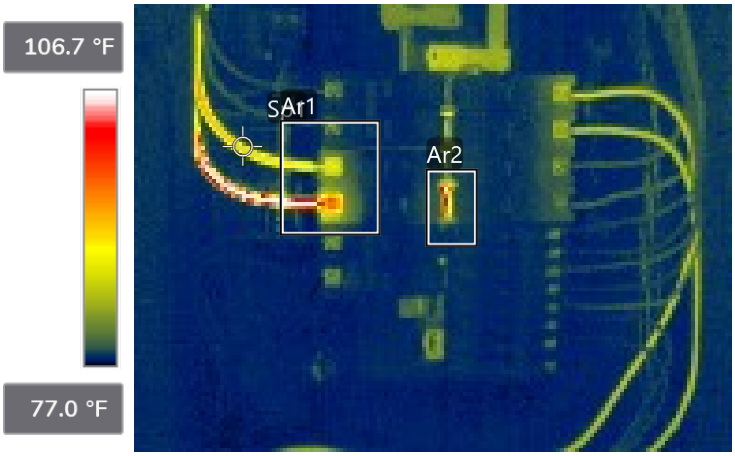
File information	
File name	IR_1705.jpg
Maximum temp.	101.5 °F
Minimum temp.	73.8 °F

Measurements	
Sp1	84.9 °F
Ar1	
Max	101.5 °F
Avg	88.1 °F
Min	77.2 °F

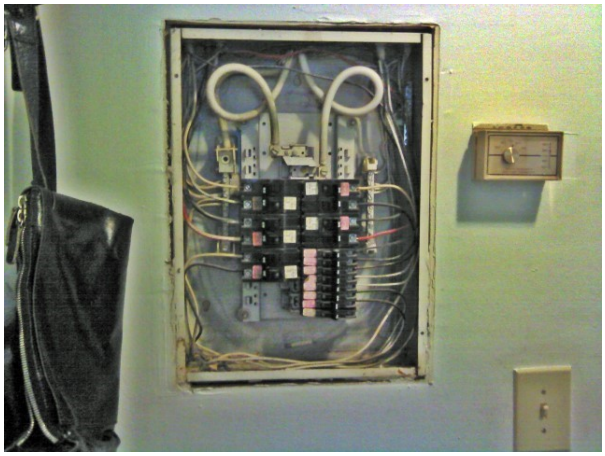
Note		
Note	Apartment C service panel.	Electrical

Comments: Priority 2. There is a 16.6 F Delta-T between conductors that feed the 45A Breaker. Additionally, poor wire connection at breaker terminal. Recommend immediate corrections by a licensed electriican.

6/28/2022 6:49:29 AM



IR_1715.jpg



49030062

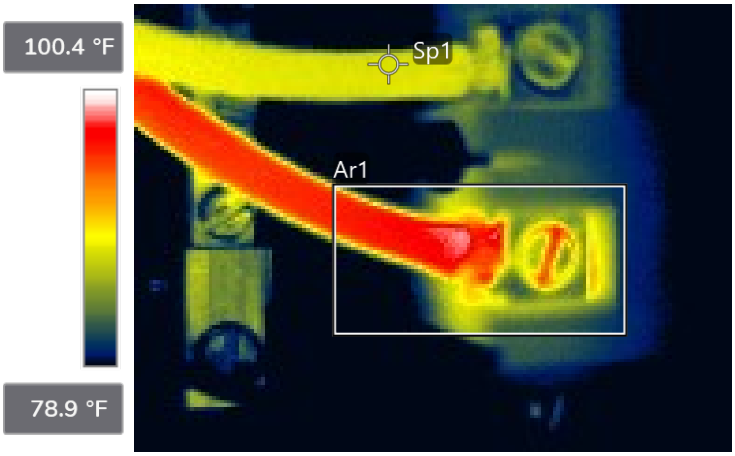
File information	
File name	IR_1715.jpg
Maximum temp.	107.6 °F
Minimum temp.	76.9 °F

Measurements	
Sp1	91.5 °F
Ar1	
Max	107.6 °F
Avg	81.0 °F
Min	77.2 °F
Ar2	
Max	107.2 °F
Avg	80.0 °F
Min	77.7 °F

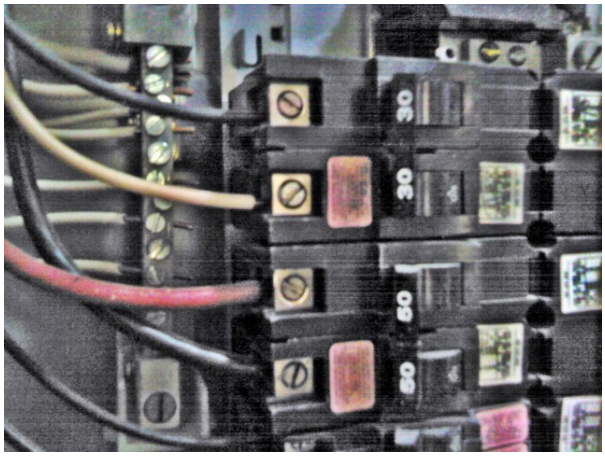
Note		
Note	Apartment D service panel.	Electrical

Comments: Priority 2. Apparent faulty connection between the left 50A breaker and panel buss. 16.1 F Delta-T. Recommend immediate correction by a licensed electrician.

6/28/2022 8:05:53 AM



IR_1731.jpg



49030062

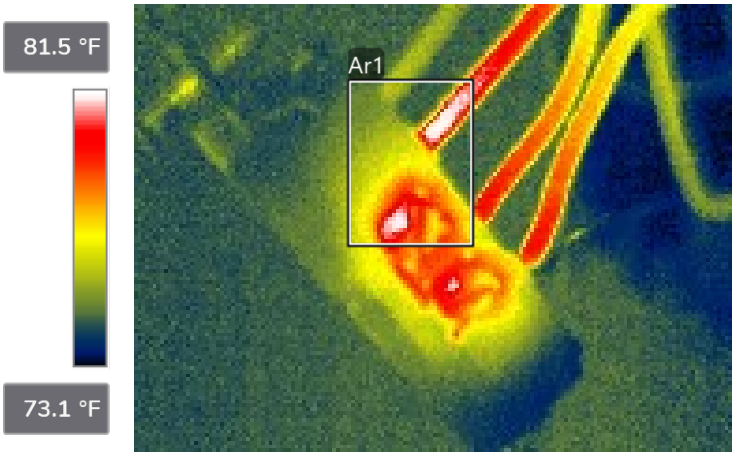
File information	
File name	IR_1731.jpg
Maximum temp.	98.9 °F
Minimum temp.	75.9 °F

Measurements	
Sp1	88.0 °F
Ar1	
Max	98.9 °F
Avg	85.9 °F
Min	76.0 °F

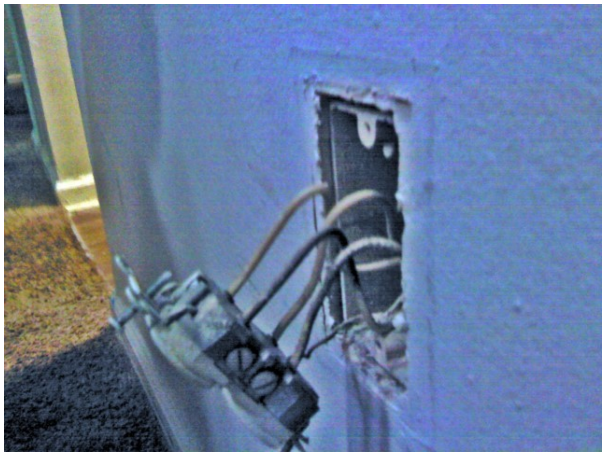
Note		
Note	Apartment E service panel.	Electrical

Comments: Priority 3. Poor wire connection at top left 50A breaker terminal. 10.9 F Delta-T between conductor wires that feed the 50A breaker. Recommend correction by a licensed electrician.

6/28/2022 8:16:25 AM



IR_1739.jpg



49030062

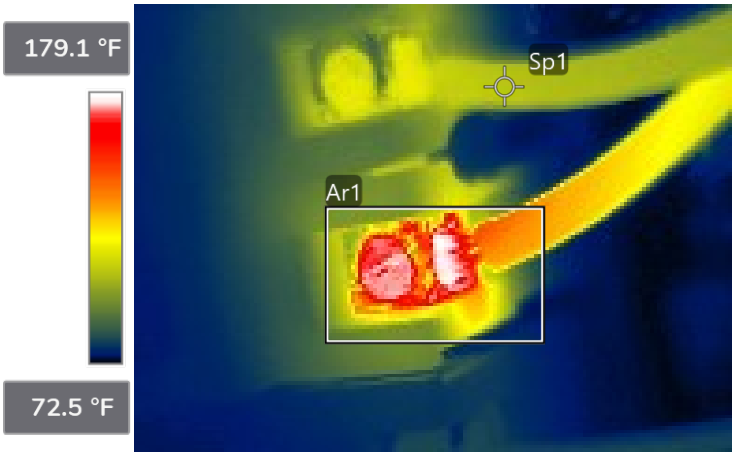
File information	
File name	IR_1739.jpg
Maximum temp.	81.8 °F
Minimum temp.	72.9 °F

Measurements	
Ar1	
Max	81.8 °F
Avg	77.0 °F
Min	74.3 °F

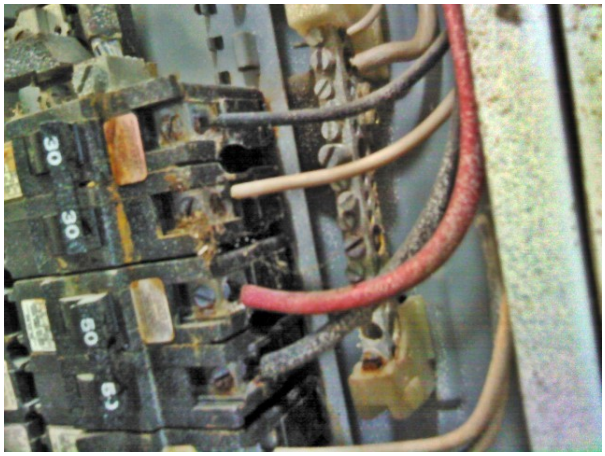
Note	
Note	Apartment F View of receptacle device.

Comments:Priority 1. This anomaly indicates a poor electrical connection due to back-stabbing of wiring into the receptacle device terminal. This can result in overheating, which may be associated with potential fire risks. Additionally, further evaluation as to why the grounded conductor is hot. Recommend immediate corrections by a licensed electrician.

6/28/2022 7:51:50 AM



IR_1751.jpg



49030062

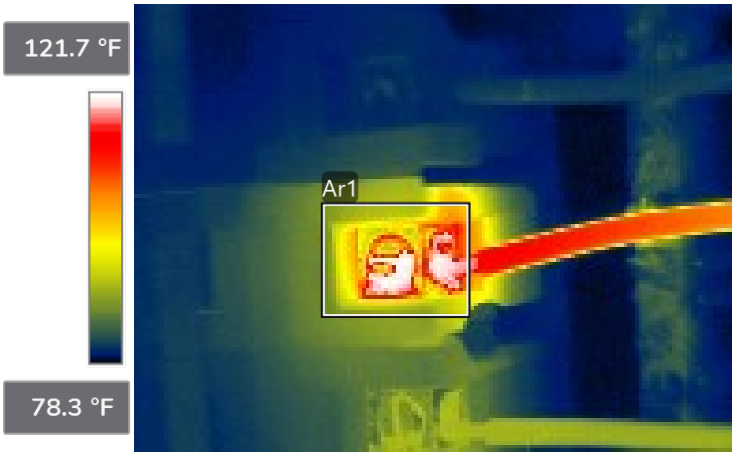
File information	
File name	IR_1751.jpg
Maximum temp.	179.4 °F
Minimum temp.	72.6 °F

Measurements	
Dt1	
Ar1.Max-Sp1	65.3 °F
Sp1	114.1 °F
Ar1	
Max	179.4 °F
Avg	128.8 °F
Min	74.7 °F

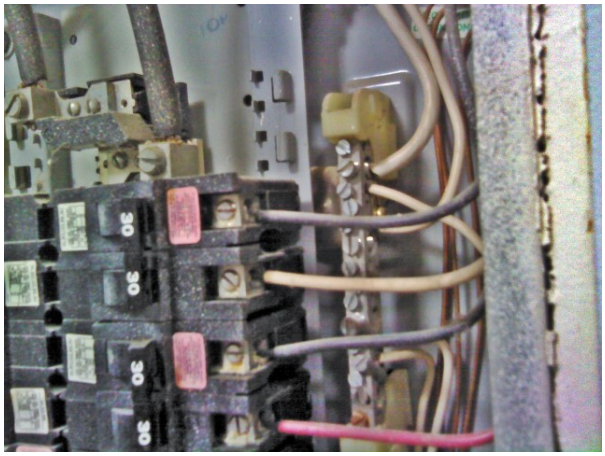
Note		
Note	Apartment G service panel.	Electrical

Comments: Priority 1. Poor wire connection at top right 50A breaker terminal. 65.3 F Delta-T between wires that feed the breaker. Recommend immediate correction by a licensed electrician.

6/28/2022 8:06:12 AM



IR_1761.jpg



49030062

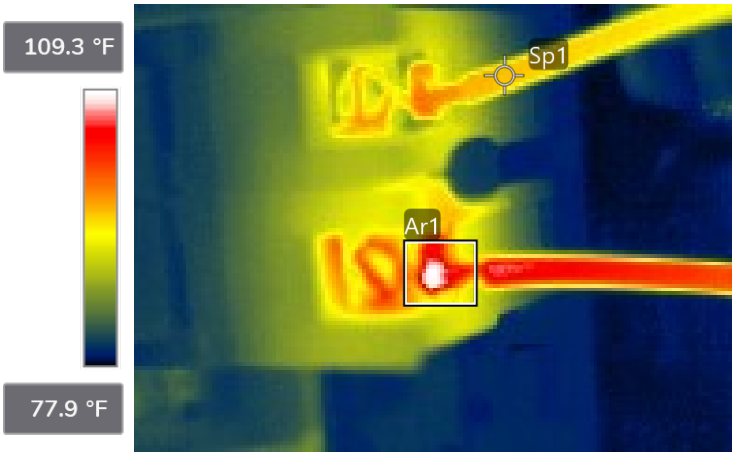
File information	
File name	IR_1761.jpg
Maximum temp.	122.1 °F
Minimum temp.	78.3 °F

Measurements	
Ar1	
Max	122.1 °F
Avg	101.8 °F
Min	85.2 °F

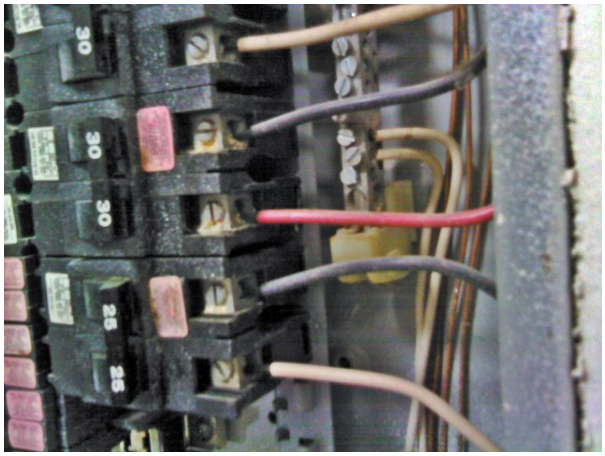
Note		
Note	Apartment H service panel.	Electrical

Comments: Priority 1. Poor wire connection at 2nd top right 30A breaker terminal. 36.9 Delta area measurement. Recommend immediate correction by a licensed electrician.

6/28/2022 9:06:34 AM



IR_1763.jpg



49030062

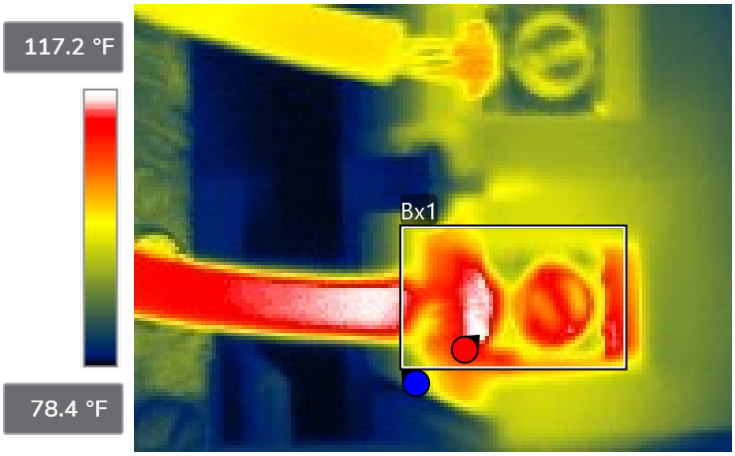
File information	
File name	IR_1763.jpg
Maximum temp.	110.5 °F
Minimum temp.	77.8 °F

Measurements	
Sp1	95.8 °F
Ar1	
Max	110.5 °F
Avg	98.9 °F
Min	91.3 °F
Dt1	
Ar1.Max-Sp1	14.7 °F

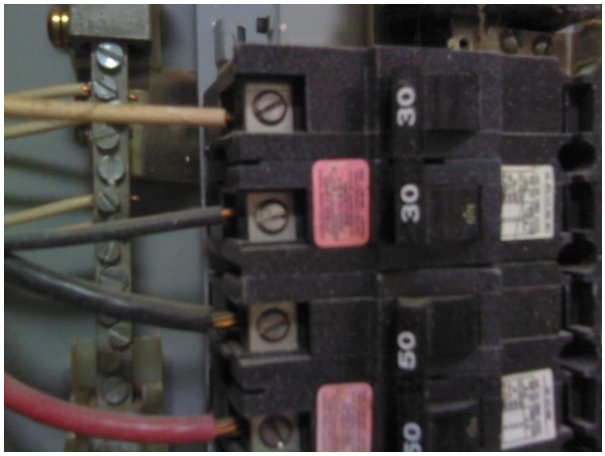
Note		
Note	Apartment H service panel.	Electrical

Comments: Priority 2. Poor wire connection at right side 25A breaker terminal. 14.7 Delta-T between wires that feed the 25A breaker. Recommend correction by a licensed electrician.

6/28/2022 9:07:48 AM



IR_1765.jpg



49030062

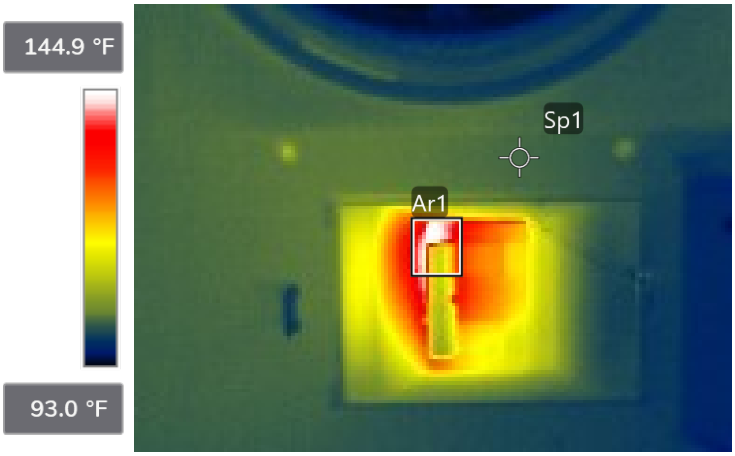
File information	
File name	IR_1765.jpg
Maximum temp.	119.1 °F
Minimum temp.	78.1 °F

Measurements	
Bx1	
Max	119.1 °F
Avg	104.2 °F
Min	88.2 °F

Note		
Note	Apartment H service panel.	Electrical

Comments: Priority 2. Poor wire connection at left side top left 50A breaker terminal. Delta-T 30.9 at area measurement. Recommend immediate correction by a licensed electrician.

6/28/2022 9:20:45 AM



IR_1773.jpg



49030062

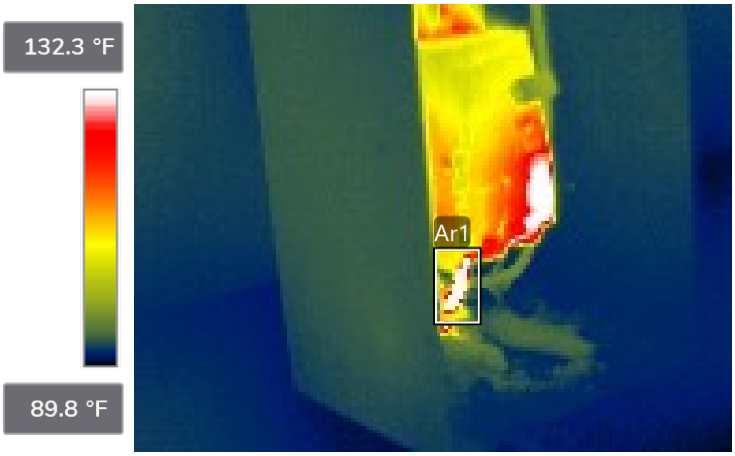
File information	
File name	IR_1773.jpg
Maximum temp.	149.7 °F
Minimum temp.	92.7 °F

Measurements	
Sp1	102.0 °F
Ar1	
Max	149.7 °F
Avg	131.9 °F
Min	112.3 °F

Note	
Note	Building A Exterior meter & main disconnect bank.

Comments: Priority 1. Indirect IR measurement at meter bank of far left bottom main disconnect. Temperature significantly higher than other similar components. Recommend immediate evaluation for correction by a licensed electrician.

6/28/2022 9:28:23 AM



IR_1783.jpg



49030062

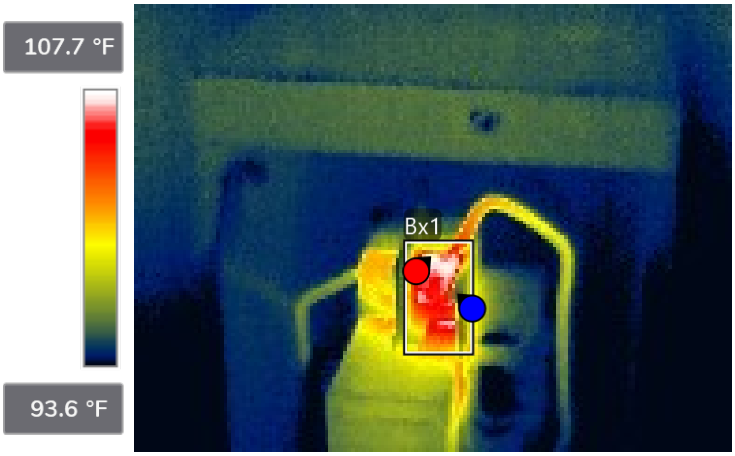
File information	
File name	IR_1783.jpg
Maximum temp.	176.5 °F
Minimum temp.	89.7 °F

Measurements	
Ar1	
Max	176.5 °F
Avg	112.6 °F
Min	92.4 °F

Note	
Note	Building A Exterior condenser unit service disconnect breaker.

Comments: Priority 1. Significant temperature rise. Appears associated with faulty service disconnect breaker. Recommend immediate corrections by a licensed electrician.

6/28/2022 10:18:15 AM



IR_1813.jpg



49030062

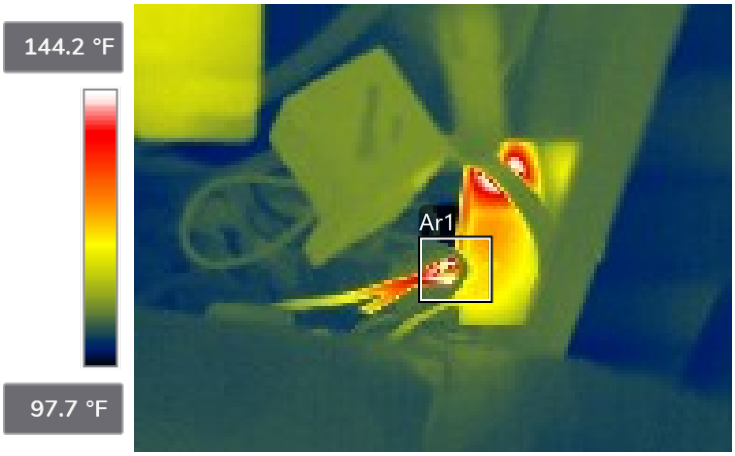
File information	
File name	IR_1813.jpg
Maximum temp.	107.7 °F
Minimum temp.	91.3 °F

Measurements	
Bx1	
Max	107.7 °F
Min	95.3 °F

Note	
Note	Building B Exterior condenser unit service disconnect breaker.

Comments: Priorty 1. Appears to be a faulty connection between the service disconnect breaker and main buss, or a poor wire connection. Recommend immediate correction by a licensed electrician.

6/28/2022 10:58:33 AM



IR_1839.jpg



49030062

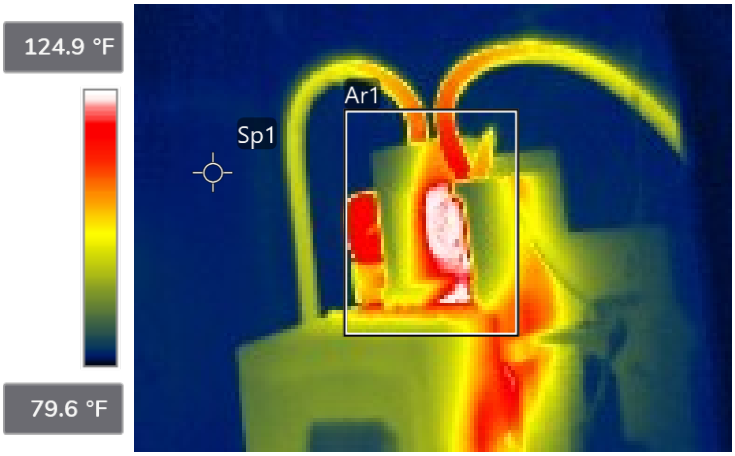
File information	
File name	IR_1839.jpg
Maximum temp.	148.5 °F
Minimum temp.	97.5 °F

Measurements	
Ar1	
Max	148.5 °F
Avg	117.3 °F
Min	98.2 °F

Note		
Note	Building C panel.	Meter bank, house

Comments: Priority 1. Significant temperature rise at undetermined component/device in bottom right corner of house service panel. Recommend immediate corrections by a licensed electrician.

6/29/2022 3:49:17 AM



IR_1861.jpg



49030062

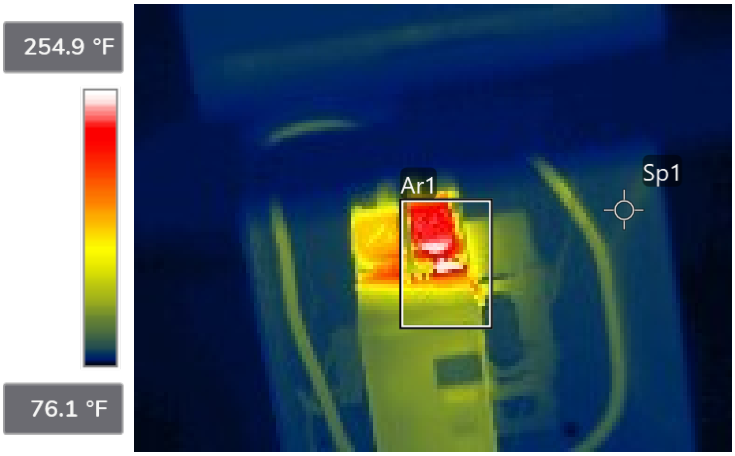
File information	
File name	IR_1861.jpg
Maximum temp.	130.7 °F
Minimum temp.	79.8 °F

Measurements	
Sp1	81.1 °F
Ar1	
Max	130.7 °F
Avg	101.6 °F
Min	81.1 °F

Note	
Note	Building D Exterior condenser unit service disconnect.

Comments: Priority 1. Significant temperature rise. Appears to be a faulty connection between the service disconnect breaker and main buss. 49.6 F Delta-T. Recommend immediate correction by a licensed electrician.

6/29/2022 4:20:37 AM



IR_1881.jpg



49030062

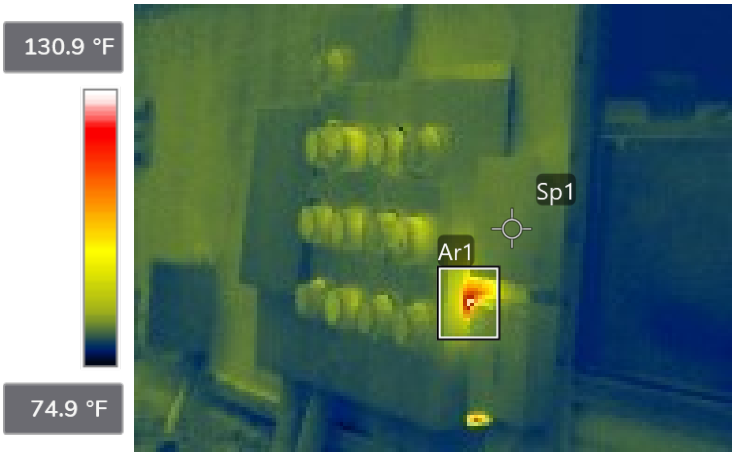
File information	
File name	IR_1881.jpg
Maximum temp.	285.4 °F
Minimum temp.	75.7 °F

Measurements	
Sp1	90.6 °F
Ar1	
Max	*285.4 °F
Avg	*164.5 °F
Min	89.2 °F

Note	
Note	Building D Exterior condenser unit service disconnect.

Comments: Priority 1. Significant temperature rise. Appears to be a faulty connection between the service disconnect breaker and main buss. 196 F Delta-T. Recommend immediate correction by a licensed electrician.

6/29/2022 4:51:00 AM



IR_1905.jpg



49030062

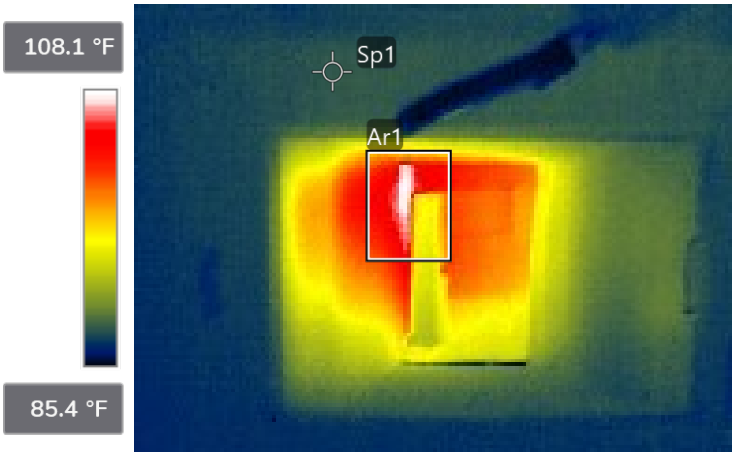
File information	
File name	IR_1905.jpg
Maximum temp.	131.8 °F
Minimum temp.	76.0 °F

Measurements	
Sp1	83.0 °F
Ar1	
Max	131.8 °F
Avg	91.0 °F
Min	83.0 °F

Note		
Note	Building E	Exterior meter bank.

Comments: Priority 1. Indirect IR measurement at meter bank far right edge/side. 48.8 Delta-T. Temperature significantly higher than other similar components. Recommend immediate evaluation for correction by a licensed electrician.

6/29/2022 6:24:32 AM



IR_1969.jpg



49030062

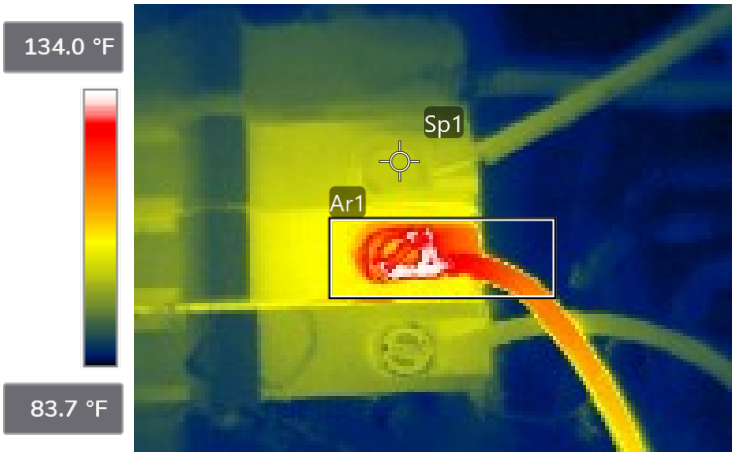
File information	
File name	IR_1969.jpg
Maximum temp.	109.2 °F
Minimum temp.	85.2 °F

Measurements	
Sp1	88.5 °F
Ar1	
Max	109.2 °F
Avg	101.5 °F
Min	94.7 °F

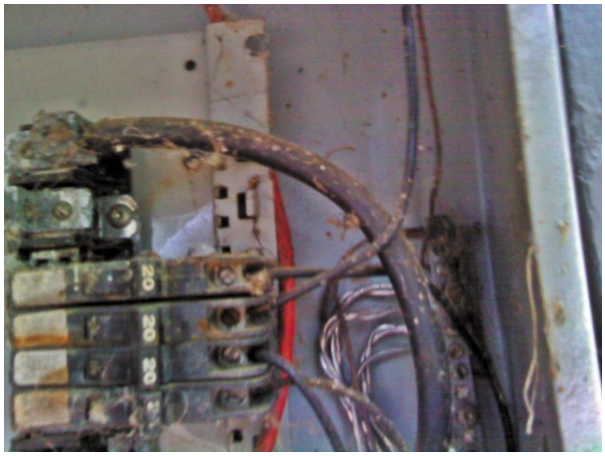
Note		
Note	Building F	Exterior meter bank.

Comments: Priority 1. Indirect measurement at meter bank bottom main disconnect breaker that feeds the house panel. 20.7 F Delta-T. Higher temperature than other similar components. Recommend immediate evaluation for corrections by a licensed electrician.

6/29/2022 6:49:51 AM



IR_1987.jpg



49030062

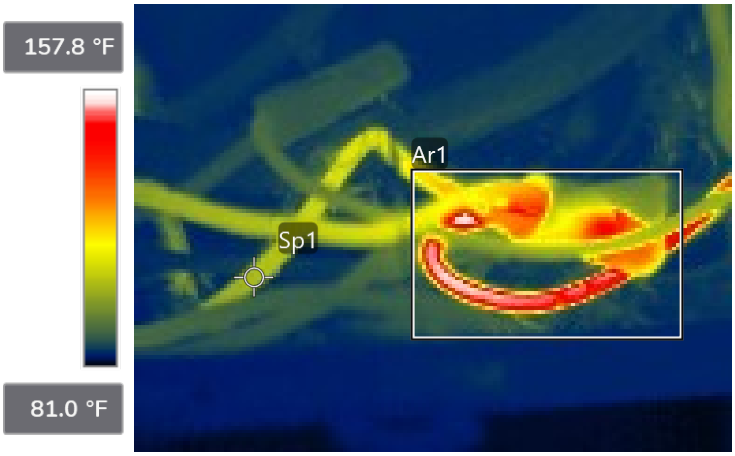
File information	
File name	IR_1987.jpg
Maximum temp.	135.4 °F
Minimum temp.	83.8 °F

Measurements	
Sp1	101.8 °F
Ar1	
Max	135.4 °F
Avg	109.6 °F
Min	84.9 °F

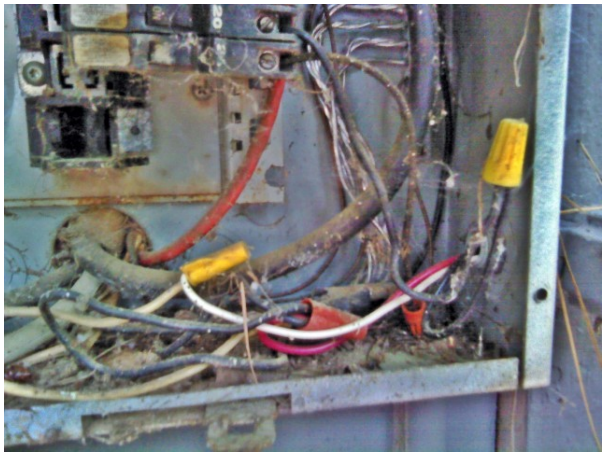
Note	
Note	Building G Exterior meter bank house panel.

Comments: Priority 1. Poor wire connection at bottom right 3rd from top 20A breaker. 33.6F Delta-T between wires that feed the 20A breaker. Recommend immediate correction by a licensed electrician.

6/29/2022 6:50:35 AM



IR_1989.jpg



49030062

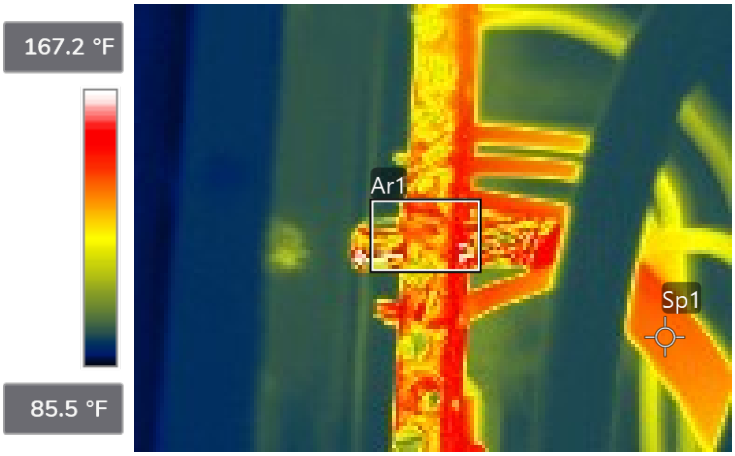
File information	
File name	IR_1989.jpg
Maximum temp.	158.3 °F
Minimum temp.	81.0 °F

Measurements	
Sp1	105.9 °F
Ar1	
Max	158.3 °F
Avg	106.9 °F
Min	84.2 °F

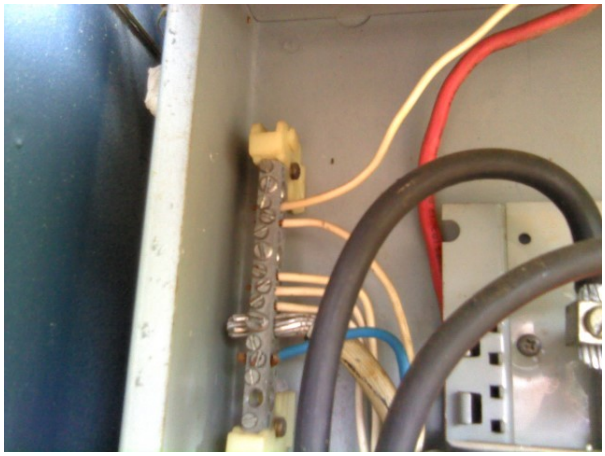
Note	
Note	Building G Exterior meter bank house panel.

Comments: Priority 1. Signficant temperature rise. Poor wire connection inside wire nut at bottom right corner of the house panel. 52.4 Delta-T. Recommend immediate correction by a licensed electrician.

6/29/2022 7:27:24 AM



IR_2021.jpg



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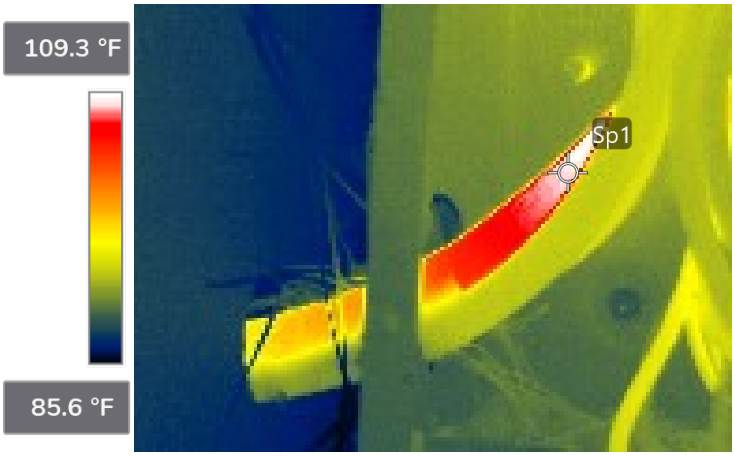
File information	
File name	IR_2021.jpg
Maximum temp.	176.4 °F
Minimum temp.	86.6 °F

Measurements	
Sp1	140.1 °F
Ar1	
Max	176.4 °F
Avg	135.6 °F
Min	96.5 °F

Note	
Note	Building H Exterior meter bank house panel.

Comments: Priority 1. Significant temperature rise at large neutral conductor and neutral bus bar. Area max temperature 176.4 F. Recommend immediate correction by a licensed electrician.

6/29/2022 6:27:55 AM



IR_2025.jpg



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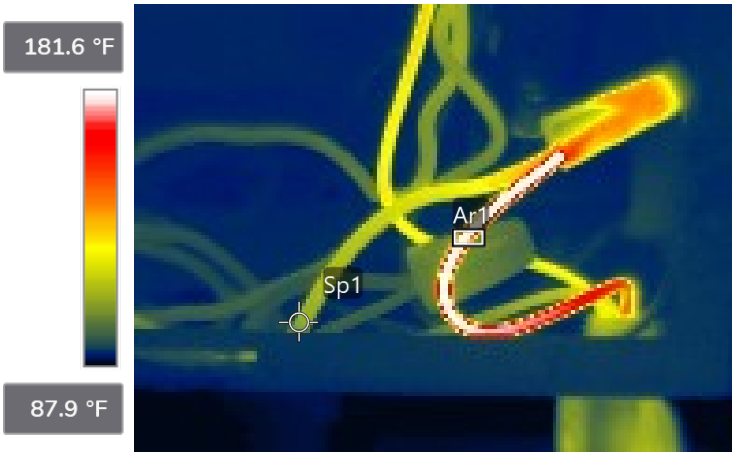
File information	
File name	IR_2025.jpg
Maximum temp.	109.9 °F
Minimum temp.	85.3 °F

Measurements	
Sp1	108.4 °F

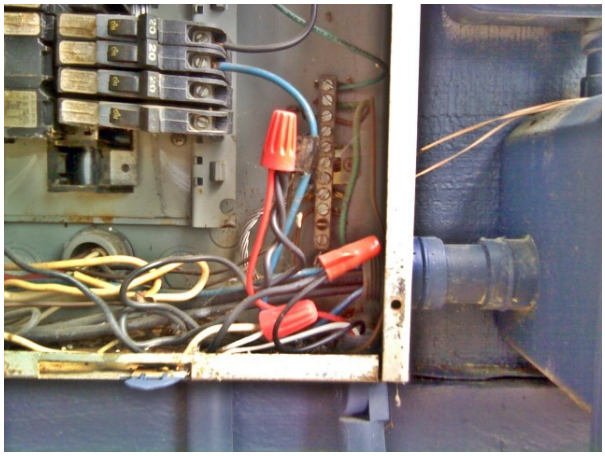
Note	
Note	Building H Exterior meter bank. House panel main conductor wire feed.

Comments: Priority 1. Significant temperature rise at house panel main service conductor wire feed. Recommend immediate evaluation for correction by a licensed electrician.

6/29/2022 7:28:13 AM



IR_2027.jpg



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File information	
File name	IR_2027.jpg
Maximum temp.	185.4 °F
Minimum temp.	85.9 °F

Measurements	
Sp1	113.9 °F
Ar1	
Max	185.4 °F
Avg	145.8 °F
Min	95.4 °F

Note	
Note	Building H Exterior meter bank house panel.

Comments: Priority 1. Significant temperature rise. Poor wire connection inside wire nut at bottom right corner of the house panel. 71.5 F Delta T. Recommend immediate correction by a licensed electrician.