HI-SPEED INDUSTRIAL SERVICE
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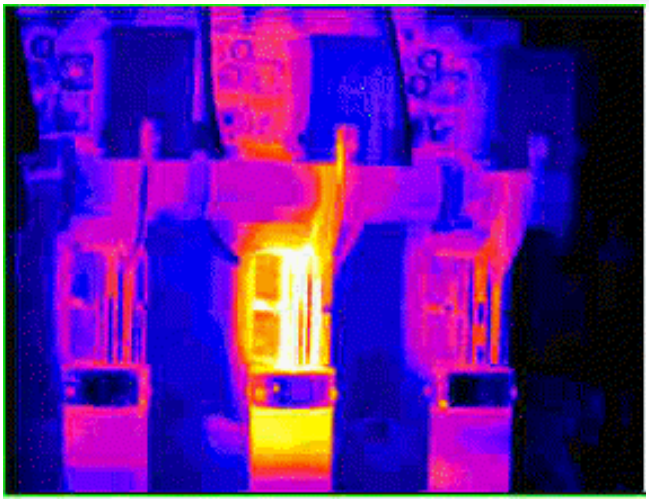


# Harlow's Casino and Resort
# 2019 IR Survey Report

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ITC Certified Level I Infrared Thermographer
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| | |
|---|---|
| **Job Number** | 140437 |
| **Survey Date** | 8/21/19 |
| **Report Date** | 8/27/19 |

# 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 four-step defect rating system:

**CLASS I** - A defect is present, but the likely effect on component reliability is not clear. No immidiate action is recommended other than continued monitoring.

**CLASS II** - 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 III** - 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 IV** - A defect or defects are present that make continued component reliability unpredictable, and likelihood of secondary damage is high. Consideration should begiven to an unscheduled shutdown to correct.



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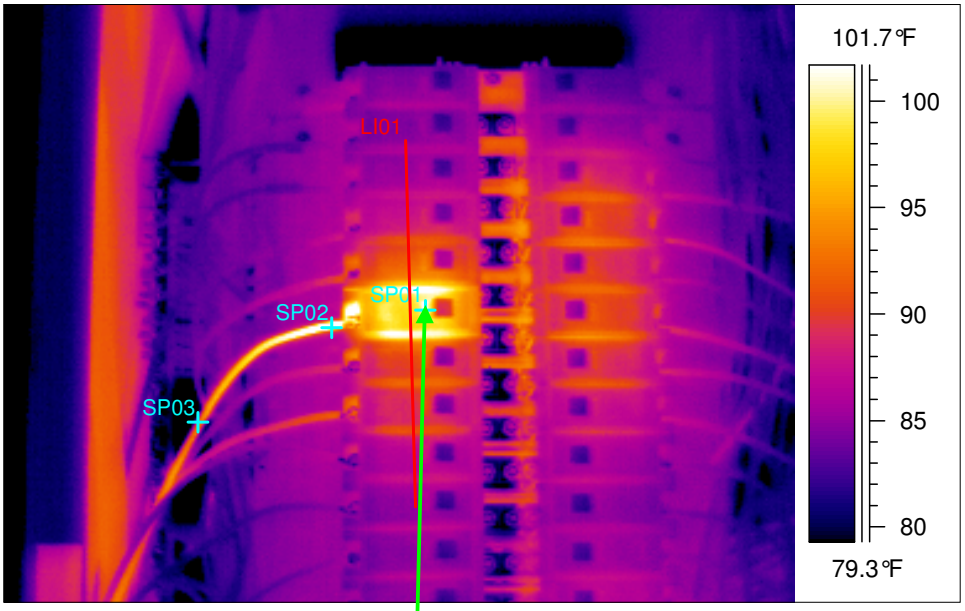
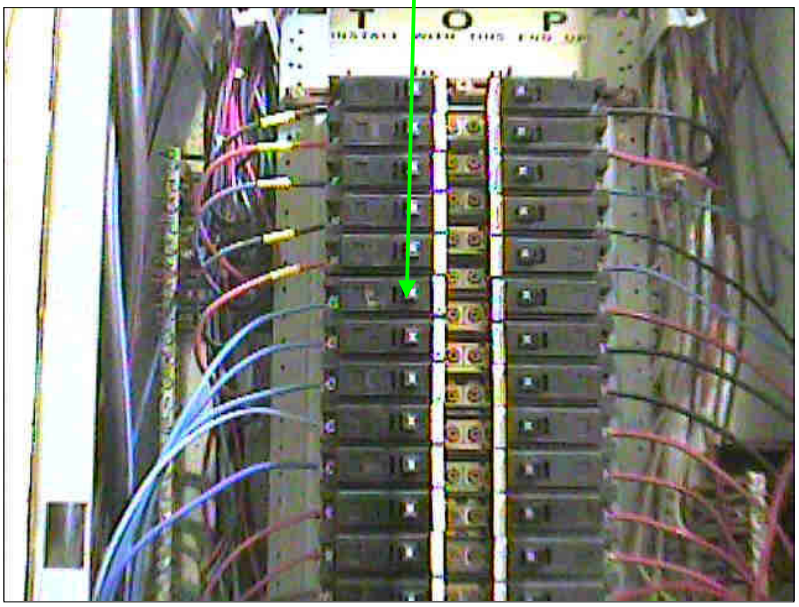
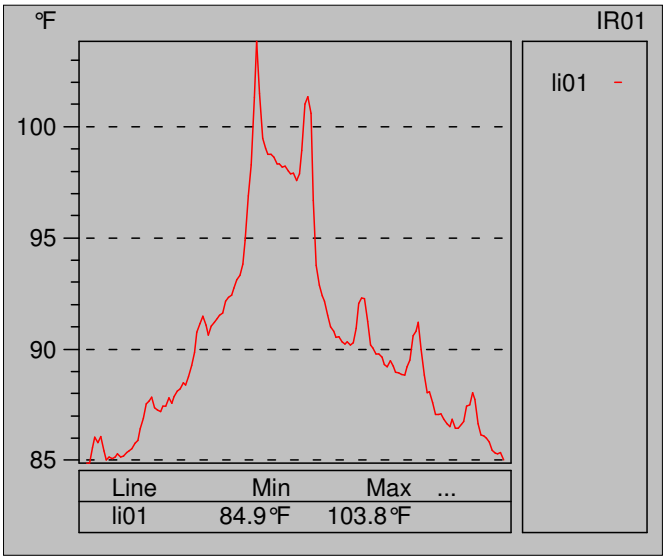
# QualiTest IR Radiometric Survey Report

| Component | Equipment/Bucket ID | Plant/Area | Date |
|---|---|---|---|
| Circuit 11 | RP-1 | Stage Bar Panels | 8-21-19 |




| Label | Value |
|---|---|
| IR : max | 106.6°F |
| IR : min | 72.9°F |
| SP01 | 102.7°F |
| SP02 | 105.9°F |
| SP03 | 90.4°F |
| LI01 : max | 103.8°F |
| LI01 : min | 84.9°F |




| | |
|---|---|
| **Fault** | Breaker issue |
| **Defect Rating** | **CLASS I** |

**Recommendation**

Breaker appears to be heavily loaded or has possible internal issue that is causing heat. Lead connection checked to be tight. Ensure breaker isn't under excessive load. Breaker may need to be replaced.

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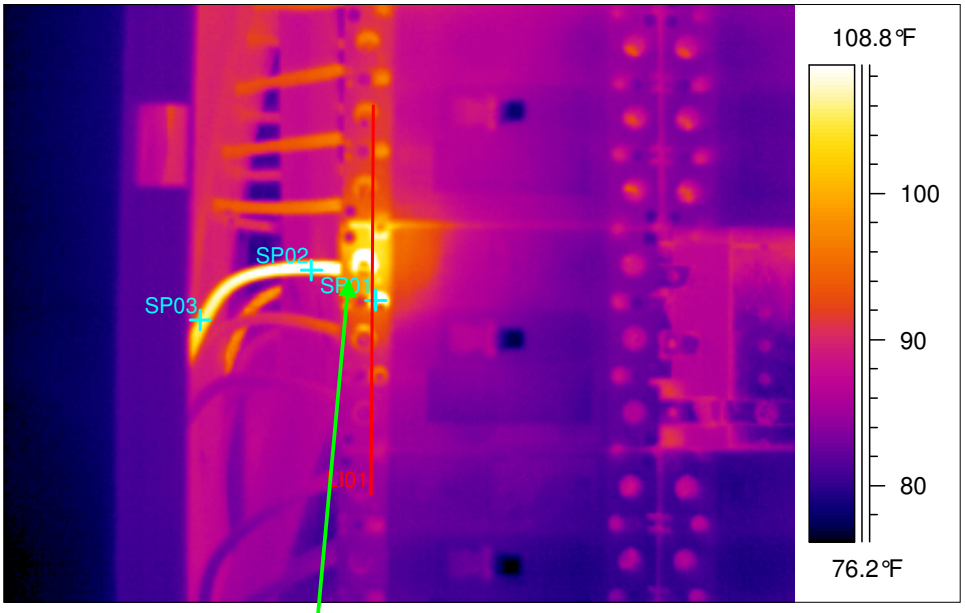
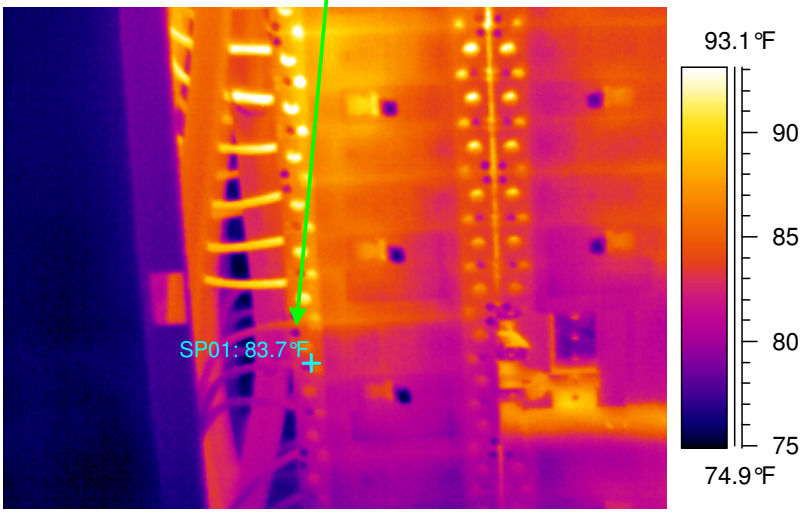
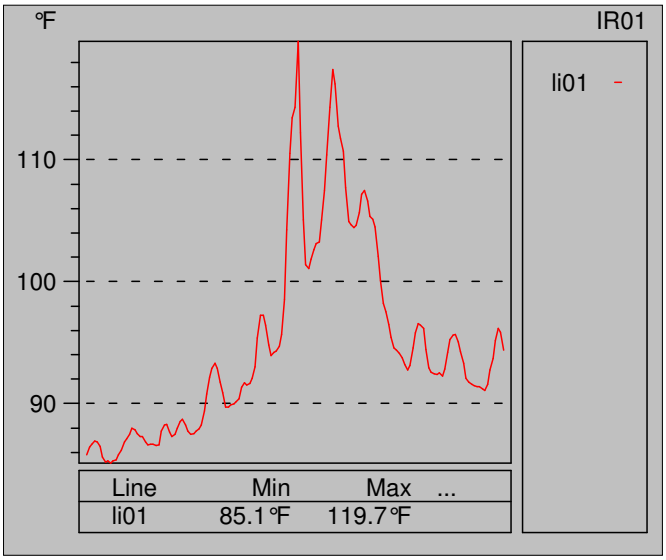
# QualiTest IR Radiometric Survey Report

| Component | Equipment/Bucket ID | Plant/Area | Date |
|---|---|---|---|
| Loose connection | Water Well Pump/HP-1 | Emergency Panel Room (Bridge) | 8-21-19 |




| Label | Value |
|---|---|
| IR : max | 128.8°F |
| IR : min | 75.7°F |
| SP01 | 127.0°F |
| SP02 | 112.9°F |
| SP03 | 105.6°F |
| LI01 : max | 119.7°F |
| LI01 : min | 85.1°F |




| | |
|---|---|
| **Fault** | Loose connection |
| **Defect Rating** | **CLASS II** |

**Recommendation**

IR image showed a possible loose connection. Connections were checked and found to be loose. Gephart safely tightened connection with proper PPE. Panel was rechecked and found to be OK after tightening connection. See 2nd image.

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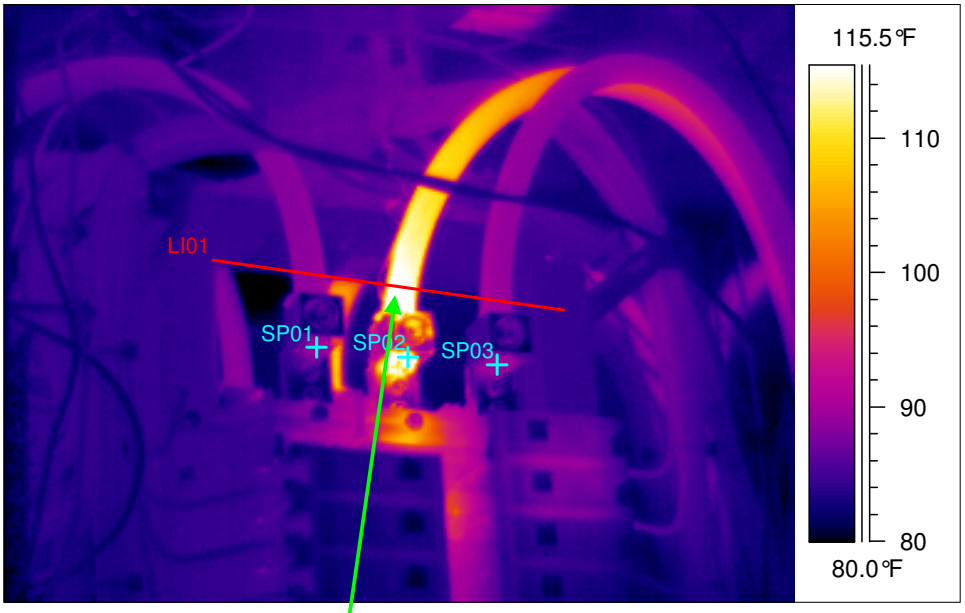
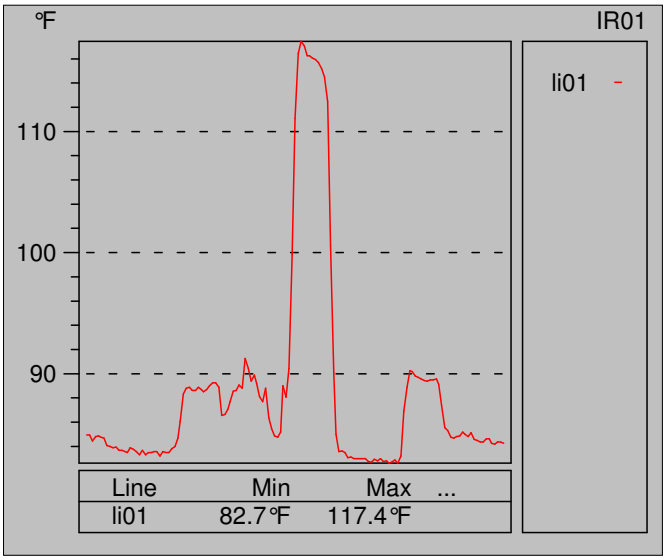
# QualiTest IR Radiometric Survey Report

| Component | Equipment/Bucket ID | Plant/Area | Date |
|---|---|---|---|
| Loose connection | Incoming B phase RP-7 | Emergency Panel Room (Bridge) | 8-21-19 |




| Label | Value |
|---|---|
| IR : max | 125.9°F |
| IR : min | 79.5°F |
| SP01 | 89.8°F |
| SP02 | 125.1°F |
| SP03 | 89.9°F |
| LI01 : max | 117.4°F |
| LI01 : min | 82.7°F |


| Fault | Loose connection |
|---|---|
| Defect Rating | CLASS II |

**Recommendation**

R image showed a possible loose connection. Connections were checked and found to be loose. Gephart safely tightened connection with proper PPE. Panel was rechecked and found to be OK after tightening connection. See 2nd image.