



Index 450 ALLEGHANY 1101 Connector, Summary

Distribution Contact: Brian Shade

Date Identified: 4/18/22
Fire Index: 450, Tier 2

Circuit: ALLEGHANY 1101
City: Sierra City
Division: Sierra

Failure Impacts

EC #: 123360159
OIS#: 1676079
ILIS #: 22-0051167
Pole SAP#: 100111818

Background (Source: Ignition Tracker)

On April 18, 2022 at 18:17 hours, a PG&E Troublemaker was dispatched to the Alleghany 1101, a 12kV Distribution Circuit near State Highway 49, 1.80 miles East of Forest Route 93 in Sierra City in response to an area outage. Upon entering the rural area, the Troublemaker was met by Fire Department on the side of the road requesting his assistance. He then realized this was more than an area outage. Initial analysis indicates equipment failure caused the ignition. Once the Fire Department made the scene safe and allowed PG&E to enter, the Troublemaker began his assessment and found the connector had failed at the aluminum to copper connection. This failure caused the ignition that was .25 acres in size. The fire was suppressed by Sierra City Fire Department. This incident led to an outage affecting 604 customers. Due to the remoteness of the area, and a one way feed, the town was fed by a generator through the night. A PG&E Crew, along with the responding PG&E Troublemaker returned to the site on April 19, 2022 to replace the connector and re-energize electricity to the impacted area.

Safety: Ignition is a public safety event.
Customer Impact: 604 customers out of power.

Preliminary Failure Mode/Discussion

The jumper failure within the compression connector appears to be at least partially attributed to a fatigue fracture. There was little to no deformation observed on fracture surface on three of the copper strands. Workmanship may have also contributed to the failure as the connector had one less crimp than required per 041010 page 6 note 2 for the Homac OB-101 connectors. The broken strands and/or workmanship could contribute to localized arcing and thermal damage within the joint.

Proposed Testing Plan (if approved)

- Failed component sent to ATS: received 5/5/2022 (Photos next slide), ATS22-0411
- Testing Plan
 - Conduct an initial visual examination to document the failed splice. – **Complete**
 - Conduct optical microscopy to document the morphology of the fracture surface . – **Complete**
 - Conduct fractography by scanning electron microscopy (SEM) to confirm failure mode. – if approved/authorized

Index 450 ALLEGHANY 1101 Connector, Summary

EQUIPMENT INFO

Connector

TYPE: ACSR

Size: #2

SAP Equipment: 100111818

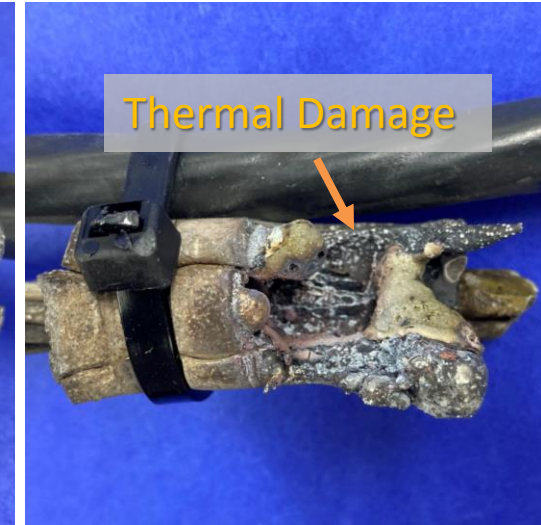
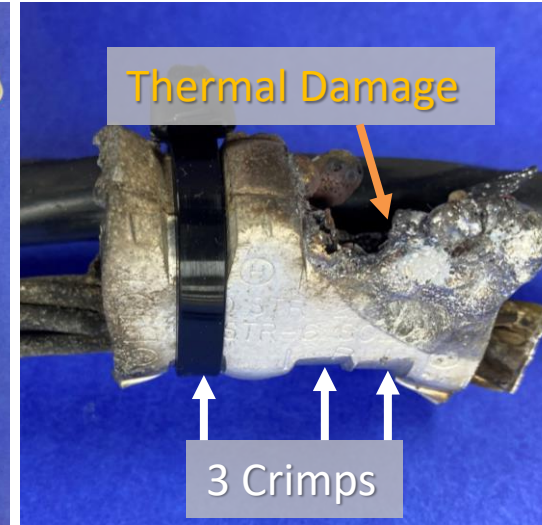
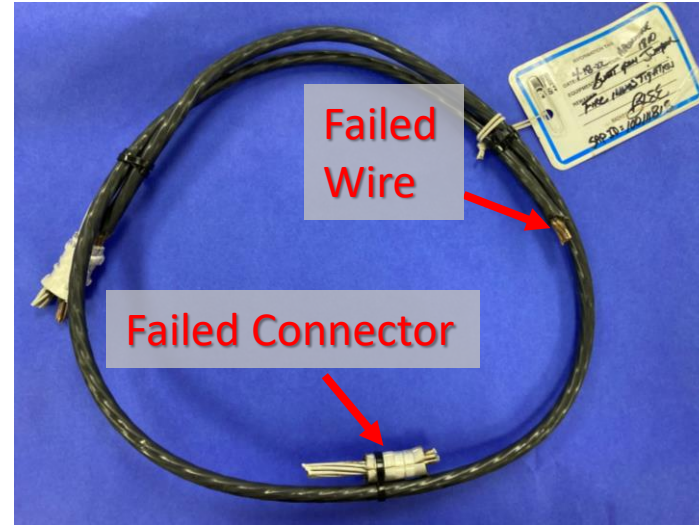
Year installed: 1952 (EDGIS)

Index: 450

Lat: 39.566413686100

Long: -120.709930295300

As-Received Photos



Field Photos

