

NATF Redacted Operating Experience Report

Dropped Ram during Structure Jacking

About NATF Redacted Operating Experience (OE) Reports

North American Transmission Forum (NATF) operating experience reports highlight positive or negative transmission (reliability or resiliency) experiences worth sharing for learning opportunities or potential trending. The overall goal is to help each other learn without experiencing the same issues first-hand. This sharing originates confidentially within the NATF membership.

Redacted operating experience reports are posted on the NATF public website to allow the NATF and its members to more broadly share information, especially safety-related alerts and learnings, with contractors and other utilities to benefit the industry at large.

The NATF member company that submitted the initial restricted distribution OE report for this topic/event has approved the NATF to issue this redacted OE report.

Open Distribution

Copyright © 2019 North American Transmission Forum. Not for sale or commercial use. All rights reserved.

Disclaimer

This document was created by the North American Transmission Forum (NATF) to facilitate industry work to improve reliability and resiliency. The NATF reserves the right to make changes to the information contained herein without notice. No liability is assumed for any damages arising directly or indirectly by their use or application. The information provided in this document is provided on an “as is” basis. “North American Transmission Forum” and its associated logo are trademarks of NATF. Other product and brand names may be trademarks of their respective owners. This legend should not be removed from the document.

Topic

Dropped Ram during Structure Jacking

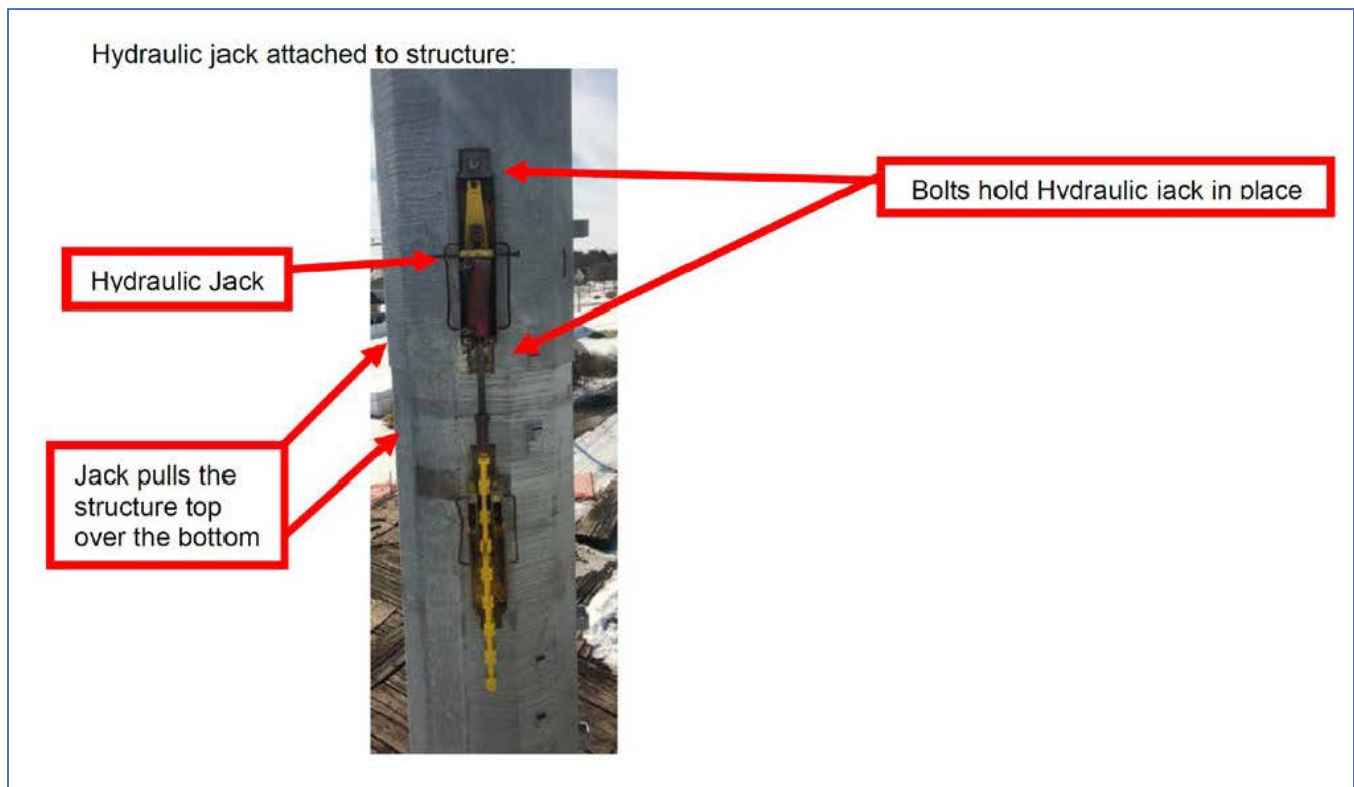
Description

While in the process of using a hydraulic ram to force two transmission tower sections together (jacking), the ram broke loose from the structure and fell 35 feet to the ground. The contractor found the threads stripped out on the 1" X 1" bolts that hold the jacking plate in place and on the nuts that were welded to the structure by the manufacturer.

Before starting work, the crew recognized the line of fire and drop zone hazards, preventing any injuries.

Potential contributing factors are:

- Possible wear of bolts from multiple previous uses.
- Possible defect of nut welded to structure by manufacturer.
- Improper mounting of jacking plate.





stripped threads

Stripped bolt used to hold hydraulic jack in place



4 stripped threads

Lessons Learned

- Reinforced the importance of always reviewing line of fire and drop zone hazards.
- Ensure proper mounting of jacking plate to ensure forces are transferred across the jacking nuts welded to the pole section as expected. Proper mounting includes ensuring welded jacking nuts are properly spaced within the required tolerance. The treads should see minimal forces if the jacking plates are mounted properly.

Actions Taken

1. Reminding and encouraging crews to always stay out of fall zone.
2. Replacing jacking bolts in all five jacking kits used by the contractor.
3. Developing lessons learned from this near miss.
4. Procuring thread gauges for jacking bolts.
5. Stocking each jacking kit with a threading gauge to allow better inspection of bolts.
6. Developing bolt-changeout requirement.
7. Communicated proper mounting of the jacking plates to the pole section.

Extent of Condition

Unknown at this time.