

NATF Redacted Operating Experience Report

Worker Injured by Fall While Accessing Bucket on Truck

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Topic

Worker Injured by Fall While Accessing Bucket on Truck

Description

A substation maintenance electrician fell while entering the bucket on a bucket truck, sustaining significant, but not life-threatening injuries. However, the potential for a more serious injury or fatality existed.

A substation maintenance crew consisting of three electricians (J1, J2, J3) resumed work at a substation following a lunch break. J1 and J2 were tasked with replacing hydraulic fluid associated with the mechanism on a circuit breaker, which included removing a hydraulic pump and changing out a filter.

J1 determined that accessing the hydraulic pump using the bucket on the bucket truck would provide greater stability than using a ladder. The bucket truck used by the crew is one of only two trucks within our fleet that features a door for accessing the bucket. J1 put on a fall-protection harness with a self-retracting lanyard in preparation for working aloft.

J1 stepped into the bucket from the rear of the truck and pulled the door closed behind him. The primary latch on the door most likely failed to fully engage when the door was closed due to it being in a degraded condition. J1 did not ensure the door-latching mechanism was engaged or attempt to engage the spring-loaded thumb latch as he was accessing the bucket at that time and was not yet prepared to raise the bucket off its cradle. As J1 positioned within the bucket to attach his lanyard to the tie-off ring on the boom, J1's foot contacted one or more items lying loose on the floor of the bucket (e.g., a descent device, rope, brackets, fasteners), causing J1 to lose balance. J1's back contacted the unlatched bucket door, which then opened outward per design, resulting in falling backwards onto the truck bed. J1's back and the left side of his body impacted an unsecured spare tire lying on the truck bed with sufficient force to induce multiple injuries.



Upon hearing J1 fall, J2 and J3 proceeded to the back of the truck to assist. J1, who was exhibiting

signs of being in considerable pain, responded to inquiries regarding condition by stating that he needed to go to the hospital. Medical assistance was initiated via calling 911. In order to make J1 more comfortable, J2 removed the lanyard from the back of J1's harness, helped reposition J1 off of the tire, and released the straps on J1's harness.

After J3 uncoupled the crew's pickup truck from its trailer, J2 drove the truck down to the substation gate to meet the emergency responders. Shortly after J2 arrived at the gate, an officer from the local sheriff's department arrived. J2 briefed the officer regarding safety precautions for entering the substation, and then allowed the officer to proceed to J1's location. Approximately five minutes later, an ambulance carrying several emergency medical technicians (EMTs) arrived at the gate, were similarly briefed by J2, and proceeded to the scene. The EMTs subsequently assessed J1's condition, placed J1 on a backboard, and then transported J1 to the hospital.

J3 subsequently contacted our company supervision and management to report the issue. J2 and J3 took measures to secure the work site and then proceeded to the hospital to check on their co-worker's condition. J1 was released from the hospital later that day and was further evaluated by another physician the following day.



**Approximate location of
Spare tire on truck.**

Lessons Learned

The team identified the following event causes:

1. No criteria established that prohibits using the truck if its latching mechanism sticks.
2. No written expectations established for securing loads on open-bed trucks.
3. Lack of standards / unclear standards.

4. Work-arounds due to equipment unavailability.

Actions Taken

1. Removal of hazard (rescue devices will now be stored in a container external to the bucket, versus in the bucket posing a tripping risk).
2. Develop a procedure for acceptable (standard) storage practices.
3. Create red-tag policy for equipment, training on process, and checklist for equipment usage.
4. Develop load securement program for all motor vehicles.

Extent of Condition

The team evaluated the extent to which the same conditions that were factors in this incident exist in other equipment, products, processes, or human performance.

1. Condition #1: loose items on bucket floor
2. Condition #2: degraded bucket door latching mechanism
3. Condition #3: unsecured spare tire