

NATF Redacted Operating Experience Report

Bucket Contact with Distribution Wire over Roadway

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Topic

Bucket Contact with Distribution Wire over Roadway

Description

This exact bucket truck had been driven on this road approximately eight times in the previous two months without incident. The first time driving this road, the crew noticed the wires seemed to be quite low, so the driver lowered the bucket position to ensure clearance. In addition, they drove near the middle of the two-lane road where the wires were at a higher point. Another crew member acted as a spotter from behind to ensure there was enough clearance as the driver cautiously approached and cleared the wires. The spotter estimated there was approximately 1.5 feet of clearance. The truck is not typically driven with the bucket in the lowered position because it obstructs the view through the front window. On each subsequent trip, the bucket was fully lowered, and the truck was driven near the center of the road when approaching the overhead wires. However, a spotter was not used on subsequent trips.

On one specific trip using the same bucket truck, a lineman was leaving the jobsite at approximately 10:30 p.m., heading east on the road. (Note: there is no alternate route for this winding two-lane roadway.) The lineman was aware of the low hanging wires and approached the area very slowly with the bucket fully lowered, staying near the middle of the road where the wires were at the highest point. Due to the darkness, the driver saw a spark (peripherally) through the left-side mirror. The driver stopped the truck immediately and called management, who flagged off the area. The driver did not exit the vehicle in case it was energized. Once management arrived, they determined that the truck was not energized. However, to be safe and cautious, the driver exited the vehicle by jumping out with both feet.

The bucket made contact with the overhead telephone cable and pulled it forward, causing the primary wooden structure to lean toward the roadway at an approximate 25-degree angle, subsequently causing the primary to hit the messenger wire or neutral. The steel messenger from the telephone cable became energized from the primary.

Though the height of the cables prior to contact is unknown, the height of cables that cross the road about 100 feet east of the event were measured days later and found to be between 13'1" and 13'7," depending on where on the roadway the measurements were taken. The minimum cable height over roadways is supposed to be 14'6." The bucket truck needs a 13'0" clearance.

There was no reason to believe the line would be lower during this trip than it had been during previous trips over the past two months. The truck had been driven on this route to the jobsite earlier that same day without incident. It is still unclear why the truck was unable to clear on this trip. There were three theories: (1) a firetruck that was spotted driving on this route during the day may have snagged the wires, causing the pole to lean and the wires to drop slightly lower to where our bucket could now reach, (2) the heavy rain that had occurred all week saturated the vegetation that hung across the wires just north of the incident location, causing them to droop down onto the wires, resulting in additional sag, or (3) the weight distribution of the bucket truck had been changed, which might cause it to lean a few inches.

The local fire chief stated that the fleet's tallest truck can only be driven in a way that makes its highest point 11'4," so it is unlikely the firetruck hit the line. It was also confirmed that the utility bucket truck was not loaded differently than normal.

Lessons Learned

1. Personnel need to be aware that conditions can change at any time.

Corrective Actions

1. The line design group was informed of the incident to raise awareness that minimum height of sag of the circuit can change.
2. Linemen were advised to use a spotter any time there is a possibility of contacting a low-hanging wire or cable when it is practical and safe to do so. Having a spotter for each trip may introduce a safety risk, particularly along this specific stretch of road at night. This is a winding road and several speeding vehicles were observed where they were not staying fully in the correct lane. Passersby would have reduced visibility for our vehicles stopped in the roadway. This event occurred late at night with no road lighting.

Extent of Condition

This situation can occur any time large equipment is being moved near overhead wires.