

CSI Country-Wide Case Study Safety Strategy Discussion

Construction Safety Investigator



Instructions:

The objective of this tool is to provide field supervisors with information to proactively engage workers and discuss safety related concerns that they may encounter. Safety discussions typically pertain to all activities that workers will be involved in that may have the potential for safety related exposures. This case study is based on facts and materials developed and first published by the agency/organization identified in the section below entitled Source of Case Study Investigative Information.

Case Day:

April 2020

Accident Type:

Fall Accident – Tree Trimming Boom Lift

Relevant Laws, Rules, and Codes May Include:

29CFR 1926.20(a)(1); 29 CFR 1926.20(b)(2); 29 CFR 1926.20(b)(4); 1926.20(f)(2); 1926.21; 1926.453

- Washington State Administrative Codes (WAC)
- ANSI/SAIA A92.22-2020: Safe Use of Mobile Elevating Work Platforms (MEWPs)
- ANSI/SAIA A92.24-2018: Training Requirements for the Use, Operation, Inspection, Testing and Maintenance of Mobile Elevating Work Platforms (MEWPs)
- ANSI Z133-2017: American National Standard for Arboricultural Operations – Safety Requirements

Case:

Operator Falls from Boom Lift while Tree Trimming

Accident Detail:

A boom lift operator working for a landscaping company died after he fell from the basket of a boom lift while trying to pull cut tree branches into the basket.

On the day of the incident, the operator was working as part of a three-person crew to remove trees at a residence. It was their first day on the site. Their plan was for the operator and a coworker to first work in the elevated boom lift to limb trees with chainsaws.

They decided to bring the cut branches into the basket to prevent them from damaging a garage and shed. They had been working for about an hour. To get the branches into the basket, the operator opened the side access gate of the basket.

As he leaned forward through the gate, he fell from the basket to the roof of the shed 12 feet below.

The incident occurred on the property of a residential home in Western Washington State. The property had a flat driveway in front of the garage where the work crew parked the boom lift. From that location, the boom lift basket was able to reach the limbs of the first trees the crew intended to remove.

Reconstructive Safety Evaluation:

- What are some of the possible causes of the accident being discussed?
- What actions could have been taken that might have prevented this accident from occurring?

Agency's Accident Scene Conclusion:

- The operator had worked for the employer on and off for 15 years. He was hired to operate the boom lift because he had more experience as an operator than the employer. His training and experience as an operator of Mobile Elevating Work Platforms (MEWPs) is unknown
- At the time of the incident, the employer had no written accident prevention program (APP). An APP is required for employers in Washington State. He said that he verbally communicated safety information to workers, and they were to report safety concerns to him. He said they did not do a safety orientation or walk around on the day of the incident because he did not believe it was needed
- According to the other worker who was interviewed, they had not held safety meetings. This was confirmed by the employer
- The employer rented the boom lift, the woodchipper, and the personal fall protection gear that they needed to do the job. Their fall protection consisted of two personal fall protection harnesses and lanyards
- Before the crew started the job, they did not have a meeting to discuss the job in general or any task-specific hazards they may encounter. They did not review the boom lift operator's manual or manufacturer's safety precautions before operating the boom lift
- The employer brought the personal fall protection equipment, but he did not communicate to the workers that they should wear them while working in the basket. The coworker stated that they did not wear the fall protection because they thought it got in the way of their work
- Workers were in the process of limbing the tree on the right side of the garage in preparation to remove the tree. The coworker was cutting branches with his chainsaw while the operator was pulling the branches into the basket. The operator opened the side access gate of the basket in an attempt to get some branches into the basket
- The coworker said he was reaching down to pick up his chainsaw when he saw the operator fall from the basket onto the roof of the shed 12 feet below. It is unknown if the operator was leaning outside of the basket and lost his balance or tripped over branches in the basket or the toe board

Contributing Factors

- Not wearing personal fall protection
- Working in boom lift basket with access gate open
- Overreaching to cut and pull branches into the basket
- Crowding and trip hazards possibly caused by tree branches in the basket
- No accident prevention program (APP)
- No job hazard analysis (JHA).

Preventive Safety Measures Identified by the Investigating Agency Include:

- Ensure that workers are trained on how to safely operate and work in boom lifts. There are specific safety requirements regarding the safe use of MEWPs contained in Safety Standards for Elevating Work Platforms, Washington Administrative Code (WAC) 296-869 as well as consensus standards published by the American National Standards Institute (ANSI)

- The specific ANSI requirements that apply and may have helped prevent this incident had they been implemented include:
 - Operators shall only operate MEWPs that they are trained, authorized, and have been familiarized to operate
 - Training shall include both theory (classroom/online) training and practical (hands-on) operation and evaluation
 - All group B MEWP operators and occupants shall use personal fall arrest or fall restraint systems at all times
 - Access gates shall be closed when the boom lift basket is occupied and elevated per the manufacturer’s instructions
- Ensure that workers always wear personal fall protection when they are exposed to fall hazards while working in boom lifts
- Develop an accident prevention program (APP) that describes the hazards associated with tree trimming and tree removal and how to control them

Additional Commentary on Preventive Safety Measures from Chubb Include:

- Complete a Job Safety Task Analysis that includes scope of work, anticipated exposures, and safety equipment and/or procedures needed to ensure the task is completed successfully and safely
- Conduct a pre-work meeting to review the JSTA and ensure workers understand the task to be completed, any safe working procedures and have the necessary safety equipment
- Employees should have adequate training on job-specific tasks. Proper training must extend to all workers, including day laborers. Language barriers and communication should also be considered during training

Attendance Roster

Source of Case Study Investigative Information:

This case study is based on facts and materials developed and first published by the following agencies during their investigation of the applicable incident:

- U.S. Centers for Disease Control and Prevention (CDC) and National Institute for Occupational Safety and Health Office of the Director (NIOSH)

The source material is otherwise available on the agency website for no charge. Chubb’s use of information sourced from these or any other governmental agency does not constitute endorsement or recommendation of Chubb by these governmental agencies.

Source and Links to Relevant Material:

Washington State FACE Program, Case Report: 52-48-2021;
<https://www.cdc.gov/niosh/face/stateface/wa/21WA5248.html>

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