

Potential Hazard Review

Physical

- Caught in, on, between, or pinch points: Crush, amputation
- Electrical: Shock, burn, cardiac arrest, death
- Slips/falls: Bruise, contusion, sprain, strain, fracture from fall and impact
- Striking against: Laceration, puncture, abrasion
- Pressure: Pressurized hoses or connections

Related Safe Work Practices

- Boom Trucks
- Chainsaws, Operation
- Electrical Safety
- Fuel Safety
- Traffic Safety

Personal Protective Equipment

- Safety belts

Authority

- CCR Title 8 Section 3638, 3648

Prepared by: Arborist Safe Work Practice Working Group

Approval by: J. Bramlett, Division Manager of Environment, Health and Safety

K. Gee, Director of Human Resources

D. Chu, Director of Administration and Finance

B. Palacio, Superintendent of Recreation and Community Services

E. Andersen, Superintendent of Parks and Open Spaces

S. Shih, Superintendent of Structural Maintenance

D. Kern, Director of Operations

P. Ginsburg, General Manager

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This safe work practice applies to all employees operating or working on an aerial lift (defined as any vehicle-mounted or self-propelled device, telescoping extensible or articulating, or both, which is primarily designed to position personnel) *except* for Boom Trucks (see *Boom Trucks SWP*).

This SWP is dedicated to helping you avoid an injury or illness from known hazards. You are advised to follow these recommendations, read and follow this SWP and any related SWPs, complete and required or recommended training, and to obtain advice from a Qualified Person if you have any questions.

A Qualified Person is a person **designated** by the employer; and by reason of **training**, experience, or instruction who has demonstrated the ability to perform safely all

assigned duties; and, when required is properly licensed in accordance with federal, state, or local laws and regulations.¹

All tasks require that you:

- Use equipment in accordance with the guidelines set forth by the manufacturer. This includes following all signs and labels, and reviewing any manufacturer's operating manuals.
 - If the instructions provided in the operating manual conflict with this SWP, then follow the instructions in the manual. The manufacturer's instructions prevail over this SWP.
- Review the safety data sheets (SDSs) for each chemical.
- Have completed required training, training on this SWP and those listed above as related. Training on SWPs must be completed before initial assignment. It is also recommended that you complete refresher training every two years.

BEFORE

1. Prior to the daily use of an aerial lift device, a visual inspection and operational check shall be made in accordance with the manufacturer's instructions.
2. Make sure that the surface upon which the unit is being operated on is level with no hazardous irregularities or accumulation of debris which might cause a moving platform to overturn.
3. Ensure the lift is the appropriate size and capacity for the job.
4. Where moving vehicles are present, the work area shall be marked with warning signs such as flags, roped off areas, or other effective means of traffic control (see *Traffic Safety*).

DURING

1. Aerial lift buckets, platforms or booms of such equipment shall be equipped with some means of anchorage to which a safety belt can be secured. The operator should affix his/her safety belt according to the manufacturer's recommendations.
 - a. Safety belts are not required when the lift being used is of the scissor type (only goes up and down) as long as guardrails are provided.
 - b. Safety belts are required when driving the lift at any time, to reduce the risk of catapulting.

¹ Qualified Person definition obtained from "Safety and Health Training and Instruction Requirements". Retrieved September 11, 2012 from <http://www.dir.ca.gov>.

2. Safety belts are used only to keep employees inside the bucket, and are not meant to arrest a fall outside the bucket. The 42" guardrail protection (i.e. the bucket sides) must be maintained, or the use of "fall arrest systems" (i.e. harness system) must be employed.
3. The use of safety belts shall not be compromised (e.g. using planks, ladders, or standing on side rails to gain greater working height or reach).
4. The combined load, including the worker(s), material, and tools shall not exceed the rated lift capacity as stated by the manufacturer and posted on the unit.
5. Unstable objects such as barrels, boxes, loose brick, tools, and debris shall not be allowed to accumulate on the work platform, or used to stand on.
6. Never use an aerial lift or aerial ladder as a crane or hoist to lift or lower materials unless the unit is specifically designed to perform such operations. Also, never use an aerial lift to apply pulling or pushing pressure to any object.
7. Aerial baskets or platforms shall not be supported by adjacent structure(s) when workers are on the platform or in the basket while in an elevated position.
8. Do not use lifts when exposed to high winds, storms, or when the lift is covered with ice (unless provisions have been made to ensure the safety of the employees).
9. Install wheel chocks before operating the aerial lift. When elevating personnel with the vehicle stationary, the braking systems shall be set.
10. When operating an aerial lift, the operator shall look in the direction of travel of the bucket and be aware of the location of the booms in relation to all other objects and hazards.
11. Booms shall not be operated unless outriggers, where required, are down.
12. Pressure shall be released before connections are broken to avoid the hazards of flying particles or whipping of hydraulic or pneumatic hose except where quick-acting connectors are used. Never kink a hydraulic or pneumatic hose to cut off pressure prior to disconnecting.
13. No part of the body shall be used to locate or attempt to stop a hydraulic leak (a hydraulic puncture wound may cause a generalized infection).
14. Booms or baskets shall not contact conductors, cables, poles, trees, and similar objects.

15. Electric cables, wire rope, or other conductive material shall not be run from the truck or other grounded sources to the bucket on insulated aerial lifts.
16. A one-person basket shall not have more than one person riding in it during work operations.
17. Workers shall not modify (i.e., drill holes in) aerial lift baskets. This will reduce the dielectric integrity of the basket.
18. Do not bypass safety interlocks, or remove safety devices on the aerial lift.²
19. All hoses affecting the dielectric characteristics of insulated equipment shall be made of non-conductive material. Hydraulic fluid for insulated units shall be of the non-conductive type.
20. During aerial lift operations employees shall maintain a minimum clearance of 10 feet from any electrical lines (see *Electrical Safety SWP*).
21. If the employee does not know the voltage of a particular conductor, it is recommended that the local utility be consulted before any work begins.
22. All employees must be constantly aware of the fact that even fully-insulated baskets do not protect workers from other electric paths to the ground such as paths through trees, guy wires, cables etc., any one of which can be fatal.
23. Prior to leaving the basket for entry into the tree, employees shall be safely secured to the tree before removing the safety line attached to the basket. The procedure shall be reversed when entering the basket from a tree.
24. Do not move an aerial device truck when the boom is elevated in a working position with employees in a basket or platform, unless all of these criteria are met:
 - The equipment is designed for this type of operation.
 - All controls and signaling devices are tested and in good operating condition.
 - Effective communication is maintained.
 - Route to be traveled is surveyed prior to the work trip.
 - The speed of the vehicle does not exceed 3 miles per hour.
 - Only one employee is in the basket.
25. Genie Lift Z-34/22 with indoor tires can only be used outside if the following conditions are met³:

² Hi-Ranger Mobile Aerial Tower –Operation and Maintenance Manual, Indiana 1979

³ Corrective action for project file 5496

- a. The grade does not exceed 5%.
- b. The surface is hard, and free of ruts, bumps, holes or other impediments such that all 4 wheels are in contact with the surface at all time.

AFTER

1. Report any problem or deficiencies that develop during your shift. If the problem is serious, make it your responsibility to have the vehicle removed from service.

References:

1. Specialty Technical Publishers Cal-OSHA Training Guide - STP Cal-OSHA 8 CCR 3638 Elevating Work Platforms and Aerial Devices Sections L-5, L-12 -12.5., Vancouver B.C, 2007
2. A Construction Worker Dies When a Fully Extended Scissor Lift Falls Over, California Fatality Assessment and Control Evaluation Program, California FACE Report 10CA008, 2/3/2011