



PDH-Pro.com

Aerial Lift Safety

Course Number: HS-02-102

PDH: 1

Approved for: AK, AL, AR, DE, FL, GA, IA, ID, IL, IN, KS, KY, LA, MD, ME, MI, MN, MO, MS, MT, NC, ND, NE, NH, NJ, NM, NV, NY, OH, OK, OR, PA, SC, SD, TN, TX, UT, VA, VT, WI, WV, and WY

State Board Approvals

Florida Provider # 0009553 License #868

Indiana Continuing Education Provider #CE21800088

Maryland Approved Provider of Continuing Professional Competency

New Jersey Professional Competency Approval #24GP00025600

North Carolina Approved Sponsor #S-0695

NYSED Sponsor #274

How Our Written Courses Work

This document is the course text. You may review this material at your leisure before or after you purchase the course.

After the course has been purchased, review the technical material and then complete the quiz at your convenience.

A Certificate of Completion is available once you pass the exam (70% or greater).

If a passing grade is not obtained, you may take the quiz as many times as necessary until a passing grade is obtained).

If you have any questions or technical difficulties, please call (508) 298-4787 or email us at admin@PDH Pro.com.





Module 1: Using Aerial Lifts

Learning Objectives

By the end of this section, you will be able to:

- **Identify** the primary hazards associated with aerial lift operations and the equipment types governed by specific OSHA standards.
- **Evaluate** job site conditions to implement mandatory safety clearances and stability protocols.
- **Select** appropriate fall protection and personal protective equipment based on platform type and manufacturer specifications.

Safe Operation of Aerial Lifts

Executive Summary: Fatalities in aerial lift operations are primarily driven by falls, electrocutions, and tip-overs; rigorous adherence to manufacturer load limits, 10-foot power line clearances, and active fall restraint systems is required to mitigate these risks.

Aerial Device Classification

Aerial lifts are defined as vehicle-mounted, boom-supported aerial platforms used to access utility lines and elevated job sites.

- **Included Equipment:** Cherry pickers, bucket trucks, aerial ladders, and vertical towers.
- **Regulatory Distinction:** OSHA regulates **scissor lifts** as mobile scaffolds, not as aerial devices.

Operational Safe Work Practices

Training and Inspection

- **Verify training** for all workers operating aerial lifts to ensure competency in safe equipment use.
- **Test all controls** and inspect the lift daily prior to use.
- **Ensure clear marking** of all control functions.

Equipment Integrity

- **Maintain and operate** lifts strictly according to the manufacturer's instructions.
- **Prohibit overriding** of any hydraulic, mechanical, or electrical safety devices.
- **De-energize** and perform **lockout/tagout** procedures before any maintenance or repair work.



Platform Safety and Stability

- **Stand firmly** on the basket floor; sitting or climbing on the edge or rails is strictly prohibited.
- **Eliminate reach extensions** such as planks, boxes, or other items used inside the basket.
- **Verify base stability** by ensuring all wheels are on a solid base and deploying **outriggers** if provided.

⚠ **Safety Constraint:** You must set the brakes and use wheel chocks when operating on an incline. Never exceed the equipment load limits, accounting for the combined weight of the worker, tools, and materials.

Working Near Power Lines

Overhead electrical hazards require constant awareness and strict distance adherence.

- **Minimum Clearance:** Maintain at least **10 feet (3 meters)** from the nearest energized overhead line.
- **Conductive Objects:** Any object that may contact a line (wires, transformers, ducts, pipes) must also maintain the 10-foot clearance.
- **Standard Assumption:** Treat all overhead lines as **energized**, even if they appear insulated or are downed.

💡 **Design Tip:** While qualified power line and communications workers may work closer than 10 feet under specific training protocols, general operators must never lose awareness of the overhead hazard.

Struck-by, Crushed-by, and Caught-in Hazards

To prevent crushing injuries, establish clear boundaries between the equipment and surrounding structures.

- **Danger Zones:** Mark a danger zone around the aerial lift support vehicle.
- **Equipment Movement:** Never move the unit with workers in the elevated platform unless the equipment is specifically designed for such operations by the manufacturer.
- **Hazardous Positioning:** Do not position workers between overhead hazards (joists, beams) and the rails of the basket.


⚠ **Safety Constraint:** If the basket moves while a worker is positioned against an overhead object, they can become trapped and crushed between the rails and the object.

Fall Protection Systems

Fall protection is a critical requirement for all aerial lift operations to prevent ejection from the platform.



- **Restraint Systems:** Use a **body harness** or positioning device (or restraining belt) with a lanyard attached to the boom or basket.
- **Prohibited Anchoring:** Do not allow workers to belt off to an adjacent pole, structure, or nearby equipment while working from the lift.

 **Calculation Note:** When calculating the total load on the platform, you must sum the weights of the operator, all hand tools, and any bulk materials to ensure they remain below the manufacturer's rated capacity.

Checkpoint Quiz

1. Which of the following equipment is regulated by OSHA as a mobile scaffold rather than an aerial device?

- a) Cherry picker
- b) Bucket truck
- c) Scissor lift
- d) Vertical tower

Answer: (c). OSHA explicitly regulates scissor lifts as mobile scaffolds.

2. What is the minimum clearance distance required for a non-qualified worker operating an aerial lift near energized overhead power lines?

- a) 5 feet
- b) 10 feet
- c) 15 feet
- d) 20 feet

Answer: (b). A minimum clearance of at least 10 feet must be maintained from the nearest overhead line.

3. When is it permissible to move an aerial lift while the platform is elevated and occupied?

- a) Only when the move is less than 5 feet.
- b) Only if the worker is wearing a body harness.
- c) Only if the equipment is specifically designed for this operation.
- d) It is never permissible under any circumstances.

Answer: (c). Movement is prohibited unless the manufacturer has designed the equipment for operation while elevated.



Purchase this course to
see the remainder of
the technical materials.