Toolbox Talk: Aerial Lift Safety

Introduction

Aerial lifts are essential tools in modern construction and maintenance, offering flexibility and efficiency that traditional ladders and scaffolding often cannot match. These devices come in various forms, including extendable boom platforms, aerial ladders, articulating boom platforms, and vertical towers, which may be powered or manually operated. Despite their advantages, aerial lifts present significant hazards, and their improper use can result in severe injuries or fatalities. This toolbox talk will cover essential safety measures, hazard awareness, and operational guidelines to ensure safe use of aerial lifts.

Key Safety Guidelines

1. Weather Conditions

- Wind Restrictions: Operating an aerial lift in winds exceeding 20 mph is hazardous. OSHA guidelines (1926.1431(k)(8)(i)) require a qualified person to evaluate wind conditions before commencing or continuing operations. If wind speeds exceed the limit, halt operations immediately. Additionally, avoid operating aerial lifts during rain, thunderstorms, or other severe weather conditions.

2. Common Hazards

Aerial lifts are associated with several risks, including:

- Falls: Falling from an elevated level.
- Falling Objects: Objects dropping from the lift.

  Tip-Overs: The lift tipping over due to unstable conditions.

- Ejections: Workers being ejected from the lift platform.
- Structural Failures: Collapses or failures of lift components.
- Electric Shock: Electrocution due to contact with power lines.
- Entanglement: Getting caught in moving parts or nearby objects.
- Contact Hazards: Collisions with ceilings, overhead structures, or other objects.

3. Pre-Operation Inspection

Before using an aerial lift, conduct a thorough pre-start inspection to ensure all components are in safe working condition. This includes:

- Vehicle Components: Check fluid levels (oil, hydraulic, fuel, coolant), look for leaks, inspect wheels, tires, battery, and charger, and verify the operation of lower-level controls, horn, gauges, lights, and backup alarms.
- Lift Components: Inspect operating and emergency controls, personal protective devices, hydraulic, pneumatic, fuel, and electrical systems, and ensure all placards, warnings, and operational markings are visible. Check for mechanical fasteners, locking pins, cable and wiring harnesses, outriggers, stabilizers, and guardrail systems. Ensure there are no loose or missing parts.

Do not operate any lift with defective components until they are repaired by a qualified person. Tag out and remove defective lifts from service until repairs are completed.

West Virginia University Aerial Lift Pre Use Inspection Checklist
https://www.ehs.wvu.edu/files/d/9344ba27-74e9-4095-949c-e1d332764dfe/aerial-lift-pre-use-inspection-form.pdf

4. Work Zone Safety

- Inspect the work zone for potential hazards before and during operation:
- Ground Conditions: Look for drop-offs, holes, unstable surfaces, and debris.
- Clearances: Ensure adequate ceiling height and check for slopes, ditches, and bumps.
- Overhead Hazards: Avoid working near power lines, communication cables, and other overhead obstructions.
- Weather Conditions: Be mindful of severe weather, such as ice and high winds.
- Proximity: Keep other personnel at a safe distance from the work area.

5. Operational Safety

- Fall Protection: Ensure access gates are closed, stand firmly on the platform, and do not climb or lean over guardrails. Use a body harness or restraining belt with a lanyard attached to the lift. Avoid belting off to nearby structures.

- Loading and Travel: Do not exceed the load capacity, avoid using the lift as a crane, and do not carry oversized objects. Do not operate with the platform raised unless the manufacturer's instructions permit it. Follow protocols for operating lower-level controls and never exceed reach limits.
- Overhead Protection: Maintain awareness of overhead clearances and stay at least 10 feet away from power lines. Ensure that power lines are de-energized if working in their vicinity.

6. Stability and Insulation

- Stability: Set outriggers on a level, solid surface, use wheel chocks on slopes, and apply brakes when outriggers are used. Set up appropriate work zone warnings, such as cones and signs.
- Insulation: Insulated aerial lifts provide protection from electric shock but do not protect against other grounding paths. Avoid drilling holes in the bucket to maintain the effectiveness of insulation.

OSHA: Aerial Lift Fact Sheet
https://www.osha.gov/sites/default/files/publications/aerial-lifts-factsheet.pdf

OSHA: Working Safely with Scissor Lifts
https://www.osha.gov/sites/default/files/publications/OSHA3842.pdf

Summary

To ensure safety when using aerial lifts, adhere to the following key points:

- Weather Conditions: Avoid using lifts in winds over 20 mph and during severe weather.
- Hazards: Be aware of and mitigate risks such as falls, falling objects, tip-overs, and electrical hazards.
- Pre-Operation Inspection: Conduct thorough checks of vehicle and lift components before use.
- Work Zone Safety: Inspect the work area for hazards and ensure clearances.
- Operational Safety: Follow guidelines for fall protection, load limits, and equipment use.
- Stability and Insulation: Ensure stability of the lift and proper insulation against electrical hazards.

By following these guidelines, we can significantly reduce the risk of accidents and injuries associated with aerial lift operations. Stay vigilant, prioritize safety, and always operate with caution.

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SAFETY TRAINING SIGN IN SHEET

TRAINING TITLE	Aerial Lift Safety		
DATE & TIME		LOCATION	
COMPANY		TRAINER	

NAME	SIGNATURE	PHONE