Purpose of Meeting

- To remind workers that using aerial lifts can result in a serious injury.
- To reinforce aerial lift safety rules.
- To consider ways to protect yourself from the hazards presented by aerial lifts.

Materials and Preparation

- A copy of the written aerial lift safety rules or policy.

Note to Trainer

- Enter your name and the training date on the Training Sign In Sheet.
- Have each attendee sign the Training Sign In Sheet next to their name.
- Use this page for your reference and give attendees copies of the remaining pages.
AERIAL LIFT/BUCKET TRUCK SAFETY

Introduction

Due to the nature of our work, it is necessary at times to use aerial lift devices. These devices are large pieces of machinery that require specialized training to operate. In order to ensure your safety and the safety of your coworkers, it is vital that you are properly trained and then refresher trainings are given periodically.

This training has been developed to educate workers about how to take appropriate precautions in order to work safely with and around aerial lift devices.

What Are Aerial Lift Devices?

Aerial devices include boom-supported aerial platforms such as:
- Bucket trucks
- Cherry pickers
- Aerial ladders
- Vertical towers

How Do Aerial Lift Device Injuries Happen?

Causes of aerial lift device injuries include:
- Electrocution
- Falls
- Collapses
- Tipovers
- Getting caught between the lift bucket or guardrail and object (such as steel beams or joists)
- Being struck by falling objects
- Being catapulted out of a bucket when the boom or bucket is struck by something.
Pre-Use Safety Check

Check the following each day before using an aerial lift device:

- Operating controls and
- Emergency controls
- Safety Devices such as outriggers and guardrails
- Personal fall protection gear
- Wheels and tires
- Any other items specified by the manufacturer.
- Look for possible leaks (air, hydraulic fluid, and fuel-system) and loose or missing parts.

All controls must be clearly marked as to their function.

Aerial lift devices must always be maintained and operated according to the manufacturer's instructions.

Personal Protective Equipment/ Fall Protection

Aerial lift device workers are required to wear the proper personal protective equipment:

- ANSI-approved hardhat
- Eye protection
- Insulated gloves where there is a risk of electrocution
- Fall restraint safety belt system or full body harness fall arrest system

Follow all fall protection policies and procedures when working on aerial lift devices. Use a body harness or positioning device with a lanyard properly attached to anchor points supplied by the bucket truck/aerial lift device manufacturer on the boom or basket. This will ensure that you will not be ejected or pulled from the basket.

NEVER belt off to an adjacent pole, structure or other equipment.
Check the Work Area

Make sure the lift is being used on a stable, level surface. Never work on a slope that exceeds slope limits listed by the manufacturer.

Check the area for holes, drop-offs, bumps, and debris. Also check for overhead power lines, trees or other obstructions.

Before operating a bucket truck make sure that the boom is cradled and tied down and that all other equipment is secure.

Operating an Aerial Lift Device

- Set outriggers, brakes, and wheel chocks – even if you're working on a level slope.
- If working near traffic, set up work-zone warnings, like cones and signs.
- Close lift platform chains or doors.
- Stand on the floor of the bucket or lift platform. Do not climb on or lean over guardrails.
- NEVER exceed manufacturer’s load-capacity limits. Always allow for the combined weight of the worker(s), tools and materials.
- NEVER override hydraulic, mechanical or electrical safety devices.
- NEVER use planks, boxes or other items inside the basket to extend their reach.
Bucket Truck Safety Features

All bucket trucks are not identical. It is essential that operators must be familiar with the specific bucket trucks they are working with.

Buckets must be at least 39 inches deep so that for most workers the lip of the bucket is above waist level. Bucket trucks have additional safety features such as guards, outrigger interlock and ground fault interrupter circuits, and warning labels. These features must not be modified or removed.

Working Around Power Lines

Observe where the power lines are and NEVER lose awareness of them while working.

You must maintain a minimum clearance of at least 10 feet from the nearest overhead line. Also, any conductive object that can be contacted must be maintained at least 10 feet from overhead lines. Conductive objects include:

- Wires
- Transformers
- Ducts
- Pipes
- Other equipment.

Always treat overhead lines as energized, even if they are down or appear to be insulated.
Bucket Truck Protections

Bucket trucks have three components that provide some protection from electrocution. Be sure to properly maintain these components in accordance with manufacturer and ANSI standards.

1. A basket liner will protect the portion completely inside the liner. Anything conductive that extends out of the liner will conduct electricity into the liner and make it ineffective.

2. The insulating section of the upper boom will prevent current flow from the boom tip through the boom to the elbow only.

3. The lower boom insert will provide an insulation section between the elbow and the truck chassis.

Note that the boom tip contains metal structural support components and so it does not provide any insulation. Note the placement of the band of arrows on the upper boom which indicates the end of the insulated section.

Covers and guards may provide some electrical protection, but you should not rely on them because they are not maintained or tested for this purpose.

Tool Hoses

Many aerial lift devices have hydraulic tools attached. These tools are connected to the bucket truck’s hydraulic systems through non-conductive tool hoses.

It is essential to inspect these hoses for wrinkling just beyond the fitting, which is a sign that a hose failure is about to occur. If the insulation is compromised and bridges across electrical lines it can cause an arc. The arc may melt a hole in the hose and then ignite the mist of hydraulic oil as it escapes from the damaged hose.

NOTES:

Provided by:
DKF Solutions Group for

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Avoid Injuries Caused by Struck-by, Crushed-by or Caught-in Hazards

- Establish and clearly mark a danger zone around the aerial lift support vehicle.
- Never move the equipment with workers in the elevated platform unless the equipment has been specifically designed for this type of operation.
- Do not position worker(s) in the basket between overhead hazards, such as joists and beams, and the rails of the basket. If the basket moves, the worker(s) could become trapped and crushed between the rails and the overhead object.

Conclusion

Working with and around aerial lift devices always presents some risks. It takes everyone working together to minimize hazards and create a safer work environment.

Follow all safety policies and procedures, and if you are ever unsure about how to safely operate or work around an aerial lift device, see your supervisor immediately.