



Goal

This program provides information on general safety and operational guidelines for aerial lifts.

Background

An aerial lift is any vehicle-mounted device used to elevate personnel, including:

- Extendable boom platforms,
- Aerial ladders,
- Articulating (jointed) boom platforms,
- Vertical towers, and
- Any combination of the above.

Training

Only qualified persons can operate aerial lift devices, and only your employer can certify that you are a qualified operator. A "qualified person" is a person who possesses a recognized degree, certificate, professional standing, or skill and who, by knowledge, training, and experience, has demonstrated the ability to deal with problems relating to the subject matter, the work, or the project. Training should include:

- Explanations of electrical, fall, and falling object hazards;
- Procedures for dealing with hazards;
- Recognizing and avoiding unsafe conditions in the work setting;
- Instructions for correct operation of the lift (including maximum intended load and load capacity);
- Demonstrations of the skills and knowledge needed to operate an aerial lift before operating it on the job;
- When and how to perform inspections; and
- Manufacturer's requirements.

Workers should also be re-trained in the event of any of the following:

- An accident occurs during aerial lift use,
- Workplace hazards involving an aerial lift are discovered,

- A different type of aerial lift is used, or
- An employee is observed operating an aerial lift improperly.

Inspections

Along with monthly and annual inspections conducted by qualified maintenance technicians, workers should conduct a pre-start inspection to verify that vehicle and aerial lift equipment and all their components are in safe operating condition. This should be completed prior to each work shift. Follow the manufacturer's recommendations and include a check of the following:

Vehicle components

- Proper fluid levels (oil, hydraulic, fuel and coolant);
- Leaks of fluids;
- Wheels and tires;
- Battery and charger;
- Lower-level controls;
- Horn, gauges, lights and backup alarms;
- Steering and brakes.

Lift components

- Operating and emergency controls;
- Personal protective devices;
- Hydraulic, air, pneumatic, fuel and electrical systems;
- Fiberglass and other insulating components;
- Missing or unreadable placards, warnings, or operational, instructional and control markings;
- Mechanical fasteners and locking pins;
- Cable and wiring harnesses;
- Outriggers, stabilizers and other structures;
- Loose or missing parts;
- Guardrail systems.

Work Zone

Assure that work zones are inspected for hazards, including:

- Drop-offs, holes, or unstable surfaces such as loose dirt;
- Inadequate ceiling heights;
- Slopes, ditches, or bumps;
- Debris and floor obstructions;
- Overhead electric power lines and communication cables;
- Other overhead obstructions;
- Other hazardous locations and atmospheres;
- High wind and other severe weather conditions, such as ice; and
- The presence of others near the work.

Hazards

The major causes of injuries and fatalities involving aerial lifts are falls, electrocutions, struck-by's, and collapses or tip-overs. In all instances, establish and clearly mark a danger zone around the aerial lift support vehicle.

Power Lines / Electrocution – Always treat overhead lines as energized, even if they are down or appear to be insulated. Maintain a minimum clearance of at least 10 feet away from the nearest overhead line. In addition, any conductive object that can be contacted must be maintained at least 10 feet from overhead lines. Conductive objects could be wires, transformers, ducts, pipes or other equipment. De-energize and lockout/tagout aerial lifts before performing any maintenance or repairs.

Struck-by, Crushed-by, or Caught-in Hazards - Never move the equipment with workers in the elevated platform unless the equipment has been specifically designed for this type of operation. Do not allow workers to position themselves 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.

Falls – Ensure that access gates or openings are closed. Do not allow workers to belt off to an adjacent pole, structure or equipment while working from an aerial lift. Use a body harness or positioning device with a lanyard attached to the boom or basket to prevent the worker from being ejected or pulled from the basket.

Stability – When outriggers are used, set the brakes and position them on pads or a solid, level surface. When safe to do so, use wheel chocks on sloped surfaces.

Environmental – Hazards can include heat exhaustion, heat stroke, cold exposure, stinging and biting insects, animals and mammals, and lightning, among others. Make sure first aid kits and CPR training is up to date.



Personal Protective Equipment

All operators should make sure they are wearing the proper personal protective equipment. All equipment should fit correctly and be in working condition. Always inspect any equipment before wearing.

Fall Protection – a full body harness or body belt with an appropriate lanyard connected to a designated anchor point.

Helmet – should be properly fitted and made to withstand 20,000 volts (Class E).

Eye Protection – goggles, safety glasses, and/or prescription safety glasses if necessary.

Hearing Protection – ear muffs or plugs, especially important if you're using a loud, portable hand tool such as a chainsaw.

Leg Protection – most important when not in a bucket.

Face Shield – can be worn in tandem with safety glasses, but should never replace them.

Foot Protection – sturdy, non-slip boots.

Clothing – remove all jewelry and make sure clothes are high-visibility and close-fitting so as not to get caught in any equipment.

Job Briefing

All workers should understand the hazards associated with their work, as well as their individual responsibilities. Job briefing should include a discussion of the job steps, potential hazards, specific work assignments, action steps needed to avert the hazards present, any personal protective equipment required, and any new hazard or change in the job site that needs to be addressed.

Review

1. Which of the following is not a common cause of injury with aerial lifts?
 - a. Electrocution
 - b. Snake bite
 - c. Collapse
 - d. Struck-by
2. Anyone can operate an aerial lift as long as they read the manual.
True / False
3. Personal protective equipment should be worn when operating in an aerial lift. Which of the following types of protection are important?
 - a. Safety glasses
 - b. Helmet
 - c. Fall Protection
 - d. All the above
4. It is best to position the lift between overhead objects so that the operator has something to hang on to in case he falls.
True / False
5. Which parts of the lift should be inspected before beginning work?
 - a. Work zone
 - b. Lift components
 - c. Vehicle components
 - d. All the above

Answers

1. B
2. False (must be certified by their employer)
3. D
4. False (this can cause trapping/crushing)
5. D

For more information on aerial lift safety and fall protection see the Service Lloyds website. In Risk Control's Training Materials section, we have additional resources including:

- Personal Fall Protection Systems – Toolbox Talk
- Personal Protective Equipment – Toolbox Talk
- Slips & Falls Prevention – Toolbox Talk

Remember to practice Safety; don't learn it by accident.

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