

BUCKET TRUCK SAFETY

The following guidelines have been established to reduce the risk of incident and personal injury when working with or in close proximity to Pioneer bucket trucks (aka aerial lifts).

Definitions

Aerial lift devices are used to elevate personnel to job sites above the ground. These include extensible boom platforms, aerial ladders, and aerial ladder trucks, articulating boom platforms, vertical towers and any combination of these devices. Aerial lift devices may be constructed of metal, wood, fiberglass, reinforced plastic or other materials

- An aerial device includes any vehicle-mounted device telescoping or articulating or both which is used to position personnel.
- An articulating boom platform is an aerial device with two or more hinged boom sections.
- An extensible boom platform is an aerial device (except ladders) with a telescopic or extensible boom.
- A mobile unit is a combination of an aerial device, its vehicle and related equipment.
- A platform, or elevated platform, is any personnel-carrying device that is a component of an aerial device.
- A vehicle is any carrier that is not manually propelled.

Responsibilities

Only properly trained and authorized employees are permitted to operate aerial lift devices. Employees have a responsibility to keep un-trained employees from entering and using the bucket and lift. Employees are responsible to wear all the required personal protective equipment.

Hazard/Risk Analysis

Whenever bucket trucks are operated in the vicinity of [energized electrical](#) utility lines the potential for electrocution exists. Even house drops and telephone circuits can be energized with enough voltage to kill. Lifts allow personnel to perform work above ground, creating a fall hazard. Operators must be aware of hazards including falls, tip-overs and electricity. [Be aware of safe distances listed in Table R-2.](#)

TABLE R-2 - APPROACH DISTANCES TO EXPOSED ENERGIZED OVERHEAD POWER LINES AND PARTS

| Voltage range (phase to phase, RMS) | Approach distance (inches) |
|-------------------------------------|----------------------------|
| 300 V and less | (¹) |
| Over 300V, not over 750V | 12 |
| Over 750V not over 2 kV | 18 |
| Over 2 kV, not over 15 kV | 24 |
| Over 15 kV, not over 37 kV | 36 |
| Over 37 kV, not over 87.5 kV | 42 |
| Over 87.5 kV, not over 121 kV | 48 |
| Over 121 kV, not over 140 kV | 54 |

¹ Avoid contact.

Prevention and Control

Bucket trucks differ enough that even trained workers should not operate a bucket truck they are unfamiliar with on the job.

Buckets or “baskets” are required to be at least 39” deep to put the lip above the waists of most workers and reduce the risk of falling out. Safety features such as guards, outrigger interlock and ground fault interrupter circuits, and warning labels are included on bucket trucks. These are designed to help prevent accidents and may not be modified or removed.

All employees are required to wear the personal protective equipment provided with each bucket truck operation:

- ANSI approved hardhat
- Eye protection
- Fall restraint system/[Fall arrest system](#)
- Insulated gloves where electrocution risk is possible

Bucket truck workers must wear a fall-restraint safety belt system or a full-body harness fall arrest system. Fall arrest equipment, work positioning equipment or travel restricting equipment shall be used by employees working at elevated locations more than 4 feet above the ground. When stopping or arresting a fall, personal fall arrest systems shall limit the maximum arresting force on an employee to 900 pounds if used with a body belt. When stopping or arresting a fall, personal fall arrest systems shall limit the maximum arresting force on an employee to 1800 pounds if used with a body harness.

Personal fall arrest systems shall be rigged such that an employee can neither free fall more than 6 feet nor contact any lower level. If vertical lifelines or drop lines are used, not more than one employee may be attached to any one lifeline.

Bucket Truck Preparation and Positioning Process

Fall-arrest/[Fall-restraint](#) equipment must be thoroughly inspected by [a competent person](#) before each use. Look for cuts, holes, tears, abrasions, frays, burns, chemical damage, and other signs of wear. Examine hardware to make sure it is in proper working order.

Depending on how the truck is equipped, an inspection will be performed prior to each use:

- Tire pressure
- Lights
- Beacons
- Vehicle fluid levels
- Outriggers and pads
- Emergency brake
- Leveling system
- Hydraulic lubrication
- Pin retainers
- Structural and mechanical integrity
- Communications equipment
- Jib boom and other material handling
- Boom and boom rest
- Electrical circuits, including ground fault interrupter, start-stop and auxiliary circuits.
- Controls are plainly marked to their function
- Test lift controls
- Traffic cones stored
- Warning signs and flags stored
- First aid kit stored
- Fire extinguisher present
- Emergency rescue equipment

Any problems found during an inspection must be corrected before a bucket truck is operated.

Before driving the bucket truck, perform a “walk around” inspection to make sure the boom is cradled and tied down and all other equipment is secure. Never move a bucket truck with the boom in an elevated position. The driver and all passengers will wear their seatbelts.

Workers will survey the site prior to positioning the truck to perform work. Look for and avoid hazards that may set the stage for tip-over. The truck should have the emergency brake applied and wheels chocked. Outrigger pads may be necessary to assure firm footing. [When extending or retracting outriggers verify that all workers are outside the danger zone.](#) Follow signs and barricades rules for notifying traffic of work zone (located in this Safety & Health Manual).

Personnel should remove all climbers or “gaffs” or unnecessary metal objects that they might be wearing to minimize electrocution hazards. Fall-arrest/[Fall-restraint](#) equipment should be properly attached to anchor points supplied by the bucket truck manufacturer; belting off to other objects or structures is prohibited. The accompanying shock-absorbing lanyard is attached at the center of the wearer’s back, between the shoulder blades, [fall-arrest system](#).

While performing work the employee should [remain](#) “boxed-in.” Stand firmly on the floor with both feet, not sitting or climbing on the bucket lip and never leaning out of the bucket. Do not use planks, ladders or other devices as substitute work positions. Do not move the aerial lift trucks with employees located in the elevated work boom position. Attending personnel may not operate lower controls unless permission has been obtained from the employee in the elevated platform except in the case of an emergency.

Bucket operators will take note of the location of co-workers on the ground prior to lowering the boom to avoid striking any employees working below.

[Do not exceed the manufactures load limits for boom or bucket load.](#)

Emergency Response

If the work cannot be performed in an approved manner using the bucket truck, personnel must find another approach. If a worker becomes injured in the bucket or falls from the bucket and sustains injuries, call 911 immediately. Emergency numbers are posted in all bucket trucks near the dashboard. Then notify Human Resources. Report your location as specifically as possible.

Equipment Maintenance

Aerial lift devices may [not](#) be “field modified” for use other than those intended by the manufacturer. [All modifications shall be pre-approved in writing by the manufacture](#) or by an equivalent authority, such as a nationally recognized testing laboratory, to be in conformity with ANSI/SIA A92.5-1992 requirements to be at least as safe as the equipment prior to modification.

Whenever a fall-arrest system prevents a fall, it must be examined by a competent person and certified sound before it is reused.

Whenever new equipment is acquired an initial inspection and test based on the manufacturer’s manuals will be performed. The Pioneer mechanic will also be responsible for periodic minor and major maintenance performed, and to check the manufacturer’s manual for each truck to determine maintenance requirements.

Corrective Action

Please refer to the Corrective Action section of the Pioneer Personnel Manual.

Training

Training on bucket trucks for Pioneer employees will include manufacturer requirements, Pioneer rules, and government regulations in the curriculum. Training will occur every three years, [sooner for observed unsafe work practices](#) or if new employees are required to receive training as a condition of employment.

Recordkeeping

Human Resources and Outside Plant will retain initial employee training records of individuals authorized to operate specific aerial lift devices. Training curriculum will be stored with the Human Resources training file, while certifications will be filed in the employee's personnel file.

Inspection records will be maintained by the operating employees and stored at the White House.

Vehicle and platform maintenance records will be maintained by the company Mechanic and kept with records at the Warehouse.

All "field modifications" made on bucket trucks will be recorded in detail and filed with manufacturer approvals with the Mechanic's file at the Warehouse.