



Line Clearance and Tree Trimming Safety

Procedures for Working Near Power Lines

Safety procedures for cutting trees by means of climbing or using a bucket truck that is in proximity to electrical hazards

Prior to performing tree work near energized power lines all OSHA and ANSI Z 133.1 regulations and the following procedures must be followed.

- Each crew must have a qualified foreman/supervisor on site at all time with authority to safely direct the work activities of the crew.
- A safety briefing shall take place with the entire crew prior to the start of each shift.
- All overhead and underground conductors shall be considered to be energized with potentially fatal voltages.
- The voltages of any hazardous power lines shall be determined before any employee climbs, enters, or works around any tree. Only qualified personnel shall be utilized to determine the voltage prior to work commencing.
- Only insulated and properly inspected equipment shall be utilized when removing tree branches that are in contact with exposed energized conductors and/or equipment.
- Work shall stop when adverse weather conditions are present.
- All brush chippers must have either a mechanical infeed system or an infeed hopper.
- All power saws must be turned off when the saw is being carried up a tree.
- All climbing equipment, including primary and secondary ropes, shall be inspected before each use for damage or defects.



- A pre hazard assessment of each tree will be completed prior to climbing or bucket truck operation. During the hazard assessment the foreman will instruct the crew what the plan of action is going to be. The foreman along with the tree worker (qualified line clearance tree trimmer/trainee) will review the distances of the power lines to any part of the tree (trunk, limbs, etc.) so that all present dangers are looked at and all regulations are followed.
- Only qualified line clearance tree trimmers or qualified line clearance tree trimmer trainees that go within 10 ft of any energized electrical conductors in excess of 750 volts (primary conductor) shall perform the task at hand. Only employees trained in the skills and approved techniques shall be allowed to work safely around energized or exposed live parts. All qualified employees climbing or operating bucket trucks must obey the minimum approach distance of 2'4" from energized conductors as stated in ANSI Z133.1 5.2 table 1.
- For each line clearance tree trimmer or trainee that will be working in proximity to electrical hazards there must be a second qualified trimmer/trainee arborist (with climbing gear on stand – by) within visual or voice distance that will be able to perform aerial rescue.
- If the minimum approach distances from table 1 or 2 at any time cannot be maintained, work must be stopped and a power outage/power drop will need to be coordinated.
- All other equipment (i.e. cranes, scissor lifts, skid steers) and arborists that are not line clearance qualified shall maintain minimum approach distances (10 ft) from energized electrical conductors as stated in ANSI Z133.1 5.2 table 2.
- All equipment (knuckle booms, bucket trucks, scissor lifts, roll off trucks, etc.) entering and exiting properties shall be aware of and avoid all overhead lines.

Climbing:

- Climbers should not use a steel corded positioning lanyard while working in proximity to electrical hazards. When climbing, arborist should climb on the back side of the tree away from the energized electrical conductors as required in ANSI Z133.1 5.2 Tables 1 & 2.
- The tie – in position of a climber should be above the work area and located in such a way that a slip would swing the arborist away from any energized electrical conductor or other identified hazard (ANSI Z133.1 5.2.7).
- All ropes and arborist climbing equipment should meet ANSI Z 8.7 standards.
 - All climbing equipment shall be inspected before each use and stored or transported in a place where it will not be damaged.
- While climbing, arborist will be tied off 100% of the time. There will be “NO FREE CLIMBING”
- Arborist while working aloft shall have available a minimum of two means of being tied in (i.e. a climbing line and a positioning lanyard).
- While working aloft drop starting chainsaws is permissible as long as the area below is not occupied.
- Climbers when operating a chain saw aloft shall use a second point of attachment (work positioning lanyard or a double crotched rope).



- While operating a chain saw aloft they shall be held with two hands and never be used to cut above the shoulders.
- Before an arborist working aloft cuts or drops any part of a tree he must do a visual check below and give some kind of verbal warning signal.
- Proper rigging and lowering techniques must be performed when there is any potentially dangerous hazards such as houses, secondary power lines, phone and cable lines, guy wires, etc.

Bucket trucks:

- A visual hazard assessment shall be performed on each tree and the overhead exposures prior to entering or performing any work.
- A daily inspection and operational checks of each piece of equipment needs to be done and documented prior to each work day.
- Booms or buckets shall not make contact with energized electrical conductors, guy wires, poles, trees, or similar objects (ANSI Z133.1 6.2.14).
- There must be an up to date dielectric test certification on each bucket truck used in line clearance work prior to starting any work.
- Buckets shall not be tampered with at any times (i.e. holes drilled into outer bucket).
- One person buckets shall not have more than one person in them during tree work operations.
- Bucket trucks shall never be used unless outriggers are fully extended on solid ground and level. Pads should be used in areas where workers need to ensure ground is stable.
- Operators of the outriggers shall give a verbal warning sign before lowering outriggers.
- Each operator shall wear a full body harness and an approved fall protection lanyard while working aloft in a bucket.
- Each fall protection system shall be attached to a secured point that will withstand 5000lbs of pressure.
- The boom of the bucket truck shall never be used as cranes or hoists to lift or lower materials.
- Bucket trucks shall never be moved with an employee in an elevated bucket.
- Before an arborist working aloft cuts or drops any part of a tree he must do a visual check below and give some kind of verbal warning signal.
- While working aloft drop starting chainsaws is permissible as long as the area below is not occupied.
- While operating a chain saw aloft they shall be held with two hands and never be used to cut above the shoulders.
- Proper rigging and lowering techniques must be performed when there is any potentially dangerous hazards such as houses, secondary power lines, phone and cable lines, guy wires, etc.

