

# Minnesota Electrical Association Electrical Toolbox Talks 

## Ladder Safety

Most ladder accidents occur from improper selection or use which results in over-reaching, tipping, and falls. Here are some guidelines for preventing ladder accidents on the jobsite.

- Ladders must be used on stable and level surfaces unless secured to prevent accidental movement. Also, ladders must not be used on slippery surfaces unless secured or provided with slip-resistant feet to prevent accidental movement. Slip-resistant feet should not be used as a substitute for the care in placing, lashing, or holding a ladder upon slippery surfaces.
- Ladders should not be loaded beyond the manufacturer's rated capacity. Look at the labeling on the ladder to identify its rated capacity.
- Ladders placed in areas such as passageways, doorways, or driveways, or where they can be displaced by workplace activities or traffic must be secured to prevent accidental movement, or a barricade must be used to keep traffic or activities away from the ladder.
- Ladders must not be moved, shifted (walked), or extended when being used by an employee.

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- Use nonconductive side rails if a worker or the ladder could contact exposed energized electrical equipment. Stay 10 feet from power lines unless you're qualified to be closer.
- When ascending or descending any ladder, you must face the ladder.
- You must use at least one hand to grasp the ladder when climbing. This rule requires you to maintain three points of contact at all times when ascending or descending.
- A worker on a ladder must not carry any object or load that could cause him/her to lose balance and fall. Use a hand line to raise and lower loads.
- Portable ladders with structural defects such as broken or missing rungs, cleats or steps, or broken or split rails, corroded components, or other faulty or defective components must be taken out of service.


## Ladder Safety <br> (continued)

## Extension Ladders

- When extension ladders are used for access to an upper landing surface, the side rails must extend at least $3 \mathrm{ft}(0.9 \mathrm{~m}$ ) above the upper landing surface. When such an extension is not possible, the ladder must be secured and a grasping device such as a grab rail must be provided to assist workers in mounting and dismounting the ladder.
- OSHA does not allow the top 3 rungs on an extension ladder to be used as steps.
- Extension ladders must be used at an angle where the horizontal distance


Slip-resistant feet from the top support to the foot of the ladder is approximately one-quarter of the working length of the ladder ( 20 ft up means 5 ft out). Some ladders have a special sticker on the side rail to help ensure that you have set up the ladder at the proper angle.

- The top of a non-self-supporting ladder must be placed with two rails supported equally unless it is equipped with a single-support attachment.


## Portable Step Ladders

- The top plate and first rung down on a stepladder must not be used as a step according to OSHA rules. This is because the ladder becomes especially unstable at the very top of the ladder.
- Cross bracing on the rear section of stepladders must not be used for climbing unless the ladders are designed for it and are provided with steps for climbing on both front and rear sections.
- Spreaders must be fully extended before use.


## Permanent (fixed) ladders (OSHA 1926.1053)

If the fixed ladder is 24 ft or more, ladder safety devices, and related support systems, shall conform to all the following:

- They shall be capable of withstanding without failure a drop test consisting of an 18" drop of a 500-pound weight;
- They shall permit the employee using the device to ascend or descend without continually having to hold, push or pull any part of the device, leaving both hands free for climbing;
- They shall be activated within 2 ft after a fall occurs, and limit the descending velocity of an employee to $7 \mathrm{ft} / \mathrm{sec}$. or less;


Fall Restraint

- The connection between the carrier or lifeline and the point of attachment to the body belt or harness shall not exceed 9 " in length.

