LADDERS

Never climb ladders while carrying a heavy load. Ladders require the use of both hands. Loads not only tie up the hands, but also unbalance the body. Loads should be lifted by winch or pulley.

1. Ladders and Climbing

Climbing can be very hazardous and every employee must use good judgment when climbing is necessary. The employee needs to understand how to inspect equipment for damage and how to safely use the climbing equipment. The remainder of this section will cover the use of ladders for climbing. If ropes and specialized equipment are needed for climbing, the employee should receive formal training prior to attempting to use the equipment.

Ladders

- Always choose the ladder that appropriately meets the specifications of the job.
- All wood ladder parts shall be free from sharp edges and splinters, sound and free from accepted visual inspection from shake, wand, compression failures, decay, or other irregularities. Metal ladders should not have sharp edges, burrs or other defects.
- Ladders shall be maintained in good condition at all times, the joint between the side rails shall be tight, all hardware and fittings securely attached, and the movable par. Metal ladders should not have sharp edges, burrs or other defects.
- Safety feet and other auxiliary equipment shall be kept in good condition to insure proper performance.
- Ladders shall be inspected frequently and those which have developed defects shall be withdrawn from service for repair or destruction and tagged or marked as “DANGEROUS, DO NOT USE”.
- Rungs should be kept free of grease and oil.
- Portable rung and cleat ladders shall, where possible, be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is one-quarter of the working length of the ladder. The ladder shall be so placed as to prevent slipping, or it shall be lashed, or held in position. Ladders shall not be used as platforms, runways, or scaffolds.
- Ladders shall not be placed on boxes, barrels, or other unstable bases to obtain additional height.
- No ladder should be used to gain access to a roof unless the top of the ladder shall extend at least 3 feet above the point of support, at eave, gutter, or roofline.
- Tops of stepladders shall not be used as a step.
- Only one person shall use a ladder at a time.
- When ascending or descending, the climber must face the ladder.
- Users are cautioned to take proper safety measures when ladders are used in areas containing electric circuits to prevent short circuits or electrical shock.
- Ladder rungs must be evenly spaced in order to prevent a miss step that can result in loss of balance or grip and the possibility of falling. If rungs are not evenly spaced, extra caution must be used.
• Store ladders where they are protected from the elements and inaccessible to unauthorized personnel.
• Do not cover entrances or exits with ladders or leave them in positions that might be hazardous to people in the area.

2. Climbing Ladders

Persons preparing to climb ladders should wear sturdy well fitted gloves, sturdy boots in good repair, and clothing that is snug enough so that it is not likely to catch on the ladder.

Climbing and descending should be done facing the ladder. The foot should be placed on one rung at a time (never skip rungs) so that the front edge of the heel is against the rung to prevent slipping, particularly on wet, oily or slippery rungs. The hands should firmly grasp the rungs, not the rails. Gripping the rungs for climbing, as fire fighters are trained to do, provides greater control and less chance of slipping than gripping the side rails of a ladder; the climbing rhythm should be followed so that at any time one hand has a firm grip on a rung while the other is reaching for the next rung up or down.

Safe climbing requires both hands to be free for gripping the rungs of the ladder. Nothing should be carried in the hands while climbing. If tools and small equipment cannot be hoisted, they should be carried up ladders only in backpacks, on shoulder straps, or on belts.

Care should be taken to prevent tools or equipment (in backpacks, in pockets, or on tool belts) from catching on a rung or rail and throwing the climber off balance, or from becoming dislodged from the pack and falling to a lower surface.

Portable ladders should be checked for total weight capacity. Never have more than one person climbing the ladder at one time. Check that there are no bows, bends, cracks, or rotted wood in the ladder. Never use a make shift ladder constructed on site. Never use ladders as scaffolding or bridges to cross open areas. Ladders are designed to have part of the weight distributed in downward compression on the rail members. Use of a ladder as a scaffold or bridge may exceed its design strength and should not be used in that manner.

Use only ladders that have cleat, no-slip feet or bottom pads. The single most frequent accident involving portable ladders is the bottom slipping outward away from the vertical support surface. Make sure the bottom of the cleat pads rest on a non-slip level surface. Beware of gravel, grass, smooth wet concrete, or oily slippery surfaces.

Before climbing a portable ladder, position a crewmember at the foot of the ladder to stabilize the bottom while climbing is taking place.

Make sure the ladder is properly positioned on a secure and level surface before climbing. Never attempt to shift or move a ladder while still on it. Remove all equipment hanging from the rungs before shifting position of the ladder. When moving a ladder, position one crewmember on each side to firmly grasp and stabilize it. Position the ladder with the base a safe distance from the vertical surface it is up against. If the base is too close to the vertical surface, there is the danger of the weight of the climber causing the ladder to fall backwards. If the base is too far from the surface there is increased strain on the structural members of the ladder and a tendency for the bottom to slip away from the vertical surface.
3. Pitch of Fixed Ladders

Fixed ladders shall be considered as substandard if they are installed within the pitch range of 60 and 75 degrees with the horizontal. Substandard fixed ladders are permitted only where it is found necessary to meet conditions of installation. This substandard pitch range shall be considered as a critical range to be avoided if possible.

Pitch greater than 90 degrees ladders have a pitch in excess of 90 degrees with the horizontal and are prohibited.

Maintenance – All ladders shall be maintained in a safe condition. All ladders shall be inspected regularly, with the intervals between inspections being determined by use and exposure.