

Portable Ladder Safety Plan



Chris Gorham

Loss Control Manager



Every year thousands of workers are injured after falls from heights, and there are several dozen fatalities. Many of these accidents involve ladders – usually the misuse of them, as using a ladder in a safe and cautious manner virtually precludes the possibility of workplace injury. It should be obvious to any corporation or small business that keeping your employees healthy and working is preferable to having them injured and convalescing or, potentially, making injury claims against you. The key to avoiding these unfortunate situations is to implement proper Portable Ladder Safety Plan in your workplace – and then ensure that your employees participate in it and take it's lessons to heart.

Common Mistakes

The problem with ladders is that everyone assumes they are so simple as to need no training. After all, the concept is obvious: You either lean the ladder against a wall until friction and gravity hold it in place, or you open a stepladder and climb up. Easy! Yet

there are many ways to go wrong. The assumption that there is nothing to learn about ladder safety is the first mistake many workers make.

The most common misuses of ladders that lead to workplace injury are: overreaching/leaning, using a ladder of insufficient height, combining ladders, placing ladders on unstable surfaces (such as tables), and failure to secure rubber feet or to lock the spreaders of a stepladder. While some of these practices may seem to be failures of common sense, many unsafe uses of a ladder can be corrected with the implementation of portable ladder safety plan and proper training. See sample plan below to use as a guide in formulating your own portable ladder safety plan:

[Company name]

Portable Ladder Safety Plan

Plan last updated: [date]

Authority and Scope

This Plan is authorized by **[name]**.

Regulation: Ladders (29 CFR 1910.23) **[Replace with state regulations if applicable.]**

Scope: This Plan applies to all **[name]** employees and contracted employees in all construction areas.

Policy Statement

It is the policy of this organization to prevent injuries to all employees and ensure their safety at work. We will evaluate all slip, trip, and fall hazards related to the use of portable ladders and implement procedures and communication programs to protect workers from injury. All portable ladders will be provided and maintained free of slip, trip, and fall hazards that could result in injury to workers and visitors.

Plan Administration

Function	Name/Department	Phone
Plan Administrator		
Competent Person		
Supervisor		

Plan Administrator. The Administrator will:

- Ensure compliance with safety and health regulations and policies for portable ladders.
- Develop, implement, and periodically evaluate the effectiveness of this Plan.
- Enforce all safety policies and procedures in the Plan.
- Ensure that all personnel who use portable ladders are trained in safe work practices.

Competent person. The competent person will conduct periodic inspections, surveys, and analyses of slip, trip, and fall hazards for all portable ladders.

Supervisors. Supervisors will:

- Periodically inspect for slip and fall hazards related to portable ladders, and continually conduct safety checks of work operations.
- Enforce all safety policies and procedures in this Plan.
- Take defective ladders out of service.

Employees. All employees will:

- Follow the procedures of this Plan and the instructions of their supervisor.
- Report any unsafe or hazardous conditions or acts that may cause injury to either them or any other employees.
- Properly care for and use portable ladders according to the procedures in this Plan and manufacturer's instructions
- Avoid activities that could result in personal injury or injury to others.

Plan Review and Update

This Plan will be reviewed annually by all supervisors to insure the program's effectiveness and changed or updated as needed.

Definitions

Cleat means a ladder crosspiece or rectangular cross section placed on edge upon which a person may step while ascending or descending a ladder.

Competent person means a person capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Extension ladder means a non-self-supporting ladder that is adjustable in length.

Fixed ladder means a ladder that is permanently attached to a structure, building, or equipment.

Handrail means a rail used to provide employees with a handhold for support.

Maximum intended load means the total load (weight and force) of all employees, equipment, tools, materials, and other loads that could reasonably be anticipated to be applied to a walking-working surface (such as a ladder) at any one time.

Portable ladder means a ladder that can be readily moved or carried.

Qualified person means a person who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience has successfully demonstrated the ability to solve or resolve problems relating to subject matter (in this application, portable ladder safety).

Rung, step, or cleat means the crosspiece of a ladder on which an employee steps to climb up and down.

Single ladder means a ladder consisting of a pair of side rails connected together by cleats, rungs, or steps.

Stepladder means a self-supporting portable ladder, nonadjustable in length, having flat steps and a hinged back.

Stepstool means a self-supporting, portable ladder that has flat steps and side rails, a fixed height, no pail shelf, and does not exceed 32 inches in overall height to the top cap. A stepstool is designed so that an employee can stand on all of the steps and the top cap.

Two-section ladder means a non-self-supporting portable ladder adjustable in length consisting of two sections.

Walking-working surface means any horizontal or vertical surface on or through which an employee walks, works, or gains access to a work area or workplace location.

Hazard Assessment

The competent person will conduct a job hazard analysis (JHA) or assessment of areas where portable ladders are used for potential slip, fall, electrocution, and other hazards.

The competent person will consider all possible ladder-related hazards, including:

- Slipping of the ladder base
- Slips and falls while climbing or working from a ladder
- Tipping sideways
- Excessive loading
- Damage to ladders and components
- Electrical power lines
- Heat sources
- Slippery floors
- Uneven or unstable surfaces
- Obstructions
- Pedestrian or vehicle traffic

See the attached *Job Hazard Analysis Worksheet* and the *Slips, Trips, and Falls Hazard Assessment Survey* forms for more information.

Ladder Specifications

Design and Construction Requirements

The following design and construction specifications apply to all portable ladders:

- Ladder rungs, steps, and cleats, except for those on stepstools, must be spaced not less than 10 in. (25 cm) and not more than 14 in. (36 cm) apart, as measured between the centerlines of the rungs, cleats, and steps.
- Steps on stepstools must be spaced not less than 8 in. (20 cm) and not more than 12 in. (30 cm) apart.
- Ladder rungs, steps, and cleats, except for those on stepstools, must have a minimum clear width of 11.5 in. (29 cm).
- Stepstools must have a minimum clear width of 10.5 in. (26.7 cm).
- Wooden ladders must not be coated with any material that could obscure cracks, damage, or other structural defects.
- Metal ladders must be made with corrosion-resistant material or protected against corrosion.
- Rungs and steps of metal ladders must be corrugated, knurled, dimpled, coated with skid-resistant material, or otherwise treated to minimize slip hazards.
- Ladder surfaces must be free of puncture and laceration hazards.
- Stepladders must be equipped with a metal spreader or locking device that securely holds the front and back sections in an open position while the ladder is in use.

Selection and Setup

The following selection and setup requirements apply to all portable ladders:

- Ladders must be used only for their intended purpose.
- Employees working in proximity to exposed live electrical parts must use a ladder with nonconductive side rails. Metal ladders should never be used around electrical hazards.
- Ladders must never be loaded beyond the maximum intended load, which includes the weight of the employee and all tools, equipment, and materials being carried.
- Ladders must be inspected before use in each work shift, and more frequently as necessary, to identify any visible defects that could cause injury.
- Ladders that are found to be damaged or defective must be immediately tagged “Dangerous: Do Not Use” or with similar language and removed from service until repaired or replaced.
- Ladder steps, rungs, and cleats must be free of oil, grease, ice, and other substances or materials that could create a slip hazard.
- Ladders must be used only on stable and level surfaces unless they are secured or stabilized to prevent accidental displacement.
- Ladders used on slippery surfaces must be secured and stabilized.
- Portable ladders used to access an upper landing surface must have side rails that extend at least 3 ft (0.9 m) above the upper landing surface.
- The top of a non-self-supporting ladder (i.e., extension ladder or straight ladder) must be placed so that both side rails are supported, unless the ladder is equipped with a single support attachment.
- For non-self-supporting ladders, the base of the ladder should be placed at a distance from the vertical wall equal to one-fourth the working length of the ladder. For example, the base of a ladder with a working length of 16 ft should be placed 4 ft from the vertical wall.

Safe Work Practices

Employees must always follow these safe work practices when using a portable ladder:

- Employees must always face the ladder when climbing up or down.
- Employees must always use at least one hand to grasp the ladder when climbing up or down.
- Employees must not carry any object or load that could cause them to lose balance and fall when climbing up or down a ladder. Employees should transport materials in a tool belt or shoulder strap, or hoist materials up after climbing.
- Ladders must never be moved, shifted, or extended while in use.
- Ladders placed in passageways, doorways, driveways, or other locations where they could be displaced by other activities or traffic must be secured to prevent accidental displacement or guarded by a temporary barricade, such as traffic cones or caution tape, to keep activities and traffic away from the ladder.
- Employees must never stand on the cap or top step of a stepladder (except for stepstools).
- Employees must never tie or fasten together ladders or ladder sections to gain added length, unless they are specifically designed for this use.

- Ladders must never be placed on boxes, barrels, or other unstable bases to gain additional height.

Transporting Ladders

- If possible, employees should carry ladders in pairs with one employee at each end.
- If employees must carry a ladder alone, they should balance the center of the ladder on their shoulder, keeping the front end above their head and the back end near the ground.
- Use caution when carrying a ladder around corners.
- If a ladder must be transported in a vehicle, it should be secured with ties to prevent it from moving or falling off during transport.

Ladder Storage

Ladders will be stored in the following manner:

- Store all ladders in an area sheltered from exposure to excessive heat, moisture, chemicals, or other elements that would lead to premature deterioration or to damage.
- Store wood ladders affected by exposure to heat and dampness in a well-ventilated area.
- Store straight and extension ladders horizontally on racks or hooks with support points at the top, middle, and bottom of the ladder to prevent sagging and warping.

Inspections

All ladders will be inspected regularly, with the intervals between inspections being determined by use and exposure. A qualified person will inspect ladders for visible defects periodically and after any incident that could affect their safe use.

All ladders will be inspected for:

- Shake
- Wane
- Compression failures
- Decay
- Other irregularities

If a ladder tips over, immediately inspect it before subsequent use for:

- Side rail dents or bends
- Damage to rung-to-side-rail connections
- Damage to hardware connections
- Rivets for shear

Maintenance and Care

All ladders will be maintained in good condition at all times. The following maintenance and care procedures will be implemented during each workshift:

- Keep joints between steps and side rails tight.

- Ensure all hardware and fittings are securely attached.
- Ensure moveable parts operate freely without binding or undue play.
- Replace frayed or badly worn rope.
- Keep safety feet and other auxiliary equipment in good condition to insure proper performance.
- Keep ladder rungs and steps free of grease, oil, ice, and other debris.

Lubricate metal bearings of locks, wheels, pulleys, and other moving or adjustable parts at regular intervals depending on frequency and severity of use.

Repair

Improvised ladder repairs are prohibited.

Ladders needing repairs are subject to the following rules:

- Portable ladders with structural defects—such as broken or missing rungs, cleats, or steps, broken or split rails, corroded components or other faulty or defective components—will immediately be marked defective or tagged with “Do Not Use” or similar language and withdrawn from service until repaired.
- Ladder repairs must restore the ladder to a condition meeting its original design criteria before the ladder is returned to use.
- A qualified person must perform or supervise all ladder repairs that affect the structural integrity of the ladder.

Accident Investigation

All incidents that result in injury to workers, as well as near misses, will be reported and investigated. Investigations will be conducted by a qualified person as soon after an incident as possible to identify the cause and means of prevention to eliminate the risk of reoccurrence.

See the attached *Accident Investigation Report* form for more information.

In the event of an incident that results in serious injury, this Plan will be reevaluated to determine if additional practices, procedures, or training is necessary to prevent future incidents.

Training

A qualified person will provide training in ladder hazards and safe practices to all employees who may use portable ladders at time of hire and as needed thereafter. All employees will be trained to recognize hazards related to portable ladders and instructed how to minimize or eliminate these hazards. Training will include, as applicable:

- The nature of slip and fall hazards related to portable ladders
- Proper use, placement, and care in handling of all portable ladders
- Safe practices for ladder transportation and storage
- Maximum intended load-carrying capacities of ladders used

Safety Meetings

Supervisors will provide safety meetings or talks to employees as a group every *[insert frequency]* and to individual employees who fail to follow safe procedures.

Retraining

Each employee will be retrained as necessary to maintain his or her understanding and knowledge on the safe use of portable ladders.

Training Recordkeeping

Training will be documented with employee sign-in sheets, date of training, and the training session agenda.

Recordkeeping

Copies of all hazard assessments, ladder specifications, inspection forms, and safety checklists will be maintained at *[insert location]* for *[insert duration]*.

Sources:

- Cal OSHA
- BLR

Questions or Assistance:

Chris Gorham
Loss Control Manager
York Risk Services Group, Inc.
Cell: (916) 738-9046
Email: Christopher.gorham@yorkrsg.com