STAIRWAYS AND LADDERS

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Stairways and ladders are among the most frequently used items on the job. Routine use of stairs and ladders can lead to carelessness. Accident figures show that traveling up and down stairs is not always as safe as it looks. A recent study showed 34,000 reported accidents involving ladders or stairways. Most of these incidents could have been avoided with proper maintenance, selection and use of climbing equipment.

Safety on ladders and stairways at your workplace involves understanding what they are designed for and how to use them. This handbook will teach you how to inspect, set up and use ladders properly. You’ll also learn work practices that will enable you to climb stairways safely.
PORTABLE LADDERS

SET-UP AND USE
Selecting the right ladder for the job is the first step to ladder safety. The ladder’s type tells how much weight it can support.

- **Type 1A** — Extra-heavy industrial ladder: 300 lbs.
- **Type 1** — Heavy-duty industrial ladder: 250 lbs.
- **Type 2** — Medium-duty commercial ladder: 225 lbs.
- **Type 3** — Light-duty household ladder: 200 lbs.

Remember when you’re choosing a ladder, that it has to hold your weight plus the weight of any tools and materials you're carrying.

STEPLADDERS
One common portable ladder is the stepladder. Stepladders:
- Stand by themselves
- Are not adjustable in length
- Have a hinged back
- Have flat steps six to 12 inches apart
- Are at least 11 1/2 inches wide at the top
- Open at least one-inch for each foot of ladder length.

Rules for using stepladders safely:
- Make sure the ladder is fully open and the spreaders are locked.
- Do not climb, stand or sit on the top two rungs.

EXTENSION LADDERS
Another common portable ladder is the extension ladder. Extension ladders are:
- Lightweight and durable
- Adjustable in length
- Made up of two or more sections that travel in guides or brackets
- At least 12 inches wide
- Not longer than 20 feet per section.

Extension ladders should have positive stops to ensure safe overlap of the sections. The overlap needed depends on the total length of all sections measured along the side rails.

- Ladders up to 32 feet long use a three-foot overlap.
- Ladders from 32 to 36 feet use a four-foot overlap.
- Ladders from 36 to 48 feet use a five-foot overlap.
- Ladders over 48 feet use a six-foot overlap.
Follow these rules when using extension ladders:
- Have a co-worker help you raise and lower the ladder.
- Never raise or lower the ladder with the fly section extended.
- Be sure to secure or foot the ladder firmly before extending it.

- Figure out and use the right set-up angle or pitch. The distance from the foot of your ladder to the base of what it is leaning against should be about one fourth of the distance from the ladder’s top support to its bottom support.
- Set up the ladder with about three feet extending above the working surface.

**General Safety Tips**

Important rules for setting up and using portable ladders:
- Make sure the ladder will be standing on a firm level surface.
- Try not to set a ladder up in a passageway. If you must use a ladder in a passageway, set out cones or barricades to warn passers-by.
- Never place a ladder on an unstable base for more height.
- Use both hands for climbing.
- Hoist your tools if carrying them would keep you from using both hands.
- Don’t stretch in order to reach something. Climb down and move your ladder.

- Tie off the ladder to a secure object at chest height. With longer ladders, tie off the top part also.
- Use wooden or fiberglass ladders for electrical work or in areas where contact with electrical circuits could occur.
- Do not use a ladder for anything other than a ladder.
**FIXED LADDERS**

Fixed ladders are permanently attached to buildings or other structures. Some fixed ladders have rungs that are individually attached to the structure. These ladders have no side rails and are dangerous to climb. All fixed ladders must meet certain safety requirements.

- They must be able to support at least two loads of 250 lbs. on any two consecutive points of attachment.
- They must be able to withstand rigging, impact loads and various weather conditions.
- The rungs must be parallel, level and uniformly spaced.
- The rungs cannot be more than 12 inches apart.
- The rungs should not be more than 16 inches long.
- If a fixed ladder is longer than 20 feet, it must have safety devices, such as cages or wells, to protect falling workers.

**QUALIFIED CLIMBERS**

If some of the fixed ladders at your workplace are climbed only a few times a year, your company may set up a Qualified Climber Program.

- A climber’s physical fitness is determined either by performance tests or by a physician who knows the physical demands of the job.
- A qualified climber must be properly trained and in good physical condition.
- A qualified climber can be assigned to climb without fall protection under certain conditions.
- A qualified climber must use proper fall-protection equipment once he reaches the work area.
CLIMBER TRAINING

A qualified climber’s training should include classroom lessons and actual climbing instruction.

- The classroom questions should cover:
  * Safety equipment
  * Safe climbing methods
  * Climbing risks during bad weather
  * How to perform the work task once the employee has reached the work area.

- Climbing instruction includes:
  * Observation of other qualified climbers
  * Hands on climbing under close supervision with and without fall protection.
  * After a worker has shown he is able to climb without fall protection, his trainer or supervisor can rate the worker as a qualified climber.

INSPECTION AND MAINTENANCE

Ladders must be kept in good condition at all times. They need care and cleaning, especially when used in oily or greasy areas or left outside. Regular inspections will help make sure ladders are safe.

Check each ladder in these ways:
- Look for broken or missing steps or rungs.
- Look for broken or split side rails and other defects.
- Feel for soft areas on wooden ladders.
- Check for rust or weakness in the rungs and side rails of metal ladders.
- Also, look for corrosion on the inside of open-ended hollow rungs.
- Check fallen or misused ladders for excessive dents or damage.
- Make sure the connections between the rungs and side rails haven't come loose.
- Tag defective ladders Out of Order or Do Not Use.
A stairway is a series of steps and landings that has four or more risers. Stairways let you move from one level of a structure to another. They can lead to platforms, pits, machinery, or crossovers. Spiral stairways are not permitted in many industrial settings, but they can be found on tanks and other round structures more than five feet across.

**SAFETY REQUIREMENTS**

There are certain safety requirements for stairways.

- A fixed stairway must be strong enough to carry five times its maximum intended load.
- All stairway treads must be slip-resistant.
- Railings are required on the open sides of exposed stairways.
- Enclosed stairways should have handrails on one side.
- A stairway must provide a safe platform for doing everyday operations and maintenance.

Most stairway accidents occur because workers do not realize the hazards of climbing stairs. Some common causes of stairway accidents are:

- Dangerously high stairways
- Poor lighting or glare
- Poor housekeeping
- Slippery or greasy steps.
SAFETY ON STAIRWAYS

Some simple work practices will help you climb stairs safely:
■ Pay close attention as you climb. On the way down, look for the leading edge of each step.
■ On poorly lit stairways be extra careful and take your time.

■ Reduce fatigue on long climbs by minimizing your load if you can and take rest breaks when needed.
■ Always use railings and handrails.
■ Use the safe platforms provided when working on stairways.
■ Never use stairways as storage areas.
■ Clean up cluttered or slippery steps.

SUMMARY

Using ladders and stairways properly is an important part of safeguarding your health. Choose the right ladder for each job, follow the basic rules for using it safely and perform regular inspections and maintenance. On stairways, pay close attention while you climb, use the handrails and help keep steps clean and free of clutter.

Taking just a little extra care will enable you to climb stairways and ladders safely and with confidence.
1. True False Everyone knows how to climb stairways and ladders, so accidents on them are very rare.

2. True False The type of ladder determines how much weight it can support.

3. True False The length of a stepladder can be adjusted.

4. True False It’s okay to sit on the top rung of a stepladder, as long as you don’t stand on it.

5. True False Extension ladders are made up of two or more sections that travel in guides or brackets.

6. True False The greater the total length of an extension ladder is, the more its sections should overlap.

7. True False You should always leave a distance of three feet between the foot of an extension ladder and the building it’s leaning against.

8. True False It’s important to make sure all ladders are placed on a firm and level surface.

9. True False Face the ladder and hold on as you climb.

10. True False Metal ladders are the strongest kind, so they’re the best ones to use no matter what type of work you’re doing.

11. True False A fixed ladder is a ladder that is permanently attached to a building other permanent structure.

12. True False The rungs of a fixed ladder can be up to 24 inches apart.

13. True False Under certain conditions a qualified climber can be assigned to climb a structure without fall protection.

14. True False Any worker who is in good physical condition is a qualified climber.

15. True False When inspecting a ladder, you only have to look for missing or broken rungs.

16. True False If a ladder is defective, it should be tagged Out of Order or Do Not Use.

17. True False A fixed stairway is strong enough if it can support twice its maximum intended load.

18. True False Poor lighting can make stairways more hazardous.

19. True False Railings are put on stairways only to give you something to grab onto if you start to fall.

20. True False Everyone should help keep steps clean and clutter free.

ACKNOWLEDGEMENT OF TRAINING

I have read and understand the training handbook, Stairways and Ladders. I have also completed and passed the comprehensive quiz at the conclusion of the handbook.

Employee’s Signature Date

Trainer’s Name Date

NOTE: This record may be included in the employee’s personnel or training file.