Ladder Safety

WHY DO PEOPLE FALL? IT'S LIKELY A PLANNING PROBLEM.

Written by Alex Miller, ARM, OHST

You can analyze multiple incident examples at your own organization, and what you will find is that many will point to the same basic lesson: a ladder problem is typically a planning problem. They arise from everyday actions that stem from either poor or no planning of what they are going to do, like;

- Using the wrong ladder for the task,
- Rushing the setup to get done quicker,
- Overreaching instead of repositioning,
- Carrying materials while climbing, or
- Continuing to use a ladder that should have been removed from service.

Some typical examples are where a worker fell backward off an extension ladder onto concrete. In another, a worker carrying a metal ladder contacted an overhead power line. Those choices will lead to falls, electrical contact, damaged materials, lost time, and preventable costs.

Different tasks, same pattern: the work started before the hazards were fully recognized, analyzed, and eliminated, or at least controlled.

Why this topic deserves attention

- A ladder task is often treated as routine, but routine tasks are exactly where complacency can take hold.
- When ladder work is planned and executed well, organizations can avoid injuries.
- Preventing injuries will keep crews productive, reduce warranty work, and help keep schedules on track.
- The idea here is not simple compliance with a regulation. The benefits of sending people home unhurt are more important and beneficial to everyone involved.

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What can drive ladder incidents

- Workers have not been taught how to identify the correct ladder for the task at hand.
- The ladder is in poor condition, damaged, or contaminated with slippery material, and the person uses it anyway.
- The ladder is used in a way it was never designed for because;
  - The wrong ladder was brought to the job,
  - The job changed, and a new type of ladder was not used,
  - No pre-planning was done to determine what was needed, so someone “guessed”.
- Unsafe surroundings, such as uneven ground, traffic, clutter, or overhead power lines, are ignored instead of being addressed.

What portable ladder safety involves

These are not isolated technical mistakes. They are signals about work planning, supervision, and field discipline. The more routine the task feels, the more important it is to keep those signals visible. We will be discussing the 4 areas that involve portable ladder safety, and these are areas that are critical for people within your company to know, so they can plan ladder use appropriately:

1. Design and Construction
2. Ladder Selection
3. Inspection, Use, and Maintenance
4. Employee Training

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1. Design and Construction

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Ladders are built for different jobs, and that matters more than many crews realize. A step ladder, a single ladder, and an extension ladder do not behave the same way in the field.

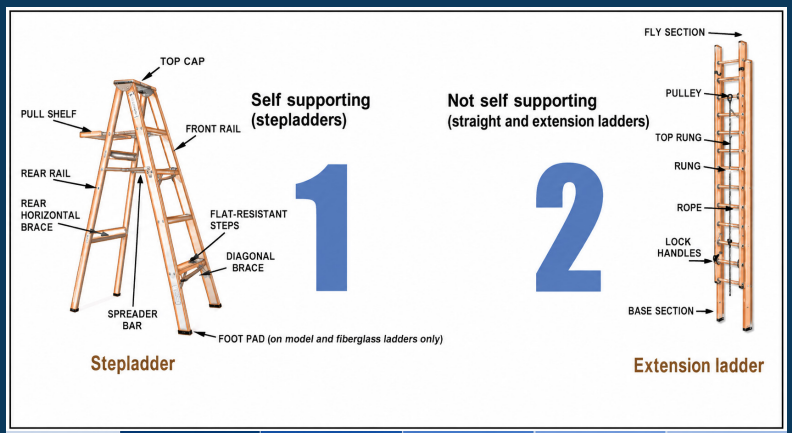
Material also matters. Aluminum may be light and convenient, but it is a poor choice anywhere electrical exposure is possible. Fiberglass may be the better option when conductivity must be controlled. The right construction features make safe work easier; the wrong ladder creates unnecessary risk before the climb even starts.

Good ladder design supports good decisions in the field. Crews benefit when the ladder type, height, and duty rating are obvious, easy to verify, and matched to the task. That reduces improvisation and helps supervisors standardize expectations from one site to the next. The best and most obvious is that the person is more comfortable and efficient while using the correct tool for the job.

BUSINESS VALUE: STANDARD EQUIPMENT REDUCES VARIABILITY

Standardizing equipment essentially means you are pre-planning tasks and associating specific tools with specific tasks beforehand. The results are...

- Crews spend less time making do with the wrong equipment.
- Supervisors can coach one clear method instead of correcting improvisation.
- The likelihood of damage, delay, and injury drops when the ladder matches the job from the start.



TYPE	TYPE IAA	TYPE IA	TYPE I	TYPE II	TYPE III
LOAD CAPACITY	375 pounds	300 pounds	250 pounds	225 pounds	200 pounds
RELATED USE	Special Duty Professional Use	Extra Heavy Duty Industrial Use	Heavy Duty Industrial Use	Medium Duty Commercial Use	Light Duty Household Use

2. Ladder Selection

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Selection should be driven by the job, the environment, and the worker. The ladder must be tall enough to reach the work without forcing anyone onto the top steps or top rungs. It must have enough capacity for the worker, clothing, tools, and materials. It must also fit the space available. This means taking into consideration things like;

- Access to work areas like doorways and walkways,
- Human traffic patterns,
- Overhead obstructions and/or hazards, and
- Ground conditions for proper setup.

When a bad ladder selection has been made, it can be identified by the risky behavior of the people having to use the wrong ladder. These risky activities are often seen as

- Overreaching,
- Sideloading,
- Unstable footing, or
- Stand where the ladder was never intended to support a person.

A good supervisor or safety person should be able to identify these behaviors or actions and then address the mistake. When making a correction of a mistake like this, addressing the issue is critical. Correct the issue at hand, of course, but then press further and try to uncover the "why" as to the reason for the wrong ladder choice. At all times, the supervisor of the job must make sure that the people they are overseeing...

- Choose a ladder that lets the worker stay in a stable, centered position.
- Match the ladder material to the exposure, especially around electrical hazards.
- Think about the path to the work, not just the work itself: carrying, staging, and setting up all matter.
- Account for the total load, including tools, tool belts, and supplies.

Selection is also where companies protect profitability. The wrong ladder slows the task, increases supervision demands, and often leads to repositioning, rework, or damage. The right ladder supports a smoother workflow. Workers can reach the task comfortably, complete it with fewer interruptions, and move on without creating secondary hazards for the rest of the crew.

3. Inspection, Use, and Maintenance

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This is where most ladder incidents are prevented or...not. A ladder in good condition still has to be set correctly, used correctly, and removed from service when it no longer deserves trust. Small defects and small shortcuts combine quickly. A worn foot, a loose rung, a poor setup angle, muddy boots, or a cluttered landing can each be enough to turn a routine task into an injury event.

Inspect before use

- Check rails, rungs, feet, locks, spreaders, ropes, and labels.
- Look for wear, damage, missing parts, contamination, corrosion, and heat or chemical damage.
- Remove damaged ladders from service immediately instead of setting them aside for later decisions.

Damaged ladders should not stay in circulation

Check rungs and rail condition

Use secure contact points when tying off

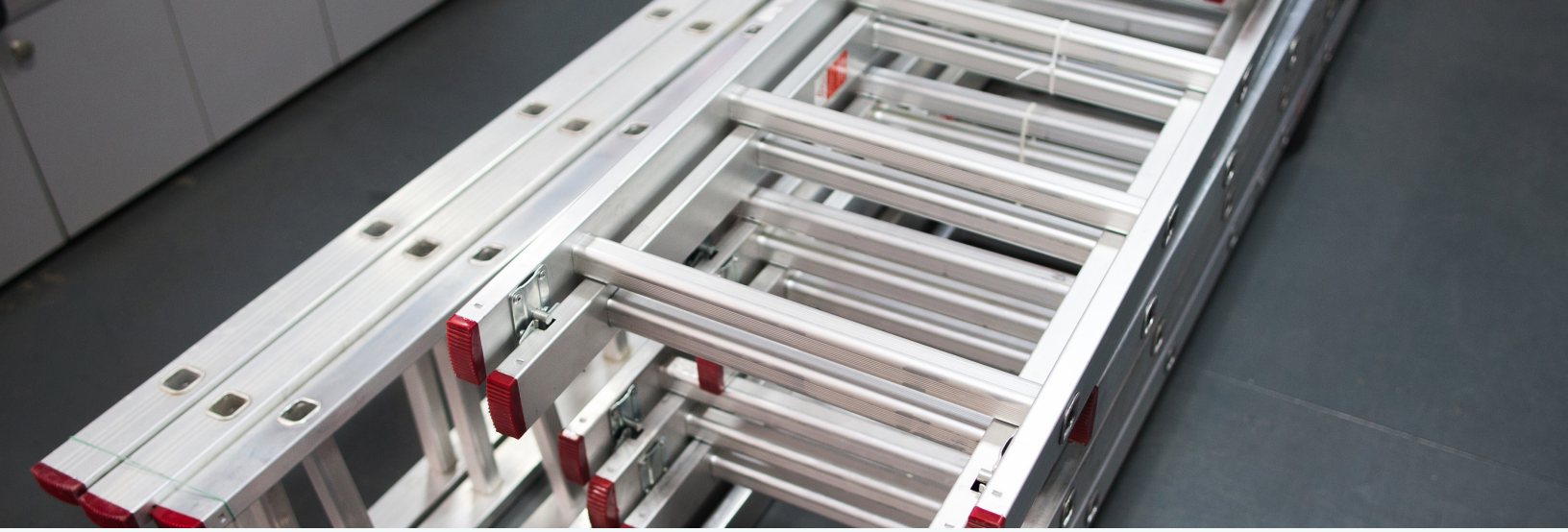
Set up ladder to be solid and to stay put

Footing and support matter just as much as ladder conditions.

- Set ladders on stable, level surfaces.
- Keep the base clear.
- Do not gain extra height with boxes or truck beds.
- If traffic could hit the ladder, redirect traffic, or guard the area.

Once set up, climb, and work in control

- Face the ladder
- Maintain three points of contact while climbing.
- Keep your belt buckle centered between the rails.
- Do not carry materials in your hands while climbing; stage them differently or pass them up.
- Reposition the ladder instead of leaning farther than the ladder wants to safely support.
- Do not stand on prohibited upper steps or rungs



Safe use is not just about avoiding a fall. It also keeps the task efficient. Workers who are balanced, properly positioned, and not fighting the equipment tend to produce better work with less fatigue. That means fewer dropped items, fewer interrupted tasks, and better quality at the point of installation or repair.

Maintain and store ladders like critical tools

Ladders often deteriorate between jobs, not during them. Poor transport, weather exposure, careless storage, and delayed repairs gradually turn serviceable equipment into unreliable equipment.

Clean ladders regularly, protect them during transport, store them where they will not be damaged by heat, moisture, or sunlight, and replace parts or entire ladders before the next crew inherits the problem.

What supervisors can correct in the field

FIELD OBSERVATION OF SITUATION	CORRECTIVE ACTION THAT SHOULD BE TAKEN
A worker is reaching sideways	Stop and reposition the ladder before the next movement.
Ladder is set in traffic or near a doorway	Control the area before the climb continues.
Top steps or top rungs are being used for work	Change the access method or ladder size.
A worker is carrying tools or materials by hand	Change staging so three-point contact can be maintained.
Ladder looks damaged or contaminated	Take it out of service and replace it now, not later.
Why did this happen in the first place?	Go back and see who planned the activity. Correct the planning process as needed.

Crews rarely need a lecture in the middle of a task; they need a clear correction that is applied consistently. Repetitive “lectures” become more about the lecture than the content the lecture was about. Repetition builds habit, and good habits are what keep routine ladder work from drifting into routine risk.

Common shortcuts that deserve immediate intervention

- Using a damaged ladder or one with missing parts.
- Using a ladder for a job it was not intended to do.
- Standing too high on the ladder to save a repositioning step.
- Placing ladders on boxes, truck beds, scaffolds, or other unstable surfaces.
- Using ladders in high wind or close to overhead electrical hazards without changing the plan.

A useful coaching standard is simple: if a worker has to improvise to make the ladder task work, there is an issue. Either the wrong ladder is being used (poor planning for the job), or the employee does not know what to do (poor training of the employee). Stopping to reset the method is faster and less expensive than working through the poor situation.

Only use ladders as they were designed for

Unsafe position must be corrected immediately

Locks and spreaders must work as intended

How correct ladder use supports profitability

SAFE LADDER PRACTICE

- Right ladder selected up front
- Pre-use inspection of ladders
- Removal of damaged ladders
- Stable setup
- Controlled climbing
- Clear training expectations
- Proper storage and transport

OPERATIONAL PAYOFF

- Less delay, less improvisation, fewer interruptions to the work plan
- Fewer breakdowns in the field
- Fewer incidents due to a ladder breaking during use
- Less rework, less dropped material
- More consistent production quality
- Stronger supervision and easier reinforcement of safe habits
- Longer equipment life by preventing avoidable damage

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4. Employee Training

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Training is what turns a written expectation into a work habit. Employees should understand not only what to do, but why it matters. When workers can recognize a poor setup, identify a damaged ladder, and explain why overreaching is dangerous, they are more likely to intervene before someone gets hurt. Training should be practical, site-specific, and reinforced by what supervisors accept in the field.

- How to choose the correct ladder for the task and environment.
- How to inspect it, set it, climb it, and work from it without losing stability.
- How to recognize when the task calls for a different access method altogether.
- How to stop and correct unsafe conditions before the work begins.
- How near-misses and previous incidents can be used to sharpen judgment, not just document failure.

Strong ladder training also improves culture. It signals that the company expects planning, discipline, and quality in small tasks as well as large ones. That message carries over. Crews that handle ladder work well are often the same crews that manage housekeeping, access, material handling, and pre-task planning well.

Closing Thought

Ladder safety is easy to underestimate because ladders are so familiar. That familiarity is exactly why organizations should keep the message practical and clear. A ladder should not be viewed as simple equipment that needs little thought. It is access equipment that demands the right choice, the right setup, the right work habits, and the right leadership. When those pieces are in place, companies get more than compliance: they get fewer injuries, steadier production, better quality, and stronger confidence that routine work will stay routine.