

Portable Ladder Safety – Compliance Game Plan



Falls are the leading cause of workplace injuries and OHS penalties. Although horizontal falls, i.e., slips, trips and falls from the same level) happen more often, vertical falls are more likely to kill or seriously injure a worker. Over 20% of all workplace fall injuries involve ladders; that rate rises to 81% when the sample is limited to construction workers. Here's a game plan for preventing fall injuries and ensuring compliance with OHS requirements for one of the most common types of ladder found on work sites: single portable ladders. [Click here](#) to look up the portable ladder OHS regulations of your jurisdiction.

Defining Our Terms

Portable ladders are a climbing tool typically made up of side rails that are joined together by steps, rungs, cleats or rear braced spaced at safe intervals. As the name suggests, portable ladders can be moved from location to location as opposed to fixed ladders permanently anchored to buildings or structures. They come in 3 basic models:

- **Stepladders:** Self-supporting ladders, i.e., they don't have to be anchored or leaned against a surface, that have flat steps and a hinged base and which are nonadjustable in length;
- **Extension ladders:** Non-self-supporting ladders made up of 2 or more sections that travel in guides or brackets allowing for adjustment in length; and
- **Single ladders:** Non-self-supporting ladders made up of just one section that aren't adjustable in length.

While OHS regulations include specific requirements for each of these models, this Game Plan focuses on single ladders. And it assumes that workers using the ladder are not using fall protection equipment.

5-Step Portable Ladder Compliance Game Plan

There are 5 basic sets of measures you must take to minimize the risk of falls from portable single ladders and ensure compliance with OHS requirements.

1. General Design & Construction Requirements

Employers must ensure that single use ladders they furnish are properly designed and constructed for the work they're used to carry out. Generally, ladders must be made of appropriate materials, solidly constructed and strong enough to support the load they'll be expected to bear. Most jurisdictions also require ladders to meet some version of Canadian Standards Association (CSA) standard CSA Z-11, *Portable Ladders*; in some jurisdictions, ladders can comply with either CSA Z-11 or an American National Standards Institute (ANSI) standard for the particular type of ladder based on the materials it's made of:

- ANSI A14.1 for single portable ladders made of wood; or
- ANSI A14.2 for single portable ladders made of metal.

Design & Construction Standards for Portable Single Ladders Across Canada

CSA	CSA or ANSI	Not Specified
Federal, New Brunswick, Nova Scotia, Ontario, Québec	Alberta, Manitoba, Newfoundland, Yukon	BC, Prince Edward Island, Saskatchewan, Northwest Territories, Nunavut

2. Wooden Ladder Design & Construction Requirements for Wooden Ladders

Many jurisdictions give employers and contractors leeway to construct custom portable wooden ladders for use at the site provided that they meet specifications listed in the OHS regulations. Typically, such ladders must:

- Be made of Grade 1 or equally good quality, straight grained lumber free of loose knots, sharp edges, splinters and shakes;
- Not be painted or coated with the exception of transparent coatings that don't hide the wood grain or interfere with inspecting the ladder;
- Have rungs spaced at specific intervals, typically 300 mm apart;
- Not exceed 9 metres in length; and
- Have siderails that are securely attached and that meet specific width and thickness standards that vary depending on how long the ladder is.

3. Ladder Maintenance & Inspection

Ladders must be kept clean and maintained in accordance with manufacturer's instruction. Employers must ensure that a competent person inspects the ladder before each use and at least once a year. A few provinces, including Manitoba, New Brunswick and Prince Edward Island, require workers to inspect their own ladders and report any defects to the employer. In either case, key items for inspection include verifying that:

- The joint between the steps and side rails is kept tight;
- Hardware and fittings are securely attached;
- Movable parts are able to operate freely without binding or undue play;
- Safety feet and other auxiliary equipment are kept in good condition; and
- Rungs are kept free of grease and oil.

Any ladders found to have loose, broken or missing rungs, split siderails or other potentially dangerous damages or defects must be immediately removed from

service and not used again until they're verified as having been properly repaired.

4. Ladder Positioning

Having the right ladder won't do much good if it's not used right. The starting point is ladder placement. Because portable single ladders aren't self-supporting the way stepladders are, they must be securely placed on a flat and stable base or held firmly in place by a worker. Where a solid anchor can't be provided, the ladder must be placed at a safe angle. Most OHS regulations require that the base of the ladder be no less than one-quarter and no more than one-third of the length of the ladder from a point directly below the top of the ladder and at the same level as the ladder base. Other common placement rules:

- The side rails must extend a minimum distance, typically 1 metre/3 feet, beyond the platform or landing to which the ladder is a means of access;
- The ladder can't be placed in front of or against a door unless the door is blocked in the open position, locked or guarded; and
- Ladders made of metal or that have metal components can't be used near exposed electrical lines or circuits.

Who's Responsible for Safe Placement'

Although the rules are pretty much the same in all jurisdictions, the one big difference is whether the employer or the worker is responsible for ensuring that a single portable ladder is safely placed. Under Federal, Manitoba, Nova Scotia, Northwest Territories, Nunavut and Saskatchewan OHS law, the employer must ensure safe placement; but in Alberta, New Brunswick, Prince Edward Island and Yukon, that responsibility falls on the worker using the ladder; the remaining jurisdictions don't specify who's responsible for safe placement.

5. Ladder Use

It's critical to ensure that workers use ladders safely and in accordance with the manufacturer's instructions. One key way to accomplish that is to implement a portable ladder safety policy that includes safe work procedures. Things workers SHOULD DO include:

- Face the ladder at all times;
- Stay in the centre of the steps or rungs;
- Maintain 3 points of contact when climbing or coming down the ladder; and
- Keep their body from extending beyond the side rails (except their arms).

Things workers generally SHOULD NOT DO:

- Work from the top 2 rungs or steps of the ladder; and
- Carry heavy or bulky equipment up or down the ladder.