

Portable ladder safety

by Arne Larson



There are three basic types of portable ladders – stepladders, extension ladders and straight or single ladders. This safety talk presents information for choosing, using, storing and maintaining each type safely.

Obtain a stepladder and a short extension ladder to use in your presentation. Use a flip chart or note board to record questions and comments from the group as you discuss ladder safety.

Use the ladders brought into class to discuss ladder types, safe use tips and storage and maintenance information.

Choosing the correct ladder

Inform the group to evaluate the job before choosing the type of ladder to use. Use stepladders where there is room to fully spread and lock the legs into place on a flat, firm surface. Extension ladders have two sections that fit together and may be expanded to reach higher than a stepladder. Use straight or single ladders in tight places where there is no room for a step or extension ladder. Ladders are divided into service classes and labeled accordingly:

- Type I ladders are for heavy-duty industrial use;
- Type II commercial ladders are for less-demanding business tasks;
- Type III are light-duty ladders intended for home use.

Types of portable ladders

Discuss the various types of portable ladders with the group.

Stepladders

- Most commonly used type of ladder
- Available in lengths up to 20 feet
- Two sections spread apart and lock into place
- Made of wood, aluminum or fiberglass
- Must be placed on a level, flat surface

Extension ladders

- For access to heights above 20 feet
- Available in lengths up to 60 feet
- Consists of two separate sections that slide together
- Made of wood, aluminum or fiberglass
- Must have room to lean at proper angle

Straight ladders

- May be used in place of extension ladder
- Available in lengths up to 30 feet
- Consists of single ladder section
- Made of wood, aluminum or fiberglass
- May be extra narrow for access to confined spaces

Tips for safe ladder use

- Thoroughly inspect every ladder before use.
- Take any damaged ladder out of service immediately.
- Ensure the ladder feet are on a firm, level surface.
- Ensure lock spreaders are fully open on stepladders.
- Always face a ladder when going up or down.
- Maintain at least three-point contact on a ladder (two feet and one hand).
- Don't carry tools and equipment when climbing a ladder — use a rope to pull them up in a bucket or pouch.
- Stay within side rails of a ladder; don't over-reach to either side.
- Don't sit or stand on the top step or rung of a ladder.
- Always get off a ladder before trying to move it.
- Do not use a ladder as a work platform.
- Never use a metal ladder near electrical lines or equipment.
- Tie off the top and bottom of an extension ladder when possible.
- Place the feet of a straight or extension ladder one foot away from the structure base for every four feet of ladder height.
- Ensure that the ladder extends at least three feet above the roof or support point when accessing a roof or other structure.
- Observe the minimum section overlap for extension ladders:
 - Heights up to 36 feet require minimum three-foot overlap;
 - From 36 feet to 48 feet requires a minimum four-foot overlap;
 - More than 48 feet requires a minimum five foot overlap.

Storage and maintenance

- Store ladders indoors in a clean, dry location when possible.
- Keep ladders clean and free of dirt, oil and grease.
- Check all nuts, bolts and rivets for tightness.
- Maintain non-slip cleats or feet in good condition.
- Make only repairs authorized by the manufacturer.
- Treat wood ladders with preservative – never paint.
- Lightly lubricate mechanisms such as spreaders on stepladders.

Group actions

- Review the ladder types and classes used on your site.
- Practice setting up and climbing the ladders brought for class.
- Discuss any questions regarding safe usage tips.
- Ask attendees to inspect ladders in their work areas, and report any defects or problems found.

References

Web sites

- OSHA Construction eTool, Misuse of Portable Ladders (Occupational Safety and Health Administration): www.osha.gov/SLTC/etools/construction/falls/ladders.html
- Stairways and Ladders: A Guide to OSHA Rules (Occupational Safety and Health Administration): www.osha.gov/Publications/osha3124.pdf
- Falls (eLCOSH): www.elcosh.org/en/browse/65/falls.html
- Online Safety Library: Ladder Safety (Oklahoma State University): www.ehs.okstate.edu/links/ladder.htm

Videos

BWC's Division of Safety & Hygiene video library has a number of videos on ladder safety. These are available for loan to Ohio employers. Order a catalog by calling 1-800-OHIOBWC (ask for the video library), or visit our web site, ohiobwc.com.

Arne Larson is a safety specialist with the Lubrizol Corp.'s research and testing facility in Wickliffe, Ohio. He has 16 years of experience in safety and industrial hygiene.

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