



McMaster University

Standard Operating Procedure: Ladder Safety

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To insure the safety and serviceability of all portable ladders the following precautions on the care of ladders shall be observed.

Care and Inspection:

1. All ladders shall be maintained in good condition at all times.
 - The joint between all components of the ladder shall be tight.
 - All hardware and fittings shall be securely attached.
 - All movable parts shall operate freely without binding or undue play.
 - All ladders shall be free of damage including bent, abraded or cut parts.
 - In addition to the above, wooden ladders shall be of sound material and be free from loose knots, splinters and shakes. Wooden ladders shall not be painted.
2. All metal locks, bearings, wheels and pulleys etc. shall be kept lubricated and serviceable at all times. Two piece ladders shall have fully serviceable pulleys and ropes.
3. All safety feet shall be kept in good condition to ensure proper non-slip performance.
4. All ladders shall be stored in such a manner that they are readily accessible for use and inspection and free from danger of falling.
5. All portable ladders, when not in use, shall be stored such that they will not be exposed to the elements or sunlight and where there is sufficient ventilation. They shall not be stored near radiators, stoves, steam pipes, or other places subjected to excessive heat or dampness.
6. All long ladders shall be stored in a horizontal position, supported at no more than 6' intervals and have a sufficient number of points of support to avoid sagging. They shall be securely fastened in their stored position and be kept free from debris or other material.
7. All ladders which are carried on University owned vehicles shall be securely fastened to minimize chafing and the effects of road shock.
8. All ladders shall be inspected frequently. Ladders with defects are to be repaired or destroyed.
9. All ladders rungs shall be kept free of grease, oil and dirt.
10. Job built ladders shall be constructed and used in strict conformity to Ontario Reg. 213/91.
11. All fiberglass/aluminum ladders shall be regularly inspected for damaged and blooming of fibres.

Use of The Ladder:

1. The following rules apply to the proper positioning of all non-self supporting (Extension) ladders.
2. All ladders shall be carefully inspected before use. All ropes or cables used on extension ladders shall be periodically inspected and replaced if defective.
3. Defective ladders shall be red tagged, taken out of service and reported to the Supervisor immediately.
4. All ladders with broken or missing steps, rungs, cleats, broken or damaged side rails or other faulty equipment shall not be used. Improvised repairs shall not be made. The only permitted repair to the structure of any ladder is to replace defective feet. Repairs shall be made by a competent worker.
5. Short ladders shall not be spliced together to make longer sections.
6. No ladders shall be placed on boxes, barrels, carts, vehicles, benches or other unstable bases to obtain additional height.
7. No ladders shall be used as braces, skids or for other than their intended purpose.
8. No ladder shall be used in a horizontal position. It shall not be used as support of planks such as a scaffold. No ladder shall be set up on a scaffold or other temporary structure.
9. All portable ladders shall be properly placed to have a secure footing before attempting to use. The ladder shall be tied off at the top or held in position at the base by another employee.
10. No portable ladder shall be used by more than one employee at one time.
11. All portable ladders shall be so placed that the base of the ladder is $\frac{1}{4}$ - $\frac{1}{3}$ of its height away from the vertical. (example: A ladder extending 15' up a wall shall be approx. 4' - 5' away at the base of the wall.)
12. No ladders shall be placed in front of any door opening or any aisle or roadway, unless guarded by another employee. The area shall be flagged off and the door locked off.
13. When supporting the top of the ladder at a window opening, a board shall be attached across the back of the ladder extending across the window and providing firm support against the building walls or window frames.
14. Ladders shall be set up on even ground. Where this is not possible, a wood base such as a sheet of heavy plywood or lengths of planking will be built as an even, firm base for the ladder.
15. Do not go up or down a ladder without the free use of both hands. Use three point contact at all times – two hands and one foot or two feet and one hand.
16. Always face the ladder when both ascending and descending.
17. All ladders which are used to gain access to a roof or other level shall be so extended that the top of the ladder shall extend at least 3 feet above the point of support.
18. The adjustment of an extension ladder shall be done while the employee who is using the ladder is standing at the base of the ladder and not on the ladder itself.
19. Never stand higher than the third rung from the top of a non self supported ladder.
20. Any worker working on a ladder more than 3 metres (10') off the ground shall wear fall protection.
21. On all two-section extension ladders the minimum overlap for the two sections in use shall be as follows:

<u>Size Of Ladder</u>	<u>Overlap</u>
Up to and including 36 feet	3 Feet
Over 36 feet up to and including 48 feet	4 Feet
Over 48 Feet up to and including 60 Feet	4 Feet

22. All extension ladders shall be so erected so that the upper section is resting on the bottom section.
23. Non-slip bases shall be used on portable ladders. Job built ladders shall be securely affixed at the bottom and shall rest on a mud plate or other appropriate base.
24. Metal ladders shall not be used for performing electrical work.

Portable Step Ladders

1. Only approved portable ladders shall be used in the University.
2. A portable ladder shall be deemed approved if it contains the following information on it at the time of purchase:
 - The manufacturer's name
 - Date of manufacture.
 - The nominal length and maximum extended length where applicable.
 - The ladder grade – 1 or 2.
 - The duty load rating in pounds.
 - Safety cautions in words and symbols.
 - Manufactured ladders must have a CSA, ULC or equivalent ratings.
3. The purchase of approved ladders shall be limited to the following two types
 - Grade 1 – Industrial (Test load rating 900 pounds.)
 - Grade 2 – Commercial (Test load rating 850 pounds.)
 - Grade 3 – Residential (Test load rating 800 pounds.)

The purchase and use of grade 3 ladders, second hand ladders and repainted ladders shall not be permitted.

Ladder identification and inspection.

- All ladders will be identified i.e. Grade # 1 Rating.
- All ladders will be inspected before use or at least on a monthly basis.
- The monthly inspection will consist of the following:

Utilities Ladder # 1		
Checked By:		

Safety Feet in good condition	<input type="checkbox"/> yes	<input type="checkbox"/> no
Joint between step & side rail tight	<input type="checkbox"/> yes	<input type="checkbox"/> no
All hardware and fittings securely attached	<input type="checkbox"/> yes	<input type="checkbox"/> no
Movable parts move freely	<input type="checkbox"/> yes	<input type="checkbox"/> no
Lubricated movable parts	<input type="checkbox"/> yes	<input type="checkbox"/> no
Ladder properly stored	<input type="checkbox"/> yes	<input type="checkbox"/> no
Cables and ropes in good condition	<input type="checkbox"/> yes	<input type="checkbox"/> no
Steps free of dirt/oil	<input type="checkbox"/> yes	<input type="checkbox"/> no
Inspect ladder for dents, breaks or damage	<input type="checkbox"/> yes	
Ladder in safe condition to use	<input type="checkbox"/> yes	<input type="checkbox"/> no
If No then notify Supervisor, red tag & lock out the ladder to prevent its use.		

Step Ladder Use:

1. Always inspect the ladder for complete serviceability before use.
2. Pick the correct height ladder for the job intended.
3. Open the ladder fully and ensure the locks are down and locked.
4. Ensure the ladder is set up on even, solid ground with all four feet bearing down equally.
5. No ladder shall be set up or used on a scaffold.
6. Not more than one worker may stand on a step ladder at one time.
7. The bracing on the back legs of step ladders is designed solely for increased stability and shall not be used for climbing.
8. Never stand on the top shelf or the top step of a step ladder.
9. Never straddle a step ladder or stand on the back support members.
10. Never use a step ladder as a straight ladder to lean against a wall or object.
11. Climb the ladder using both hands and both feet maintaining three point contact at all times.
12. Lean forward and always work forward. Never work to the side or behind the vertical.
13. Stand on the rungs with your feet apart near the outer vertical ladder support members.
14. If the area of work is out of reach whilst leaning forward, descend and reposition the ladder.
15. Never use aluminum ladder when working on electric jobs.
16. Always climb and descend a ladder facing forward and using three point contact.

END OF SECTION.

Legal Disclaimer

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