



Ladder Program and Training Materials

OSHA

Table of Contents

Ladder Program	1
Appendix A	5
Appendix B.....	7
Employee Handout	9
Presentation Instructor Notes	10
Presentation Quiz	11
Presentation Sign-In Log	13

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Ladder Program

Effective Date:
Revision #:



Reference Standard

Occupational Safety and Health Administration (OSHA), Walking – Working Surfaces Subpart D, including:

- 29 CFR 1910.25 Portable Wood Ladders
- 29 CFR 1910.26 Portable Metal Ladders
- 29 CFR 1910.27 Fixed Ladders

Purpose

This procedure establishes minimum procedures for the selection, installation, maintenance and use of ladders.

Scope

This procedure applies to all of our company employees, all contractors and vendors performing work on company property, and all other individuals who are visiting or have business with our company.

Responsibilities

- Management is responsible for the development and review of this program. Management is also responsible for appropriate employee training.
- Management and supervisors are responsible for enforcement of this program.
- Employees must comply with all procedures outlined in this policy.
- Contractors and vendors must comply with all procedures outlined in this policy.

Definitions

Cage: An enclosure that is fastened to the side rails of a fixed ladder or to the structure to encircle the climbing space for the safety of the climber. Often called a cage or basket guard.

Contractor: A non-company employee being paid to perform work in our facility.

Extension Ladder: A non-self-supporting portable ladder adjustable in length consisting of two or more sections traveling in guides or brackets arranged to permit length adjustment.

Fixed Ladder: A ladder that is permanently attached to a structure, building or equipment.

Ladder Safety Device: Any device, other than a cage or well, designed to eliminate or reduce the possibility of accidental falls and which may incorporate belts, harnesses, friction brakes and sliding attachments.

Landing Platform: A platform used to break the vertical length of a fixed ladder. Landing platforms must be equipped with hand rails and toe boards.

Nonconductive Ladder: A ladder made of fiberglass, wood or other nonconductive material.

Platform Ladder: A self-supporting ladder of fixed size with a platform at the working level.

Rungs: Steps on a ladder.

Side Rails: The sides of a ladder.

Stepladder: A self-supporting ladder, nonadjustable in length having flat steps and a hinged back.

Straight Ladder: Ladders that are used in a straight manner, single section ladders and extension ladders.

Trestle Ladder: A self-supporting portable ladder, nonadjustable in length hinged at the top.

Vendor: A non-company employee being paid to perform a service in our facility.

Well: A permanent, complete enclosure around a fixed ladder, which is attached to the walls of the well.

Procedure

Portable Ladders

Ladder Selection

- Our facility will not make ladders; only purchased ladders will be used.
- All ladders will be rated for industrial use.
- Parts used for ladder repair will be manufacturer supplied or approved direct replacement parts only.
- All ladders that could be used for electrical maintenance and installation or around electrical wires and equipment will be nonconductive.
- Stepladders will be 20 feet or less in height.
- Straight ladders will be 30 feet or less in length.
- Extension ladders will be 60 feet or less in length.
- Wood extension ladders will be two sections only.
- Ladders will have uniform step spacing; 12 inches or less.
- The minimum width between the side rails at the top of the ladder will be 11½ inches.
- Extension ladders will have the following minimum overlap between sections:

<u>Ladder Length</u>	<u>Overlap Length</u>
Up to 36 Feet	3 Feet
Over 36 Feet to 48 feet	4 Feet
Over 48 Feet	5 Feet

Inspection and Care

- All ladders will have a permanent storage location assigned.
- If ladders are stored vertically, they will be restrained by chains or other devices.
- If ladders are stored horizontally, support will be provided along the entire side rail to prevent damage and distortion.
- Storage locations will be dry and protect the ladders from damage.
- Metal and ladders will not be painted. If wood preservatives are used, they will be approved by the ladder manufacturer.
- Ladders will be inspected as follows:
 - Monthly — Documented inspection (see Appendix A); and
 - Before Use — Visual inspection performed by the ladder user prior to use.
- DAMAGED OR DEFECTIVE LADDERS WILL NOT BE USED. THEY WILL BE TAGGED AS DANGEROUS, DO NOT USE THE LADDER, TAKE IT OUT OF SERVICE.

- The only ladder repair that will be made in our facility will be a replacement in kind of a worn or broken part. Welded repairs, straightening, etc. will not be undertaken.
- Ladders that are deemed unsafe will be tagged and stored in a secure location pending repair. Ladders to be discarded will be cut up to prevent improper use by someone scavenging the ladder from trash.

Ladder Use

- Conductive ladders and wet wood ladders are not to be used for electrical work or around energized electrical equipment.
- Maintain at least 10 feet clearance from power lines.
- Ladders will not be used as stages, platforms, braces etc. or for any purpose other than a ladder.
- Any ladder that was dropped or exposed to fire or corrosive chemicals will be taken out of service until tested.
- Three-point contact (minimum of two feet and one hand in contact with the ladder) will be observed when climbing all ladders.
- The climber will face the ladder at all times.
- Ladders should not be set up in front of doors unless the door is locked, blocked or guarded. Ladders should not be set up where foot or vehicle traffic could accidentally upset the ladder: adequate warning devices should be used to alert others to the presence of the ladder.
- Bulky or heavy object will not be carried up the ladder, they will be hoisted.
- Ladders must be placed on secure footing; never on boxes, barrels or other unstable objects.
- Ladders should be tied-off at the top and bottom if power tools are being used or if other work is being conducted that could place undue stress on the ladder footing. When tying off the ladder, always attach rope to the siderails, not the rungs.
- Only one person on a ladder at one time (unless the ladder is designed for multiple persons).
- Step ladder rules include:
 - Do not lean the ladder against a wall or stationary object, it can only be used when fully opened;
 - The spreader must be fully open and secured; and
 - Never stand on the top step of a step ladder.
- Straight ladder rules include:
 - Lean the ladder against a secure point that supports both side rails;
 - When accessing a roof or platform the ladder must extend a minimum of three rungs above the roof or platform elevation; and
 - To achieve the proper work angle, set the ladder base one forth (1/4th) of the distance of the working height back from the vertical support.

Fixed Ladders

Installation

- Cages or wells will be provided for all ladders of more than 20 feet.
- The maximum unbroken length of a fixed ladder is 30 feet.
- Landing platforms are required for each 30 feet of ladder height or fraction thereof. If a ladder cage and/or ladder safety device is not provided, landings must be provided for each 30 feet (except on chimneys).

- Landing platforms will be equipped with standard guard rails and toe boards and be a minimum of 24 inches wide by 30 inches long.

Inspection

Fixed industrial ladders, cage and platform systems will be inspected at least monthly (see Appendix B). Any questionable observation will result in the ladder being taken out of service until a qualified engineering professional can evaluate the equipment. Additionally, personnel who use the ladder must visually inspect it before each use.

Ladder Safety Devices

- Ladder safety devices may be used. If a ladder safety device is used, no cage or landing platform protection is required.
- Ladder safety devices will be inspected prior to each use and formally inspected on the schedule recommended by the manufacturer.
- Personnel designated to use ladder safety devices will be trained at least annually in proper operation, inspection and emergency procedures.

Training

- All personnel who work with ladders will be trained prior to use.
- At a minimum, retraining will be provided whenever observations indicate that safe use rules are not being followed.

Training Outline

- Ladder storage;
- Inspection;
- Safe transport of ladders;
- Ladder set-up and importance of stable and even ladder footing;
- Barricading the work area;
- Electrical safety issues;
 - Never use metal ladders for electrical work or around electrical equipment; and
 - Maintain at least 10 feet of clearance from electrical lines.
- Three-point contact, safe climbing; and
- Specific safety issues outlined above.

Revision History Record:

Revision Number	Section	Revised By	Description
0	NA	NA	Original document.

Appendix A

PORTABLE LADDER MONTHLY INSPECTION

Portable Ladder Monthly Inspection

Inspector: _____

Ladder: _____

Date: _____

✓ Check Pass

X Fail

NA = Not Applicable

<u>INSPECTION ITEM</u>	<u>PASS</u>	<u>FAIL</u>	<u>NA</u>
1. Side rails undamaged			
2. Rungs undamaged			
3. Ladder joints are tight			
4. Rungs and side rails free of grease and slip hazards			
5. Safety feet present			
6. Pulleys in good condition (extension ladders)			
7. Ropes in good condition (extension ladders)			
8. Ladder locks functional (extension ladders)			
9. Ladder stops functional (extension ladders)			
10. Spreaders and hinges operational (step ladders)			
11. Warning signs legible			

Corrective Action: _____

REMOVE DAMAGED OR DEFECTIVE LADDERS FROM SERVICE IMMEDIATELY

Appendix B

FIXED LADDER MONTHLY INSPECTION

Fixed Ladder Monthly Inspection

Inspector: _____

Ladder: _____

Date: _____

✓ Pass

X Fail

NA = Not Applicable

INSPECTION ITEM

PASS

FAIL

NA

1. Check each attachment to structure for:
 - Rust
 - Loose fasteners
 - Anchor material deterioration
 - Deformity
 - General Deterioration
 - General Damage
2. Side rails undamaged
3. Rungs undamaged
4. Cages-tight attachment to ladder/structure
5. Platform rails and toeboard
6. Obstructions for climbers
7. Ladder free of grease and slip hazards
8. Loose or missing parts
9. Ladder safety device

SEE MANUFACTURER INSPECTION FORM

Corrective Action: _____

REMOVE DAMAGED OR DEFECTIVE LADDERS FROM SERVICE IMMEDIATELY

PLAYING IT SAFE

Be safe and healthy on the job at with these helpful tips provided by Thompson.

Ladder Safety

Tips for climbing with caution

Falls from elevated surfaces are frequently listed as one of the top 10 causes of accidents in the workplace. Most of these accidents occur due to failure to follow basic ladder safety. To help prevent ladder injuries, practice the following safety tips.

Setting up Safely

Make sure you select the correct ladder for the job – check the length and duty rating. Proper length is a minimum of three feet extending over the roofline or working surface.

Inspect your ladder before each use for loose or damaged:

- Steps
- Rungs
- Spreaders
- Rung dogs
- Safety feet
- Other parts
- Clear the area where you will be working. Never place a ladder in front of a door that isn't locked, blocked or guarded.

Because metal ladders conduct electricity, use a wooden or fiberglass ladder near powerlines or electrical equipment.

Check that all locks on extension ladders are properly engaged before placing your ladder on a steady surface. The ground underneath the ladder should be level and firm. Large, flat wooden boards braced underneath a ladder can help level it on an uneven surface or soft ground. Straight, single or extension ladders should be set up at approximately a 75 degree angle.

Use the 1:4 ratio to ensure your safety when on a ladder. Place the base of the ladder one foot away from whatever it's leaning against for every four feet of height up to the point of contact for the top of the ladder.

Use Caution

Always exercise caution when using a ladder and do not use a ladder for any other purpose than intended. Other safety considerations include:

- Make sure the weight that your ladder is supporting does not exceed its maximum load rating (user plus materials). And only one person should be on a ladder at a time.
- Keep your body centered between the rails of the ladder at all times. Do not lean too far to the side while working. Never overreach – instead, descend from the ladder and move it to a better position.
- Do not step on the top step, bucket shelf, or attempt to climb or stand on the rear section of a stepladder.
- Always face the ladder when climbing up or down. Never leave a raised ladder unattended.
- Slowly step down from a ladder if you feel dizzy or tired.
- Non-slip footwear should be worn at all times when on a ladder.

Minimize ladder accidents by adhering to these safety and prevention tips.



Step Safely

Ladders pose special safety hazards, but by following proper safety guidelines, worksite injuries and deaths caused by ladder misuse can be significantly reduced.

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LADDER PROGRAM INSTRUCTOR NOTES

The following provides a useful preparation outline for use by trainers presenting the Ladder Program presentation to employees. The presentation is available from Thompson.

Training Objectives

- Train employees to respect ladders and to follow safe procedures to avoid accidents

Before Training

- Read the OSHA standard and the model Ladder Safety program
- Understand that this program covers the three basic ladder types: step ladders, straight ladders and fixed industrial ladders. The concepts found in this program can be used to develop procedures for other types of ladders if necessary.
- If your facility does not have fixed industrial ladders you can delete the applicable sections in the written program, the student handout and the presentation
- A documented ladder inspection program should be implemented with appropriate assignment of personnel and necessary training provided
- Have examples of facility ladders available so that the inspection, transport and set-up of the ladders can be practiced

Introduction for Training

- Begin by stressing the overall importance of safety in your facility
- Review with students that working from a ladder can be hazardous and that if rules are followed no accidents should occur
- Give examples of facility use of ladders
- As a ground breaker, you can ask employees what experience they have had with ladders in past jobs

General Guidelines

- Stress the importance of the bullet points on these slides
- Stress the importance of the individual employee being committed to his/her own safety
- Be sure to be open to questions or comments

Conclusion

- Review the importance of safety in your facility
- Review the handout as prompted to do on the "Conclusion" slide

LADDER PROGRAM QUIZ

Name: _____ Date: _____ Score: _____

Place a check mark on the line with the best answer for each of these 10 questions:

1. It is OK to stand on the top step and the bucket shelf of a ladder if you need to.
a) True
b) False
2. A ladder with a 20-foot high top support should be 5 feet away from the base you are climbing.
a) True
b) False
3. Straight, single or extension ladders should be set up at approximately what angle?
a) 25 degree angle.
b) 45 degree angle.
c) 75 degree angle.
4. If you have to place a ladder in front of a door, what precautionary measures should you take?
a) Make sure the door is locked, blocked or guarded.
b) No precautionary measures are needed.
5. Large, flat wooden boards braced underneath a ladder can help level it on an uneven surface or soft ground.
a) True
b) False
6. What type of ladder should you NOT use near power lines or electrical equipment?
a) Wooden ladders.
b) Metal ladders.
c) Fiberglass ladders.
7. Before you use a ladder for a job, what should you check on the ladder?
a) Check the length of the ladder.
b) Check the duty rating of the ladder.
c) Check for loose or damaged steps, rungs, spreaders, rung dogs and safety feet.
d) All of the above.
8. A ladder must extend 3 feet or more beyond a roofline if you are going to climb on the building.
a) True
b) False
9. You should place a ladder 1 foot away from whatever it is leaning against for every _____ feet of height to the point of contact for the top of the ladder.
a) 1
b) 4
c) 8

LADDER PROGRAM
QUIZ ANSWERS

1. B
2. A
3. C
4. A
5. A
6. B
7. D
8. A
9. B

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