



Ladder

Safety



Purpose

Ladders can present opportunities for unsafe acts & conditions

Everyone who uses ladders with OSBT needs to be trained in proper selection, inspection, use & storage to prevent accidents

Training

OSBT will provide training for each employee who uses ladders which enable employees to recognize hazards related to ladders & use proper procedures to minimize those

Should be competent in:

INSPECTION

LADDER STORAGE

SAFE CLIMBING TECHNIQUES

ELECTRICAL SAFETY ISSUES

LADDER SET-UP & IMPORTANCE OF STABILITY

SAFE TRANSPORT OF LADDERS



Responsibilities



HSSE

❖ Provide technical support & consultation to departments of employees so they understand requirements & establish safe practices

❖ Provide ladder safety training to affected employees

❖ Maintain records of training

❖ Ensure employees use the correct type, rating, & ANSI compliant ladder

❖ Contact HSSE with questions regarding compliance & safety procedures

Managers & Supervisors

❖ Ensure employees attend all required training

❖ Ensure proper safety equipment is supplied to their affected employees

❖ Ensure that designated employees perform documented portable ladder inspections

Partners

❖ Comply with all applicable OSHA workplace safety regulations & others outlines in this policy

Responsibilities

Employees

- ❖ Ensure all leaders meet OSHA guidelines & are ANSI compliant
- ❖ Comply with manufacturer instructions
- ❖ Document ladder inspections annually
- ❖ Report damaged ladders & tag them “out of service”
- ❖ Conduct visual inspection of ladders before each use
- ❖ Conduct an inspection checklist while checking out the ladder from storage
- ❖ Notify supervisor with questions about safety procedures, need for safety equipment, & difficulty complying with these requirements



General Requirements

ONLY OSHA APPROVED LADDERS ARE ALLOWED ON THE JOB

- Portable ladders must be placed on a substantial base with the area around the top & bottom of the ladder kept clean
- Side rails of ladders must extend at least 36 in. above the landing or grab rails will be provided
- Stepladders, straight, & extension ladders are to be tied or secured while in use
At least 1/2" thick & 6' in length should be applied to the top rung
- When using a ladder, be sure the area around the ladder is guarded
Rope off the area & place warning signs
- Place ladders at approximately a 75-degree angle
Place the bottom of the ladder 1 ft. back for every 4 ft. in height
- Straight & extension ladders require non-skid feet



General Requirements

DO

- ✓ Always face the ladder when climbing & keep hands free
- ✓ Remove damaged ladder from use when any unsafe condition is noticed
- ✓ Inspect all ladders & scaffolds before use & report any defects to your supervisor
- ✓ Clean your shoes of grease or any slippery materials before climbing the ladder or scaffold
- ✓ Use a fiberglass ladder instead of a metal one, if available
- ✓ Replace ladders with open or hollow rungs & display signs of excessive corrosion & wear must be replaced
- ✓ Inspect ladders on a regular basis & tag when beyond repair

DON'T

- X Stand on the top 3 rungs of a straight ladder without handholds unless protected by a safety belt
- X Place planks on the top of stepladders
- X Stand on the top 2 steps of a ladder
- X Paint or coat wooden ladders with dark coatings or colors as it may impair the inspection of the ladder
 - X Painted/ coated ladders cannot be properly inspected & should be removed from service
- X Tie ladders together to get more height to other support for which ladders were not intended
- X Use metal ladders within 4 feet of exposed live electrical parts
- X Use makeshift ladders or scaffolds

- ✓ Immediately remove damaged ladders from use when any unsafe condition is noted
- ✓ Maintain at least a 10 ft clearance from power lines
- ✓ Take any ladder out of service that has been dropped or exposed to fire or corrosive chemicals
- ✓ Use three-point contact when ascending/descending all ladders
- ✓ Use adequate warning devices to alert others to the presence of the ladder
- ✓ Place ladders on secure footing
- ✓ Tie off ladders at top & bottom if power tools are being used or work that could place stress on the ladder footing
- ✓ Only allow one person on the ladder at a time



- X Reach out more than an arm's length from a ladder
- X Use ladders with missing rungs, broken/split side rails, or other faulty/defective construction
- X Place ladders in the horizontal position or used as a platform, walkway, or scaffold
- X Use conductive or wet wood ladders for electrical work or around energized electrical equipment
- X Set up ladders where there is high foot/vehicle traffic or in front of doors or passageways, unless the door is locked, blocked, or guarded
- X Carry bulky or heavy objects up the ladder
- X Place ladders on boxes, barrels or other unstable objects



Ladder Rating & Storage

Storage

- Store ladders on sturdy hooks in areas where they cannot be damaged
- Store to prevent warping or sagging
- Do not hang things on ladders that are in stored conditions

Rating

- I-A – 300 lbs. (heavy duty)
- I – 250 lbs. (heavy duty)
- II – 225 lbs. (medium duty)
- III -- 200 lbs. (light duty)

Carrying a Ladder

- ❖ Balance the ladder on your shoulder
- ❖ Position so front end of ladder is above your head & back end is near the ground
- ❖ When ascending/descending stairs, carry the ladder with one hand & hold the stair rail with the other

- ❖ When it is necessary for 2 people to carry a ladder, both should be on the same side of the ladder & both people should walk in step
- ❖ Spikes, hooks, or ladder feet should face the rear when a ladder is being carried



Standard Operating Procedures (SOPs)

Portable Ladders

Selection:

OSBT will NOT make their own ladders, only purchased ladders will be used

- All ladders will be rated for industrial use
- Parts used for ladder repair will be manufacturer supplied & approved
- All ladders used for electrical maintenance, installation, or around electrical wires or equipment will be nonconductive



Extension ladders:

Extension ladders will be 60 ft or less in height

Wood extension ladders will be 2 sections only

Ladders will have uniform step spacing (12in or less)

Min. width between the side rails at the top of the ladder will be 11 1/2 in.

Minimum overlap between sections:

Ladder Length	Overlap length
Up to 36 ft	3 ft
Over 36 ft	4 ft
Over 48 ft	5 ft



Standard Operating Procedures (SOPs)

Portable Ladders

Types & Dimensions:

Step Ladders

- ❖ Less than 20 ft in height
- ❖ Can only be used when fully opened & secured
- ❖ Spreader must be fully opened & secured
- ❖ Never stand on the top step



Straight Ladders

- ❖ Less than 30 ft in height
- ❖ Lean the ladder against a secure point that supports both rails
- ❖ When assessing a roof/platform, the ladder must extend at least 3 rungs above the platform elevation



Standard Operating Procedures (SOPs)

Fixed Ladders

Installation

- ❖ Cages or ladders will be provided for all ladders pf more than 20 ft.
- ❖ Max. unbroken length is 20 ft.
- ❖ Landing platforms are required for each 30 ft. of ladder height
 - ❖ If ladder cage/safety device is not provided, landings must be provided for each 30 ft.



Inspection & care

- ❖ Ladders, cage, & platform systems will be inspected daily
- ❖ Any questionable observation will result in the ladder being taken OOS until a qualified engineering professional can evaluate the equipment



Setting up a straight ladder

1 TRANSPORT LADDER HORIZONTALLY

2 PLACE THE BASE OF THE LADDER AGAINST THE BASE OF WALL OR BLOCK

3 RAISE THE LADDER STARTING AT THE TOP RUNG

4 RAISE THE LADDER TO VERTICAL POSITION

❖ HOLD W ONE HAND & GRASP LOWER RUNG W OTHER HAND

5 PULL THE BASE OF THE LADDER BACK UNTIL THE LADDER IS 75° RELATIVE TO THE BASE'S SUPPORT SURFACE



Setting up a step ladder



1 CARRY LADDER HORIZONTALLY

2 STAND THE LADDER UP VERTICALLY

3 STEP TO THE SIDE FACING THE LADDER

- ❖ REST THE LADDER ON THE MAIN RAIL FEET
- ❖ GRASP THE MAIN RAIL W ONE HAND AND THE REAR RAIL W THE OTHER HAND
- ❖ SPREAD THE RAILS APART

4 LOCK THE SIDE RAIL TIE BAR/BRACES IN THE HORIZONTAL POSITION
SHOULD LOOK LIKE THE LETTER "A"



Ladder Hazards

Falls from ladders can result in broken bones or even death

Ladder safety is a lifesaving program



LADDERS WITH MISSING OR BROKEN PARTS



USING A LADDER WITH TOO LOW OF A WEIGHT RATING



USING A LADDER TOO SHORT FOR PURPOSE



OBJECTS FALLING FROM LADDERS



USING METAL LADDERS NEAR ELECTRICAL WIRES



USING LADDERS AS A WORKING PLATFORM



Falling

Reduce the chances of falling by:

- ❖ Wearing slip resistant shoes with heels & heavy soles to prevent foot fatigue
- ❖ Cleaning the soles of your shoes to maximize traction
- ❖ Using towlines, tool belt, or an assistant to convey materials so hands are free
- ❖ Avoiding sudden movements by climbing slowly & deliberately
- ❖ Keeping your belt buckle (stomach) between the ladder side rails or within in the width of the cleats
- ❖ Do not overreach or lean sideway while on the ladder



How long it takes to fall:

Time (seconds)	Distance (feet)
0.5	4
1.0	16
1.5	36
2.0	64
2.5	100
3.0	144
4.0	256



Three Point-of-Contact Climb

Minimizes the chances of slipping or falling from the ladder by helping the climber continue their stability in the event one of their limb slips

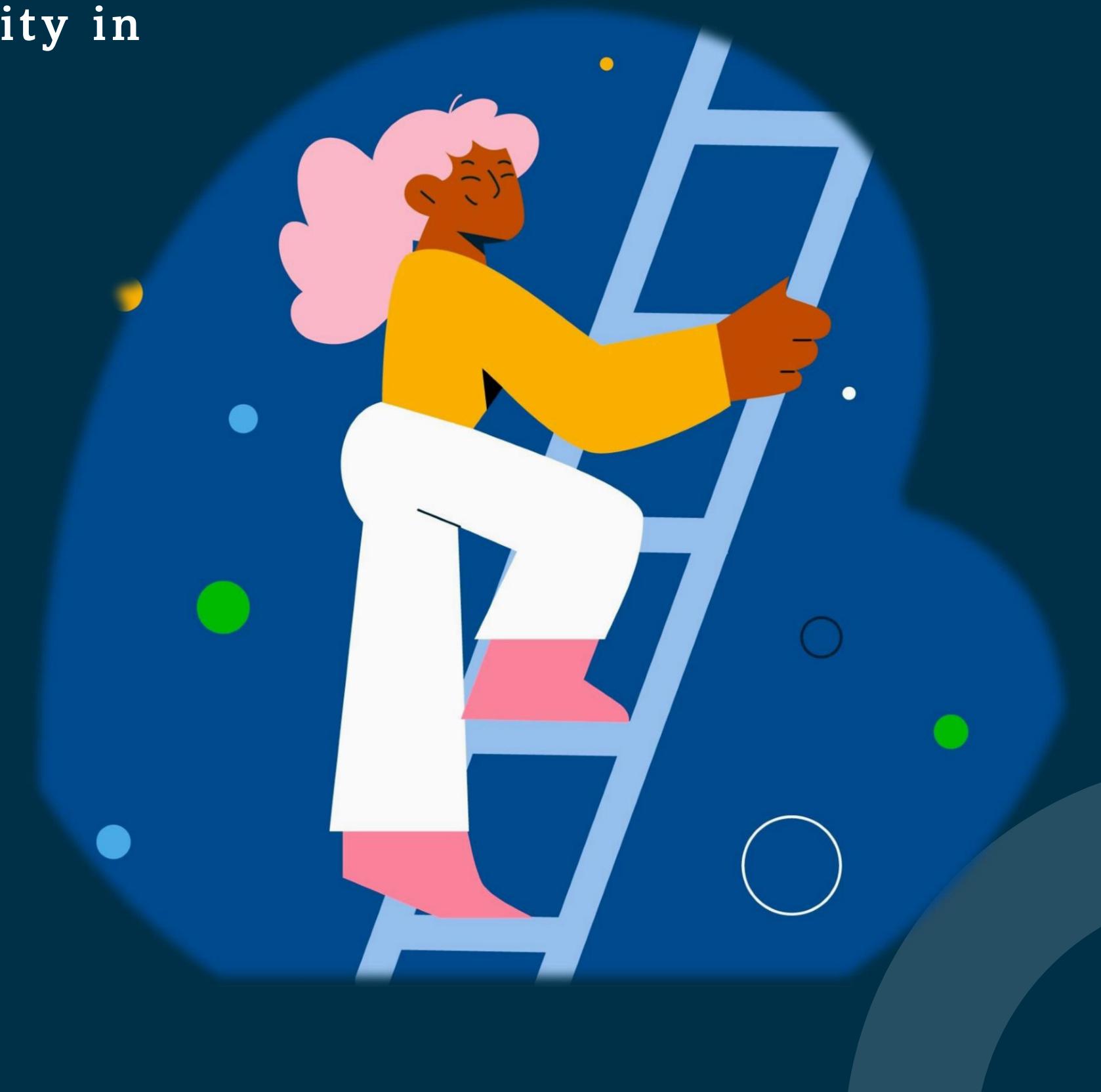
During the ascent/descent...

- 1 foot & 2 hands

OR

- 2 feet & 1 hand

in contact with the ladder





Ladder Safety Devices

- ❖ NO cage or landing platform - protection is required
- ❖ INSPECTED prior to each use & formally INSPECTED on SCHEDULE recommended by THE MANUFACTURER
- ❖ PRIOR TO ASCENDING/DESCENDING a FIXED LADDER examine connections to assure THAT LADDER IS PROPERLY SECURED

Ladder Maintenance

- ❖ KEEP LADDERS CLEAN
- ❖ NEVER REPLACE BROKEN PARTS UNLESS PROVIDED BY ORIGINAL MANUFACTURER
- ❖ DO NOT ATTEMPT TO REPAIR BROKEN SIDE RAILS
- ❖ KEEP ALL THREADED FASTENERS PROPERLY ADJUSTED
- ❖ REPLACE WORN STEPS WITH PARTS FROM MANUFACTURER



Housekeeping

- ❖ TOOLS OR MATERIALS SHOULD NEVER BE STORED IN PASSAGeways
- ❖ WATCH WHERE CORDS & HOSES RUN
- ❖ MAKE A POINT TO IMMEDIATELY PICK UP OBSTACLES IN PASSAGeways
 - ❖ EX - DEBRIS, FOOD, EQUIPMENT, ETC.
- ❖ ANY OTHER TRIPPING HAZARDS SHOULD BE TAKEN CARE OF IMMEDIATELY
 - ❖ EX - CORDS, WIRES, LOOSE FLOORING, ETC.

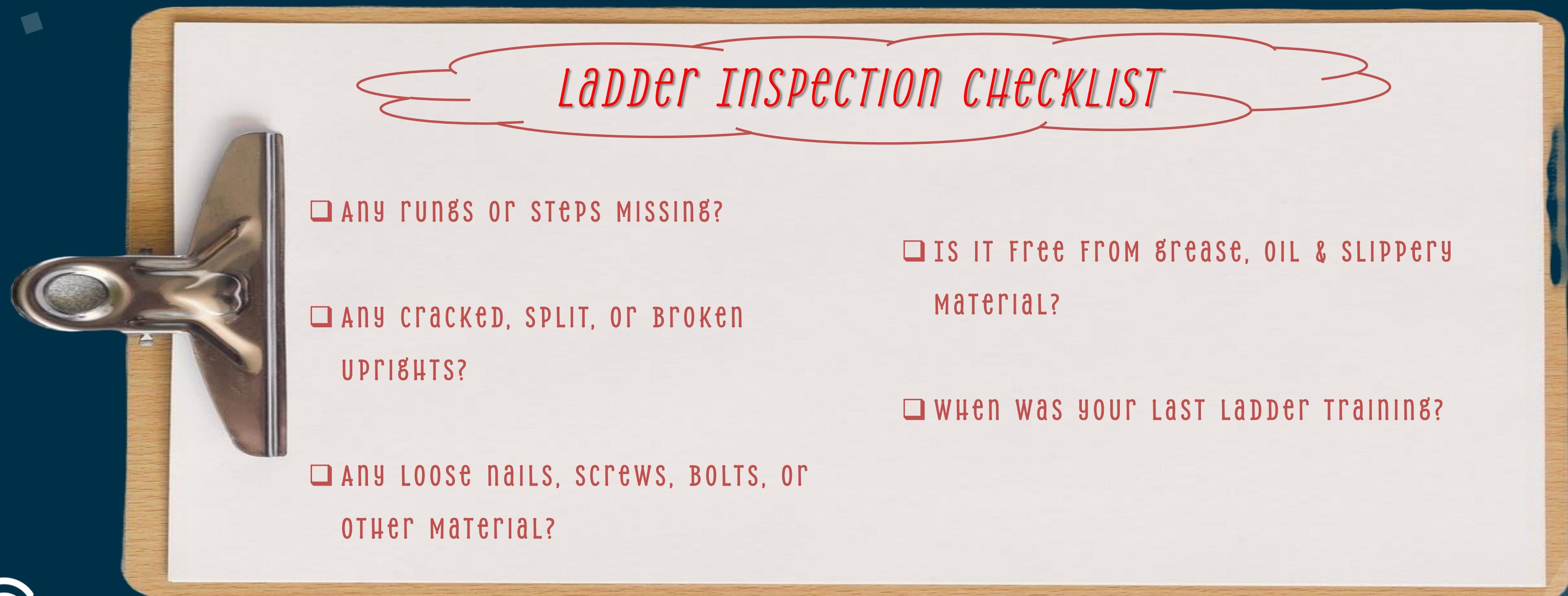


Ladder Inspection

Performed prior to each use

Damaged or defective ladders will NOT be used

They will be tagged as "DANGEROUS", & taken OOS & stored in a secure location pending repair





**Thank you for completing the
Ladder Safety training!**

**Please complete the Ladder Safety quiz to
receive credit for this module.**



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