



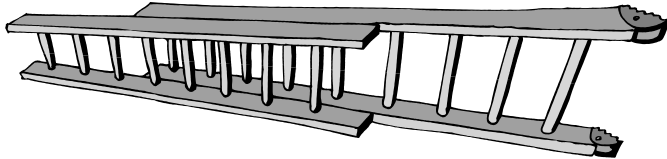
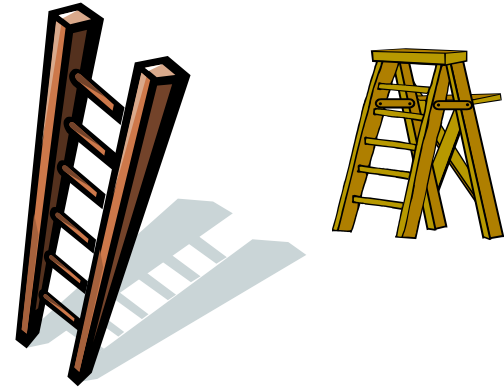
RISK MANAGEMENT DEPARTMENT

PORTABLE LADDER

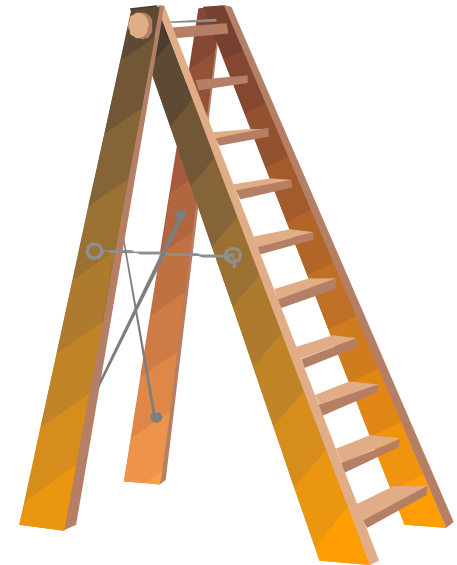


Types of Portable Ladders

- Step stools
- Straight or extension ladders
- Step or “A” frame ladders
- Job made ladders



Regulations apply to all types of ladders!



Portable Ladder Safety

■ General Requirements

- Inspection
- Loads
- Angle
- Rungs
- Slips and Falls
- Other Requirements



General Requirements

■ Inspection:

- Look for cracked, broken, defective, or missing parts.
- Check for slippery, loose, or defective steps.
- Inspect the work area for others that may be in your hazard zone. (Place cones, caution tape, or otherwise notify others of the hazard)
- Disposal: Never attempt to repair a broken ladder.



General Requirements

■ Loads

- Follow ladder capacity ratings:
TYPE I, II, III.
- Must be able to support 4-times
the intended load. (consider
your weight plus tools, etc.)
- Ensure a stable surface to
place the ladder.



General Requirements

■ Angle

- For straight ladders use a 4:1 ratio. The angle of the support to the base of the ladder is $\frac{1}{4}$ the length of the ladder.

(a 12' ladder should be 3' out at the base, $3' \times 4' = 12'$)

- Never use a step-ladder as a straight ladder.

(step ladders have fixed skid feet and need to fully contact the surface)



General Requirements

■ Rungs

- Rungs, cleats, or steps must be parallel, level and uniformly spaced.
- Rungs must be skid resistant and free of excessive debris.



General Requirements

■ Slips and Falls

- Never stand on the top two steps of a step-ladder.
- Use the 3-point rule when climbing up or down.
- Use the belt buckle rule.
(not leaning beyond the center of your body)
- Use only on stable and level surfaces.
- Tie-off straight ladders and extend 3-feet above the landing.



Climbing Ladders

- **ALWAYS FOLLOW THE 3-POINT CONTACT RULE:**



3 Point Rule

**2 hands
1 foot
or
2 feet
1 hand**

**In contact with
the ladder at
all times.**

How Ladders Can Be Dangerous

- Using the wrong ladder for the job
- Using ladders incorrectly
- Using defective ladders
- Using a ladder that has been painted, which can hide defects.





Safely Using a Ladder

- Use the correct ladder for the job, one that is not too big or too small.
- Check load capacities.
- Take the time to get the right size and type of ladder, not the most available one.
- Consider the use and the need for a non-conductive ladder.
- Allow only one person at a time to occupy the ladder.

Getting Started

- Determine the size and type of ladder you will need.
- Will you be working with or around electrical energy? If so, a non-conductive ladder will be required.
- Inspect the area where the ladder will be used. Watch out for overhead power lines and other hazards.





Pre-use Ladder Inspection

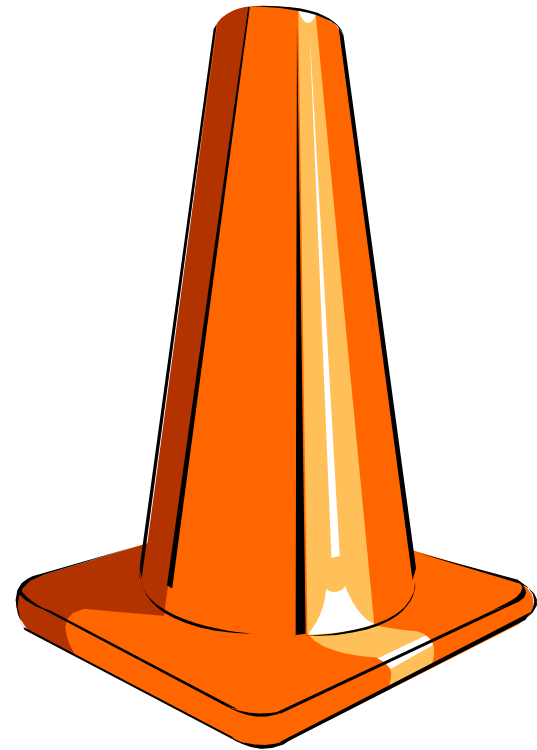
- Check to make sure that rungs do not have oil or slippery substance on them.
- Check to make sure that rungs and rails are not split, broken, or damaged.
- Ladders may not be repaired. Dispose of damaged ladders.
- Check to make sure skid-feet, slip locks, and spreaders are working properly.

Set-up Considerations

- Make sure that ladder is placed on an even surface and that the ground is not too soft to prevent sinking.
- Use the 4:1 ratio against a base for straight or extension ladders.
- Extend straight or extension ladders 3-feet above the roof surface.
- Tie-off straight or extension ladders at the top or have someone hold the ladder.
- If using two or more ladders they must be offset with a landing in-between the ladders.

Consider the Land Down Under

- Barricade off area below your ladder so pedestrians don't walk into or under your ladder.
- Use caution as you may drop something and injure someone passing by below you.



Climbing Tips

- Use the 3-point contact rule while using ladders.
- Only take one-step at a time.
- Do not stand on the top step of an “A-frame” step-ladder.



Moving a Ladder

- Never attempt to move a ladder while you are on it. (rock-n-roll, or hip-hop)
- Take the time to move a ladder instead of “over-reaching” your position.
- If your body is outside the rails you are over-reaching. (the belt buckle rule)



Carrying Materials

- Use a tool belt to keep hands free.
- Lift materials from a hand line bucket from the ground.
- Consider using mechanical lifts instead of a ladder.



Ladder in a
back-hoe
bucket!



**Ladder
in a pool
with an
electric
drill!**



Modified High-Lift or Extension Ladder?



IT'S QUIZ TIME!

1. The proper angle of a straight ladder is a 5:1 ratio? T or F
2. You must repair any ladder that is defective before use? T or F
3. Make sure your ladder extends at least 18" past the landing? T or F
4. Portable ladders must have a capacity rating of at least 10-times the intended load? T or F
5. Paint your ladder a bright color so it can be easily seen? T or F

