WORKING AT HEIGHTS – ELEVATED WORK PLATFORMS (LIFTS)

CHECKLISTS

SAFETY PRECAUTIONS

- ☐ Wherever possible, overhead power lines should be de-energized or insulated by the local utility.
- ☐ Before leaving the machine unattended, lock or otherwise prevent its unauthorized use.
- ☐ Keep platform load below maximum rated working load (RWL) — preferably below 2/3 of RWL.
- ☐ Make sure that all controls are labeled with action and direction.
- ☐ Keep guardrails in good condition and make sure that chain or gate at opening is secure before moving platform.
- ☐ Shut of power and insert required props before servicing machine or checking for problems.
- ☐ Never remove guardrails when platform is raised.
- ☐ Don't jam controls through neutral to reverse direction of movement or operation.
- ☐ Move control gradually, pausing slightly in neutral, for safer, smoother operation.
- ☐ Deploy stabilizers or outriggers according to manufacturer's instructions.
- ☐ Position boom in line with direction of travel wherever possible.
- ☐ Keep ground personnel away from machine and out from under platform or bucket.
- ☐ Never allow workers to walk the boom to get on or of the platform or bucket.
- ☐ Never try to move, push, lift, or free the machine by telescoping the boom.
- ☐ Make sure that extension cords are long enough to reach the expected platform eight.
- ☐ Operators should know how boom orientation affects center of gravity and load on wheels as well as warning and caution signs on the machine
- ☐ Operators should know applicable regulations and location of all emergency controls
- ☐ Training must be provided for each make and model the operator will be using.

SAFETY AROUND POWER LINES

Always check for overhead power lines before moving the machine or the platform. Observe regulated limits of approach around live electrical wires and equipment:

VOLTAGE RATING OF POWER LINE

- ☐ 750 to 150,000 volts
- ☐ 150,001 to 250,000 volts
- ☐ over 250,000 volts

MINIMUM DISTANCE

- ☐ 3 meters (10')
- ☐ 4.5 meters (15')
- ☐ 6 meters (20')

SCISSOR LIFTS

- ☐ Check platform/ guardrails – Guardrails in place; control panel secured, access ladder in good condition.
- ☐ Check tires for inflation when applicable.
- ☐ Check level of hydraulic oil in reservoir.
- ☐ Check lug nuts on wheels.

- ☐ Check joints, pins, and bushings – lubrication; no loose or damaged bushings or pins.
- ☐ Check tire rod linkage – no loose or missing parts; no visible damage; tie rod end studs locked.
- ☐ Check batteries are fully charged – if electrically powered. If internal combustion engine, check oil/fuel.
- ☐ Check ground control panel - switches operable; no visible damage; placards secure and legible.
- ☐ Check hydraulic supply lines/cylinders – no leaks; no loose or unsecured hose; hose guards in place/undamaged.
- ☐ Check platform control panel – all controls operable; undamaged; placards secure and legible.
- ☐ If equipped with outriggers or stabilizers, check cylinders for leakage or cracks.

BOOM-TYPE MACHINE

- ☐ Check platform and guardrails – for loose or missing parts or visible damage. Lock pins in place.
- ☐ Check hose and cable guard on boom – properly secured; no damage to guards, hoses, and cables.
- ☐ Check drive motor and brake shields – securely bolted in place; no leaks or missing hardware.
- ☐ Check drive hub – no visible damage or evidence of leakage.
- ☐ Check tires and wheels – no cut tires; tires properly inflated; no missing lug nuts; no leaks; no rim damage.
- ☐ Check frame – no bends or other damage; no loose or missing hardware.
- ☐ Check fuel supply – adequate fuel, filler cap in place; no damage, leaks or spills.
- ☐ Check power track – no visible damage to hydraulic or electrical lines.
- ☐ Check boom pivot shaft – must be properly secured and lubricated.
- ☐ Check lift cylinder – rod end shaft properly secured.
- ☐ Check tie rods and linkage – no visible damage, loose or missing parts; no steering cylinder leaks.
- ☐ Check engine oil – full mark on dip stick with filler cap secured.
- ☐ Check ground control panel- - switches operable; placards legible; no visible damage.
- ☐ Check counterweight – properly secured.
- ☐ Check exhaust system – no leaks or damage.
- ☐ Check air filter – oil in bowl clean and pre-cleaner free of dirt.
- ☐ Check battery – proper electrolyte level; cables tight with no corrosion.
- ☐ Check hydraulic oil level – full on dipstick with all systems shut down and boom stowed.
- ☐ Check hydraulic oil filter – indicator at proper position with engine at full throttle and oil
- ☐ warmed up.
- ☐ Check turntable and pinion – evidence of lubrication; no loose or missing hardware
- ☐ or damage.
- ☐ Check boom – no visible damage; wear pads secure.
- ☐ Check platform pivots and cylinders – pins properly secured with evidence of
- ☐ lubrication; no cylinder leaks.
- ☐ Check platform control console – switches/levers secured; free to return to
- ☐ neutral position
- ☐ Check for loose or missing parts – no visible damage.

- ☐ Check extending axles – axle lock pins properly installed; no leakage; no loose
- ☐ or missing parts; no visible damage.
- ☐ Check placards. All placards and instructions must be secure and legible
- ☐ Tying-of – Workers must tie of to manufacturer's specifications

Ladder Safety – Follow the "Basics" to Reduce Incidents

We've likely all been exposed to the "Basics" of ladder safety. Over the years bad habits may develop when we use ladders incorrectly without incident. Sadly, incidents do happen regularly due to improper ladder use. In 2014 there were 157 Lost Time Injuries reported to the WSIB that were a direct result from ladder use. Training/re-training of workers on ladder use, preferred methods, maintenance, storage and legislation can have the positive effect of changing our bad habits into good ones and reducing ladder use incidents.

BAD HABITS = POTENTIAL FOR INCIDENTS:

- Using the wrong type of ladder for the job.
- Not properly securing the ladder (tied off, held).
- Overreaching resulting in loss of balance.
- Setting up a ladder on an uneven surface resulting in the ladder tipping over sideways.
- Using ladders on slippery surfaces resulting in the ladder feet slipping outward.
- Using damaged ladders (broken rungs/deformed or cracked side rails/loose connecting parts) resulting in the ladder collapsing.
- Using ladders near doorways that could open and strike the ladder.
- Ladders collapsing on themselves due to damaged components, too much weight or step ladder spreader bars not being fully engaged.
- Leaning step ladders against walls (unfolded).
- Using ladders where they might contact live overhead wires.
- Leaving ladders out in the workplace as potential trip hazards.
- Using ladders in poor weather conditions.

GOOD HABITS = PROPER LADDER USE:

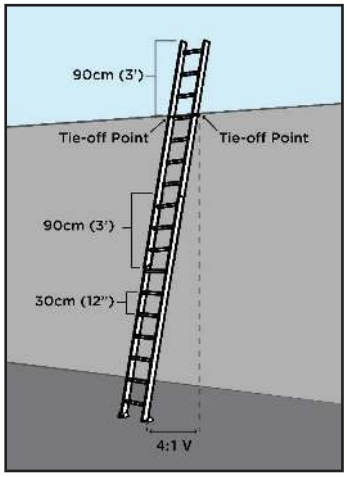
- Use the right ladder for the job. Whether it be a step or extension ladder, ensure it is the proper length. The maximum length of a ladder measured along its side rail must not exceed:
  - 6 m (20 ft) for a stepladder
  - 9 m (30 ft) for a single/straight ladder
  - 15 m (50 ft) for an extension ladder with 2 sections
  - 20 m (65 ft) for an extension ladder with more than 2 sections

GOOD HABITS = PROPER LADDER USE:

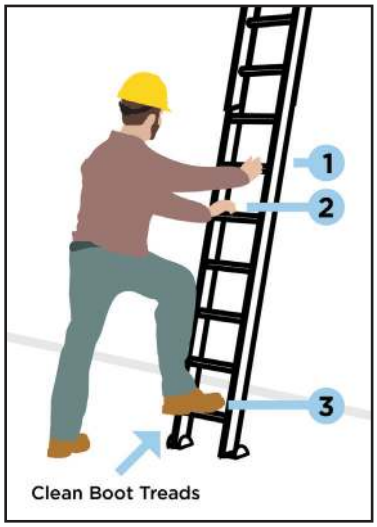
- Know & don't exceed the weight capacity provided by the manufacturer of the ladder. The Canadian Standards Association standard for portable ladders (CAN3-Z11-M81) classifies minimum characteristics of strength and stability required for safe use. It also provides a guideline for the use and care of ladders.

SECTOR	CSA LOAD RATING	GRADE TYPE	WEIGHT LIMIT
• Construction • Industrial • Utilities	Extra Heavy Duty (ANSI) Heavy Duty	1A 1	300 lbs 250 lbs
• Light Maintenance • Office • Tradesman	Medium Duty	2	225 lbs
• Household	Light Duty	3	200 lbs

- Always do a visual inspection of the ladder before climbing and train workers what to look for.
- Ensure the soles of footwear are clean and made of a non-slip material.
- Set up ladders on solid, dry and even surfaces.
- Use the ratio of 1:4 when leaning a ladder against a wall: 1 out from the wall for every 4 up.
- Secure ladders at both the top and bottom. Use a helper to support the ladder from the bottom.
- Always face the ladder while climbing.
- One person at a time on a ladder.
- Don't overreach – keep your belt buckle between the side rails of the ladder.



3 Point Contact



- Use the 3 Point Contact (two hands & one foot or one hand & two feet in contact with the ladder at all times).
- Carry tools in a tool belt when climbing or raise them up with a rope.
- Don't stand on the top two steps of a step ladder or on the bucket shelf.
- Get help when moving or positioning long or heavy ladders.
- Allow for the top of the ladder to extend at least one meter above the step off point (roof top landing).
- Maintain a clear access at both top and bottom landing areas.

PREFERRED METHODS

There are safer methods to use when working with a ladder. Consider using one of the following preferred methods when planning the work:

- Lowering work
- Scaffolding
- Using elevated platforms

Hierarchy of Controls

The chart below provides you with control options that can help eliminate or reduce risk related to working at heights using a ladder.

 ELIMINATION	• Lowering the task so that it can be done at a lower level or at the ground
 SUBSTITUTION	• Using work platforms, scaffolds or person lifts rather than ladders for carrying out work at heights when possible • Using an alternative means for access or egress for emergency procedures
 ENGINEERING	• Ensuring weight restrictions are adhered to • Ensuring ladder has non-slip feet, or is securely fastened • Using the right type of ladder for the job
 ADMINISTRATIVE	• Properly positioning ladder at safe distances and angles • Providing training on how to use ladder • Setting up on stable ground
 PERSONAL PROTECTIVE EQUIPMENT	• Always using three points of contact and facing the ladder when going up and down

PROPER LADDER MAINTENANCE & STORAGE:

- Keep ladders clean from mud, chemicals and debris that can cause them to degrade or that might hide imperfections.
- Store ladders out of the weather on dedicated horizontal wall racks. Remembering to return them to this location after each use.
- When transporting a ladder by vehicle ensure it is secured to the vehicle so movement or vibration cannot damage it.
- Tag defective ladders for replacement or potential repair and take them out of service so others will not use.
- Put a ladder maintenance program in place for life-time monitoring of each ladder's condition.

WORKER TRAINING:

- Take the time to train workers so they know which type of ladder to use for each task they may be required to do.
- Ensure workers know how to properly set up and use each type of ladder.
- Ensure workers conduct ladder inspections prior to each use.

Ladder Inspection Checklist

Before using a ladder must be inspected thoroughly for any damage, defects, suitability and quality. This checklist will help you determine if the ladder is safe to use or not. If you answer "yes" to any of the following, the ladder should be tagged and taken out of service immediately.

Date: _____ Type/Grade of Ladder _____
Inspected By: _____ Length: _____
Location: _____ Ladder ID: _____
Material: ☐ Wood ☐ Fiberglass ☐ Aluminum ☐ Other _____

Inspection Item	Yes	No
Metal Parts broken, loose, dented, rusty, missing		
Side Rails broken, loose, dented, rusty, signs of deterioration		
Rungs broken, loose, dented, rusty, signs of deterioration		
Braces, Uprights or Steps broken, cracked, splintered, chipped, defective, missing or signs of deterioration		
Anti-Slip Feet broken, cracked, defective, poor condition, missing, or signs of deterioration		
Extension ladder lock, pulley or other fittings worn, out of place, damaged, unworkable, missing or signs of deterioration		
Steps: greasy, slippery, cracks, splitting		
Spreader Arms and Stops broken, bent, loose, damaged, defective, rusty, unworkable or missing		
Rope damaged, worn, broken, frayed, knotted or missing		
Pail Tray damaged, worn, broken, bent, rusty, tight, unworkable or missing		
Ladder makeshift repairs, signs of deterioration, bent, warped, twisted or bowed		
Storage Improperly stored		
Identification Marks (CSA) not visible		

☐ Continue Use ☐ Repair ☐ Destroy

KNOW THE LEGISLATION, STANDARDS, GUIDELINES AND BEST PRACTICES THAT APPLY TO YOUR WORKPLACE:

The Ontario Ministry of Labour website is a good source of information for finding the Legislation, Standards, Guidelines and Best Practices that apply to your workplace:

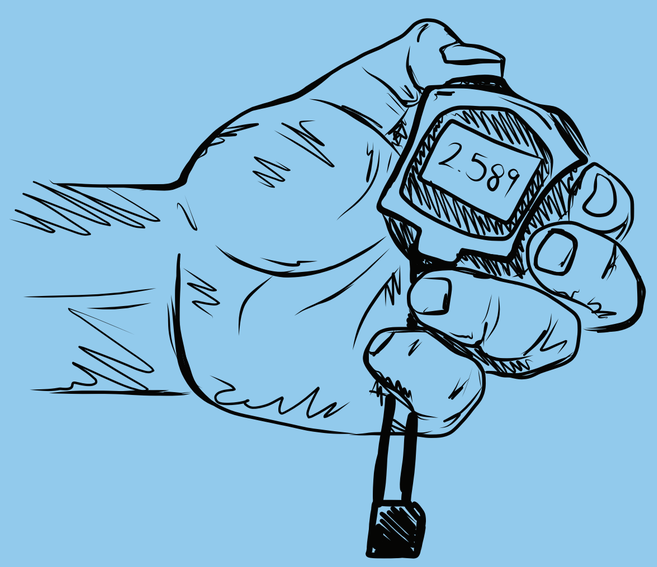
- Ministry of Labour's MSD Prevention/Ergonomic Guidance regarding:
  - Step Stools in Industrial Workplaces http://www.labour.gov.on.ca/english/hs/pubs/ladder_step.php
  - Sliding, Fixed, Portable (Extension, Single) Ladders in Industrial Workplaces http://www.labour.gov.on.ca/english/hs/pubs/ladder_sliding.php
  - Portable Ladders in Industrial Workplaces (Mobile Ladder Stand / Ladder Platform) http://www.labour.gov.on.ca/english/hs/pubs/ladder_mobile.php
  - Portable Ladders in Industrial Workplaces (Step / Platform or Trestle Ladders) http://www.labour.gov.on.ca/english/hs/pubs/ladder_portable.php
- Ladder Safety in Construction – Requirements to conduct risk assessments prior to determining whether or not to use a ladder rather than a scaffold. http://www.labour.gov.on.ca/english/hs/sawo/pubs/fs_laddersafety.php
- Where frequent access is required to equipment elevated above or located below floor level, permanent platforms shall be provided with access by a fixed stair or access ladder. Regulation for Industrial Establishments, O. Reg. 851/90 Section 19. http://www.ontario.ca/laws/regulation/900851
- Fixed Access Ladder Engineering Data Sheet 2–04. http://www.labour.gov.on.ca/english/hs/pubs/eds2-4_ladders.php

NEED HELP?

Your PSHSA consultant can help you change your ladder safety Bad habits into Good habits.
We offer resources and hands-on training programs like 'Working at Heights' to help get you started.

Find your PSHSA consultant at **www.pshsa.ca**

Prevention of Slips, Trips and Falls



Over **42,000**

workers are injured annually due to fall accidents

That's more than one injury every 2.5 minutes!

This number accounts for **17%** of the "loss-time injuries" that were accepted by workers' compensation boards or commissions across Canada. **(in 2011)**

HOW CAN YOU PREVENT FALLS DUE TO SLIPS AND TRIPS?

1 Housekeeping

Good housekeeping is the first and the most fundamental level of preventing falls due to slips and trips.

Including:
- ⚠ cleaning all spills immediately
- ⚠ marking spills and wet areas
- ⚠ mopping or sweeping debris
- ⚠ removing clutter
- ⚠ securing mats, rugs and carpets
- ⚠ closing file cabinet or storage drawers
- ⚠ covering cables that cross walkways
- ⚠ keeping working areas and walkways well lit:
- ⚠ replacing used light bulbs and faulty switches

Without good housekeeping practices, any other preventive measures such as installation of sophisticated flooring, specialty footwear or training on techniques of walking and safe falling will never be fully effective.

2 Footwear

Since there is no footwear with **anti-slip** properties for every condition, consultation with manufacturers is highly recommended in selecting proper footwear.

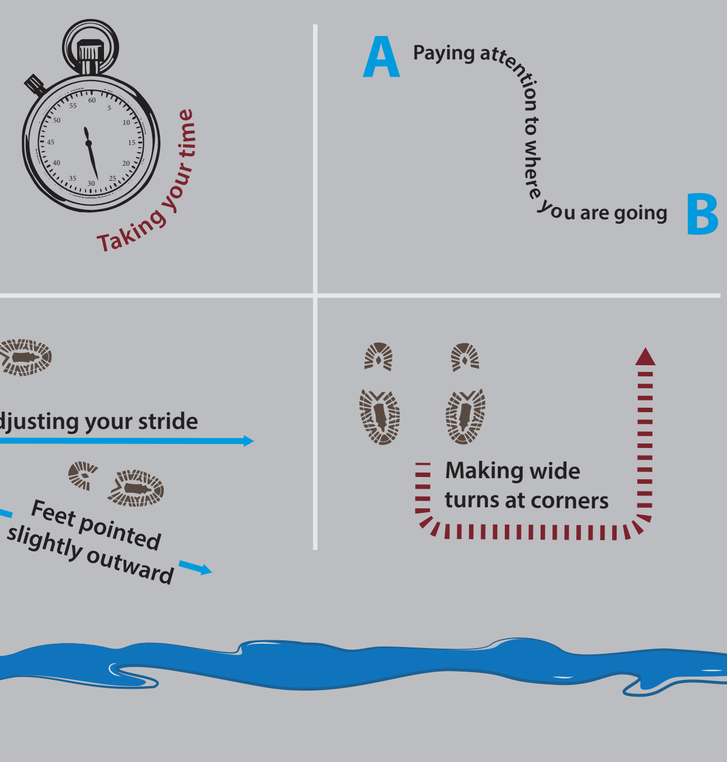
Properly fitting footwear increases comfort and prevents fatigue, which in turn improves safety for the employee.

3 Flooring

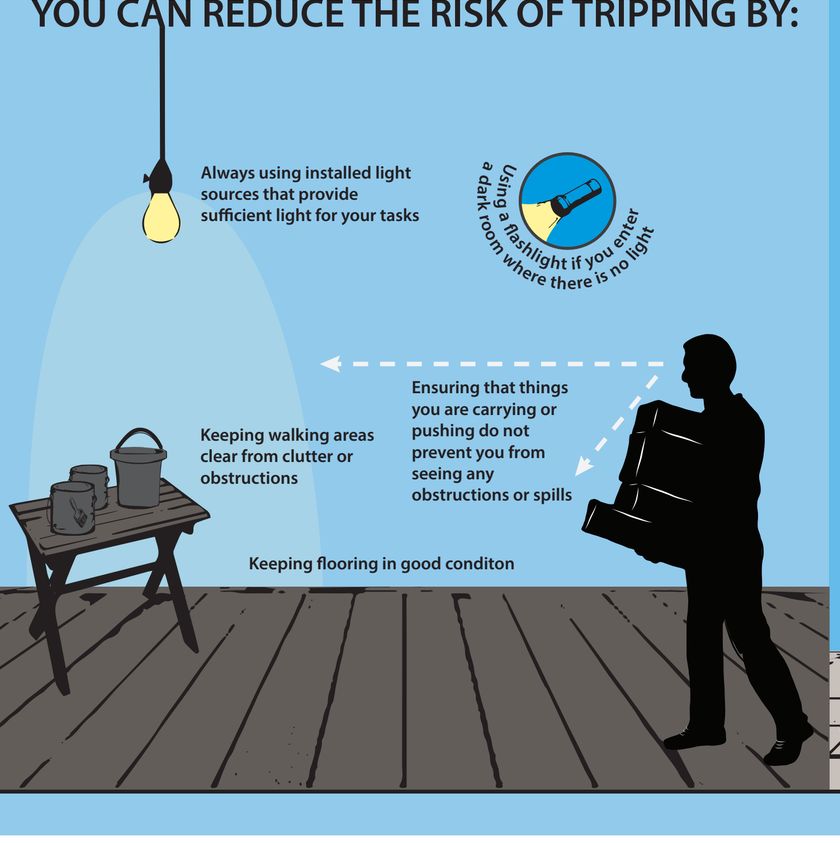
Installing or replacing **resilient, non-slippery flooring** can further improve safety and reduce the risk of falling, as well as prevent or reduce foot fatigue. Recoating or replacing floors, installing mats, pressure-sensitive abrasive strips or abrasive-filled paint-on coating, and metal or synthetic decking contributes to slip prevention measures.

WHAT CAN YOU DO TO AVOID FALLING AT WORK?

YOU CAN REDUCE THE RISK OF SLIPPING ON WET FLOORING BY:



YOU CAN REDUCE THE RISK OF TRIPPING BY:



YOU CAN REDUCE THE RISK OF FALLING FROM A HEIGHT BY:

Establishing a complete fall protection program (if one is not in place), including:

SLIPS

66% of falls happen on the same level resulting from slips and trips

34%

are falls from a height

COMMON CAUSES OF SLIPS ARE:
- ⚠ wet or oily surfaces
- ⚠ weather hazards
- ⚠ loose rugs or mats
- ⚠ walking surfaces with unequal traction

SLIPS HAPPEN WHERE THERE IS TOO LITTLE FRICTION OR TRACTION BETWEEN YOUR FOOTWEAR AND THE WALKING SURFACE.

TRIPS

COMMON CAUSES OF TRIPS ARE:
- ⚠ obstructed view
- ⚠ poor lighting
- ⚠ clutter
- ⚠ wrinkled carpeting
- ⚠ uncovered cables
- ⚠ open drawers not being closed
- ⚠ uneven walking surfaces

TRIPS HAPPEN WHEN YOUR FOOT COLLIDES WITH AN OBJECT CAUSING YOU TO LOSE BALANCE AND EVENTUALLY FALL.

FALLS

Each type of fall requires different features in a fall prevention program.

FALLS FROM AN ELEVATION COMMONLY OCCUR FROM HEIGHTS DUE TO:
- ⚠ ladders
- ⚠ roofs
- ⚠ down stairs
- ⚠ jumping to a lower level

FALLS FROM AN ELEVATION HAPPEN WHEN WORKERS ARE AT RISK OF FALLING THREE METERS OR MORE.

Sources:

http://www.wsib.on.ca/files/Content/Downloadable%20FileSlipsBrochure_2130A/Slips2130A.pdf
http://www.labour.gov.on.ca/english/hs/pdf/fs_falls.pdf

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