Your Fall Protection Equipment – Your Lifeline



Safety Talk

What's at Stake?

Falls are one of the oldest causes of injuries and death. A worker is most at risk if working at heights of four feet or more; above running machinery, water and hazardous liquids, or exposed to an opening in a work surface. Fall protection equipment can mean the difference between life and death.

What's the Danger?

The risk of falling and exposure to fall hazards is typically higher on construction sites, but fall deaths occur in most industries. Fall hazards include working on sloping rooftops or roofs and floors with deteriorating materials, unprotected edges and unfavorable weather conditions. Even more dangerous, is lack of awareness which can lead to using inadequate or damaged fall protection equipment. For example, borrowing and using a, possibly defective, body harness without inspecting it.

How to Protect Yourself

Fall protection comes in many forms, including scaffolds, guardrails, safety nets, and personal fall arrest systems. However, the fall protection you wear is your direct lifeline when it comes to stopping you in the event of a fall. All equipment shares similar safety components for the protection they give. To detect damages and prevent equipment failure while working at heights, a familiarity of these components is necessary.

- **Hardware** is any metal part like a D-ring, used for connecting parts of fall protection equipment.
    - Attachments should overlap and move freely, ensure locks are working.
    - Inspect for damage, cracks, rust, bends, dents, sharp edges, corrosion

and distortions.

- **Webbing** is the woven fabric used for producing straps and belts like in a harness.
    - Inspect for cuts, holes, loosening, burns, tears, scraping, wearing, stretching, dirt, chemical damage and discoloration.
- **Stitching (impact indicator)**: This is a section of the webbing with a special stitch pattern designed to release when the harness receives impact.
    - Inspect for ruptured stitches, pulled or cut fibers and discard if noticed.
- **Ropes** are specially blended synthetics or wires built for strength and stress resistance, normally used for descent control.
    - Inspect for cuts, burns, abrasion, knots, excess dirt, discoloration, broken wires, corrosion, twists and separated strands.
- **Shock absorber** is a unit of the lanyard with a built-in woven inner core that expands during a fall to reduce the force.
    - Inspect for elongation, tears and excess dirt.
- **Label** is a small piece of paper, fabric or plastic attached to equipment that carries important information.
    - Ensure labels are in place, clean and readable.

Equipment built from the above components include:

- **Full body harness** is secured around the body to distribute fall arrest forces over the thighs, pelvis, waist, chest, and shoulders.
    - Inspect hardware, webbing, stitching and label.
- **Lanyards**: Lanyard is a flexible line of webbing or rope, used to attach a body belt or full body harness to a lifeline or anchor.
    - Inspect hardware, webbing, rope, stitching and shock absorbers.
- **Descent control device** is used to safely lower a worker down.
    - Inspect hardware, pulleys, and ropes.
- **Self-retracting device,** like a car’s seatbelt, releases when pulled gently and locks when speed or force is applied. This stops the downward motion of somebody falling.
    - Inspect hardware: (screws, fasteners, housing, anchors, hooks), labels, webbing and stitching.
    - Locking action and retraction by pulling out the lifeline and allowing it to retract.

Finally, keep your equipment working well and lasting long by following these guidelines.

- Follow manufacturer’s instructions for care, storage, and use.
- Wipe off dirt with clean, wet sponge and repeat cleaning with water and detergent.
- Rinse webbing in clean water, wipe with a clean cloth and hang to dry.
- Store equipment away from dirt, direct heat, prolonged sunlight, fumes, corrosion and sharp edges.
- Always inspect equipment before use, replace defective equipment immediately, and do not use if in doubt.
- Ensure equipment is inspected at least annually by an authorized person.

Final Word

Your fall protection equipment is your lifeline. Inspecting it before use is a must. For quality inspection, an understanding of fall protection equipment, their uses and components to be inspected is essential. The Canadian Standards Association (CSA Z259) guide and ANSI Z 359.2 2007 are two guides to reference for more detailed information.