

Fall Protection Lifelines Cut by Exposed Edges

Attention: Employers and workers who rely on personal fall arrest systems

A real and deadly risk

In Washington State, two workers fell to their deaths due to their self-retracting lifelines (SRLs) being severed in separate fall incidents. The lifelines had been anchored horizontally (i.e., at a level below the harness D-ring).

- One incident involved a steel-cable lifeline that was severed when it contacted the edge of formwork made of steel plates.
- The other incident occurred when a nylon webbing lifeline was severed after contacting sharp, abrasive edges along a beveled wall.

Evidence from investigations of each incident indicated damage to lifelines occurred during the fall, not before. In both cases, manufacturers of the lifelines warned about using SRLs around edges that could damage the lifeline or prevent the SRL from effectively arresting the fall.

Although the incidents described involved SLRs, non-SLRs (e.g., lanyard and rope, webbing, or cable) have similar risk.

Employers are required to address this risk per WAC 296-155-24613(1)(e), "You must protect all safety lines and lanyards against being cut or abraded".

How to prevent this from happening at your jobsite

Any open side or edge of a floor, roof, deck, platform, or formwork creates a condition in which a lifeline could contact an edge and be severed in the event of a fall.

To protect workers who use lifelines:

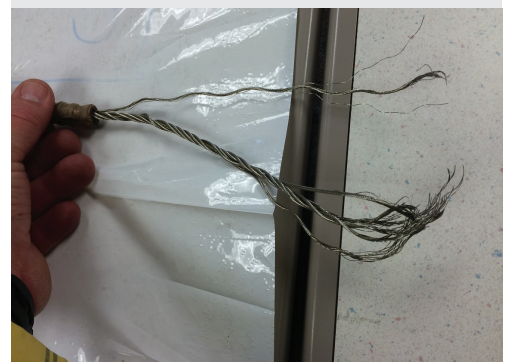
- Identify and document all potentially hazardous edges during your walk-around safety inspections at the jobsite.
- When possible, avoid working in areas where lifelines could contact potentially hazardous edges should a fall occur.



Lifelines anchored horizontally necessitate extra safety precautions when working near metal or concrete edges along decking, floors, roofs, platforms, formwork, and other surfaces.



Metal edges can present a deadly risk to lifelines and lives. The edge on the steel plate shown above cut a worker's steel cable lifeline shown below.



- Anchor lifelines vertically overhead, whenever possible, to prevent the lifeline from contacting an edge and to minimize swing falls (or the pendulum effect) that can abrade and cut lifelines. In addition, make sure workers stay within a safe working distance from the overhead anchor point.
- When a fall could occur over an edge:
 - Select and provide lifelines designed specifically for the application and follow the manufacturer's instructions for use.
 - Protect lifelines against being cut or abraded by covering the edge with a protective material.
 - Address potentially hazardous edges and protective measures for lifelines in your Fall Protection Work Plan.
- Routinely inspect lifelines and other fall protection equipment before each use.
- Instruct crews on:
 - The use and limitations of the fall protection equipment provided.
 - Where potentially hazardous edges are located.
 - Why they need to protect lifelines when working around exposed edges and how to do that.
- Share this alert with crews to reinforce awareness of this safety issue.



The exposed edges (shown above) cut a worker's nylon webbing lifeline (shown below) during a fatal fall.



Other resources you can access

Get an **electronic** copy of this [Hazard Alert](#)

L&I Safety web page: www.Lni.wa.gov/Safety-health.

For other related rules, contact your local L&I office or visit [the safety rules webpage](#).

Find the nearest [L&I office](#).

How can I get help from Labor & Industries?

The Department of Labor & Industries provides consultations, training, and technical assistance at no cost to employers. Call today to schedule a [free confidential consultation](#) or go to for more information.

You may also call 1-800-423-7233 or visit a local L&I office and ask for the Consultation Manager.

*This alert was developed by L&I's Division of Occupational Safety and Health (DOSHS) to alert employers, labor groups, and employees to potential hazards associated with work activities. **This is not a rule and creates no new legal obligations.** The information provided includes suggested guidance on how to avoid workplace hazards and describes relevant mandatory safety and health rules. DOSHS recommends you also check the related rules for additional requirements.*