

SAFETY TALK

[fall protection – basic types]

Falls are a significant cause of serious injuries. You don't have to fall far to be injured or even killed. For your own safety, you should know the basic types of fall protection and what works best for each situation. The basic types are guardrails, travel-restraint, fall-arrest, and warning-line systems (warning lines are to be used during the application of weatherproofing jobs only).

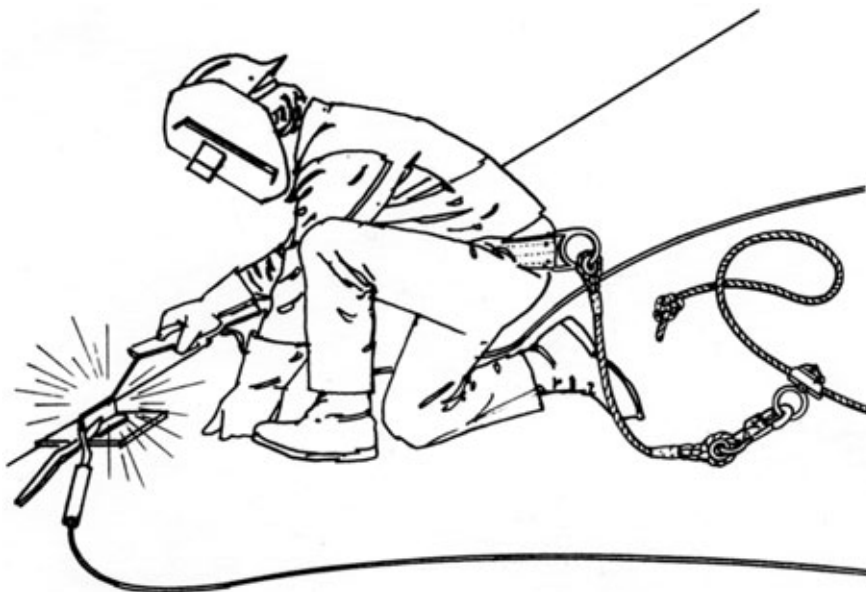
1) Guardrails

Guardrails are excellent methods of fall protection because they remove the risk of falling by putting a barrier between the employee and the edge. See Safety Talk #8 – Guardrails.

2) Travel-restraint system

A travel-restraint system keeps you from getting too close to an unprotected edge. It restrains your travel to prevent you from falling. When you get to the open edge of a floor or roof, the system holds you back.

The system consists of a lanyard, a lifeline and a safety harness or belt. The lanyard and lifeline are adjusted to let you travel only so far. The safety harness or belt attaches to the lifeline directly, or through a rope grab.

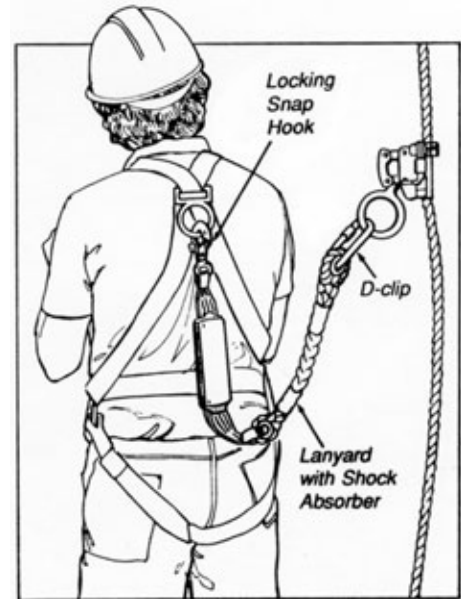


3) Fall-arrest system

A fall-arrest system keeps you from making contact after you have fallen. It arrests your fall.

You must use a fall-arrest system if you are working from:

- An unguarded work area that is more than 3 metres above the nearest safe level.
- An unguarded work area that is above any surface or thing that could cause injury to you upon contact.
- An unguarded work area that is above any open top tank, pit or vat.
- A work platform that is 3 metres above a permanent, safe level.
- Any work area where a health and safety officer has determined that it is necessary.



A fall-arrest system must limit the impact on the body of a fallen worker to 8 kN. This can be accomplished by using a shock absorber or by limiting the free fall distance to 1.2 metres. It consists of a lanyard and a strong anchor. The anchor for an individual fall-arrest system (for one person only) must be capable of withstanding a force of 17.8 kN – approximately the weight of a small car. The lanyard can be connected to the anchor directly or through a lifeline system.

Although section 49(3) of *Regulation 91-191* under the *Occupational Health and Safety (OHS) Act* requires the use of a safety belt with a fall-arrest system, manufacturers of safety belts that comply with CSA* Z259.1-95 or Z259.1-05 do not allow the use of belts for fall arrest. A full body harness should be used for all fall-arrest situations. The use of shock absorbers is also highly recommended as they significantly decrease the physical impact on the fallen worker. Most employers have adopted both the shock absorber and the full body harness, because when used together, they reduce the impact on the body considerably.

If an employee falls into their fall-arrest system, the following is required:

- Because the employee will need to be rescued quickly, a rescue plan should be developed ahead of time so you are prepared.
- The fall-arrest equipment must be removed from service and inspected by a competent person before it is returned to service.

Travel-restraint and fall-arrest equipment should be CSA-approved.

4) Warning-line system

A warning-line system is placed 1 metre from the roof edge and warns employees when they are getting close to the edge. The warning-line method of fall protection can only be used by roofers who are applying weatherproofing to a roof that is 4 in 12 or less.

In New Brunswick, the law on fall protection can be found under sections 49-50, 95(2), 97-100, 102, 105-112, 121(2), 129.1(4-6), 129.3(2), 131(1), 141(1), 231(5) and 232(2) of *Regulation 91-191* of the *OHS Act*.

*CSA — Canadian Standards Association