



Tool Box Safety Talk No. 3

September 2002

Fall Protection

Falls are the leading cause of serious roofing accidents and roofing deaths. Roofers are exposed to the risk of falls from height and several means of protecting workers are available. Workers should know the various options available to protect their health and safety when working near the roof edge.

Fall Protection Types

There are several fall protection apparatus available including guardrails, travel restraints and fall arrest personal protective equipment. Fall protection equipment shall be labeled with the Canadian Standards Association (CSA) or American National Standards Institute (ANSI) approval labels.

Guardrails

Guardrails are commonly used on construction sites, as they are a convenient means of protecting workers. Guardrails shall protect roof openings and the roof edge. Guardrails shall be attached to the edge or as close to the open edge as possible. The guardrail system must be designed to withstand loads that will be applied to them during roofing operations. A simple guardrail system can be constructed from dimensional lumber consisting of standards, top and middle rails and a toe board. Wooden standards should be placed no more than 2400mm (8 ft.) apart and secured to the building structure. Well-anchored standards are essential to the performance of this fall protection system. When using wood construction the top rail shall be laid flat to provide maximum resistance when lateral forces are applied to it. If rails must be removed for material handling, rope off openings using a flagging and wear fall restraint equipment.

Travel Restraint Systems

Where guardrails have not been provided, a restraint system may be used to restrict a workers travel distance and prevents them from getting to near the roof edge. Travel restraint safety equipment is comprised of an anchored lifeline and an adjustable lanyard that attaches to the workers safety belt or harness. This system allows the worker to travel along the lifeline and incorporates a stop that holds the worker back from the roof edge. Some restraint systems use a rope grab that locks at sudden pulls like the seat belt in a vehicle. The rope grab may be attached directly to the lifeline without using a lanyard.

Over

Fall Arrest System

Roofers must wear fall arrest systems when they are in the danger of falling more than three (3) metres (10 ft.) or when working above operating machinery, fluids or hazardous substances and objects. A fall arrest system consists of a full body harness and a lanyard with a shock absorber. The fall arrest equipment may be attached directly to an adequate support or connected to an anchored lifeline. Fall arrest loads may be high and the lifeline must be sized and anchored to support the weight of a small vehicle. Safety supply companies provide training on the proper use and maintenance of fall arrest systems and completing this training is recommended. Please be advised that equipment that has been involved with an actual fall must be replaced with new as it has done its job and is no longer safe to use.

Prior to use always carefully check the safety of your fall arrest personal protective equipment. Make sure that straps, buckles and other hardware are in place and undamaged. Inspect the lifeline and lanyard for fraying, burns, kinking, abrasions and other signs of general wear or abuse. Inspect the lanyard's shock absorber by looking for torn or missing stitching. The lanyard must be securely fastened to its D-rings. Finally check the rope grip for proper operation by jerking it suddenly. It should stop immediately and remain tightly gripped to the lifeline. Defective or questionable fall arrest equipment should be tagged for repair and taken out of service immediately. Have your safety supplier inspect your fall arrest equipment regularly, as this may be the difference in keeping you healthy and safe. When not in use, store fall arrest equipment in a clean covered container and out of the direct sunlight.