


Myths and facts of fall protection

By Thomas Kramer



The excuses for not using fall protection come in many forms: “It slows me down,” “It makes it harder to work,” and “I don’t really need it.” If not done correctly, all these things can be true. But when systems are designed around the worker’s needs, using fall protection can actually enhance safety and productivity.

Fatal misconceptions like these abound in the construction industry. Many of these misunderstandings involve the use of personal protective equipment (PPE) like harnesses and lanyards. Although the amount of money spent on PPE has doubled during the past decade, statistics show that fall fatalities were still increasing before the economic slowdown.

In fact, according to data from the Bureau of Labor Statistics, fall fatalities increased for 12 years after OSHA 1926 Subpart M (fall protection) was released. This unfortunate fact may stem from the reality that in the past workers fell without a harness on; now they are falling with a harness on, but not properly connected, if attached at all, to an anchorage point.

Two additional references for fall protection requirements include the ANSI Z359 Family of Standards and ANSI A10.32. While ANSI Z359

focuses on general industry, it is often used by those in construction because of its comprehensive nature.

How well do you know the finer points of fall protection? You can get a better idea of your knowledge by identifying whether the following statements are myths or facts.

Myth or Fact:
Fall protection equipment requires a pre-use inspection every time it’s used.

Fact. Fall protection equipment manufacturers require an inspection of all equipment by the user before each use. This informal inspection verifies that all equipment is in good working order. A formal inspection by a trained, competent equipment inspector is also required on a regular basis – typically every six months.

Myth or Fact:
According to OSHA, a harness and lanyard are not needed when using a scissor lift.

Fact. A harness and lanyard are not required when performing work

from a scissor lift; the perimeter guard rail is your primary means of fall protection. During your pre-use inspection, the guard rail should be reviewed to ensure that it is in good condition. However, your feet must remain firmly on the floor of the scissor lift and climbing on the guard rail is never permitted. Some companies require the use of a harness and lanyard in a scissor lift for added safety; a harness and lanyard is always required when using an articulating boom lift.

Myth or Fact:
An adequate clearance distance is 6’ to 8’ when using an energy-absorbing lanyard.

Myth. Most lanyards are 6’ in length and the clearance required depends on the location of the anchorage point. When an anchorage is even with the back D-ring of a harness, 12’ of clearance is required to safely arrest a fall. This distance becomes greater if your anchorage location falls below your back D-ring. Because of this factor, anchorages should always be as high as the back D-ring.

Myth or Fact:
**Cable loads in horizontal
lifeline systems can
exceed 5,000 lbs.**

Fact. End reactions from multi-user horizontal lifelines can easily exceed 5,000 lbs. Because of their complexity and opportunity for misuse, OSHA requires all horizontal lifelines to be designed, used and inspected under the supervision of a qualified person in the field of fall protection.

Myth or Fact:
**A harness only needs
one D-ring.**

Myth. Although this is more opinion than requirement, harnesses should have a minimum of two D-rings one on the dorsal (back) and one on the chest. Dorsal D-rings are used for the connection of most active fall protection systems. Whenever a worker is subject to a fall, a rescue procedure must also be planned. If the fall protection system is connected to the dorsal D-ring, an additional D-ring aids connecting rescue equipment.

Myth or Fact:
**Self-retracting lanyards
always lock up in a
few inches.**

Myth. A self-retracting lanyard is very similar to a seat belt. When the payout of the lanyard reaches 3.5' to 4.5' per second, clutches are thrown out and a braking system takes over to gently arrest the fall.

Sales representatives may tug on the webbing of a self-retracting lifeline and claim that it locks up in inches. In these cases, they are simply showing how quickly the clutches engage. Most manufacturers' literature contains a claim that the arrest distance for their equipment is 42". A new ANSI Z359 standard is being created with

a special class of fast-acting self-retracting devices.

Myth or Fact:
**The best way to rescue
someone who has fallen
while wearing fall PPE is
by calling 911.**

Myth. Many people rely on 911 as their rescue team. In short, this provides you with a false sense of security. By all means, 911 should be called whenever a worker has fallen, but an internal rescue plan should be in place prior to executing work at heights to ensure an OSHA-required prompt rescue. The ANSI Z359 Family of Standards provides helpful information on rescue planning.

Myth or Fact:
**A guard rail that is
taller than 42" is always
acceptable.**

Myth. A guard rail at 42" high may be okay if all other design criteria are met. The guard rail must be designed to withstand a 200-lb. force applied at the top rail in any direction and the clear opening between rails must not exceed 19" and a toe board must be present. The standard 42" height applies to the location of the top rail above the working surface.

If the work is performed on a small step above the platform level, the 42" height is measured from the top of the step where the work is taking place.

Myth or Fact:
**A 1/2"-diameter
shouldered eyebolt
bolted to a steel beam
is an acceptable
anchorage location.**

Myth. There is more to an anchorage point than strength requirements.

Some other concerns are equipment compatibility and swing fall and clearances. Manufacturers also prohibit eyebolts from being used when loads are applied out-of-plane.

Additionally, avoid using material handling equipment for fall protection. While common in the past, it is not a best practice today.

Education and diligence

Proper use of fall protection equipment can mean the difference between life and death. If you answered these questions correctly, congratulations! Please continue to enhance your fall protection knowledge using the ANSI and other references mentioned in this article.

If you struggled to answer the questions, you are not alone. Fall protection is a complex subject with many regulations, standards, equipment options and training sources. Training is required by OSHA regulations and other standards, so it is an essential part of a safety program. Make sure your personnel are properly trained and can easily answer the critical issues conveyed in this article.

When you have the knowledge to properly address fall protection issues, you can effectively create a safer environment for workers. ♦

Editor's Note:

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