The ABCD's of PFAS: Help Workers Remember How to Stay Safe Working at Heights

Passive and Active Fall Protection

The best fall protection is a passive system that doesn't rely or require a worker to do anything – they don't have select or wear fall protection. Passive systems include guardrail systems and safety nets. Passive systems aren't always possible to install and use however, and that's when active fall protection is needed.

One type of active fall protection is a personal fall arrest system or **PFAS**. When used correctly a PFAS can stop (arrest) a falling worker from hitting the surface or ground below. A PFAS consists of a full-body harness, a shock-absorbing lanyard or retractable lifeline, and a secure anchor/s point. If any part of the system fails, the worker is put at a high risk for injury or death.

Training

Considering the importance of a PFAS as a life-saving device, it makes sense that it to be used correctly and be in good condition.

Of course, this involves training. Before performing work at height that requires the use of a PSAF, your workers must be trained on:

- the safe way to wear a PSAF;
- how to safely use a PSAF, including which anchor points are suitable – and which are not;
- the rescue plan; and
- inspecting and caring for the PSAF.

Training Fails

Even after training, how often do you see these PFAS blunders?

- A worker wrapping their lanyard around a beam or pipe and then tying the lanyard back on itself.
- A 6-foot shock-absorbing lanyard tied off to a waist-level anchor point on a worker who is working 6 feet off the ground.
- A narrow piece of PVC piping or other structure that you know can't stand up to the force of a fall.

The ABCD's of PFAS

Here's an easy way to reinforce your training and help your workers remember some of the more pertinent points.

A – Anchor Point

In technical terms, an anchor point is a secure point of attachment for your fall arrest system's lanyard or lifeline. In other words, it'll be supporting your weight and fighting gravity's forces if you fall. You want to tie-off to something sturdy!

- Anchor point locations should be planned out before work begins. If not, or you're ever not sure what to tie-off too, ASK before you tie-off.
- The anchor point should be attached to a substantial structural member, such as a beam, girder, roof truss or rafter.
- And here's why. An anchor point must support either 5,000 pounds per worker (the weight of two small cars) or twice the intended load.

How Not to Die

 Don't use a roof pipe or vent as an anchor point. They are not designed to support the required 5,000 pounds per worker. Instead, use an anchor point that has been engineered and installed for the job, or another approved anchor point.



 Never use sheetrock screws to install an anchor point either –

they are great for sheetrock – but are NOT designed for fall arrest.

B – Body Harness

A full-body harness is required for a PFAS. The body harness distributes the force of a fall to reduce the chance of bodily injury. It includes shoulder and thigh straps, and a D-ring.

How Not to Die

Body belts should never be part of a PFAS. Body belts have been banned for use with personal fall arrest systems for years. Why's that you ask? Take a look at these stats from a study OSHA and engineers at Wright Patterson Airforce Base did in the mid-80's.

- An average-sized woman, they calculated, could live two and a half minutes before dying of asphyxiation or internal injuries caused by the belt.
- A man would survive for about 32 seconds. In a harness, however, a worker could survive between 19 and 29 minutes. https://www.ishn.com/articles/82312-banning-body-belts

Make sure that D-rings are larger than the snap hook.

The connecting D-ring in a properly fitted harness should be in the center of the upper back.

C – Connecting Device

A retractable lifeline or shock-absorbing lanyard and its connectors are used to link a full-body harness to the anchor system. Different types of connectors include carabiners, snap hooks, D-rings, and rope grabs. Connectors must have a minimum tensile strength of 5,000 pounds.

How Not to Die

- Never hook lanyards together unless manufacturer approved.

- Don’t ever tie a knot in a lanyard or lifeline – doing so reduces the strength by at least 50%.

- Shock-absorbing lanyards and retractable lifelines are rarely compatible—so DON’T connect them.

D – Descent & Rescue

Your employer is required to have a rescue plan for rescuing a worker whose fall has been arrested. Prompt rescue is important to your safety after an arrested fall.

How Not to Die

- If you’re not sure what the rescue plan is – ASK! Suspension trauma can set it in quickly once your PFAS stops your fall. You will literally be left hanging there until someone rescues you or you are somehow able to perform self-rescue.

http://stopconstructionfalls.com/wp-content/uploads/2013/03/Personal-Fall-Arrest-Systems-Brochure.pdf