

Fall Protection Basics

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ABCs of Fall Protection

FOLLOW THESE SIX STEPS TO STAY SAFE

How to Put On a Full-Body Safety Harness

A full-body safety harness is a vital part of a personal fall arrest system (PFAS). Follow these six steps to understand how to properly fit and use one:

1 Inspect the harness.

Are the buckles and other hardware firmly attached to the straps? Are there any exposed buckle springs that could become loose under pressure? Look out for a harness that is cut or damaged in any way. A weakened or damaged strap could mean the harness will not hold you in the event of a fall.

2 Put the harness on.

Open all the buckles and straps (and belt if the harness has one). Slip the straps over your shoulders and position the D-ring between your shoulder blades. D-ring should be big enough for the appropriate lanyard to be attached to the harness. A correctly positioned D-ring will ensure you are suspended upright if you fall.

3 Connect and tighten the leg straps.

Place one end of one leg strap between your legs and secure it to the opposite end. Do the same for the other leg. The fit should be tight but shouldn't prevent you from standing up straight (you should be able to place your hand between your thigh and the strap). Next, connect the belt (if the harness has one).

4 Buckle and adjust the harness.

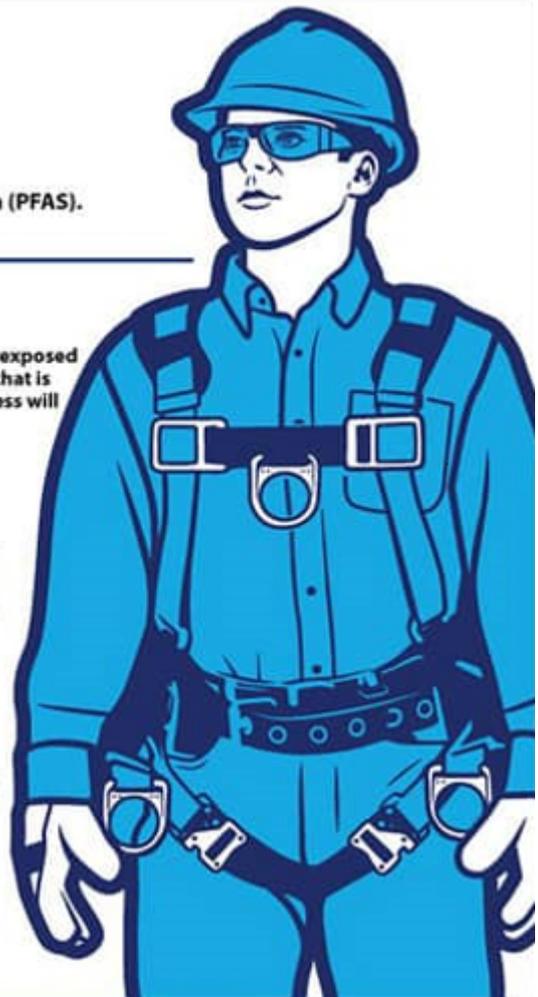
Buckle the chest strap and adjust the fit so that the strap goes across the middle of your chest. Adjust the chest and shoulder straps so that they are snug and the harness stays in place if you fall head-first (if the chest strap is loose it could wrap around the user's neck during a fall).

5 Understand common buckle types.

- Tongue buckles: The webbing goes through the buckle, then insert the tongue through the grommet.
- Parachute buckles: The webbing goes under the buckle and over the roller, and then down between the roller and frame. Pull the webbing to tighten. The end of the webbing should go at least 3 inches past the buckle.
- Pass-style buckles: The male buckle goes through the female buckle. Pull the webbing to tighten.
- Quick-connect buckles: The buckle tab goes into the receptor until you hear a click.

6 Make any adjustments.

After connecting all the buckles, make sure the harness is snug but not too restrictive. It's about right if you can place a hand under the webbing and make a fist and not pull it out too easily. Tuck away any strap ends so they don't get caught on equipment.



The ABCs of PFAs

A

is for "anchor point" (or tie-off point): a secure point of attachment for the fall arrest system's lanyard or lifeline.



B

is for "body harness" (or full-body harness). These harnesses have shoulder and thigh straps and a D-ring at the back.



They distribute the force of a fall, cutting the chance of bodily injury.

C

is for "connecting device": a lifeline or shock-absorbing lanyard that connects the full-body harness to the anchor point.



For more on PFAS, consult OSHA standard 1915.159

To Calculate Fall Distance

Add up the following:

DD

Deceleration Distance

+

HC

Height of Suspended Worker

+

C

Clearance of Obstruction During Fall Arrest

=

RD

Required Distance Below Anchor Point to Nearest Obstruction



Calculating Your Fall Distance

The basics of every Personal fall arrest system can be described as the ABC's of fall arrest.

A

ANCHORAGE

Anchorage means a secure point of attachment (Structure) for the fall arrest system.



B

BODY SUPPORT

Full body harnesses provide a connection point on the worker for the personal fall arrest system.



C

CONNECTORS

Connectors are devices used to connect the worker's full body harness to the anchorage system. (Eg. shock absorbing lanyard, self retracting lifeline, etc.).



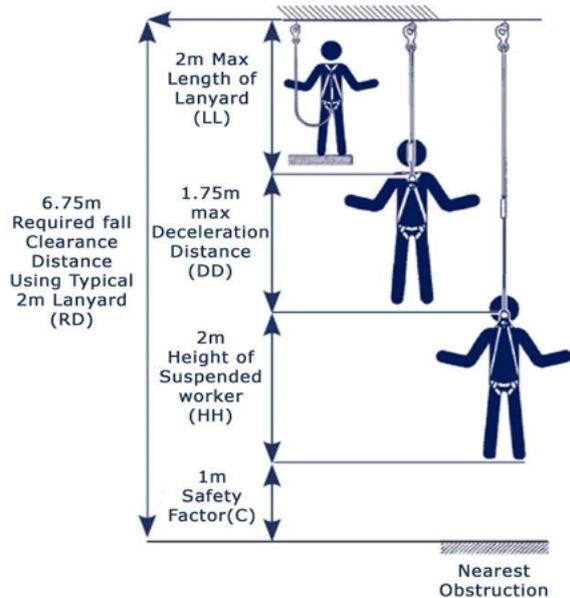
D

DESCENT / RESCUE

Rescue and retrieval of a fallen worker is a required component of any fall protection program.



Calculating Your Fall Distance



LL = Lanyard Length

DD = Energy Absorber Deceleration Distance (1.75m Total)

HH = Height of the Harness Dorsal D-Ring from the Worker's Feet

C - Clearance to obstruction (1m Total)

RD = Required Distance Below Anchor point to Nearest Obstruction

RD = LL + DD + HH + C

OSHA Fall Protection Guidelines for Framers

OSHA Fall Protection Guidance For Framers