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Fall Protection Systems - Anchor Points for Fall Arrest Systems

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You've got your full body harness on and properly adjusted, and you've attached the proper end of your lanyard to the back D-ring on your harness. The next step is to attach the other end of your lanyard to an anchor point. But selecting the wrong anchor point could have some painful, or even deadly, ramifications. That means you must put some serious thought put into what you hook off to with your lanyard. So, let's discuss some general principles about anchor points for fall arrest systems.

First, be aware that when you free-fall and then hit the end of the lanyard, the shock load created can significantly exceed the total combined weight of your body plus any clothing and tools you may be holding, depending on the distance you free fall, perhaps up to 10 times your total combined weight. So, only attach to an anchor point that a qualified person has determined will support two times the maximum shock load applied when someone of your total weight falls. And never tie off to objects such as, but not limited to, guardrails, scaffold posts, ladder rungs or side rails, window mullions, roof vent pipes, electrical conduit, ductwork, gas or sprinkler pipes, or ceiling tile grids, as these items are almost never suitable anchor points for a personal fall arrest system.

Secondly, when presented with two or more suitable anchor points, keep in mind that, all other things being equal, the higher the anchor point, the better. That is because OSHA fall protection standards require us to limit our free fall to no more than six feet, when feasible, and attaching to the higher anchor point will lessen the distance you will free fall. The benefits are you are less likely to make inadvertent contact with objects below you, and you will generate less of a jolt when you reach the end of the lanyard. Of course, you should also select the shortest lanyard possible when performing your job to reduce your fall distance. And in cases where attaching the lanyard to a high enough anchor point to limit your free fall to six feet or less is not feasible, get with the Competent person to look at alternatives, such as using a retractable lanyard or a travel restraint device.

Another good thing to keep in mind is to select a suitable anchor point that is located as close to the center of your body as possible; ideally, directly over your head. Doing so lessens the propensity of your body swinging sideways and inadvertently striking a nearby object.

Also remember that many anchor points are designed for only one person to tie off to and would therefore not be suitable for two or more people to use simultaneously. So only use an anchor point that someone else is also attached to after confirming with the Competent person that it will support the potential load of everyone attached at the same time.

Lastly, remember that manufactured portable anchors, which are used on many jobs, must be attached to approved supporting structural members using the manufacturer’s specified fasteners and installation instructions. Do not take shortcuts when installing these devices, or they could fail.

Fall Prevention - Avoiding Falls While Working on Scaffolding

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Here are some tips to help avoid falls when working with various types of scaffolding:

Guardrails or another suitable form of fall protection, such as a personal fall arrest system or travel restraint system, must be used any time work is being performed on a scaffold platform that is 10 or more feet above the ground or lower level, according to Federal OSHA's scaffolding standards (address your state OSHA/company/jobsite rules here if the threshold requiring fall protection on scaffolding is different than the Federal OSHA 10-foot rule).

Guardrails, where used, must be installed along all outside edges and the ends of all scaffold platforms being used. Furthermore, if the scaffold platform is more than 14 inches from the face of the building or structure where work is being performed, then a guardrail or other suitable means of fall protection must be utilized along that side too. That rule changes to 18 inches for plastering and lathing operations.

Do not remove sections of guardrails on a scaffold to load and unload materials or equipment unless you are using an approved alternate form of fall protection. This might include utilization of a personal fall arrest system or a travel restraint system appropriate for the job.

Stepping directly onto, or off, a scaffold platform from any other surface, such as a building structure or another scaffold platform, is only allowed when the scaffold platform is not more than 14 inches horizontally and 24 inches vertically from the other surface.

Never climb the cross-bracing on a scaffold as a means of accessing a scaffold platform. Crossbracing is not designed for this purpose and doing so can lead to a potential fall for the person climbing on the bracing, or even failure of the entire scaffolding system.

Also, do not climb up or down a scaffold frame unless authorized by the Competent Person. Most scaffold frames are NOT designed for climbing on, even though it may appear they are. Only scaffold frames that meet strict design criteria and are designed and constructed for use as ladder rungs can be used for climbing.

When vertical lifelines are used for fall protection on suspended scaffolding, they must be fastened to a fixed safe point of anchorage, approved for use by the Competent Person, that is independent of the scaffold. The lines must also be protected from sharp edges and abrasion. Vertical lifelines, independent support lines, and suspension ropes must not be attached to each other, nor can they be attached to or use the same point of anchorage, nor can they be attached to the same point on the scaffold or personal fall arrest system.

Fall Prevention - Avoiding Falls While Using Portable Ladders

Fall Prevention – Avoiding Falls While Using Portable Ladders

Here are some tips to help you avoid falling while using portable ladders at work, as well as at home:

• Use the right length of portable ladder for the job. If your ladder is too short to allow you to safely reach the work point, DO NOT set it on makeshift devices such as a box, barrel, or pallet to gain extra height. Always take the time to get the proper length ladder required for the job.

• Always stand on the lowest ladder rung possible to safely perform your work. Do not stand on or above any ladder rung designated by the ladder manufacturer as unsafe for use. Also, do not work with one foot supported on a ladder rung while your other foot is supported on another surface; this may cause the ladder to slide to one side and make you fall.

• Always maintain as many points of contact as possible when working from a portable ladder. Do not carry anything in either hand while climbing up or down a ladder. When stationary, face the ladder, keep both feet firmly planted on the same ladder rung or step, and maintain a firm grip with at least one hand when possible. Should it become necessary to use both hands to perform work for a short period of time, keep both feet firmly planted on the same ladder rung, and support the upper portion of your body by leaning your chest, thighs, or knees forward against the ladder.

• Keep your body always centered as closely as possible on the ladder. Avoid reaching too far to one side or the other, as this can cause you to lose balance, or can even cause the ladder to fall over to one side. A good rule of thumb to minimize over-reaching is to keep your belt buckle located between the side-rails of the ladder at all times. Even better, try to keep your sternum (the point at the center of your chest) located between the side rails of the ladder you are using.

• Do not climb a step ladder that is leaning against a wall or other structure. A step ladder’s feet are not designed to safely set on the ground or other surface in a leaning position and could cause the bottom of the ladder to slip out. (You may wish to point out that this rule does not apply to specialty ladders which are designed by some manufacturers to lean against a wall, if applicable).

• Do not climb up the back side of a step ladder. The cross braces on back of your portable step ladder are just that, braces. They are not designed to support your weight, the spacing between

the braces is too far apart to climb safely, and they are not treated to prevent your foot from slipping off. (You may wish to point out that this rule does not apply to specialty ladders designed by some manufacturers to be climbed on both sides, if applicable).

• Never set up your ladder in the back of a truck bed, on top of a trailer, or in the bucket of a front-end loader or other vehicle. Even though we would like to believe there is no way the vehicle could move and cause your ladder to fall, unintended things do happen on occasion.

• Do not salvage and use undamaged sections of a broken ladder. If one part of the ladder is damaged or broken, take the entire ladder out of service. Do not separate the “good” section to use for climbing or other purpose. It should also go without saying that making any kind of structural repairs or modifications to broken ladders in the field must not be done either.

OSHA's Lockout/Tagout Standards - Why They Affect Everyone

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OSHA published their “control of hazardous energy” standard, also known as “Lockout/Tagout”, way back in 1989. This new standard required employers to develop and implement a program that effectively identified all hazardous energy sources so they could be isolated or controlled when one or more employees were performing maintenance or service on equipment or machinery which could be unknowingly started or release stored energy.

Despite this comprehensive OSHA standard, many workers throughout the USA continue to suffer needless injuries, and some even die, because someone purposely takes a shortcut or accidentally commits an unsafe act without fully understanding the potential ramifications.

That is why OSHA requires that **ALL** workers be informed of their responsibilities when it comes to implementing an effective Lockout/Tagout program. To simplify this task, OSHA has identified three separate classes of employees in their Lockout/Tagout standard. They are:

Authorized Employees – A person who performs servicing or maintenance on a machine or equipment under the protection of a Lockout/Tagout program.

Affected Employees – An employee whose job requires him/her to operate or use a machine or equipment on which servicing, or maintenance is being performed by an Authorized employee under Lockout/Tagout, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.

Other Employees – An employee who may be in an area where Lockout/Tagout procedures might be utilized by others.

Obviously, the key to us having an effective Lockout/Tagout program that protects everyone is for **ALL** of us to understand what roles we play, and when those roles could change. That is why we will review in our upcoming toolbox talks how each class of employee has different responsibilities under the Lockout/Tagout program. But just

as importantly, we will see how an employee could fall into more than one of these groups, and how our personal responsibilities could change, depending on where we are in the workplace and the work that is being performed nearby.