Guidance

Dynamic and Static Dropped Tools and Objects

The Working at Height Regulations published in 2005 take into account all sorts of risks for those working at height, as well as those below. The regulations are designed to mitigate as much of the risk as possible in order to ensure the safety of both workers and the public. Where those regulations apply to dropped objects, there are two things to consider: dynamic and static tools and objects.

Understanding the difference between dynamic and static goes a long way in conducting necessary safety risk assessments. As a result, risk assessments are more thorough, more comprehensive, and offer more solutions to potential dropped tool and object problems. We will discuss both dynamic and static objects in the following paragraphs, as well as different ways potential risks can be minimised. By putting these things into practice companies and their workers will be keeping everyone involved safe.

Static Objects and Dropped Tools

We begin with a static object because that's the one we most normally associate with the dropped tools and falling objects. A static object is one that falls from a fixed place such as a scaffold, a worker's tool belt, or even the hand of the worker himself. To best understand the static objects we can consider them the main "player" in a dropped object scenario. Regardless of what a tool hits on the way down, or the damage it does, the tool that started the entire process is considered static.

Often times static objects fall when they are lying unattended on scaffolding or the edge of the cherry picker. Workers will forget the tool is sitting there and will turn around, accidentally hitting it with an arm. Either way, the untethered tool is free to fall to the ground unless there's something there to catch it.

Static objects also fall when workers lose their grip, when moving between a worker's tool bag and the place of work, or other such scenarios. Since none of us can fully anticipate every possible circumstance in order to prevent such incidents, the best way of protecting ourselves is to tether tools using specialised tool lanyards. These lanyards secure the tools so that they cannot fall to the ground below.

Dynamic Objects and Dropped Tools

A dynamic dropped object is one that falls to the ground after being struck by a static object as it falls through the same space. For example, imagine a hammer falling from a height of three stories and striking a light sconce on its way down. If that light sconce breaks free and falls as well, it is known as a dynamic object. A dynamic falling object would not have fallen had it not been struck by the static falling object. That said, dynamic falling objects and tools add to the danger of any dropped object scenario.

Understanding the potential and the consequences of dynamic falling objects requires careful observation. Once a safety risk assessment inspector is fully aware of the surroundings of a particular job environment, he can then begin to identify possible problems such as the aforementioned light sconce. It is important to be able to see all objects and fixtures that could potentially become dynamic dropped objects if proper precautions are not taken. But this type of thinking takes practice, experience, and even a certain amount of imagination.

Preventing the Static Objects from Creating Dynamic Objects

The best way to avoid dynamic dropped objects is to prevent static dropped objects. Using the previous example of the light sconce, there are three different things that could have been put into place to prevent the accident. First and foremost, the hammer should be tethered to the worker's safety harness, his tool belt, himself or a stationary part of the scaffolding/cherry picker. This one safety precaution alone greatly reduces the chances of that hammer ever falling to the ground.In addition, enclosed workspaces can also be used in case a tether fails and the hammer falls. A cherry picker is a great example of such an enclosed space, if the basket the worker is standing in is of solid construction and had collected measures surrounding the platform.

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Finally, placing nets and fans underneath the work area as a final caution offers a third layer of protection that will almost entirely eliminate falling objects striking dynamic ones. When all three of these safety measures are practised simultaneously there is little or no chance for the hammer to strike the light sconce and put it in motion. It is interesting to note that all three safety measures can be employed quickly and with very little effort once a company is well versed in doing so.

Proper Tethering Is Paramount

Workers know that their performance is being judged not only by safety but also by the amount of production they are responsible for. Therefore, if we tether a tool for a worker who then finds the tethering makes it uncomfortable to use, it is time to rethink the tethering choice. Yes, tools need to be secured, but they need to be secured in a way that does not hinder the worker's production. Tools also should be usable with minimum discomfort while they are tethered.

Failing to take these things into consideration increases the chances that a worker will un-tether his tools when no one's looking. To most workers their own comfort and speed are more important than tethering because those things directly influence their output which, in turn, influences their pay and potential for promotion. It's up to those who design safety systems to ensure tools are tethered in a way to maximise worker comfort and efficiency.

Customised Tethering Solutions

Sometimes the proper tethering of tools requires customised solutions that fit specific tools for specific situations. Fortunately, there are companies who specialise in such customised tethering solutions. With a list of tools that need to be tethered and an accurate description of how they are used, these companies can create just the right tethering systems that combine maximum safety and worker productivity. Such solutions are often more expensive than off-the-shelf solutions, but they will pay for themselves in terms of worker productivity.

Companies that employ unusual tools are more likely than not to have to use customised solutions. But rest assured that tethering manufacturers can, and will, find a way to secure your tools one way or the other. Whether it is through lanyards or some other means, they will find a way to make it happen. Don't skimp on tool safety systems just because you have some customised needs. Spend a little extra money to get a solution that's right for you - so that everyone is safe.

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