

## How To Properly Tether Your Tools



### The New Dropped Object Standard Has Passed

Newsflash! In mid-July the Dropped Objects Standard 121-2018 was approved by ANSI (American National Standards Institute) and ISEA (International Safety Equipment Association). This new standard focuses on establishing minimum design, performance, and labeling requirements for product solutions that prevent falling objects and guidelines for testing that equipment. We'll provide a link at the bottom of this article for more info on the new standard, so for now, read on ...

Before diving into the article, Nate Bohmbach (the Product Director from Ergodyne) has some great advice on the "Whys" and "Hows" of Tool Tethering.  
*(images are linked to the videos)*

#### How To Properly Connect Your Tool Lanyard To Your Tool



#### Choosing The Right Tool Lanyard



#### Avoiding Tool Tether Confusion, And Snag Hazards



#### Walking Through The Timeline Of Tool Tethering



## Falling Objects Requires Our Attention

Falling objects in construction zones is nothing new. Workers have been dropping tools for over 100 years. We've had plenty of time to develop safety rules and programs to keep people safe, yet there are thousands of injuries reported each year from falling objects. That speaks to the importance of consistently implementing a solid safety program and our responsibility to enforce these protocols with our crews – and those that enter our construction sites.

When dealing with dropped objects on a jobsite the first line of defense is always to PREVENT objects from falling. These prevention methods are referred to as Active, or Primary, solutions. This will be our focus in this article. Passive, or Secondary measures are designed to catch dropped objects, and attempt to limit the potential damage after objects have fallen.

## Passive Engineering Controls

Let's touch on Passive preventative methods for a minute. These administrative controls include things like debris netting, catch platforms and canopies, toe boards, barricades with posted warning signs, guard rails and scaffolds with attached screens, taped off designated Drop Zones, etc. These safeguards are definitely necessary, but not always sufficient. When objects hit debris netting they can still deflect and launch in a different direction – and some smaller objects can actually pass through the netting causing damage and injury. When we are working at heights implementing Passive controls is an important step on any project, but we need to go farther to ensure the safety for our crews.

## Active Engineering Controls

Active engineered solutions are designed to keep objects from falling in the first place, so it's a no-brainer to focus on these solutions first. Let's look at some proven best practices to follow to ensure these methods will be safe and effective. Most contractors have a PPE plan in place to protect their workers from falls, but may have overlooked developing a plan to cover tools at heights. Unfortunately, some companies wait until they experience a tragic event before investing in, and implementing, an effective safety program.

# The 3Ts

## TRAPPING TEETHERING TOPPING

When dealing with human life, a proactive approach is always better than a reactive one.

Keep in mind, it is much easier for all involved to expand an existing Fall Protection program to include tools, rather than develop a new, separate program that deals with tool-drops.

That said, let's take a look at some of the available options you can implement when developing an effective Primary safety plan for your tools and equipment. Most contractors are aware of the ABC's of Fall Protection which exists to keep workers from falling. In like manner, "The Three T's" covers active controls to keep tools and equipment from falling.



### TRAPPING

Trapping is the process of retrofitting a tool with a solid functional anchor point. Most tools do not have an anchoring point out of the box. If you will be working at heights, your tools need to be trapped and anchored to avoid tool drops and subsequent injuries. Anchors for tools must be attached to a solid structure that can easily support the weight of the tool and associated drop force (which can be hundreds of pounds depending on the tool and method of shock absorption).

#### One-Step tool

attachments are traps created with a specific tool and application in mind. Examples of one-step solutions are slips for screwdrivers and hex keys, zipper pouches for mobile phones and tablets, mountable brackets for power tools, wraps for tape measures, etc.

#### ONE STEP TOOL TRAPS



**Two-Step** tool attachments involve two different solutions working in tandem – like securing a elastic loop tool tail with a self-adhering tape or shrink. Additional components could include web tool tails, coiled tool lanyards, detachable loops and carabiners.

#### TWO STEP TOOL TRAP



When trapping your tools be careful not to compromise the tool's functionality. Also, check the manufacturer ratings on your trap solutions to make sure they can handle the weight of your tool and the potential associated force if dropped.

### TETHERING

Tethering is the process of securing a tool or piece of equipment to an anchor point using an approved retention device (like a lanyard). Tools under 5 lbs. can be tethered to a worker or structure using a variety of lanyards. Wrist Lanyards secure a lightweight tool to your wrist.



Coil Lanyards or Retractable Lanyards draw the length inward, reducing tangles and snag hazards. Traditional Lanyards are the most common option and can be used to tether small tools to a worker, or large tools and equipment (up to 80 lbs.) to a secure structural anchor point. Traditional Lanyards use a pre-determined length to secure tools and equipment.

Be aware that tools exceeding 5 lbs. should NEVER be secured to a worker. The resulting force can dislocate a wrist or shoulder, or result in loss of balance and a potential fall. Energy-absorbing lanyards are an effective means of reducing the dynamic force imposed on a body or other anchor resulting from a drop.

### TOPPING

Topping refers to the various containers workers can use to contain and transport tools while working at heights. Tool Pouches and Tool Bags are usually fixed stationary containers secured to a worker to keep tools nearby and accessible.

Hoist buckets and Hoist Bags are used to transport tools and equipment to and from heights using pulleys and lifts and are generally not stationary.

Most hoist bags and buckets offer a variety of connection points – from swiveling snap hooks, D-rings, and swiveling carabiners, to simple webbing handles. Hoist buckets with a removable safety top can hold your tools in place during transport and reduces the risk of injury while hoisting tools and gear at-heights. Many heavy-duty hoist buckets can support a load of 100 – 150 lbs.

All types of tool containers should have some type of top enclosure to secure its contents. Many containers also have anchor points to tether tools. If a container does not have a top enclosure they MUST have anchor points to secure the contents.



## ***digging deeper***

### **The New Dropped Object Standard (as promised)**

[American National Standard for Dropped Object Prevention](#)

[Dropped objects standard 121-2018 approved](#)

### **Other Related Links**

[Safety hazards: Dropped and falling objects](#)

[ehstoday.com/sky-isnt-falling](#)

[www.ergodyne.com/blog/the-three-ts](#)

[One step hand tool tethering](#)

### **Here's a great vid on the Three T's**

[https://www.youtube.com/watch?v=nPescAFuAvg](#)

**To view the online article go to:**

[https://news.whitecap.com/falling-objects/](#)