



WAHSA PGN07

Practical Guidance Note 07

GUIDANCE ON USING AND SPECIFYING TOOL LANYARDS FOR WORK AT HEIGHT ACTIVITIES

A series of informative notes for all industries involved with work at height or rescue.

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INTRODUCTION

This guidance note gives guidance to users and specifiers in the selection and use of tool lanyards for work at height activities.

Tool lanyards are becoming more widespread throughout the work at height industry as a means of prevention of injuries caused by falling objects. As yet, there is no British or European Standard which specifically shows fitness for purpose of tool lanyards, although Sections 10 and 11 of the Work at Height Regulations 2005 has a requirement for “suitable steps” to be taken to prevent falling objects. Failure of a tool lanyard, or not using a tool lanyard, can result in serious injury or death to workers in the immediate vicinity of the work at height activity.

This document is aimed at clarifying what a suitable means of prevention against dropping is in respect to a lanyard or tether and the means to determine whether the tool lanyard will successfully sustain the forces generated by a falling object.

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01 WHAT IS A TOOL LANYARD?

Tool lanyards, or tool tethers, are devices designed to prevent accidents to workers by unsecured falling tools used during work at height activities. They are available in a variety of lengths and styles with elements for connection between the tool operator and the tool, such that accidental release of the tool will not result in a dangerous falling object.

Tool lanyards generally comprise of the following elements:

1. **Connection to the user.** This can take the form of a choking strap or snap hook for direct connection to the user (e.g. wrist strap) or to items of work wear or PPE.
2. **Connection to a structure.** Heavy tools falling on a lanyard can inflict large impact forces on the user and could put them in a fall risk situation. In these circumstances, it may be more appropriate to connect the tool to a structure rather than the user.
3. **Lanyard element.** Various tool lanyard types exist such as fixed length, adjustable, elasticated and retractable.
4. **Connection to the tool.** These can be of the same form as the connection to the tool operator, though in some instances anchor or attachment elements may be required to be fitted to the tool before the connection to the lanyard can be made secure.

02 WHEN SHOULD A TOOL LANYARD BE USED?

Where there is risk to personnel in the underlying area, or where no other means are in place to prevent any potential for injury being caused by falling objects, a tool lanyard can be a good solution for tools and loose objects during work at height activities. Careful, considered selection of the appropriate tool lanyard, which matches the requirements of the attached tool is critical.

Users should be aware that their legal requirement is to prevent tools and objects from falling and not simply to have a tool lanyard present, as in some instances the tool lanyard may be inadequate to prevent the tool from falling if dropped.

03 SAFETY ISSUES

Before using any tool lanyards for work at height activities, the following considerations should be given to ensure that the lanyard is adequate to retain the tool in the event of accidental dropping. The tool lanyards needs to be practicable to use and allow the tool user to be able to perform their work task uninhibited.

3.1 LENGTH OF TOOL LANYARD

For any work at height activities, if there is no other means of preventing a falling object from causing potential harm, a tool lanyard must be used. The lanyard length should be long enough to allow the operator to carry out their duties unhindered, but as short as possible to reduce the free fall distance in the event of the tool being dropped. The longer the lanyard, the greater the forces that may be impacted on the user.

3.2 STRENGTH OF TOOL LANYARD

Falling object impact forces can be many magnitudes greater than that of the weight of the tool when its fall is arrested. The tool lanyard should include a label marked with a maximum or recommended tool weight rating and supplied with recommendations or instructions on its use.

The lanyard must be able to retain this force in the event of a dropped tool from its most onerous working position; typically above head height to the maximum extension of the lanyard. The manufacturer should be able to supply documented evidence to prove the product suitability and strength when used in its worst working condition.

3.3 CONNECTION TO THE TOOL

Consideration should also be given to the way the tool is secured. It is not sufficient to check the maximum allowed tool weight alone. Choking around a tool for example may not be sufficient to prevent failure as the tool could slip through the attachment unless the choke is through a captive handle. Also, some tools may not have the facility to connect to. Consult the suppliers to see if they have advice on connection options.

3.4 CONSIDERATIONS ON THE DURABILITY AND HOW PERMANENT THE CONNECTIONS BETWEEN THE LANYARD, THE USER AND THE TOOL

When selecting a tool lanyard, consideration should be given to the materials used to construct the lanyard and the environment which it will be used in. Plastic or fragile connection components may not be suitable for use in particularly arduous working conditions and if damaged during use, could result in the lanyard being unable to restrain the tool if dropped.

3.5 APPROPRIATE MEANS OF SECURELY CONNECTING THE TOOL LANYARD TO THE USER

Whilst the tool lanyard must be able to retain the arresting forces generated by the falling tool, it is equally important to consider the method of securing the tool lanyard. In the majority of cases, manufacturers of the tool lanyards prescribe the attachment of the lanyard to the user. However, as with all types of PPE, the anchor is the often overlooked critical aspect of providing a safe system. Connection to User Parking Points, which are designed to break-away, accessory loops on harnesses etc. will most likely be unsuitable for the connection of a tool lanyards and it is strongly recommended that wherever the tool lanyard is connected to an element which has an equal or greater breaking load to that of the lanyards indicated rating. The combination of heavy tools with long, fixed length lanyards also presents the issue of potential soft tissue injuries to the user in the event of a dropped tool. And / or creating a fall risk situation to the user.

3.6 CONNECTING TO A STRUCTURE RATHER THAN THE USER

Heavier weight tools, particularly those weighing up to 5kg and over, present a risk to the user. The tool lanyard needs to be capable of arresting the fallen tool, but forces on the user could be excessive. Wherever possible connect to a suitably strong structure rather than the user. Some tool lanyards are available with energy absorbing properties, thus allowing heavier tools to be attached to the users fall arrest system.