

INSTITUTE FOR WORK AT HEIGHT



Good Practice Note

2019

Good Practice notes inform the industry on how to embrace best practice and how to deal with issues that may arise. They are aligned with, but do not replace regulation as well as endorse industry standards

Inspection of Flexible Lifelines

Topic:

One of the most FAQ to the IWH, is who can inspect lifelines and what do they need to look out for....

We need to define exactly what it is that we expect from the responsible person (whomsoever it might be).

Start off with its application – i.e. how many persons can use the system at the same time?

- “Inspect” – [To look at something closely so as to assess its condition.]
- “Testing” – [perform a static /dynamic test to ensure the integrity of the system]
- “Design” – [a Pr. Eng. or equivalent competent person calculates all the forces in the system and specifies the necessary components / sub-systems]

Pre-requisite:

To inspect an existing system, it would have already passed the two other phases i.e.: -

1. It would have originally been designed by an engineer that would have looked at the forces in the system, factored in the required safety coefficient and checked all the load bearing parts and main supporting structure to ensure that these factored loads can be sustained during an arrest event.

2. The installed system would have been tested with a load of at least 6kN at midspan to confirm its integrity (if it's a single person / user system). If both of these stages were done and if the system passed both then the “inspect” is merely looking closely at all the components to see if all are in good working order. For this we do not need the services of a Pr. Eng. but merely a competent person.

Competency:

The definition of a "competent person" means a person who—

- (a) has in respect of the work or task to be performed the required knowledge, training and experience and, where applicable, qualifications, specific to that work or task: Provided that where appropriate qualifications and training are registered in terms of the provisions of the National Qualification Framework Act, 2008 (Act No. 67 of 2008), those

qualifications and that training must be regarded as the required qualifications and training; and

(b) is familiar with the Act and with the applicable regulations made under the Act;

Inspections:

1. A designated person at a supervisory level certified competent for the installation, testing and inspection of Class “C” horizontal flexible lines as defined in SANS 50795:1996 clause 3.13.3
2. The competent person must be in possession of the system designer’s loading calculations, specifications, hardware, anchor details and anchor plan drawing
3. The building’s responsible person should be aware of the following w.r.t lifelines:
 - a. Tasks to be undertaken;
 - b. The likely work method and proximity to work location, e.g. window cleaning directly or via a pole; and
 - c. The requirements for the ongoing inspection, testing, repair and maintenance;
 - d. The frequency, intensity and duration of work tasks;
 - e. The number of simultaneous users;
 - f. The likely competency of user(s) in using personal fall protection equipment.

Inspection Checklist:

It is required to keep records of inspections completed on the lifelines.

Although not a complete list, here are some common things you will want to inspect:

- Inspect all screw, bolts, nuts and any other fastening devices to ensure they are not loose or missing. Also make sure they haven’t been altered in any way.
- Look for rust, corrosion or any other deterioration of the metal components.
- Inspect your webbing for cuts or abrasions, rope for broken wires (wire rope), broken threads (synthetic rope), or any other obvious damage.
- Inspect all sleeves and connectors for distortion, cracks, dents and proper installation.

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- Inspect the system's impact detection (Shock Absorber). Does it indicate that the lifeline was involved in a fall? If so, remove it from service immediately.
- If there are any other mechanisms on your specific lifeline, ensure you are inspecting them as per the manufacturer's instructions.
- Ensure no part of your system is compromised by sharp edges, abrasive structures, or other hazards.

Maintenance:

Maintenance is what will keep your equipment optimally efficient. In order to properly maintain your lifeline, you should:

- Clean it as directed by the manufacturer. The PPE should be cleaned periodically, usually with warm water and mild soap. Make sure all casings and ropes are clean. Ensure that your labels are clean and legible. Let the equipment air dry.
- Store the equipment in a cool dry place. While in use, ensure your inspections are frequent enough for the type of weather exposure it is getting, and when not in use, store it properly.
- If any issues arise, contact manufacturer or manufacturer representative. Do not let problems – or even suspected problems – go unchecked. Your employees are counting on this equipment to protect their lives.

Usage limitations:

The number of persons using the lifeline as indicated on the system. Where this is not indicated the limitation will be set to one person per lifeline.

Note:

The following standards are applicable to flexible lifelines:

- SANS 50353-2 – Guided type fall arresters including a flexible anchor line
- SANS 50795 – Anchor devices - Requirements and testing
- SANS 50365 – Manufacturer requirements
- BS 7883:2019 – Personal fall protection equipment - System design
- BS 8610:2017 – Personal fall protection equipment - Anchor systems