Using Harnesses Safely

All persons under the control of Fenlock-Hansen Ltd must understand and comply with the following procedures before commencing work with harnesses. Confirm Proof of Understanding and Acceptance by recipient’s signature.

Introduction

Safety harnesses and lanyards limit the distance of fall, but do not eliminate them. They are no substitute for effective fall protection measures. In the first instance, proper working platforms, with double guardrails and toe boards must be provided.

Where this is impracticable and there is a risk of falling, a safety harnesses must be provided and used i.e. when working on ‘hop-ups’

Health and Safety Guidance recommends pre-use checks, and detailed inspections at least every six months, or if used frequently or in harsh environments, every three months.

In addition, lanyards should be regularly checked before use and users should know what to look for. They should be treated with care, not dragged on the ground or allowed to get dirty and must never be wrapped around sharp or angled surfaces.

For instance, recent research has shown that a 1mm nick in the edge of a lanyard can result in a 5 to 40% loss in strength, depending on the make of the lanyard.

Therefore, identifying by inspection, lanyards that are safe to use could save your life!

Inspections

Pre-Use Inspections

- Done each time the harness and lanyard are used.
- By using your hands and eyes.
- Check all of the equipment.
- Pass it slowly through the hands in order to detect small cuts in the edges, softening or hardening of fibres and ingress of contaminates.
- The visual check should be undertaken in good light and take a few minutes.

Thorough Inspection

- Conduct formal inspections on safety harnesses and lanyards every 3 months.
- All harnesses and lanyards will need to be identifiable and their inspection recorded.
- The formal inspections must be completed by the supplier/manufacturer.
Inspection Procedures, Pre-Use

Harnesses

- Beginning at one end, hold the body side of the harness towards you, grasp the belt with your hands six to eight inches apart and bend the strap into an inverted U.

- Follow this procedure the entire length of the harness. Watch for frayed edges, broken fibres, pulled stitches, cuts, or chemical damage.

- Special attention should be given to the attachment of buckles and D-rings to webbing. Note any unusual wear, frayed or cut fibres, or distortion of the buckles or D-rings.

- Rivets should be tight and immovable with fingers. Body side rivet base and outside rivet burr should be flat against the material. Bent rivets will fail under stress. Especially note condition of D-ring rivets and D-ring metal wear pads, if any. Discoloured, pitted, or cracked rivets indicate chemical corrosion.

- The tongue or billet of the belt receives heavy wear form repeated buckling and unbuckling. Inspect for loose, distorted, or broken grommets.

- Tongue Buckle - Buckle tongues should be free of distortion. The outer bars and centre bars must be straight. Pay special attention to corners and attachment points of the centre bar.

- Friction Buckle - Inspect buckle frame and sliding bar for cracks, distortion, or sharp edges.

- Sliding Bar Buckle - Inspect for cracks, distortion, or sharp edges. Sliding bar should move freely, knurled edges slip if worn smooth. Pay special attention to corners and ends.

Lanyards

When inspecting lanyards, begin at one end and work to the opposite end. Slowly rotate the lanyard so that the entire circumference is checked. Spliced ends require particular attention. Hardware should be examined in addition to the procedures detailed below, i.e., snaps, D-rings, and thimbles.

- Steel - While rotating the steel lanyard, watch for cuts, frayed areas, or unusual wearing patterns on the wire. Broken strands will separate from the body of the lanyards.

- Webbing - While bending webbing over a pipe or mandrel, observe each side of the webbed lanyard. This will reveal any cuts or breaks. Swelling, discoloration, cracks or charring are obvious signs of chemical damage. Observe closely for any breaks in stitching.

- Rope - Rotation of the rope lanyard while inspecting from end to end will bring to light any fuzzy, worn, broken, or cut fibres. Weakened areas from extreme loads will appear as a noticeable change in the original diameter and should be removed from service immediately.
Defects and Damage - Examples

The following defects and damage may result in the failure of the harness or lanyard.

- Cuts of 1mm or more at the edges of the webbing.
- Surface abrasions across the face of the webbing and loops.
- Abrasions at the edges, particularly if localised.
- Damage to the stitching.
- A knot in the lanyard, other than those intended by the manufacturer.
- Chemical damage, often indicated by flaking of the surface or change in the colour of the fibres.
- Heat or friction damage, may be indicated by fibres with a glazed appearance, which may feel harder than surrounding fibres.
- UV-degradation, there may be some loss of colour (if dyed) and a powdery surface.
- Partially deployed energy absorber.
- Contamination (e.g. with dirt, grit, sand etc) which may result in internal or external abrasions.
- Damage of deformed fittings. (Karabiners, screw link connectors, hooks).
- Damage to the sheath and core of a kern mantel rope (e.g. rucking of the core detected during tactile inspection).
- Internal damage to a cable-laid rope

Withdraw of Equipment

Withdraw equipment under any of the following circumstances:

- The equipment is suffering from the defects or damage identified on page 2.
- Equipment not formally inspected within the last three months.
- Unique identification is not evident (equipment should be indelibly and permanently marked in accordance with BS EN 365:1993.)
- Equipment is not marked with CE-marking.
- Equipment, which has been subject to a fall.
NB

- Employees or sub contractors shall not use equipment that is unsafe or damaged
- Employees are responsible for conducting daily pre-use inspections.
- Equipment that is withdrawn from use must be given to the site manager who will pass it on to a competent person for a detailed inspection to decide whether they should continue to be used, destroyed or returned to the manufacturer for testing.

Storage of Equipment

Harnesses and lanyards should be stored as follows:

- In cool, dry, and clean conditions.
- Out of direct sunlight.
- Away from direct sources of heat.
- Away from sources of contamination.
- Away from any sharp objects.
- When packing a harness away, do not crumple, as it will make the harness harder to put on.

Cleaning

- Clean the harness with a mild soap or detergent and luke-warm water.
- Wipe hardware with a clean dry cloth.
- You may lightly oil the hinges. However, remove excess oil.
- Hang wet harnesses up to air dry.
Working Safely

Donning a Harness

Six Easy Steps

1. Hold harness by back D-ring. Shake harness to allow all straps to fall in place.
2. If chest, leg, and/or waist straps are buckled, release straps and unbuckle at this time.
3. Slip straps over shoulders so D-ring is located in middle of back between the shoulder blades.
4. Pull leg strap between legs and connect to opposite end. Repeat with second leg strap. Ensure straps are not twisted and the webbing is lying flat (a twisted strap will increase the pressure places on the body in the event of a fall).
5. Connect chest strap and position in the mid-chest area. Tighten to keep shoulder and leg straps taut.
6. When all straps buckled, tighten so that harness fits snug but allows full range of movement. Pass excess strap through loop keepers.

................................................that could Save Your Life!

Anchor Points

Working in One Position

- Use a short lanyard i.e. 1m., in order to prevent a fall.
- Clip-on and clip-off from a position of safety i.e. behind a hand rail
- Always connect to a horizontal tube.
- Ensure that clip cannot slide off tube.
- Clip-on above your head.
- Use proper scaffold clips on the lanyard.

Working in Multi Positions - walking along ‘hop-ups’

- Use a short lanyard i.e. 1m., in order to prevent a fall.
- First clip-on and last clip-off must be from a position of safety i.e. behind a handrail
- Always connect to a horizontal tube.
- Ensure that clip cannot slide off tube.
- Clip-on above your head.
- Use proper scaffold clips on the lanyard.
- Use two lanyards.
- Clip one on before unclipping the other, in order to move horizontally.
Using Harnesses Safely!
Training Register

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* By signing this form, I state that I have understood the training given to me and will follow Hansen’s Procedures.

Copy this form freely and use to compile the harness training register.
Harness Use and Pre-Use Inspection Register

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* By signing this form, I state that I have conducted harness pre-start checks as per Hansen’s Procedures.

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