Personal Fall Protection Systems - Toolbox Talk

SKYWAY
Leaders in Safety at Height
Course Aim

To enhance employee safety in the workplace by the correct use of Personal Height Safety Equipment.
Course Outline

- The need for training
- Introduction to working at height health and safety requirements
- ABCs of Fall Protection
- Pre-use checks
- Fitting your harness
- Emergency considerations
- Using the applicable system correctly
Why Do We Need Training??

**FACT: WORKING AT HEIGHT IS DANGEROUS**

- Training enhances our safety awareness. It teaches us to work more safely and with confidence.
- It reduces risks to ourselves and others, ultimately preventing accidents.
Training is a legal requirement...

- Instruction and training must be given in a form, manner and language that would be reasonably likely to be understood by those receiving it.

- Training must be adapted to changed circumstances or new risks and should be repeated periodically.

- Training must be provided to employees on:
  - Recruitment
  - In the event of transfer or change of task
  - When new work equipment, systems of work or new technology is introduced
Employers responsibilities…

- Ensuring the safety, health and welfare of people at work.

- Prevent exposure to physical agents, noise and vibration etc

- Providing and maintaining welfare facilities for employees

- Providing appropriate protective equipment and clothing to the employees

- Carrying out internal hazard audits

- Ensuring that reportable accidents and dangerous occurrences are reported to the HSA.
Legal Duties....

Employees responsibilities....

- Comply with relevant laws and protect their own safety and health
- Ensure that they are not under the influence of any intoxicant
- Cooperate with Skyway with regard to safety, health and welfare at work
- Participate in safety and health training offered by Skyway
- Not carry out any work that they are not trained to do.
- Play an active role in Health and Safety and are encouraged to make suggestions or raise concerns on any relevant issues.
Personal Fall Protection Systems

Anchor → Bodywear

Connecting device
Anchors: EN795a-e

- 10kN for fall arrest use

*see further slides for details

Choked webbing sling wrapped around scaffold tube
Anchor Points

- Temporary anchors are ideal in certain environments
- The user attaches them to the structure, prior to use, and removes them when finished
Anchor Points

The anchor point height can be critical to the correct operation of some fall arrest equipment.

- *Retractable fall arrest devices* should be connected above shoulder height
- *Lanyards* should ideally be connected above shoulder height but not essential for correct operation

If you have any doubt about the anchor point…

DO NOT USE IT!!!
Bodywear: Full Body Harness

- Holds the body as a fall stops (arrests)
- Distributes fall forces
- Suspends worker ‘head up’ (post fall)
- Ergonomics – comfort in-use
- Maximum working weight 140kg

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Connecting Devices:

- Your ‘life-line’ or umbilical cord
- Connects harness to the anchor point
- Impact force < 6kN
- Can be:
  - Retractables: Personal Fall Limiters (PFLs) / Self Retracting Lifelines (SRLs)
  - Lanyards: wire, rope, webbing
  - Grabs: rope and cable - manual & trailing

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PFPE User Inspection – Soft Goods

PFPE must be examined:
- Pre-use by YOU
- By a competent person

Recommended Competent person minimum examination schedule (Eqpt in regular use):
- Harnesses - 6 monthly
- Lanyards - 6 monthly
- Other equipment - 6 monthly
Inspect webbing visually for:

- Cuts
- Abrasions
- Burns. Either from a heat source or from contact with corrosive chemicals or materials
- Broken stitching

Pronounced edge cut - remove from use!

The strength of a harness can be reduced by up to 40% with a 4mm cut!!!
The activated warning flag shows the Manyard has been involved in a fall.

Heavy-duty outer sheathing acts as a back-up lanyard.

Integrated shock-absorbing material.

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PFPE User Inspection

It is equally important to inspect your metal fall protection products.

Inspect for signs of:
- Damage
- Corrosion
- Excessive wear
- Correct function

Inspect mechanical devices (Rope grabs etc) for:
- Correct operation
- Loose components

This rope grab has been severely damaged by abuse and paint.

Over-loaded steel karabiner.

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Fitting Your Harness.... Step 1

Hold harness by back D-ring. Shake harness to allow all straps to fall in place.

The dorsal attachment is the easiest point on a full body harness to identify.
If chest, leg and/or waist straps are buckled, release straps and unbuckle at this time.

This will ensure the harness is correctly adjusted to you, the individual user.
Fitting Your Harness.... Step 3

Slip straps over shoulders so the D-ring is located in the middle of the back between the shoulder blades.

You will hang awkwardly if the dorsal ‘D’ is badly positioned.
Pull leg strap between legs and connect to opposite end. Repeat with second leg strap. If belted harness, connect waist strap after leg straps.

Correctly tensioned leg loops ensures the harness does not ‘sag’ when loaded.
Harnesses

✅ Fasten the buckles and tighten the straps.

❌ The harness should not be restrictive, but you should know you are wearing it.

✅ Attach the intermediate connection to an upper attachment point if it incorporates an energy absorber or is a fall arrest block.

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Using a Skyway Cable System

Before using, check the system is in date and tensioned correctly with the spinning indicator disk

System should be certified and labelled

DO NOT use system if system is not certified

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Using a Skyway Cable System

Connecting to the system is very simple but secure in operation. Once connected, the catcher has a smooth and efficient travelling action over intermediate or corner connections.

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Using a Skyway Cable System

Steps for connecting onto the cable system
Open the Cable Shuttle as shown on the above picture

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Steps for connecting onto the cable system
Attach the Cable Shuttle as shown on the above picture
Using a Skyway Cable System

Steps for connecting onto the cable system
Connect the recommended lanyard onto the Shuttle

[Website Links]
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Using a Skyway Cable System

The Cable Shuttle passes freely over the intermediate and corner brackets as shown.
Using a Skyway Pivotloc Ladder

The Pivotloc Ladder should be in the closed position as shown above
Using a Skyway Pivotloc Ladder

The pin at the back of the ladder is pulled and the ladder is opened as shown.
Using a Skyway Pivotloc Ladder

The Pivotloc Ladder Shuttle is attached to the ladder as shown

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Using a Skyway Pivotloc Ladder

The Pivotloc Ladder Shuttle is attached to the front point attachment harness.
Using a Skyway Pivotloc Ladder

As the user climbs the ladder the Pivotloc Shuttle follows the user up the ladder
Using a Skyway Pivotloc Ladder

The Pivotloc ladder prevents the user from falling.
Using a Kingspan Safetraxx System by Skyway

The Kingspan Safetraxx by Skyway should be located at the access point

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Using a Kingspan Safetraxx System by Skyway

Connect the Karabiner of the lanyard to the Safetraxx Shuttle

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Using a Kingspan Safetraxx System by Skyway

Work can be carried out using the recommended lanyard

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Calculating the Potential Fall Distance

Why? To ensure we do not hit the lower level if we fall!

The calculation below gives the *minimum fall* distance between the lanyard anchorage and the lower level when attached below our feet:

- **Twice** the length of the lanyard (to allow for the length of the lanyard above the anchor point PLUS the complete lanyard length).
- **+1.75m** deceleration distance to allow for the maximum elongation of the energy absorber and any give in the lanyard.
- **+1m** safety margin.

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Retractable fall arrest blocks provide a quick-reaction fall arrest solution and are ideal where the use of a lanyard would result in a ground fall.

Spot the difference.
Falling Limiting the effects

- Check for minimum pendulum when using your SRL or PFL!!!
- This will prevent you from swinging into structure below and to the side of your work area:
Ensure you and your colleagues know what to do in the event of an emergency *before* your work commences. It maybe as simple as locating a fire escape, but you must also think about what to do in the event of a fall.

**IF YOU FALL:**

- Try to make contact with a fellow employee
- Attempt to regain access to the structure
- *Wiggle your toes*. If possible, place your feet onto a solid surface, & take your weight off the harness
- Do not panic!!!!
The Do’s and Don’ts of Fall Protection…

Do’s

✓ Carry out a pre-use check
✓ Connect your leg-loops
✓ Adjust your harness to fit YOU
✓ Know your emergency plan
✓ Ensure connectors are fastened

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Don’ts

☒ Tie knots in lanyards
☒ Clip 2 lanyards (or more!) together
☒ Attach lanyards to PFLs / SRLs
☒ Use 2 energy absorbing lanyards together
☒ Become another statistic…
Think Safety First

The End