Health and Safety Standard

FALL PROTECTION

1. PURPOSE

This standard establishes the requirements for protection from fall hazards posed by working from heights or falls to lower levels.

2. SCOPE

This standard identifies fall protection at permanent or temporary work areas as well as specifying the requirements of Fall Protection Plans at SaskPower.

Fall protection ranges from elimination of the fall hazards, implementation of active or passive fall protection systems including the use of fall protection equipment as PPE worn by a worker.

This standard does not cover fall protection for falls from same levels.

This standard outlines the minimum requirements that shall be met or exceeded by SaskPower workers and contractors. Failure to comply may result in injuries, damage to equipment and property, performance management or any combination thereof.

The use of the word “shall” within this standard denotes a mandatory action, whereas the use of the word “should” or “may” denotes a recommended action.

3. DEFINITIONS

The following definitions apply to this standard:

Anchorage – is a permanent structure or part of a structure designed to withstand any fall arrest forces imposed.

Connector – is an element that is used to join a component to another component or to an anchorage.

Control Zone – is the area within two metres of an unguarded edge of a level (≤ 1 in 25 slope (rise / run) or ≤ 4% grade) work surface of three metres or more in height. The control zone is clearly marked with a raised warning line or other effective method. A travel restraint system or equally effective method is used in the control zone.

D-ring – is a connector used integrally in a harness as an attachment element or fall arrest attachment and in lanyards, energy absorbers, lifelines, and anchorage connectors as an integral connector.

Energy Absorber – is a component or element that is included as an integral part of an SRD that dissipates kinetic energy and limits deceleration forces during fall arrest.

Fall Arrest System – is an assembly of interconnected components configured to arrest a worker's fall when connected to a suitable anchorage.

Fall protection system – is a control zone, a personal fall arrest system, a safety net, or a travel restraint system.

Falls from heights – is an exposure to different level falls while working at heights or around floor level openings, above or below ground level.

Full Body Harness – is personal protective equipment that is designed to support the body during and after the arrest of a fall.

Guardrail – is a structure that prevents falls from heights.

Lanyard – is a flexible line or strap used to secure a worker or an energy absorber to a lifeline, anchorage, or anchorage connector.

Lifeline – is a length of rope or strap that is attached to a safe point of anchorage at one end or, in the case of a horizontal lifeline, at both ends to support and guide for a personal fall arrest system or personnel lowering device.

Self-retracting device (SRD) – is a device that performs a tethering function while allowing vertical movement to the maximum working length, which will arrest a worker's fall in conjunction with a full body harness.

Similar Barrier – is any barrier that the employer or contractor can demonstrate to provide a level of protection that is at least equivalent to a guardrail.

Temporary - refers to a designed structure that is to be removed by the last workers using it before commissioning or prior to turnover to the contractor or owner and it is intended and designed to last not more than one year.

Travel Restraint System – is a system that prevents a worker from travelling to the edge of a structure or to a work position from which the worker could fall.

Worksite – is an area at a place of employment where a worker works or is required or permitted to be present.

4. REQUIREMENTS

4.1 IDENTIFY FALL HAZARDS

Fall hazards at a temporary or permanent worksite shall be identified via a documented hazard/aspect and risk assessment or on a fall protection plan. Fall hazards exist:

- If an employee may fall a vertical distance of three metres or more; or
- Where there is potential of injury from falls at less than three metres.

4.2 CONTROL METHODS

Where reasonably practicable, fall hazards shall be eliminated. If fall hazards cannot be eliminated, fall protection systems shall be used to reduce the risk.

Guardrails or similar barriers shall be installed at permanent work areas where workers may fall more than 1.2 metres and less than 3 metres and shall be constructed in accordance with *The Occupational Health and Safety Regulations, 2020,* section 9-11.

Where the use of a guardrail, similar barrier or travel restraint system is not reasonably practicable, a safety net, control zone or fall arrest system shall be used.

Where a fall arrest system is the fall protection equipment to be used for the work, the fall arrest system components shall be selected accordingly to ensure the worker does not strike objects below the work area in the event of a fall.

A written Fall Protection Plan is required if there is a potential for falls over three metres and workers are not protected by guardrails or similar barriers.

When working from an aerial device, elevated work platform, suspended powered scaffold, work platform mounted on a forklift, or man basket supported by a crane or digger derrick workers shall use a fall arrest system and have a written fall protection plan. Other fall protection systems may be used in addition to the fall arrest system.

4.2.1 FALL PROTECTION PLAN

A fall protection plan shall:

- Be in writing;
- Be available to workers at the work site before work begins; and

- Include all components listed in subsection 9-3(2) of *The Occupational Health and Safety Regulations, 2020*:

  "(a) the fall hazards at the worksite;

  (b) the fall protection system to be used at the worksite;

  (c) the procedures used to assemble, maintain, inspect, use and disassemble the fall protection system; and

  (d) the rescue procedures to be used if a worker falls, is suspended by a personal fall arrest system or safety net and needs to be rescued."

A separate fall protection plan need not be created for each work site where workers face fall hazards at multiple work sites and the fall protection equipment and rescue procedures are identical at each work site.

A new or amended fall protection plan shall be required when fall protection equipment varies to mitigate the fall hazard or if a different rescue procedure is necessary.

Workers affected by the fall protection plan shall be trained in all of its elements.

4.3 FALL PROTECTION COMPONENTS

Fall protection equipment varies by design, class, or type. Equipment used shall be appropriate for the work in the given work environment. For example, not all self-retracting devices are designed to be connected to an anchorage below a worker's shoulder.

Fall protection components and their interconnection to form a fall protection system shall meet the applicable requirements outlined in the *The Occupational Health and Safety Regulations, 2020* in particular Parts 7, 9, 12 and 13.

4.3.1 FULL BODY HARNESS

Full body harnesses shall meet the requirements of CSA Z259.10-2018 Standard for the applicable classes required for the work being performed.

4.3.1.1 USE

Users shall be trained in the correct use of full body harnesses.

The use of suspension trauma relief straps on a full body harness is mandatory.

Full body harnesses shall:

- Be worn and used as per the manufacturer specifications and instructions.
- Be either 100% on or 100% off; workers are never to move around with a partially donned harness.
- Be donned and adjusted prior to entering a fall risk area and may be removed after leaving a fall risk area.

Full body harnesses that have been subject to a fall shall be removed from service, tagged, and inspected and/or disposed of through the Division's inspection process.

Full body harnesses shall not be modified.

Other PPE or equipment must not compromise the level of protection provided by the full body harness.

4.3.1.2 INSPECTION

Full body harnesses in use shall be inspected by a competent person:

- Documented inspection annually, or more frequently as per manufacturer's specifications.
- When the harness has been subject to a fall.

Full body harnesses shall be inspected by the user prior to use. If in doubt, do not use.

- Inspect all straps and webbing for cuts, frays, pulled stitching, burns, or chemical damage.
- Inspect D-Rings/Back pads for cracks, sharp edges, distortion(bends).
- Inspect buckles for any unusual wear, distortion, or corrosion.
- Inspect Tongue/Grommets for heavy wear, from repeated buckling and unbuckling, loose grommets, punched holes in webbing or corrosion.
- Inspect Tongue Buckle for distortion or sharp edges.
- Inspect Friction and Mating Buckles for distortion or corrosion.
- Check for proof of periodic inspection.

4.3.1.3 CARE OF FULL BODY HARNESS

Full body harnesses shall only be cleaned with manufacturer's recommended cleaning agents.

- Oil and grease lubricants shall not be used on any fall arrest system component.

Full body harnesses shall be stored in a cool dry area, out of the elements, sunlight, and potential chemical exposure.

- Hang the harness by the dorsal "D" ring to prevent tangling or in a storage bag.

Do not drop your equipment on any hard surface, such as a concrete floor or a pavement.

Do not remove labels, tags, or any other markings.

Do not mark with paint, felt marker or tape, as chemical damage may result.

Retention of records in compliance with SaskPower Enterprise Classification and Retention Schedule (ECaRS) and RIM Guidelines.

4.3.2 OTHER FALL PROTECTION COMPONENTS

Other fall protection components including body belts, lanyards, energy absorbers, self-retracting devices, lifelines, connectors, descent devices and anchorage connectors shall be compliant with the applicable CSA standard. Refer to section 6.2 of this document for a listing of current fall protection related CSA standards.

4.3.2.1 CARE AND USE OF COMPONENTS

Fall protection components shall be:

- Used, inspected, and revalidated as per manufacturer's specifications;
- Inspected for damage before each use;
- Inspected when subject to a fall and replaced if damaged;
- Cleaned and stored according to manufacturer's specifications;
- Inspected by a competent person at a frequency defined by the manufacturer;
- Destroyed if defective.

Body belts shall not to be used as part of a fall arrest system.

Only one connection shall be allowed per 'D' ring.

Never connect two devices together that have gates (e.g. snap hook to carabiner).

4.4 PROVISIONING

For SaskPower employees fall protection components, including full body harnesses, shall be supplied through SaskPower Stores or through the applicable Division's purchasing process.

For Transmission and Distribution employees' requests shall be processed through Apparatus Stores in Regina or Saskatoon. Apparatus stores will record the serial number, assign, and tag the component with a unique number to identify the asset; the information is to be entered into a database associated with SAP.

4.5 RECORDS OF INSPECTIONS

Records of inspections shall be managed by business areas and be readily available for review.

A label or tag affixed to the equipment shall indicate either the date of inspection or when next inspection is due at a minimum.

5. IMPLEMENTATION

The requirements of this version of the standard are to be met within three months of the approval date at which time the previous version will be superseded.

6. RESOURCES

6.1 INTERNAL RESOURCES

Related Policies:	Hazard/Aspect and Risk Assessment (HARA) Policy
Related Standards:	Hazard/Aspect and Risk Assessment (HARA) Standard Personnel Hoisting Standard
Additional Information:	**Worker Clipped In Verbal Confirmation Directive – T &D** **SaskPower Fall Protection Plan Form** **4 D – 2 D ring body belts and transitioning – May 27 2019**

6.2 EXTERNAL RESOURCES

Related Legislation:	*The Saskatchewan Employment Act* *Occupational Health and Safety Regulations, 2020*
Related Standards:	CSA Z259.1-05 (R2020) Body belts and saddles for work positioning and travel restraint CSA Z259.2.2-2017 Self-retracting devices CAN/CSA-Z259.2.3:16 (R2020) Descent Devices CSA Z259.2.4-15 (R2020) - Fall arresters and vertical rigid rails CSA Z259.2.5-17 - Fall arresters and vertical lifelines CSA Z259.10-2018 Full body harnesses CSA Z259.11-2017 Personal energy absorbers and lanyards CSA Z259.12-2016 Connecting components for personal fall arrest systems (PFAS) CSA Z259.13-16 (R2020) Manufactured horizontal lifeline systems CSA Z259.14-2012 (R2016) Fall restrict equipment for wood pole climbing CSA Z259.15-2017 Anchorage connectors CSA Z259.16-15 (R2020) Design of active fall-protection systems CSA Z259.17-16 (R2020) Selection and use of active fall-protection equipment and systems
Additional Information:	National Building Code of Canada, Roofing Types and Slope Limits, Table 9.26.3.1 Occupational health and safety (OHS) fall protection plan, OHS information for workers and employers, Government of Alberta

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