

	FALL PROTECTION ALL-A0A-00-000-HST-0003	Retention Code: CG01 - CA
		Revised: February 2020
Owner: HSE Operations	Approved By: Manager, Health & Safety Operations	Review Frequency: Five years or less
<i>This document contains proprietary information belonging to ConocoPhillips Canada. It is intended to govern activities of ConocoPhillips Canada employees and contractors who perform work at ConocoPhillips Canada worksites. Its most current version may only be relied upon by those parties who receive a copy provided by ConocoPhillips Canada directly.</i>		

About this Standard	3
Purpose	3
1. Fall Protection	4
1.1. General	4
Defenses Required	4
Fall Protection system is required	4
Fixed ladders / climbable structures	4
Work procedure in place of fall protection	4
2. Fall Protection Plan	5
Plan is developed	5
Plan contents	5
Plan is reviewed	5
3. Fall Protection System.....	6
3.1. Equipment	6
Certification	6
Requirements.....	6
System Requirements	6
3.2. Anchor Points	7
Anchor Point design and use.....	7
Acceptable anchor points	7
OHS Codes and anchor points.....	7
3.3. Clearance Distances.....	8
How to calculate	8
3.4. Inspect and Maintain.....	8
Inspecting.....	8
Maintenance	8
Removal from service	9
References	10

Document History

Date	Approved by	Change Summary
February 2020	David Reaich	Usability Mapped – Issued for Use

About this Standard

Purpose

The purpose of this standard is to provide fall protection requirements to safely support employees and contractors when working above ground level.

1. Fall Protection

1.1. General

Defenses Required

Defenses are required to address the following hazards as necessary:

- Falls from height
- Suspension trauma
- Improper use / set-up of equipment
- Damaged equipment.

Fall Protection system is required

A fall protection system is required if a worker could fall:

- 3m or more where no guardrail is present
- Less than 3m where there is a possibility a worker could sustain injuries more serious than those resulting from landing on a solid, flat surface
- Onto a hazardous substance, object or through a work surface opening.

Fixed ladders / climbable structures

A fall arrest system must be included if a ladder / structure extends vertically more than 3m and is not protected by a ladder cage.

Work procedure in place of fall protection

Work procedure in place of fall protection equipment are restricted to:

- Installing or removing fall protection equipment
 - Roof inspecting and repairs (must be limited to light duty tasks of limited work period)
 - Emergency repairs
 - At height transfers between equipment and structures if allowed by the equipment manufacturer.
-

2. Fall Protection Plan

Plan is developed

Fall Protection Plan form is used to develop a fall protection plan.

Plan contents

Plan must contain the following:

Contents	Description
Hazards	<ul style="list-style-type: none"> Fall hazards at the worksite are known
Fall Protection System	<ul style="list-style-type: none"> Harness / lanyard, lifeline used. Anchors used during the work
Anchor Points	<ul style="list-style-type: none"> Verification of design and location
Safeguards	<ul style="list-style-type: none"> ensure enough clearance distances below the work area to prevent the worker from striking the ground or other objects
System Procedures	<ul style="list-style-type: none"> Procedures to assemble, maintain, inspect, use and take down the fall protection system
Emergency Response	<ul style="list-style-type: none"> plan to be used if a worker falls, is suspended in a fall arrest system and requires emergency removal

Plan is reviewed

The fall protection plan is reviewed:

- With workers prior to start
- When work or environmental conditions change.

3. Fall Protection System

3.1. Equipment

Certification


All equipment used for a fall protection system is certified as follows:

- Be compatible
- Meet and be used as per CSA or ANSI standard or CEN in Alberta
- Have certifying standard labelled on the equipment.

Requirements

Common equipment and components required for fall protection systems are:

Equipment and Components	Requirements
Full body harness	<ul style="list-style-type: none"> • Properly sized for weight and shape of user
Lanyards	<ul style="list-style-type: none"> • CPC workers must use shock absorbing or retractable lanyards. • Must be secured to an anchor point above worker's shoulder height, as high as reasonably practicable. • Free fall distance must not exceed 1.2 m.
Carabiners and snap hooks	<ul style="list-style-type: none"> • Must be self-closing and self-locking. • Must have a least two serial steps of deliberate manual actions in order to open. • Must be marked with breaking strength on major axis and the manufacturer name or trademark.



NOTE: Body belts are not permitted.

System Requirements

The personal fall protection system must limit the maximum arresting to:


- 6 kilonewtons (kN) or 1350 pounds-force in Alberta
- 8 kN in British Columbia

3.2.Anchor Points

Anchor Point design and use

Design and use of anchor points are as follows:

- designed and approved by a professional engineer.
- An anchor point attached to a personal fall arrest system must not be used to support or suspend a platform.
- When possible, anchor points are:
 - easily accessible
 - located directly above the worker and work
 - positioned high enough to prevent contact with a lower level if a fall occurs.
- Anchor points must not be located where sharp objects or rough edges could cause wear on equipment.
- Anchor points must not be selected that result in load being applied to snap hook locking mechanism.
- Multiple lanyards must not be used together to reach an anchor point.



NOTE: Never use guardrails, electrical conduit, floor gratings, insulated pipe, plastic pipe or fire suppression piping as anchor points.

Acceptable anchor points

Acceptable anchor points are manufacturer anchors, pipes and structural steel.

Anchor point	Requirements
Pipe	<ul style="list-style-type: none"> • 3-inch or greater nominal pipe size (NPS) metal pipe. • span between pipe supports must not be greater than 6 m for any pipe size. • pipe length must be continuous for at least two supports on either side of attachment.
Structural steel	<ul style="list-style-type: none"> • 2 ½" x 2 ½" x 3/8" angle span must be 6 m or less.

OHS Codes and anchor points

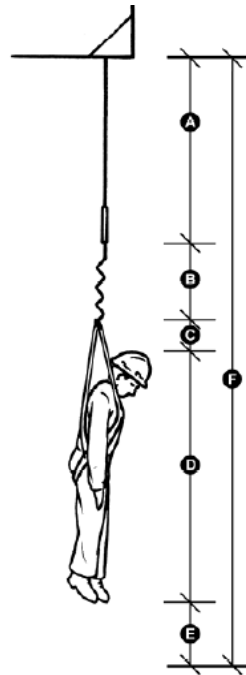
Provincial OHS requirements must be followed if work plans use an anchor point developed outside of original equipment design criteria. Refer to the appropriate OHS code and contact your local HSE representative.

3.3. Clearance Distances

How to calculate

The example shows how to calculate the minimum clearance distance below an anchor point based on a worker's fall arrest system.

This worker needs 6m (20 ft) of clear space below the anchor point.



Assumptions:

The worker is 1.8 m (6 ft.) tall using a 1.8 m (6 ft.) long lanyard. The combined weight of the worker, clothing, and tool belt is at least 100 kg (200 lbs).

- A Length of lanyard – 1.8 m (6 ft.)
- B 1.1 m (3.5 ft) due to shock absorber pulling apart
- C Harness stretch plus D-ring sliding – 0.45 m (1.5 ft.)
- D Height of worker – 1.8 m (6 ft)
- E Safety factor – clearance below feet of 0.9 m (3 ft.)
- F A+B+C+D+E
Overall minimum clearance is 6.0 m (20 ft.)



NOTE: If using retractable lanyards, ensure defenses are implemented for hazards related to lanyard angle and distance from swing hazards

3.4. Inspect and Maintain

Inspecting

All fall protection equipment must be inspected prior to use and:

- Remain free from substances and conditions that could cause defects
- Recertified as required specified by manufacturer.

Maintenance

- Kept free from substances and conditions that could cause defects.

Continued on next page ...

... continued from previous page.

Removal from
service

Equipment is to be removed from service when:

- Defective in condition or function
- Exposed to excessive heat, a chemical or other damaging/corrosive material
- Used to arrest a fall. Manufacturer or professional engineer must inspect and recertify equipment before reuse.

Once removed, equipment shall be disposed of.

References

Reference the following documents as required.

Document Name	Document ID
Alberta OH&S Code, Part 9, Fall Protection	
Alberta OH&S Code, Part 8, Entrances, Walkways, Stairways and Ladders	
British Columbia OH&S Regulations, Part 11, Fall Protection	
Fall Protection Plan	