OSHA General/Construction Fall Protection Regulations

1926.502(d)(15)
Anchorage used for attachment of personal fall arrest equipment shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 pounds (22.2 kN) per employee attached, or shall be designed, installed, and used as follows:

1926.502(d)(15)(i)
as part of a complete personal fall arrest system which maintains a safety factor of at least two; and

1926.502(d)(15)(ii)
under the supervision of a qualified person.

1926.502(d)(16)
Personal fall arrest systems, when stopping a fall, shall:

1926.502(d)(16)(i)
limit maximum arresting force on an employee to 900 pounds (4 kN) when used with a body belt;

1926.502(d)(16)(ii)
limit maximum arresting force on an employee to 1,800 pounds (8 kN) when used with a body harness;

1926.502(d)(16)(iii)
be rigged such that an employee can neither free fall more than 6 feet (1.8 m), nor contact any lower level;

1926.502(d)(16)(iv)
bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet (1.07 m); and,

1926.502(d)(16)(v)
have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of 6 feet (1.8 m), or the free fall distance permitted by the system, whichever is less.

Note: If the personal fall arrest system meets the criteria and protocols contained in Appendix C to subpart M, and if the system is being used by an employee having a combined person and tool weight of less than 310 pounds (140 kg), the system will be considered to be in compliance with the provisions of paragraph (d)(16) of this section. If the system is used by an employee having a combined tool and body weight of 310 pounds (140 kg) or more, then the employer must appropriately modify the criteria and protocols of the Appendix to provide proper protection for such heavier weights, or the system will not be deemed to be in compliance with the requirements of paragraph (d)(16) of this section.

1926 Subpart M App C
II.(b) "Testing considerations." Before purchasing or putting into use a personal fall arrest system, an employer should obtain from the supplier information about the system based on its performance during testing so that the employer can know if the system meets this standard. Testing should be done using recognized test methods. Section II of this appendix C contains test methods recognized for evaluating the performance of fall arrest systems. Not all systems may need to be individually tested; the performance of some systems may be based on data and calculations derived from testing of similar systems, provided that enough information is available to demonstrate similarity of function and design.

II.(n) "Other considerations." Because of the design of some personal fall arrest systems, additional considerations may be required for proper tie-off. For example, heavy deceleration devices of the self-retracting type should be secured overhead in order to avoid the weight of the device having to be supported by the employee. Also, if self-retracting equipment is connected to a horizontal lifeline, the sag in the lifeline should be minimized to prevent the device from sliding down the lifeline to a position which creates a swing hazard during fall arrest. In all cases, manufacturer's instructions should be followed.

1910.66 App C
I.(a) "Scope and application." This section establishes the application of and performance criteria for personal fall arrest systems which are required for use by all employees using powered platforms under paragraph 1910.66(j).

I.(9) Horizontal lifelines, where used, shall be designed, and installed as part of a complete personal fall arrest system, which maintains a safety factor of at least two, under the supervision of a qualified person.
I.(10) Anchorages to which personal fall arrest equipment is attached shall be capable of supporting at least 5,000 pounds (22.2 kN) per employee attached, or shall be designed, installed, and used as part of a complete personal fall arrest system which maintains a safety factor of at least two, under the supervision of a qualified person.

I.(d) "System performance criteria." (1) Personal fall arrest systems shall, when stopping a fall:
(i) Limit maximum arresting force on an employee to 900 pounds (4 kN) when used with a body belt;
(ii) Limit maximum arresting force on an employee to 1,800 pounds (8 kN) when used with a body harness;
(iii) Bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet (1.07 m); and
(iv) Shall have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of six feet (1.8 m), or the free fall distance permitted by the system, whichever is less.

I. (2)(i) When used by employees having a combined person and tool weight of less than 310 pounds (140 kg), personal fall arrest systems which meet the criteria and protocols contained in paragraphs (b), (c) and (d) in section II of this appendix shall be considered as complying with the provisions of paragraphs (d)(1)(i) through (d)(1)(iv) above. (ii) When used by employees having a combined tool and body weight of 310 pounds (140 kg) or more, personal fall arrest systems which meet the criteria and protocols contained in paragraphs (b), (c) and (d) in section II may be considered as complying with the provisions of paragraphs (d)(1)(i) through (d)(1)(iv) provided that the criteria and protocols are modified appropriately to provide proper protection for such heavier weights.

I. (3) Personal fall arrest systems shall be rigged such that an employee can neither free fall more than six feet (1.8 m), nor contact any lower level.

I. (4) The attachment point of the body belt shall be located in the center of the wearer's back. The attachment point of the body harness shall be located in the center of the wearer's back near shoulder level, or above the wearer's head.

I. (6) Personal fall arrest systems or components shall be used only for employee fall protection.

I. (7) Personal fall arrest systems or components subjected to impact loading shall be immediately removed from service and shall not be used again for employee protection unless inspected and determined by a competent person to be undamaged and suitable for reuse.

I. (8) The employer shall provide for prompt rescue of employees in the event of a fall or shall assure the self-rescue capability of employees.

I. (9) Before using a personal fall arrest system and after any component or system is changed, employees shall be trained in accordance with the requirements of paragraph 1910.66(i)(1), in the safe use of the system.

I. (f) "Inspections." Personal fall arrest systems shall be inspected prior to each use for mildew, wear, damage and other deterioration, and defective components shall be removed from service if their strength or function may be adversely affected.

**OSHA Signs & Tags Regulations**

1910.145(a)(1)
These specifications apply to the design, application, and use of signs or symbols (as included in paragraphs (c) through (e) of this section) that indicate and, insofar as possible, define specific hazards that could harm workers or the public, or both, or to property damage. These specifications are intended to cover all safety signs except those designed for streets, highways, and railroads. These specifications do not apply to plant bulletin boards or to safety posters.

1910.145(c)(3)
Safety instruction signs. Safety instruction signs shall be used where there is a need for general instructions and suggestions relative to safety measures.

1910.145(d)(1)
Design features. All signs shall be furnished with rounded or blunt corners and shall be free from sharp edges, burrs, splinters, or other sharp projections. The ends or heads of bolts or other fastening devices shall be located in such a way that they do not constitute a hazard.

1910.145(d)(6)
Safety instruction signs. The standard color of the background shall be white; and the panel, green with white letters. Any letters used against the white background shall be black. The colors shall be those of opaque glossy samples as specified in Table 1 of ANSI Z53.1-1967 or in Table 1 of ANSI Z535.1-2006(R2011), incorporated by reference in § 1910.6.
Use. Tags shall be used as a means to prevent accidental injury or illness to employees who are exposed to hazardous or potentially hazardous conditions, equipment or operations which are out of the ordinary, unexpected or not readily apparent. Tags shall be used until such time as the identified hazard is eliminated or the hazardous operation is completed. Tags need not be used where signs, guarding or other positive means of protection are being used.

1910.145(f)(4)
General tag criteria. All required tags shall meet the following criteria:

1910.145(f)(4)(i) Tags shall contain a signal word and a major message.


1910.145(f)(4)(i)(B) The major message shall indicate the specific hazardous condition or the instruction to be communicated to the employee.

1910.145(f)(4)(ii) The signal word shall be readable at a minimum distance of five feet (1.52 m) or such greater distance as warranted by the hazard.

1910.145(f)(4)(iii) The tag's major message shall be presented in either pictographs, written text or both.

1910.145(f)(4)(iv) The signal word and the major message shall be understandable to all employees who may be exposed to the identified hazard.

1910.145(f)(4)(v) All employees shall be informed as to the meaning of the various tags used throughout the workplace and what special precautions are necessary.

1910.145(f)(4)(vi) Tags shall be affixed as close as safely possible to their respective hazards by a positive means such as string, wire, or adhesive that prevents their loss or unintentional removal.

1910.145(f)(5) Danger tags. Danger tags shall be used in major hazard situations where an immediate hazard presents a threat of death or serious injury to employees. Danger tags shall be used only in these situations.

1910.145(f)(6) Caution tags. Caution tags shall be used in minor hazard situations where a non-immediate or potential hazard or unsafe practice presents a lesser threat of employee injury. Caution tags shall be used only in these situations.

1910.145(f)(7) Warning tags. Warning tags may be used to represent a hazard level between "Caution" and "Danger," instead of the required "Caution" tag, provided that they have a signal word of "Warning," an appropriate major message, and otherwise meet the general tag criteria of paragraph (f)(4) of this section.

OSHA Training Regulations

1926.503(b)(1) The employer shall verify compliance with paragraph (a) of this section by preparing a written certification record. The written certification record shall contain the name or other identity of the employee trained, the date(s) of the training, and the signature of the person who conducted the training or the signature of the employer. If the employer relies on training conducted by another employer or completed prior to the effective date of this section, the certification record shall indicate the date the employer determined the prior training was adequate rather than the date of actual training.

1926.503(b)(2) The latest training certification shall be maintained.

1926.503(c)
"Retraining." When the employer has reason to believe that any affected employee who has already been trained does not have the understanding and skill required by paragraph (a) of this section, the employer shall retrain each such employee. Circumstances where retraining is required include, but are not limited to, situations where:

1926.503(c)(1) Changes in the workplace render previous training obsolete; or
1926.503(c)(2) Changes in the types of fall protection systems or equipment to be used render previous training obsolete; or
1926.503(c)(3) Inadequacies in an affected employee's knowledge or use of fall protection systems or equipment indicate that the employee has not retained the requisite understanding or skill.

Uniline Regulations

5.1 Inspection and General Maintenance of the Uni-8 Horizontal Lifeline

The Uni-8 Horizontal Lifeline has been designed to be used under a variety of conditions. It uses high-grade components that are corrosion resistant. However, the System’s working life depends on factors such as correct care and maintenance and the environment in which the System is installed.

- Never attempt to repair, modify or dismantle the Uni-8 Horizontal Lifeline
- Do not attempt to adjust the tension

These activities should only be carried out by an Uniline Approved Installer.

The Uniline System is virtually maintenance free. Occasionally the components and cable may need cleaning dependent on environment. This should be done with a soft brush, warm water and mild detergent, ensure to thoroughly rinse with plenty of clean water.

Although highly resistant to chemicals and environmental conditions, take all precautions to avoid contaminating the system with acids, bitumen, cement, chloride, paint or aggressive cleaning fluids. If the System is likely to be contaminated, please contact your Approved Installer or Uniline Safety Systems for advice.

If the system is installed outdoors in an aggressive environment and protected from natural washing with rain water, the parts should be washed periodically to avoid contamination.

5.2 Servicing

In accordance with manufacturers recommendations and current national standards the Uni-8 Horizontal Lifeline System should be inspected at least once a year, in high use applications the servicing interval should be more frequent, as determined by the installer or Uniline Safety Systems Limited.

As the Uni-8 Horizontal Lifeline is unlike other horizontal lifelines and has many unique features, only Approved Uniline Installers who have been trained and certified should inspect Uniline products.

5.3 Warranty

The Uni-8 System supplied by Uniline Safety Systems and installed by an Approved Systems Integrator carries with it a 10 year warranty, subject to normal use and correct installation. The warranty is invalidated if the minimum service intervals, carried out by an Approved Systems Integrator are not maintained.

This warranty does not include the products appearance after a number of years, nor replacement parts due to wear and tear or where damage has been caused through misuse. (Your Systems Integrator should provide a warranty for the installation work.)

Capital Safety/Diversified Fall Protection Regulations

- Current OSHA and ANSI regulations state that recertifications shall comply with the manufacturer’s instructions
- Capital Safety and Diversified Fall Protection dictate that an annual inspection of the fall protection system and components shall be done/recorded by a qualified person other than the user (Capital Safety technical bulletins MISC002 REV E & MISC007 REV B)
Definitions

"Anchorage" means a secure point of attachment for lifelines, lanyards or deceleration devices, and which is independent of the means of supporting or suspending the employee.

"Body belt" means a strap with means both for securing it about the waist and for attaching it to a lanyard, lifeline, or deceleration device.

"Body harness" means a design of straps which may be secured about the employee in a manner to distribute the fall arrest forces over at least the thighs, pelvis, waist, chest and shoulders with means for attaching it, to other components of a personal fall arrest system.

"Buckle" means any device for holding the body belt or body harness closed around the employee's body.

"Competent person" means a person who is capable of identifying hazardous or dangerous conditions in the personal fall arrest system or any component thereof, as well as in their application and use with related equipment.

"Connector" means a device which is used to couple (connect) parts of the system together. It may be an independent component of the system (such as a carabiner), or an integral component of part of the system (such as a buckle or dee-ring sewn into a body belt or body harness, or a snap-hook spliced or sewn to a lanyard or self-retracting lanyard).

"Deceleration device" means any mechanism, such as a rope grab, rip stitch lanyard, specially woven lanyard, tearing or deforming lanyard, or automatic self-retracting-lifeline/lanyard, which serves to dissipate a substantial amount of energy during a fall arrest, or otherwise limits the energy imposed on an employee during fall arrest.

"Deceleration distance" means the additional vertical distance a falling employee travels, excluding lifeline elongation and free fall distance, before stopping, from the point at which the deceleration device begins to operate. It is measured as the distance between the location of an employee's body belt or body harness attachment point at the moment of activation (at the onset of fall arrest forces) of the deceleration device during a fall, and the location of that attachment point after the employee comes to a full stop.

"Equivalent" means alternative designs materials or methods which the employer can demonstrate will provide an equal or greater degree of safety for employees than the methods, materials or designs specified in the standard.

"Free fall" means the act of falling before the personal fall arrest system begins to apply force to arrest the fall.

"Free fall distance" means the vertical displacement of the fall arrest attachment point on the employee's body belt or body harness between onset of the fall and just before the system begins to apply force to arrest the fall. This distance excludes deceleration distance, lifeline and lanyard elongation but include any deceleration device slide distance or self-retracting lifeline/lanyard extension before they operate and fall arrest forces occur.

"Lanyard" means a flexible line of rope, wire rope, or strap which is used to secure the body belt or body harness to a deceleration device, lifeline, or anchorage.

"Lifeline" means a component consisting of a flexible line for connection to an anchorage at one end to hang vertically (vertical lifeline), or for connection to anchorages at both ends to stretch horizontally (horizontal lifeline), and which serves as a means for connecting other components of a personal fall arrest system to the anchorage.

"Personal fall arrest system" means a system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, a body belt or body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations of these.

"Qualified person" means one with a recognized degree or professional certificate and extensive knowledge and experience in the subject field who is capable of design, analysis, evaluation and specifications in the subject work, project, or product.

"Rope grab" means a deceleration device which travels on a lifeline and automatically frictionally engages the lifeline and locks so as to arrest the fall of an employee. A rope grab usually employs the principle of inertial locking, cam/lever locking, or both.

"Self-retracting lifeline/lanyard" means a deceleration device which contains a drum wound line which may be slowly extracted from, or retracted onto, the drum under slight tension during normal employee movement, and which, after onset of a fall, automatically locks the drum and arrests the fall.

"Snap-hook" means a connector comprised of a hookshaped member with a normally closed keeper, or similar arrangement, which may be opened to permit the hook to receive an object and, when released, automatically closes to retain the object. Snap-hooks are generally one of two types:

1. The locking type with a self-closing, self-locking keeper which remains closed and locked until unlocked and pressed open for connection or disconnection, or
2. The non-locking type with a self-closing keeper which remains closed until pressed open for connection or disconnection.

"Tie-off" means the act of an employee, wearing personal fall protection equipment, connecting directly or indirectly to an anchorage. It also means the condition of an employee being connected to an anchorage.

"Tag" means a device usually made of card, paper, pasteboard, plastic or other material used to identify a hazardous condition.