



## **Step By Step How to Establish, Manage and Implement a Fall Protection Program**

**The following is a step by step guideline for establishing, managing and implementing a fall protection program arranged in a chronological order:**

- 1. Assign Fall Protection Program Manager and designate Competent Person for Fall Protection;**
- 2. Train Fall Protection Program Manager and Competent person for Fall Protection;**
- 3. Program manager develop written FP program;**
- 4. Conduct fall hazard surveys and assessment and develop survey report;**
- 5. Select type of FP system(s) and FP method(s) to be used;**
- 6. Develop site specific Fall Protection and Prevention Plan (If Personal fall protection system is the planned method). The plan shall be developed either by the Competent Person or Qualified Person for Fall Protection;**
- 7. FP equipment programming and purchases;**
- 8. Identify and train End Users on the use of FP equipment. Training shall be conducted by a competent person;**
- 9. Establish FP equipment storage area and develop requirements for care, maintenance and inspection procedures in accordance with manufacturer's instructions and recommendations;**
- 10. Competent person select/identify use of non-certified anchorages. A Qualified Person will design the certified anchorages. A Competent person can install, use and inspect certified anchorages under the direction of the qualified person;**
- 11. Develop rescue plan and procedures;**
- 12. Conduct refresher/update training as required;**
- 13. Audit the program.**



## **SPECIFIC EQUIPMENT INSPECTION**

### **ANCHORAGE SYSTEMS (anchorages and anchorage connectors):**

1. Inspect all components of the anchorage system
2. Visibly inspect for abrasions, wear points, damaged threads, on all equipment before use.
3. For synthetic slings and anchor straps inspect all sewing and loops for wear, chemical damage, burn damage, and/or ultraviolet deterioration.
4. Refer to the anchorage-attached tags to determine when the sling should be retired.
5. Inspect cables for excessive damage to the steel fibers.
6. Re-certify the anchorage system exposed to weather or corrosive conditions.
7. Inspect anchorage connectors for integrity and attachment to solid surfaces.

### **SNAPHOOKS AND CARABINERS**

- a) Inspect on a regular basis and before each use.
- b) Inspect snaphooks and carabiners for any hook, locks and eye distortion.
- c) Verify that there are no cracks, pitted surfaces and eye distortions.
- d) The keeper latch must not be bent, distorted, or obstructed.
- e) Verify that the keeper latch seats into the nose without binding.
- f) Verify that the keeper spring securely closes the keeper latch.
- g) Test the locking mechanism to verify that the keeper latch locks properly.
- h) Verify that the points where the lanyard attaches to the snaphooks are free of defects
- i) Retire snaphooks, carabiners, and all integral components if any discoloration, deformation, cracks, or abrasions are detected.
- j) Retire immediately if the item has sustained any fall, or if the spring is broken and gate is bent, or if the gatekeeper no longer engages the slot cleanly.
- k) Damaged snaphook and carabiners shall be tagged and removed from service and from the inventory list.
- l) Dirty snaphooks and carabiners shall be cleaned with kerosene, WD-40 (or equivalent), or similar solvents, and immersed in boiling water for 30 seconds to remove the cleaning agent. Dry with a soft cloth to ensure that the gate and gatekeeper operate properly.
- m) Ensure that only double-locking-type gates are used.

### **LANYARDS AND ENERGY ABSORBERS**

- a) Inspect lanyards put under a slight tension on a regular basis.
- b) Check all components for abrasion, cuts, discoloration, cracks, burns, knots, torn stitching and excessive wear.
- c) Visually inspect the energy absorber for any signs of damage, paying close attention to where the energy absorber attaches to the lanyard.
- d) Wash lanyards and energy absorbers on a regular basis to remove dirt and grit, which can abrade the fibers.
- e) Lanyards and energy absorbers shall have a permanently attached labels indicating the manufacturer's name, serial number or lot number, date of manufacture, maximum elongation (deployment distance), maximum and average arresting force, maximum free-fall distance (6 or 12 foot free fall), and capacity. The lanyards and energy absorbers must also have

permanently attached labels that indicate they meet OSHA & ANSI Z359.13 Standard and requirements. Lanyards bearing the markings of ANSI A10.14, ANSI Z359.1 (1992, R199) or ANSI Z359.1 (2007) are not acceptable and they shall be taken out of service.

- f) Use and review manufacturer's logbook provided with the equipment to determine the age of the lanyard and energy absorber.
- g) Lanyards and energy absorbers shall be inspected by the user prior to each use and by a Competent Person other than the user at least once a year.
- h) Check for missing marking and labels.
- i) Maximum usage of a lanyard shall not be more than 5 years, unless the Competent Person for Fall Protection carefully inspects it, review its history of use and storage, and recommends its continued use, once put in service (assuming the new unused lanyard is stored in a climate-controlled location, [i.e., in a plastic bag not exposed to fumes, and in a cool location out of direct sunlight).

### **Retire the lanyard:**

- a) After a hard fall.
- b) When the shock absorber (even if slightly) is impacted or deployed.
- c) If the lanyard has been used for any other purpose other than Fall Protection.
- d) If the equipment show excessive wear, chemical damage, burn damage, and/or ultraviolet deterioration.

### **FALL-ARRESTOR (ROPE GRAB)**

- a) Inspect regularly.
- b) Check for signs of wear, corrosion, rust, and other anomalies.
- c) If any sign of wear or malfunction is observed, remove the device from service immediately.

### **SELF-RETRACTING DEVICES**

- a) Inspect before each use for any physical damage.
- b) Inspection by a Competent Person shall be in accordance with the manufacturer's instructions and recommendations. Inspection shall be documented. c. If the Self-retracting Device housing becomes yellow, gathers condensation, or the indicator has been engaged, remove it from service immediately, and return it to the manufacturer for repair and recertification.
- c) SRDs shall have permanently attached labels indicating that they meet ANSI Z359.14 and OSHA Standards and requirements.
- d) Make sure that all back nuts or rivets are tight
- e) Make sure that the entire length of the nylon strap is free of any cuts, burns, abrasions, kinks, knots, broken stitches, and excessive wear, and retracts freely.
- f) Test the unit by pulling sharply on the lanyard to verify that the locking mechanism is operating correctly.

### **ADDITIONAL DISCUSSION**

SRDs should be briefly inspected prior to each use, and more thoroughly inspected by a CP regularly. With specialized training it is possible that a CP can become certified to conduct recertification and general services. Usually, SRDs are returned to the manufacturer for service and recertification. Any equipment with many movable mechanical components or parts requires specialized inspection. Usually the CP does not have the tools, equipment and/or qualification to conduct such inspection.

In order to determine if the SRD is in good and safe working condition, specialized testing and inspection must be conducted on the SRD. This includes opening the casing, inspecting the inner components of the SRL and the drum containing excess spooled line, inspecting the locking mechanism, spring, connecting means, and fall indicator, and corrosion inspection in special environments. This is the why only the manufacturer can inspect and certify the SRD.

**SRDs are designated as Repairable or Non-repairable:**

Repairable Self-retracting Devices shall be returned to the manufacturer for servicing and re-certification (Factory authorized inspection) depending on the type, usage and the environment, in accordance with the following Inspection Requirements table:

TYPE OF USE	APPLICATION EXAMPLES	CONDITION OF USE	INSPECTION FREQUENCY BY COMPETENT PERSON	FACTORY AUTHORIZED INSPECTION
Infrequent to light use	Used in rescue, confined space, industrial (factory) maintenance	Good Storage conditions, indoor or infrequent outdoor use, room temperature, clean environments	Annually	At least every 2-5 years, but no longer than interval required by the manufacturer
Moderate to Heavy Use	Transportation Facilities, Residential/wood Construction, Utilities and Warehouses/Hangars	Fair storage Conditions, indoor and extended outdoor use, all temperature, clean or dusty environments	Semi Annually To annually	At least every 1-2 years, but no longer than interval required by the manufacturer
Severe conditions\ continuous use..	Commercial, Construction and industrial use, Shipyard environment	Harsh storage conditions, prolonged or continuous outdoor use, all temperatures, dirty environment	Quarterly to semi annually	At least annually, but no longer than intervals required by the manufacturer

**All Inspections of all Self-retracting Devices shall not be longer than the intervals required by the manufacturer.**

SRDS can either be repaired by the manufacturer or cannot be repaired. For repairable SRDs, not

requiring factory authorized inspections by a manufacturer would be considered non-compliant with ANSI Z359 standards.

Non Repairable SRDs are designed and designated as Non-Repairable (not designed for disassembly). They are very basic in design and limited in length and use, made of synthetic webbing. Complete internal inspection is not possible without destroying or damaging the device.

The designated competent person for fall protection shall work with written manufacturer's inspection requirements to determine whether the device can be used or not. If the inspection is not possible, the device shall be taken out of service.

## **BODY SUPPORT (FULL-BODY HARNESS)**

- a) Inspect daily or before each use.
- b) Inspect thoroughly and verify that there are no torn, frayed, broken fibers, pulled stitches, or frayed edges, anywhere on the harness
- c) Closely examine all of the nylon webbing to ensure there are no burn marks from welding or heat sources, which could weaken the material
- d) Examine D-ring for excessive wear, deterioration, or cracks.
- e) Verify that buckles are not deformed, cracked, and will operate correctly.
- f) Check to see that all grommets (if present) are secure and not deformed from abuse or a fall.
- g) Check tongue/straps for excessive wear from repeated buckling.
- h) All rivets must be tight, not deformed.
- i) Inspect for missing markings and labels.
- j) Ensure that harnesses are not painted or marked.
- k) Examine the harness for discoloration, abrasions and ultraviolet deterioration.
- l) Store harnesses in a cool, dry, and safe environment; ideally in a locked storage area
- m) A Competent Person other than the user shall inspect the harness periodically, or at least once a year.
- n) Wash the harness in a mild soap and rinse multiple times to remove any soap residue, and hang to dry out of direct sunlight in a cool, dry environment.
- o) Maintain a logbook indicating the date of entry into service, the nature of the work performed, washing of the harness, or other relevant details.
- p) Retire harnesses from service after five years from the date put into service (assuming the new unused harness is stored in a climate-controlled environment [i.e., in a plastic bag not exposed to fumes, and in a cool location out of direct sunlight) unless the Competent Person for Fall Protection carefully inspects it, reviews its history of use and storage, and recommends its continued use.
- q) The body support harness shall have a permanently attached label indicating manufacturer's name, serial number or lot number, date of manufacture, capacity, and that it meets OSHA & ANSI Z359 Fall Protection Code/Standards requirements.

## **ROPES (SYNTHETIC FIBERS)**

- a) Inspect rope periodically for broken fibers, severely worn areas, or change in the consistency of the core; inspect under slight tension and check for soft areas, bulges, or excessive stiffness.
- b) Avoid exposing rope to hazardous chemicals, moisture, acids, or oils.
- c) Do not use the rope after it is impacted or damaged.
- d) Wash the rope on a regular basis with lukewarm water and mild detergent to remove dirt or grit, rinse several times to remove soap residue, and hang in a dry, cool, dark area.
- e) Store rope in a strong weatherproof bag. Rope always must be dry before being placed in storage.

- f) Rope shall have a permanently attached label indicating manufacturer's name, serial number or lot number, date of manufacture, capacity, and that it meets OSHA & ANSI Z359 Fall Protection Code/Standards requirements.
- g) Retire rope after five years of service unless the Competent Person for Fall Protection carefully inspects it, reviews its history of use and storage, and recommends its continued use. If it is damaged, impacted, or exposed to chemicals, remove from service immediately.
- h) Avoid the use of Kern-mantle ropes.

### **CLIMBING LADDER FALL ARREST SYSTEM**

- a) Inspect on a regular basis per equipment manufacturer's requirements.
- b) The sleeve must run freely without hand operations or guidance.
- c) Check cable and rails for abrasions, wear, looseness, and cracks.
- d) Before climbing, check integrity of cable, system, and ground level.

### **RAISING/LOWERING DEVICES (RESCUE)**

- a) Inspect before each use.
- b) Check for wear and corrosion.

### **HORIZONTAL LIFELINE**

- a) Inspect the system including anchorages, anchorage connectors, cable and other hardware for defects or loose or components similar to inspection of other fall-arrest system components.
- b) The end-user shall inspect the components of the system prior to each use.
  - Type 1 HLL system, the Competent Person for Fall Protection shall inspect the system at an interval of no more than one year under the direction of a Qualified Person for Fall Protection.
  - Type 2 HLL System shall be inspected once a year by the Competent Person for Fall Protection who is trained by the manufacturer of the system to perform such inspections and under the direction of the Qualified Person for Fall Protection.

### **ADDITIONAL INSTRUCTIONS FOR ASSEMBLY, DISASSEMBLY, STORAGE, INSPECTION, CARE AND MAINTENANCE**

- a) Protect against cuts and abrasions:
- b) All safety lines and lanyards shall be protected against cuts or abrasions. Padding must be used wherever sharp edges exist.
- c) All safety lines and lanyards shall be stored in an approved location, as follows:
- d) All Personal Fall Protection equipment shall be stored in a weatherproof container or locker when not in use.
- e) Equipment should not be allowed to lie in water or direct sunlight, since this will affect equipment strength.
- f) Never store personal fall-arrest equipment in the bottom of a tool box, on the ground, or outside exposed to the elements (i.e., sun, rain, snow, etc.).
- g) During inspection of the equipment by the competent person for fall protection, only mark on the labels.
- h) Some manufacturers permit marking on straps using certain types of permanent markers which are water resistant and quick-drying such as Sanford Sharp Permanent Markers. Always consult the manufacturer for marking on the equipment.

**THE FALL-ARREST SYSTEM COMPONENTS SHALL BE COMPATIBLE, AS FOLLOWS:**

- a) Contact the qualified or Competent Persons for Fall Protection or manufacturer's representative for assistance. In the use of fall-arrest systems, all components shall be designed for use with each other, or approval must be obtained from the manufacturer or Qualified Person to use the configuration that uses different components. All system components shall be compatible.
- b) Follow the manufacturers and the Qualified Person's instructions for installation, assembly/disassembly, and use, as follows:
- c) All systems must be installed, assembled, and disassembled per the manufacturer's direction. Failure to follow these instructions could lead to the possible failure of a system.
- d) In the event of a fall, secure all equipment involved and contact the Safety Officer for disposition. Do not reuse safety equipment that has experienced a fall:

**In the event of a fall, the first response is to ensure the safety of the employees. After rescue and, if required, medical aid is provided, all equipment involved must be removed from service.**

**Care and Maintenance of the Equipment:**

- a) Snaphooks and Carabiners: Clean dirty gates of snaphooks and carabiners by applying WD-40 (or equivalent), other solvents, oil, or kerosene, until the gates work smoothly, then immerse in boiling water for 20-30 seconds to remove cleaning agent; dry with a soft cloth to ensure that the gate and gatekeeper operate properly.
- b) Harnesses, Lanyards and Ropes: Wash on regular basis with mild soap and rinse multiple times to remove the soap residue, store in a cool dry and safe environment to dry. Ensure harnesses and lanyards are not painted or marked. Mark only on labels

**Note:** Always consult manufacturer's instructions and recommendations for care and maintenance of the equipment.

