LIFE SAFETY DEVICES
SECURE YOUR STEPS, EMPOWER YOUR SAFETY

ANCHORAGE STRAP

INSTRUCTION MANUAL

THE INSTRUCTIONS APPLIES TO

THE FOLLOWING MODELS: AC04, AC06, AC08, AC10

CONCRETE ANCHOR WEB STRAPS INSTRUCTIONS

Do not skip this instruction manual. Read the instruction manual carefully before using the equipment. If failed in doing so it may cause serious injury or Death.

It is crucial to thoroughly read and comprehend this manual, incorporate it as part of a fall protection training program as required by OSHA or any state regularity agency. These instructions are designed to meet the manufacturer instructions as required by ANSI Z 359.1 and OSHA. The user must fully understand the proper equipment use and limitations entirely.

THE INSTRUCTION APPLIES TO THE FOLLOWING MODELS: AC04, AC06, AC08, AC10

1. General Requirements, Warnings and Limitations

This equipment is specifically crafted for the incorporation into a personal fall protection system. Components should only be utilized for their designated and approved purposes, avoiding any alternative operations or uses. Fall arrest systems are specifically engineered to meet OSHA regulations and standards. Fall Restraint System must be designed by a Qualified Person, and must be installed and used under the supervision of a competent person.

- All authorized persons/users are required to consult the regulations governing occupational safety, along with relevant ANSI standards. Please refer to product labeling for information on specific OSHA regulations, and ANSI standards met by the product.
- **Consult a doctor if there is any reason to doubt a user's ability to withstand and safely absorb fall arrest forces. Age, fitness, health conditions can seriously affect the worker if a fall occurs. Pregnant Women and minors should not use this equipment.**
- It's crucial to consistently implement proper precautions, including clearing any obstructions, debris, or hazards from the work area that could pose a risk of injury or impede the system's operation. Before each use, all equipment must undergo inspection in accordance with the manufacturer's instructions. Additionally, a qualified individual should conduct regular inspections of all equipment to ensure ongoing safety compliance.
- To minimize the potential for accidental disengagement, a competent person must ensure system compatibility.
- Equipment must not be altered in any way. Repairs must be performed only by the Manufacturer, or persons or entities authorized in writing by the manufacturer.

- Any product exhibiting deformities, unusual wear, or deterioration must be immediately discarded. Any equipment subject to a fall must be removed from service. The authorized person/user shall have a rescue plan and the means at hand to implement it when using this equipment.
- Never use fall protection equipment for purposes other than those for which it was designed. Fall protection equipment should never be used for towing or hoisting.
- All synthetic material must be protected from slag, hot sparks, open flames, or other heat sources. The use of heat resistant materials is recommended in these applications.
- Never use natural materials (manila, cotton, etc.) as part of a fall protection system.
- Do not expose this equipment to chemicals which may have a harmful effect on the materials used to construct it. Be especially aware of caustic environment, or those that contain high levels of organic acids or bases. If you are uncertain about the safe operation of this equipment in any environment, contact Life Safety Devices for further instructions.
- Do not use the equipment near sharp edges, abrasive surfaces and looping around small diameter structural members.
- Do not use the equipment around moving machinery or electrical hazards.

Life Safety Anchor Straps should be used only with the combinations of components, sub-systems or both which may not affect or interfere with the safe function of one another. Be certain that connecting devices are compatible and that other elements of the Personal Fall Arrest System (PFAS) are safe to use and compatible before use.

2. System Limitations & Requirements

Before installing or using this equipment, please consider the following limitations and requirements:

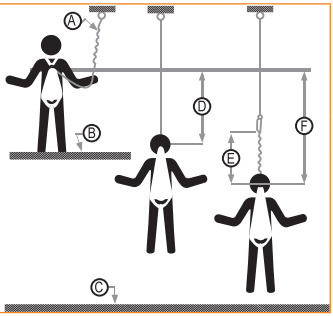
Capacity

Life Safety Anchor Straps are designed for use by single user with a combined weight (clothing, tools, etc.) of no more than 310 lbs. (140 kg) Make sure all of the components in your system are rated to a capacity appropriate to your application. All Life Safety Anchor Straps are rated 5000lbs.

Free Fall

Personal Fall Arrest System (PFAS)s used with this equipment must be rigged to limit the free fall to 6 feet (1.8 M) per ANSI Z359.1. Restraint systems must be rigged so that no vertical free fall is possible. Work positioning systems must be rigged so that free fall is limited to 2 feet (.6 m) or less. Personnel riding systems must be rigged so that no vertical free fall is possible. Climbing systems must be rigged so that free fall is limited to 18 inch. (.46 cm) or less. Rescue systems must be rigged so that no vertical free fall is possible. See subsystem manufacturer's instructions for more information. Below figure illustrates fall clearance requirements. There must be sufficient clearance below the user to allow the system to arrest a fall before the user strikes the ground or other obstruction.

A.	Connecting Subsystem (Energy Absorbing Lanyard Shown)
B.	Working Level
C.	Lower Level or Obstruction
D.	Free Fall - 6ft. (1.8m) Max. (per ANSI Z3559.1)
E.	Deceleration Distance
F.	Total Fall Distance Free Fall (D) + Deceleration (E)



Clearance required is dependent on the following factors:

- Elevation of Anchorage
- Connecting Subsystem Length
- Deceleration Distance
- Free Fall Distance
- Worker Height
- Movement of Harness Attachment Element

Swing Falls

Swing falls occur when the anchorage point is not directly above the point where a fall occurs. The force of striking an object in a swing fall may result in severe injury or death. Minimize swing falls by working as close to the anchorage point as possible. Under no circumstances should a swing fall be allowed it there is a risk of injury. Swing falls will significantly increase the clearance required when a self-retracting lifeline or other variable length connecting subsystem is used.

Environmental Hazards

In areas where environmental hazards are present, additional precautions may be necessary to prevent injury to the user or damage to the equipment. Hazards may include, but are not limited to; heat, chemicals, corrosive environments, high voltage power lines, gases, moving machinery, and sharp edges.

Compatibility of Components

Unless otherwise noted, Life Safety Devices equipment is designed for use with Life Safety Devices approved components and subsystems only. Substitutions or replacements made with non-approved components or subsystems may jeopardize compatibility of equipment and may affect safety and reliability of the complete system.

Compatibility of Connectors

Connectors are considered to be compatible with connecting elements when they have been designed to work together in such a way that their sizes and shapes do not cause their gate mechanisms to inadvertently open regardless of how they become oriented.

If the connecting element that a snap hook or carabiner attaches to is undersized or irregular in shape, a situation could occur where the connecting element applies a force to the gate of the snap hook or carabiner. This force may cause the gate (of either a self-locking or a non-locking snap hook) to open, allowing the snap hook or carabiner to disengage from the connecting point. Connectors must be compatible in size, shape, and strength. Self-locking snap hooks and carabiners are required by ANSI Z359.1 and OSHA. Making Connections: Always use snap hooks and carabiners which needs double manual action to open with this equipment. Only use connectors that are suitable to each application. Ensure all connections are compatible in size, shape and strength. Do not use equipment that is not compatible. Ensure all connectors are fully closed
and locked.

The connection should not be made:

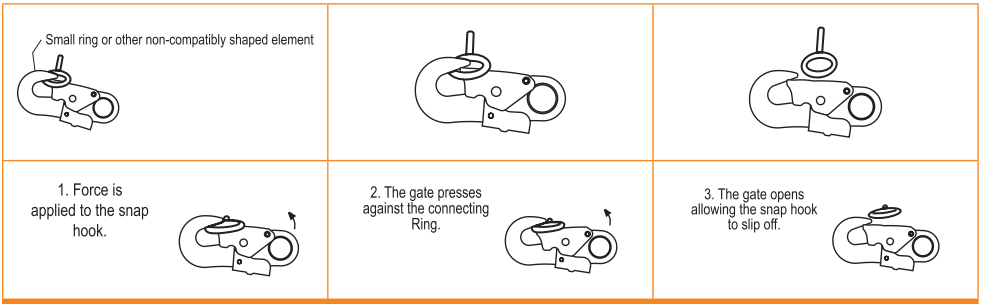
- To a D-ring to which another connector is attached.
- In a manner that would result in a load on the gate.
- In a false engagement, where features that protrude from the snap hook or carabiner catch on the anchor and without visual confirmation seems to be fully engaged to the anchor point.
- To each other.
- Directly to webbing or rope lanyard or tie-back (unless the manufacturer's instructions for both the lanyard and connector specifically allow such a connection).
- To any object which is shaped or dimensioned such that the snap hook or carabiner will not close and lock, or that roll-out could occur

NOTE: Other than 3,600 lb. (16 kN) gated hooks, large throat opening snap hooks should not be connected to standard size D-rings or similar objects which will result in a load on the gate if the hook or D-ring twists or rotates. Large throat snap hooks are designed for use on fixed structural elements such as rebar or cross members that are not shaped in a way that can capture the gate of the hook.

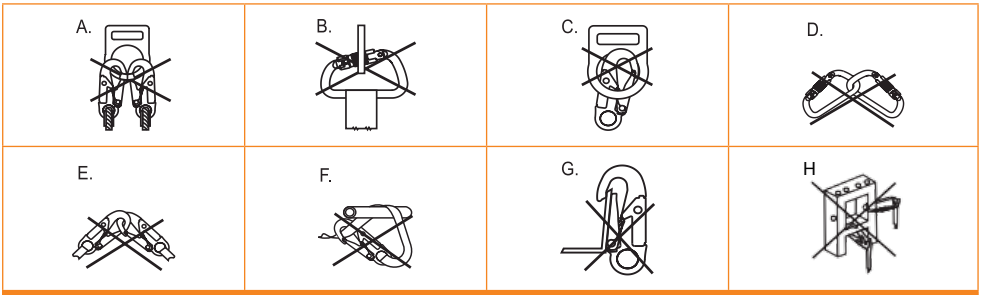
Restrictions Regarding Making Connections

- Do not make connections where the hook locking mechanism can come into contact with a structural member or other equipment and potentially release the hook.
- Do not connect a snap hook into a loop or thimble of a wire rope or attach in any way to a slack wire rope.
- The snap hook must be free to align with the applied load as intended (regardless of the size or shape of the mating connector)
- A carabiner may be used to connect to a single or pair of soft loops on a body support such as a body belt or full body harness, provided the carabiner can fully close and lock. This type of connection is not allowed for snap hooks.
- A carabiner may be connected to a loop or ring connector that is already occupied by an automatic closing connector.

If the connecting element to which a snap hook (shown) or carabiner attaches is undersized or irregular in shape, a situation could occur where the connecting element applies a force to the gate of the snap hook or carabiner. This force may cause the gate (of either a self-locking or a non-locking snap hook) to open, allowing the snap hook or carabiner to disengage from the connecting point.



Figured 4 - Unintentional Disengagement (roll-out)



Figured 5 - Inappropriate Connections

Connecting Sub-Systems

Personal Fall Arrest Systems (PFAS) used with this equipment must meet applicable state, OSHA and ANSI requirements. A full body harness must be worn when this equipment is used as a component of a personal fall arrest system. As required by OSHA, the personal fall arrest system must be capable of arresting the user's fall with a maximum arresting force of 1,800 lbs. (8 kN), and limit the free fall to 6 ft. (1.8 m) or less. If the maximum free fall distance must be exceeded, the employer must document, based on test data, that the maximum arresting force will not be exceeded, and the personal fall arrest system will function properly. Free fall greater than 6 ft. (1.8 m), and up to a maximum of 12 ft. (3.7 m) is possible, Life Safety Devices recommends using a personal fall arrest system incorporating a Life Safety Devices Energy Absorbing Lanyard. Life Safety Devices has performed testing using the Life Safety Devices Energy Absorbing Lanyard in free falls up to 12 ft. (3.7 m) to ensure the maximum arresting force does not exceed 1,800 lbs. (8.0 kN), and the system functions properly.

Rescue Plan

Rescue operation must be performed by the trained and competent personal. The rescue operation must be performed under the supervision of the rescue expert team or personal. It is advised that while working on site work in pairs. Before starting to work the user must have the rescue plan according to the work.

If Equipment is Subjected to a Fall

Remove the equipment from service immediately if it has been subjected to the forces of a fall arrest. Contact your distributor or Palmer Safety about policies regarding replacement of Life Safety Devices components involved in a fall.

Specific Instructions

Life Safety Devices Anchors are designed to provide complete attachment system to user in the event of a fall. These attachment systems must be connected to the proper body support and connecting facility. These Anchors are meant to hold the victim of fall till the rescue operation is performed, so this is important that the whole system must have the all the essential components before going for the use. The whole fall arrest system must be used by the trained/competent person. It is advisable to make a checklist of the essential components according to one's use before going for work.

Use of Fall Arrest System

The fall arrest system MUST ONLY be connected to the back attaching element on the harness provided for the purpose ("D" ring or webbing attachment extension) or to the chest anchorage points ("webbing link" or "D" link). The chest anchorage points must imperatively be used together. The D-rings on the belt and the ventral anchorage point must only be used for the attachment of a work positioning or retaining system and never with a fall arrest system. During use, check regularly the adjustment and/or attachment points.

Product Labeling

ANCHOR WEB STRAP PART: #AC04

- ☐ AC04
- ☐ AC06
- ☐ AC08
- ☐ AC10

Prior to use, read and understand all Manufacturer's instructions provided with equipment at time of shipment.

Compliant with OSHA 1910, OSHA 1926 Subpart M, ANSI Z359.1-2007, and ANSI A10.32-2012 regulations.

Date of Manufacture:

MM/YYYY

B: SAMPLE / S: XXXX

Materials:
Polyester and Steel

Capacity Range: 130-310 lbs. (including all equipment), or up to 420 lbs. if used in combination with equipment explicitly certified for such use.

All PFAS equipment must be selected and deemed compatible with Cross Arm Strap by a Competent Person.

Only make compatible connections. Refer to instructions for proper connection methods.

Warning

MAXIMUM 1 connection per anchor.

Avoid contact with hazards, including, but not limited to, heat, chemicals, electricity, and sharp or abrasive edges and surfaces.

Made in India

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INSPECTION GRID

User must inspect prior to EACH use. Competent Person must complete formal inspection every 6 months. Competent Person to inspect and initial.

Date of First Use:

_____

Product lifetime is 5 years from Date of First Use, or, if not recorded, from Date of Manufacture, as long as equipment passes pre-use and Competent Person inspections.

YR / MO	20__	20__	20__	20__	20__
J					
F					
M					
A					
M					
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J					
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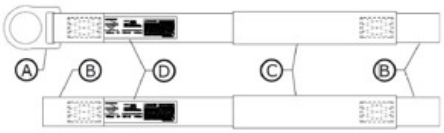
O					
N					
D					

If equipment fails inspection IMMEDIATELY REMOVE FROM SERVICE

DO NOT REMOVE LABELS



A. D-Ring
B. Web Loop
C. Wear Sleeve
D. Labels

Figured 1 - Product labeling

Anchorage Strength

The anchorage strength required is dependent on the application type. The following are the requirements of ANSI 359.1 for these application types:

Table 2 - Anchorage Strength Requirements

Fall Arrest[1]	Non-Certified Anchorage:	5,000lbs (22.2 kN)
	Certified Anchorage[2]:	2 Times the Maximum Arresting Force for Certified Anchorage
Restraint[1]	Non-Certified Anchorage	1,000 (4,5 kN)
	Certified Anchorages[2]:	2 times the foreseeable force for certified anchorages.
Work Positioning[1]	Non-Certified Anchorage	3,000 lbs (13.3 kN)
	Certified Anchorages[2]:	2 times the foreseeable force for certified anchorage.
Rescue[1]	Non-Certified Anchorage	3,000 lbs (13.3 kN)
	Certified Anchorages[2]:	5 times the foreseeable force for certified anchorage.
Climbing	Structure which a climbing system is attached must sustain the loads required by that particular system. See the instructions for the climbing system for requirements.	

[1] *Multiple Systems: When more than one of the defined systems is attached to an anchorage, the strength defined for non-certified or certified anchorage shall be multiplied by the number of systems attached to the anchorage.*

[2] *Certified Anchorage: An anchorage for fall arrest, positioning, restraint, or rescue systems that a qualified person certifies to be capable of supporting the potential fall force that meet the criteria for a certified anchorage prescribed in this standard.*

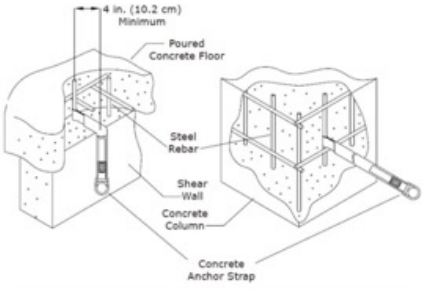
- **Fall Arrest:** Anchorages selected for fall arrest systems shall have a strength capable of sustaining static loads applied in the directions permitted by the system of at least: 1. 5,000 lbs. (22.2 kN) for noncertified anchorages, or 2. Two times the maximum arresting force for certified anchorages. When more than one fall arrest system is attached to an anchorage, the strengths set forth in (1) and (2) above shall be multiplied by the number of systems attached to the anchorage.
- **As Per OSHA:** Anchorages used for attachment of personal fall arrest systems shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 lbs. (22.2kN) per user attached, or be designed, installed and used as part of a complete Personal Fall Arrest System (PFAS) which maintains a safety factor of at least two, and is under the supervision of a qualified person.
- **Work Positioning:** The structure to which the work positioning system is attached must sustain static loads applied in the directions permitted by the work positioning system of at least 3,000 lbs., or twice the potential impact load, whichever is greater. See OSHA. When more than one work positioning system is attached to an anchorage, the strengths stated above must be multiplied by the number of work positioning systems attached to the anchorage.

- **Restraint:** Anchorages selected for restraint and travel restraint systems shall have a strength capable of sustaining static loads applied in the directions permitted by the system of at least: 1. 1,000 lbs. (4.5 kN) for non- certified anchorages, or 2. Two times the foreseeable force for certified anchorages. When more than one restraint and travel restraint system is attached to an anchorage, the strengths set forth in (1) and (2) above shall be multiplied by the number of systems attached to the anchorage.
- **Rescue:** Anchorages selected for restraint and travel restraint systems shall have a strength capable of sustaining static loads applied in the directions permitted by the system of at least: 1. 3,000 lbs. (13.3 kN) for non-certified anchorages, or 2. Five times the foreseeable force for certified anchorages. When more than one restraint and travel restraint system is attached to an anchorage, the strengths set forth in (1) and (2) above shall be multiplied by the number of systems attached to the anchorage.

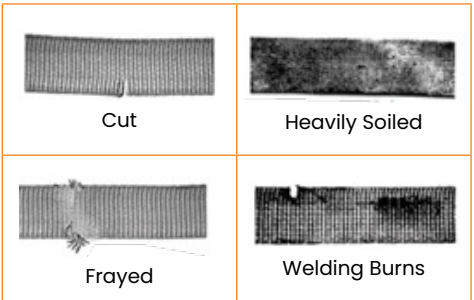
Inspection

Before each use, proceed with thorough visual examination to ensure that the PPE is intact (the same applies for the equipment used with the harness (connectors, lanyard…) and take all necessary steps concerning the implementation of rescue in total safety. In the event of your product being contaminated, consult the manufacturer or authorized agent. If you have any doubts regarding the safe state of the product or if the product has been used to arrest a fall, for your personal safety, it is essential to withdraw the PPE from service and send it back to the manufacturer or a qualified repair Center for checking or destruction.
Following the inspection, the center will provide written authorization or refusal for the use of the PPE. Never attempt to modify or repair PPE.

Before each use of this equipment inspect it according to the following guidelines
A formal inspection of fall protection products/components must be performed preferably every six months or at least annually by a competent person other than the user. The frequency of formal inspections should be based on conditions of use or exposure. Record the inspection results in the inspection and maintenance log at the end of this manual. The component should be checked for Cut, Frayed, Heavily Soiled, welding burns etc. Metal parts like D-rings should be duly check for the crack, bent, deformities, corrosions etc.



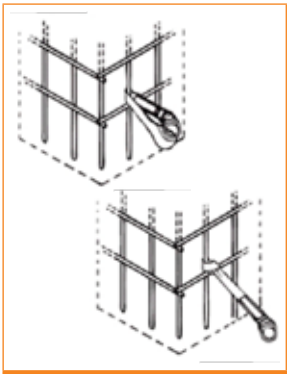
Figured 5 - Anchor Strap Installation



Figured 9 - Damaged Webbing

Installation Of Anchor Straps

Figure 5 illustrates installation of the Concrete Anchor Strap. Select a location for the anchorage that will provide the best safety to the user. Once a section of concrete column or a shear wall has been poured and allowed to cure, place the Web Loop end of the Anchor Strap over an exposed section of Steel Rebar. The anchoring rebar must be at least 4 in. (10 cm) from the outside face of the poured concrete. Once the Anchor Strap is in place, forming of the floor or column may continue. The concrete anchor will be secured by making the next pour, and allowing the concrete to cure. Once forms are removed and the concrete has cured, anchors will remain on the face of a column, or on the seam between shear wall and bottom side of the floor. If the rebar cage has already been completed the concrete Anchor Strap may be choked around the internal rebar by folding the Anchor Strap around the rebar and then pulling the D-Ring end through the Web Loop (see Figure 6). All other stipulations of this manual must still be followed, specifically regarding anchorage strength, position, and concrete curing before use.



Figured 5 - Anchor Strap Installation

WARNING

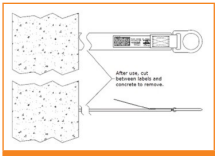
Do not use Concrete Anchor Strap until it is embedded in cured concrete. The concrete is an essential part of the anchorage strength. Using the Anchor Strap without concrete support may cause the anchorage connector to fail and could result in serious injury or death.

REMOVING ANCHOR STRAP

Once the fall hazard has been eliminated, the Concrete Anchor Strap must be removed. Use a knife or scissors to cut the Anchor Strap at the concrete seam (see Figure 7). After use, cut between labels and concrete to remove.

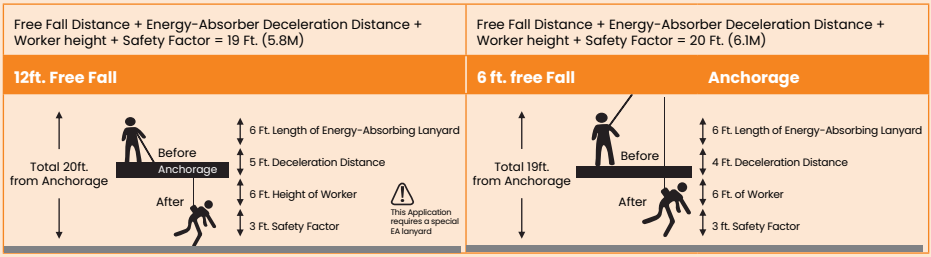
FALL CLEARANCE

If there is a risk of fall or if the only anchorage is below the attachment points on the harness, it is essential to use a lanyard provided with an energy absorber. Before using a shock absorbing lanyard, check that there is sufficient fall clearance below the user to prevent any collision with the structure or the ground. With a weight of 220 lbs and a fall factor of two (the least favorable case), the fall clearance D is the stopping distance H (2L+5.74 ft) plus an additional distance of 3.28 ft.



Figured 7 - Removing the Anchor Strap

Calculating Total Fall Distances: Total Fall Clearance below worker is calculated from Anchorage Connection. Free Fall Distance + Energy - Absorber Deceleration Distance + Worker height + Safety Factor. Care must be taken to ensure that the total fall distance is clear of obstructions, such as equipment, to avoid contact with a lower level.



Periodic Examination

Keep these instructions with the product and fill in the identification sheet, entering the information taken from the markings.

- The periodic examination is essential to test the resistance and condition of the equipment and to guarantee the safety of the user.
- A qualified person must examine this equipment at least once each year in strict compliance with the instructions of the manufacturer and the previous check must be recorded on the attached sheet.
- The frequency of inspection should be increased in accordance with the regulations, if the equipment is in heavy usage or if the equipment is used in harsh environments. Check also that the markings are legible.

3. Material & Construction

Webbing Materials

- Made up of high tenacity polyester; Breaking strength 5000 lbs.

System Requirements

- **Compatibility of Components:** Life Safety Devices Fall Protection equipment is designed to be used with Life Safety Devices approved components. Please contact Life Safety Devices if you have a question regarding compatibility. Making substitutions without approval from Life Safety Devices Fall Protection may lead to injuries and or death by compromising the safety and reliability of the complete system. A Qualified person can make a determination on compatibility of equipment from different manufacturers.
- **Compatibility of Connectors:** Connectors (D-rings, hooks, carabiners) must be capable of supporting at least 5,000lbs. (23kN). Do not use equipment that is not compatible. Non-compatible connectors may unintentionally disengage. Self-locking snap hooks and carabiners are required by ANSI and OSHA. Connectors must be compatible in size, shape, and strength.
- **Making Connections:** Only use self-locking snap hooks and carabiners with any Life Safety Devices Protection equipment. Do not use equipment that is not compatible.

Others

- **Maintenance & Cleaning:** Repairs to equipment can be made only by a Life Safety Devices representative or person or entity authorized by Life Safety Devices. Contact Life Safety Devices for maintenance and repair. Cleaning after use is important for maintaining the safety and life of the equipment. Cleanse the equipment of all dirt, corrosives, and contaminants. If the equipment cannot simply be wiped clean use a mild soap and water. Rinse, wipe, and hang to dry in shade
- **Storage:** Store the harness in a cool, dry and clean place out of direct sunlight. Avoid areas where heat, moisture, light, oil, and chemicals or their vapors or other degrading elements may be present. Equipment which is damaged or in need of maintenance should not be stored in the same area as usable equipment. Heavily soiled, wet, or otherwise contaminated equipment should be properly maintained (e.g. dried and cleaned) prior to storage. Prior to using equipment which has been stored for long periods of time, a Formal Inspection should be performed by a competent person. For harnesses with Dielectric buckles, pass-thru buckles or Quick Connect Buckles, store the harness with the buckles connected.
- **Training:** It is the responsibility of the users to assure that they read, understand, and follow all instructions and are trained in the care and use of this device. Training should be repeated periodically and any time there is a change of components within the system. Training must be conducted without exposing the trainee to a fall hazard

4. HOW TO DISPOSE A LANYARD

When the lanyard becomes unfits or in case of any wear and tear, dispose the lanyard immediately.

Follow the Steps for Disposal

- Make the three plastic crates namely- Textile, Metal & Plastic for placing the respective components of the lanyard.
- Spread the lanyard on a table / flat surface.
- Inspect the wear & tear present on the lanyard.
- If any wear and tear is observed, dispose the lanyard using a sharp scissor; first cut the Textile and dismantle the lanyard.
- Put the Textile, Plastic & Metal components in their respective plastic crates.

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CHECK CARD

It is recommended that the lanyard be inspected and examined by a competent person for any damages or failures if the need arises, but at least once a year. The observations should be recorded in the table below. In case such damages are observed, the lanyard should be replaced immediately. The lanyard shall only be used within a work positioning system according to EN 358:1999. The instructions for use for the individual components are to be observed.

SERVICE and INSPECTION RECORD

SERIAL NUMBER:			
MODEL NUMBER:			
DATE PURCHASED:		**DATE OF FIRST USE:**	

INSPECTION DATE	INSPECTIONS ITEMS NOTED	CORRECTIVE ACTION	MAINTENANCE PERFORMED
Approved by:			
Approved by:			
Approved by:			
Approved by:			
Approved by:			
Approved by:			
Approved by:			
Approved by:			
Approved by:			
Approved by:			
Approved by:			
Approved by:			

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