

# FRONTLINE

FALL PROTECTION

## READ CAREFULLY!

### INSTRUCTION, CARE & MAINTENANCE GUIDE ENERGY ABSORBING LANYARDS

#### Applicable Model #s

Pack Type Energy Absorbing Lanyards with Stretch

LES61S-US

LES62R-US

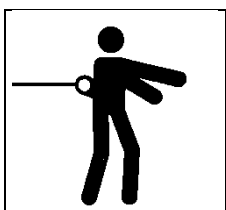
### **Warning**

You must read and fully understand all instructions, or have all instructions explained to you, before attempting to use this equipment. Equipment must not be installed, operated or inspected by anyone who does not understand this Owner's Manual. Failure to observe these instructions could result in serious injury or death. Careless or improper use of this equipment can result in serious injury or death. Training and instruction review should be repeated at regular intervals. If you have any questions regarding these instructions or need additional copies, contact Frontline Fall Protection at: [www.FrontlineFall.com](http://www.FrontlineFall.com) or [info@FrontlineFall.com](mailto:info@FrontlineFall.com).

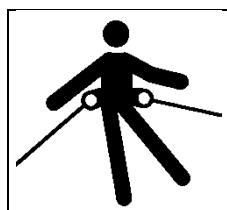
Use these icons to determine the appropriate use for Frontline equipment. Equipment must only be used for the purpose for which it is designed. Products with more than one appropriate use will have icons for all accepted uses.



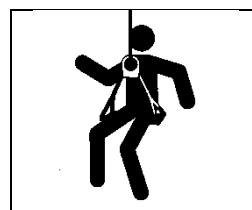
Fall Arrest



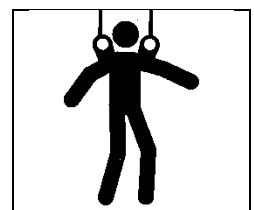
Restraint



Positioning



Suspension



Retrieval

# 1. APPLICATION

## 1.1 ANCHOR SLINGS

Provide an OSHA-compliant anchor point when attached to a structural support capable of supporting at least 5,000 lbs. (22.2 kN).

## 1.2 BODY HARNESS ANSI CLASS III, OSHA

Used for positioning, restraint, fall arrest, rescue/retrieval or suspension. Full-Body Harnesses distribute the fall arresting forces throughout a large area of the body. When used for fall arrest an approved energy absorber should be used whenever possible. If conditions do not allow for the use of an energy absorber, the system must be used so that forces imposed on the body do not exceed OSHA'S limit of 1800 lbs. (8kN). **Expected harness stretch is 6" (152mm), make sure this distance along with other factors such as D-ring/connector length, settling of the user's body and all other contributing elements are considered when calculating the clearance required below a worker where there is a possibility of falling.**

## 1.3 WEB LANYARDS

Used for positioning or restraint. **Not to be used for fall arrest unless an energy absorber is used.** Web lanyards are not used for fall arrest since fall arrest forces will exceed OSHA'S maximum allowable arresting force of 1800 lbs. (8 kN).

## 1.4 ROPE LANYARDS

Used for positioning or restraint. When rope lanyards are used for fall arrest, care must be taken to ensure that fall arrest forces do not exceed 1800 lbs. (8 kN). A fall of more than three (3) feet would generally exceed this limit.

## 1.5 ENERGY ABSORBERS (DECELERATION DEVICES)

For fall arrest, an energy absorber lanyard is recommended. When used properly, the energy absorber will limit maximum arresting forces to less than 900 lbs. (4kN)

**IMPORTANT:** Energy absorbers can increase total fall distance by up to 42 in. (1.1 m) or more. It is essential that it be determined before use whether the fall space permits the use of an energy absorber.

# 2. USE REQUIREMENTS

## 2.1 ANCHORAGE

Secure point of attachment for lifelines, lanyards or deceleration devices. Anchorages 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. Certified Anchorages must be able to support at least two (2) times the potential (foreseeable) impact load. Positioning devices shall be secured to an anchorage capable of supporting at least twice the potential impact load of an employee's fall or 3,000 pounds (13.3 kN), whichever is greater.

## 2.2 HARNESSES

Harnesses are to be worn snug around the body. If a harness does not fit properly, replace it with the correct size. The fall arrest connection on the harness must be positioned in center of the wearer's back near shoulder level. **DO NOT USE A BODY BELT FOR FALL ARREST. DO NOT ALTER.**

## 2.3 LANYARDS

Lanyards shall be kept as short as possible to minimize free fall distance. Free fall distance shall not exceed 6 ft. (1.8 m). **DO NOT ALTER THE LANYARD.**

## 2.4 ENERGY ABSORBERS

It is **HIGHLY RECOMMENDED** that an energy absorber be part of a fall arrest system whenever possible. Energy absorbing lanyards shall be kept as short as possible to minimize free fall distance. Free fall distance shall not exceed 6 ft. (1.8 m).

## 2.5 HARDWARE

Belts, harnesses, lanyards, lifelines and accessory equipment are supplied with snaphooks, D-rings and other hardware designed specifically as matched elements. **Use of incompatible hardware can be unsafe!** Use of mismatched hardware can result in the inadvertent release of the snaphook (roll-out) caused by external pressure on the snaphook gate. In all cases the user must check any attachment method to make sure it cannot bring pressure on the snaphook gate in a manner to permit accidental opening. Snaphooks should not be snapped to other snaphooks. Snaphooks shall not be snapped to a D-ring if the snaphook gate opening is larger than  $\frac{3}{4}$  of an inch. Snaphooks shall have a 5000 lbs. (22.2kN) minimum tensile strength rating. ANSI Z359 and A10.32 require that connector gates have a minimum gate strength of 3600 lbs. (16kn) Visually examine the connection for positive snaphook engagement. Use locking snaphooks for all connections.

## 3. SPECIFICATIONS

- Max Arresting Force on all Frontline Energy Absorbing Lanyards when tested in accordance with ANSI Z359.13 is 900 (4kN) lbs.
- Maximum Elongation when tested in accordance with ANSI Z359.13 is 42 in. (1.07 m).
- As per OSHA Regulations and ANSI Z359.1, Max free fall distance shall not exceed 6 ft.
- Energy Absorber webbing is made of polyester
- All connectors meet ANSI Z359.12 - 5000 lbs. (22.2kN) MBS, 3600 lbs. (13.3 kN) gate strength.

## 4. CAUTIONS

Items subjected to **FALL ARREST** or **IMPACT FORCES** must be immediately removed from service and destroyed. Any item showing **EXCESSIVE WEAR OR DETERIORATION** shall be destroyed. Inspect all equipment before each use. Failure to observe proper inspection and usage procedures could result in **INJURY** or **DEATH**.

**ENVIRONMENTAL HAZARDS** must be considered in selecting the appropriate equipment. Recommendations where chemicals, high temperature or other unusual conditions exist may be addressed to Frontline Fall Protection.

## 5. EMPLOYEE TRAINING CONSIDERATIONS

Thorough employee training in the selection and use of personal fall arrest systems is imperative. Employees must be trained in the safe use of the system. This should include the following: application limits; proper anchoring and tie-off techniques; estimation of free fall distance, including determination of deceleration distance, and total fall distance to prevent striking a lower level; methods of use; and inspection and storage of the system. Careless or improper use of the equipment can result in serious injury or death. Employers and employees should become familiar with the material in related OSHA regulations, as well as manufacturer's recommendations, before a system is used. Of uppermost importance is the reduction in strength caused by certain tie-offs (such as using knots, tying around sharp edges, etc.) and maximum permitted free fall distance. Also, to be stressed are the importance of inspections prior to use, the limitations of the equipment, and unique conditions at the worksite which may be important in determining the type of system to use. Any questions may be addressed to Frontline.

## 6. LABELING

### Label Locations



Label pack under cover on harness connection end

## Exemplar Product Labels

Read and Understand all instructions provided before attempting to use this device. If there are any questions as to the correct use of this or any Frontline product, DO NOT USE, Contact:  
**Info@FrontlineFall.com**  
 Meets: OSHA, ANSI A10.32, ANSI Z359.1, Z359.13.  
**Max Elongation:** 42 inches,  
**Max Arrest Force:** < 900 lbs.  
**Max Free Fall:** 6 feet  
**Capacity:** 350 lbs. Max.\*\*  
**Model #:** LES61S-US  
**Length:** 6 ft.  
**Material:** Polyester  
**Mfg Date:** 02/21  
 \*\*ANSI capacity range 130-310 lbs.  
**FRONTLINE**  
 FALL PROTECTION  
**Frontline**  
 Miami, FL  
 www.FrontlineFall.com  
 Made in USA

Visual inspection is required before each use, for mildew, wear, damage, deployment or deterioration. Units subjected to a fall shall be removed from service. Defective components shall be removed from service. The snap hook keeper spring shall provide tension to close the keeper in a locked position; it shall close flat against the snap hook and exhibit no sideways movement or play. Snap hook locking mechanism shall keep snap hook gate locked in closed position. It is essential that it be determined prior to use whether the fall space permits the use of an energy absorber. Refer to supplied instruction manual for additional information.

Serial#: 00925500

**INSPECTION LOG**

| Year | Insp Date | Insp by | Insp Date | Insp by |
|------|-----------|---------|-----------|---------|
| 2021 |           |         |           |         |
| 2022 |           |         |           |         |
| 2023 |           |         |           |         |
| 2024 |           |         |           |         |
| 2025 |           |         |           |         |
| 2026 |           |         |           |         |

**FAILURE TO READ AND UNDERSTAND ALL INSTRUCTIONS MAY RESULT IN SERIOUS INJURY OR DEATH. DO NOT USE IF YOU DO NOT UNDERSTAND INSTRUCTIONS, YOU HAVE NOT BEEN PROPERLY TRAINED OR IF INSTRUCTIONS ARE MISSING.**

**Do Not Remove This Label**

**Warning: User Capacity Range 130-310 lbs.**  
**6ft. 900 lbs.**  
 Maximum Free Fall Average Arresting Force  
 Maximum Deployment Distance 42"  
 Forces may increase when cold and/or wet  
**Read Instructions Before Use**

## 7. STANDARDS COMPLIANCE

All Frontline Energy Absorbing Lanyards meet all applicable OSHA Standards including 1910.66 and 1926 Subpart M. as well as ANSI Z359.1-07, ANSI Z359.13-09, ANSI A10.32-12.

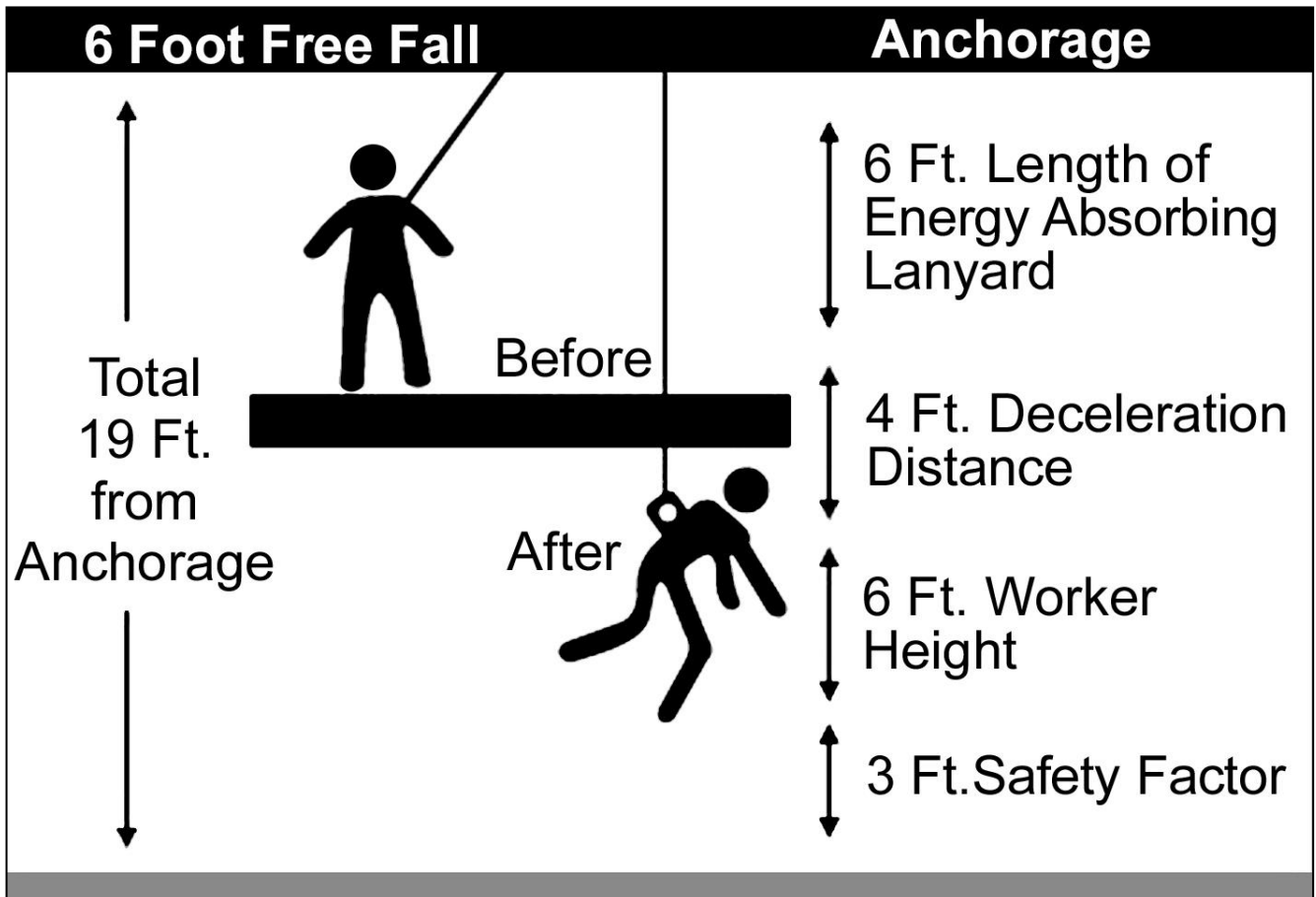
## 8. FALL DISTANCES & SWING FALL HAZZARDS

### 8.1 FREE FALL CONSIDERATIONS

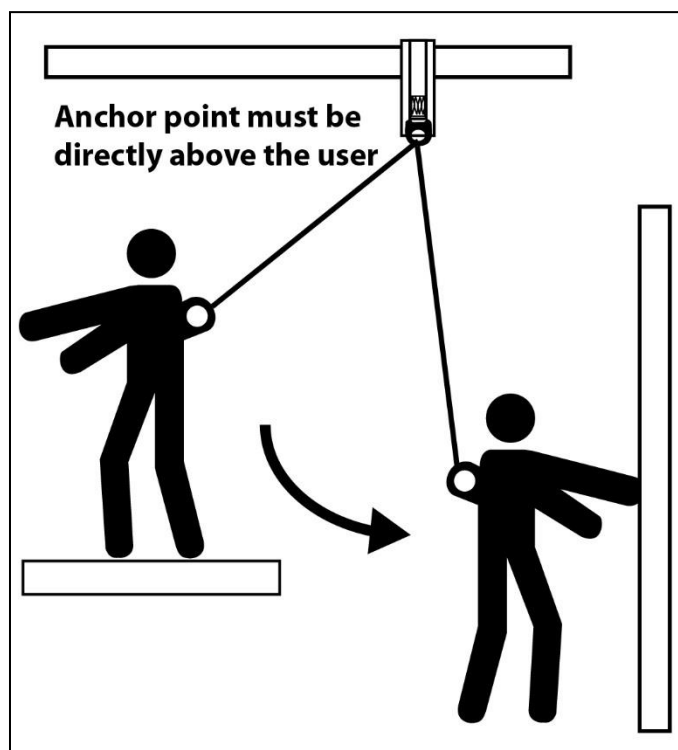
Free fall distance should be kept to a minimum, and as required by OSHA, in no case shall exceed 6 feet. The tie-off attachment point to the lifeline or anchor should be located at or above the connection point of the fall arrest equipment on harness.

8.2 Use the diagram below to calculate required clearance. The numbers are representative examples, substitute the actual distances associated with your jobsite, the equipment being used and local, state, and federal regulations. In the example below, Minimum Fall Clearance is 19 ft. from the anchorage. Note: ANSI Z359.13 allows for a deployment distance of up to 48 in. (1.2 m), OSHA requirements allow for a maximum deceleration distance of up to 3.5 ft. (1.07 m).

**Minimum Fall Clearance** = Length of Lanyard + Deceleration Distance + Length of Body + Elongation/Safety Factor



8.3 Swing Fall Hazard - Work directly under your anchorage whenever possible. If a swing fall can occur, ensure that there are no hazards in the swing fall path. Total fall distance is greater in a swing fall than in a vertical fall. Ensure that you account for the added distance when calculating Minimum Required Fall Space.

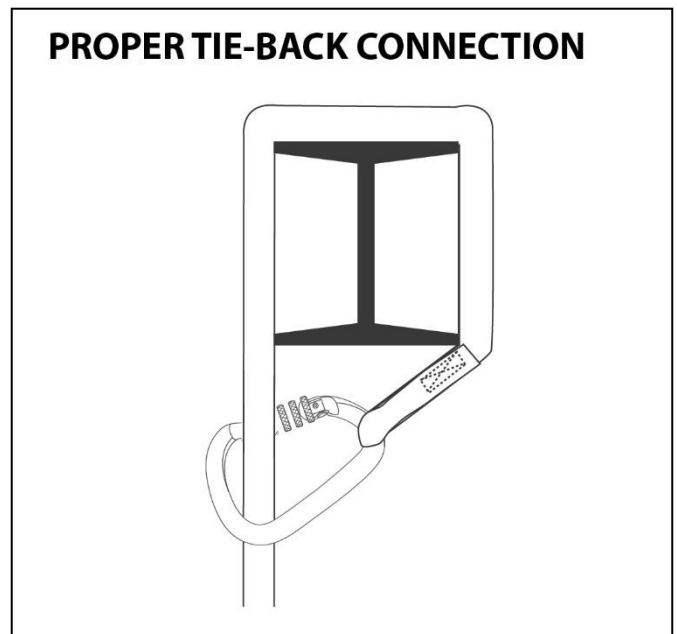
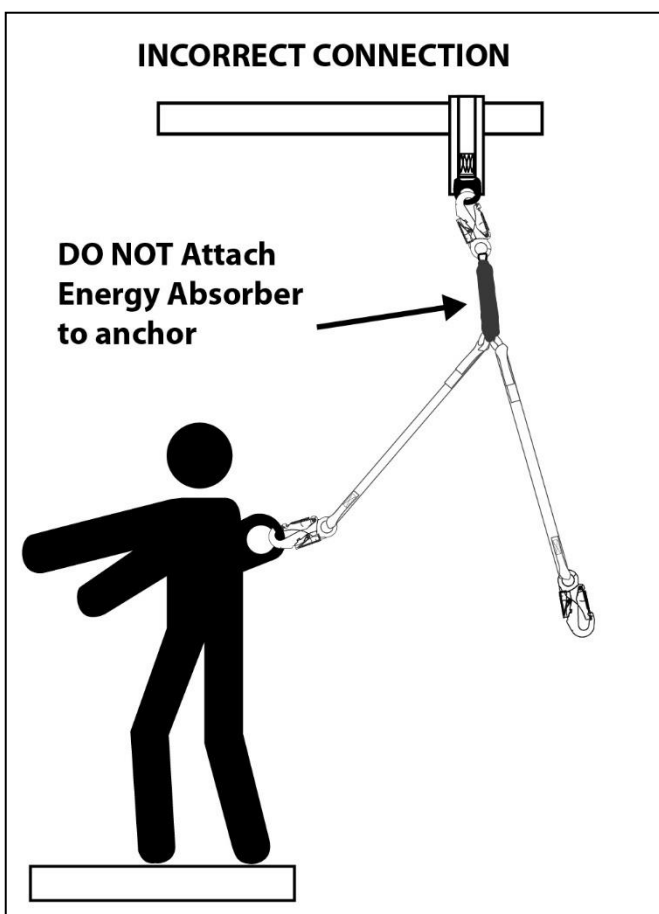
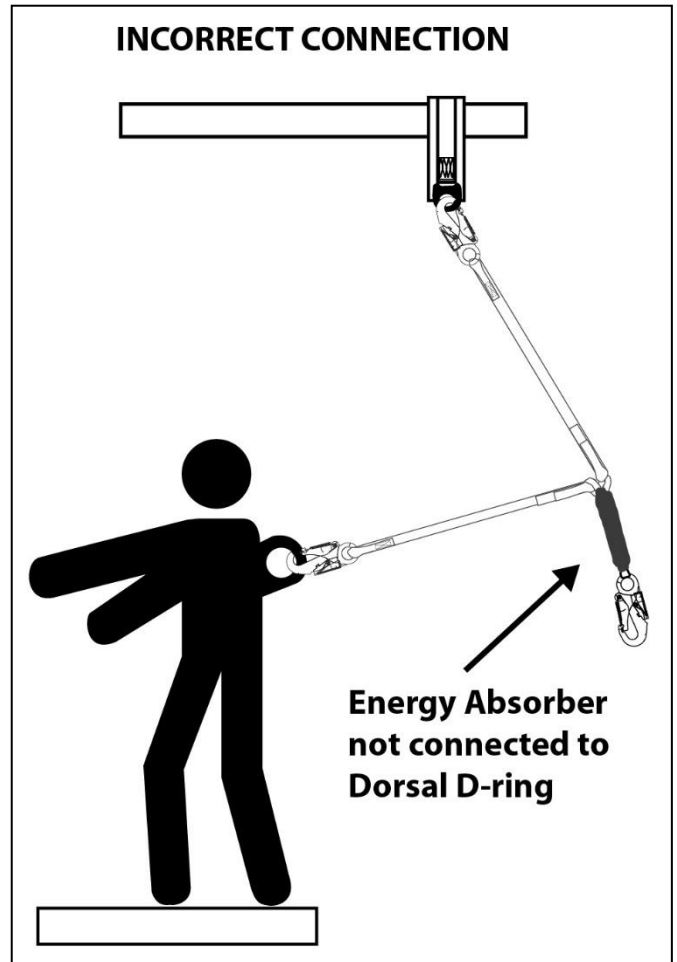
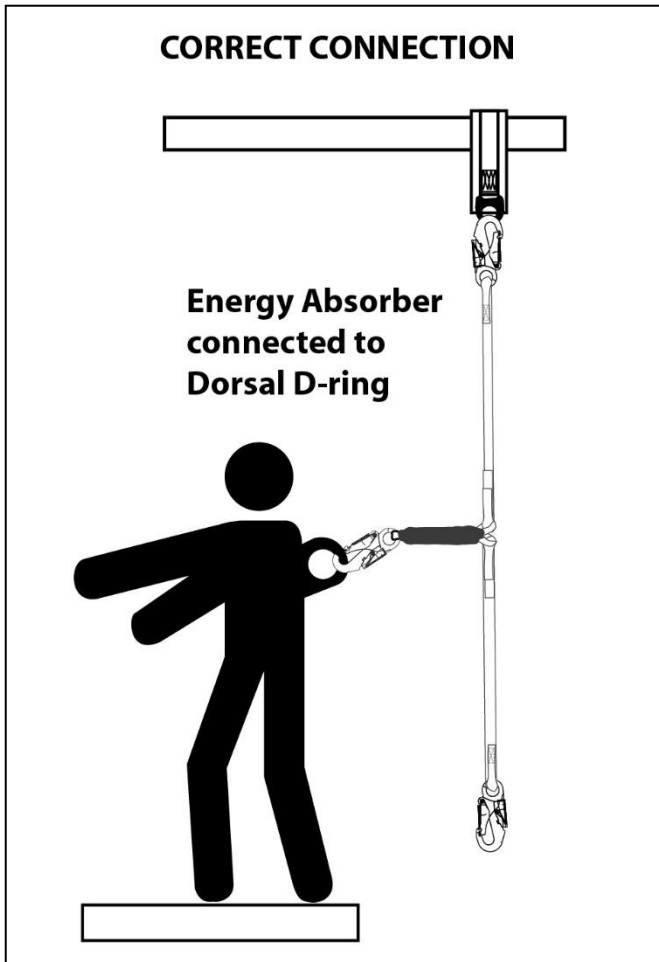


## 9. 100% TIE-OFF & TIE-BACK LANYARDS

### 9.1 100% Tie-off

Extra care must be taken when using a 100% tie-off (“Y”) Lanyard. While they allow for continuous connection, precautions must be taken to provide the highest level of safety. These include;

1. The energy absorber must be attached to the Dorsal D-ring only.
2. Do not connect the energy absorber to the anchorage.
3. Connect the unused leg to special snaphook retainer on harness only.
4. For use by one person at a time only.
5. Do not allow lanyard to pass arms or legs during use.
6. Distance between connection anchor points shall never exceed the stated length of the lanyard.



### 9.2 Tie-Back Lanyards

Model # PS-SA-LN16 & PS-SA-LN7 are the only lanyards that may be used for tie back. Tie back using the attached carabiner only. The snaphook must be attached to user's harness never tie back using snaphook.

## 10. INSPECTION

10.1 Users shall establish their own formal routine inspection according to prevailing conditions and applicable standards and regulations. ANSI Z359 requires inspection by a competent person other than the user at intervals of no more than one year. Use the inspection grid to record your results. A minimum of two formal inspections per year is recommended. Visual inspection is required before each use, for mildew, wear, damage and other deterioration. Defective components shall be removed from service and destroyed.

10.2 Buckles, D-rings, snaphooks and thimbles shall not be distorted, or have any sharp edges, burrs, cracks, worn parts or corrosion. Make sure buckles work freely. The snaphook gate spring shall provide tension to keep the snaphook gate closed in a locked position; it shall close flat against the snaphook and exhibit no sideways movement or play. Rivets and grommets shall be tightly set in the material with no distortion.

10.3 All webbing shall be free of frayed or broken fiber, pulled stitches, tears, abrasions, mold, burns or discoloration. Rope splices shall be tight with five tucks. Thimbles shall be held by the splice. Inspect rope by twisting. Inspect webbing by bending and/or pressing over a 1½ inch diameter object.

10.4 Extension-type shock absorbing devices shall show no evidence of elongation.

10.5 Inspect Stress Indicator (if equipped):

Location: Non-Elastic Tubular Lanyard – near bunched webbing

Elastic Tubular Lanyard – near snaphook on anchorage end of lanyard

Purpose: This indicator is designed to deploy if the equipment has been subjected to fall arrest forces.

DO NOT USE if any Stress indicator has deployed.

10.6 All Labels should be present and legible

**NOTE: THE PRECEDING INSPECTION PROCEDURES ARE A MINIMAL METHOD OF INSPECTION. THE INSPECTION PROCEDURE MUST REFLECT THE USE APPLICATION.**

**AN INTACT STRESS INDICATOR DOES NOT INDICATE THAT THE EQUIPMENT IS FIT FOR USE.**

DO NOT attempt to repair or modify any Frontline Fall Protection equipment. Repairs and/or modifications shall only be performed by the manufacturer or persons or entities authorized in writing.

## 11. HOW TO CLEAN EQUIPMENT

11.1 Proper cleaning and storage of FRONTLINE equipment will pay dividends in the form of added safety and longer product life. Take care that your storage area is clean and dry, and not exposed to damaging chemicals, fumes, or sunlight.

### 11.2 ROPE & WEBBING

1. Dampen sponge in plain water and wipe off all surface dirt.
2. Squeeze sponge dry.
3. Dip sponge in solution of water and mild detergent.
4. Rub down rope/webbing vigorously, working up a thick lather.
5. Wipe dry with clean cloth.
6. Hang away from heat to dry.

