June 26, 2012

**Tech Brief ANSI/ASSE Z359.14-2012**  
The Standard is Published and Available

ASSE, as secretariat of the Z359 ANSI Accredited Standards Committee (ASC) for Fall Protection and Fall Arrest, has continued to receive a significant number of inquiries related to the newly approved ANSI/ASSE Z359.14-2012 American National Standard titled Safety Requirements for Self-Retracting Devices for Personal Fall Arrest and Rescue Systems.

Due to these inquiries for information about the standard, we have put together what we call a “guide” for those with interest. The following information below should hopefully be of assistance:

**Title:** Safety Requirements for Self-Retracting Devices For Personal Fall Arrest and Rescue Systems

**Scope:** This standard establishes requirements for the performance, design, qualification testing, markings and instructions, inspections, maintenance and storage, and removal from service of self-retracting devices (SRDs) including self-retracting lanyards (SRLs), self-retracting lanyards with integral rescue capability (SRL-Rs), and self-retracting lanyards with leading edge capability (SRL-LEs). This standard establishes requirements for SRDs intended for use in personal fall arrest or rescue systems for authorized persons within the capacity range of 130 to 310 pounds (59 to 141kg).

This is a new standard and there are no past versions of the standard.
Current Status of the Z359.14 Standard: The standard was approved by ANSI on April 26, 2012. The standard is planned to be effective during July 2012.


The standard is one of a series of safety standards that have been formulated by the Z359 ANSI Accredited Standards Committee for Fall Protection and Fall Arrest. The Z359 standards serve as a guide to SH&E professionals, contractors, labor unions, equipment manufacturers, and all facets of business and industry working fall protection/arrests hazards and exposures.

The site to order the standard is below:


The Table of Contents from the approved standard is below:

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It is important to note that this statement is in all ANSI/ASSE Standards:

“…The use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether he/she has approved the standards or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standards...”

Below is from the Foreword section of the standard

This standard, national in scope, was developed by an Accredited Standards Committee functioning under the procedures of the American National Standards Institute, with the American Society of Safety Engineers (ASSE) as secretariat.

It is intended that every employer whose operations fall within the scope and purpose of the standard will adopt the guidelines and requirements detailed in this standard.

The need for this standards activity grew out of the continuing development of a series of fall protection-related standards. The focus is to tie the elements of those standards together and provide the tools with which employers may develop the programs that incorporate those elements. This standard also brings together the administrative requirements of those fall protection standards. It should be noted, as in all Z359-series standards, that this standard applies to occupational activities. It does not apply to sports activities such as mountaineering.

Neither the standards committee, nor the secretariat, states that this standard is perfect or in its ultimate form. It is recognized that new developments are to be expected, and that revisions of the standard will be necessary as the state-of-the-art progresses and further experience is gained. It is felt, however, that uniform guidelines for fall protection programs are very much needed and that the standard in its present form provides for the minimum criteria necessary to develop and implement a comprehensive managed fall protection program.

The Z359 Committee acknowledges the critical role of design in influencing the use of proper fall protection equipment. Designs which eliminate fall hazards through the proper application of the hierarchy of safety controls are the preferred method for fall protection. Design deficiencies often increase the risk for employees who may be exposed to fall hazards: examples
are (1) lack of rail systems to prevent falls from machines, equipment and structures; (2) failure to provide engineered anchorages where use of personal fall arrest systems are anticipated; (3) no provision for safe access to elevated work areas; (4) installation of machines or equipment at heights, rather than floor/ground level to preclude access to elevated areas; (5) failure to plan for the use of travel restriction or work positioning devices. To that end, this series of standards also provides guidance for design considerations for new buildings and facilities.

Basic fall safety principles have been incorporated into these standards, including hazard survey, hazard elimination and control, and education and training. The primary intent is to ensure a proactive approach to fall protection. However, the reactive process of accident investigation is also addressed to ensure that adequate attention is given to causation of falls.

The Z359 Committee solicits public input that may suggest the need for revisions to this standard. Such input should be sent to the Secretariat, ASC Z359, American Society of Safety Engineers, 1800 E. Oakton Street, Des Plaines, IL 60018-2187.

This standard was developed and approved for submittal to ANSI by the American National Standards Committee on Standards for Fall Protection, Z359. Committee approval of the standard does not necessarily imply that all committee members voted for its approval. At the time it approved this standard, the Z359 Committee had the following members:

Below is from the first two sections and several pages of the standard

1. SCOPE, PURPOSE, APPLICATION, EXCEPTIONS AND INTERPRETATIONS

1.1 Scope. This standard establishes requirements for the performance, design, qualification testing, markings and instructions, inspections, maintenance and storage, and removal from service of self-retracting devices (SRD’s) including self-retracting lanyards (SRL’s), self-retracting lanyards with integral rescue capability (SRL-R’s), and self-retracting lanyards with leading edge capability (SRL-LE’s). This standard establishes requirements for SRD’s intended for use in personal fall arrest or rescue systems for authorized persons within the capacity range of 130 to 310 pounds (59 to 141kg).

1.2 Purpose and Application.

1.2.1 This standard addresses self-retracting devices used in occupations requiring personal protection against falls from heights and applies to the manufacturers, distributors, purchasers and authorized persons who use such equipment.

The requirements of this standard supersede any corresponding requirements in either the ANSI/ASSE Z359.1-2007 or ANSI/ASSE Z359.4-2007 American National Standards.

1.2.2 Before any equipment shall bear the marking Z359.14 or be represented in any way as being in compliance with this standard, all applicable requirements of this standard shall be met.
1.3 **Self-Retracting Device Classifications.** Self-retracting devices shall be classified according to dynamic performance (see Section 3.1.9) as follows:

Class A: Maximum arrest distance of 24 inches (610mm).

Class B: Maximum arrest distance of 54 inches (1,372mm).

1.4 **Exceptions.**

1.4.1 The requirements of this standard do not address material handling and sports-related activities.

1.4.2 Variance from the requirements of this standard are permissible in isolated instances of practical difficulties when applying it at the authorized person level, but only when it is clearly evident that an equivalent degree of protection is thereby secured.

1.5 **Interpretations.** Requests for interpretations of this standard shall be in writing and addressed to the Secretariat of this standard.

2. **DEFINITIONS**

Please refer to ANSI/ASSE Z359.0, *Definitions and Nomenclature Used for Fall Protection and Fall Arrest*, for definitions of terms used in this standard.

3. **REQUIREMENTS**

3.1 **General Requirements.**

3.1.1 **Integral Connectors.** Snaphooks or carabiners which are integral to self-retracting devices shall meet the requirements of ANSI/ASSE Z359.12. Integral rings or similar openings intended to accept a snaphook or carabiner shall be designed to minimize the possibility of rollout of a mating snaphook or carabiner.

3.1.2 **Locking Function.** Self-retracting devices shall be automatic in their locking (fall stopping) function. It shall not be possible to override the self-locking feature of the device when in use. The design of working parts, their location and the protection afforded to them shall be such as to prevent the possibility of performance being impaired by casual interference.

3.1.3 **Energy Absorption.** Self-retracting devices which perform an energy absorption function shall be designed such that the energy absorption function is available throughout the usable working range of the device. The working range or length is defined as the amount of travel allowed by the device starting from full retraction to full extension under normal working tension.

E3.1.3 Devices which use a reserve line technique to accomplish energy absorption at the end
of the working range may require servicing after the reserve has been deployed.

3.1.4 Visual Indicator. Self-retracting devices shall include a visual indicator that will activate in accordance with the requirements of Section 3.1.9, Dynamic Performance.

E3.1.4 The visual indicator should be readily visible to the user at full extension of the line prior to use. Consideration should be given to size and location of the indicator. For example, if the indicator is on the housing and the unit is mounted overhead, the indicator should still be visible if activated.

Links and information related to ANSI/ASSE American National Standards

- Essential Requirements used by ANSI:
  

- The links below will give information addressing how voluntary national consensus standards are used in regulatory settings:
  


- There is an official memorandum of understanding between OSHA and ANSI. The link to the read the memorandum is at:
  

This is a newly approved standard so there are not specific examples yet of the standard being recognized in the public and private sector. The standard has already been included in numerous media reports and articles. We believe there will be significant recognition in the future. Below are some overall examples of Z359 recognition:

In regards to 5A1 citations, Z359 is used extensively. The most recent inquiry indicates that Z359.1 alone has been referenced 144 times at level of Federal OSHA.

http://www.osha.gov/pls/imis/generalsearch.html
Z359 has extensive recognition with OSHA overall. Below is an example:


Additional Resources

This URL is for the current complete Fall Protection. Z359.14 will be included as part of its upcoming revision:


The following Z359 Standards are given away on a complimentary basis, but the rest are not free:

ANSI/ASSE Z359.0-2012, Definitions and Nomenclature for Fall Protection

http://www.asse.org/shoponline/z359form.php

ANSI/ASSE Z359.7-2011, Qualification and Verification Testing of Fall Protection Products

http://www.asse.org/shoponline/z359-7form.php