

- ANSI/ASSP Z359 Updates. The Premier Fall Protection Standard
- Presented By Mike Costantino
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- Cell 609-304-1003



About the Presenter: Mike Costantino



Competent Person Fall protection

27 yrs., 9 CP classes, 5 Manufacturers

OSHA 30, 500, 510

QSSP- Qualified Safety Sales Professional

CPMR Certified Professional Manufacturer
Representative

Partner/Founder Sales Solutions inc 23 person Safety
only Manufacturer Rep firm Maine to Florida

Agenda/Overview

Discussion of ANSI Z359 Fall Protection Code

Review ANSI Z359.14-2021 (SRLs) Changes AKA YOYOs !

Review ANSI Z359.11-2021 (FBHs) Changes

Review ANSI 359.7 Test requirements

Compliance Timelines

Open Q&A Session



ANSI/ASSP Fall Protection Standards

ANSI Z359: The Fall Protection Code

- Currently 13 individual standards exclusively on fall protection

ANSI A10.32 – Personal Fall Protection Used in Construction and Demolition Operations

ANSI Z117.1 – Confined Spaces



General Z359 Direction for Future Updates

310 lb. test mass will replace
282 lb. test mass

- This will be implemented as each standard gets updated individually and is not an immediate global change

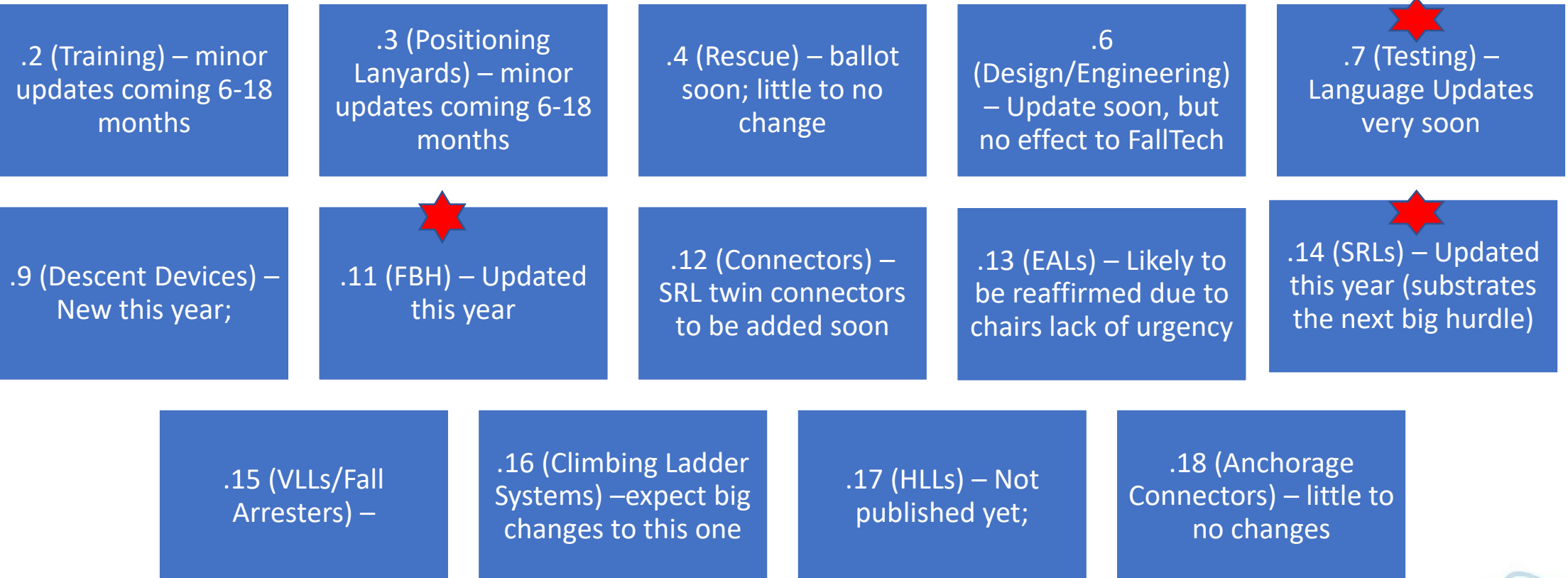
More and more standardized
labeling and user instruction
information

- Focus is on simplifying the information for the end user

Based on Membership
Balance, there is a desire for
more End User members

- More feedback from end users is needed to move most of the standards forward beyond theoretical/behind the desk concepts

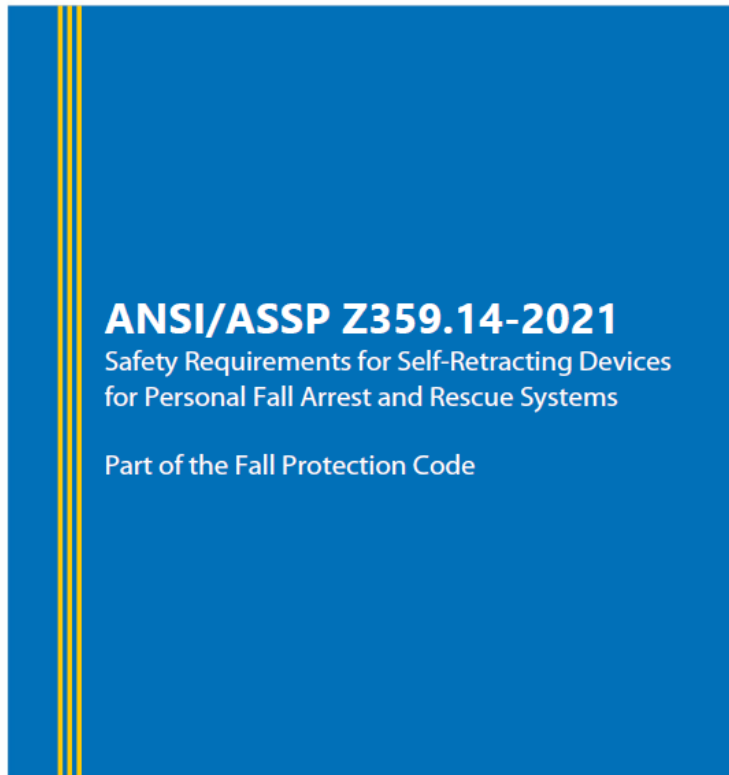
General Z359.1 Incorporates all chapters



Z359 Standard Approval/Effectivity Timeline



ANSI/ASSP Z359.14-2021 (SRLs)



AMERICAN SOCIETY OF
SAFETY PROFESSIONALS



- Approved: June 17 , 2021
- Published: July 6, 2021
- Effective: August 1, 2022
- **Extended to February 1, 2023**



ANSI/ASSP Z359.14- 2021 (SRLs)

2014 Classifications are Done (replaced)

- -SRL- Anchored
- Class A and Class B
- -SRL-LE Leading Edge (terminology will stick around)
- -SRL-R- Rescue 3ways

2014

2021

replaces with:

- SRL- anchored
- SRL-P Personals, worn
- SRL-R Rescue 3 ways

2021 SRL Overhead Performance

2014 Class A & Class B

- Max Arrest Force: 1,800 lb.
- Ave Arrest Force : 1,350lbf (A) / 900 lb. (B)
- Arrest Distance : 24" (A) / 54" (B)
- Leading Edge Max Arrest Distance?

2021 Class 1 & Class 2

- Max Arrest Force: 1,800 lb.
- Average Arrest force: 1,350 lb.
- Average Arrest force wet, cold, hot, : 1575lbf
- Max Arrest Distance overhead: 42"
- Max Arrest Distance foot level: N/A

ANSI/ASSP Z359.14-2014 **OLD**

SRL

A or B or Le



SRL-P

A or B or LE



SRL-R



ANSI/ASSP Z359.14-2021 (SRLs)

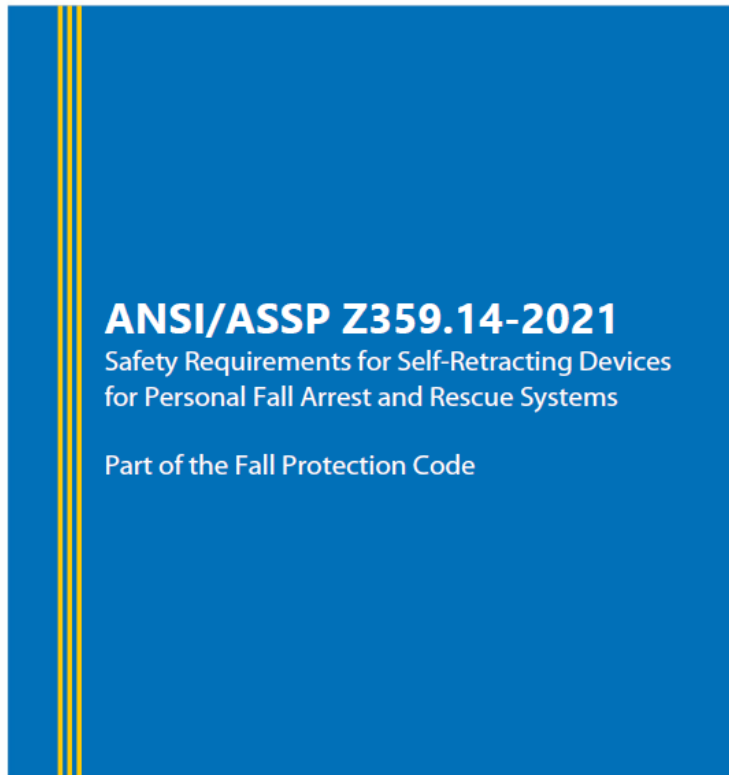
Class
1
Anchor at or
above dorsal D-ring



Class
2
Anchor above or
below dorsal D-ring



ANSI/ASSP Z359.14-2021 (SRLs)



AMERICAN SOCIETY OF
SAFETY PROFESSIONALS



- Testing requirements changes
 - Test mass move up to 310 lbs. for all testing
 - Previously 282 lbs. or 300 lbs.
 - Static testing requirement moves up to 3,600 lb.
 - Previously 3,000 lb.
 - Presents a challenge to 3/16" cable design units
 - Presents significant compliance challenge for Stainless Steel cable units



ANSI/ASSP Z359.14-2021 (SRLs)

- New SRL rules require fall clearance charts be present on product.
- Ends dual labeling nightmare! A, LE?
- Ends guessing at clearance!



ANSI/ASSP Z359.14-2021 (SRLs)



- Significantly more product testing required
 - Twin SRL testing (in response to a manufacturer's Recall)
 - Twin SRL connectors
 - Tie-back SRL wraparound beam testing
 - Tie-back SRL webbing abrasion testing
 - Locked Pawl Testing
 - SRL-P Misuse Testing
 - Energy Capacity Testing
 - And more...

ANSI/ASSP Z359.14-2021 (SRLs)

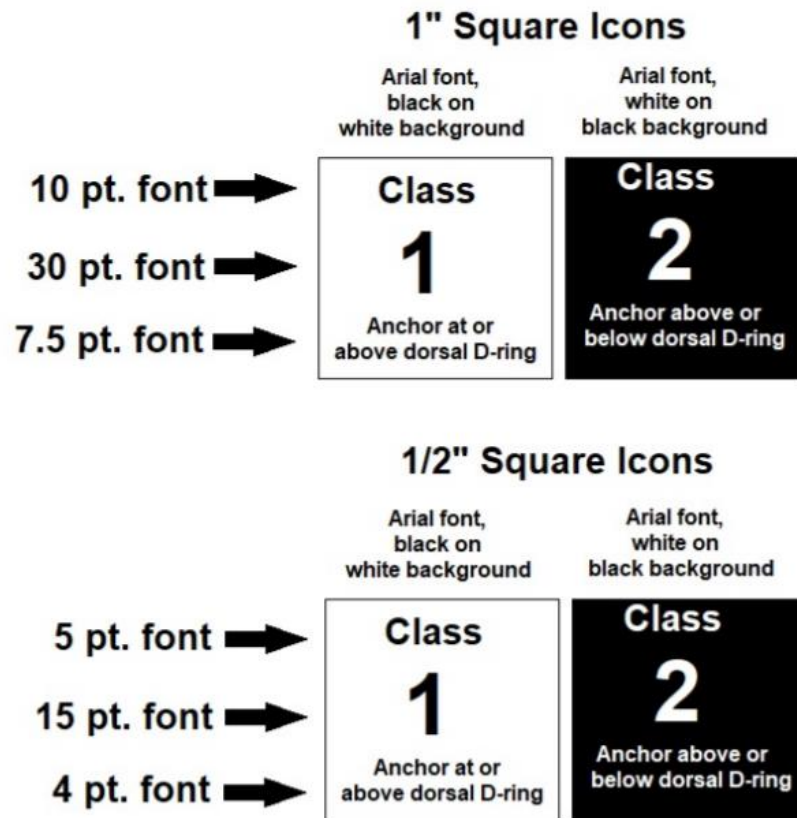
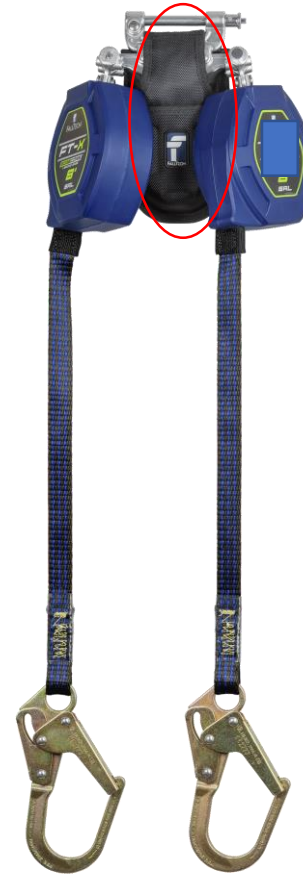


Figure 14: Class Designation Icons

- Major changes to product labeling and markings
- Unchanged:
 - Leading Edge sharpness remains at 0.005"
 - **Personal (wearable) units designed for foot level anchors (LE) must have shock absorber on the person's back.**
 - No provisions for testing on any substrate besides steel
 - Claims for approval on other substrates (concrete) are done by manufacturer (non-standardized)

ANSI/ASSP Z359.14: Pop Quiz

- Proper Class 2 (Leading) Personal SRL



Requalification Update. Ask the manufacturer!

- Do products comply to New Standard?
- Has Testing to Z359.14-2021 started for new product development as well as requalification of existing products to class 1 and 2. ?
- Will Products that are qualified to 2021 have their label, manual, and DOC changes coordinated and phased into production as a running change?
- Ask your manufacturer for 3rd party documentation.
- Ask your manufacturer for their plan to comply to the new standard and requalify existing products.

Overview regarding these changes

- Most SRL fall clearances will change - 310 lb. test mass applied
- If ANSI use is in a Company's SOP, changes will be required
- Class A and B is replaced with Class 1 and 2 (different meanings)
- All below D-Ring anchors require "Leading Edge" Class 2 SRLs
- OSHA only designations will appear
- Check with your manufacturers for updates on fall clearances
- Still no ANSI testing specific to abrasive edges
- SRLs must have fall clearance charts on product
- Ask your manufacturer for test data (DOCs) – sharing is no longer required by ANSI

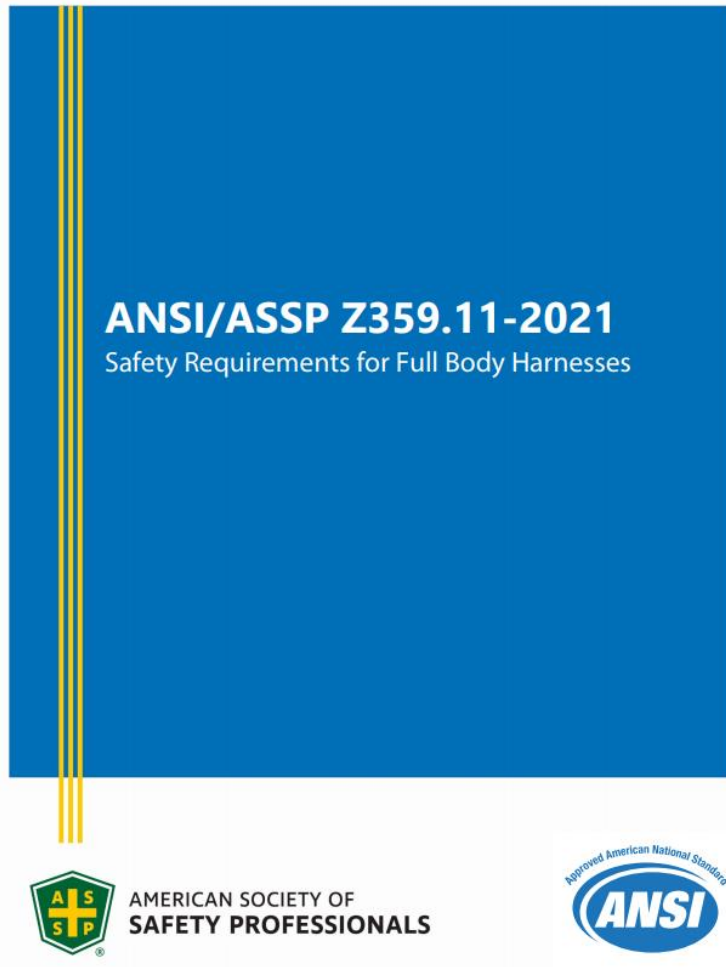


“Grandfathering” ???

- ANSI is a voluntary consensus standard with no enforcement organization. For 1926.
- Adopted into EM385 . Law!
- Manufacturer rules are different than end users
 - As a manufacturer, we would be out of compliance for marking product to Z359.14-2014 if **manufactured** after Feb 1, 2023
 - As an end user, they would be out of compliance for **using** a product marked to Z359.14-2014 after Feb 1, 2023



ANSI/ASSP Z359.11-2021 Full Body Harness (FBH)



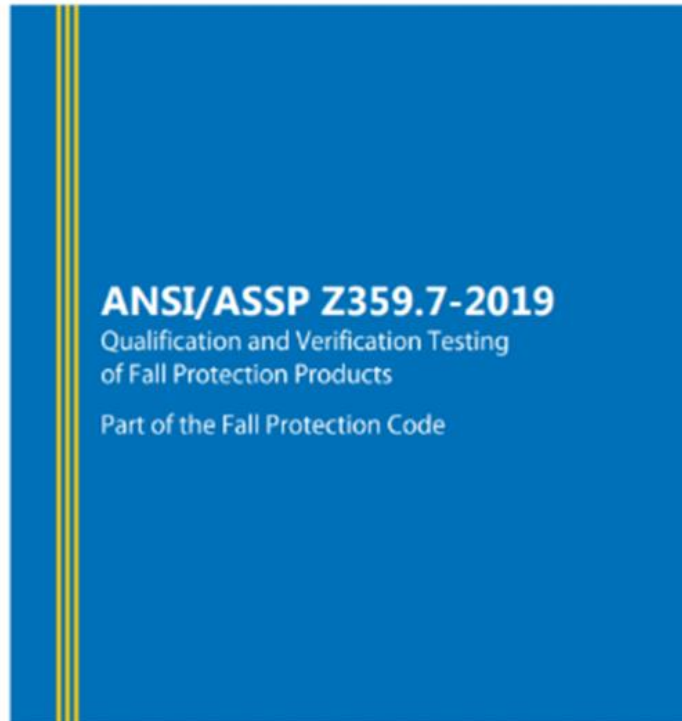
- Very Minor Update
 - Testing Lab Safety
 - Front D-ring Testing Issues
 - Label Changes to match CSA
- Approved: March 18, 2021
- Published: April 14, 2021
- Effective: May 1, 2022



What is an ANSI harness?

- Break a way lanyard holders 120lbs
- Back belt or connector strap.
- Sub pelvic strap.
- Must have impact indicators
- Impact indicators must deploy
- Must have loose strap retainers
- Single point attachments, sternal, dorsal, waist 2 inch of center
- Head first and feet first tested
- Load bearing straps:
 - Virgin material
 - Width 1.5/8
 - Load 5000
 - Abrasion testing 3000
- Hole spacing requirement
- Locked Stitching
- Must meet .7 and all other hardware chapters.

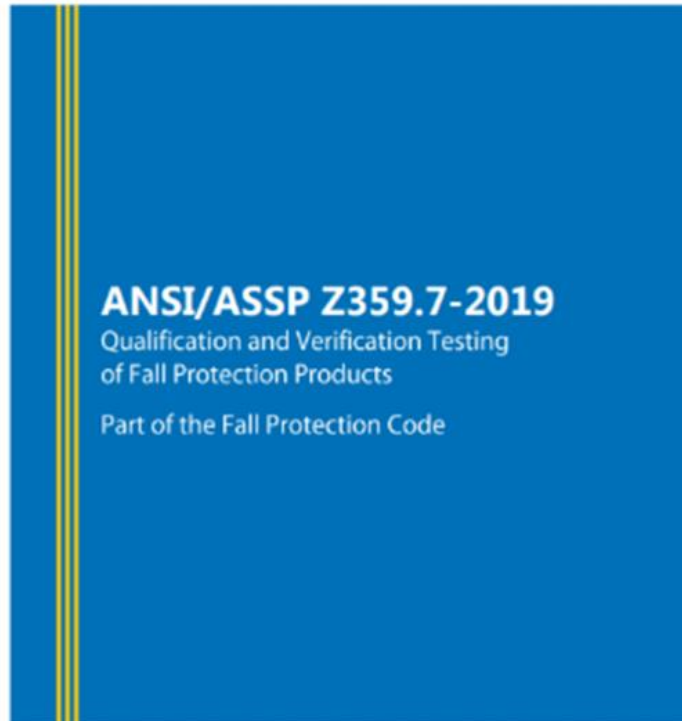
ANSI/ASSP Z359.7-2019 TESTING!



- Approved on April 2, 2019
- Effective on May 1, 2020
- Covers all qualification and verification testing of fall protection products:
 - Testing equipment requirements and specifications
 - Documentation and Recordkeeping requirements for manufacturers



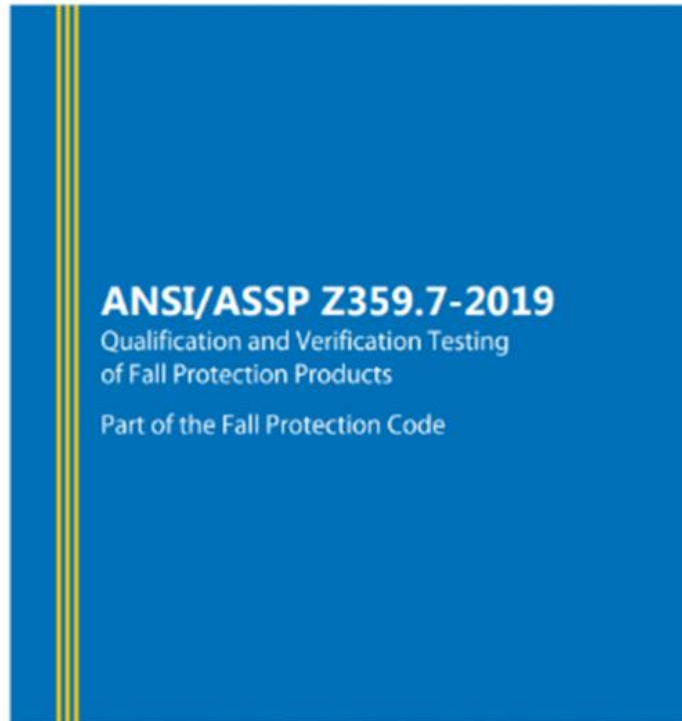
ANSI/ASSP Z359.7-2019



- Covers all qualification and verification testing of fall protection products:
 - All testing must be conducted in an ISO:17025 lab
 - ISO:9001 accredited manufacturers must requalify every 5 years
 - Non-ISO:9001 accredited manufacturers must requalify every 2 years



ANSI/ASSP Z359.7-2019



- Major Changes in this revision
 - Third party testing witness or Professional Engineer requirement is replaced by required publication of Declarations of Conformity (DOC) or Certificates of Conformity (COC)
 - Manufacturers are NOT required to provide test reports upon request demonstrating, only DOC or COC
 - Some manufacturers not happy about this!
- **Responsible manufacturers continue to publish DOCs with Test Reports, going above and beyond the standard**

What is this & why does it matter?

- How does this help me to keep workers safe?
- “Higher level of transparency in a “buyer beware” marketplace”
- Manufacturer is required to provide a document that states the product complies with the standard and will perform as intended
 - Accrediting Agency “stamp” is what legitimizes the document.
 - Value ISO 17025, 9001

Declaration of Conformity
In Accordance with ANSI/ISEA 125-2014 and ANSI/ASSP Z359.7-2019

[Redacted]
Fall Protection - Precision Engineering
Alexander Andrew, Inc. 1306 S. Alameda St. Compton, CA 90221 (800) 719-4619

Declaration # Declaration Date

Tested Item #

Additional Items Conforming Under this Declaration:


Alexander Andrew, Inc. declares that the product(s) listed above is in conformity with the requirements of the following product standard(s):

Conformity Assessment Method in accordance with ANSI/ISEA 125-2014


Level 1 Level 2 Level 3

Level 1: FallTech Lab Outside the Scope of ISO/IEC Standard 17025:2005	Level 2: FallTech Lab Within the Scope of ISO/IEC Standard 17025:2005	Level 3: Independent 3rd Party Lab accredited to ISO/IEC Standard 17025:2005
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Supporting Documentation

Authorized Signature 

Name Title Date

 International Accreditation Service, Inc.
3060 Saturn St, Ste 100
Brea, CA 92821 +1 562-364-8201

FallTech Lab - TL-594
ISO/IEC 17025:2017
Alexander Andrew Inc dba FallTech

ANSI/ASSP Z359.14 DOC Example

Declaration of Conformity
In Accordance with ANSI/ISEA 125-2014 and ANSI/ASSP Z359.7-2019

Fall Protection: Precision engineered.
Alexander Andrew, Inc. 1306 S. Alameda St. Compton, CA 90221 (800) 719-4619

Declaration # D0901042 Declaration Date 9/1/2021

Tested Item # 721530LE FT-R SRL, Leading Edge, 30', Plastic Housing

Additional Items Conforming Under this Declaration:

Alexander Andrew, Inc. declares that the product(s) listed above is in conformity with the requirements of the following product standard(s):


ANSI Z359.14-2021

Conformity Assessment Method in accordance with ANSI/ISEA 125-2014


Level 1 Level 2 Level 3

Level 1: FallTech Lab Outside the Scope of ISO/IEC Standard 17025:2005
Level 2: FallTech Lab Within the Scope of ISO/IEC Standard 17025:2005
Level 3: Independent 3rd Party Lab accredited to ISO/IEC Standard 17025:2005

Supporting Documentation PC-2346

Authorized Signature 

Name Zachary Winters Title Engineering Manager Date 9/1/2021

 International Accreditation Service, Inc. 3060 Saturn St, Ste 100 Brea, CA 92821 +1 562-364-8201
FallTech Lab - TL-594 ISO/IEC 17025:2017 Alexander Andrew Inc dba FallTech

FLT-23 Rev



FallTech Testing Laboratory
1306 S. Alameda Street,
Compton, CA 90221-4803
Tel: (323) 752-0060
www.falltech.com

FallTech Test Report				
Test Report No.	PC-2346	Rpt. Date	8/31/2021	Rev Date
Report Prepared For	FallTech			
Initiated By	Dan Redden	Test Specification(s)	ANSI Z359.14-2021: 4.2.1, 4.2.3, 4.3.1 4.3.3, 4.5.1, 4.5.2	
Part No.	721530LE	Part No. Revision	A	
Part Description	FT-R SRL, Leading Edge, 30', Plastic Housing			
Test Request No.	PC-2346	Date Complete	8/25/2021	
Material/Sample Identification (Continued)				
Sample ID	Description			
43Q	FT-R SRL, Leading Edge, 30', Plastic Housing			
37Q	FT-R SRL, Leading Edge, 30', Plastic Housing			
10Q	FT-R SRL, Leading Edge, 30', Plastic Housing			
22Q	FT-R SRL, Leading Edge, 30', Plastic Housing			
6Q	FT-R SRL, Leading Edge, 30', Plastic Housing			
8Q	FT-R SRL, Leading Edge, 30', Plastic Housing			
22Q	FT-R SRL, Leading Edge, 30', Plastic Housing			
6Q	FT-R SRL, Leading Edge, 30', Plastic Housing			
8Q	FT-R SRL, Leading Edge, 30', Plastic Housing			
Test Summary				
Test Specification	Test Criteria	Test Result	Pass/Fail	
ANSI Z359.14-2021 4.2.1	Static Strength	≥ 3600 Lbf for ≥ 60 Seconds	3628.7 lbf	Pass
ANSI Z359.14-2021 4.2.1	Static Strength	≥ 3600 Lbf for ≥ 60 Seconds	3636.4 lbf	Pass
ANSI Z359.14-2021 4.2.1	Static Strength	≥ 3600 Lbf for ≥ 60 Seconds	3656.9 lbf	Pass
ANSI Z359.14-2021 4.2.3	Locking Strength	> 1800 Lbf for > 60 Seconds	1827.6 lbf	Pass
ANSI Z359.14-2021 4.2.1	Locking Strength	> 1800 Lbf for > 60 Seconds	1825.5 lbf	Pass
ANSI Z359.14-2021 4.2.1	Locking Strength	> 1800 Lbf for > 60 Seconds	1841.7 lbf	Pass
ANSI Z359.14-2021 4.3.1	Max Arrest Force	≤ 1800 Lbf	1445.7 lbf	Pass
	Avg Arrest Force	≤ 1350 Lbf	1007.4 lbf	Pass
	Arrest Distance	≤ 42"	35.5"	Pass
ANSI Z359.14-2021 4.3.1	Visual Indicator	Clear evidence of Impact	Clear Evidence	Pass
	Max Arrest Force	≤ 1800 Lbf	1400.0 lbf	Pass
	Avg Arrest Force	≤ 1350 Lbf	910.6 lbf	Pass
ANSI Z359.14-2021 4.3.1	Arrest Distance	≤ 42"	22.3"	Pass
	Visual Indicator	Clear evidence of Impact	Clear Evidence	Pass
	Max Arrest Force	≤ 1800 Lbf	1518.9 lbf	Pass
ANSI Z359.14-2021 4.3.1	Avg Arrest Force	≤ 1350 Lbf	1029.6 lbf	Pass
	Arrest Distance	≤ 42"	35.9"	Pass
	Visual Indicator	Clear evidence of Impact	Clear Evidence	Pass



This laboratory is accredited with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to the joint ISO-ILAC Communiqué dated January 2009). FallTech Testing Laboratory allows for a +/- 5% tolerance on dynamic and static strength test results.

FLT-08 Rev. J
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ANSI Z359.14-2021 4.3.1	Avg Arrest Force
	Arrest Distance
	Visual Indicator
ANSI Z359.14-2021 4.3.1	Max Arrest Force
	Avg Arrest Force
	Arrest Distance
ANSI Z359.14-2021 4.3.1	Visual Indicator



This laboratory is accredited
This accreditation demonstrates
laboratory quality management
FallTech Testing Laboratory

FallTech Test Report

Test Report No.	PC-2346	Rpt. Date	8/31/2021	Rpt. Rev		Rev Date	
Report Prepared For	FallTech						
Initiated By	Dan Redden	Test Specification(s)	ANSI Z359.14-2021: 4.2.1, 4.2.3, 4.3.1 4.3.3, 4.5.1, 4.5.2				
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Material/Sample Identification (Continued)

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	Avg Arrest Force ≤ 1350 Lbf	1029.6 lbf	Pass
	Arrest Distance ≤ 42"	35.9"	Pass
	Visual Indicator Clear evidence of Impact	Clear Evidence	Pass

How does one circumvent the “rules”?

Not tested in ISO:17025 lab

ISO:17025 Lab doesn't have Z359.14 in its scope

Omission of lab accreditation mark

- Prevents investigation by customer into lab credibility
- Only name of lab listed

No actual test report to reference (fake cover sheet)

Quality of the Qualified Person signing the DOCs

Lick n' Stick

- Item # and product description are for the overseas product
- Modifying the product substantially from original product qualified

Manufacturing Best Practices Checklist

Build your Fall Protection Manufacturer Specification

- ISO 17025 Laboratory (Ensure ISO Scope covers all Z359 Standard)
- ISO 9001 QMP (Quality Management Program)
- Declaration of Conformity or Certificate of Conformity for all products
- 3rd Party Independent Engineer Witness Signature & Stamp with DOC
- Product Test Reporting & Testing Transparency
- Easily Accessible Test Reports
- Credential Transparency (Have the Manufacturing ISO Scope on File)
- Domestic Manufacturing Capability (know where the products are made)
- Sales, Marketing, & Training Services for Post-Sale Support
- Product Quality & Build of Materials
- Depth & Breadth of Product Line

Thank You

Follow up questions can be sent to: Mike@SalesSolutionsinc.Net
Brian@salesSolutionsInc.Net

