Declaration of Conformity

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

FALLTECH®

Alexander Andrew, Inc. 1306 S. Alameda St Compton, CA 90221 (800) 719-4619

Declaration #	D0216067	**Declaration Date**	2/16/2023

Tested Item # **721530T** **FT-R SRL, Class 1 Technora Rope, 30', Plastic Housing**

Additional Items Conforming Under this Declaration:

721530TD1

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 & ASTM F887

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

Level 1		**Level 2**	**X**	**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-2682**

Authorized Signature

Name Zachary Winters **Title** Engineering Manager **Date** 2/16/2023

IAS ACCREDITED Testing Laboratory

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

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-2682	**Rpt. Date**	2/16/2023	**Rpt. Rev**		**Rev Date**	
Report Prepared For	FallTech						
Initiated By	Zachary Winters	**Test Specification(s)**		ANSI Z359.14-2021: 4.2.1, 4.2.3 4.3.1, 4.5.1,			
Part No.	721530T			**Part No. Revision**	A		
Part Description	FT-R SRL, Class 1 Technora Rope, 30' Plastic Housing						
Test Request No.	PC-2682			**Date Complete**	1/17/2023		
Test Operator(s)	Yesbet Sierra / Jay Sponholz						

Material/Sample Identification

Sample ID	Description
SST1	FT-R SRL, Class 1 Technora Rope, 30' Plastic Housing
SST2	FT-R SRL, Class 1 Technora Rope, 30' Plastic Housing
SST3	FT-R SRL, Class 1 Technora Rope, 30' Plastic Housing
L1	FT-R SRL, Class 1 Technora Rope, 30' Plastic Housing
L2	FT-R SRL, Class 1 Technora Rope, 30' Plastic Housing
L3	FT-R SRL, Class 1 Technora Rope, 30' Plastic Housing
A1	FT-R SRL, Class 1 Technora Rope, 30' Plastic Housing
A2	FT-R SRL, Class 1 Technora Rope, 30' Plastic Housing
A3	FT-R SRL, Class 1 Technora Rope, 30' Plastic Housing
H1	FT-R SRL, Class 1 Technora Rope, 30' Plastic Housing
H2	FT-R SRL, Class 1 Technora Rope, 30' Plastic Housing
H3	FT-R SRL, Class 1 Technora Rope, 30' Plastic Housing
C1	FT-R SRL, Class 1 Technora Rope, 30' Plastic Housing
C2	FT-R SRL, Class 1 Technora Rope, 30' Plastic Housing
C3	FT-R SRL, Class 1 Technora Rope, 30' Plastic Housing
W1	FT-R SRL, Class 1 Technora Rope, 30' Plastic Housing
W2	FT-R SRL, Class 1 Technora Rope, 30' Plastic Housing
W3	FT-R SRL, Class 1 Technora Rope, 30' Plastic Housing
R1	FT-R SRL, Class 1 Technora Rope, 30' Plastic Housing
R2	FT-R SRL, Class 1 Technora Rope, 30' Plastic Housing
R3	FT-R SRL, Class 1 Technora Rope, 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	3639.6 lbF	Pass
ANSI Z359.14-2021 4.2.1	Static Strength	≥ 3600 Lbf for ≥ 60 Seconds	3633.5 lbF	Pass
ANSI Z359.14-2021 4.2.1	Static Strength	≥ 3600 Lbf for ≥ 60 Seconds	3627.7 lbF	Pass

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Part Description	FT-R SRL, Class 1 Technora Rope, 30' Plastic Housing						
Test Request No.	PC-2682			**Date Complete**	1/17/2023		

Test Summary

Test Specification	Test Criteria		Test Result	Pass/Fail
ANSI Z359.14-2021 4.2.3	Locking Strength	> 1800 Lbf for > 60 Seconds	1836.2 lbF	Pass
ANSI Z359.14-2021 4.2.1	Locking Strength	> 1800 Lbf for > 60 Seconds	1836.5 lbF	Pass
ANSI Z359.14-2021 4.2.1	Locking Strength	> 1800 Lbf for > 60 Seconds	1832.9 lbF	Pass
ANSI Z359.14-2021 4.3.1	Max Arrest Force	≤ 1800 Lbf	1279.3 lbF	Pass
	Avg Arrest Force	≤ 1350 Lbf	777.9 lbF	Pass
	Arrest Distance	≤ 42"	41.5"	Pass
	Visual Indicator	Clear evidence of Impact	Clear Evidence	Pass
ANSI Z359.14-2021 4.3.1	Max Arrest Force	≤ 1800 Lbf	1233.1 lbF	Pass
	Avg Arrest Force	≤ 1350 Lbf	756.6 lbF	Pass
	Arrest Distance	≤ 42"	39.8"	Pass
	Visual Indicator	Clear evidence of Impact	Clear Evidence	Pass
ANSI Z359.14-2021 4.3.1	Max Arrest Force	≤ 1800 Lbf	1175.0 lbF	Pass
	Avg Arrest Force	≤ 1350 Lbf	798.2 lbF	Pass
	Arrest Distance	≤ 42"	29.8"	Pass
	Visual Indicator	Clear evidence of Impact	Clear Evidence	Pass
ANSI Z359.14-2021 4.3.1.7 Hot	Max Arrest Force	≤ 1800 Lbf	1006.3 lbF	Pass
	Avg Arrest Force	≤ 1575 Lbf	682.6 lbF	Pass
	Arrest Distance	≤ 42"	40.5"	Pass
	Visual Indicator	Clear evidence of Impact	Clear Evidence	Pass
ANSI Z359.14-2021 4.3.1.7 Hot	Max Arrest Force	≤ 1800 Lbf	1009.4 lbF	Pass
	Avg Arrest Force	≤ 1575 Lbf	756.0 lbF	Pass
	Arrest Distance	≤ 42"	38.9"	Pass
	Visual Indicator	Clear evidence of Impact	Clear Evidence	Pass
ANSI Z359.14-2021 4.3.1.7 Hot	Max Arrest Force	≤ 1800 Lbf	1140.0 lbF	Pass
	Avg Arrest Force	≤ 1575 Lbf	702.5 lbF	Pass
	Arrest Distance	≤ 42"	30.1"	Pass
	Visual Indicator	Clear evidence of Impact	Clear Evidence	Pass

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Part No.	721530T			**Part No. Revision**	A		
Part Description	FT-R SRL, Class 1 Technora Rope, 30' Plastic Housing						
Test Request No.	PC-2682			**Date Complete**	1/17/2023		

Test Summary

Test Specification	Test Criteria		Test Result	Pass/Fail
ANSI Z359.14-2021 4.3.1.8 Cold	Max Arrest Force	≤ 1800 Lbf	1181.4 lbF	Pass
	Avg Arrest Force	≤ 1575 Lbf	818.6 lbF	Pass
	Arrest Distance	≤ 42"	34.6"	Pass
	Visual Indicator	Clear evidence of Impact	Clear Evidence	Pass
ANSI Z359.14-2021 4.3.1.8 Cold	Max Arrest Force	≤ 1800 Lbf	1212.1 lbF	Pass
	Avg Arrest Force	≤ 1575 Lbf	808.9 lbF	Pass
	Arrest Distance	≤ 42"	37.8"	Pass
	Visual Indicator	Clear evidence of Impact	Clear Evidence	Pass
ANSI Z359.14-2021 4.3.1.8 Cold	Max Arrest Force	≤ 1800 Lbf	1114.9 lbF	Pass
	Avg Arrest Force	≤ 1575 Lbf	766.3 lbF	Pass
	Arrest Distance	≤ 42"	37.1"	Pass
	Visual Indicator	Clear evidence of Impact	Clear Evidence	Pass
ANSI Z359.14-2021 4.3.1.9 Wet	Max Arrest Force	≤ 1800 Lbf	1012.9 lbF	Pass
	Avg Arrest Force	≤ 1575 Lbf	725.9 lbF	Pass
	Arrest Distance	≤ 42"	41.8"	Pass
	Visual Indicator	Clear evidence of Impact	Clear Evidence	Pass
ANSI Z359.14-2021 4.3.1.9 Wet	Max Arrest Force	≤ 1800 Lbf	1155.2 lbF	Pass
	Avg Arrest Force	≤ 1575 Lbf	773.4 lbF	Pass
	Arrest Distance	≤ 42"	33.4"	Pass
	Visual Indicator	Clear evidence of Impact	Clear Evidence	Pass
ANSI Z359.14-2021 4.3.1.9 Wet	Max Arrest Force	≤ 1800 Lbf	1197.7 lbF	Pass
	Avg Arrest Force	≤ 1575 Lbf	749.0 lbF	Pass
	Arrest Distance	≤ 42"	35.8"	Pass
	Visual Indicator	Clear evidence of Impact	Clear Evidence	Pass

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Part No.	721530T			**Part No. Revision**	A		
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Test Request No.	PC-2682			**Date Complete**	1/17/2023		

Test Summary

Test Specification	Test Criteria		Test Result	Pass/Fail
ANSI Z359.14-2021 4.5.1	Retraction Tension 0% Extracted	1.25 Lbf - 25 Lbf ≤ 48" Extended	2.7 lbF	Pass
	Retraction Tension 50% Extracted	1.25 Lbf - 25 Lbf ≤ 48" Extended	3.5 lbF	Pass
	Retraction Tension 100% Extracted	1.25 Lbf - 25 Lbf ≤ 48" Extended	7.8 lbF	Pass
ANSI Z359.14-2021 4.5.1	Retraction Tension 0% Extracted	1.25 Lbf - 25 Lbf ≤ 48" Extended	3.0 lbF	Pass
	Retraction Tension 50% Extracted	1.25 Lbf - 25 Lbf ≤ 48" Extended	3.7 lbF	Pass
	Retraction Tension 100% Extracted	1.25 Lbf - 25 Lbf ≤ 48" Extended	7.8 lbF	Pass
ANSI Z359.14-2021 4.5.1	Retraction Tension 0% Extracted	1.25 Lbf - 25 Lbf ≤ 48" Extended	2.7 lbF	Pass
	Retraction Tension 50% Extracted	1.25 Lbf - 25 Lbf ≤ 48" Extended	2.2 lbF	Pass
	Retraction Tension 100% Extracted	1.25 Lbf - 25 Lbf ≤ 48" Extended	7.2 lbF	Pass

Conclusion

Based upon the samples provided to the Lab:
FallTech P/N 721530T Rev. A meets the requirements of ANSI Z359.14-2021 and ASTM F887-20 Section 22

Report Signatories and Approval

Lab Quality Manager	Jay Sponholz	Date	2/16/2023
Witnessed by	Not Required	Date	N/A

STANDARD
MS-CRPT-0001
REV 16-05

ArcWear
A KINECTRICS COMPANY

KINECTRICS

TESTING - EXPOSURE TO AN ELECTRIC ARC

Test Specimen:

FallTech, Self-Retracting Lifeline - Personal, Style 721530T,
Webbing: Kevlar, Yellow

Requested by:

FallTech
1306 S Alameda St
Compton, CA 90221

Test Standard:

ELECTRIC ARC TESTS: ASTM F887-20, SECTION 22
OBSERVATION OF PERSONAL CLIMBING EQUIPMENT EXPOSED TO AN ELECTRIC ARC

Test Report:

K-580778-2207H10-R00

Results:

Based on the test results in Table 4-1 and observations, the product tested meets the requirements criteria of Table 1-1. The verification of performance shall include a mechanical integrity (vertical drop test) as soon as possible following the arc exposure. SRL products are not included in the scope in ASTM F887-20 section 22. The material evaluation under arc exposure from these limited tests is not a validation of performance to the referenced standard.

Sample Received	Test Date	Report Date
July 15, 2022	August 4, 2022	August 31, 2022

Prepared by

YBrito G.
Digitally signed by Guerra Yosbani
Date: 2022.09.06 09:08:08 -04'00'

Yosbani Guerra
Technologist, HCL
TD Technologies, Kinectrics

Approved by

Claude Maurice
2022.09.06 10:28:57 -04'00'

Claude Maurice
Technical Specialist, HCL
TD Technologies, Kinectrics

For questions about this test report, please contact testing@arcwear.com

Revision History

Rev	Description		
00	Initial report creation		
	Issue Date August 31, 2022	Prepared by Yosbani Guerra	Approved by Claude Maurice
Rev	Description		
	Issue Date	Prepared by	Verified by

DISCLAIMER

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QUALITY MANAGEMENT

The arc testing performed to the above mentioned Standard is accredited by the Standards Council of Canada (SCC) to conform to the requirements of CAN-P-4E (ISO/IEC 17025:2017). Accreditation by the Standards Council of Canada (SCC) is a mark of competence and reliability

- The test performed does not apply to electrical contact or electrical shock hazard.
- The test result is applicable only to the Test Specimens delivered to Kinectrics, other material, design or color may have a different response.
- It is the clients' responsibility to provide full and accurate information about the items supplied.
- No test is done to validate the fiber content or composition of the test item.
- Photographs of the test specimens and waveforms of the arc current, voltage and calorimeters with the circuit and arc exposure calibration records are available from Kinectrics and provided to the client separately from this report.

1 Test Standard:

Electrical arc test according to ASTM F887-20, Section 22
Standard Specifications for Personal Climbing Equipment, After Exposure to an Electric Arc Evaluation. Specimens are mounted on mannequins of panels having a distance of 30.5 cm (12 inches) from the centerline of the electrodes. The test standard requires that the finished personal climbing equipment be exposed to a level of 40 cal/cm² ± 5 cal/cm².

1.1 Test Requirements

Harnesses- The test program requires the specimens be placed on mannequins as normally worn. A minimum of eight samples are tested, four samples with the front facing the arc and four samples with the back side toward the arc.

Harness accessories, loops etc. - Three specimens of each accessory or loop are required to be exposed to the arc.

Energy Absorbing Lanyard - Three specimens of each lanyard are required to be exposed to the arc.

SRL & SRD- Self-retracting devices (SRDs) are not included in the scope of arc exposure test in ASTM F887-20, Section 22. These devices are under consideration for inclusion at a future date. In the current standard, their test method, number of samples required, and subsequent drop test and criteria has not been established by ASTM.

At the request of the client, the test exposure level and method for energy absorbing lanyards was followed. The drop test to verify mechanical integrity following the arc exposure will be arranged by the producer based on the applicable drop method followed for such devices.

Other effects than the thermal effects of an electric arc like noise, light emissions, pressure rise, hot oil, electric shock, the consequences of physical and mental shock or toxic influences are not covered by this standard.

1.2 Acceptance criteria for products exposed to electrical arc:

The procedure outlined in ASTM F887-20 is followed to verify the electric arc performance of the personal climbing equipment. The product is considered as having passed the visual inspection criteria if the parameters defined in Table 1-1 are met. As proof of performance following the arc exposure, the exposed test specimens shall be subjected to a drop test. This shall be done as soon as practically possible. The samples have been returned to the client as directed to perform the drop test.

Table 1-1: Visual inspection Criteria for Electric Arc Performance of ASTM F887-20

Parameter	Criterion
Arc Energy	Electrical arc exposure of 40 cal/cm² ± 5 cal/cm²
Ignition	No electric arc ignition.
After-flame Time	Less than 5 seconds on load bearing materials and less than 15 seconds for accessories or non-load bearing components.
Melting/Dripping	No melting and dripping of molten materials to the floor of any load bearing material. Accessories are allowed to exhibit melting and dripping provided they are not ignited while dripping.

2 Test Condition:

The following test circuit parameters and conditions were used.

- Electric arc current: 8 kA rms ± 10%, 60 Hz
- Open circuit voltage: 2500 V rms ± 10%, 60 Hz
- Nominal Heat Flux Density: 2100 kW/m^2 (50 cal/cm²·s)
- Arc duration: 0.85 seconds ± 0.1 s to obtain required incident energy
- Electrode gap: 305 mm (12 inches)
- Distance from mannequin to electrode: 305 mm (12 inches)
- Deviations and abnormalities: **Verification of arc performance for SRDs is not the scope of ASTM F887-20.**

Note: The measurement uncertainty, MU, for the measured values of this test method are well within the requirements of the test standard and are defined on a 95% confidence interval basis over the full test range, as follows:

- Temperature: ± 2 °C
- Arc Current: ± 2.5%
- Time zero reference: ± 3 ms
- Incident Energy: ± 1.5%
- Voltage: ± 2.2%

4 Test Results:

Arc exposures were performed on the samples provided to include the webbing, document pouch area and SRL case. If the conditions and evaluation of the samples meet the criteria in Table 1-1, the product has passed the electrical arc exposure and is candidate for the mechanical drop test to fully meet the arc performance requirements of ASTM F887-20. Photographs of the samples before and after the arc exposure are shown in Section 6.

Table 4-1: Summary of Test Results

Test	**22-1709**			
Specimen	**A - Left**	**A - Right**	**B - Left**	**B - Right**
Incident Energy	44.0 Cal/cm²	44.0 Cal/cm²	39.0 Cal/cm²	39.0 Cal/cm²
After-flame (s)	0	0	0	0
Ignition	N	N	N	N
Melting and Dripping	N	N	N	N
Acceptance Criteria	Meets	Meets	Meets	Meets
Test	**22-1710**			
Specimen	**A - Left**	**A – Left**	**B - Right**	
Incident Energy	44.7 Cal/cm²	44.7 Cal/cm²	36.6 Cal/cm²	
After-flame (s)	0	0	0	
Ignition	N	N	N	
Melting and Dripping	N	N	N	
Acceptance Criteria	Meets	Meets	Meets	

4.1 Observations:

Charring of the outer layer of webbing was observed on all samples tested. No after-flame was observed on any of the samples tested. There was no evidence of melting or dripping on any of the samples tested.

5 Interpretation of Results:

This testing does not assign an arc rating to this product. The purpose of this test was to observe the response characteristics of this product when exposed to an open-air electric arc.

Based on the test results in Table 4-1 and observations, the product tested meets the requirements criteria of Table 1-1 used for evaluation of harnesses and lanyards.

The verification of performance shall include a mechanical integrity (vertical drop test) as soon as possible following the arc exposure.

SRL & SRD- Self-retracting devices are not included in the scope of arc exposure test in ASTM F887-20, Section 22. These devices are under consideration for inclusion at a future date. In the referenced standard, their test method, number of samples required, and subsequent drop test and criteria has not been established.