Declaration of Conformity

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

FALLTECH®
Fall Protection. Precision Engineered.

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

Declaration #	B0330151	**Declaration Date**	3/30/2021

Tested Item #	**8087CFDM**	**Arc Flash Nylon Non-belted M Loop, Overmold Hip, Sternal D-rings & QC Chest, TB Legs**

Additional Items Conforming Under this Declaration:

8087CFDS **8087CFD2X**

8087CFDL

8087CFDXL

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

ANSI Z359.11-2014 & ASTM F887

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

Level 1		**Level 2**	**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-2205**	**K-580521-2102H03-R00**

Authorized Signature 

Name Zachary Winters **Title** Engineering Manager **Date** 3/30/2021

IAS ACCREDITED

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-2205	**Rpt. Date**	3/29/2021	**Rpt. Rev**		**Rev Date**	
Report Prepared For	FallTech						
Initiated By	Dan Redden	**Test Specification(s)**		ANSI Z359.11-2014: 4.3.5, 4.3.3, 4.3.4, 4.3.6 ASTM F-887-18			
Part No.	8087CFD			**Part No. Revision**	A		
Part Description	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs						
Test Request No.	PC-2205			**Date Complete**	3/24/2021		
Test Operator(s)	Yesbet Sierra / Jay Sponholz						

Material/Sample Identification

Sample ID	Description
5706849	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs
5706858	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs
5706850	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs
5706855	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs
5706857	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs
5706859	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs
5706866	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs
5706864	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs
5706861	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs
DPT1	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs
5706853	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs
5706854	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs
5706862	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs
5706848	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs
5706865	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs
5706851	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs
5706852	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs
5706867	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs
5706863	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs
5706864	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs
5706866	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs

Test Summary

Test Specification	Test Criteria		Test Result	Pass/Fail
ANSI Z359.11-2014 4.3.5	Static Strength (Dorsal D-ring)	3600 Lbf ≥ 1 Minute	3631.8 Lbf	Pass
	Static Strength (Dorsal D-ring)	Harness Shall Not Release Test Torso	Did Not Release	Pass
	Adjuster Slippage	Slippage ≤ 1"	0.0"	Pass
	Tear Distance (Buckle)	Shall Not Tear a Distance > 1" or Adjacent Eyelet	Did Not Tear Through	Pass
	Tearing	Straps Shall Not Show Any Signs of Tearing	Did Not Tear	Pass

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Part Description	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs						
Test Request No.	PC-2205			**Date Complete**	3/24/2021		

Test Summary (Continued)

Test Specification	Test Criteria		Test Result	Pass/Fail
ANSI Z359.11-2014 4.3.5	Static Strength (Dorsal D-ring)	3600 Lbf ≥ 1 Minute	3621.9 Lbf	Pass
	Static Strength (Dorsal D-ring)	Harness Shall Not Release Test Torso	Did Not Release	Pass
	Adjuster Slippage	Slippage ≤ 1"	0.0"	Pass
	Tear Distance (Buckle)	Shall Not Tear a Distance > 1" or Adjacent Eyelet	Did Not Tear Through	Pass
	Tearing	Straps Shall Not Show Any Signs of Tearing	Did Not Tear	Pass
ANSI Z359.11-2014 4.3.5	Static Strength (Dorsal D-ring)	3600 Lbf ≥ 1 Minute	3634.2 Lbf	Pass
	Static Strength (Dorsal D-ring)	Harness Shall Not Release Test Torso	Did Not Release	Pass
	Adjuster Slippage	Slippage ≤ 1"	0.0"	Pass
	Tear Distance (Buckle)	Shall Not Tear a Distance > 1" or Adjacent Eyelet	Did Not Tear Through	Pass
	Tearing	Straps Shall Not Show Any Signs of Tearing	Did Not Tear	Pass
ANSI Z359.11-2014 4.3.5	Static Strength (Sternal D-ring)	3600 Lbf ≥ 1 Minute	3630.1 Lbf	Pass
	Static Strength (Sternal D-ring)	Harness Shall Not Release Test Torso	Did Not Release	Pass
	Adjuster Slippage	Slippage ≤ 1"	0.0"	Pass
	Tear Distance	Shall Not Tear a Distance > 1" or Adjacent Eyelet	Did Not Tear Through	Pass
	Tearing	Straps Shall Not Show Any Signs of Tearing	Did Not Tear	Pass
ANSI Z359.11-2014 4.3.5	Static Strength (Sternal D-ring)	3600 Lbf ≥ 1 Minute	3618.8 Lbf	Pass
	Static Strength (Sternal D-ring)	Harness Shall Not Release Test Torso	Did Not Release	Pass
	Adjuster Slippage	Slippage ≤ 1"	0.0"	Pass
	Tear Distance	Shall Not Tear a Distance > 1" or Adjacent Eyelet	Did Not Tear Through	Pass
	Tearing	Straps Shall Not Show Any Signs of Tearing	Did Not Tear	Pass

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Report Prepared For	FallTech						
Initiated By	Dan Redden	**Test Specification(s)**		ANSI Z359.11-2014: 4.3.5, 4.3.3, 4.3.4, 4.3.6 ASTM F-887-18			
Part No.	8087CFD			**Part No. Revision**	A		
Part Description	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs						
Test Request No.	PC-2205			**Date Complete**	3/24/2021		

Test Summary (Continued)

Test Specification	Test Criteria		Test Result	Pass/Fail
ANSI Z359.11-2014 4.3.5	Static Strength (Sternal D-ring)	3600 Lbf ≥ 1 Minute	3623.4 Lbf	Pass
	Static Strength (Sternal D-ring)	Harness Shall Not Release Test Torso	Did Not Release	Pass
	Adjuster Slippage	Slippage ≤ 1"	0.0"	Pass
	Tear Distance	Shall Not Tear a Distance > 1" or Adjacent Eyelet	Did Not Tear Through	Pass
	Tearing	Straps Shall Not Show Any Signs of Tearing	Did Not Tear	Pass
ANSI Z359.11-2014 4.3.5	Static Strength (Side D-rings)	3600 Lbf ≥ 1 Minute	3627.9 Lbf	Pass
	Static Strength (Side D-rings)	Harness Shall Not Release Test Torso	Did Not Release	Pass
	Adjuster Slippage	Slippage ≤ 1"	0.0"	Pass
	Tear Distance (Buckle)	Shall Not Tear a Distance > 1" or Adjacent Eyelet	Did Not Tear Through	Pass
	Tearing	Straps Shall Not Show Any Signs of Tearing	Did Not Tear	Pass
ANSI Z359.11-2014 4.3.5	Static Strength (Side D-rings)	3600 Lbf ≥ 1 Minute	3645.4 Lbf	Pass
	Static Strength (Side D-rings)	Harness Shall Not Release Test Torso	Did Not Release	Pass
	Adjuster Slippage	Slippage ≤ 1"	0.0"	Pass
	Tear Distance (Buckle)	Shall Not Tear a Distance > 1" or Adjacent Eyelet	Did Not Tear Through	Pass
	Tearing	Straps Shall Not Show Any Signs of Tearing	Did Not Tear	Pass
ANSI Z359.11-2014 4.3.5	Static Strength (Side D-rings)	3600 Lbf ≥ 1 Minute	3632.5 Lbf	Pass
	Static Strength (Side D-rings)	Harness Shall Not Release Test Torso	Did Not Release	Pass
	Adjuster Slippage	Slippage ≤ 1"	0.0"	Pass
	Tear Distance (Buckle)	Shall Not Tear a Distance > 1" or Adjacent Eyelet	Did Not Tear Through	Pass
	Tearing	Straps Shall Not Show Any Signs of Tearing	Did Not Tear	Pass

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Report Prepared For	FallTech						
Initiated By	Dan Redden	**Test Specification(s)**		ANSI Z359.11-2014: 4.3.5, 4.3.3, 4.3.4, 4.3.6 ASTM F-887-18			
Part No.	8087CFD			**Part No. Revision**	A		
Part Description	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs						
Test Request No.	PC-2205			**Date Complete**	3/24/2021		

Test Summary (Continued)

Test Specification	Test Criteria		Test Result	Pass/Fail
ANSI Z359.11-2014 4.3.3	Dynamic Performance Dorsal D-ring (Feet First)	Peak Impact Load ≥ 3600 Lbf	3765.4 Lbf	Pass
	Dynamic Performance Dorsal D-ring (Feet First)	Harness Shall Not Release Test Torso	Did Not Release	Pass
	Dynamic Performance Dorsal D-ring (Feet First)	Remain Suspended for ≥ 5 Minutes	5 Minutes	Pass
	Dynamic Performance Dorsal D-ring (Feet First)	Angle at Rest ≤ 30°	1.4°	Pass
	Dynamic Performance Dorsal D-ring (Feet First)	At Least One Fall Arrest Indicator Shall Deploy	Visibly and Permanently Deployed	Pass
	Dynamic Performance Dorsal D-ring (Feet First)	Harness Stretch Shall Not Exceed 18"	9.0"	Pass
ANSI Z359.11-2014 4.3.3	Dynamic Performance Dorsal D-ring (Feet First)	Peak Impact Load ≥ 3600 Lbf	3945.6 Lbf	Pass
	Dynamic Performance Dorsal D-ring (Feet First)	Harness Shall Not Release Test Torso	Did Not Release	Pass
	Dynamic Performance Dorsal D-ring (Feet First)	Remain Suspended for ≥ 5 Minutes	5 Minutes	Pass
	Dynamic Performance Dorsal D-ring (Feet First)	Angle at Rest ≤ 30°	10.9°	Pass
	Dynamic Performance Dorsal D-ring (Feet First)	At Least One Fall Arrest Indicator Shall Deploy	Visibly and Permanently Deployed	Pass
	Dynamic Performance Dorsal D-ring (Feet First)	Harness Stretch Shall Not Exceed 18"	9.2"	Pass
ANSI Z359.11-2014 4.3.3	Dynamic Performance Dorsal D-ring (Feet First)	Peak Impact Load ≥ 3600 Lbf	3756.8 Lbf	Pass
	Dynamic Performance Dorsal D-ring (Feet First)	Harness Shall Not Release Test Torso	Did Not Release	Pass
	Dynamic Performance Dorsal D-ring (Feet First)	Remain Suspended for ≥ 5 Minutes	5 Minutes	Pass
	Dynamic Performance Dorsal D-ring (Feet First)	Angle at Rest ≤ 30°	6.5°	Pass
	Dynamic Performance Dorsal D-ring (Feet First)	At Least One Fall Arrest Indicator Shall Deploy	Visibly and Permanently Deployed	Pass
	Dynamic Performance Dorsal D-ring (Feet First)	Harness Stretch Shall Not Exceed 18"	10.7"	Pass

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Report Prepared For	FallTech						
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Part No.	8087CFD			**Part No. Revision**	A		
Part Description	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs						
Test Request No.	PC-2205			**Date Complete**	3/24/2021		

Test Summary (Continued)

Test Specification	Test Criteria		Test Result	Pass/Fail
ANSI Z359.11-2014 4.3.4	Dynamic Performance Dorsal D-ring (Head First)	Peak Impact Load ≥ 3,600 Lbf	2787.7 Lbf	*
	Dynamic Performance Dorsal D-ring (Head First)	Harness Shall Not Release Test Torso	Did Not Release	Pass
	Dynamic Performance Dorsal D-ring (Head First)	Remain Suspended for ≥ 5 Minutes	5 Minutes	Pass
	Dynamic Performance Dorsal D-ring (Head First)	Angle at Rest ≤ 30°	21.4°	Pass
	Dynamic Performance Dorsal D-ring (Head First)	At Least One Fall Arrest Indicator Shall Deploy	Visibly and Permanently Deployed	Pass
ANSI Z359.11-2014 4.3.4	Dynamic Performance Dorsal D-ring (Head First)	Peak Impact Load ≥ 3,600 Lbf	1248.8 Lbf	*
	Dynamic Performance Dorsal D-ring (Head First)	Harness Shall Not Release Test Torso	Did Not Release	Pass
	Dynamic Performance Dorsal D-ring (Head First)	Remain Suspended for ≥ 5 Minutes	5 Minutes	Pass
	Dynamic Performance Dorsal D-ring (Head First)	Angle at Rest ≤ 30°	7.5°	Pass
	Dynamic Performance Dorsal D-ring (Head First)	At Least One Fall Arrest Indicator Shall Deploy	Visibly and Permanently Deployed	Pass
ANSI Z359.11-2014 4.3.4	Dynamic Performance Dorsal D-ring (Head First)	Peak Impact Load ≥ 3,600 Lbf	1942.9 Lbf	*
	Dynamic Performance Dorsal D-ring (Head First)	Harness Shall Not Release Test Torso	Did Not Release	Pass
	Dynamic Performance Dorsal D-ring (Head First)	Remain Suspended for ≥ 5 Minutes	5 Minutes	Pass
	Dynamic Performance Dorsal D-ring (Head First)	Angle at Rest ≤ 30°	6.4°	Pass
	Dynamic Performance Dorsal D-ring (Head First)	At Least One Fall Arrest Indicator Shall Deploy	Visibly and Permanently Deployed	Pass

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Part No.	8087CFD			**Part No. Revision**	A		
Part Description	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs						
Test Request No.	PC-2205			**Date Complete**	3/24/2021		

Test Summary (Continued)

Test Specification	Test Criteria		Test Result	Pass/Fail
ANSI Z359.11-2014 4.3.3	Dynamic Performance Sternal D-ring (Feet First)	Peak Impact Load ≥ 3600 Lbf	2757.5 Lbf	*
	Dynamic Performance Sternal D-ring (Feet First)	Harness Shall Not Release Test Torso	Did Not Release	Pass
	Dynamic Performance Sternal D-ring (Feet First)	Remain Suspended for ≥ 5 Minutes	5 Minutes	Pass
	Dynamic Performance Sternal D-ring (Feet First)	Angle at Rest ≤ 50°	25.3°	Pass
	Dynamic Performance Sternal D-ring (Feet First)	At Least One Fall Arrest Indicator Shall be Deployed Visibly and Permanently	Visibly and Permanently Deployed	Pass
	Dynamic Performance Sternal D-ring (Feet First)	Harness Stretch Shall Not Exceed 18"	15.8"	Pass
ANSI Z359.11-2014 4.3.3	Dynamic Performance Sternal D-ring (Feet First)	Peak Impact Load ≥ 3600 Lbf	3249.7 Lbf	*
	Dynamic Performance Sternal D-ring (Feet First)	Harness Shall Not Release Test Torso	Did Not Release	Pass
	Dynamic Performance Sternal D-ring (Feet First)	Remain Suspended for ≥ 5 Minutes	5 Minutes	Pass
	Dynamic Performance Sternal D-ring (Feet First)	Angle at Rest ≤ 50°	29.4°	Pass
	Dynamic Performance Sternal D-ring (Feet First)	At Least One Fall Arrest Indicator Shall be Deployed Visibly and Permanently	Visibly and Permanently Deployed	Pass
	Dynamic Performance Sternal D-ring (Feet First)	Harness Stretch Shall Not Exceed 18"	13.3"	Pass

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Report Prepared For	FallTech						
Initiated By	Dan Redden	**Test Specification(s)**		ANSI Z359.11-2014: 4.3.5, 4.3.3, 4.3.4, 4.3.6 ASTM F-887-18			
Part No.	8087CFD			**Part No. Revision**	A		
Part Description	Arc Flash Nylon Non-Belted S Loop, Overmold Hip, Sternal D-rings & QC Chest w/Leather, TB Legs						
Test Request No.	PC-2205			**Date Complete**	3/24/2021		

Test Summary (Continued)

Test Specification	Test Criteria		Test Result	Pass/Fail
ANSI Z359.11-2014 4.3.3	Dynamic Performance Sternal D-ring (Feet First)	Peak Impact Load ≥ 3600 Lbf	3218.3 Lbf	*
	Dynamic Performance Sternal D-ring (Feet First)	Harness Shall Not Release Test Torso	Did Not Release	Pass
	Dynamic Performance Sternal D-ring (Feet First)	Remain Suspended for ≥ 5 Minutes	5 Minutes	Pass
	Dynamic Performance Sternal D-ring (Feet First)	Angle at Rest ≤ 50°	28.9°	Pass
	Dynamic Performance Sternal D-ring (Feet First)	At Least One Fall Arrest Indicator Shall be Deployed Visibly and Permanently	Visibly and Permanently Deployed	Pass
	Dynamic Performance Sternal D-ring (Feet First)	Harness Stretch Shall Not Exceed 18"	13.3"	Pass
ANSI Z359.11-2014 4.3.6	Fall Arrest Indicator Test (Doral D-ring)	At Least One Fall Arrest Indicator Shall Deploy	Visibly and Permanently Deployed	Pass
ANSI Z359.11-2014 4.3.6	Fall Arrest Indicator Test (Doral D-ring)	At Least One Fall Arrest Indicator Shall Deploy	Visibly and Permanently Deployed	Pass
ANSI Z359.11-2014 4.3.6	Fall Arrest Indicator Test (Doral D-ring)	At Least One Fall Arrest Indicator Shall Deploy	Visibly and Permanently Deployed	Pass

Conclusion

Based upon the samples provided to the Lab:
FallTech P/N 8087CFD Rev. A meets the requirements of ANSI Z359.11-2014 and * ASTM F-887-18

Test Exceptions

* Harness has been dynamically tested and subjected to forces of 5,000 Lbs. or more. Energy absorbing properties inherent to the harness prevented residual force readings equal to or greater than the 3,600 Lbs. required by the standard.

Report Signatories and Approval

Lab Quality Manager	Jay Sponholz	Date	3/29/2021
Witnessed by	Not Required	Date	N/A

ArcWear
A KINECTRICS COMPANY

KINECTRICS

TESTING - EXPOSURE TO AN ELECTRIC ARC

Test Specimen:
Harness, Style 8087CFDM
Webbing: Yellow Nylon

Requested by:
FallTech
1306 S Alameda St
Compton, CA 90221

Test Standard:
ELECTRIC ARC TESTS: ASTM F887-20
OBSERVATION OF PERSONAL CLIMBING EQUIPMENT EXPOSED TO AN ELECTRIC ARC

Test Report:
K-580521-2102H03-R00

Sample Received	Test Date	Report Date
Febuary-19-2021	February-24-2021	March-01-2021

Prepared by

Robert Ferraz
Technologist, HCL
TD Technologies, Kinectrics

Approved by

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 March-01-2021	Prepared by Robert Ferraz	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 17025:2005). 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.

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 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/cm^2·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)

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

3 Test Specimen:

The following description of the test sample was provided by the client and confirmed by the identification tag shown in Figure 3.1.

Sample description: Falltech, Harness
Sample identification: Style 8087CFDM
Manufacturer: Falltech
Material of webbing: Yellow Nylon
Number of samples tested: 12
Deviations: None

Figure 3.1: Sample photo of Identification Tag

4 Test Results:

Arc exposures were performed on twelve samples as indicated. 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

Trial # 21-1140		
Mannequin	**A – Front**	**B – Back**
Item Serial #	5706853	5706854
Incident Energy	39.4 Cal/cm²	42.0 Cal/cm²
After-flame	0	0
Ignition	N	N
Melting and Dripping	N	N
Acceptance Criteria	Meets	Meets
Trial # 21-1141		
Mannequin	**A – Front**	**B – Back**
Item Serial #	5706851	5706852
Incident Energy	43.0 Cal/cm²	39.4 Cal/cm²
After-flame	0	1
Ignition	N	N
Melting and Dripping	N	N
Acceptance Criteria	Meets	Meets
Trial # 21-1142		
Mannequin	**A – Front**	**B – Back**
Item Serial #	5706859	5706858
Incident Energy	36.5 Cal/cm²	42.9 Cal/cm²
After-flame	0	0
Ignition	N	N
Melting and Dripping	N	N
Acceptance Criteria	Meets	Meets
Trial # 21-1143		
Mannequin	**A – Front**	**B – Back**
Item Serial #	5706857	5706850
Incident Energy	38.1 Cal/cm²	40.1 Cal/cm²
After-flame	0	0
Ignition	N	N
Melting and Dripping	N	N
Acceptance Criteria	Meets	Meets

Trial # 21-1144		
Mannequin	**A – Front**	**B – Back**
Item Serial #	5706861	5706860
Incident Energy	39.6 Cal/cm²	37.9 Cal/cm²
After-flame	0	0
Ignition	N	N
Melting and Dripping	N	N
Trial # 21-1145		
Mannequin	**A – Front**	**B – Back**
Item Serial #	5706862	5706848
Incident Energy	43.3 Cal/cm²	37.4 Cal/cm²
After-flame	0	0
Ignition	N	N
Melting and Dripping	N	N
Acceptance Criteria	Meets	Meets

4.1 Observations:

Light charring of the outer layer of webbing was observed on all samples tested. After flame was observed on the identification tag pack of one of the samples tested and lasted for under 15 seconds as described in Table 4-1. There was no evidence of melting, dripping or ignition on any of the samples tested.

5 Interpretation of Results:

Based on the test results in Table 4-1 and observations, the product tested meets the requirements criteria of Table 1-1 as per ASTM F887-20 sections 22.1-22.4 and 22.6.1-22.6.2.

According to ASTM F887-20, Section 25, qualification of performance shall include a mechanical integrity (vertical drop test) as soon as possible following the arc exposure. This shall be arranged by the producer.