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 #	BC0620030a	**Declaration Date**	6/20/2022

Tested Item #	**8077FDQCM**	**FT-Arc Nomex FBH 1D+FD Climbing Non-Belted , Medium, QC Legs and Chest, Dielectric**

Additional Items Conforming Under this Declaration:

8077FDQCXS	**8077FDQCXL**	**8079FDQCXS**	**8079FDQCL**	**8079FDQC3X**
8077FDQCS	**8077FDQC2X**	**8079FDQCS**	**8079FDQCXL**	
8077FDQCL	**8077FDQC3X**	**8079FDQCM**	**8079FDQC2X**	

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

CSA Z259.10-2018

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-2601**	**K-580778-2205H05-R00**

Authorized Signature _____

Name Zachary Winters **Title** Engineering Manager **Date** 7/15/2022

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-2601	**Rpt. Date**	6/14/2022	**Rpt. Rev**		**Rev Date**	
Report Prepared For	FallTech						
Initiated By	Dan Redden	**Test Specification(s)**		CSA Z259.10-18: 6.2.2.1, 6.2.2.4, 6.2.2.5, 6.2.6			
Part No.	8077FDQCM			**Part No. Revision**	A		
Part Description	FT-Arc Nomex FBH 1D+FD Climbing Non-Belted, Medium, QC Legs and Chest, Dielectric						
Test Request No.	PC-2601			**Date Complete**	6/10/2022		
Test Operator(s)	Yesbet Sierra / Jay Sponholz						

Material/Sample Identification

Sample ID	Description
6342687	FT-Arc Nomex FBH 1D+FD Climbing Non-Belted, Medium, QC Legs and Chest, Dielectric
6342682	FT-Arc Nomex FBH 1D+FD Climbing Non-Belted, Medium, QC Legs and Chest, Dielectric
6342684	FT-Arc Nomex FBH 1D+FD Climbing Non-Belted, Medium, QC Legs and Chest, Dielectric
6342686	FT-Arc Nomex FBH 1D+FD Climbing Non-Belted, Medium, QC Legs and Chest, Dielectric

Test Summary

Test Specification	Test Criteria		Test Result	Pass/Fail
CSA Z259.10-18 6.2.2.1.1	Drop Test Class A Dorsal D-ring (Feet First)	Peak Impact ≥ 3,600 Lbf or 39.4" Free Fall	5041.8 lbs. Fall Height 39.4"	Pass
	Drop Test Class A Dorsal D-ring (Feet First)	Test Mass Remain Suspended for: ≥ 2 Minutes	2 Minutes	Pass
	Drop Test Class A Dorsal D-ring (Feet First)	All Connectors remain connected	All Connected	Pass
	Drop Test Class A Dorsal D-ring (Feet First)	Angle at Rest = ≤ 30°	1.8°	Pass
	Drop Test Class A Dorsal D-ring (Feet First)	Activate Fall Arrest Indicator	Visibly and Permanently Deployed	Pass
	Drop Test Class A Dorsal D-ring (Feet First)	Harness Stretch ≤ Manufactures Stated Value	21.5"	Pass
CSA Z259.10-18 6.2.2.1.2	Drop Test Class A Dorsal D-ring (Head First)	Peak Impact ≥ 3,600 Lbf or 39.4" Free Fall	2856.2 lbs. Fall Height 39.4"	Pass
	Drop Test Class A Dorsal D-ring (Head First)	Test Mass Remain Suspended for: ≥ 2 Minutes	2 Minutes	Pass
	Drop Test Class A Dorsal D-ring (Head First)	All Connectors remain connected	All Connected	Pass
	Drop Test Class A Dorsal D-ring (Head First)	Activate Fall Arrest Indicator	Visibly and Permanently Deployed	Pass

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FallTech Test Report

Test Report No.	PC-2601	**Rpt. Date**	6/14/2022	**Rpt. Rev**		**Rev Date**	
Report Prepared For	FallTech						
Initiated By	Dan Redden	**Test Specification(s)**		CSA Z259.10-18: 6.2.2.1, 6.2.2.4, 6.2.2.5, 6.2.6			
Part No.	8077FDQCM			**Part No. Revision**	A		
Part Description	FT-Arc Nomex FBH 1D+FD Climbing Non-Belted, Medium, QC Legs and Chest, Dielectric						
Test Request No.	PC-2601			**Date Complete**	6/10/2022		

Test Summary (Continued)

Test Specification	Test Criteria		Test Result	Pass/Fail
CSA Z259.10-18 6.2.2.4	Drop Test Class L Ladder Climbing	Peak Impact ≥ 3,600 Lbf or 39.4" Free Fall	4275.1 lbs. Fall Height 39.4"	Pass
	Drop Test Class L Ladder Climbing	Test Mass Remain Suspended for: ≥ 2 Minutes	2 Minutes	Pass
	Drop Test Class L Ladder Climbing	All Connectors remain connected	All Connected	Pass
CSA Z259.10-18 6.2.6	Fall Arrest Indicator Static	Load to 900 lbs. or Indicator deploys Whichever occurs first	724.4 lbs.	Pass
	Fall Arrest Indicator Static	Verify Fall Arrest Indicator has activated	Visibly and Permanently Deployed	Pass

Conclusion

Based upon the samples provided to the Lab:
FallTech P/N 8077FDQCM Rev. A meets the requirements of CSA Z259.10-18 and * ASTM F-887-18

Report Signatories and Approval

Lab Quality Manager	Jay Sponholz	Date	6/14/2022
Witnessed by	Bob Howey (Element)	Date	

TESTING - EXPOSURE TO AN ELECTRIC ARC

Test Specimen:

FallTech,
Full Body Harness, Style 8077FDQCM,
Webbing: Nylon Black

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-580778-2205H05-R00

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 22.6.1-22.6.2. According to ASTM F887-20, Section 25, verification of performance shall include a mechanical integrity (vertical drop test) as soon as possible following the arc exposure.

Sample Received	Test Date	Report Date
May 9, 2022	May 16, 2022	May 27, 2022

Prepared by

Yosbani
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 May 27, 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.

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/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)
- Deviations and abnormalities: None

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%

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:	Fall Protection Harness
Sample identification:	Style 8077FDQCM
Manufacturer:	FallTech
Material of webbing:	Nylon, Black
Number of samples tested:	14
Harness Accessories:	None
Notes:	None

Figure 3.1: Identification Tag

4 Test Results:

Arc exposures were performed on the 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 # 22-0624		**Trial # 22-0625**	
Mannequin	**A – Front**	**B – Back**	**A – Front**	**B – Back**
Item Serial #	6346681	6346682	6346690	634680
Incident Energy	44.8	45.9*	39.8	44.0
After-flame	0	0	10	0
Ignition	N	N	N	N
Melting and Dripping	N	N	N	N
Acceptance Criteria	Meets	Meets	Meets	Meets
	Trial # 22-0626		**Trial # 22-0627**	
Mannequin	**A – Front**	**B – Back**	**A – Front**	**B – Back**
Item Serial #	6346675	6346677	6346679	6346688
Incident Energy	40.7	43.3	42.7	45.6*
After-flame	0	1	0	0
Ignition	N	N	N	N
Melting and Dripping	N	N	N	N
Acceptance Criteria	Meets	Meets	Meets	Meets
	Trial # 22-0628		**Trial # 22-0629**	
Mannequin	**A – Front**	**B – Back**	**A – Front**	**B – Back**
Item Serial #	6346684	6346674	6346686	6346687
Incident Energy	41.2	41.9	44.4	42.7
After-flame	0	0	0	0
Ignition	N	N	N	N
Melting and Dripping	N	N	N	N
Acceptance Criteria	Meets	Meets	Meets	Meets
	Trial # 22-0630		**Trial # 22-0631**	
Mannequin	**A – Front**	**B – Back**	**A – Front**	**B – Back**
Item Serial #	No Sample	6346683	No Sample	6346685
Incident Energy		44.7		41.2
After-flame		0		0
Ignition		N		N
Melting and Dripping		N		N
Acceptance Criteria		Meets		Meets

*Incident Energy above 45 cal/cm², test is invalid.
Additional tests completed to meet acceptance criteria.

4.1 Observations:

Charring of the outer layer of webbing and components was observed on all the samples tested. For tests #22-0625 after flame lasting 10 seconds was observed on sample A on a buckle. There was no melting/dripping or ignition observed on any of the tests performed.

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 as per ASTM F887-20 sections 22.1-22.4 and 22.6.1-22.6.2.

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

6 Photographs:

The following photographs are representative of the test results observed.

Figure 6.1: Sample set up before arc exposure.