

Declaration of Conformity

In Accordance with ANSI/ISEA 125-2014



Alexander Andrew, Inc. 1306 S. Alameda St Compton, CA 90221

Declaration #

B0117108a

Declaration Date

1.19.17

Tested Item #

7047RM

Arc Flash Nomex Standard Non-Belted FBH

Additional Items Conforming Under this Declaration:

7047RS 7047RL 7047RXL 7047R2X 7047R3X 7047
7047XL 70472X 70473X

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

ANSI Z359.11-2014 and ASTM F887-13

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-1005

K-4189321612H02R00

Authorized Signature

Name

Mark Sasaki

Title

Director of Engineering

Date

7.23.18

Exova
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Testing. Advising. Assuring.

January 19, 2017

FallTech Testing Laboratory
1306 S. Alameda Street
Compton, CA 90221

Attention: Jay Sponholz
Quality Manager

Subject: **Attestation of Witnessing Testing**
Exova OCM Job # 370043-21
FallTech P.O.: OPEN
Report No.: PC-1005
Base Part No. 7047RM
Description: Full Body Harness

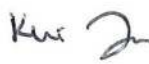

Dear Mr. Sponholz:



The purpose of this attestation is to attest to the fact that a representative of Exova OCM was on site at FallTech's facilities to confirm suitability of the equipment used, calibration status of the equipment and to witness testing performed by FallTech employees. Details of this visit are included below:

- Date of Testing:
 - January 17, 2017
- Exova OCM Test Witness:
 - Kevin Ton
- FallTech Test Operators:
 - Yesbet Sierra and Jay Sponholz
- Specification:
 - ANSI Z359.11-2014 Sections 4.3.5, 4.3.3, 4.3.4, 4.3.6, 4.3.7
- Equipment Calibration Interval
 - 1 year, except weights which are 5 years

Attached to this attestation is the test report generated by FallTech Testing Laboratory. Exova OCM test witness certifies the report accurately presents the testing performed on the samples identified.

Test Report #	Date	Base Part #	Description	Sample ID's	Results
PC-1005	1/18/2017	7047RM	Full Body Harness	3612464 3692024 3692023 3612466 3692017 3692018 2976983 3692020 3692015 3612465 3692019 3692016	Pass

Test Witness Signature: Kevin Ton Test Technician Mechanical Laboratory	(Signed for and on behalf of Exova-OCM) 	
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Approval Signature: Thomas J. (Tom) Parsons Manager Quality / Technical Services	(Signed for and on behalf of Exova-OCM) 	
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This attestation shall not be reproduced except in full, without the written approval of Exova-OCM. The laboratory has witnessed the testing the material / items supplied by the client as sampled by the client. The testing is not within Exova OCM's L.A.B scope of testing and was not performed at Exova OCM.



FallTech Test Report

Test Report Number	PC-1005	Date	1/18/2017	Rev		Rev Date	
Report Prepared For	FallTech						
Initiated By	Dan Redden	Test Specification	ANSI Z359.11-2014 4.3.5, 4.3.3, 4.3.4, 4.3.6, 4.3.7				
Base Part #	7047RM	Description	Full Body Harness				
Proposed Part #	N/A	Built By Whom	Production	BOM	No		
Test Request #	PC-1005	Date Received	1/6/2017	Date Complete	1/17/2017		
Test Operator	Jay Sponholz	Test Operator	Yesbet Sierra				

Material/Sample Identification

Sample ID	Description
3612464	Full Body Harness
3692024	Full Body Harness
3692023	Full Body Harness
3612466	Full Body Harness
3692017	Full Body Harness
3692018	Full Body Harness
2976983	Full Body Harness
3692020	Full Body Harness
3692015	Full Body Harness
3612465	Full Body Harness
3692019	Full Body Harness
3692016	Full Body Harness

FallTech Test Report

Test Report Number	PC-1005	Date	1/18/2017	Rev		Rev Date	
Report Prepared For	FallTech						
Initiated By	Dan Redden	Test Specification	ANSI Z359.11-2014 4.3.5, 4.3.3, 4.3.4, 4.3.6, 4.3.7				
Base Part #	7047RM	Description	Full Body Harness				
Proposed Part #	N/A	Built By Whom	Production	BOM	No		
Test Request #	PC-1005	Date Received	1/6/2017	Date Complete	1/17/2017		

Test Summary

Test Specification	Test Criteria	Test Result	Pass/Fail	
ANSI Z359.11-2014 4.3.5	Static Strength (Dorsal D-ring)	3600 Lbf \geq 1 Minute	3637.2 Lbf	Pass
	Static Strength (Dorsal D-ring)	Harness Shall Not Release Test Torso	Did Not Release	Pass
	Adjuster Slippage	Slippage \leq 1"	0.0"	Pass
	Tear Distance	Shall Not Tear a Distance Greater Than to 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 \geq 1 Minute	3639.6 Lbf	Pass
	Static Strength (Dorsal D-ring)	Harness Shall Not Release Test Torso	Did Not Release	Pass
	Adjuster Slippage	Slippage \leq 1"	0.0"	Pass
	Tear Distance	Shall Not Tear a Distance Greater Than to 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 \geq 1 Minute	3639.0 Lbf	Pass
	Static Strength (Dorsal D-ring)	Harness Shall Not Release Test Torso	Did Not Release	Pass
	Adjuster Slippage	Slippage \leq 1"	0.0"	Pass
	Tear Distance	Shall Not Tear a Distance Greater Than to Adjacent Eyelet	Did Not Tear Through	Pass
	Tearing	Straps Shall Not Show Any Signs of Tearing	Did Not Tear	Pass



FallTech Test Report

Test Report Number	PC-1005	Date	1/18/2017	Rev		Rev Date	
Report Prepared For	FallTech						
Initiated By	Dan Redden	Test Specification	ANSI Z359.11-2014 4.3.5, 4.3.3, 4.3.4, 4.3.6, 4.3.7				
Base Part #	7047RM	Description	Full Body Harness				
Proposed Part #	N/A	Built By Whom	Production	BOM	No		
Test Request #	PC-1005	Date Received	1/6/2017	Date Complete	1/17/2017		

ANSI Z359.11-2014 4.3.3	Dynamic Performance Dorsal D-ring (Feet First)	Peak Impact Load ≥ 3600 Lbf	6996.0 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°	0.4°	Pass
	Dynamic Performance Dorsal D-ring (Feet First)	At Least One Fall Arrest Indicator Shall be Deployed Visibly and Permanently	Visibly and Permanently Deployed	Pass
	Dynamic Performance Dorsal D-ring (Feet First)	Harness Stretch Shall Not Exceed 18"	10.8"	Pass
ANSI Z359.11-2014 4.3.3	Dynamic Performance Dorsal D-ring (Feet First)	Peak Impact Load ≥ 3600 Lbf	7367.3 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°	0.7°	Pass
	Dynamic Performance Dorsal D-ring (Feet First)	At Least One Fall Arrest Indicator Shall be Deployed Visibly and Permanently	Visibly and Permanently Deployed	Pass
	Dynamic Performance Dorsal D-ring (Feet First)	Harness Stretch Shall Not Exceed 18"	8.4"	Pass
ANSI Z359.11-2014 4.3.3	Dynamic Performance Dorsal D-ring (Feet First)	Peak Impact Load ≥ 3600 Lbf	7090.4 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°	2.5°	Pass
	Dynamic Performance Dorsal D-ring (Feet First)	At Least One Fall Arrest Indicator Shall be Deployed Visibly and Permanently	Visibly and Permanently Deployed	Pass
	Dynamic Performance Dorsal D-ring (Feet First)	Harness Stretch Shall Not Exceed 18"	12.0"	Pass

FallTech Test Report

Test Report Number	PC-1005	Date	1/18/2017	Rev		Rev Date	
Report Prepared For	FallTech						
Initiated By	Dan Redden	Test Specification	ANSI Z359.11-2014 4.3.5, 4.3.3, 4.3.4, 4.3.6, 4.3.7				
Base Part #	7047RM	Description	Full Body Harness				
Proposed Part #	N/A	Built By Whom	Production	BOM	No		
Test Request #	PC-1005	Date Received	1/6/2017	Date Complete	1/17/2017		

ANSI Z359.11-2014 4.3.4	Dynamic Performance Dorsal D-ring (Head First)	Peak Impact Load $\geq 3,600$ Lbf	4684.2 Lbf	Pass
	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 $\leq 30^\circ$	3.2°	Pass
	Dynamic Performance Dorsal D-ring (Head First)	At Least One Fall Arrest Indicator Shall Be Deployed Visibly and Permanently	Visibly and Permanently Deployed	Pass
ANSI Z359.11-2014 4.3.4	Dynamic Performance Dorsal D-ring (Head First)	Peak Impact Load $\geq 3,600$ Lbf	4717.9 Lbf	Pass
	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 $\leq 30^\circ$	2.6°	Pass
	Dynamic Performance Dorsal D-ring (Head First)	At Least One Fall Arrest Indicator Shall Be Deployed Visibly and Permanently	Visibly and Permanently Deployed	Pass
ANSI Z359.11-2014 4.3.4	Dynamic Performance Dorsal D-ring (Head First)	Peak Impact Load $\geq 3,600$ Lbf	5147.3 Lbf	Pass
	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 $\leq 30^\circ$	1.4°	Pass
	Dynamic Performance Dorsal D-ring (Head First)	At Least One Fall Arrest Indicator Shall Be Deployed Visibly and Permanently	Visibly and Permanently Deployed	Pass



FallTech Test Report					
Test Report Number	PC-1005	Date	1/18/2017	Rev	Rev Date
Report Prepared For	FallTech				
Initiated By	Dan Redden	Test Specification	ANSI Z359.11-2014 4.3.5, 4.3.3, 4.3.4, 4.3.6, 4.3.7		
Base Part #	7047RM	Description	Full Body Harness		
Proposed Part #	N/A	Built By Whom	Production	BOM	No
Test Request #	PC-1005	Date Received	1/6/2017	Date Complete	1/17/2017

ANSI Z359.11-2014 4.3.6	Fall Arrest Indicator Test (Dorsal D-ring)	At Least One Fall Arrest Indicator Shall be Deployed Visibly and Permanently	Visibly and Permanently Deployed	Pass
ANSI Z359.11-2014 4.3.6	Fall Arrest Indicator Test (Dorsal D-ring)	At Least One Fall Arrest Indicator Shall be Deployed Visibly and Permanently	Visibly and Permanently Deployed	Pass
ANSI Z359.11-2014 4.3.6	Fall Arrest Indicator Test (Dorsal D-ring)	At Least One Fall Arrest Indicator Shall be Deployed Visibly and Permanently	Visibly and Permanently Deployed	Pass
ANSI Z359.11-2014 4.3.7	Lanyard Parking Attachment Element	Disengagement Load ≤ 120 Lbf	Previously Tested and passed under PC-0722	Pass

Conclusion

FallTech P/N 7047RM meets the requirements of ANSI Z359.11-2014, and ASTM F-887-13

Report Signatories and Approval

Lab Quality Manager		Date	1/18/2017
Witnessed by	Kevin Ton 	Date	1/23/2017



Test Performed for
ArcWear.com
Louisville, KY 40223
www.ArcWear.com

Personal Climbing Equipment provided by
FallTech
1306 S Alameda St
Compton, CA 90221
800-719-4619

Full Body Harness, Model 7047RM

ASTM F887-13 Standard Specifications for Personal Climbing Equipment
Section 22, Electric Arc Performance Evaluation

Kinectrics Inc. Report No.: K-418932-1612H02-R00

Item received: December 9, 2016

Test Date: December 12, 2016

Client representative: Hugh Hoagland
ArcWear

Digitally signed by
Hugh Hoagland
Date: 2016.12.19
17:35:46 -05'00'

Prepared by: Andrew Haines
Technologist
Kinectrics Inc

Date: 2016.12.22
19:03:10 -05'00'

Approved by: Stephen Cress, P. Eng
Department Manager, DAM
Transmission and Distribution Technologies
Kinectrics Inc

Stephen Cress
2017.01.13 19:47:42
-05'00'

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Note about this report

- The test performed does not apply to electrical contact or electrical shock hazard
- The test result is applicable only to the Test Item, other material or color may have a different response.
- The findings of this report are based on the current test method as described in the Reference Standard
- It is assumed that the information supplied by the client was valid and complete

Kinectrics Inc., 800 Kipling Avenue, Toronto, Ontario, Canada, M8Z 5G5
Tel: 416-207-6305, FAX: 416-207-5717
www.kinectrics.com

Electric Arc Exposure Test Report

Test Description

Harnesses- The test program requires the specimens be placed on mannequins as normally worn. A minimum of six samples are tested, three samples with the front facing the arc and three samples with the back side toward the arc. The mannequin is positioned as to have the arc centered on the chest for front facing exposure and centered on the fall arrest attachment for the back facing exposure.

Harness accessories, loops etc. - Three specimens of each accessory or loop are required to be exposed to the arc. These may be attached webbing or other suitable means to allow the item to be held against the mannequin or panel at a distance of 30.5 cm (12 inches).

Shock Absorbing Lanyard - Three specimens of each lanyard are required to be exposed to the arc. These are placed over the shoulder and held against the mannequin or panel at a distance of 30.5 cm (12 inches). Several lanyards may be tested at one time on the same mannequin.

Test Requirements

The test standard requires that the finished personal climbing equipment be exposed to a level of 40 ± 5 cal/cm². In the case where the arc exposure is out of range of the standard, extra samples may be performed if available. There shall be no ignition of any component, no greater than 5 seconds afterflame and no melting and dripping of any materials.

As proof of performance following the arc exposure, the exposed test specimens shall be subjected to a drop test per ANSI Z359.1 or Z349.13 as applicable. This shall be done as soon as practically possible. ArcWear has arranged to have the test items returned to the client or other laboratory to perform the drop test.

Results and Observations

The following test data was recorded for each trial:

- Arc exposure electrical conditions: arc trial number, RMS arc current, arc voltage, arc duration, energy dissipated in arc, plots of arc current and arc voltage
- Average incident energy from monitors.
- Photographs of exposed samples before and after exposure
- Video recording during and immediately after the exposure to record after-flame
- Examination of the samples after the test for evidence of ignition, melting and dripping or any other material problems.

The essential test data and test results with a representative photograph of the samples are presented in the following pages. The observations are performed by a qualified observer that has knowledge of behavior of materials in an arc exposure and in depth knowledge of arc testing specifications and requirements.

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 recognized throughout the world.

Sample description: Full Body Harness
Sample identification: 7047RM
Manufacturer: FallTech
Material of webbing: Kevlar/Nomex

Trial # 16-6343		
Mannequin	A – front exposure	B – back exposure
Item Serial #	N/A	N/A
Ei, cal/cm ²	39.3	43.2
Afterflame	0	0
Ignition	N	N
Melting and dripping	N	N
Comment	Pass	Pass
Trial # 16-6344		
Mannequin	A – front exposure	B – back exposure
Item Serial #	N/A	N/A
Ei, cal/cm ²	40.5	39.8
Afterflame	0	0
Ignition	N	N
Melting and dripping	N	N
Comment	Pass	Pass
Trial # 16-6345		
Mannequin	A – front exposure	B – back exposure
Item Serial #	N/A	N/A
Ei, cal/cm ²	43.1	40.0
Afterflame	0	0
Ignition	N	N
Melting and dripping	N	N
Comment	Pass	Pass

Conclusions

The Full Body Harness Model 7047RM has met the no melting, no dripping, no ignition criteria of ASTM F887-13 section 22.8. In order to satisfy the Electric Arc Performance requirements in accordance with section 22 of the standard, the test specimens must pass the specified drop test following arc exposure.