

Declaration of Conformity

In Accordance with ANSI/ISEA 125-2014



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

Declaration #

D0714002b

Declaration Date

2.7.14

Tested Item #

82710SA1

10' DuraTech® Web SRD

Additional Items Conforming Under this Declaration:

82710SA3	82710SA4	82710SA5	82710SC1	82710SC3	82710SG4	82710SG5
	82911SC1	82911SC3	82911SG5	82911SG6	82911SA4	

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

ANSI Z359.14-2012 and ASTM F887-13*

* All FallTech Arc Flash SRDs have been tested under a 3rd Party adoption of ASTM F887-13 for self-retracting lifelines. (see pages 21 - 23)

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

Level 1

Level 2

Level 3

X

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

340085A

8N689

K-418927-1607H11-R00

Authorized Signature

Name

Dustin Hawkins

Title

VP Business Development

Date

12.1.16

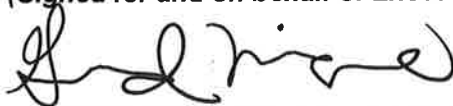

Revision History

Revision Letter:	Original Issue	Issue Date:	February 20, 2014
Prepared By:	Vicki Sheehan	Approved By:	G. Minogue / T. Parsons

Revision Letter:	A	Re - Issue Date:	February 21, 2014
Revised By:	Tom Parsons	Approved By:	See below
Reason for Revision:	Revise sample I.D.'s per customer email 2/21/14. Other editorial changes were made. (C)		

Report Signatories and Approval

This is to certify that the above tests were performed in accordance with the terms of the purchase order requirements.
Test equipment is calibrated with standards traceable to the NIST.

Approval Signature: Tim Stetson Supervisor Mechanical Laboratory	<i>(Signed for and on behalf of Exova-OCM)</i> 	
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Approval Signature: Thomas J. (Tom) Parsons Manager Quality / Technical Services	<i>(Signed for and on behalf of Exova-OCM)</i> 	
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This test report shall not be reproduced except in full, without the written approval of Exova-OCM. The laboratory has tested the material / items supplied by the client as sampled in accordance with the client's requirements. The recording of false, factious or fraudulent statements or entries on the test report may be punished as a felony under federal law. Tests so marked (*) are not included in the L-A-B and/or Nadcap schedule of accreditation of this laboratory.

Introduction

On January 23, 2014 Exova OCM received for testing four (4) samples consisting of ten (10) self-retracting lifeline devices, two extra. On February 3, 2014 Exova received two (2) additional self-retracting lifeline devices making six (6) samples consisting of 12 self-retracting lifeline devices, two extra.

Testing was performed in accordance with the P.O. and Exova OCM Quote No 14-240-1048D. Receiving inspection was performed on January 27, 2014 and no discrepancies were noted.

SPECIFICATION: American National Standard ANSI/ASSE Z359.14-2012, para. 4.2.5 & 3.1.7

MATERIAL/SAMPLE IDENTIFICATION:

Sample No.	Description	Sample I.D.
1	(4) Self-Retracting Device (1 Extra)	6' Webbing
2	(4) Self-Retracting Device (1 Extra)	10' Webbing
3	(1) Self-Retracting Device	20' (Web)
4	(1) Self-Retracting Device	20' (Cable)
5	(1) Self-Retracting Lifeline Device	30' Galvanized; 7 x 19 Wire Rope
6	(1) Self-Retracting Lifeline Device	50' Galvanized; 7 x 19 Wire Rope

REQUIRED TESTING:

Sample No.	Quantity	Test Description	Test Method
1 - 6	10 total	Proof Load	ANSI/ASSE Z359. 14-2012, para. 4.2.5 & 3.1.7

Summary of Results

Sample No.	Determination	Test Values	Requirements	Results
1	Ultimate Load (lbf held for 1 minute)	3069 Avg.	Load of 3000 pounds held for one minute.	Complies
2	Ultimate Load (lbf held for 1 minute)	3013 Avg.	Load of 3000 pounds held for one minute.	Complies
3	Ultimate Load (lbf held for 1 minute)	3020	Load of 3000 pounds held for one minute.	Complies
4	Ultimate Load (lbf held for 1 minute)	3014	Load of 3000 pounds held for one minute.	Complies
5	Ultimate Load (lbf held for 1 minute)	3024	Load of 3000 pounds held for one minute.	Complies
6	Ultimate Load (lbf held for 1 minute)	3032	Load of 3000 pounds held for one minute.	Complies

Conclusion

The above customer supplied devices meet ANSI/ASSE Z359. 14-2012 for the testing performed

Proof Load

<i>Material Identification:</i>	1) Self-Retracting Device
<i>Part No. / Lot / Batch / Serial No.:</i>	6' Webbing
<i>Specification:</i>	Exova OCM Quote & American National Standard ANSI/ASSE Z359.14-2012, para. 4.2.5 & 3.1.7
<i>Test Procedure:</i>	ANSI/ASSE Z359. 14-2012, para. 4.2.5 & 3.1.7
<i>Details:</i>	<i>Test Speed:</i> 2.0 inch/minute
<i>Specimen Conditions:</i>	73°F / 46% RH
<i>Test Temperature:</i>	73°F
<i>Test Performed By:</i>	Aurelio Lara <i>Date of Test:</i> 02-13-2014

TEST RESULTS:

Specimen No.	Ultimate Load (lbf)
1	3062
2	3072
3	3074
Average:	3069
Requirement:	Load of 3000 pounds held for one minute.

The above sample meets ANSI/ASSE Z359.14-2012 requirements for the above test.

EQUIPMENT USED:

Equipment	Size / Type	Control Number	Calibration Due
Load Frame	33 kip	1118	07-08-14
Load Cell	5 kip	2152	09-20-14

Proof Load

<i>Material Identification:</i>	2) Self-Retracting Device
<i>Part No. / Lot / Batch / Serial No.:</i>	10' Webbing
<i>Specification:</i>	Exova OCM Quote & American National Standard ANSI/ASSE Z359.14-2012, para. 4.2.5 & 3.1.7
<i>Test Procedure:</i>	ANSI/ASSE Z359. 14-2012, para. 4.2.5 & 3.1.7
<i>Details:</i>	<i>Test Speed:</i> 2.0 inch/minute
<i>Specimen Conditions:</i>	73°F / 46% RH
<i>Test Temperature:</i>	73°F
<i>Test Performed By:</i>	Victor Romo <i>Date of Test:</i> 02-14-2014

TEST RESULTS:

Specimen No.	Ultimate Load (lbf)
1	3022
2	2996
3	3021
Average:	3013
Requirement:	Load of 3000 pounds held for one minute.

The above sample meets ANSI/ASSE Z359.14-2012 requirements for the above test.

EQUIPMENT USED:

Equipment	Size / Type	Control Number	Calibration Due
Load Frame	5 kip	2274	06-25-14
Load Cell	5 kip	2275	01-30-15

Proof Load

<i>Material Identification:</i>	3) Self-Retracting Device
<i>Part No. / Lot / Batch / Serial No.:</i>	20' (Web)
<i>Specification:</i>	Exova OCM Quote & American National Standard ANSI/ASSE Z359.14-2012, para. 4.2.5 & 3.1.7
<i>Test Procedure:</i>	ANSI/ASSE Z359. 14-2012, para. 4.2.5 & 3.1.7
<i>Details:</i>	<i>Test Speed:</i> 2.0 inch/minute
<i>Specimen Conditions:</i>	73°F / 46% RH
<i>Test Temperature:</i>	73°F
<i>Test Performed By:</i>	Victor Romo <i>Date of Test:</i> 02-14-2014

TEST RESULTS:

Specimen No.	Ultimate Load (lbf)
1	3020
Requirement:	Load of 3000 pounds held for one minute.

The above sample meets ANSI/ASSE Z359.14-2012 requirements for the above test.

EQUIPMENT USED:

Equipment	Size / Type	Control Number	Calibration Due
Load Frame	5 kip	2274	06-25-14
Load Cell	5 kip	2275	01-30-15

Proof Load

Material Identification: 4) Self-Retracting Device
Part No. / Lot / Batch / Serial No.: 20' (Cable)
Specification: Exova OCM Quote & American National Standard ANSI/ASSE Z359.14-2012, para. 4.2.5 & 3.1.7
Test Procedure: ANSI/ASSE Z359. 14-2012, para. 4.2.5 & 3.1.7
Details: *Test Speed:* 2.0 inch/minute
Specimen Conditions: 73°F / 46% RH
Test Temperature: 73°F
Test Performed By: Victor Romo *Date of Test:* 02-15-2014

TEST RESULTS:

Specimen No.	Ultimate Load (lbf)
1 - 1 st Time	640**
1 - 2 nd Time	3014
Requirement:	Load of 3000 pounds held for one minute.

**Note: Material dropped then continued to hold to required load.

The above sample meets ANSI/ASSE Z359.14-2012 requirements for the above test.

EQUIPMENT USED:

Equipment	Size / Type	Control Number	Calibration Due
Load Frame	30 kip	1548	06-25-14
Load Cell	5 kip	1109	05-02-14

Proof Load

<i>Material Identification:</i>	5) Self-Retracting Lifeline Device
<i>Part No. / Lot / Batch / Serial No.:</i>	30' Galvanized; 7 x 19 Wire Rope
<i>Specification:</i>	Exova OCM Quote & American National Standard ANSI/ASSE Z359.14-2012, para. 4.2.5 & 3.1.7
<i>Test Procedure:</i>	ANSI/ASSE Z359. 14-2012, para. 4.2.5 & 3.1.7
<i>Details:</i>	<i>Test Speed:</i> 2.0 inch/minute
<i>Specimen Conditions:</i>	73°F / 46% RH
<i>Test Temperature:</i>	73°F
<i>Test Performed By:</i>	Victor Romo <i>Date of Test:</i> 02-15-2014

TEST RESULTS:

Specimen No.	Ultimate Load (lbf)
1	3024
Requirement:	Load of 3000 pounds held for one minute.

The above sample meets ANSI/ASSE Z359.14-2012 requirements for the above test.

EQUIPMENT USED:

Equipment	Size / Type	Control Number	Calibration Due
Load Frame	30 kip	1548	06-25-14
Load Cell	5 kip	1109	05-02-14

Proof Load

<i>Material Identification:</i>	6) Self-Retracting Lifeline Device
<i>Part No. / Lot / Batch / Serial No.:</i>	50' Galvanized; 7 x 19 Wire Rope
<i>Specification:</i>	Exova OCM Quote & American National Standard ANSI/ASSE Z359.14-2012, para. 4.2.5 & 3.1.7
<i>Test Procedure:</i>	ANSI/ASSE Z359. 14-2012, para. 4.2.5 & 3.1.7
<i>Details:</i>	<i>Test Speed:</i> 2.0 inch/minute
<i>Specimen Conditions:</i>	73°F / 46% RH
<i>Test Temperature:</i>	73°F
<i>Test Performed By:</i>	Victor Romo
	<i>Date of Test:</i> 02-15-2014

TEST RESULTS:

Specimen No.	Ultimate Load (lbf)
1	3032
Requirement:	Load of 3000 pounds held for one minute.

The above sample meets ANSI/ASSE Z359.14-2012 requirements for the above test.

EQUIPMENT USED:

Equipment	Size / Type	Control Number	Calibration Due
Load Frame	30 kip	1548	06-25-14
Load Cell	5 kip	1109	05-02-14

END OF REPORT



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ORIGINAL REPORT OF ANALYSIS

FALL TECH #1622
1306 S. ALAMEDA STREET
COMPTON, CA 90221-4803

MTL# 8N689 (Pg 1 of 29)
DATE RECEIVED: 1/28/14
DATE COMPLETED: 2/7/14
BY: Dan Redden
P.O.#

Description: Self – Retracting Devices
Part number: 10' DuraTech Web SRL Non-LE
Mfg.: Fall Tech
Specification required: ANSI Z359.14-2012

D.O.M: 1/14

Self – Retracting Devices

3.1.2 Locking Function

Sample SN	Automatic with no override	Result
1707581	Yes	Pass
1707568	Yes	Pass
1707578	Yes	Pass

3.1.4 Visual Indicator

Sample SN	Visible	Result
1707581	Yes	Pass
1707568	Yes	Pass
1707578	Yes	Pass

All samples will be retained for a period of 30 days.

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Tests are accredited and meet the requirements of ISO/IEC 17025 as verified by the ANSI/ASQ National Accreditation board/Aclass. Refer to certificate & scope of accreditation at -1503.

We certify the above analysis to be the true results on the designated samples.

MIDWEST TESTING LABORATORIES, INC. Cherie Ulatowski

Cherie Ulatowski-President



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ORIGINAL REPORT OF ANALYSIS

FALL TECH #1622

MTL# 8N689 (Pg 2 of 29)

Self – Retracting Devices

3.1.5 Corrosion Protection – 96 hours salt spray

Sample SN	Corrosion Related Failure	Payout / Retract / Lock	Retraction Tension 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 20% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 40% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)
1707579	No	Yes	1.73 / 10	1.34 / 10	2.68 / 10

Retraction Tension – 60% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 80% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 100% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Result
3.45 / 10	4.05 / 10	3.94 / 10	Pass

3.1.6 / 4.2.6 Retraction Tension

Sample SN	Retraction Tension 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 20% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 40% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 60% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)
1707579	1.29 / 10	1.49 / 10	2.22 / 10	3.01 / 10
1707580	1.44 / 10	1.41 / 10	1.65 / 10	2.16 / 10
1707581	1.58 / 10	1.77 / 10	1.96 / 10	2.76 / 10

Retraction Tension – 80% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 100% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Result
3.48 / 10	4.24 / 10	Pass
2.67 / 10	4.34 / 10	Pass
3.37 / 10	4.13 / 10	Pass



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ORIGINAL REPORT OF ANALYSIS

FALL TECH #1622

MTL# 8N689 (Pg 3 of 29)

Self – Retracting Devices

3.1.8 / 4.2.3 Dynamic Strength – 300 lb. weight SRD to Anchor

Sample SN	Lock and Hold	Line Retention 1,000 lbs.	Result
1707543	Yes	Held	Pass
1707556	Yes	Held	Pass
1707561	Yes	Held	Pass

3.1.8 / 4.2.3 Dynamic Strength – 300 lb. weight SRD to Weight

Sample SN	Lock and Hold	Line Retention 1,000 lbs.	Result
1707564	Yes	Held	Pass
1707542	Yes	Held	Pass
1707575	Yes	Held	Pass



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ORIGINAL REPORT OF ANALYSIS

FALL TECH #1622

MTL# 8N689 (Pg 4 of 29)

Self – Retracting Devices

3.1.9 / 4.2.1 Dynamic Performance SRD to Anchor

Sample SN	Length After Drop (inches)	Arrest Distance Class A: (≤ 24 inches) Class B: (≤ 54 inches)	Average Arrest Force Class A: (≤ 1350 lbs.) Class B: (≤ 900 lbs.)	MAF (≤ 1,800 lbs.)	Payout / Retract / Lock / Visual Indicator
1707581	60.75	24.75	859	1,173	Yes
1707568	64.25	29.25	768	1,014	Yes
1707578	63	27	716	828	Yes

Retraction Tension 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 20% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 40% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 60% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)
2.37 / 9	2.33 / 9	3.42 / 9	5.44 / 9
1.25 / 9	1.32 / 9	2.95 / 9	2.76 / 9
1.77 / 9	1.89 / 9	3.21 / 9	3.74 / 9

Retraction Tension – 80% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 100% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Result
5.57 / 9	6.61 / 9	Pass Class B
5.11 / 9	4.44 / 9	Pass Class B
5.25 / 9	5.15 / 9	Pass Class B



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ORIGINAL REPORT OF ANALYSIS

FALL TECH #1622

MTL# 8N689 (Pg 5 of 29)

Self – Retracting Devices

3.1.9 / 4.2.1 Dynamic Performance SRD to Weight

Sample SN	Length After Drop (inches)	Arrest Distance Class A: (≤ 24 inches) Class B: (≤ 54 inches)	Average Arrest Force Class A: (≤ 1350 lbs.) Class B: (≤ 900 lbs.)	MAF (≤ 1,800 lbs.)	Payout / Retract / Lock / Visual Indicator
1707580	64.75	28.75	757	984	Yes
1707572	58.25	22.25	761	989	Yes
1707562	59	23	771	971	Yes

Retraction Tension 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 20% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 40% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 60% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)
1.30 / 9	1.60 / 9	1.71 / 9	2.61 / 9
1.25 / 9	1.36 / 9	2.15 / 9	2.77 / 9
1.29 / 9	1.49 / 9	1.99 / 9	2.75 / 9

Retraction Tension – 80% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 100% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Result
3.01 / 9	3.61 / 9	Pass Class B
3.31 / 9	3.94 / 9	Pass Class A and B
3.35 / 9	3.91 / 9	Pass Class A and B



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ORIGINAL REPORT OF ANALYSIS

FALL TECH #1622

MTL# 8N689 (Pg 6 of 29)

Self – Retracting Devices

3.1.9 / 4.2.1 / 4.2.8.1 Dynamic Performance - Heat - SRD to Anchor

Sample SN	Length After Drop	Arrest Distance Class A: (≤ 24 inches) Class B: (≤ 54 inches)	Average Arrest Force Class A: (≤ 1575 lbs.) Class B: (≤ 1125 lbs.)	MAF (≤ 1,800 lbs.)	Payout / Retract / Lock / Visual Indicator
1707573	63.5	27.5	588	662	Yes
1707567	63.25	27.25	668	795	Yes
1707558	71.50	35.5	582	649	Yes

Retraction Tension 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 20% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 40% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 60% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)
1.82 / 9	1.56 / 9	2.51 / 9	3.18 / 9
2.20 / 9	2.09 / 9	3.19 / 9	3.95 / 9
2.15 / 9	1.88 / 9	2.92 / 9	3.66 / 9

Retraction Tension – 80% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 100% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Result
3.92 / 9	5.12 / 9	Pass Class B
4.14 / 9	5.77 / 9	Pass Class B
4.08 / 9	5.55 / 9	Pass Class B



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ORIGINAL REPORT OF ANALYSIS

FALL TECH #1622

MTL# 8N689 (Pg 7 of 29)

Self – Retracting Devices

3.1.9 / 4.2.1 / 4.2.8.1 Dynamic Performance - Heat - SRD to Weight

Sample SN	Length After Drop	Arrest Distance Class A: (≤ 24 inches) Class B: (≤ 54 inches)	Average Arrest Force Class A: (≤ 1575 lbs.) Class B: (≤ 1125 lbs.)	MAF (≤ 1,800 lbs.)	Payout / Retract / Lock / Visual Indicator
1707566	61	25	600	692	Yes
1707577	70	34	571	639	Yes
1707553	62.5	26.5	537	789	Yes

Retraction Tension 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 20% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 40% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 60% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)
2.42 / 9	2.29 / 9	2.50 / 9	3.21 / 9
1.52 / 9	1.38 / 9	2.43 / 9	2.94 / 9
2.19 / 9	1.91 / 9	2.48 / 9	3.11 / 9

Retraction Tension – 80% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 100% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Result
4.41 / 9	5.09 / 9	Pass Class B
3.94 / 9	4.77 / 9	Pass Class B
4.22 / 9	4.93 / 9	Pass Class B



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ORIGINAL REPORT OF ANALYSIS

FALL TECH #1622

MTL# 8N689 (Pg 8 of 29)

Self – Retracting Devices

3.1.9 / 4.2.1 / 4.2.8.2 Dynamic Performance - Cold – SRD to Anchor

Sample SN	Length After Drop	Arrest Distance Class A: (≤ 24 inches) Class B: (≤ 54 inches)	Average Arrest Force Class A: (≤ 1575 lbs.) Class B: (≤ 1125 lbs.)	MAF (≤ 1,800 lbs.)	Payout / Retract / Lock / Visual Indicator
1707576	79.75	43.75	520	637	Yes
1707546	80	44	525	581	Yes
1707565	61.5	25.5	562	784	Yes

Retraction Tension 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 20% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 40% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 60% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)
1.78 / 9	1.83 / 9	2.68 / 9	3.69 / 9
2.27 / 9	2.15 / 9	2.80 / 9	3.21 / 9
2.13 / 9	2.31 / 9	2.83 / 9	3.33 / 9

Retraction Tension – 80% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 100% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Result
4.78 / 9	5.84 / 9	Pass Class B
4.53 / 9	5.68 / 9	Pass Class B
4.66 / 9	5.75 / 9	Pass Class B



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1072 WHEATON • TROY, MICHIGAN 48083
 PHONE (248) 689-9262 • FAX (248) 689-7637
 info@midwesttesting.com • www.midwesttesting.com

ORIGINAL REPORT OF ANALYSIS

FALL TECH #1622

MTL# 8N689 (Pg 9 of 29)

Self – Retracting Devices

3.1.9 / 4.2.1 / 4.2.8.2 Dynamic Performance - Cold – SRD to Weight

Sample SN	Length After Drop	Arrest Distance Class A: (≤ 24 inches) Class B: (≤ 54 inches)	Average Arrest Force Class A: (≤ 1575 lbs.) Class B: (≤ 1125 lbs.)	MAF (≤ 1,800 lbs.)	Payout / Retract / Lock / Visual Indicator
1707554	57.5	21.5	679	876	Yes
1707551	67.75	31.75	708	901	Yes
1707545	68.5	32.5	681	859	Yes

Retraction Tension 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 20% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 40% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 60% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)
2.02 / 9	2.21 / 9	2.57 / 9	3.37 / 9
2.07 / 9	2.51 / 9	2.68 / 9	3.21 / 9
2.16 / 9	2.55 / 9	2.71 / 9	3.52 / 9

Retraction Tension – 80% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 100% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Result
4.20 / 9	5.96 / 9	Pass Class A and B
4.44 / 9	5.84 / 9	Pass Class B
4.39 / 9	5.89 / 9	Pass Class B



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ORIGINAL REPORT OF ANALYSIS

FALL TECH #1622

MTL# 8N689 (Pg 10 of 29)

Self – Retracting Devices

3.1.9 / 4.2.1 / 4.2.8.3 Dynamic Performance - Wet – SRD to Anchor

Sample SN	Length After Drop	Arrest Distance Class A: (≤ 24 inches) Class B: (≤ 54 inches)	Average Arrest Force Class A: (≤ 1575 lbs.) Class B: (≤ 1125 lbs.)	MAF (≤ 1,800 lbs.)	Payout / Retract / Lock / Visual Indicator
1707549	62.5	26.5	828	1,303	Yes
1707550	68.5	32.5	700	849	Yes
1707544	64.5	28.5	804	1,127	Yes

Retraction Tension 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 20% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 40% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 60% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)
2.67 / 9	2.44 / 9	2.89 / 9	3.01 / 9
2.05 / 9	2.16 / 9	3.12 / 9	3.10 / 9
2.22 / 9	2.32 / 9	2.95 / 9	3.06 / 9

Retraction Tension – 80% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 100% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Result
5.42 / 9	5.02 / 9	Pass Class B
5.55 / 9	5.45 / 9	Pass Class B
5.39 / 9	5.39 / 9	Pass Class B



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ORIGINAL REPORT OF ANALYSIS

FALL TECH #1622

MTL# 8N689 (Pg 11 of 29)

Self – Retracting Devices

3.1.9 / 4.2.1 / 4.2.8.3 Dynamic Performance - Wet – SRD to Weight

Sample SN	Length After Drop	Arrest Distance Class A: (≤ 24 inches) Class B: (≤ 54 inches)	Average Arrest Force Class A: (≤ 1575 lbs.) Class B: (≤ 1125 lbs.)	MAF (≤ 1,800 lbs.)	Payout / Retract / Lock / Visual Indicator
1707555	61.25	25.25	762	1,116	Yes
1707563	62	26	817	1,268	Yes
1707557	64.5	29.5	705	999	Yes

Retraction Tension 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 20% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 40% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 60% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)
2.17 / 9	1.89 / 9	3.00 / 9	2.64 / 9
2.85 / 9	1.51 / 9	2.96 / 9	3.15 / 9
2.21 / 9	1.93 / 9	2.91 / 9	2.97 / 9

Retraction Tension – 80% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Retraction Tension – 100% 3.1.6 / 4.2.6 (1.25 – 25 lbs. / ≤ 24 inches)	Result
3.21 / 9	4.96 / 9	Pass Class B
3.79 / 9	5.24 / 9	Pass Class B
4.12 / 9	5.19 / 9	Pass Class B



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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

Model 82911SA4, 11' Duratech ArcFlash SRD

OBSERVATION OF WORK PRODUCTS EXPOSED
TO AN ELECTRIC ARC

Kinectrics Inc. Report No.: K-418927-1607H11-R00

Item received: August 4, 2016

Test Date: August 4, 2016

Client representative: Hugh Hoagland
ArcWear

Digitally signed by Hugh
Hoagland
Date: 2016.08.10 15:10:15 -04'00'

Prepared by: Andrew Haines
Technologist
Kinectrics Inc

Date: 2016.08.10
17:29:22 -04'00'

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

Stephen Cress
2016.08.16 14:15:01
-04'00'

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Electric Arc Exposure Test Report

Test Description

At the time of this test, there was no directly applicable test standard to cover arc testing of self-retracting lanyards. It was decided after discussion between Kinectrics and Arcwear to adopt the general set-up used for ASTM F887-13 to generate the arc. The purpose of the electric arc test was to expose the test items to 40 ± 5 cal/cm² and to evaluate for ignition, melting and dripping following the exposure.

In order to complete testing, the test laboratory used the test fixture described in *ASTM F887 - 13 Standard Specifications for Personal Climbing Equipment, Section 22. Electric Arc Performance*. Although the products being evaluated do not strictly fall within the scope of this standard, the apparatus and procedure was adopted to suit the Client's requirements. The test procedure involves installing the finished product onto a secure platform with instrumented calorimeters on each side in order to evaluate the material response characteristics to an arc flash exposure.

- Test Parameters: Arc Gap= 12 inches (30.5 cm), Distance to the arc = 12 inches (30.5 cm)
- Arc Current = 8 kA RMS

The following test data was recorded for each trial:

- Arc exposure electrical conditions: arc trial number, arc current, arc voltage, arc duration, energy dissipated in arc, incident energy
- Review of product by qualified observer (see attached observation form)
- Photographs of garment before and after arc exposure
- Video recording of arc exposure

Results and Observations

The details of the product and observations are attached on the product evaluation form. These were completed at the time of the test. The subjective evaluation of the product was to document product design or material response concerns such as ignition or melting and dripping. The observations were performed by a qualified observer that has knowledge of behavior of materials in an arc exposure and in depth knowledge of testing specifications and requirements.

Quality Management

Kinectrics' Quality Management System is registered to ISO 9001:2008 by QMI, a division of SAI Global and North America's leading QMS registrar. Adherence to this standard provides one of the strongest assurances of service quality available. As a minimum, all work at Kinectrics' is performed to meet the requirements of ISO 9001:2008.

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
- It is assumed that the product description supplied by the client is accurate and complete

Sample description: 11' Duratech ArcFlash SRD
Sample identification: Model 82911SA4
Manufacturer: FallTech
Material of webbing: Kevlar
Other detail: Nomex Cover

Trial # 16-3686		
Mannequin	A – front exposure	B – back exposure
Item Serial #	N/A	N/A
Ei, cal/cm ²	38.1	31.3
Afterflame	0	0
Ignition	N	N
Melting and dripping	N	N
Comment	Pass	Incident energy exposure level was lower than acceptable range.
Trial # 16-3926		
Mannequin	A – front exposure	B – back exposure
Item Serial #	N/A	N/A
Ei, cal/cm ²	42.0	39.4
Afterflame	0	0
Ignition	N	N
Melting and dripping	N	N
Comment	Pass	Pass

Conclusions

The Model 82911SA4 11' Duratech ArcFlash SRD showed good overall performance in the electric arc and did not exhibit any signs of melting, dripping, or ignition of any system component during testing. Although there is no requirement, it is strongly recommended that these tested items be subjected to an applicable drop test following exposure.