

### **Declaration of Conformity**

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

**Declaration #:** DOC-UFH11502Q **Declaration Date:** 06/06/2024

Item #: UFH11502Q

**Description:** KStrong® EndurX™ 5-Point Full Body Harness, Abrasion Resistant Shoulder Pad, Premium Work Positioning Waist Pad w/Removable Tool Belt, Deluxe Leg Pads, Enhanced Dorsal D-ring Plus™, Front D-ring, Side D-rings, Quick Slide Adjusters, Trauma Relief Straps, QC Chest,

TB Legs (SS), All Aluminum Hardware

**Brand Name:** KStrong **Manufacturer:** KStrong

Address: 150 N. Radnor Chester Road, Suite F200, Radnor, PA 19087

Additional Items Conforming Under this Declaration (If Applicable):

UFH11502Q(XS) UFH11502Q(S) UFH11502Q(M) UFH11502Q(L)

UFH11502Q(XL) UFH11502Q(2XL)

UFH11502Q(3XL)

KStrong declares that the product(s) listed above is in conformity with the requirements of the following performance standard(s):

#### ANSI Z359.11-2021

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



#### Level 1:

KStrong Lab Outside the Scope of ISO/IEC Standard 17025:2017



#### Level 2:

KStrong Lab Within the Scope of ISO/IEC Standard 17025:2017



#### Level 3:

Independent 3rd Party Lab accredited to ISO/IEC Standard 17025:2017

Supporting Documentation: KS-Test-UFH11502Q.pdf

This Certificate is a guarantee that the above standard(s) was met by the requirements of such standard. Testing was performed under normal operation mode. The results of testing apply only to the particular sample tested and the specific test carried out. This Certificate is only issued for products which have passed the testing requirements of listed standard(s).

**Authorized Signature:** 

John H. Kemp Jr. President - KStrong

ISO 17025 Accredited Test Laboratory

intertek Total Quality. Assured.



Intertek Testing Services NA, Inc. 3933 US Rt. 11 Cortland, NY 13045

Tel: 1 607-753-6711 www.intertek.com

**Accrediting Agency** 





A2LA 5202 Presidents Court, Ste 220 Frederick, MD 21703 Tel: 301.644.3248 info@A2LA.org



## **Test Verification of Conformity**

Verification Number: 105844345CRT-002

On the basis of the referenced test report(s), sample(s) of the below product have been found to comply with the harmonized standards and Directives listed on this verification at the time the tests were carried out. Other standards and Directives may be relevant to the product. This verification is part of the full test report(s) and should be read in conjunction with it(them).

Applicant Name & Address: KStrong INC

150 N. Radnor Chester Rd.

Suite F200 Radnor, PA 19087

USA

Product Description: Full Body Harness

Models/Type References: UFH10541G, UFH10551Q Shared Model: UFH10511G, UFH10511Q, UFH10531Q,

UFH10551G, UFH10502G, UFH11502Q, UFH10533G, UFH10533Q, UFH10541Q

Brand Name: KStrong Inc.

Relevant Standards: ANSI Z359.11-2021

Verification Issuing Office

Name & Address:

Intertek Testing Services NA, Inc.

3933 US Rt-11 Cortland, NY 13045

USA

Date of Tests: 09/11/2023

Test Report Number(s): 105844345CRT-001

Signature:

Name: Matthew Stevens
Position: Team Leader

Date: 06/10/2024





This Verification is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Verification. Only the Client is authorized to permit copying or distribution of this Verification are view or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test/inspection results referenced in this Verification are relevant only to the sample tested/inspected. This Verification by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.



# KSTRONG INC. TEST REPORT

#### **SCOPE OF WORK**

ANSI Z359.11-2021 Safety Requirements for Full Body Harnesses

#### REPORT NUMBER

105844345CRT-001

#### **ORIGINAL REPORT NUMBER**

105167073CRT-002

#### **ISSUE DATE**

June 6, 2024

#### **PAGES**

14

#### **DOCUMENT CONTROL NUMBER**

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Report No.: 105844345CRT-001

Date: June 6, 2024

3933 US Rt. 11 Cortland, NY 13045

Telephone: 1 607-753-6711

www.intertek.com

KStrong Inc. 150 N. Radnor Chester Rd. Suite F200 Radnor, PA 19087 USA

Report Number.....: 105844345CRT-001

Signed Quote Number....: Qu-01453270

PO Number. ....: N/A

Name of Testing Laboratory

Preparing the Report ...... Intertek Testing Services NA Inc.

**Test Specification:** 

Standard.....: ANSI/ASSP Z359.11-2021

Date(s) of Testing...... 9/11/2023

Product Description....::

Product Type: .....: Full Body Harness

Brand Name: .....: KStrong

Model Number(s): .....: UFH10541G, UFH10551Q

UFH10511G, UFH10511Q, UFH10531Q, UFH10551G,

Model Sharing...... UFH10502G, UFH11502Q, UFH10533G, UFH10533Q,

UFH10541Q

Date(s) Samples Received .....: 8/25/2023

Report No.: 105844345CRT-001

Date: June 10, 2024

#### **SECTION 1**

#### **SUMMARY OF TESTING**

| TESTS COMPLETED   | ANSI/ASSP Z359.11-2021<br>CLAUSE    | STATUS |
|---|-------------------------------------|--------|
| Design  | 3<br>Data from 105167073CRT-001     | PASS   |
| Dynamic Feet First Drop (Dorsal)                              | 4.3.3 Data from 105167073CRT-001    | PASS   |
| Dynamic Feet First Drop (Sternal)                             | 4.3.3                               | PASS   |
| Dynamic Head First Drop (Dorsal)                              | 4.3.4<br>Data from 105167073CRT-001 | PASS   |
| Static Feet First (Dorsal)                                    | 4.3.5 Data from 105167073CRT-001    | PASS   |
| Static Feet First (Sternal)                                   | 4.3.5                               | PASS   |
| Visual Indicator Test (purchase EAL for test)                 | 4.3.6 Data from 105167073CRT-001    | PASS   |
| Static Feet First (Hip)                                       | 4.3.5 Data from 105167073CRT-001    | PASS   |
| Static Feet First (Shoulder)                                  | 4.3.5 Data from 105167073CRT-001    | PASS   |
| Static Feet First Test for Lanyard Parking Attachment Element | 4.3.7 Data from 105167073CRT-001    | PASS   |
| Markings and Instructions                                     | 5<br>Data from 105167073CRT-001     | PASS   |

#### **SECTION 2**

This test report concludes the work anticipated in the testing phase of your project. If there are any questions regarding this report, please contact the undersigned at 607-753-6711.

| COMPLETE<br>D BY: | Alex Smith | REVIEWED<br>BY: | Matthew Stevens |
|-------------------|------------|-----------------|-----------------|
| TITLE:            | Technician | TITLE:          | Team Leader     |
| SIGNATURE:        | Ales Smith | SIGNATURE       | MACH            |
| DATE              | 06/06/2024 | DATE:           | 06/10/2024      |

Please see attached test data for details.

Report No.: 105844345CRT-001

Date: June 10, 2024

#### **SECTION 3**

#### **TESTING EQUIPMENT CALIBRATION INFORMATION**

| USED<br>FOR TEST | DESCRIPTION  | MANUFACTURER | CONTROL<br>NO. | MODEL<br>NO. | SERIAL<br>NO. | CAL.<br>DATE | CAL.<br>DUE |
|------------------|--------------|--------------|----------------|--------------|---------------|--------------|-------------|
| X                | Level        | MD           | L096           | NA           | NA            | 6/6/23       | 6/6/24      |
| X                | Test Torso   | NA           | 15064          | 220 lbs      | -             | VBU          | VBU         |
| Х                | Load Cell    | Interface    | G139           | -            | -             | 11/15/22     | 11/15/23    |
| X                | Tape Measure | NA           | H338           | -            | -             | 5/11/23      | 5/11/24     |

#### **SECTION 3**

#### SUPPLEMENTAL TEST DATA

| Paragraph | Test Description   | Results | Compliance |
|-----------|--|---------|------------|
| 3         | Requirements   |         |            |
| 3.1       | Design Requirements  |         |            |
| 3.1.2     | Permanently incorporate a dorsal or sternal attachment   | YES     | PASS       |
| 3.1.2     | Materials and constructions shall meet requirements  | YES     | PASS       |
| 3.1.3     | FBH w/ dorsal attachment shall permanently include a sub-pelvic strap and /or waist belt                                   | YES     | PASS       |
| 3.1.4     | FBH w sternal attachment shall permanently include a waist belt  | YES     | PASS       |
| 3.1.4     | All shoulder straps shall come together and be connected at the dorsal location  | YES     | PASS       |
| 3.1.4     | All FBH's shall permanently incorporate a waist belt or a back strap for controlling the separation of the shoulder straps | YES     | PASS       |
| 3.1.5     | Modular components shall design requirements   | YES     | PASS       |
| 3.1.5.1   | Modular components shall be attached to the harness using connections that meet section 3                                  | YES     | PASS       |
| 3.1.5.2   | Attachment element extender can be no longer than 24-inches  | YES     | PASS       |
| 3.1.6     | FBH integrated into a vest shall allow visual inspection or entire FBH   | YES     | PASS       |
| 3.1.7     | All FBH shall be equipped with a fall arrest indicator that will deploy during dynamic testing                             | YES     | PASS       |
| 3.1.8     | FBH/EA/EAL combinations shall meet the requirements of Z359.11 and Z359.13   | YES     | PASS       |
| 3.1.9     | FBH shall include keepers for straps   | YES     | PASS       |
| 3.1.10    | FBH shall include lanyard parking attachment   | YES     | PASS       |
| 3.1.11    | It shall not be possible to remove elements  | YES     | PASS       |
| 3.1.12    | All single point attachment elements must be located within 2-inches of the vertical centerline                            | YES     | PASS       |
| 3.2       | Attachment Element Requirements  | YES     | PASS       |
| 3.2.1     | Dorsal- shall be used as the primary fall arrest attachment  | YES     | PASS       |
| 3.2.1.1   | May be used in travel restraint or rescue  | YES     | PASS       |
| 3.2.1.2   | Dorsal attachment shall direct the load through the shoulder straps and around the thighs                                  | YES     | PASS       |

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| Paragraph | Test Description   | Results |    | Compliance |
|-----------|--|---------|----|------------|
| 3.2.1.3   | Dorsal Attachment Element requirements   | YES     |    | PASS       |
| 3.2.1.3.1 | Dynamic Feet First- see section 4.3.3  | YES     |    | PASS       |
| 3.2.1.3.2 | Dynamic Head First – see section 4.3.4   | YES     |    | PASS       |
| 3.2.1.3.3 | Static Feet First- see section 4.3.5   | YES     |    | PASS       |
| 3.2.1.3.4 | Fall Arrest Indicator – see section 4.3.6  | YES     |    | PASS       |
| 3.2.2     | The sternal attachment may be used as an alternative fall arrest attachment  | YES     |    | PASS       |
| 3.2.2.1   | The sternal attachment may be used for travel restraint or rescue  | YES     |    | PASS       |
| 3.2.2.2   | Sternal attachment design shall direct the load through the shoulder straps and thighs   | YES     |    | PASS       |
| 3.2.2.3   | Sternal Attachment Element Requirements  | YES     |    | PASS       |
| 3.2.2.3.1 | Dynamic Feet First – see section 4.3.3   | YES     |    | PASS       |
| 3.2.2.3.2 | Static Feet First – see section 4.3.5  | YES     |    | PASS       |
| 3.2.2.3.3 | Fall Arrest Indicator – see section 4.3.6  | YES     |    | PASS       |
| 3.2.3     | Frontal attachment to be used for ladder guided type FA's where no chance of fall in a feet first direction (may be used for work positioning) |         | NA | NA         |
| 3.2.3.1   | Frontal Attachment Element Requirements  | YES     |    | PASS       |
| 3.2.3.1.1 | Dynamic Feet First – see section 4.3.3   | YES     |    | PASS       |
| 3.2.3.1.2 | Static Feet First – see section 4.3.5  | YES     |    | PASS       |
| 3.2.4     | Shoulder attachments shall be used as a pair, also for rescue and entry/retrieval not for FA.  | YES     |    | PASS       |
| 3.2.4.1   | Shoulder Attachment Elements Requirements  | YES     |    | PASS       |
| 3.2.4.1.1 | Static Feet First – see section 4.3.5  | YES     |    | PASS       |
| 3.2.5     | Waist, rear attachment for travel restraint only   | YES     |    | PASS       |
| 3.2.5.1   | Waist, rear attachment shall be subjected to minimal loading, not used for FA  | YES     |    | PASS       |
| 3.2.5.2   | Waist Attachment Elements Requirements   | YES     |    | PASS       |
| 3.2.5.2.1 | Static Feet First – see section 4.3.5  | YES     |    | PASS       |
| 3.2.6     | Hip attachments shall be used as a pair and solely for work positioning, not used for FA   | YES     |    | PASS       |
| 3.2.6.1   | Hip Attachment Element Performance<br>Requirements   | YES     |    | PASS       |
| 3.2.6.1.1 | Static Feet First – see section 4.3.5  | YES     |    | PASS       |
| 3.2.7     | Suspension seat shall be used as a pair and solely for work positioning, not used for FA   |         | NA | NA         |
| 3.2.7.1   | Suspension Seat Attachment Element Performance Requirements  |         | NA | NA         |
| 3.2.7.1.1 | Static Feet First – see section 4.3.5  | YES     |    | PASS       |
| 3.3       | Component Requirements   | YES     |    | PASS       |
| 3.3.1     | Load Bearing Straps  | YES     |    | PASS       |
| 3.3.1.1   | Shall not be less than 1-5/8" (41mm)   | YES     |    | PASS       |
| 3.3.1.2   | Minimum breaking strength of 5,000 lbs per section 7.1.1   | YES     |    | PASS       |

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| Paragraph | Test Description  |   | Results  |          |      |        | Compliance |
|-----------|---|---|--|----------|------|--------|------------|
| 3.3.1.3   | Straps shall be pure, non-recycled synther material. Any restrictions shall be marked FBH                     |   |  | YES      |      |        | PASS       |
| 3.3.1.4   | Straps shall be hot cut, sealed, covered, or stitched to prevent fraying                                      |   |  | YES      |      |        | PASS       |
| 3.3.1.5   | After abrasion conditioning per 7.1.2, stra<br>have a breaking strength of at least 3,600<br>tested to 7.1.1  | lbs when  |  | YES      |      |        | PASS       |
| 3.3.1.6   | In areas of concentrated wear straps shall protected  | be  |  | YES      |      |        | PASS       |
| 3.3.1.7   | Spacing between eyelets centers shall be 1-1/8- 2 inches  | between   |  | YES      |      |        | PASS       |
| 3.3.2     | Thread and Stitching  |   |  | YES      |      |        | PASS       |
| 3.3.2.1   | Shall have the same material as load bear   | ing straps  |  | YES      |      |        | PASS       |
| 3.3.2.2   | All stitching shall be lock stitched and ba   |   |  | YES      | _    |        | PASS       |
| 3.3.2.3   | All stitching used to connect load bearing shall be contrasting in color at a distance inches                 | members   |  | YES      |      |        | PASS       |
| 3.3.3     | Connecting Components   |   |  | YES      |      |        | PASS       |
| 3.3.3.1   | Hardware shall conform to Z359.12 (excelloops)  | ept soft  |  | YES      |      |        | PASS       |
| 3.3.3.2   | Soft loops attachments may be used in pla<br>metal connecting components                                      | ace of  |  | YES      |      |        | PASS       |
| 3.3.3.3   | Soft loop attachments shall be constructed materials that meet section 3.3.1                                  | d of  |  |          |      | NA     | NA         |
| 3.3.3.4   | Soft loops shall include protection from v  | wear  |  |          |      | NA     | NA         |
| 4         | Qualification Testing   |   |  | <u> </u> |      |        |            |
|           |   | "DO   | RSAL ATTACHMENT"   |          |      |        |            |
| 4.3.3     | Dynamic Feet First Drop Test:   |   |  |          |      |        |            |
|           | Test Set-up (Dorsal):   |   | Feet First DORSAL Attack<br>Requirements per Section 3.                        |          |      |        |            |
| l         | 1. Don the harness on the test torso  | Sample II   | D:   1 of Dorsal Attachment Element  | -        | 8    | inches |            |
|           | 2. Position dorsal attachment per the Mfg Instructions.   | Drop Heig   |  |          | 3    | ft     |            |
|           | 3. If equipped with chest strap (section  | Max Arre  |  |          | 4894 | lbs    |            |
|           | 4.3.2), locate strap +/-2 inches on torso   | Hi- initial   | height   |          | 112  | inches |            |
|           | from datum E figure 5 and 1b of standard  | Hf- final h   | neight   |          | 118  | inches |            |
|           | 4. Determine drop height, attach quick  |   | ness Effect (Hi-Hf)  |          | 6    | inches | PASS       |
|           | release to the torso neck, lower torso to<br>remove slack, measure height (lowest<br>point of torso to floor) | is stated in the Mfg. Instructions, whichever is less. Stated: Release from the torso |  |          | 18   | inches | 17100      |
|           | 5. Raise torso to predetermined height,   |   |  |          |      | no     |            |
|           | release, measure MAF, measure and record final height   | Support the torso for a period of 5-minutes post fall                                 |  |          | Yes  |        |            |
|           | SI  |   | Shall support the torso post fall of an angle not greater than 30° to vertical |          | Yes  | 9.2°   |            |
|           |   | At least or<br>and perma  | ne fall arrest indicator deployed visib<br>mently                              | oly      | Yes  |        |            |
|           |   |   |  |          |      |        |            |

Report No.: 105844345CRT-001

| Paragraph | Test Description  | Results  |   |   | Compliance  |   |      |
|-----------|---|--|---|---|-------------|---|------|
|           |   | nesaits  |   |   | Compilative |   |      |
| 4.3.3     | Dynamic Feet First Drop Test:  Test Set-up (Dorsal):  1. Don the harness on the test torso 2. Position dorsal attachment per the Mfg Instructions. 3. If equipped with chest strap (section 4.3.2), locate strap +/-2 inches on torso from datum E figure 5 and 1b of standard 4. Determine drop height, attach quick release to the torso neck, lower torso to remove slack, measure height (lowest point of torso to floor) 5. Raise torso to predetermined height, release, measure MAF, measure and record final height | Feet First DORSAL Attachment Requirements per Section 3.2.1.3.1  Sample ID: 2  Location of Dorsal Attachment Element Drop Height  Max Arrest Force Hi- initial height  Hf- final height  He – Harness Effect (Hi-Hf)  Harness effect shall not exceed 18-inches or which is stated in the Mfg. Instructions, whichever is less. Stated: -  Release from the torso  Support the torso for a period of 5-minutes post fall   |   | ret-up (Dorsal):  In the harness on the test torso ition dorsal attachment per the instructions.  In the harness on the test torso ition dorsal attachment per the instructions.  In the harness on the test torso ition dorsal attachment per the instructions.  In the harness on the test torso ition dorsal attachment per the instructions.  In the harness on the test torso ition dorsal attachment per Section 3.2.1.3.1  In the harness on the test torso ition dorsal attachment Requirements per Section 3.2.1.3.1  In the harness on the test torso it in the Market Force and IDrop Height and Max Arrest Force are initial height and In the July and Interest Effect (Hi-Hif) and Interest Effect (Hi-Hif) and Interest Effect (Hi-Hif) and Interest Effect (Hi-Hif) are stated in the Mfg. Instructions, whichever is less. Stated:  In the harness on the test torso in the Max Arrest Force are initial height and Interest Effect (Hi-Hif) and Interest Effect (Hi-Hif) are stated in the Mfg. Instructions, whichever is less. Stated:  In the harness on the test torso in the Max Arrest Force are initial height |             | inches ft lbs inches inches inches inches | PASS |
|           | record illian neight  | Shall support the torso post fall of an angle not greater than 30° to vertical  At least one fall arrest indicator deployed visibly and permanently  | yes<br>yes  | 6.8°  |             |   |      |
| 4.3.3     | Dynamic Feet First Drop Test:  Test Set-up (Dorsal):  1. Don the harness on the test torso 2. Position dorsal attachment per the Mfg Instructions. 3. If equipped with chest strap (section 4.3.2), locate strap +/-2 inches on torso from datum E figure 5 and 1b of standard 4. Determine drop height, attach quick release to the torso neck, lower torso to remove slack, measure height (lowest point of torso to floor) 5. Raise torso to predetermined height, release, measure MAF, measure and record final height | Feet First DORSAL Attachment Requirements per Section 3.2.1.3.1  Sample ID: 3  Location of Dorsal Attachment Element Drop Height Max Arrest Force Hi- initial height  Hf- final height  He – Harness Effect (Hi-Hf)  Harness effect shall not exceed 18-inches or which is stated in the Mfg. Instructions, whichever is less. Stated:  Release from the torso  Support the torso for a period of 5-minutes post fall  Shall support the torso post fall of an angle not greater than 30° to vertical  At least one fall arrest indicator deployed visibly and permanently | 8<br>3<br>4242<br>112<br>½<br>120<br>¼<br>7 <sup>3</sup> ⁄ <sub>4</sub><br>18<br>yes<br>yes | inches ft lbs inches inches inches ano 8.1°   | PASS        |   |      |

Report No.: 105844345CRT-001

| Paragraph | Test Description   | Results  |  |  | Compliance   |
|-----------|--|--|--|--|--------------|
| 4.3.3     | Dynamic Feet First Drop Test:  | 11034110   |  |  | - Price live |
| 4.3.3     | Dynamic Feet First Drop Test:  Test Set-up (Sternal):  1. Don the harness on the test torso 2. Position dorsal attachment per the Mfg Instructions. 3. If equipped with chest strap (section 4.3.2), locate strap +/-2 inches on torso from datum E figure 5 and 1b of standard 4. Determine drop height, attach quick release to the torso neck, lower torso to remove slack, measure height (lowest point of torso to floor) 5. Raise torso to predetermined height, release, measure MAF, measure and record final height | Feet First STERNAL Attachm Requirements per Section 3.2.1  Sample ID: 3  Drop Height  Max Arrest Force  Hi- initial height  Hf- final height  He – Harness Effect (Hi-Hf)  Harness effect shall not exceed 18-inches or which is stated in the Mfg. Instructions, whichever is less. Stated:  Release from the torso  Support the torso for a period of 5-minutes post fall  Shall support the torso post fall of an angle not greater than 30° to vertical  At least one fall arrest indicator deployed visibly |  | ft lbs inches inches inches inches 28.3° | PASS         |
| 4.3.3     | Dynamic Feet First Drop Test:  Test Set-up (Sternal):  1. Don the harness on the test torso 2. Position dorsal attachment per the Mfg Instructions.  | Feet First STERNAL Attachm Requirements per Section 3.2.1  Sample ID: 3  Drop Height Max Arrest Force  | ent  | ft lbs                                   |              |
|           | 3. If equipped with chest strap (section 4.3.2), locate strap +/-2 inches on torso from datum E figure 5 and 1b of standard 4. Determine drop height, attach quick release to the torso neck, lower torso to remove slack, measure height (lowest point of torso to floor)   | Hi- initial height  Hf- final height  He – Harness Effect (Hi-Hf)  Harness effect shall not exceed 18-inches or which is stated in the Mfg. Instructions, whichever is less. Stated:  Release from the torso  Support the torso for a period of 5-minutes  | 130 <sup>3</sup> / <sub>4</sub> "  138"  7 <sup>1</sup> / <sub>4</sub> "  18 | inches<br>inches<br>inches<br>inches     | PASS         |
|           | 5. Raise torso to predetermined height, release, measure MAF, measure and record final height  | post fall  Shall support the torso post fall of an angle not greater than 30° to vertical  At least one fall arrest indicator deployed visibly and permanently   | yes<br>yes   | 29.2°                                    |              |
|           |  |  |  |  |              |

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| Paragraph | Test Description   | Results  |   |                  | Compliance |
|-----------|--|--|---|------------------|------------|
| 4.3.3     | Dynamic Feet First Drop Test:  Test Set-up (Sternal):  1. Don the harness on the test torso  | Feet First STERNAL Attachm Requirements per Section 3.2.1 Sample ID: 3   |   |                  |            |
|           | 2. Position dorsal attachment per the Mfg Instructions.  3. If equipped with chest strap (section 4.3.2), locate strap +/-2 inches on torso  | Drop Height Max Arrest Force Hi- initial height Hf- final height   | 4<br>3954<br>130 <sup>3</sup> / <sub>4</sub> <sup>2</sup><br>137" |                  |            |
|           | from datum E figure 5 and 1b of standard 4. Determine drop height, attach quick release to the torso neck, lower torso to  | He – Harness Effect (Hi-Hf) Harness effect shall not exceed 18-inches or which is stated in the Mfg. Instructions, whichever is less. Stated:  | 6 1/4"  | inches           | PASS       |
|           | remove slack, measure height (lowest point of torso to floor)  5. Raise torso to predetermined height,   | Release from the torso  Support the torso for a period of 5-minutes post fall  Shall support the torso post fall of an angle   | yes<br>yes  | 29.6°            |            |
|           | release, measure MAF, measure and record final height  | not greater than 30° to vertical  At least one fall arrest indicator deployed visibly and permanently  | yes   | 2510             |            |
| 4.3.4     | Dynamic Head First Drop Test:  Test Set-up (Dorsal):  1. Don the harness on the test torso 2. Position dorsal attachment bearing point 8 +/- 1 inch below the top of the shoulder (or maximum lowest position) 3. If equipped with chest strap (section 4.3.2), locate strap +/-2 inches on torso from datum E figure 5 and 1b of standard 4. Attach quick release to the torso crotch, lower torso to remove slack 5. Raise torso to predetermined height, release, measure MAF | Head First DORSAL Attachment Requirements per Section 3.2.1.3.2  Sample ID:  Location of Dorsal Attachment Element Drop Height Max Arrest Force Release from the torso  Support the torso for a period of 5-minutes post fall Shall support the torso post fall of an angle not greater than 30° to vertical  At least one fall arrest indicator deployed visibly and permanently                                |   | inches ft lbs no | PASS       |
| 4.3.4     | Dynamic Head First Drop Test:  Test Set-up (Dorsal):  1. Don the harness on the test torso 2. Position dorsal attachment bearing point 8 +/- 1 inch below the top of the shoulder (or maximum lowest position) 3. If equipped with chest strap (section 4.3.2), locate strap +/-2 inches on torso from datum E figure 5 and 1b of standard 4. Attach quick release to the torso crotch, lower torso to remove slack 5. Raise torso to predetermined height, release, measure MAF | Head First DORSAL Attachment Requirements per Section 3.2.1.3.2  Sample ID: 2  Location of Dorsal Attachment Element 8 inches Drop Height 6 ft  Max Arrest Force 2800 lbs  Release from the torso no  Support the torso for a period of 5-minutes post fall  Shall support the torso post fall of an angle not greater than 30° to vertical  At least one fall arrest indicator deployed visibly and permanently |   | PASS             |            |

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| Paragraph | Test Description  | Results   |                           |  | Compliance |
|-----------|---|---|---------------------------|--|------------|
| 4.3.4     | Dynamic Head First Drop Test:   |   |                           |  |            |
|           | Test Set-up (Dorsal):  1. Don the harness on the test torso 2. Position dorsal attachment bearing point 8 +/- 1 inch below the top of the shoulder (or maximum lowest position) 3. If equipped with chest strap (section 4.3.2), locate strap +/-2 inches on torso from datum E figure 5 and 1b of standard 4. Attach quick release to the torso crotch, lower torso to remove slack 5. Raise torso to predetermined height, release, measure MAF | Head First DORSAL Attachmen Requirements per Section 3.2.1.3  Sample ID: 3  Location of Dorsal Attachment Element Drop Height Max Arrest Force Release from the torso  Support the torso for a period of 5-minutes post fall  Shall support the torso post fall of an angle not greater than 30° to vertical  At least one fall arrest indicator deployed visibly and permanently   | .2 8 1 6 2670 yes         | inches ft lbs no  12.1° no   | PASS       |
| 4.3.5     | Static Feet First Test:  Test Set-up (Dorsal):  1. Don the harness on the test torso 2. Secure crotch of test torso to test equipment 3. connect to attachment element 4. mark locations of buckles and adjusters 5. apply 3,600 lb load and maintain for 1-minute 6. Release load and evaluate sample  | Feet First DORSAL Attachment Requirements per Section 3.2.1.3  Sample ID: 1,2,3  Release from the torso  Slippage – Crotch Strap Adjuster, Right  Slippage – Crotch Strap Adjuster, Left  Slippage – Chest Strap Adjuster, Center  Slippage – Chest Strap Adjuster, Right  Slippage – Chest Strap Adjuster, Right  Slippage – Chest Strap Adjuster, Left  Slippage – Other  Slippage – Other  Strap tear further than adjacent eyelet adjuster  Straps shall show no signs of tearing  "Slippage through any adjuster shall not exceed 1-in | .3  0 0 0 0 0 0 na na yes | no inches | PASS       |
| 4.3.6     | Visual Indicator Test:  Test Set-up (Dorsal):  1. Don the harness on the test torso 2. Position dorsal attachment per the Mfg Instructions. 3. Attach quick release to the neck of the test torso 4. Attach a Z359.13 compliant 6-foot EAL to the test anchorage 5. lower torso until test shackles are straight but no load 6. raise torso 24-inches   | DORSAL Attachment Requirements per Section 3.2.1.3  Sample ID: 1,2,3  At least one fall arrest indicator shall deploy visibly and permanently   | .4<br>YE                  | S  | PASS       |

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| Paragraph | Test Description   | Results   | Compliance |
|-----------|--|---|------------|
| <u> </u>  | ·  | ST TEST FOR HIP /SHOULDER ATTACHMENT ELEMENT  |            |
| 4.3.5     | Static Feet First  Test Set-up (Hip):  1. Don the harness on the test torso 2. Secure crotch of test torso to test equipment 3. connect to attachment element 4. mark locations of buckles and adjusters 5. apply 3,600 lb load and maintain for 1-minute 6. Release load and evaluate sample            | Feet First Hip Attachment Requirements per Section 3.2.1.3.3  Sample ID: 1,2,3  Release from the torso no Slippage – Crotch Strap Adjuster, Right oinches Slippage – Crotch Strap Adjuster, Left oinches Slippage – Chest Strap Adjuster, Center oinches Slippage – Chest Strap Adjuster, Right oinches Slippage – Chest Strap Adjuster, Right oinches Slippage – Chest Strap Adjuster, Left oinches Slippage – Chest Strap Adjuster, Left oinches Slippage – Other na inches Slippage – Other na inches Slippage – Other na inches Strap tear further than adjacent eyelet adjuster na Strap shall show no signs of tearing yes  "Slippage through any adjuster shall not exceed 1-inch" | PASS       |
| 4.3.5     | Static Feet First Test:  Test Set-up (Sternal):  1. Don the harness on the test torso 2. Secure crotch of test torso to test equipment 3. connect to attachment element 4. mark locations of buckles and adjusters 5. apply 3,600 lb load and maintain for 1-minute 6. Release load and evaluate sample  | Feet First Hip Attachment Requirements per Section 3.2.1.3.3  Sample ID: 1,2,3  Release from the torso no Slippage – Crotch Strap Adjuster, Right 0 inches Slippage – Crotch Strap Adjuster, Left 0 inches Slippage – Chest Strap Adjuster, Center 0 inches Slippage – Chest Strap Adjuster, Right 0 inches Slippage – Chest Strap Adjuster, Right 0 inches Slippage – Chest Strap Adjuster, Left 0 inches Slippage – Other na inches Slippage – Other na inches Slippage – Other na inches Strap tear further than adjacent eyelet adjuster na Strap shall show no signs of tearing yes  "Slippage through any adjuster shall not exceed 1-inch"   | PASS       |
| 4.3.5     | Static Feet First Test:  Test Set-up (Shoulder):  1. Don the harness on the test torso 2. Secure crotch of test torso to test equipment 3. connect to attachment element 4. mark locations of buckles and adjusters 5. apply 3,600 lb load and maintain for 1-minute 6. Release load and evaluate sample | Feet First Shoulder Attachment Requirements per Section 3.2.1.3.3  Sample ID: 1,2,3  Release from the torso no Slippage – Crotch Strap Adjuster, Right 0 inches Slippage – Crotch Strap Adjuster, Left 0 inches Slippage – Chest Strap Adjuster, Center 0 inches Slippage – Chest Strap Adjuster, Right 0 inches Slippage – Chest Strap Adjuster, Right 0 inches Slippage – Chest Strap Adjuster, Left 0 inches Slippage – Other na inches Slippage – Other na inches Strap tear further than adjacent eyelet adjuster na Straps shall show no signs of tearing yes  "Slippage through any adjuster shall not exceed 1-inch"  | PASS       |

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| Paragraph | Test Description   |             | Results                              |             |           |  | Compliance |
|-----------|--|-------------|--------------------------------------|-------------|-----------|--|------------|
| 4.3.7     | Static Feet First Test for Lanyard   |             |                                      |             |           |  |            |
|           | Parking Attachment Element:  |             |                                      |             |           |  |            |
|           |  |             | Static Feet Fi                       |             |           |  |            |
|           | Test Set-up:   | Sampl       | Requirements per Sec                 | tion 3.1.12 |           | $\dashv$                                     |            |
|           |  |             | n disengagement load                 | 93          | lbs       | _  |            |
|           | 1. Don the harness on the test torso   |             | eed 120 lbs                          | 73          | no        |  |            |
|           | 2. Secure crotch of test torso to test   |             |                                      |             |           |  |            |
|           | equipment 3. connect to attachment element   |             | Static Feet Fi                       | irst        |           |  |            |
|           | 4. apply steady load until connection  |             | Requirements per Sec                 |             |           |  |            |
|           | between lanyard parking attachment   | Sampl       |                                      | 2           | 11        | _  |            |
|           | and test lanyard separate  |             | m disengagement load<br>reed 120 lbs | 99          | lbs<br>no | _  | PASS       |
|           | 6. Record maximum force applied  | Load ex     | eed 120 108                          |             | 110       |  |            |
|           |  |             | Static Feet Fi                       | irst        |           | $\neg$                                       |            |
|           |  |             | Requirements per Sec                 |             |           |  |            |
|           |  | Sampl       |                                      | 3           |           |  |            |
|           |  |             | n disengagement load                 | 95          | lbs       |  |            |
|           |  | Load exc    | eed 120 lbs                          |             | no        |  |            |
|           |  |             |                                      |             |           |  |            |
|           |  |             |                                      |             |           |  |            |
|           |  |             |                                      |             |           |  |            |
|           |  |             |                                      |             |           |  |            |
| 5         |  | "7          | Marking and Instructions"            |             |           |  |            |
| 5.1       | Marking Requirements   |             | Turning wife Theoret everene         |             |           |  |            |
| 3.1       | Warking Requirements   |             |                                      |             |           |  |            |
| 5.1.1     | Shall be in English  |             |                                      |             |           |  | PASS       |
| 5.1.2     | Required markings shall endure the life of   | f the       |                                      |             |           |  |            |
|           | component, when PSL's are used they sha  |             |                                      |             |           |  | PASS       |
|           | with UL969-2001 (section 7.2.1)  |             |                                      |             |           |  | rass       |
|           |  |             |                                      |             |           |  |            |
| 5.1.3     |  |             |                                      |             |           |  |            |
|           | Full Body Harnesses shall be marked with   | n the follo | ving:                                |             |           |  |            |
|           |  |             |                                      |             |           |  |            |
|           | Marking  | Con         | nments                               | YES         | NO        | NA   |            |
|           | Materials of Construction  |             |                                      | X           |           |  |            |
|           | Size or range of sizes   |             |                                      | X           |           |  |            |
|           | Part number and model designation  |             |                                      | X           |           |  |            |
|           | Year of manufacture  |             |                                      | X           |           |  | DAGG       |
|           | Manufacturer's name or logo Warning to follow the manufacturer's                                     |             |                                      | X           |           |  | PASS       |
|           | Warning to follow the manufacturer's instructions included with the equipment at tin                 | ne          |                                      | X           |           |  |            |
|           | of shipment from the manufacturer  |             |                                      |             |           |  |            |
|           | A label permanently attached to the lanyard  |             |                                      |             |           |  |            |
|           | parking attachment which states, "Park Lanyar  | rd          |                                      | X           |           |  |            |
|           | Here", See Instructions  |             |                                      |             |           |  |            |
|           | A label as defined in figure 10a & 10b of the standard   |             |                                      | X           |           |  |            |
|           | Swarand G  |             |                                      | 1           | 1         | <u>,                                    </u> |            |
| 5.2       | Instructions Requirements  |             |                                      |             |           |  |            |
| 5.2.1     | •  | tha         |                                      |             |           |  |            |
| 3.2.1     | Instructions shall be in English, and affixed to equipment at time of shipment from the manufacture. |             |                                      |             |           |  | PASS       |
|           | equipment at time of simplificit from the manuf  | acturel     | L                                    |             |           |  |            |

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| Paragraph | Test Description  | Resul    | ts |     |    |      | Compliance |  |  |  |
|-----------|---|----------|----|-----|----|------|------------|--|--|--|
| 5.2.2     | Instructions shall contain the following informa  | ation:   |    |     |    |      |            |  |  |  |
|           | Instructions  | Comments |    | YES | NO | NA   |            |  |  |  |
|           | Appendix A of the standard in it's entirety   |          |    | X   |    |      |            |  |  |  |
|           | A statement that the manufacturer's instructions  |          |    |     |    |      |            |  |  |  |
|           | shall be provided to the users  |          | X  |     |    |      |            |  |  |  |
|           | Manufacturers name, address, and telephone  |          |    | X   |    |      |            |  |  |  |
|           | number  |          |    | Λ   |    |      |            |  |  |  |
|           | Manufacturer's part number and model  |          |    | X   |    |      |            |  |  |  |
|           | designation for the equipment   |          |    |     |    |      |            |  |  |  |
|           | Intended use and purpose of the equipment   |          |    | X   |    |      |            |  |  |  |
|           | Length of Harness Effect  |          |    | X   |    |      |            |  |  |  |
|           | Proper method of use and limitations on use of the equipment                                |          |    | X   |    |      |            |  |  |  |
|           | Illustrations showing locations of markings on  |          |    | +   |    |      | - D.A.G.G  |  |  |  |
|           | the equipment   |          |    | X   |    |      | PASS       |  |  |  |
|           | Reproduction of printed information on all  |          |    | +   |    |      |            |  |  |  |
|           | markings  |          |    | X   |    |      |            |  |  |  |
|           | Inspection procedures required to assure the  |          |    |     |    |      |            |  |  |  |
|           | equipment is in serviceable condition and   |          |    | X   |    |      |            |  |  |  |
|           | operating correctly   |          |    |     |    |      |            |  |  |  |
|           | Criteria for discarding equipment which fails   |          |    | X   |    |      |            |  |  |  |
|           | inspection  |          |    |     |    |      |            |  |  |  |
|           | Procedures for cleaning. maintenance, and   |          |    | X   |    |      |            |  |  |  |
|           | storage   |          |    | 37  |    |      |            |  |  |  |
|           | Reference to Z359.11 Acceptable use for all attachment elements (see                        |          |    | X   |    |      |            |  |  |  |
|           | Acceptable use for all attachment elements (see Appendix A of the standard)                 |          |    | X   |    |      |            |  |  |  |
|           | Appendix A of the standard)   |          |    |     |    |      |            |  |  |  |
| 5.2.3     | Instructions shall require that only the equipment  |          |    |     |    |      |            |  |  |  |
| 5.2.5     | manufacturer, or persons or entities authorized in writing                                  | ting     |    |     |    |      | PASS       |  |  |  |
|           | by the manufacturer, shall make repairs to the equipr                                       |          |    |     |    |      | 17155      |  |  |  |
| 5.2.4     | Instructions shall require the user to remove equipme                                       |          |    |     |    |      |            |  |  |  |
|           | from service if it has been subjected to the forces of                                      |          |    |     |    |      | PASS       |  |  |  |
|           | arresting a fall and will include information on inspe                                      | ction    |    |     |    |      | PASS       |  |  |  |
|           | of load indicators  |          |    |     |    |      |            |  |  |  |
| 5.2.5     | Instructions shall require the user to have a rescue plant.                                 |          |    |     |    |      |            |  |  |  |
|           | and the means at hand to implement it when using th   | e        |    |     |    |      | PASS       |  |  |  |
| 506       | equipment   |          |    |     |    |      |            |  |  |  |
| 5.2.6     | Instructions shall provide warnings regarding:  | <u> </u> |    | MEG | NO | NTA. |            |  |  |  |
|           | Warnings  | Comments |    | YES | NO | NA   |            |  |  |  |
|           | Altering the equipment  |          |    | X   |    |      |            |  |  |  |
|           | Misusing the equipment  |          |    | A   |    |      |            |  |  |  |
|           | Using combinations of components or sub-<br>systems, or both, which may affect or interfere |          |    | X   |    |      |            |  |  |  |
|           | with the safe function of each other  |          |    | Α.  |    |      |            |  |  |  |
|           | Exposing the equipment to chemicals, heat,  |          |    | +   |    |      |            |  |  |  |
|           | flames, or other environmental conditions, which  |          |    |     |    |      | PASS       |  |  |  |
|           | may produce a harmful effect and to consult the   |          |    | X   |    |      |            |  |  |  |
|           | manufacturer in case of doubt   |          |    |     |    |      |            |  |  |  |
|           | Using the equipment around moving machinery   |          |    | X   |    |      |            |  |  |  |
|           | and electrical hazards  |          |    | Λ   |    |      |            |  |  |  |
|           | Using the equipment near sharp edges or   |          |    | X   |    |      |            |  |  |  |
|           | abrasive surfaces   |          |    |     | 1  | 1    |            |  |  |  |
|           | Exposure to light (UV degradation)  |          |    |     |    | X    |            |  |  |  |

#### **SECTION 5**

#### **REVISION HISTORY**

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Report No.: 105844345CRT-001

Date: June 10, 2024

| REPORT NUMBER    | DATE OF<br>REVISION | DESCRIPTION OF CHANGE:                                    | PROJECT<br>OWNER | REVIEWED BY     |
|------------------|---------------------|---|------------------|-----------------|
| 105167073CRT-001 | 08/31/2022          | Original Report   | Steven Morey     | Matthew Stevens |
| 105167073CRT-002 | 09/11/2023          | Added Sternal Drop<br>(4.3.3) & Sternal<br>Static (4.3.5) | Alex Smith       | Matthew Stevens |
| 105844345CRT-001 | 06/10/2024          | Report Extension  | Alex Smith       | Matthew Stevens |

#### **SECTION 6**

#### PHOTOGRAPH(S)

UFH10541G



UFH10511G

UFH10551Q



UFH10511Q

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UFH10531Q



UFH10551G



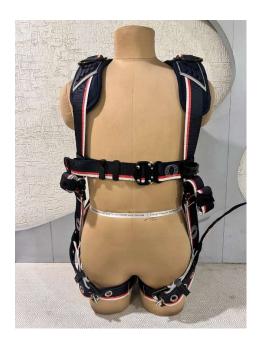
UFH10502G UFH11502Q

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UFH10533G



UFH10533Q



Report No.: 105844345CRT-001

UFH10541Q

