INTERTEK TEST REPORT

**Frontline Fall Protection Inc**
**6 Lee Blvd**
**Malvern, PA 19355**
**Phone: +1 305-721-4407**
**info@frontlinefall.com**

| | |
|---|---|
| **Intertek Test Report Number:** | **106119125CRT-001** |
| **Original Intertek Test Report Number:** | **G102785334CRT-001** |
| **Intertek *Signed* Quote Number (s):** | **Qu-01510686** |
| **Product Type:** | **PEA Y Lanyard** |
| **Product Model:** | **LIS62RDL** |
| **Shared Model:** | **LIS61SDL** |
| **Type of Testing Entity:** | **Third Party Testing Laboratory** |
| **Test Standard:** | **ANSI/ASSE Z359.13-2013** |
| **Evaluation/Testing Location:** | **Intertek, 3933 US Rte 11, Cortland NY 13045 **** |
| **Date(s) of Testing:** | **12/5/16 – 12/7/16** |

Dear Mr. Betancourt,

Intertek has completed the evaluation of your LIS62RDL PEA Y 6' Lanyard, to the client specified requirements of American National Standard, Safety Requirements for Personal Energy Absorbers and Energy Absorbing Lanyards, ANSI/ASSE Z359.13. The test samples were received in pristine condition. The evaluation was performed at Intertek in Cortland, NY on the dates posted below. The results of these tests are as indicated below.

| Tests Completed | Test Date | ANSI/ASSE Z359.13-2013, | Pass/Fail |
|---|---|---|---|
| Static Strength | 12/6/16 | 4.7 | PASS |
| Activation Force | 12/5/16 | 4.2 | PASS |
| Dynamic Performance (Y Lanyard) | 12/5/16 | 4.8 & 4.9 | PASS |
| Dynamic Performance (Hip) | 12/5/16 | 4.10 | PASS |
| General Requirements | 12/5/16 | 3 | PASS |
| Markings and instructions | 12/5/16 | 5 | PASS |

**Please see attached test data for details.**
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.

Written by,

Alex Smith
Technician
Performance Group

Reviewed by,

Matthew Stevens
Team Leader
Performance Group

** "Intertek Laboratory is ISO/IEC 17025:2005 (CAN-P-4E) accredited by Standards Council of Canada (SCC) with the scope available for review at the following location: http://www.scc.ca/en/palcan/38

| | | | | | |
|---|---|---|---|---|---|
| Client/Ref #: | Frontline Fall Protection Inc | Engineer: | Andrew Rulison | | |
| Job No.: | G106119125 | Tested By: | Matthew Stevens | Date: | 12/07/2016 |
| Product: | PEA 6' Y Lanyard | Reviewed By: | Matthew Stevens | Date: | 3/5/2025 |
| Model No.: | LIS62RDL | Standard: | ANSI/ASSE Z359.13-2013 | | |
| Description: | See Above | | | | |

Sample Control No : CRT1611301548 **TRANSCRIBED TEST DATA**

| System Verification<br>System Includes: Load Cell, NI Card, & Labview Program | | |
|---|---|---|
| ***Pre-Calibration*** | | |
| 1. Zero program | | Yes |
| 2. Attach weight to load cell | Weight used (lbs): 282 | |
| 3. Activate Labview | | Yes |
| 4. Record Weight | Weight recorded (lbs): 282.4 | |
| ***Post-Calibration*** | | |
| 1. Zero program | | Yes |
| 2. Attach weight to load cell | Weight used (lbs): 282 | |
| 3. Activate Labview | | Yes |
| 4. Record Weight | Weight recorded (lbs):282.6 | |
| 5. Completed by and date | By: MS | Date: 12/5/16 – 12/7/16 |

| Section (Test) | Requirement | Results | | Compliance |
|---|---|---|---|---|
| 3 | Requirements | | | |
| 3.1 | Personal Energy Absorber (PEA) Component | | | |
| 3.1.1 | Classifications | | | |
| 3.1.1.1 | 6 ft FF | | YES | PASS |
| 3.1.1.2 | 12 ft FF | | NA | NA |
| 3.1.2 | Material | Virgin synthetic materials | YES | PASS |
| 3.1.3 | Terminations | | | |
| 3.1.3.1 | Spliced | | NA | NA |
| 3.1.3.2 | Stitched | | YES | PASS |
| 3.1.3.3 | Wire rope | | NA | NA |
| 3.1.3.4 | Terminations (other) | | NA | NA |
| 3.1.4 | Connectors | Meet Z359.1 or Z359.12 | YES | PASS |
| 3.1.5 | Deployment indicator | Obvious it is activated, flag or label | YES | PASS |

Client/Ref #: Frontline Fall Protection Inc
Job No.: G106119125
Product: PEA 6' Y Lanyard
Model No.: LIS62RDL
Description: See Above

Engineer: Andrew Rulison
Tested By: Matthew Stevens Date: 12/07/2016
Reviewed By: Matthew Stevens Date: 3/5/2025
Standard: ANSI/ASSE Z359.13-2013

Sample Control No : CRT1611301548

**TRANSCRIBED TEST DATA**

| Section (Test) | Requirement | Results | Compliance |
|---|---|---|---|
| 3.2.9 (4.7) | **Static Strength Testing of Y-Lanyards**<br><br>Subject Y-lanyard to a force > 5,000 lbs-f for 1 minute. Time to reach load to be 3-minutes minimum. | **Configuration #1 (section 4.7.1) Connection – central connector/one EAL leg**<br>**6 ft** X — Sample: 1 — Sample: 2 — Sample: 3<br>**12 ft**<br>Break — NO — NO — NO<br><br>**Configuration #2 (section 4.7.2) Connection – central connector/alternate leg**<br>**6 ft** X — Sample: 1 — Sample: 2 — Sample: 3<br>**12 ft**<br>Break — NO — NO — NO<br><br>**Configuration #3 (section 4.7.3) Connection – between two EAL legs (Miss-use)**<br>**6 ft** X — Sample: 1 — Sample: 2 — Sample: 3<br>**12 ft**<br>Break — NO — NO — NO | PASS |

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Job No.: G106119125 | Tested By: Matthew Stevens | Date: 12/07/2016
Product: PEA 6' Y Lanyard | Reviewed By: Matthew Stevens | Date: 3/5/2025
Model No.: LIS62RDL | Standard: ANSI/ASSE Z359.13-2013
Description: See Above

Sample Control No : CRT1611301548 **TRANSCRIBED TEST DATA**

| Section (Test) | Requirement | Results | Compliance |
|---|---|---|---|
| 3.2.10.1<br>3.2.10.2<br>(4.8 & 4.9) | **AMBIENT DRY: Dynamic Performance Testing of EA Lanyards, Test within 5-min. of conditioning** | | PASS |

| Requirements | | |
|---|---|---|
| | Avg. AF lbs-f | Max. AF lbs-f |
| **Ambient Dry** | | |
| 6ft FF | < 900 | < 1,800 |
| 12 ft FF | < 1,350 | < 1,800 |
| **Max. Deployment Distance** | | |
| 6ft FF | 48- inches | |
| 12 ft FF | 60-inches | |

| Condition Samples 24 hrs | |
|---|---|
| Temp: 21 C +/-3 (70 F +/- 5) | 69.8 F |
| RH: 65 +/-5 | 64.3 % |
| Start Time: | 12/4/16 |
| Stop Time: | 12/5/16 |

| **Ambient Dry – Single Leg Connection** | | | | | |
|---|---|---|---|---|---|
| **6 ft FF:** | **X** | Sample: 1 | Sample: 2 | Sample: 3 | |
| **12 ft FF:** | | | | | |
| **"Zero" force sensor:** | | YES | YES | YES | |
| Time: chamber to drop: | | 1 | 1 | 1 | Min |
| Time: in chamber | | >24h | >24h | >24h | Hrs/min |
| Elongation, initial: | | 108 | 108 | 108 | Inches |
| Elongation, final: | | 149 | 150 | 151 | Inches |
| Total Elongation (Ef-Ei): | | 41 | 42 | 43 | Inches |
| AF avg. : | | 756 | 754 | 741 | Lbs-f |
| AF max. : | | 1112 | 1019 | 996 | Lbs-f |
| **Ambient Dry – Dual Leg Connection** | | | | | |
| **6 ft FF:** | **X** | Sample: 1 | Sample: 2 | Sample: 3 | |
| **12 ft FF:** | | | | | |
| **"Zero" force sensor:** | | YES | YES | YES | |
| AF avg. : | | 753 | 748 | 746 | Lbs-f |
| AF max. : | | 1067 | 977 | 1010 | Lbs-f |

| | | | | | |
|---|---|---|---|---|---|
| 4.10 | Dynamic Performance Testing of Y-Lanyards – Hip Test<br><br>Ref: section 3.2.10 | | | | PASS |

| **Ambient Dry** | | **Sample 1** | **Sample 2** | **Sample 3** |
|---|---|---|---|---|
| **6 ft FF:** | | X | X | X |
| **12 ft FF:** | | | | |
| **"Zero" sensor:** | | Yes | Yes | Yes |
| AF avg. : Lbs | | 725 | 728 | 754 |
| AF max. : Lbs | | 1229 | 1110 | 1160 |
| Nylon keeper broke | | YES | YES | YES |

* IF keeper broke, the EAL must include a warning label on each leg (section 5.2.2)

Client/Ref #: Frontline Fall Protection Inc Engineer: Andrew Rulison
Job No.: G106119125 Tested By: Matthew Stevens Date: 12/07/2016
Product: PEA 6' Y Lanyard Reviewed By: Matthew Stevens Date: 3/5/2025
Model No.: LIS62RDL Standard: ANSI/ASSE Z359.13-2013
Description: See Above

Sample Control No : CRT1611301548 **TRANSCRIBED TEST DATA**

| Section (Test) | Requirement | Results | Compliance |
|---|---|---|---|
| 4.2 | **Activation Force Testing of PEA's**<br><br>Apply 10 lb load and measure bearing pt to bearing pt, apply static force of 450 lbs minimum, hold for no less than 1 minute, examine for activation, release load, allow sample to recover un-tensioned for 1 hour , then re-measure with 10-lb load, shall not activate or elongate > 2-inches. | | PASS |

| **6 ft FF:** | **X** | Sample: 1 | Sample: 2 | Sample: 3 | |
|---|---|---|---|---|---|
| **12 ft FF:** | | | | | |
| Signs of Activation: | | NO | NO | NO | |
| Length, initial: | | 72 | 72 | 72 | Inches |
| Length, final: | | 72 ¾ | 72 ¾ | 72 ¾ | Inches |
| Elongation (Lf-Li): | | ¾ | ¾ | ¾ | Inches |

| | | | |
|---|---|---|---|
| 3.2 | Energy Absorbing Lanyard (EAL) component | | PASS |
| 3.2.1 | Material | | PASS |
| 3.2.2 | Terminations | | PASS |
| 3.2.2.1 | Spliced | | PASS |
| 3.2.2.2 | Stitched | | PASS |
| 3.2.2.3 | Wire rope | | PASS |
| 3.2.2.4 | Terminations (other) | | PASS |
| 3.2.3 | EAL Connectors | | PASS |
| 5 | Marking and Reference Literature | | |
| 5.1 | General Marking Requirements | | |
| 5.1.1 | Shall be in English | | PASS |
| 5.1.2 | Required markings shall endure the life of the component, when PSL's are used they shall comply with UL969-89 | | PASS |
| 5.1.3 | Equipment shall be marked with the following: | | PASS |

| Marking | Comments | YES | NO | NA |
|---|---|---|---|---|
| Part number and model designation | | X | | |
| Year of manufacture | | X | | |
| Manufacturer's name or logo | | X | | |
| Capacity rating | | X | | |
| Serial number | | X | | |
| Standard number | | X | | |
| Warning to follow the manufacturer's instructions included with the equipment at time of shipment from the manufacturer | | X | | |

| | | |
|---|---|---|
| 5.2 | Specific marking requirements | |

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Model No.: LIS62RDL Standard: ANSI/ASSE Z359.13-2013
Description: See Above

Sample Control No : CRT1611301548 **TRANSCRIBED TEST DATA**

<table>
<tr><th>Section (Test)</th><th>Requirement</th><th>Results</th><th>Compliance</th></tr>
<tr><td>5.2.1</td><td>PEA's and EAL's shall be marked with the following:
<table>
<tr><th>Marking</th><th>Comments</th><th>YES</th><th>NO</th><th>NA</th></tr>
<tr><td>The fiber used in the material of construction</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td>The length</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td>The need to avoid contact with sharp edges and abrasive surfaces</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td>The need to make only compatible connections</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td>The maximum elongation</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td>Restriction, if, any, on the types of components, with which the PEL is designed to be used</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td>The Avg AF, Max FF distance , and capacity of the PEA on a separate label identical in size, color, and content as fig 17a and 17b</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td>6 ft FF PEA's shall be in black print on a contrasting white background, fig 17a</td><td></td><td></td><td></td><td>X</td></tr>
<tr><td>12 ft FF PEA's shall be in white print on a contrasting black background, fig 17b</td><td></td><td>X</td><td></td><td></td></tr>
</table></td><td></td><td>PASS</td></tr>
<tr><td>5.2.2</td><td>Y-Lanyard Marking<br><br>In addition to, Y-Lanyards that fail the Dynamic Hip Test in section 3.2.10 must include a warning on both connecting ends of the lanyard specifically directing users how to safely store the unused leg of the lanyard</td><td></td><td>PASS</td></tr>
<tr><td>5.3</td><td>General Instruction Requirements</td><td></td><td></td></tr>
<tr><td>5.3.1</td><td>Instructions shall be in English, and affixed to the equipment at time of shipment from the manufacturer</td><td></td><td>PASS</td></tr>
<tr><td>5.3.2</td><td>Instructions shall contain the following information:
<table>
<tr><th>Instructions</th><th>Comments</th><th>YES</th><th>NO</th><th>NA</th></tr>
<tr><td>A statement that the manufacturer's instructions shall be provided to the users</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td>Manufacturers name, address, and telephone number</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td>Manufacturer's part number and model designation for the equipment</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td>Intended use and purpose of the equipment</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td>Proper method of use and limitations on use of the equipment</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td>Illustrations showing locations of markings on the equipment</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td>Reproduction of printed information on all markings</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td>Inspection procedures required to assure the equipment is in serviceable condition and operating correctly</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td>Anchorage requirements</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td>An illustration of how to calculate free fall distances</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td>Criteria for discarding equipment which fails inspection</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td>Procedures for cleaning. maintenance, and storage</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td>Reference to Z359.13</td><td></td><td>X</td><td></td><td></td></tr>
</table></td><td></td><td>PASS</td></tr>
</table>

Client/Ref #: Frontline Fall Protection Inc
Job No.: G106119125
Product: PEA 6' Y Lanyard
Model No.: LIS62RDL
Description: See Above

Engineer: Andrew Rulison
Tested By: Matthew Stevens Date: 12/07/2016
Reviewed By: Matthew Stevens Date: 3/5/2025
Standard: ANSI/ASSE Z359.13-2013

Sample Control No : CRT1611301548 **TRANSCRIBED TEST DATA**

| Section (Test) | Requirement | Results | Compliance |
|---|---|---|---|
| 5.3.3 | Instructions shall require that only the equipment manufacturer , or persons or entities authorized in writing by the manufacturer, shall make repairs to the equipment | | PASS |
| 5.3.4 | Instructions shall require the user to remove equipment from field service if it has been subjected to the forces of arresting a fall | | PASS |

SECTION 5

**REVISION HISTORY**

| REPORT NUMBER | DATE OF REVISION | DESCRIPTION OF CHANGE: | PROJECT OWNER | REVIEWED BY |
|---|---|---|---|---|
| 106119125CRT-001 | 3/5/2024 | Report Extension | Alex Smith | Matthew Stevens |