



# GUARDIAN® ANSI/ASSP Z359.14-2021

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**Test Report Number:** 202306134200007  
**Job Number:** 1016, 202306134200007C  
**Product SKU#:** 4200007  
**Product Type:** Self-Retracting Device  
**Product Description:** SRL, CLASS 2, EDGE, SINGLE, 10FT, GALV CABLE, INDICATING STEEL SNAP HOOK, NO BACK PAD  
**Testing Standard:** ANSI/ASSP Z359.14-2021 Safety Requirements for Self-Retracting Devices for Personal Fall Arrest and Rescue Systems  
**Date(s) of Manufacture:** 5/01/2022  
**Date(s) of Testing:** 4/03/2020, 5/23/2023, 5/24/2023, 5/25/2023, 5/26/2023

## REQUIREMENT VERIFICATION

| Requirement Description   | Clause/Section               | Result           |
|---------------------------|------------------------------|------------------|
| General Requirements      | 3.1 General Requirements     | Meets or Exceeds |
| Markings and Instructions | 5. Markings and Instructions | Meets or Exceeds |

## QUALIFICATION TESTING

| Test Description                                           | Test Date | Clause/Section                                                                           | Result                        |
|------------------------------------------------------------|-----------|------------------------------------------------------------------------------------------|-------------------------------|
| Static Strength (SRD)                                      | 5/23/2023 | 4.2.1 Static Testing of Self-Retracting Devices                                          | Pass                          |
| Locking Strength                                           | 5/23/2023 | 4.2.3 Locking Strength Testing of Self-Retracting Devices                                | Pass                          |
| Dynamic Performance (SRD, Ambient)                         | 5/23/2023 | 4.3.1 Dynamic Performance of Self-Retracting Devices (SRDs)                              | Pass                          |
| Dynamic Performance (SRD, Hot)                             | 5/23/2023 | 4.3.1.7 Dynamic Performance of Self-Retracting Devices (SRDs, Hot)                       | Pass                          |
| Dynamic Performance (SRD, Cold)                            | 5/23/2023 | 4.3.1.8 Dynamic Performance of Self-Retracting Devices (SRDs, Cold)                      | Pass                          |
| Dynamic Performance (SRD, Wet)                             | 5/23/2023 | 4.3.1.9 Dynamic Performance of Self-Retracting Devices (SRDs, Wet)                       | Pass                          |
| Retraction Testing                                         | 5/23/2023 | 4.5.1 Retraction Tension Testing of Self-Retracting Device Line                          | Pass                          |
| Dynamic Performance (Class 2, Perpendicular to edge)       | 5/24/2023 | 4.3.3 Additional Dynamic Performance Testing of Self-Retracting Devices (SRDs) Class 2   | Pass                          |
| Dynamic Performance (Class 2, Perpendicular to edge, Hot)  | 5/24/2023 | 4.2.8.1 Additional Dynamic Performance Testing of Self-Retracting Devices (SRDs) Class 2 | Pass                          |
| Dynamic Performance (Class 2, Perpendicular to edge, Cold) | 5/24/2023 | 4.2.8.2 Additional Dynamic Performance Testing of Self-Retracting Devices (SRDs) Class 2 | Pass                          |
| Dynamic Performance (Class 2, Perpendicular to edge, Wet)  | 5/25/2023 | 4.2.8.3 Additional Dynamic Performance Testing of Self-Retracting Devices (SRDs) Class 2 | Pass                          |
| Dynamic Performance (Class 2, Offset from edge)            | 5/24/2023 | 4.3.3 Additional Dynamic Performance Testing of Self-Retracting Devices (SRDs) Class 2   | Pass                          |
| Dynamic Performance (Class 2, Offset edge, Hot)            | 5/24/2023 | 4.2.8.1 Additional Dynamic Performance Testing of Self-Retracting Devices (SRDs) Class 2 | Pass                          |
| Dynamic Performance (Class 2, Offset from edge, Cold)      | 5/24/2023 | 4.2.8.2 Additional Dynamic Performance Testing of Self-Retracting Devices (SRDs) Class 2 | Pass                          |
| Dynamic Performance (Class 2, Offset from edge, Wet)       | 5/25/2023 | 4.2.8.3 Additional Dynamic Performance Testing of Self-Retracting Devices (SRDs) Class 2 | Pass                          |
| Corrosion Test                                             | 4/03/2020 | 7.4 ASTM B117, Standard Practice for Operating Salt Spray (Fog) Apparatus                | See Appended Corrosion Report |

This test report covers these additional products:

Please contact [quality@guardianfall.com](mailto:quality@guardianfall.com) for signed report.

| Test Equipment            |               |             |
|---------------------------|---------------|-------------|
| Equipment                 | Model         | Serial      |
| Load Cell                 | 1220ACK-25K-B | 367976A     |
| Load Cell                 | 1210AF-10K-B  | 444522A     |
| Test Weight               | 282 lb        | GFP001      |
| Test Weight               | 18 lb         | GFP002      |
| Test Weight               | 10 lb         | GFP005      |
| Measuring Tape (Pasadena) | TX1-25        | 20243698    |
| Environmental Chamber     | S-8-8200      | 46336       |
| Environmental Chamber     | SM-16-8200    | 49357       |
| Scale                     | Totalcomp     | 02314063019 |

#### Notes

| 3.1     | General Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                     |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 3.1.1   | Integral Connectors. Snaphooks or carabiners which are integral to self-retracting devices shall meet the requirements of the most recent version of ANSI/ASSP Z359.12. Integral rings or similar openings intended to accept a snaphook or carabiner shall be designed to minimize the possibility of rollout of a mating snaphook or carabiner.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Meets or Exceeds    |
| 3.1.2   | Locking Function. Self-retracting devices shall be automatic in their locking (fall arresting) function. It shall not be possible to override the self-locking feature of the device when in use. The design of working parts, their location and the protection afforded to them shall be such as to prevent the possibility of performance being impaired by casual interference.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Meets or Exceeds    |
| 3.1.3   | Energy Absorption. Self-retracting devices which perform an energy absorption function shall be designed such that the energy absorption function is available throughout the usable working range of the device. The working range or length is defined as the amount of travel allowed by the device starting from full retraction to full extension under normal working tension.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Meets or Exceeds    |
| 3.1.4   | 3.1.4 Visual Indicator. Self-retracting devices shall include a visual indicator that will activate in accordance with the requirements of 3.3.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Meets or Exceeds    |
| 3.1.5   | Corrosion Protection. Corrosion protection shall be afforded to all elements (parts) of self-retracting devices. Protection shall, at a minimum, allow the device to operate as intended and show no signs of corrosion which, if left unchecked, could result in corrosion-related failure of the device after being salt spray (fog) tested for 96 hours in accordance with the method described in the reference in 7.4. After the salt spray test, the line shall pay out, retract and lock. Retraction tension shall be as specified in 3.5.                                                                                                                                                                                                                                                                                                                                                                                    | See Appended report |
| 3.1.6   | Line Constituent of Self-Retracting Devices                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                     |
| 3.1.6.1 | Webbing and Synthetic Rope. Webbing and synthetic rope used as a line constituent of the self-retracting device shall be made of pure or non-recycled synthetic materials having strength, aging and abrasion resistance characteristics equivalent or superior to polyamides. Other synthetic materials than those stated herein are permitted for the line constituent of SRDs only when it can be demonstrated that all requirements of this standard are met and, additionally, that the durability, reliability and other properties pertinent to the intended uses have been evaluated and determined suitable by the manufacturer. Any restrictions on the use of such SRDs shall be marked on the SRD. Webbing shall have a minimum breaking strength of 4,500 pounds (20kN) for Class 1 devices and 5,000 pounds (22.2kN) for Class 2 devices, when tested in accordance with references in 7.1, 7.2 or 7.3 as appropriate. | Meets or Exceeds    |
| 3.1.6.2 | Wire Rope. Wire rope used as a line constituent of a self-retracting device shall be constructed of stainless steel or galvanized steel strand. There is no required specification, provided that the SRD meets the minimum requirements of 3.2.1 and 3.3.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Meets or Exceeds    |
| 3.1.6.3 | Terminations of the constituent line shall be designed so as to meet the requirements of 3.2.1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Meets or Exceeds    |
| 3.1.7   | Class 2 Energy Absorber. The line constituent of Class 2 devices shall include an integral energy absorber element adjacent to the end of the line which connects to the body support. The energy absorber shall meet the requirements of ANSI/ASSP Z359.13. Alternative energy absorber designs are allowed provided all performance requirements for Class 2 devices are satisfied including 3.2.1 with the alternative energy absorber included during the static test. If the Class 2 device housing(s) is intended to be connected to the full body harness and can only be used in this orientation, then an energy absorber is not required as part of the line constituent although an energy management system is still required.                                                                                                                                                                                           | Meets or Exceeds    |

## Notes

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|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>5</b>     | <b>Instruction Requirements</b>                                                                                                                                                                                                                                                                                                                         |                  |
| <b>5.1</b>   | <b>Marking Requirements</b>                                                                                                                                                                                                                                                                                                                             |                  |
| <b>5.1.1</b> | Warnings shall be in English and shall meet the formatting requirements of the reference in 7.7. Non-warning markings shall be in English or pictorial format.                                                                                                                                                                                          | Meets or Exceeds |
| <b>5.1.2</b> | The legibility and attachment of required markings shall endure for the life of the component, subsystem or system being marked. When pressure-sensitive labels are used, they shall comply with the applicable provision of the reference in 7.6.                                                                                                      | Meets or Exceeds |
| <b>5.1.3</b> | Self-Retracting Devices shall be marked with:                                                                                                                                                                                                                                                                                                           |                  |
|              | - part number and model designation                                                                                                                                                                                                                                                                                                                     | Meets or Exceeds |
|              | - year of manufacture                                                                                                                                                                                                                                                                                                                                   | Meets or Exceeds |
|              | - manufacturer's name or logo                                                                                                                                                                                                                                                                                                                           | Meets or Exceeds |
|              | - capacity range, including clothing, tools and equipment (130 lbs to 310 lbs);                                                                                                                                                                                                                                                                         | Meets or Exceeds |
|              | - unique ID number;                                                                                                                                                                                                                                                                                                                                     | Meets or Exceeds |
|              | - standard number (Z359.14-2021)                                                                                                                                                                                                                                                                                                                        | Meets or Exceeds |
|              | - how to inspect visual indicator                                                                                                                                                                                                                                                                                                                       | Meets or Exceeds |
|              | - warning to follow the manufacturer's instructions included with the equipment at time of shipment from the manufacturer                                                                                                                                                                                                                               | Meets or Exceeds |
|              | - warning of the need for inspection in accordance with the manufacturer's instructions                                                                                                                                                                                                                                                                 | Meets or Exceeds |
|              | - the fiber or other materials used in the lanyard construction and any limitations of such materials                                                                                                                                                                                                                                                   | Meets or Exceeds |
|              | - the lanyard working length                                                                                                                                                                                                                                                                                                                            | Meets or Exceeds |
|              | - maximum arresting force                                                                                                                                                                                                                                                                                                                               | Meets or Exceeds |
|              | - average arresting force                                                                                                                                                                                                                                                                                                                               | Meets or Exceeds |
|              | - arrest distance                                                                                                                                                                                                                                                                                                                                       | Meets or Exceeds |
|              | - guidance with respect to clearance requirements                                                                                                                                                                                                                                                                                                       | Meets or Exceeds |
|              | - proper installation means                                                                                                                                                                                                                                                                                                                             | Meets or Exceeds |
|              | - warning of the need for testing of the device for locking and retraction before each use                                                                                                                                                                                                                                                              | Meets or Exceeds |
|              | - warning of the need to avoid lanyard contact with sharp edges and abrasive surfaces (not required for Class 2 SRDs)                                                                                                                                                                                                                                   | Meets or Exceeds |
|              | - suitability for use with horizontal lifelines                                                                                                                                                                                                                                                                                                         | Meets or Exceeds |
|              | - suitability for horizontal use                                                                                                                                                                                                                                                                                                                        | Meets or Exceeds |
| <b>5.1.4</b> | Class Designation Icon. In addition to the requirements of 5.1.3, the manufacturer shall include, in a conspicuous location on the device, the appropriate color-coded icon designating the class of the device. For SRLs and SRL-Rs, the icon shall be a minimum of 1-inch square (25mm). For SRL-Ps it shall be a minimum of .5-inch square (12.5mm). | Meets or Exceeds |

|              |                                                                                                                                                                                                                                                                                                   |                  |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>5.1.5</b> | Self-Retracting Lanyards with Integral Rescue Capability. In addition to the requirements in 5.1.3, self-retracting lanyards with integral rescue capability shall be marked to identify:                                                                                                         |                  |
|              | - direction to turn crank                                                                                                                                                                                                                                                                         | Meets or Exceeds |
|              | - warning against allowing slack line while in rescue mode                                                                                                                                                                                                                                        | Meets or Exceeds |
| <b>5.1.6</b> | Class 2 Self-Retracting Devices. In addition to the requirements in 5.1.3, Class 2 self-retracting devices shall be marked to identify:                                                                                                                                                           |                  |
|              | - minimum installation setback distance                                                                                                                                                                                                                                                           | Meets or Exceeds |
|              | - clearance required when falling over edge                                                                                                                                                                                                                                                       | Meets or Exceeds |
|              | - a warning that exposure to a sharp or serrated structural edge could damage the device and that anchorage should be elevated to the extent possible to limit the risk of damage or failure                                                                                                      | Meets or Exceeds |
|              | - a warning to adhere to the hierarchy of controls as discussed in ANSI/ASSP Z359.2                                                                                                                                                                                                               | Meets or Exceeds |
| <b>5.1.7</b> | Class 2 SRLs. In addition to the requirements of 5.1.6, Class 2 SRLs shall include labels illustrating a fall clearance table and a diagram of the axes shown on the table. These labels shall be affixed to the product, preferably at or near the point of attachment to the full body harness. | Meets or Exceeds |
| <b>5.1.8</b> | Class 2 SRL-Ps. In addition to the requirements of 5.1.6, Class 2 SRL-Ps shall include an illustration of clearance requirements on the label.                                                                                                                                                    | Meets or Exceeds |
| <b>5.1.9</b> | Warnings for Dual SRL-Ps. SRL-Ps shall be marked to include a warning that dual-connections shall only be made for the purposes of 100% tie-off transitions.                                                                                                                                      | NA               |

#### Notes

| 5.2   | Instruction Requirements                                                                                                                                                                                                                      |                  |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| 5.2.1 | Instructions shall be provided to the user printed in English at the time of shipment from the manufacturer. Alternate media may be used for the dissemination of instructions, but only in addition to, not in lieu of printed instructions. | Meets or Exceeds |
| 5.2.2 | Instructions shall contain the following information:                                                                                                                                                                                         |                  |
|       | - a statement that the manufacturer's instructions shall be provided to users                                                                                                                                                                 | Meets or Exceeds |
|       | - manufacturer's name, address and telephone number                                                                                                                                                                                           | Meets or Exceeds |
|       | - manufacturer's part number or model designation for the equipment                                                                                                                                                                           | Meets or Exceeds |
|       | - intended use and purpose of the equipment                                                                                                                                                                                                   | Meets or Exceeds |
|       | - proper method of use and limitations on use of the equipment                                                                                                                                                                                | Meets or Exceeds |
|       | - illustrations showing locations of markings on the equipment                                                                                                                                                                                | Meets or Exceeds |
|       | - reproduction of printed information on all markings                                                                                                                                                                                         | Meets or Exceeds |
|       | - inspection procedures required to assure the equipment is in serviceable condition and operating correctly                                                                                                                                  | Meets or Exceeds |
|       | - anchorage requirements                                                                                                                                                                                                                      | Meets or Exceeds |
|       | - criteria for discarding equipment which fails inspection                                                                                                                                                                                    | Meets or Exceeds |
|       | - procedures for cleaning, maintenance and storage                                                                                                                                                                                            | Meets or Exceeds |
|       | - reference to the Z359 standards and applicable regulations governing occupational safety                                                                                                                                                    | Meets or Exceeds |
|       | - proper installation means and limitations on the type of anchorage connectors used, if any                                                                                                                                                  | Meets or Exceeds |
|       | - the diameter of rope or wire rope, and width and thickness of webbing used in the lanyard                                                                                                                                                   | Meets or Exceeds |
|       | - the fiber or other materials used in the lanyard construction                                                                                                                                                                               | Meets or Exceeds |
|       | - the lanyard length                                                                                                                                                                                                                          | Meets or Exceeds |
|       | - suitability for use with horizontal lifelines, deforming or flexible anchorages                                                                                                                                                             | Meets or Exceeds |
|       | - the maximum and average arresting force when dynamically tested in ambient conditions, in accordance with the requirements of this standard                                                                                                 | Meets or Exceeds |
|       | - the arrest distance when dynamically tested in accordance with the requirements of this standard                                                                                                                                            | Meets or Exceeds |
|       | - how to determine fall clearance, which shall include a safety margin                                                                                                                                                                        | Meets or Exceeds |
|       | - testing of the device for locking before each use                                                                                                                                                                                           | Meets or Exceeds |
| 5.2.3 | Instructions shall require that only the equipment manufacturer, or persons or entities authorized in writing by the manufacturer, shall make repairs to equipment.                                                                           | Meets or Exceeds |
| 5.2.4 | Instructions shall require the user to remove equipment from field service if it has been subjected to the forces of arresting a fall or effecting a rescue.                                                                                  | Meets or Exceeds |
| 5.2.5 | Instructions shall require the user to have a written rescue plan and the means at hand to implement it when using the equipment.                                                                                                             | Meets or Exceeds |

|              |                                                                                                                                                                                                                                                                                   |                  |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>5.2.6</b> | Instructions shall provide warnings regarding:                                                                                                                                                                                                                                    |                  |
|              | - altering the equipment                                                                                                                                                                                                                                                          | Meets or Exceeds |
|              | - misusing the equipment                                                                                                                                                                                                                                                          | Meets or Exceeds |
|              | - using combinations of components or subsystems, or both, which may affect or interfere with the safe function of each other                                                                                                                                                     | Meets or Exceeds |
|              | - exposing the equipment to chemicals, high heat, severe cold or other harsh environments which may produce a harmful effect and to consult the manufacturer in cases of doubt                                                                                                    | Meets or Exceeds |
|              | - using the equipment around moving machinery and electrical hazards                                                                                                                                                                                                              | Meets or Exceeds |
|              | - using the equipment near sharp edges and abrasive surfaces                                                                                                                                                                                                                      | Meets or Exceeds |
|              | - risk of striking an object or obstruction during a swing fall                                                                                                                                                                                                                   | Meets or Exceeds |
|              | - avoiding the use of SRDs in applications where engulfment hazards exist                                                                                                                                                                                                         | Meets or Exceeds |
|              | - that the consequences of improperly using the device, not following instructions or markings may cause serious injury or death                                                                                                                                                  | Meets or Exceeds |
| <b>5.2.7</b> | Self-Retracting Lanyards with Integral Rescue Capability. In addition to the requirements of 5.2.1 through 5.2.6, instructions for self-retracting lanyards with integral rescue capability shall include:                                                                        |                  |
|              | - capacity when used for rescue, one or two persons                                                                                                                                                                                                                               | Meets or Exceeds |
|              | - force required to operate rescue features when device is loaded to capacity                                                                                                                                                                                                     | Meets or Exceeds |
|              | - appropriate methods to receive the individual when retrieved to upper elevation                                                                                                                                                                                                 | Meets or Exceeds |
|              | - warning to prevent slack line while in rescue mode                                                                                                                                                                                                                              | Meets or Exceeds |
|              | - maximum input RPM if equipped for powered operation                                                                                                                                                                                                                             | Meets or Exceeds |
|              | Class 2 Self-Retracting Devices. In addition to the requirements of 5.2.1 through 5.2.6, instructions for self-retracting lanyards with integral leading-edge capability shall include:                                                                                           | Meets or Exceeds |
|              | - advisory that the device was successfully tested for horizontal use and falls over a steel edge without burrs. As a result, the device may be used in situations where a fall may occur over similar edges, such as found on structural steel members or metal sheeting         | Meets or Exceeds |
|              | - a warning identifying known prohibited edge substrates                                                                                                                                                                                                                          | Meets or Exceeds |
|              | - a warning that the allowable angle of redirection of the lanyard portion of the device at the edge over which a fall might occur (measured between the two sides formed by the redirected lanyard) shall be at least 90 degrees                                                 | Meets or Exceeds |
|              | - a warning that the anchor point may only be situated at the same height as the edge at which a fall might occur or above the edge                                                                                                                                               | Meets or Exceeds |
|              | - any limitations to the allowable work area relative to the anchorage point, including factors such as swing fall and abrasion on the line at the edge, and the use of a single anchor point versus anchors that allow horizontal movement such as a horizontal lifeline or rail | Meets or Exceeds |
|              | - indication whether the device may be used in combination with a horizontal lifeline or rail                                                                                                                                                                                     | Meets or Exceeds |
|              | - a warning not to work on the far side of an opening, opposite the anchorage point                                                                                                                                                                                               | Meets or Exceeds |
|              | - advise that in the event of a fall over the edge, special rescue measures may be required                                                                                                                                                                                       | Meets or Exceeds |
|              | - a warning that use of this device in an orientation such that the constituent line may contact a sharp, jagged or abrasive structural edge is inherently dangerous, and such use should be a last resort                                                                        | Meets or Exceeds |

|               |                                                                                                                                                                                                                                                                                                                                                                                               |                  |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>5.2.8</b>  | Class 2 Self-Retracting Devices. In addition to the requirements of 5.2.1 through 5.2.6, instructions for self-retracting lanyards with integral leading-edge capability shall include:                                                                                                                                                                                                       |                  |
|               | - advisory that the device was successfully tested for horizontal use and falls over a steel edge without burrs. As a result, the device may be used in situations where a fall may occur over similar edges, such as found on structural steel members or metal sheeting                                                                                                                     | Meets or Exceeds |
|               | - a warning identifying known prohibited edge substrates                                                                                                                                                                                                                                                                                                                                      | Meets or Exceeds |
|               | - a warning that the allowable angle of redirection of the lanyard portion of the device at the edge over which a fall might occur (measured between the two sides formed by the redirected lanyard) shall be at least 90 degrees                                                                                                                                                             | Meets or Exceeds |
|               | - a warning that the anchor point may only be situated at the same height as the edge at which a fall might occur or above the edge                                                                                                                                                                                                                                                           | Meets or Exceeds |
|               | - any limitations to the allowable work area relative to the anchorage point, including factors such as swing fall and abrasion on the line at the edge, and the use of a single anchor point versus anchors that allow horizontal movement such as a horizontal lifeline or rail                                                                                                             | Meets or Exceeds |
|               | - indication whether the device may be used in combination with a horizontal lifeline or rail                                                                                                                                                                                                                                                                                                 | Meets or Exceeds |
|               | - a warning not to work on the far side of an opening, opposite the anchorage point                                                                                                                                                                                                                                                                                                           | Meets or Exceeds |
|               | - advise that in the event of a fall over the edge, special rescue measures may be required                                                                                                                                                                                                                                                                                                   | Meets or Exceeds |
|               | - advise that in the event of a fall over the edge, special rescue measures may be required                                                                                                                                                                                                                                                                                                   | Meets or Exceeds |
| <b>5.2.9</b>  | Warnings for Class 2 SRDs. A printed card, minimum size of 3 inches by 5 inches (76mm by 127mm), shall be included by the manufacturer with each Class 2 SRD. The card shall be white font (Arial, 16 pt.) on an orange background and shall state as follows:                                                                                                                                |                  |
|               | WARNING: This Class 2 self-retracting device, when attached to a foot-level anchorage, poses significant risk of injury. The user, the competent person and/or qualified person should all acknowledge that normal use of this device MAY NOT PREVENT A SERIOUS INJURY. Failure to follow all manufacturer's instructions and warnings may result in serious injury or death.                 | Meets or Exceeds |
| <b>5.2.10</b> | Warnings for Dual SRL-Ps. If the device produces a maximum arrest force greater than 1,800 pounds (8kN) when tested in accordance with 4.6.2, it shall be marked to include a warning that dual-connections shall only be made for the purposes of 100% tie-off transitions and that if a dual connection is made for any other purpose, anchorages of different elevations must be utilized. | NA               |

## Notes

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**4.2.1 Static Testing of Self-Retracting Devices**  
*Requirements per 3.2.1*

- a) Shorten the constituent line, if necessary, to allow installation in the static tensile test equipment specified in 4.1.2. With the SRD constituent fully extracted, install the device in the tensile test equipment.
- b) Apply a minimum load of 3,600 pounds (16kN). Time to reach the load shall be no less than one minute to avoid dynamic effects. The load shall be maintained for a period of no less than one minute.
- c) Compare the results with the requirements of 3.2.1.

**4.2.1 Static Testing of Self-Retracting Devices**  
*Requirements per 3.2.1*

| Samples                              | Sample #<br>10 | Sample #<br>11 | Sample #<br>12 |
|--------------------------------------|----------------|----------------|----------------|
| Actual load applied (>3,600 lb) (lb) | 3630.64        | 3640.76        | 3628.21        |
| SRL withstands tensile load?         | Yes            | Yes            | Yes            |
| Result/Assessment                    | Pass           | Pass           | Pass           |

**4.2.3 Locking Strength Testing of Self-Retracting Devices**  
*Requirements per 3.2.3*

- a) Shorten the constituent line, if necessary, to allow installation in the static tensile test equipment specified in 4.1.2. With the SRD constituent fully extracted, install the device in the tensile test equipment.
- b) Apply a minimum load of 3,600 pounds (16kN). Time to reach the load shall be no less than one minute to avoid dynamic effects. The load shall be maintained for a period of no less than one minute.
- c) Compare the results with the requirements of 3.2.1.

**4.2.3 Locking Strength Testing of Self-Retracting Devices**  
*Requirements per 3.2.3*

| Samples                              | Sample #<br>07 | Sample #<br>08 | Sample #<br>09 |
|--------------------------------------|----------------|----------------|----------------|
| Actual load applied (>1,800 lb) (lb) | 1843.09        | 1846.89        | 1852.84        |
| SRL withstands tensile load?         | Yes            | Yes            | Yes            |
| Result/Assessment                    | Pass           | Pass           | Pass           |

**Notes**

**4.3.1 Dynamic Performance of Self-Retracting Devices (SRDs, Ambient)**  
*Requirements per 3.3.1*

- a) Attach the load cell (transducer) to the drop test structure specified in 4.1. Anchor the SRD to the load cell according to manufacturer's instructions. Connect the 310-pound (140kg) test weight specified in 4.1.1 to the attachment-end connector on the constituent line.
- b) Attach the quick release mechanism specified in 4.1 to the test weight and attach the hoisting means to the quick release mechanism
- c) Hoist the test weight to the level at which 36 inches  $\pm$  1.0 inch (914mm  $\pm$  25mm) of the device line is extended from the nozzle. The horizontal distance of the quick release mechanism from the device nozzle shall not exceed 12 inches (305mm).
- d) Do not lock the device or inhibit retraction of the device.
- e) Release the test weight by activating the quick release mechanism.
- f) Measure and record the maximum arrest force, average arrest force and arrest distance.
- g) Compare the test results with the requirements of 3.3.1.

**4.3.1 Dynamic Performance of Self-Retracting Devices (SRDs, Ambient)**  
*Requirements per 3.3.1*

| Samples                               | Sample # 10 | Sample # 11 | Sample # 12 |
|---------------------------------------|-------------|-------------|-------------|
| Locking function operates correctly?  | Yes         | Yes         | Yes         |
| Line pays out and retracts correctly? | Yes         | Yes         | Yes         |
| Visual Indicator activated?           | Yes         | Yes         | Yes         |
| Max. Arrest Force (<1,800 lb) (lb)    | 907.11      | 937.59      | 888.97      |
| Average Arrest Force (<1,350 lb) (lb) | 728.53      | 712.32      | 694.94      |
| Arrest Distance (<42 in.) (in.)       | 15.00       | 18.50       | 16.25       |
| <b>Result/Assessment</b>              | Pass        | Pass        | Pass        |

**4.3.1 Dynamic Performance of Self-Retracting Devices (SRDs, Hot)**  
*Requirements per 3.3.1*

- a) Attach the load cell (transducer) to the drop test structure specified in 4.1. Anchor the SRD to the load cell according to manufacturer's instructions. Connect the 310-pound (140kg) test weight specified in 4.1.1 to the attachment-end connector on the constituent line.
- b) Attach the quick release mechanism specified in 4.1 to the test weight and attach the hoisting means to the quick release mechanism
- c) Hoist the test weight to the level at which 36 inches  $\pm$  1.0 inch (914mm  $\pm$  25mm) of the device line is extended from the nozzle. The horizontal distance of the quick release mechanism from the device nozzle shall not exceed 12 inches (305mm).
- d) Do not lock the device or inhibit retraction of the device.
- e) Release the test weight by activating the quick release mechanism.
- f) Measure and record the maximum arrest force, average arrest force and arrest distance.
- g) Compare the test results with the requirements of 3.3.1.

**4.3.1 Dynamic Performance of Self-Retracting Devices (SRDs, Hot)**  
*Requirements per 3.3.1*

| Samples                               | Sample # 07 | Sample # 08 | Sample # 09 |
|---------------------------------------|-------------|-------------|-------------|
| Locking function operates correctly?  | Yes         | Yes         | Yes         |
| Line pays out and retracts correctly? | Yes         | Yes         | Yes         |
| Visual Indicator activated?           | Yes         | Yes         | Yes         |
| Max. Arrest Force (<1,800 lb) (lb)    | 792.63      | 812.50      | 846.08      |
| Average Arrest Force (<1,575 lb) (lb) | 651.54      | 636.19      | 638.13      |
| Arrest Distance (<42 in.) (in.)       | 18.75       | 18.25       | 19.75       |
| <b>Result/Assessment</b>              | Pass        | Pass        | Pass        |

#### 4.3.1 Dynamic Performance of Self-Retracting Devices (SRDs, Cold)

##### Requirements per 3.3.1

- Attach the load cell (transducer) to the drop test structure specified in 4.1. Anchor the SRD to the load cell according to manufacturer's instructions. Connect the 310-pound (140kg) test weight specified in 4.1.1 to the attachment-end connector on the constituent line.
- Attach the quick release mechanism specified in 4.1 to the test weight and attach the hoisting means to the quick release mechanism
- Hoist the test weight to the level at which 36 inches  $\pm$  1.0 inch (914mm  $\pm$  25mm) of the device line is extended from the nozzle. The horizontal distance of the quick release mechanism from the device nozzle shall not exceed 12 inches (305mm).
- Do not lock the device or inhibit retraction of the device.
- Release the test weight by activating the quick release mechanism.
- Measure and record the maximum arrest force, average arrest force and arrest distance.
- Compare the test results with the requirements of 3.3.1.

#### 4.3.1 Dynamic Performance of Self-Retracting Devices (SRDs, Cold)

##### Requirements per 3.3.1

| Samples                               | Sample # 04 | Sample # 05 | Sample # 06 |
|---------------------------------------|-------------|-------------|-------------|
| Locking function operates correctly?  | Yes         | Yes         | Yes         |
| Line pays out and retracts correctly? | Yes         | Yes         | Yes         |
| Visual Indicator activated?           | Yes         | Yes         | Yes         |
| Max. Arrest Force (<1,800 lb) (lb)    | 1002.32     | 1066.42     | 1020.89     |
| Average Arrest Force (<1,575 lb) (lb) | 760.09      | 799.28      | 745.19      |
| Arrest Distance (<42 in.) (in.)       | 20.00       | 15.25       | 15.25       |
| Result/Assessment                     | Pass        | Pass        | Pass        |

#### 4.3.1 Dynamic Performance of Self-Retracting Devices (SRDs, Wet)

##### Requirements per 3.3.1

- Attach the load cell (transducer) to the drop test structure specified in 4.1. Anchor the SRD to the load cell according to manufacturer's instructions. Connect the 310-pound (140kg) test weight specified in 4.1.1 to the attachment-end connector on the constituent line.
- Attach the quick release mechanism specified in 4.1 to the test weight and attach the hoisting means to the quick release mechanism
- Hoist the test weight to the level at which 36 inches  $\pm$  1.0 inch (914mm  $\pm$  25mm) of the device line is extended from the nozzle. The horizontal distance of the quick release mechanism from the device nozzle shall not exceed 12 inches (305mm).
- Do not lock the device or inhibit retraction of the device.
- Release the test weight by activating the quick release mechanism.
- Measure and record the maximum arrest force, average arrest force and arrest distance.
- Compare the test results with the requirements of 3.3.1.

#### 4.3.1 Dynamic Performance of Self-Retracting Devices (SRDs, Wet)

##### Requirements per 3.3.1

| Samples                               | Sample # 01 | Sample # 02 | Sample # 03 |
|---------------------------------------|-------------|-------------|-------------|
| Locking function operates correctly?  | Yes         | Yes         | Yes         |
| Line pays out and retracts correctly? | Yes         | Yes         | Yes         |
| Visual Indicator activated?           | Yes         | Yes         | Yes         |
| Max. Arrest Force (<1,800 lb) (lb)    | 834.78      | 907.54      | 827.96      |
| Average Arrest Force (<1,575 lb) (lb) | 675.75      | 739.85      | 693.90      |
| Arrest Distance (<42 in.) (in.)       | 18.00       | 16.00       | 14.50       |
| Result/Assessment                     | Pass        | Pass        | Pass        |

**4.3.3 Additional Dynamic Performance Testing of  
Self-Retracting Devices (SRDs) – Class 2  
Perpendicular to Edge  
Requirements per 3.3.3**

- a) Attach the SRD to a rigid anchorage on the Class 2 drop test structure, in accordance with the manufacturer's instructions for anchoring the device on the same level as the edge. SRL-Ps shall be attached to the test weight, with the integral connector on the constituent line attached directly to the test anchorage.
- b) Two drop tests are to be performed. One with the line perpendicular to the edge and a second with a lateral offset of 5 feet (1.5m). A new device may be used for each test. Drop the test weight from a level 5 feet  $\pm$  1.0 inch (1.5m  $\pm$  25mm) above and at a horizontal distance of 20 inches (0.5m)  $\pm$  1.0 inch ( $\pm$  25mm) measured perpendicular from the edge, or in accordance with the following as necessary. Clamp the line so that it cannot retract.
- c) The horizontal distance of the test weight from the edge shall be increased beyond 20 inches (.5m) as needed to ensure the line element (webbing, rope, wire rope, etc.) of the SRD makes the initial contact with the edge during the tests. Other elements of the line constituent (snaphooks, energy absorbers, end fittings, etc.) shall be positioned away from the edge.
- d) The tests shall be conducted with the SRD fully extended (maximum of its working range). The SRD may need to be shortened or lengthened to accommodate the test site geometry. A 9/32 inch (7.1mm) nominal size grade 80 chain may be connected between the anchorage point and the SRD to lengthen the unit. Alternatively, a cable test lanyard of appropriate length and meeting the requirements of ANSI/ASSP Z359.7 may be used.
- e) Attach the load cell specified in 4.1 between the harness connector of the SRD and the 310-pound (141kg) test weight. Attach the quick release mechanism specified in 4.1.4 to the test weight and attach the hoisting means to the quick release mechanism. Hoist the test weight to the prescribed level and location relative to the edge and the SRD. Ensure the line is clamped, so that it cannot retract.
- f) Release the test weight by activating the quick release mechanism. Allow the test weight to swing unrestrained for a period of not less than 60 seconds following initial arrest.
- g) For each test, measure and record the maximum and average arresting force and the arrest distance and check that the visual indicator has activated.
- h) The portion of the line having contacted the edge material shall be cut from the device and terminated at each end according to the requirements of 3.1.6.3. This artifact must then be subjected to a static load for a period of not less than one minute in accordance with 3.3.3.4.

**4.3.3 Additional Dynamic Performance Testing of  
Self-Retracting Devices (SRDs) – Class 2  
Perpendicular to Edge  
Requirements per 3.3.3**

| Samples                                                                                                             | Sample #<br>16 | Sample #<br>17 | Sample #<br>18 |
|---------------------------------------------------------------------------------------------------------------------|----------------|----------------|----------------|
| Visual Indicator activated?                                                                                         | Yes            | Yes            | Yes            |
| Max. Arrest Force (<1,800 lb) (lb)                                                                                  | 844.37         | 887.24         | 880.10         |
| Average Arrest Force (<1,350 lb) (lb)                                                                               | 724.58         | 743.67         | 720.01         |
| Residual Static Force applied: (lb)<br>Synthetic constituent line: >1,000 lb<br>Wire Rope constituent line: >675 lb | 714.15         | 703.30         | 705.19         |
| Result/Assessment                                                                                                   | Pass           | Pass           | Pass           |

**4.3.3 Additional Dynamic Performance Testing of Self-Retracting Devices (SRDs) – Class 2, Hot Perpendicular to Edge**  
*Requirements per 3.3.3*

- a) Attach the SRD to a rigid anchorage on the Class 2 drop test structure, in accordance with the manufacturer's instructions for anchoring the device on the same level as the edge. SRL-Ps shall be attached to the test weight, with the integral connector on the constituent line attached directly to the test anchorage.
- b) Two drop tests are to be performed. One with the line perpendicular to the edge and a second with a lateral offset of 5 feet (1.5m). A new device may be used for each test. Drop the test weight from a level 5 feet  $\pm$  1.0 inch (1.5m  $\pm$  25mm) above and at a horizontal distance of 20 inches (0.5m)  $\pm$  1.0 inch ( $\pm$  25mm) measured perpendicular from the edge, or in accordance with the following as necessary. Clamp the line so that it cannot retract.
- c) The horizontal distance of the test weight from the edge shall be increased beyond 20 inches (.5m) as needed to ensure the line element (webbing, rope, wire rope, etc.) of the SRD makes the initial contact with the edge during the tests. Other elements of the line constituent (snaphooks, energy absorbers, end fittings, etc.) shall be positioned away from the edge.
- d) The tests shall be conducted with the SRD fully extended (maximum of its working range). The SRD may need to be shortened or lengthened to accommodate the test site geometry. A 9/32 inch (7.1mm) nominal size grade 80 chain may be connected between the anchorage point and the SRD to lengthen the unit. Alternatively, a cable test lanyard of appropriate length and meeting the requirements of ANSI/ASSP Z359.7 may be used.
- e) Attach the load cell specified in 4.1 between the harness connector of the SRD and the 310-pound (141kg) test weight. Attach the quick release mechanism specified in 4.1.4 to the test weight and attach the hoisting means to the quick release mechanism. Hoist the test weight to the prescribed level and location relative to the edge and the SRD. Ensure the line is clamped, so that it cannot retract.
- f) Release the test weight by activating the quick release mechanism. Allow the test weight to swing unrestrained for a period of not less than 60 seconds following initial arrest.
- g) For each test, measure and record the maximum and average arresting force and the arrest distance and check that the visual indicator has activated.
- h) The portion of the line having contacted the edge material shall be cut from the device and terminated at each end according to the requirements of 3.1.6.3. This artifact must then be subjected to a static load for a period of not less than one minute in accordance with 3.3.3.4.

**4.3.3 Additional Dynamic Performance Testing of Self-Retracting Devices (SRDs) – Class 2, Hot Perpendicular to Edge**  
*Requirements per 3.3.3*

| Samples                                                                                                             | Sample #<br>22 | Sample #<br>23 | Sample #<br>24 |
|---------------------------------------------------------------------------------------------------------------------|----------------|----------------|----------------|
| Visual Indicator activated?                                                                                         | Yes            | Yes            | Yes            |
| Max. Arrest Force (<1,800 lb) (lb)                                                                                  | 957.57         | 961.46         | 871.73         |
| Average Arrest force (<1,575 lb) (lb)                                                                               | 689.80         | 674.91         | 665.60         |
| Residual Static Force applied: (lb)<br>Synthetic constituent line: >1,000 lb<br>Wire Rope constituent line: >675 lb | 702.14         | 706.70         | 700.68         |
| Result/Assessment                                                                                                   | Pass           | Pass           | Pass           |

**4.3.3 Additional Dynamic Performance Testing of Self-Retracting Devices (SRDs) – Class 2, Cold Perpendicular to Edge**  
*Requirements per 3.3.3*

- a) Attach the SRD to a rigid anchorage on the Class 2 drop test structure, in accordance with the manufacturer's instructions for anchoring the device on the same level as the edge. SRL-Ps shall be attached to the test weight, with the integral connector on the constituent line attached directly to the test anchorage.
- b) Two drop tests are to be performed. One with the line perpendicular to the edge and a second with a lateral offset of 5 feet (1.5m). A new device may be used for each test. Drop the test weight from a level 5 feet  $\pm$  1.0 inch (1.5m  $\pm$  25mm) above and at a horizontal distance of 20 inches (0.5m)  $\pm$  1.0 inch ( $\pm$  25mm) measured perpendicular from the edge, or in accordance with the following as necessary. Clamp the line so that it cannot retract.
- c) The horizontal distance of the test weight from the edge shall be increased beyond 20 inches (.5m) as needed to ensure the line element (webbing, rope, wire rope, etc.) of the SRD makes the initial contact with the edge during the tests. Other elements of the line constituent (snaphooks, energy absorbers, end fittings, etc.) shall be positioned away from the edge.
- d) The tests shall be conducted with the SRD fully extended (maximum of its working range). The SRD may need to be shortened or lengthened to accommodate the test site geometry. A 9/32 inch (7.1mm) nominal size grade 80 chain may be connected between the anchorage point and the SRD to lengthen the unit. Alternatively, a cable test lanyard of appropriate length and meeting the requirements of ANSI/ASSP Z359.7 may be used.
- e) Attach the load cell specified in 4.1 between the harness connector of the SRD and the 310-pound (141kg) test weight. Attach the quick release mechanism specified in 4.1.4 to the test weight and attach the hoisting means to the quick release mechanism. Hoist the test weight to the prescribed level and location relative to the edge and the SRD. Ensure the line is clamped, so that it cannot retract.
- f) Release the test weight by activating the quick release mechanism. Allow the test weight to swing unrestrained for a period of not less than 60 seconds following initial arrest.
- g) For each test, measure and record the maximum and average arresting force and the arrest distance and check that the visual indicator has activated.
- h) The portion of the line having contacted the edge material shall be cut from the device and terminated at each end according to the requirements of 3.1.6.3. This artifact must then be subjected to a static load for a period of not less than one minute in accordance with 3.3.3.4.

**4.3.3 Additional Dynamic Performance Testing of Self-Retracting Devices (SRDs) – Class 2, Cold Perpendicular to Edge**  
*Requirements per 3.3.3*

| Samples                                                                                                             | Sample #<br>19 | Sample #<br>20 | Sample #<br>21 |
|---------------------------------------------------------------------------------------------------------------------|----------------|----------------|----------------|
| Visual Indicator activated?                                                                                         | Yes            | Yes            | Yes            |
| Max. Arrest Force (<1,800 lb) (lb)                                                                                  | 994.91         | 1104.67        | 1029.85        |
| Average Arrest force (<1,350 lb) (lb)                                                                               | 821.82         | 819.07         | 830.18         |
| Residual Static Force applied: (lb)<br>Synthetic constituent line: >1,000 lb<br>Wire Rope constituent line: >675 lb | 701.88         | 713.36         | 704.80         |
| Result/Assessment                                                                                                   | Pass           | Pass           | Pass           |

**4.3.3 Additional Dynamic Performance Testing of Self-Retracting Devices (SRDs) – Class 2, Wet Perpendicular to Edge**  
*Requirements per 3.3.3*

- a) Attach the SRD to a rigid anchorage on the Class 2 drop test structure, in accordance with the manufacturer's instructions for anchoring the device on the same level as the edge. SRL-Ps shall be attached to the test weight, with the integral connector on the constituent line attached directly to the test anchorage.
- b) Two drop tests are to be performed. One with the line perpendicular to the edge and a second with a lateral offset of 5 feet (1.5m). A new device may be used for each test. Drop the test weight from a level 5 feet  $\pm$  1.0 inch (1.5m  $\pm$  25mm) above and at a horizontal distance of 20 inches (0.5m)  $\pm$  1.0 inch ( $\pm$  25mm) measured perpendicular from the edge, or in accordance with the following as necessary. Clamp the line so that it cannot retract.
- c) The horizontal distance of the test weight from the edge shall be increased beyond 20 inches (.5m) as needed to ensure the line element (webbing, rope, wire rope, etc.) of the SRD makes the initial contact with the edge during the tests. Other elements of the line constituent (snaphooks, energy absorbers, end fittings, etc.) shall be positioned away from the edge.
- d) The tests shall be conducted with the SRD fully extended (maximum of its working range). The SRD may need to be shortened or lengthened to accommodate the test site geometry. A 9/32 inch (7.1mm) nominal size grade 80 chain may be connected between the anchorage point and the SRD to lengthen the unit. Alternatively, a cable test lanyard of appropriate length and meeting the requirements of ANSI/ASSP Z359.7 may be used.
- e) Attach the load cell specified in 4.1 between the harness connector of the SRD and the 310-pound (141kg) test weight. Attach the quick release mechanism specified in 4.1.4 to the test weight and attach the hoisting means to the quick release mechanism. Hoist the test weight to the prescribed level and location relative to the edge and the SRD. Ensure the line is clamped, so that it cannot retract.
- f) Release the test weight by activating the quick release mechanism. Allow the test weight to swing unrestrained for a period of not less than 60 seconds following initial arrest.
- g) For each test, measure and record the maximum and average arresting force and the arrest distance and check that the visual indicator has activated.
- h) The portion of the line having contacted the edge material shall be cut from the device and terminated at each end according to the requirements of 3.1.6.3. This artifact must then be subjected to a static load for a period of not less than one minute in accordance with 3.3.3.4.

**4.3.3 Additional Dynamic Performance Testing of Self-Retracting Devices (SRDs) – Class 2, Wet Perpendicular to Edge**  
*Requirements per 3.3.3*

| Samples                                                                                                             | Sample #<br>25 | Sample #<br>26 | Sample #<br>27 |
|---------------------------------------------------------------------------------------------------------------------|----------------|----------------|----------------|
| Visual Indicator activated?                                                                                         | Yes            | Yes            | Yes            |
| Max. Arrest Force (<1,800 lb) (lb)                                                                                  | 1005.34        | 895.24         | 876.98         |
| Average Arrest force (<1,575 lb) (lb)                                                                               | 764.50         | 748.40         | 748.18         |
| Residual Static Force applied: (lb)<br>Synthetic constituent line: >1,000 lb<br>Wire Rope constituent line: >675 lb | 703.42         | 707.59         | 726.93         |
| Result/Assessment                                                                                                   | Pass           | Pass           | Pass           |

**4.3.3 Additional Dynamic Performance Testing of  
Self-Retracting Devices (SRDs) – Class 2  
5 ft Offset from Edge  
Requirements per 3.3.3**

- a) Attach the SRD to a rigid anchorage on the Class 2 drop test structure, in accordance with the manufacturer's instructions for anchoring the device on the same level as the edge. SRL-Ps shall be attached to the test weight, with the integral connector on the constituent line attached directly to the test anchorage.
- b) Two drop tests are to be performed. One with the line perpendicular to the edge and a second with a lateral offset of 5 feet (1.5m). A new device may be used for each test. Drop the test weight from a level 5 feet  $\pm$  1.0 inch (1.5m  $\pm$  25mm) above and at a horizontal distance of 20 inches (0.5m)  $\pm$  1.0 inch ( $\pm$  25mm) measured perpendicular from the edge, or in accordance with the following as necessary. Clamp the line so that it cannot retract.
- c) The horizontal distance of the test weight from the edge shall be increased beyond 20 inches (.5m) as needed to ensure the line element (webbing, rope, wire rope, etc.) of the SRD makes the initial contact with the edge during the tests. Other elements of the line constituent (snaphooks, energy absorbers, end fittings, etc.) shall be positioned away from the edge.
- d) The tests shall be conducted with the SRD fully extended (maximum of its working range). The SRD may need to be shortened or lengthened to accommodate the test site geometry. A 9/32 inch (7.1mm) nominal size grade 80 chain may be connected between the anchorage point and the SRD to lengthen the unit. Alternatively, a cable test lanyard of appropriate length and meeting the requirements of ANSI/ASSP Z359.7 may be used.
- e) Attach the load cell specified in 4.1 between the harness connector of the SRD and the 310-pound (141kg) test weight. Attach the quick release mechanism specified in 4.1.4 to the test weight and attach the hoisting means to the quick release mechanism. Hoist the test weight to the prescribed level and location relative to the edge and the SRD. Ensure the line is clamped, so that it cannot retract.
- f) Release the test weight by activating the quick release mechanism. Allow the test weight to swing unrestrained for a period of not less than 60 seconds following initial arrest.
- g) For each test, measure and record the maximum and average arresting force and the arrest distance and check that the visual indicator has activated.
- h) The portion of the line having contacted the edge material shall be cut from the device and terminated at each end according to the requirements of 3.1.6.3. This artifact must then be subjected to a static load for a period of not less than one minute in accordance with 3.3.3.4.

**4.3.3 Additional Dynamic Performance Testing of  
Self-Retracting Devices (SRDs) – Class 2  
5 ft Offset from Edge  
Requirements per 3.3.3**

| Samples                                                                                                             | Sample #<br>28 | Sample #<br>29 | Sample #<br>30 |
|---------------------------------------------------------------------------------------------------------------------|----------------|----------------|----------------|
| Visual Indicator activated?                                                                                         | Yes            | Yes            | Yes            |
| Max. Arrest Force (<1,800 lb) (lb)                                                                                  | 887.32         | 895.56         | 884.74         |
| Average Arrest Force (<1,350 lb) (lb)                                                                               | 731.81         | 724.57         | 735.45         |
| Residual Static Force applied: (lb)<br>Synthetic constituent line: >1,000 lb<br>Wire Rope constituent line: >675 lb | 703.02         | 710.39         | 706.06         |
| Result/Assessment                                                                                                   | Pass           | Pass           | Pass           |

**4.3.3 Additional Dynamic Performance Testing of Self-Retracting Devices (SRDs) – Class 2, Hot  
5 ft Offset from Edge  
Requirements per 3.3.3**

- a) Attach the SRD to a rigid anchorage on the Class 2 drop test structure, in accordance with the manufacturer's instructions for anchoring the device on the same level as the edge. SRL-Ps shall be attached to the test weight, with the integral connector on the constituent line attached directly to the test anchorage.
- b) Two drop tests are to be performed. One with the line perpendicular to the edge and a second with a lateral offset of 5 feet (1.5m). A new device may be used for each test. Drop the test weight from a level 5 feet  $\pm$  1.0 inch (1.5m  $\pm$  25mm) above and at a horizontal distance of 20 inches (0.5m)  $\pm$  1.0 inch ( $\pm$  25mm) measured perpendicular from the edge, or in accordance with the following as necessary. Clamp the line so that it cannot retract.
- c) The horizontal distance of the test weight from the edge shall be increased beyond 20 inches (.5m) as needed to ensure the line element (webbing, rope, wire rope, etc.) of the SRD makes the initial contact with the edge during the tests. Other elements of the line constituent (snaphooks, energy absorbers, end fittings, etc.) shall be positioned away from the edge.
- d) The tests shall be conducted with the SRD fully extended (maximum of its working range). The SRD may need to be shortened or lengthened to accommodate the test site geometry. A 9/32 inch (7.1mm) nominal size grade 80 chain may be connected between the anchorage point and the SRD to lengthen the unit. Alternatively, a cable test lanyard of appropriate length and meeting the requirements of ANSI/ASSP Z359.7 may be used.
- e) Attach the load cell specified in 4.1 between the harness connector of the SRD and the 310-pound (141kg) test weight. Attach the quick release mechanism specified in 4.1.4 to the test weight and attach the hoisting means to the quick release mechanism. Hoist the test weight to the prescribed level and location relative to the edge and the SRD. Ensure the line is clamped, so that it cannot retract.
- f) Release the test weight by activating the quick release mechanism. Allow the test weight to swing unrestrained for a period of not less than 60 seconds following initial arrest.
- g) For each test, measure and record the maximum and average arresting force and the arrest distance and check that the visual indicator has activated.
- h) The portion of the line having contacted the edge material shall be cut from the device and terminated at each end according to the requirements of 3.1.6.3. This artifact must then be subjected to a static load for a period of not less than one minute in accordance with 3.3.3.4.

**4.3.3 Additional Dynamic Performance Testing of Self-Retracting Devices (SRDs) – Class 2, Hot  
5 ft Offset from Edge  
Requirements per 3.3.3**

| Samples                                                                                                             | Sample #<br>31 | Sample #<br>32 | Sample #<br>33 |
|---------------------------------------------------------------------------------------------------------------------|----------------|----------------|----------------|
| Visual Indicator activated?                                                                                         | Yes            | Yes            | Yes            |
| Max. Arrest Force (<1,800 lb) (lb)                                                                                  | 982.55         | 862.41         | 896.18         |
| Average Arrest force (<1,575 lb) (lb)                                                                               | 695.15         | 686.98         | 677.97         |
| Residual Static Force applied: (lb)<br>Synthetic constituent line: >1,000 lb<br>Wire Rope constituent line: >675 lb | 701.18         | 701.42         | 705.39         |
| Result/Assessment                                                                                                   | Pass           | Pass           | Pass           |

**4.3.3 Additional Dynamic Performance Testing of Self-Retracting Devices (SRDs) – Class 2, Cold**  
**5 ft Offset from Edge**  
*Requirements per 3.3.3*

- a) Attach the SRD to a rigid anchorage on the Class 2 drop test structure, in accordance with the manufacturer's instructions for anchoring the device on the same level as the edge. SRL-Ps shall be attached to the test weight, with the integral connector on the constituent line attached directly to the test anchorage.
- b) Two drop tests are to be performed. One with the line perpendicular to the edge and a second with a lateral offset of 5 feet (1.5m). A new device may be used for each test. Drop the test weight from a level 5 feet  $\pm$  1.0 inch (1.5m  $\pm$  25mm) above and at a horizontal distance of 20 inches (0.5m)  $\pm$  1.0 inch ( $\pm$  25mm) measured perpendicular from the edge, or in accordance with the following as necessary. Clamp the line so that it cannot retract.
- c) The horizontal distance of the test weight from the edge shall be increased beyond 20 inches (.5m) as needed to ensure the line element (webbing, rope, wire rope, etc.) of the SRD makes the initial contact with the edge during the tests. Other elements of the line constituent (snaphooks, energy absorbers, end fittings, etc.) shall be positioned away from the edge.
- d) The tests shall be conducted with the SRD fully extended (maximum of its working range). The SRD may need to be shortened or lengthened to accommodate the test site geometry. A 9/32 inch (7.1mm) nominal size grade 80 chain may be connected between the anchorage point and the SRD to lengthen the unit. Alternatively, a cable test lanyard of appropriate length and meeting the requirements of ANSI/ASSP Z359.7 may be used.
- e) Attach the load cell specified in 4.1 between the harness connector of the SRD and the 310-pound (141kg) test weight. Attach the quick release mechanism specified in 4.1.4 to the test weight and attach the hoisting means to the quick release mechanism. Hoist the test weight to the prescribed level and location relative to the edge and the SRD. Ensure the line is clamped, so that it cannot retract.
- f) Release the test weight by activating the quick release mechanism. Allow the test weight to swing unrestrained for a period of not less than 60 seconds following initial arrest.
- g) For each test, measure and record the maximum and average arresting force and the arrest distance and check that the visual indicator has activated.
- h) The portion of the line having contacted the edge material shall be cut from the device and terminated at each end according to the requirements of 3.1.6.3. This artifact must then be subjected to a static load for a period of not less than one minute in accordance with 3.3.3.4.

**4.3.3 Additional Dynamic Performance Testing of Self-Retracting Devices (SRDs) – Class 2, Cold**  
**5 ft Offset from Edge**  
*Requirements per 3.3.3*

| Samples                                                                                                             | Sample #<br>34 | Sample #<br>35 | Sample #<br>36 |
|---------------------------------------------------------------------------------------------------------------------|----------------|----------------|----------------|
| Visual Indicator activated?                                                                                         | Yes            | Yes            | Yes            |
| Max. Arrest Force (<1,800 lb) (lb)                                                                                  | 1072.72        | 982.31         | 1063.44        |
| Average Arrest force (<1,350 lb) (lb)                                                                               | 828.01         | 812.48         | 813.97         |
| Residual Static Force applied: (lb)<br>Synthetic constituent line: >1,000 lb<br>Wire Rope constituent line: >675 lb | 701.68         | 705.93         | 704.41         |
| Result/Assessment                                                                                                   | Pass           | Pass           | Pass           |

**4.3.3 Additional Dynamic Performance Testing of Self-Retracting Devices (SRDs) – Class 2, Wet  
5 ft Offset from Edge  
Requirements per 3.3.3**

- a) Attach the SRD to a rigid anchorage on the Class 2 drop test structure, in accordance with the manufacturer's instructions for anchoring the device on the same level as the edge. SRL-Ps shall be attached to the test weight, with the integral connector on the constituent line attached directly to the test anchorage.
- b) Two drop tests are to be performed. One with the line perpendicular to the edge and a second with a lateral offset of 5 feet (1.5m). A new device may be used for each test. Drop the test weight from a level 5 feet  $\pm$  1.0 inch (1.5m  $\pm$  25mm) above and at a horizontal distance of 20 inches (0.5m)  $\pm$  1.0 inch ( $\pm$  25mm) measured perpendicular from the edge, or in accordance with the following as necessary. Clamp the line so that it cannot retract.
- c) The horizontal distance of the test weight from the edge shall be increased beyond 20 inches (.5m) as needed to ensure the line element (webbing, rope, wire rope, etc.) of the SRD makes the initial contact with the edge during the tests. Other elements of the line constituent (snaphooks, energy absorbers, end fittings, etc.) shall be positioned away from the edge.
- d) The tests shall be conducted with the SRD fully extended (maximum of its working range). The SRD may need to be shortened or lengthened to accommodate the test site geometry. A 9/32 inch (7.1mm) nominal size grade 80 chain may be connected between the anchorage point and the SRD to lengthen the unit. Alternatively, a cable test lanyard of appropriate length and meeting the requirements of ANSI/ASSP Z359.7 may be used.
- e) Attach the load cell specified in 4.1 between the harness connector of the SRD and the 310-pound (141kg) test weight. Attach the quick release mechanism specified in 4.1.4 to the test weight and attach the hoisting means to the quick release mechanism. Hoist the test weight to the prescribed level and location relative to the edge and the SRD. Ensure the line is clamped, so that it cannot retract.
- f) Release the test weight by activating the quick release mechanism. Allow the test weight to swing unrestrained for a period of not less than 60 seconds following initial arrest.
- g) For each test, measure and record the maximum and average arresting force and the arrest distance and check that the visual indicator has activated.
- h) The portion of the line having contacted the edge material shall be cut from the device and terminated at each end according to the requirements of 3.1.6.3. This artifact must then be subjected to a static load for a period of not less than one minute in accordance with 3.3.3.4.

**4.3.3 Additional Dynamic Performance Testing of Self-Retracting Devices (SRDs) – Class 2, Wet  
5 ft Offset from Edge  
Requirements per 3.3.3**

| Samples                                                                                                             | Sample #<br>37 | Sample #<br>38 | Sample #<br>39 |
|---------------------------------------------------------------------------------------------------------------------|----------------|----------------|----------------|
| Visual Indicator activated?                                                                                         | Yes            | Yes            | Yes            |
| Max. Arrest Force (<1,800 lb) (lb)                                                                                  | 920.23         | 886.83         | 885.19         |
| Average Arrest force (<1,575 lb) (lb)                                                                               | 750.22         | 718.54         | 742.76         |
| Residual Static Force applied: (lb)<br>Synthetic constituent line: >1,000 lb<br>Wire Rope constituent line: >675 lb | 720.93         | 704.53         | 702.82         |
| Result/Assessment                                                                                                   | Pass           | Pass           | Pass           |

Pictured: 4200007  
Represents all part #s



#### Labels

Applicable to all part #s

Class  
**2**  
Anchor above  
or below dorsal  
D-ring

**GUARDIAN®**

**CR3-EDGE**  
Self-Retracting Lifeline

ANSI Z359.14-2021 | OSHA 1926.502 & 1910.140



Suitable for  
**LEADING EDGE**

Se puede utilizar en aplicaciones borde expuesto



1500135 Rev. A

**GUARDIAN®**

| Part #  | Date of Manufacture | Lot # | Serial # |
|---------|---------------------|-------|----------|
| 4200007 | MM   YY             |       |          |

**⚠ WARNING** Read supplied instructions before using. Failure to follow instructions may result in serious injury or death. Never modify product. This product is not repairable.

**USE** This device is only for use by one person as a fall arrester. Only make connections directly to attachment point on safety harness. Guard against swing-fall by keeping lifeline vertically overhead. Ensure that connection to anchorage is secured properly before use. Avoid lifeline contact with sharp or abrasive edges and surfaces. May be used as a component of a PFAS in HLL applications. Design, installation, and utilization of HLLs must be supervised by a Qualified Person. Suitable for horizontal use. Competent Person must calculate fall clearance prior to use; fall clearance calculations must include considerations for swing fall. Clearance numbers specified based on lifeline installed vertically overhead and in-line with worker.

**INSPECTION** Prior to each use, check locking (pull sharply to test) and retraction function. Inspect for signs of deployment, defects or damage to housing, lifeline (inspect full length), connectors, or missing parts. Inspect impact indicator - see instruction manual. Ensure presence and legibility of all labels. Inspection by Competent Person required at least every 12 months. Immediately remove from service in event of failed inspection, or if unit is subjected to a fall.

Lifeline Material: Steel Cable | Length: 10'  
User Weight Range (including tools and equipment):  
ANSI: 130-310 lb | OSHA: 100-310 lb (LE) | OSHA: 100-420 lb (Non-LE\*)  
Arrest Force: Max: 1,350 lb | Avg: 1,150 lb  
Min. Setback Distance from edge: 0" (LE)  
Max. Arrest Distance - 100-310 lb: 3' (Non-LE\*) | 9' 6" (LE)  
311-420 lb: 3' 6" (Non-LE\*)  
Min. Required Fall Clearance - 100-310 lb: 6' 6" (Non-LE\*) | 18' (LE)  
311-420 lb: 7' (Non-LE\*)

Inspection Date: \_\_\_\_\_  
Initials: \_\_\_\_\_  
Date of First Use: \_\_\_\_\_

Type: SRL-P  
DO NOT REMOVE LABELS

**HEIGHT SAFETY.  
SIMPLIFIED.**  
guardianfall.com

Tested and Assembled in USA.

|                               |                                                                                        |                              |                                 |
|-------------------------------|----------------------------------------------------------------------------------------|------------------------------|---------------------------------|
| <b>Test Type:</b>             | 96 Hour Neutral Salt Spray Test (NSS)                                                  | <b>Test Description:</b>     | 96 Hour Neutral Salt spray Test |
| <b>Lab Technician:</b>        | Craig Allen                                                                            | <b>ASTM B117-2019:</b>       | Neutral Salt Spray Test         |
| <b>Start of Test:</b>         | 3/31/2020                                                                              | <b>End of Test:</b>          | 4/03/2020                       |
| <b>Part Number:</b>           | 4200007                                                                                | <b>Number of Samples:</b>    | 01                              |
| <b>Description:</b>           | SRL, Class 2, Edge, Single, 10 ft, Galv Cable, Indicating Steel Snap Hook, No Back Pad | <b>Water Type:</b>           | Type IV Deionized Water         |
| <b>Salt Purity (Percent):</b> | >97.7%                                                                                 | <b>Testing on Behalf of:</b> | Guardian Fall                   |

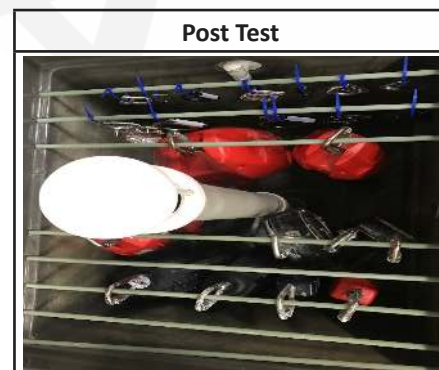
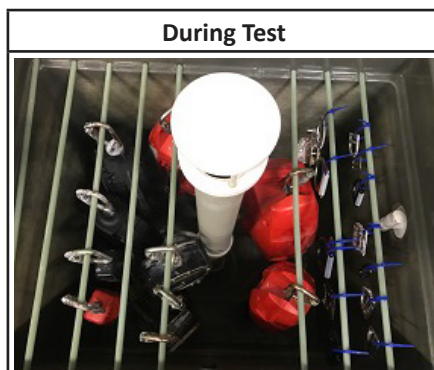
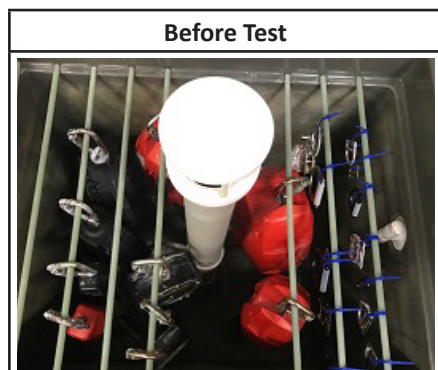
### Solution

*per 8.2 Salt Solution*

The pH of the salt solution shall be such that when atomized at 35 °C (95 °F) the collected solution will be in the pH range from 6.5 to 7.2 (Note 4). Before the solution is atomized it shall be free of suspended solids (Note 5). The pH measurement shall be made at 23 °C ± 3 °C (73 °F ± 5 °F) using a suitable glass pH-sensing electrode, reference electrode, and pH meter system in accordance with Test Method E70. pH measurement shall be recorded once daily (except on weekends, or holidays when the salt spray test is not interrupted for exposing, rearranging, or removing test specimens or to check and replenish the solution in the reservoir. The maximum interval between pH measurements shall not exceed 96 h). Only diluted, reagent grade hydrochloric acid (HCl) or reagent grade sodium hydroxide (NaOH) shall be used to adjust the pH.

| Density                          |                                                | PH                       |
|----------------------------------|------------------------------------------------|--------------------------|
| Temp.<br>25°C ± 2°C (73°F ± 5°F) | Measurement<br>1.029 - 1.036 g/cm <sup>3</sup> | Measurement<br>6.5 - 7.2 |
| Within Tolerance                 | Within Tolerance                               | Within Tolerance         |

| Interval      |                 |                          |                          | Quantity                              | Specific Gravity       |                              | PH                     |
|---------------|-----------------|--------------------------|--------------------------|---------------------------------------|------------------------|------------------------------|------------------------|
| Exposure Time | Actual Time Log | Water Jacket Temperature | Bubble Tower Temperature | Measurement<br>mL/h/80cm <sup>2</sup> | Collection Temperature | Density<br>g/cm <sup>3</sup> | Measurement<br>6.5-7.2 |
| Start         | 325.38          | 95°F                     | 116.6°F                  | 42/33 mL/h/80cm <sup>2</sup>          | 84.5°F                 | 1.034 g/cm <sup>3</sup>      | 6.74                   |
| 24 Hours      | 349.38          | 95°F                     | 116.6°F                  | 41/33 mL/h/80cm <sup>2</sup>          | 82.8°F                 | 1.034 g/cm <sup>3</sup>      | 6.74                   |
| 48 Hours      | 373.38          | 95°F                     | 116.6°F                  | 42/31 mL/h/80cm <sup>2</sup>          | 86.5°F                 | 1.034 g/cm <sup>3</sup>      | 6.72                   |
| 96 Hours      | 421.38          | 95°F                     | 116.6°F                  | 72/63 mL/h/80cm <sup>2</sup>          | 87.0°F                 | 1.034 g/cm <sup>3</sup>      | 6.63                   |



Please contact [quality@guardianfall.com](mailto:quality@guardianfall.com) for signed report.

| Test Equipment     |          |             |
|--------------------|----------|-------------|
| Equipment          | Model    | Serial      |
| pH Meter           | H18424   | 03370090101 |
| Salinity Tester    | HI998319 | LA02500060  |
| Salt Spray Chamber | SS600e   | 2018052202  |

Notes