MSA Engineering Self Certification of Standard Compliance
IAC 015-Z04

Statement of Compliance: This Lynx & Dyn evac II Rescuer Self-Retracting Lanyard meets the requirements of ANSI/ASSE Z359.14-2012, Safety Requirements for Self-Retracting Devices for Personal Fall Arrest and Rescue Systems.

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<th>Tested part number(s) or IAC No.:</th>
<th>“Sold as” part number(s)/Market:</th>
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<td>IAC 015</td>
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Test Facility & Document #: CSA GROUP - IAC015LD

PERFORMANCE DETAILS
(May format as needed)

<table>
<thead>
<tr>
<th>List standard and referenced sections as applicable</th>
<th>Results</th>
<th>Pass / Fail</th>
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<tr>
<td>SEE ATTACHED COMPLIANCE REPORT</td>
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For additional information about this product(s), please contact MSA Customer Service at 1-800-MSA-2222 (for industrial products) or Safety Works Customer Service at 1-800-969-7562 (for retail products). When requesting information, please reference "sold as" part number(s).

Quality Assurance: [Signature]  
Date: 9/0/12
3.1 General Requirements

3.1.1 Integral Connectors. Snaphooks or carabiners which are integral to self-retracting devices shall meet the requirements of ANSI/ASSE Z359.12. Integral rings or other openings intended to accept a snaphook or carabiner shall be designed to minimize the possibility of rollout of a rolling carabiner.

3.1.2 Locking Function. Self-retracting devices shall be equipped with a non-bypass (non-slippage) 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 impeded by casual interference.

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 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.

3.1.4 Visual Indicator. Self-retracting devices shall include a visual indicator that will activate in accordance with the requirements of Section 3.1.9. Dynamic Performance.

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 an extended period of time without signs of corrosion, which, if uncorrected, could result in failure of the device. The device shall be tested in a horizontal orientation for 96 hours in accordance with the method described in the reference in Section 7.4. After the salt spray test, the visual shall be operational and the visual demonstration shall function as specified in 3.1.4.

3.1.6 Retraction Tension. Retraction tension of the self-retracting device line, in addition to that required to retract the weight of the line constituent, shall not be less than 1.25 pounds (5.55N) or more than 24 pounds (111.1N) at any point in the range of motion provided by the line constituent when tested in accordance with 4.2.6. Additionally, SRL-LE's shall retract without stopping when tested in a horizontal orientation in accordance with 4.2.7. For SRL's and SRL-4's, no more than 24 inches (610mm) of the line constituent may remain extended when the device is fully retracted.

3.1.7 Static Strength. When tested in accordance with 4.2.5, the self-retracting device shall withstand a tension load of 3,000 pounds (13.3kN) statically applied.

3.1.8 Dynamic Strength. When tested in accordance with 4.2.2, for self-retracting devices, and additionally with 4.2.4 for SRL-LE’s, the device shall lock and remain locked until released. The test load shall not exceed the line breaking strength of the line constituent. For SRL’s and SRL-4’s, the device shall remain in an extended position until released. The device shall lock and remain locked until released. The test load shall not exceed the line breaking strength of the line constituent. For SRL-LE’s, following the edge test of ANSI Z359.7-2012, the dynamic performance shall be tested. The device shall lock and remain locked until released. The test load shall not exceed the line breaking strength of the line constituent. For SRL-LE’s, following the edge test of ANSI Z359.7-2012, the dynamic performance shall be tested.

3.1.9 Dynamic Performance. When tested in accordance with 4.2.1, for self-retracting devices, and additionally with 4.2.2 for SRL-LE’s in accordance with ANSI Z359.14-2012, forces need not be recorded, the arrest distance shall not exceed 12 inches (300mm), and the average arresting force shall not exceed 1,350 pounds (6kN). For Class A devices, the arrest distance shall not exceed 24 inches (610mm), and the average arresting force shall not exceed 1,800 pounds (8kN). For Class B devices, the arrest distance shall not exceed 36 inches (914mm), and the average arresting force shall not exceed 2,250 pounds (10kN). When tested in accordance with 4.2.3, for self-retracting devices, and additionally with 4.2.4 for SRL-LE’s, the dynamic performance test shall be performed. The device shall lock and remain locked until released. The test load shall not exceed the line breaking strength of the line constituent. For SRL’s and SRL-4’s, the device shall remain in an extended position until released. The device shall lock and remain locked until released. The test load shall not exceed the line breaking strength of the line constituent. For SRL-LE’s, following the edge test of ANSI Z359.7-2012, the dynamic performance shall be tested. The device shall lock and remain locked until released. The test load shall not exceed the line breaking strength of the line constituent. For SRL-LE’s, following the edge test of ANSI Z359.7-2012, the dynamic performance shall be tested.

3.2 Specific Requirements for Self-Retracting Lanyards with Integral Rescue Capability.
### 3.2.1 Operation

It shall be possible to engage the SRL-R into its rescue mode of operation at any time, subject to manufacturer's instructions. It shall be not possible to inadvertently change to an arrest mode from rescue mode. The SRL-R shall be capable of releasing or lowering the load to affect rescue. The minimum mechanical upper and lower friction coefficients shall be greater than 0.45 and 0.3 respectively. The SRL-R shall not release or reposition the line constituent when the frictional losses are less than the design frictional losses. When in rescue mode, the SRL-R device shall automatically stop and hold the load if the rescuer neglects frictional losses. When in rescue mode, the SRL-R shall automatically stop and hold the load if the rescuer intentionally or unintentionally relinquishes control. The SRL-R shall have a means to stabilize the device during use in rescue mode.

### 3.2.2 Powered Operation

SRL-R devices that incorporate a powered operation feature shall meet the requirements of Section 2.2 and when tested in accordance with 4.3.2 shall not be capable of lifting a weight equal to or greater than 20% of maximum capacity. The manufacturer shall indicate by markings the procedures given in 4.2.8. One test is required for each conditioning procedure. A new SRL-R may be used for each conditioning.

### 3.2.3 Static Strength

When tested in accordance with 4.3.3 the SRL-R shall support for a period of at least one minute without failure, a test load of 3,400 pounds (15kN). Lynx and Dynevac II Rescuer SRL's meet these requirements.

### 3.2.4 Rescue, Post Fall Arrest

When tested in accordance with 4.3.1 the SRL-R in rescue mode shall stop and hold the load within 4 inches (102mm) of travel. Additionally, the requirements of this section shall be met after conditioning in accordance with the procedures given in 4.2.8. One test is required for each conditioning procedure. A new SRL-R may be used for each conditioning.

### 3.2.5 Function

Testing in this section shall be performed following the salt spray exposure specified in Section 3.1.5. When tested in accordance with 4.3.1 the SRL-R in rescue mode shall lower, and hold the load as intended after the device has reached the test weight. Operating control is released, the load shall stop within 4 inches (102mm) of travel. Additionally, the requirements of this section shall be met after conditioning in accordance with the procedures given in 4.3.2. One test is required for each conditioning procedure. A new SRL-R may be used for each conditioning.

### 3.3 Line Constituent of Self-Retracting Devices

#### 3.3.1 Synthetic Rope

Rope used as a line constituent of the self-retracting device shall be made of pure or non-recycled synthetic materials having strength, aging, abrasion resistance and heat resistance characteristics equivalent or superior to polyamides. Other synthetic materials than those stated herein are permitted for the line constituent of SRL's only when it can be demonstrated that all requirements of this standard are met and, additionally, that the rope material used is equivalent to a rope material that has been evaluated and determined suitable. Any restrictions on the use of such SRL-R shall be marked on the line constituent of SRL-R.

When statically tested in accordance with reference 7.1, 7.2, or 7.3 as appropriate, synthetic rope shall have a minimum breaking strength of 4,500 pounds (20kN).

### 3.3.2 Webbing

Webbing used as a line constituent of the self-retracting device shall be made of pure or non-recycled synthetic materials having strength, aging, abrasion resistance and heat resistance characteristics equivalent or superior to polyamides. Other synthetic materials than those stated herein are permitted for the line constituent of SRL-R 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. Any restrictions on the use of such SRL-R shall be marked on the line constituent of SRL-R.

When statically tested in accordance with reference 7.1, 7.2, or 7.3 as appropriate, synthetic rope shall have a minimum breaking strength of 4,500 pounds (20kN).

### 3.3.3 Wire Rope

Wire rope used as a line constituent of a self-retracting device shall be constructed of stainless steel or galvanized wire strand having a minimum breaking strength of 4,500 pounds (20kN) when tested in accordance with reference 6.1.5 and minimum nominal diameter of 0.18 inches (4.6mm).

When statically tested in accordance with reference 7.1, 7.2, or 7.3 as appropriate, synthetic rope shall have a minimum breaking strength of 4,500 pounds (20kN).

### 3.3.4 Termination of the Line Constituent

The line constituent shall be designed so as to meet the requirements of 3.1.7 and 3.2.2.

### 3.3.5 SRL-LE Energy Absorber

The line constituent of SRL-LE's 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/ASSE Z359.13. Alternative energy absorber designs are allowed provided all performance requirements for SRL-LE are satisfied including 3.1.7 with the alternative energy absorber included during the static test. If the SRL-LE device housing is intended to be connected to the body support and can only be used in this orientation, then an energy absorber is not required as part of the line constituent.

### 3.4 Subsystem Requirements

Subsystems comprised of independent components which meet the requirements of the applicable Z359 standards shall be considered in compliance. In the case of conflicting requirements, the most stringent requirements shall be followed. The SRL-R shall be capable of raising or lowering speed does not exceed 2 ft/s (.6m/s). A manual back-up means of operation shall be provided.

### 3.5 Hybrid Self-Retracting Devices

Hybrid devices shall meet the individual requirements of the Lynx and class of device upon which they are based. In the case of conflicting requirements, the most stringent requirements shall be followed.