Mine Safety Appliances Company · John T. Ryan Memorial Lab
1100 Cranberry Woods Drive, Cranberry Township, PA 16066

MSA Engineering Self Certification of Standard Compliance
IAC 015-Z04

Statement of Compliance: This Lynx & Dynevac 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.

Tested part number(s) or IAC No.:	"Sold as" part number(s)/Market:
IAC 015	SEE ATTACHED COMPLIANCE REPORT

Test Facility & Document #: CSA GROUP - IAC015LD

PERFORMANCE DETAILS
(May format as needed)

List standard and referenced sections as applicable	Results	Pass / Fail
SEE ATTACHED COMPLIANCE REPORT		

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: JAMES WONDERLING Date: 9/10/12

ANSI Z359.7 3rd Party Testing Compliance Report

Revision 0

IAC 015 - LYNX® AND DYNEVAC II RESCUER SELF-RETRACTING LANYARDS

"Sold As" Part numbers	10011744, 10011745, 10127293, 10127295	
ANSI Z359.14-2012 Requirement	**Results**	**Pass/Fail**
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 similar openings intended to accept a snaphook or carabiner shall be designed to minimize the possibility of rollout of a mating snaphook or carabiner.	Lynx and Dynevac II Rescuer SRL's meet these requirements.	**Pass**
3.1.2 Locking Function. Self-retracting devices shall be automatic in their locking (fall stopping) 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.	Lynx and Dynevac II Rescuer SRL's meet these requirements.	**Pass**
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.	Lynx and Dynevac II Rescuer SRL's meet these requirements.	**Pass**
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.	Lynx and Dynevac II Rescuer SRL's meet these requirements.	**Pass**
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 Section 7.4. After the salt spray test, the line shall pay out, retract and lock; retraction tension shall be as specified in 3.1.6.	Lynx and Dynevac II Rescuer SRL's meet these requirements.	**Pass**
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 25 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-R's, no more than 24 inches (610mm) of the line constituent may remain extended when the device is fully retracted, see figure 8. For SRL-LE's, no more than 60 inches (1.5m) of the line constituent may remain extended when the device is fully retracted.	Lynx and Dynevac II Rescuer SRL's meet these requirements.	**Pass**
3.1.7 Static Strength. When tested in accordance with 4.2.5, the self-retracting device shall withstand a tensile load of 3,000 pounds (13.3kN) statically applied.	NOT APPLICABLE	**NOT APPLICABLE**
3.1.8 Dynamic Strength. When tested in accordance with 4.2.3 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 weight shall not strike the ground. The line constituent need not retract after performance of the dynamic strength test. For SRL's and SRL-R's, the line shall retain a minimum of 1,000 pounds (4.4kN) of residual tensile strength after the dynamic test when tested in accordance with 4.2.3. Note: Some SRD's are designed to attach the housing end of the device to the body support, rather than the lanyard end. For these devices each connection orientation allowed by the manufacturer shall be tested.	Lynx and Dynevac II Rescuer SRL's meet these requirements.	**Pass**
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 (note, if the energy absorber incorporated into the SRL-LE line constituent meets the requirements of ANSI/ASSE Z359.13 and is appropriate for the SRL class, forces need not be recorded), the arrest distance shall not exceed 24 inches (610mm) and the average arresting force shall not exceed 1,350 pounds (6kN) or a maximum peak of 1,800 pounds (8kN) for Class A devices. The arrest distance shall not exceed 54 inches (1,372mm) and the average arresting force shall not exceed 900 pounds (4kN) or a maximum peak of 1,800 pounds (8kN) for Class B devices. The arrest distance limits do not apply to SRL-LE's when testing in accordance with 4.2.2 however the arrest distance shall be measured during these tests to determine fall clearance guidelines reported in user instructions. The locking function must operate in accordance with 3.1.2.The device must pay out and retract the line in accordance with 3.1.6 after each dynamic performance test (with the exception of SRL-LE devices following the edge test of 4.2.2.) The visual indicator shall activate when dynamic performance is tested, and provide clear evidence that the device has been impact loaded. Additionally, the dynamic performance requirements shall be met after conditioning in accordance with the procedures given in 4.2.8. The average arresting force shall not exceed 1,575 pounds (7kN) or a maximum peak of 1,800 pounds (8kN) for Class A devices and 1,125 pounds (5kN) or a maximum peak of 1,800 pounds (8kN) for Class B devices. One test is required for each conditioning procedure. A new device may be used for each conditioning procedure. For SRL-LE's, following the dynamic performance test the lanyard shall retain a minimum static strength of 675 pounds (3kN) for wire ropes or 1,000 pounds (4.5kN) for synthetic lanyards when tested in accordance with 4.2.2. Note: Some SRD's are designed to attach the housing end of the device to the body support, rather than the lanyard end. For these devices each connection orientation allowed by the manufacturer shall be tested.	Lynx and Dynevac II Rescuer SRL's meet these requirements.	**Pass**
3.2 Specific Requirements for Self-Retracting Lanyards with Integral Rescue Capability.		

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"Sold As" Part numbers	10011744, 10011745, 10127293, 10127295	
ANSI Z359.14-2012 Requirement	**Results**	**Pass/Fail**
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 not be possible to inadvertently change to or from rescue mode. The SRL-R shall be capable of raising or lowering the load to affect rescue. The minimum mechanical advantage offered by the SRL-R in rescue mode shall be 3:1, neglecting frictional losses. When in rescue mode, the SRL-R device 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.	Lynx and Dynevac II Rescuer SRL's meet these requirements.	**Pass**
3.2.2 Powered Operation. SRL-R devices that incorporate a powered operation feature shall meet the requirements of Section 3.2 and when tested in accordance with 4.3.2 shall not be capable of lifting a weight equal to or greater than 250% of maximum capacity. The manufacturer shall indicate by markings the maximum powered input speed (rpm) allowed such that the lifting or lowering speed does not exceed 2 ft/s (.6m/s). A manual back-up means of operation shall be provided.	NOT APPLICABLE	**NOT APPLICABLE**
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 load equal to 3,000 pounds (13.3kN).	Lynx and Dynevac II Rescuer SRL's meet these requirements.	**Pass**
3.2.4 Rescue, Post Fall Arrest. When tested in accordance with 4.3.4 the SRL-R in rescue mode shall raise, lower, and hold the load as intended after the device has arrested the test weight. When 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 4.2.8. One test is required for each conditioning procedure. A new SRL-R may be used for each conditioning.	Lynx and Dynevac II Rescuer SRL's meet these requirements.	**Pass**
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 raise, lower, and hold the load as intended while the device is carrying 125% of the maximum capacity. When operating control is released, the load shall stop within 4 inches (102mm) of travel. Immediately following the test with the load of 125% of maximum capacity, this test is to be repeated using the same test specimen with a load of 75% of the minimum capacity.	Lynx and Dynevac II Rescuer SRL's meet these requirements.	**Pass**
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 SRD's 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 SRD's shall be marked on the SRD. 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).	NOT APPLICABLE	**NOT APPLICABLE**
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 SRD's 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 SRD's shall be marked on the SRD. Webbing shall have a minimum breaking strength of 4,500 pounds (20kN) when tested in accordance with reference 7.1, 7.2, or 7.3 as appropriate.	NOT APPLICABLE	**NOT APPLICABLE**
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 steel strand having a minimum breaking strength of 3,400 pounds (15kN) when tested in accordance with reference 7.5 and minimum nominal diameter of 0.1875 inches (4.8mm).	Lynx and Dynevac II Rescuer SRL's meet these requirements.	**Pass**
3.3.4 Terminations of the line constituent shall be designed so as to meet the requirements of 3.1.7 and 3.2.3.	Lynx and Dynevac II Rescuer SRL's meet these requirements.	**Pass**
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.	NOT APPLICABLE	**NOT APPLICABLE**
3.4 Subsystem Requirements. Subsystems comprised of independent components which meet the requirements of the applicable Z359 standards shall be considered in compliance provided that: (a) the user strictly adheres to ANSI/ASSE Z359.2 and; (b) the system which incorporates the subsystem of independent components meets the system performance requirements of the applicable Z359 standards. Integral subsystems shall meet all the requirements of the applicable component standards.	Lynx and Dynevac II Rescuer SRL's meet these requirements.	**Pass**
3.5 Hybrid Self-Retracting Devices. Hybrid devices shall meet the individual requirements of the type and class of devices upon which they are based. In the case of conflicting requirements, the most stringent requirements shall be followed.	NOT APPLICABLE	**NOT APPLICABLE**