Test Report
ANSI/ASSE Z359.15-2014

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Test Report Number: 2021061401340
Job Number: 132596
Product SKU#: 01340
Product Type: Lifeline
Product Description: VL58-50 50’ 5/8 yellow steel rope with snaphook at one end
Testing Standard: ANSI/ASSE Z359.15-14 Safety Requirements for Single Anchor Lifelines/Fall Arresters
Dates of Manufacture: 6/01/2018
Date(s) of Testing: 6/22/2018, 10/26/2018

REQUIREMENT VERIFICATION

Requirement Description	Clause/Section	Result
General Requirements	3. 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 Test (Single Anchor)	6/22/2018	4.3.1 Static Strength Test - Single Anchor Lifeline	Pass

This test report covers these additional products:

01360, 01365, 01344, 01346, 11348, 11337

Please contact quality@guardianfall.com for signed report.

Test Equipment		
Equipment	**Model**	**Serial**
Load Cell	1220ACK-25K-B	367976A

3	Design Requirements	
3.1	**Single Anchor Lifeline Components**	
3.1.1	Connectors integral to single anchor lifelines shall meet the requirements of ANSI/ASSE Z359.12.	Meets or Exceeds
3.1.2	Rope used in single anchor lifelines shall meet the requirements of 7.2.1.	Pass
3.1.3	When tested in accordance with reference 7.2.2, rope used for a single anchor lifeline shall have an elastic elongation of not greater than 10% at a load of 1,800lb (8kN).	NA
3.1.4	Rope used for single anchor lifelines shall have a minimum nominal diameter of 0.433 inch (11mm).	Meets or Exceeds
3.1.5	Rope used for single anchor lifelines shall be fabricated without knots or splices in the strand bundles.	Meets or Exceeds
3.1.6	Materials used in the construction of single anchor vertical lifelines shall be made from high tension industrial grade synthetic fibers, except for wire rope lifelines described in 3.1.12.	Meets or Exceeds
3.1.7	When tested in accordance with 4.3.1, a single anchor lifeline, supplied with a factory termination, shall have a breaking strength not less than 5,000lb (22kN).	Meets or Exceeds
3.1.8	Single anchor lifelines supplied with a factory termination shall be terminated by one of the following methods:	
3.1.8.1	**Spliced**. Spliced eye terminations in rope shall be made in accordance with the rope manifacturer's recommendation, subject to the following requirements. Eye splices in twisted rope having three or more strands shall have a minium of four tucks. A properly sized thimble shall be part of a formed eye terminaton. Knots shall not be used to form end terminations. Terminations (including cut ends) and splices shall be seized, whipped or otherwise integrally finished to prevent the termination or splice from unraveling or unsplicing.	Meets or Exceeds
3.1.8.2	**Stitched**. Stitched eye terminations in rope shall be sewn using lock stitches. Thread shall be of the same material type as the rope and shall be of a contrasting color to facilitate inspectionby the unaided eye with 20/20 vision, or vision corrected to 20/20 at a nominal distance of 12 inches (305mm). A properly sized thimble shall be part of a formed eye termination. Rope ends shall be seared or otherwise prevented from unraveling.	Meets or Exceeds
3.1.8.3	**Swaged**. Swaged eye terminations in rope using swages shall be made in accordance with the rope manufacturer's recommendation. The selected swage shall be appropriately sized for the diameter of the lifeline and its edge chamfered to not affect the performance of the lifeline.	Meets or Exceeds
3.1.9	When tested in accordanc with 4.3.1, a single anchor lifeline, supplied without a factory termination, shall have a minimum breaking strength not less than 6,000 pounds (26.7 kN).	NA
3.1.10	Ropes used as a single anchor lifeline intended to have dual purposes for ascending and descending in rope access of descent control applications shall meet the requirements of 7.2.2	NA
3.1.11	When tested in accordance with 4.2.3, following the dynamic performance test, the single anchor lifeline, fall arrester and connecting subsystem shall support a load not less than 1,800 pounds (8kN),	NA
3.1.12	Single anchor lifelines made from wire rope shall have:	
3.1.12.1	A breaking strength not less than 6,000 pounds (26.7kN) when tested in accordance with 4.3.1.	NA
3.1.12.2	A diameter not less than 0.3125 inch (8mm) and shall be constructed in accordance with 7.3.1 or 7.4.1 as applicable.	NA
3.1.12.3	A factory termination by means of one of the following methods: a) spliced eye with one swaged fitting, or b) return eye with a minimum of two swaged fittings. All formed eyes shall incorporate a properly sized thimble.	NA

3.2	Fall Arrester Components	
3.2.1	Connectors integral to fall arresters shall meet the requirements of ANSI/ASSE Z359.12.	NA
3.2.2	Non-integral energy absorbers and energy absorbing lanyards specified for use with fall arresters shall meet the requirements of ANSI-ASSE Z359.13.	NA
3.2.3	Lanyards integral to fall arresters shall:	
3.2.3.1	Be made from synthetic material having strength, aging, abrasion resistance and heat resistance characteristics equivalent or superior to polyamides.	NA
3.2.3.2	Be terminated by either splice or stitched method described in 3.1.8.1 or 3.1.8.2.	NA
3.2.3.3	Be tested in accordance with 4.3.2 and shall sustain a load of 3,600 pounds (16kN), without failure, for a period no less than 1 minute.	NA
3.2.3.4	Have integral connectors that meet the requirements of ANSI/ASSE Z359.12.	NA
3.2.3.5	Have a deployment indcator or warning flag that is obvious when lanyard has seen fall arrest service or loading.	NA
3.2.4	Fall arresters shall be automatic in their locking mechanism(s) shall be designed to enage if the connecting arm, lever, connector, or link is being held open. When tested in accordance with the dynamic performance manual override test in 4.2.4, the fall arrester shall arrest the fall and hold the load for a minimum of 1 minute wihout moving further down the lifeline. The total fall distance shall be not greater than 11 feet (3.35m). The average arrest force shall not exceed 900 pounds (4kN). The maximum arrest force shall not exceed 1,800 pounds (8kN).	NA
3.2.5	Fall arresters locking mechanism(s) shall be designed to engage if the connecting arm, level, connector or link is being held open. When tested in accordance with the dynamic performance manual override test in 4.2.4, the fall arrester shall arrest the fall and hold the load for a minimum of 1 minute without moving further down the lifeline. The total fall distance shall be not greater thann 11 feet (3.35m). The average arrest force shall not exceed 900 pounds (4kN). The maximum arrest force shall not exceed 1,800 pounds (8kN).	NA
3.2.6	Two consecutive and deliberate actions shall be required o open the fall arrester.	NA
3.2.7	Fall arresters shall not include a knot or hitch.	NA
3.2.8	Integral rings or similar openings shall be designed to eliminate incompatability and gate loading of the mating connectors recommended or permited by the manufacturer.	NA
3.2.9	When tested in accordance with 4.3.2, fall arresters shall sustain a load of 3,600 pounds (16kN), without failure, for a period no less than 1 minute. The fall arrester may deform, however it shall not release the load.	NA
3.2.10	When tested in accordance with 4.2.2, at ambient conditions, and following conditioning specified in 4.2.5, the fall arrester shall lock on the lifeline and remain locked, holding the test weight for 1 minute, until released. The fll arrester does not need to function at the conclusion of the test. the total fall distance shall be not greater than 11 feet (3.35m). The average arrest force shall not exceed 900 pounds (4kN). The maximum arrest force shall not exceed 1,800 pounds (8kN).	NA
3.2.11	When tested according to 4.2.1, the fall arrester shall travel up and down the lifeline without assistance.	NA
3.2.12	When tested in accordance with 4.2.3, the fall arrester shall not move down the lifeline more than 4 inches (102mm) when a force no less than 660 pounds (2.94 kN) is applied.	NA
3.2.13	When tested in accordance with reference 7.5.1 for a minimum of 48 hours, followed by 1 hour drying time, the fall arrester shall operate as intended and shall show no evidence of corrosion of the base metal. The presence of white scale is permitted.	NA

5	**Markings and Instructions**	
5.1	**General Marking Requirements**	
5.1.1	Markings shall be in English.	Meets or Exceeds
5.1.2	The legebility and attachment of equired markings shall endure for the life of the fall arrester or single anchor lifeline being marked. When pressure sensitive labels are used, they shall comply with the applicable provision of UL 969-89, *Marking and Lebeling Systems.*	Meets or Exceeds
5.2	**Specific Marking Requirements**	
5.2.1	Fall arresters shall be marked with the following: -Part number or model designation; -Year of manufacture; -Manufacturer's name or logo; -Capacity rating; -Serial number; -Standard number (Z359.15"; -Warning to follow the manufacturer's instructions included with the equipment at time of shipment from the manufacturer; -The direction of use of the fall arrester on its single anchor lifeline; -The proper size(s) and type(s) of single anchor lifeline with which the fall arrester is intended to be used; -Warning to use only manufacturer approved lanyards accordin to instructions.	NA
5.2.2	Single anchor lifelines shall be marked to identify: -The fiber used in the material of construction; -The diameter of lifeline; -The length of the lifeline; -The model of fall arrester(s) acceptable for use with the lifeline; -The need to avoid contact wih sharp edges and abrasive surfaces; -Standard number "Z359.15"; -Serial number; -Part number or model designation; -Year of manufacture; -Manufacturer's name or logo.	Meets or Exceeds
5.2.3	Integral lanyards shall be marked to identify: -The material used in lanyard construction; -The length of the lanyard; -The need to avoid contact with sharp edges and abrasive surfaces; -The need to make only compatible connections; -The average arrest force, maximum free fall distance, maximum deployment distance and capacity; -Standard number "Z359.15"; -Serial number; -Part number or model designation; -Year of manufacture; -Manufacturer's name or logo.	NA

5.3	General Instruction Requirements	
5.3.1	Instructions shall be provided in English and affixed to the equipment at the time of shipment from the manufacturer.	Meets or Exceeds
5.3.2	Instructions shall contain the following information: -A statement that the manufacturer's instructions shall be provided to users; -Manufacturer's name, address and telephone number; -Manufacturer's part number or model designation for the equipment; -Intended use and purpose of the equipment; -Proper method of use and limitations on use of the equipment; -Illustrations showing locations of markings on the equipment; -Reproduction of printed information on all markings; -Inspection procedures required to assure the equipment is in servicable condition and operating correctly; -Anchorage requirements; -Criteria for discarding and retiring equipment which fails inspection; -Procedures for cleaning, maintenance and storage; -A reference chart that indicates the clearance requirements of the system according to the fall arrester, energy asorbing lanyard and elongation characteristics of the lifeline.	Meets or Exceeds
5.3.3	Instructions shall require that only the equipment manufacturer, or persons, or entities authorized in writing by the manufacturer, shall make repairs to equipment.	Meets or Exceeds
5.3.4	Instructions shall require the user to remove equipment from field service if it has been subjected to the forces of arresting a fall.	Meets or Exceeds
5.3.5	Instructions shall require the user to have a rescue plan and the means at hand to implement it when using the equipmnent.	Meets or Exceeds
5.3.6	Instructions shall provide warnings regarding: -Altering the equipment; -Misusing the equipment; -Using combinations of fall arresters, lanyards, lifelines, which may affect or interfere with the safe function of each other; -Exposing the equipment to chemicals which may produce a harmful effect and to consult the manufacturer in cases of doubt; -Using the equipment around moving machinery and electrical hazards; -Using the equipment near sharp edges and abrasive surfaces as well as the need for abrasion protection; -Other warnings deemed necessary by the manufacturer.	Meets or Exceeds

Notes

5.4	Specific Instruction Requirements	
5.4.1	Fall Arresters. In addition to the requirements in 5.3, instructions for fall arresters shall include: -Acceptable lanyards, by make and model, for use with the fall arrester; -How to attach the lanyard to the fall arrester; -The maximum allowable free fall distance; -Proper method of connection to the full body harness (frontal and/or dorsal connection); -Warnings that the fall arrestr shall be attached to no more than one user; -Warnings to avoid exposure to physical and chemical hazards which the fall arrester is not designed to withstand; -Instructions to not manipulate or hold the fall arester or lever, but to move the fall arrester up/down by the lanyard; -The maximum arrest distance and clearance requirement when dynamically tested in accordance with the requirements of this standard; -The proper size, construction and type of single anchor lifelines with which the fall arrester is intended to be used; -Warnings to emphasize that anchoring be above the user to prevent pendulum fall; -Warnings to emphasize use is not suitable when the user is positioned on an unstable surface, fine grain material or particulate solid such as sand or coal; -Information for determining total fall distance including lifeline elongation; -Capacity range of 130 to 310 pounds; -Standard number “Z359.15”.	NA
5.4.2	Single Anchor Lifelines. In addition to the requirements in 5.3, instructions for single anchor lifelines shall include: -The material used in the single anchor lifeline construction; -Proper method of coupling the single anchor lifeline to anchorage connectors and anchorages with which it is intended to be used and to adjacent components of the system; -The minimum static strength; -Warnings that only one fall arrester be attached to the single anchor lifeline; -Warnings that onl one user can be attached to the single anchor lifeline; -Warnings to avoid exposure to physical and chemical hazards which the single anchor lifeline is not designed to withstand; -Warnings using the equipment near sharp edges and abrasive surfaces and the need for abrasion protection; -Warnings to avoid swing fall hazards encountered when the anchorage is not directly overhead; -The proper fall arrester, by make and model, with which the single anchor lifeline is intended to be used; -The percentage of stretch of the lifeline when loaded to 900 pounds (4kN); -Capacity range of 130 to 310 pounds; -Lifeline melting point; -Standard number “Z359.15”; -If permissible by the manufacturer, specific directions how to cut damaged sections from the lifelines and how to re-label non-terminated lifelines according to 5.2.2; -Direction how to stabilize the lower end of the lifeline with a weight or alternative method directed by the manufacturer; -Direction(s) regarding placement of a rope stop to prevent the fall arrester inadvertently traveling off the end of the lifeline.	Meets or Exceeds

Notes

4.3.1 Static Strength Test - Single Anchor Life-line
requirements per 3.1.7, 3.1.9, 3.1.12.1

a) Connect the lifeline test specimen between the connectors of the tensile test equipment. If the lifeline includes an integral energy absorber, include the energy absorber component in the test

b) Subject the lifeline to a force no less than 5,000 pounds (22.2 kN) for terminated specimens and 6,000 pounds (26.7 kN) for non-terminated and wire rope specimens for a period no less than 1 minute. Apply the load at no greater than 6 inches per minute (152.4 mm/min) to avoid dynamic effects

c) Compare the test results with the requirements in 3.1.7, 3.1.9 or 3.1.12.1 as applicable

4.3.1 Static Strength Test - Single Anchor Life-line
requirements per 3.1.7, 3.1.9, 3.1.12.1

Samples	Sample # 01	Sample # 02	Sample # 03
Actual weight applied (lb)	5033.77	5011.54	5061.93
Specimen maintained load	Yes	Yes	Yes
Result/Assessment	Pass	Pass	Pass

Notes