

WITNESS TESTING REPORT

Hardline Laboratory

Report No. : TH10323A/2022

Page : 1 of 6

Date : MAR. 20, 2023

Frontline Fall Protection Inc

2023 NW 84TH AVE, Miami, FL 33122, United States

The following merchandise was submitted and identified by the applicant as:Product Description: 33ft Cable Self-Retracting lifelineStyle/Item No.: RPGC30Site of Witness: No. 88-8, Sec. 2, Zhongtong W. Rd., Wufeng Dist., Taichung City 41355, TaiwanAdditional Information: Test Witness: James Tsai.**We have tested the submitted sample(s) as requested and the following results were obtained:**Test Requested: Clause 3.1.5, 3.2.1, 3.3.1, 3.4 & 3.5.1 of ANSI/ASSP Z359.14-2021, Safety Requirements for Self-Retracting Devices for Personal Fall Arrest and Rescue Systems.Test Method: ANSI/ASSP Z359.14-2021, Safety Requirements for Self-Retracting Devices for Personal Fall Arrest and Rescue Systems.Test of Samples: Device Classes: Class 1Test Result: --See following sheet(s)--Testing Period: JAN. 07, 2022 ~ FEB. 18, 2022Conclusion: The submitted sample **complies with** clause 3.1.5, 3.2.1, 3.3.1, 3.4 & 3.5.1 of ANSI/ASSP Z359.14-2021, Safety Requirements for Self-Retracting Devices for Personal Fall Arrest and Rescue Systems.

Note: This test report is extended from the original one TH10323/2022, issued on MAR. 10, 2022.

Signed for and on behalf of
SGS Taiwan Ltd.Luke Lee
Supervisor

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Test Method & Results:

Clauses	Test Item/Results	Compliance														
3.1.5	<p><u>Corrosion Protection</u> 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.</p>	Pass														
	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">Test item</td> <td style="width: 50%;">Observation</td> </tr> <tr> <td>Operate as intended:</td> <td>Yes</td> </tr> <tr> <td>Signs of corrosion (visual check):</td> <td>No</td> </tr> <tr> <td>Line pay out, retract and lock:</td> <td>Yes</td> </tr> <tr> <td>Retraction tension:</td> <td>1 foot: 2.33 lbf</td> </tr> <tr> <td>1.25~25 lbf</td> <td>50%: 3.22 lbf</td> </tr> <tr> <td></td> <td>100%: 5.19 lbf</td> </tr> </table>		Test item	Observation	Operate as intended:	Yes	Signs of corrosion (visual check):	No	Line pay out, retract and lock:	Yes	Retraction tension:	1 foot: 2.33 lbf	1.25~25 lbf	50%: 3.22 lbf		100%: 5.19 lbf
	Test item		Observation													
	Operate as intended:		Yes													
	Signs of corrosion (visual check):		No													
Line pay out, retract and lock:	Yes															
Retraction tension:	1 foot: 2.33 lbf															
1.25~25 lbf	50%: 3.22 lbf															
	100%: 5.19 lbf															
3.2.1	<p><u>Static Strength of Self-Retracting Devices (SRDs)</u> When tested in accordance with 4.2.1, SRDs shall withstand, without breaking, a load of 3,600 pounds (16kN) when statically applied.</p>	Pass														
	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">Test item</td> <td style="width: 50%;">Observation</td> </tr> <tr> <td>Static test:</td> <td>No breaking and withstand the load.</td> </tr> </table>		Test item	Observation	Static test:	No breaking and withstand the load.										
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Clauses	Test Item/Results	Compliance																																																							
3.3.1	<p>Dynamic Performance of SRDs For all SRDs, when tested in accordance with 4.3.1: 3.3.1.1 Locking function shall operate in accordance with 3.1.2. 3.3.1.2 The device shall pay out and retract the line in accordance with 3.5 after each dynamic performance test. SRL-Ps and Class 2 SRDs are excluded from this requirement. 3.3.1.3 The visual indicator shall activate when dynamic performance is tested, providing clear evidence that the device has been impact loaded. 3.3.1.4 The maximum arrest force shall not exceed 1,800 pounds (8kN), the average arrest force shall not exceed 1,350 pounds (6kN) and the arrest distance shall not exceed 42 inches (1,067mm) under ambient conditions. 3.3.1.5 The maximum arrest force shall not exceed 1,800 pounds (8kN), the average arrest force shall not exceed 1,575 pounds (7kN) and the arrest distance shall not exceed 42 inches (1,067mm) under hot, cold or wet conditions. New SRDs shall be used for each conditioning procedure.</p>	Pass																																																							
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Test item</th> <th colspan="4">Observation</th> </tr> <tr> <th>Ambient</th> <th>Hot</th> <th>Cold</th> <th>Wet</th> </tr> </thead> <tbody> <tr> <td>Locking function:</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>Pay out and retract:</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td rowspan="3">Retraction tension: 1.25~25 lbf</td> <td>1 foot:</td> <td>2.83 lbf</td> <td>3.86 lbf</td> <td>3.31 lbf</td> <td>3.88 lbf</td> </tr> <tr> <td>50%:</td> <td>4.51 lbf</td> <td>3.65 lbf</td> <td>3.72 lbf</td> <td>3.16 lbf</td> </tr> <tr> <td>100%:</td> <td>5.49 lbf</td> <td>4.94 lbf</td> <td>5.09 lbf</td> <td>5.14 lbf</td> </tr> <tr> <td>Visual indicator:</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>Maximum arrest force: ≤ 1800 lbf</td> <td>1011.68 lbf</td> <td>743.98 lbf</td> <td>801.51 lbf</td> <td>1085.66 lbf</td> </tr> <tr> <td>Average arrest force: Ambient ≤ 1350 lbf Hot/Cold/Wet ≤ 1575 lbf</td> <td>760.68 lbf</td> <td>597.29 Lbf</td> <td>669.25 lbf</td> <td>729.95 lbf</td> </tr> <tr> <td>Arrest distance: ≤ 42 inches</td> <td>25.9 inches</td> <td>30.7 inches</td> <td>26.7 inches</td> <td>31.5 inches</td> </tr> </tbody> </table>		Test item	Observation				Ambient	Hot	Cold	Wet	Locking function:	Yes	Yes	Yes	Yes	Pay out and retract:	Yes	Yes	Yes	Yes	Retraction tension: 1.25~25 lbf	1 foot:	2.83 lbf	3.86 lbf	3.31 lbf	3.88 lbf	50%:	4.51 lbf	3.65 lbf	3.72 lbf	3.16 lbf	100%:	5.49 lbf	4.94 lbf	5.09 lbf	5.14 lbf	Visual indicator:	Yes	Yes	Yes	Yes	Maximum arrest force: ≤ 1800 lbf	1011.68 lbf	743.98 lbf	801.51 lbf	1085.66 lbf	Average arrest force: Ambient ≤ 1350 lbf Hot/Cold/Wet ≤ 1575 lbf	760.68 lbf	597.29 Lbf	669.25 lbf	729.95 lbf	Arrest distance: ≤ 42 inches	25.9 inches	30.7 inches	26.7 inches	31.5 inches
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Clauses	Test Item/Results	Compliance								
3.4	Energy Capacity SRDs featuring a rotary brake shall be tested in accordance with 4.4. The maximum arrest force shall not exceed 1,800 lbs (8kN).	Pass								
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Test item</th> <th style="width: 50%;">Observation</th> </tr> </thead> <tbody> <tr> <td>Maximum arrest force: ≤ 1800 lbf</td> <td style="text-align: center;">1329.92 lbf</td> </tr> </tbody> </table>		Test item	Observation	Maximum arrest force: ≤ 1800 lbf	1329.92 lbf				
	Test item		Observation							
Maximum arrest force: ≤ 1800 lbf	1329.92 lbf									
3.5.1	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 4.5.1. Additionally, Class 2 devices shall retract without stopping when tested in a horizontal orientation in accordance with 4.5.2.	Pass								
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Test item</th> <th style="width: 50%;">Observation</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Retraction tension: 1.25~25 lbf</td> <td>1 foot: 3.15 lbf</td> </tr> <tr> <td>50%: 3.49 lbf</td> </tr> <tr> <td>100%: 4.95 lbf</td> </tr> <tr> <td>Retract without stopping in horizontal (Class 2):</td> <td style="text-align: center;">N/A</td> </tr> </tbody> </table>		Test item	Observation	Retraction tension: 1.25~25 lbf	1 foot: 3.15 lbf	50%: 3.49 lbf	100%: 4.95 lbf	Retract without stopping in horizontal (Class 2):	N/A
	Test item		Observation							
	Retraction tension: 1.25~25 lbf		1 foot: 3.15 lbf							
50%: 3.49 lbf										
100%: 4.95 lbf										
Retract without stopping in horizontal (Class 2):	N/A									

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Test equipment:

Description	Manufacturer	Model No.	Serial No.	Cal. Date
Laser distance meter	BOSCH	GLM40	122213512	2021/11/22
Environmental testing equipment	TERCHY	HEMB-120L	1080911	2021/3/24
Environmental testing equipment	TERCHY	HEMB-120L	1060910	2021/8/9
Universal Machine	NTS	LCX-100kN	18038	2021/3/24
Force guage	AIKOH	RX-10	D02639	2021/4/21
Load cell	JIHSENSE	LM-3T	90508	2021/7/14
Salt spray tester	-	DR-90	B-03-01	2021/8/9
PH meter	Lutron	PH-211	AJ.92507(B-03-02)	2020/9/25

Note :

1. The content of this report is invalid if it is not presented as the entire report.
2. The statement of conformity is based on the test results, but does not include the measurement uncertainty.
3. N/A = Not applicable; "--" = blank.

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– Picture(s) –



Photo “A” Appearance of sample

--- End of Report ---

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