



SAFEWAZE

Northstar Classic LE SRL Manual



STANDARDS	
ANSI	Z359.14-2021
OSHA	1910.140, 1910.66

Class
2
Anchor above or
below dorsal D-ring

**Read and understand instructions before using equipment!
Do not throw away instructions!**

**Always verify the latest revision of the Safewaze Manual is being utilized.
Visit the Safewaze website, or contact Customer Service, for updated manuals.**

⚠️ IMPORTANT:

- Please refer to this manual for essential instructions on the use, care, or suitability of this equipment for your application. Contact Safewaze for any additional questions.
- Record all important product information prior to use. Documentation of all Competent Person annual inspections is required in the Inspection Log.

▶ USER INFORMATION

Date of First Use: _____

Serial Number: _____

Trainer: _____

User: _____

▶ SAFETY INFORMATION AND PRECAUTIONS

- The manufacturer's instructions must be provided to users of this equipment.
- The user must read, understand, and follow all safety and usage information contained within this manual.
- The user must safely and effectively use the Northstar Classic LE SRL and all equipment used in conjunction with the SRL.
- Failure to follow all safety and usage information can result in serious injury or death.

⚠Warnings:

Regulations included herein are not all-inclusive, are for reference only, and are not intended to replace a Competent Person's judgment or knowledge of federal or state standards.

The warnings indicated below are designed to minimize risk associated with the use of the Northstar Classic LE SRL and associated equipment.

- Users should consult with their doctor to verify ability to safely absorb the forces of a fall arrest event. Fitness level, age, and other health conditions can greatly affect an individual's ability to withstand fall arrest forces. Women who are pregnant and individuals considered minors must not use any Safewaze equipment.
- Do not alter or misuse equipment. Only Safewaze, or entities authorized in writing by Safewaze, may make repairs to Safewaze fall protection equipment.
- A Competent Person must conduct an analysis of the workplace and anticipate where workers will be conducting their duties, the route they will take to reach their work, and any existing and potential fall hazards. The Competent Person must choose the fall protection equipment to be utilized. Selections must account for all potential hazardous workplace conditions. All fall protection equipment should be purchased in new and unused condition.
- If work is conducted in a high heat environment, ensure that Arc Flash or other suitable fall protection equipment is utilized.
- Use of a body belt is not authorized for fall arrest applications.
- Work directly under the anchor point as much as possible to minimize swing fall hazards.
- The user must ensure that there is adequate fall clearance when working at height.
- Equipment that is exposed to fall arrest forces must be immediately removed from service and destroyed.
- Training of Authorized Persons to correctly install, inspect, disassemble, maintain, store, and use equipment must be provided by a Competent Person. Training must include the ability to recognize fall hazards, minimize the likelihood of fall hazards, and the correct use of personal fall arrest systems.
- If conducting training operations with this equipment, a secondary fall protection system must be installed and utilized to ensure the trainee is not exposed to unintended fall hazards.
- Equipment designated for fall protection must never be used to lift, hang, support, or hoist tools or equipment unless specifically certified for such use.
- Avoid using the Northstar Classic LE SRL in applications where engulfment hazards exist.
- Avoid moving machinery, sharp and/or abrasive edges, and any other hazard that could damage or degrade the component.
- Utilize extra caution to keep lifeline free from any obstructions including, but not limited to, surrounding objects, tools, equipment, moving machinery, co-workers, yourself, or possible impact from overhead objects.
- User must inspect the SRL prior to each use and check for proper locking and retraction functions.
- Never allow slack to form in the SRL lifeline. Never tie or knot the lifeline.
- Never connect the snap hook of one SRL to the lifeline of another SRL or lanyard.
- Avoid making sudden or quick movements that could cause the SRL to inadvertently lock.
- Do not use D-ring extenders when using this product in a Leading Edge environment.
- Never exceed maximum allowable weight capacity or maximum free fall distance of the fall protection equipment.

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PART NUMBERS AND CONFIGURATIONS COVERED:



Standards: ANSI Z359.14-2021
OSHA 1910.140, 1910.66

Capacity: ANSI 130-310 lbs. (59-141 kg)
OSHA Up to 420 lbs. (191kg)

Part Number	Single Lead (S) / Dual Lead (D)	Working Length (in)	Lifeline Material	Lifeline Dimensions (in)	Housing Material	Weight (lbs.)	CONNECTOR												ATTACHMENT																				
							U.S. Steel Swivel Snap Hook (1)	Aluminum Swivel Snap Hook (2)	Distalric Snap Hook (3)	Steel Trip Snap Hook (4)	Steel Trip Snap Hook (5)	U.S. Steel Swivel Bebar Hook (6)	Steel Swivel Bebar Hook (7)	Steel Carabiner Eye Carabiner (8)	Aluminum Carabiner Eye Carabiner (9)	Aluminum Swivel Carabiner (10)	No Attachment (11)	Tri- Lock Steel Carabiner (12)	Steel Carabiner (13)	Aluminum Carabiner (14)	Aluminum Swivel Carabiner (15)	Aluminum Snap Hook (16)	FS-2433 (17)	Cable Mount Swivel (18)	SRL Loop (19)	Integrated BWRB (20)	10:1 BWRB (21)	80:1 BWRB (22)	30:1 BWRB (23)										
FS-FSP9020	1, 2	5	20	Steel Cable	ø3/16	Polymer	10.0													X																			
FS-FSP9030	1, 2	5	30	Steel Cable	ø3/16	Polymer	13.9														X																		
FS-FSP9050	1, 2	5	50	Steel Cable	ø3/16	Polymer	18.3														X																		



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▶ 1.0 INTRODUCTION

Thank you for purchasing a Safewaze Northstar Classic Leading Edge Self-Retracting Lifeline (SRL). This manual must be read and understood in its entirety and used as part of an employee training program as required by OSHA or any applicable state agency.

The Northstar Classic LE SRL is intended for use as part of a complete Personal Fall Arrest, Restraint, Work Positioning, or Rescue System. Safewaze SRLs are designed to safely arrest the user in a fall event, while minimizing forces on the body. Safewaze Northstar Classic LE SRLs are designed for a single user whose weight (including clothing, tools, equipment, etc.) is:

ANSI 130-310 lbs. (58.96-140.61 kg)
OSHA Up to 420 lbs. (190.51 kg)

Safewaze SRLs are authorized for use with Horizontal Lifeline Systems (HLL) but must NEVER be used as the lifeline constituent of an HLL System. Class 1 SRLs must only be used in overhead applications and are not authorized for use below the Dorsal D-ring. Maximum allowable Free Fall for Class 1 SRLs is 2 ft. (0.6 m). The Northstar Classic LE SRL is a Class 2 SRL. Class 2 SRLs can be used in overhead and below the Dorsal D-ring applications. Maximum allowable Free Fall for Class 2 SRLs is 6 ft. (1.8 m).

The configuration table above indicates the SRL models included in the Northstar Classic Series, as well as their configurations.

► 2.0 INTENDED USE

The equipment covered in this manual is intended for use as part of a complete Personal Fall Arrest, Restraint, Work Positioning, or Rescue System. Use of this equipment for any other purpose including, but not limited to, sports or recreational activities, material handling applications, or other action not described in these instructions is not approved by Safewaze. Use of this equipment in a manner outside the scope of those covered within this manual can result in serious injury or death. The equipment covered in this manual must only be used by trained personnel in workplace applications.

► 3.0 APPLICABLE SAFETY STANDARDS

When used according to instructions, this product meets **ANSI Z359.14-2021** standard and **OSHA 1910.66 and 1910.140** regulations. Applicable standards and regulations depend on the type of work being done and may include state-specific regulations.

Refer to local, state, and federal requirements for additional information on the governing of occupational safety regarding Personal Fall Arrest Systems (PFAS).

The system has been tested in compliance with requirements of **ANSI/ASSP Z359.7**. The testing does not extend to the substrate to which the system is attached.

ANSI requires SRLs be classified according to their intended use and are tested either as Class 1 or Class 2 units. Northstar Classic LE SRLs are Class 2 SRLs. Dynamic performance testing begins by installing the SRL in a controlled test environment. With the SRL attached to a suitable anchorage, the lifeline constituent is attached to a test weight. The weight is then dropped to simulate a fall arrest event.

Note: The SRL must be tested in all installation configurations allowed per its user instructions. Test results are recorded.

Parameters recorded are the Arrest Distance (AD), Average Arrest Force (AAF), and Maximum Arrest Force (MAF).

The Arrest Distance is the total vertical distance required to completely arrest a fall. AD includes the deceleration distance and the activation distance. The Average Arrest Force is the average of the forces applied to the body and the anchorage by the fall protection system. The Maximum Arrest Force is the maximum amount of force that may be applied to the body and the anchorage by the fall protection system.

These tests are conducted in ambient conditions. The units must also be tested in extreme atmospheric conditions. There are three conditions: Cold, Hot, and Wet (units are saturated in water and tested). Separate units may be used for each test. All test results are recorded. This test data is then used to establish the fall clearance guidelines published in this instruction manual.

Class 1 and Class 2:

- **Class 1:** Self-retracting devices which shall be used only on overhead anchorages and shall be subjected to a maximum free fall of 2 feet (0.6 m) or less, in practical application.

- **Class 2:** Self-retracting devices which are intended for applications wherein overhead anchorages may not be available or feasible and which may, in practical application, be subjected to a free fall of no more than 6 feet (1.8 m) over an edge.

When the SRL is anchored overhead of the user, ANSI Z359.14-2021 specifies that both Class 1 and Class 2 SRLs shall have an AD of less than 42 in. (1.1 m). AAF must not exceed 1,350 lbs. (612.35 kg). Conditioned testing of the units allows a slightly higher AAF of 1,575 lbs. (714.41 kg), but MAF must always remain below 1,800 lbs. (816.47 kg).

See Section 8 of this manual for how to calculate your Minimum Required Fall Clearance (MRFC).

Classification information found on product labels is based on test results.

Note: Arrest Distance is one of several parts of the MRFC. OSHA requires an SRL limit the free fall to 2 feet (0.6 m) or less. If the maximum free fall distance must be exceeded, the employer must document, based on test data, that the maximum arresting force will not be exceeded, and the personal fall arrest system will function properly.

► 4.0 WORKER CLASSIFICATIONS

Read and understand the definitions of those who work in proximity of, or may be exposed to, fall hazards:

Qualified Engineer: A person with a Bachelor of Science in Engineering degree from an accredited college or university. They are able to assume personal responsibility for the development and application of engineering science and knowledge in the design, construction, use, and maintenance of their projects.

Qualified Person: One who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated their ability to solve or resolve problems relating to the subject matter, the work, or the project.

Competent Person: One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Authorized Person: A person approved or assigned by the employer to perform a specific type of duty or duties, or to be at a specific location or locations, at the jobsite.

It is the responsibility of a Qualified Person or Engineer to supervise the jobsite and ensure safety regulations are met.

► 5.0 RESCUE PLAN

Prior to the use of this equipment, employers must create a rescue plan in the event of a fall and provide the means to implement the plan through training. The rescue plan must be specific to the project. The rescue plan must allow for employees to rescue themselves or be promptly rescued by alternative means.

This plan must be communicated to/understood by all equipment users, authorized persons, and rescuers. Rescue operations may require specialized equipment beyond the scope of this manual. Every user must be trained in the inspection, installation, operation, and proper usage of their Rescue Equipment and Rescue Plan. See ANSI Z359.4-2013 for specific rescue information. Immediately seek medical attention in the event a worker suffers a fall arrest incident.

Note: Special rescue measures may be required for a fall over an edge.

► 6.0 PRODUCT LIMITATIONS

When installing or using this equipment always refer to the following requirements and limitations:

- **Capacity Range:** ANSI 130-310 lbs. (59-141 kg) and OSHA up to 420 lbs. (191 kg). *including clothing, tools, equipment, etc.
- **Anchorage:** Anchorages selected for fall arrest systems shall have a strength capable of sustaining static loads applied in the directions permitted by the system of at least:
 1. 5,000 lbs. (2267.9 kg) for non-certified anchorages, or
 2. Two times the maximum arresting force for certified anchorages, or
 3. 3,100 lbs. for Rescue applications.

When more than one fall arrest system is attached to an anchorage, the strengths set forth in one of the above shall be multiplied by the number of systems attached to the anchorage.

From OSHA 1926.502 and 1910.66: Anchorages used for attachment of personal fall arrest systems shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 lbs. (2267.9 kg) per user attached. Or, anchorages for attachment should be designed, installed, and used as part of a complete PFAS which maintains a safety factor of at least two and is under the supervision of a Qualified Person.

- **Locking Speed:** The nature of this equipment requires a clear fall path to ensure the SRL will lock in the event of a fall. Working in obstructed fall paths, cramped areas, or on moving materials like sand and grain, may not allow the user's body to gain enough speed buildup to cause the SRL to engage and lock in the event of a fall.
- **Free Fall:** The distance a user falls before the fall arrester activates.
- **Swing Falls:** As the user moves laterally away from an overhead anchor point, the risks related to swing falls increase. The force of striking an object involving swing fall can in some instances generate more forces than a fall with the user wearing no fall protection equipment. Minimize swing falls by working as directly below the anchorage point as possible.
- **Swing Fall Drop Distance:** The additional clearance added from excess cable being paid out when working at a lateral offset from the anchorage.

- **Fall Clearance:** The amount of feet required below the working surface for the personal fall arrest system to work correctly.
- **Hazards:** Extra precautions should be taken if this equipment is used in an environment where hazards exist. Hazards can include, but are not limited to, moving machinery, high voltage equipment or power lines, caustic chemicals, corrosive environments, toxic or explosive gases, or high heat. Avoid working in an area where overhead equipment or personnel could fall and contact the user, fall protection equipment, or the lifeline. Areas where the user's lifeline may cross or tangle with the lifeline of another user should be avoided. Do not allow the lifeline to pass under arms or between the legs.
- **Sharp Edges:** Safewaze **Class 1 SRLs** are NOT designed for use in Leading Edge Environments. Should a specific work area have an extremely sharp edge/ edges that may come into contact with the lifeline constituent of the SRL, a Class 2 SRL is required.
- Use only the applicable D-ring for intended use.

▶ 7.0 PRODUCT SPECIFICATIONS

- This is a Class 2 Unit and can be anchored at, above, or below the Dorsal D-ring.
- Average Arrest Force: ≤ 1,350 lbs. (612.35 kg)
- Maximum Arrest Force: ≤ 1,800 lbs. (816.47 kg)
- Maximum Free Fall Distance: 72 in. (183 cm)
- Actual Arrest Distance and Fall Clearance calculations vary by unit can be found in Section 8.

TABLE 1: MATERIALS	
Housing	Nylon and Glass Fiber
Lifeline	$\frac{3}{16}$ in. Galvanized Steel Cable
Drum	Aluminum
Swivel	Aluminum
Fasteners	Aluminum / Steel / Stainless Steel
Locking Pawls	Brass
Main Shaft	Stainless Steel
Springs	Stainless Steel
Energy Absorber	Polyester

► 8.0 FALL CLEARANCE

Always select a personal fall arrest system and anchor point location that limits free fall and swing fall as much as possible. A free fall of more than 6 ft. could cause excessive arrest forces that could result in serious injury or death.

- **Free Fall:** The distance a user falls before the fall arrester activates. The user must determine the amount of Free Fall present in the system as this can increase or reduce the Fall Clearance. Determine height of anchorage from the D-ring, lateral offset from anchorage, anchorage setback from working edge, and the SRL model number being used to select the appropriate clearance chart.
- **Actual Arrest Distance (AD):** Safewaze SRLs are tested in accordance with ANSI Z359.14-2021 conditioning test protocols. Table 2 reflects the Actual Arrest Distances of the Northstar Classic LE SRL when subjected to Ambient, Wet, Hot, and Cold testing. These Actual Arrest Distances are typically lower than the 42" maximum as specified per ANSI. In certain instances this may allow for a Qualified Person to adjust Minimum Required Fall Clearances.
- **Harness Stretch:** The distance the harness stretches after forces have been absorbed by the harness.
- **Worker Height:** The distance between the working surface to the dorsal D-ring.
- **Swing Fall Drop Distance:** The additional clearance added from excess lifeline being paid out when working at a lateral offset from the anchorage when using an SRL.
- **Safety Factor:** Additional fall clearance added to ensure a safe distance from any obstruction after a fall. Safewaze uses a 2 ft. Safety Factor.
- **Fall Clearance:** The total combined values of Free Fall, Arrest Distance, Harness Stretch, Worker Height (working surface to dorsal D-ring), Swing Fall Drop Distance, and Safety Factor. An additional 3 ft. (1 m) of Fall Clearance is required for falls from a kneeling or crouched position. If a Swing Fall hazard exists, the total vertical fall distance will be greater than if the user had fallen directly under the anchor point.

THIS IS ONLY AN EXAMPLE

Note: Numbers used in these examples are based on ZERO offset and setback with the anchor directly overhead or below to represent an inline fall clearance calculation. Consult with your competent person when working in different scenarios and when using non-Safewaze equipment

WARNING!

ELIMINATE SWING FALL BY WORKING AS CLOSE TO AND INLINE TO THE ANCHORAGE AS POSSIBLE

NOTE: DO NOT EXCEED 4' SWING FALL DROP DISTANCE PER ANSI Z359.6-2016

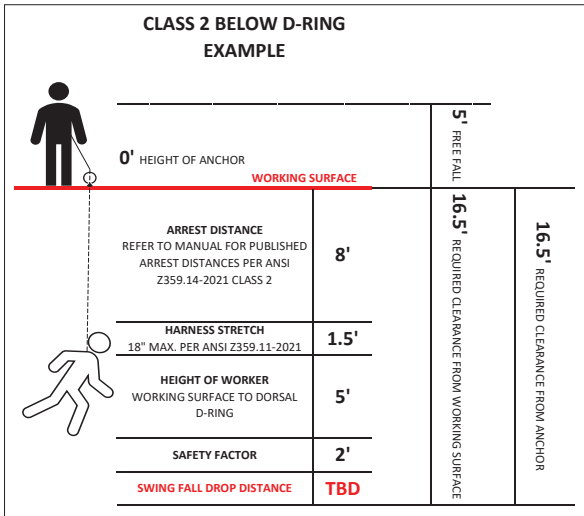
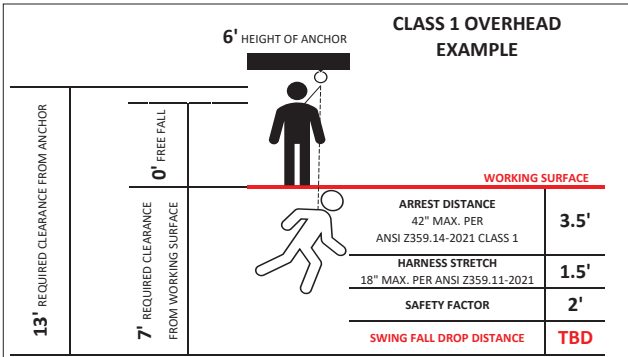


TABLE 2: ACTUAL ARREST DISTANCES (CLASS 1 DYNAMIC)

Model	Ambient*	Wet	Hot	Cold
FS-FSP9020	41" (104 cm)	34" (86 cm)	33" (84 cm)	38" (97 cm)
FS-FSP9030	30" (76 cm)	30" (76 cm)	35" (89 cm)	41" (104 cm)
FS-FSP9050	37" (94 cm)	30" (76 cm)	41" (104 cm)	33" (84 cm)

TABLE 3: ACTUAL ARREST DISTANCES (CLASS 2 DYNAMIC)

Model	Ambient*	Wet	Hot	Cold
FS-FSP9020	96" (244 cm)	85" (216 cm)	97" (246 cm)	85" (216 cm)
FS-FSP9030	93" (236 cm)	82" (208 cm)	96" (244 cm)	86" (218 cm)
FS-FSP9050	93" (236 cm)	77" (196 cm)	92" (234 cm)	80" (203 cm)

*ANSI Z359.6-2016 defines the ambient temperature range as 35°F (2°C) to 100°F (38°C).

- **Minimum Required Fall Clearance (MRFC):** The Minimum Required Fall Clearance distances for Class 1 in table 4 and Class 2 in table 5 are calculated using the greatest Actual Arrest Distance out of the four tests performed on each model. Refer to the chart that coincides with the product's model number.

Note: A Qualified Person must determine if MRFCs can be adjusted based upon actual jobsite atmospheric conditions or additional factors.

TABLE 4: MINIMUM REQUIRED FALL CLEARANCE (CLASS 1)

Model	Actual Arrest Distance	Minimum Required Fall Clearance
FS-FSP9020	41" (104 cm)	6' 11" (2.1 m)
FS-FSP9030	41" (104 cm)	6' 11" (2.1 m)
FS-FSP9050	41" (104 cm)	6' 11" (2.1 m)

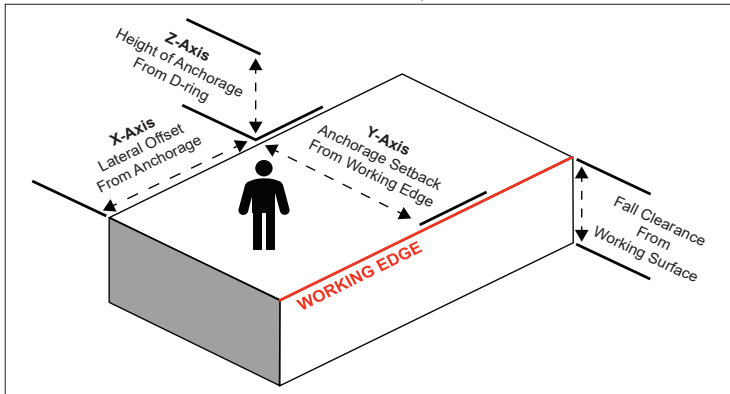
TABLE 5: MINIMUM REQUIRED FALL CLEARANCE (CLASS 2)

Model	Actual Arrest Distance	Minimum Required Fall Clearance
FS-FSP9020	97" (246 cm)	16' 6" (5.0 m)
FS-FSP9030	96" (244 cm)	16' 6" (5.0 m)
FS-FSP9050	93" (236 cm)	16' 3" (4.9 m)

FALL CLEARANCE TABLES

***For the Overhead Use (white) Class 1 charts:** Clearance Values come from combined values of Arrest Distance, Harness Stretch, Swing Fall Drop Distance, and 2 ft. safety factor. These charts are calculated based on the ANSI maximum 42" arrest distance.

***For the Below D-Ring (black) Class 2 charts:** Clearance Values come from combined values of Arrest Distance, Harness Stretch, Worker Height—working surface to dorsal d-ring, Swing Fall Drop Distance, and 2 ft. safety factor. These charts are calculated based on the greatest Actual Arrest Distance out of the four tests performed on each model. Refer to the chart that coincides with the product's model number.



CLASS 1

Fall Clearance Table: Overhead Use (Class 1) Northstar Classic 20'-50' LE

Z-Axis: Height of Anchorage From D-Ring	50'0" (15.2m)	7'0" (2.1m)	7'0" (2.1m)	7'2" (2.2m)	7'4" (2.2m)	7'8" (2.3m)	8'0" (2.4m)	8'5" (2.6m)	8'11" (2.7m)	9'6" (2.9m)	10'2" (3.1m)	10'10" (3.3m)	11'8" (3.5m)	
	45'0" (13.7m)	7'0" (2.1m)	7'1" (2.1m)	7'2" (2.2m)	7'5" (2.3m)	7'8" (2.3m)	8'1" (2.5m)	8'7" (2.6m)	9'2" (2.8m)	9'9" (3.0m)	10'6" (3.2m)	11'3" (3.4m)	12'1" (3.7m)	
	40'0" (12.2m)	7'0" (2.1m)	7'1" (2.1m)	7'2" (2.2m)	7'5" (2.3m)	7'10" (2.4m)	8'3" (2.5m)	8'9" (2.7m)	9'5" (2.9m)	10'1" (3.1m)	10'10" (3.3m)	11'9" (3.6m)	12'8" (3.9m)	
	35'0" (10.7m)	7'0" (2.1m)	7'1" (2.2m)	7'3" (2.2m)	7'6" (2.3m)	7'11" (2.4m)	8'5" (2.6m)	9'0" (2.7m)	9'8" (3.0m)	10'6" (3.2m)	11'4" (3.5m)	12'4" (3.8m)	13'4" (4.1m)	
	30'0" (9.1m)	7'0" (2.1m)	7'1" (2.2m)	7'3" (2.2m)	7'7" (2.3m)	8'1" (2.5m)	8'7" (2.6m)	9'4" (2.8m)	10'1" (3.1m)	11'0" (3.4m)	12'0" (3.7m)	13'1" (4.0m)	14'2" (4.3m)	
	25'0" (7.6m)	7'0" (2.1m)	7'1" (2.2m)	7'4" (2.2m)	7'9" (2.3m)	8'3" (2.5m)	8'11" (2.7m)	9'9" (3.0m)	10'8" (3.2m)	11'8" (3.6m)	12'10" (3.9m)	14'0" (4.3m)	15'4" (4.7m)	
	20'0" (6.1m)	7'0" (2.1m)	7'1" (2.2m)	7'5" (2.3m)	7'11" (2.4m)	8'6" (2.6m)	9'4" (2.9m)	10'4" (3.1m)	11'5" (3.5m)	12'7" (3.8m)	13'11" (4.2m)	15'3" (4.7m)	16'9" (5.1m)	
	15'0" (4.6m)	7'0" (2.1m)	7'2" (2.2m)	7'6" (2.3m)	8'2" (2.5m)	9'0" (2.7m)	10'0" (3.1m)	11'3" (3.4m)	12'6" (3.8m)	13'11" (4.2m)	15'5" (4.7m)	17'0" (5.2m)	18'8" (5.7m)	
	10'0" (3.0m)	7'0" (2.1m)	7'2" (2.2m)	7'9" (2.4m)	8'8" (2.6m)	9'10" (3.0m)	11'2" (3.4m)	12'7" (3.8m)	14'2" (4.3m)	15'10" (4.8m)	17'7" (5.4m)	19'4" (5.9m)	21'2" (6.5m)	
	5'0" (1.5m)	7'0" (2.1m)	7'5" (2.3m)	8'5" (2.6m)	9'10" (3.0m)	11'5" (3.5m)	13'2" (4.0m)	15'0" (4.6m)	16'10" (5.1m)	18'9" (5.7m)	20'8" (6.3m)	22'7" (6.9m)	24'7" (7.5m)	
	0'0" (0.0m)	9'0" (2.7m)	11'0" (3.4m)	13'0" (4.0m)	15'0" (4.6m)	17'0" (5.2m)	19'0" (5.8m)	21'0" (6.4m)	23'0" (7.0m)	25'0" (7.6m)	27'0" (8.2m)	29'0" (8.8m)		
		0'0" (0.0m)	2'0" (0.6m)	4'0" (1.2m)	6'0" (1.8m)	8'0" (2.4m)	10'0" (3.0m)	12'0" (3.7m)	14'0" (4.3m)	16'0" (4.9m)	18'0" (5.5m)	20'0" (6.1m)	22'0" (6.7m)	

X-Axis: Lateral Offset From Anchorage

X'X" (X.Xm)	Safe Work Zone
----------------	----------------

X'X" (X.Xm)	WARNING!
----------------	----------

X'X" (X.Xm)	Use Caution
----------------	-------------

WORKING IN THIS AREA MAY
RESULT IN SERIOUS INJURY OR
DEATH

CLASS 2

Fall Clearance Table: Below D-ring Use (Class 2) Northstar Classic 20' LE Cable:

Y-Axis: Anchorage Setback From Working Edge	20'0"	16'6"	16'8"	16'11"	17'5"	18'1"	18'11"	19'10"	20'11"	22'2"
	(6.1m)	(5.0m)	(5.1m)	(5.2m)	(5.3m)	(5.5m)	(5.8m)	(6.1m)	(6.4m)	(6.8m)
	15'0"	16'6"	16'8"	17'1"	17'8"	18'6"	19'7"	20'9"	22'1"	23'6"
	(4.6m)	(5.0m)	(5.1m)	(5.2m)	(5.4m)	(5.7m)	(6.0m)	(6.3m)	(6.7m)	(7.2m)
	10'0"	16'6"	16'9"	17'4"	18'2"	19'4"	20'8"	22'2"	23'9"	25'5"
	(3.0m)	(5.0m)	(5.1m)	(5.3m)	(5.5m)	(5.9m)	(6.3m)	(6.8m)	(7.2m)	(7.7m)
	5'0"	16'6"	16'11"	17'11"	19'4"	21'0"	22'9"	24'6"	26'5"	28'4"
	(1.5m)	(5.0m)	(5.2m)	(5.5m)	(5.9m)	(6.4m)	(6.9m)	(7.5m)	(8.0m)	(8.6m)
	0'0"	16'6"	18'6"	20'6"	22'6"	24'6"	26'6"	28'6"	30'6"	32'6"
	(0.0m)	(5.0m)	(5.7m)	(6.3m)	(6.9m)	(7.5m)	(8.1m)	(8.7m)	(9.3m)	(9.9m)
	0'0"	2'0"	4'0"	6'0"	8'0"	10'0"	12'0"	14'0"	16'0"	
	(0.0m)	(0.6m)	(1.2m)	(1.8m)	(2.4m)	(3.0m)	(3.7m)	(4.3m)	(4.9m)	
X-Axis: Lateral Offset From Anchorage										

X'X" (X.Xm)	Safe Work Zone	X'X" (X.Xm)	WARNING!
X'X" (X.Xm)	Use Caution	WORKING IN THIS AREA MAY RESULT IN SERIOUS INJURY OR DEATH	

Fall Clearance Table: Below D-ring Use (Class 2) Northstar Classic 30' LE Cable:

Y-Axis: Anchorage Setback From Working Edge	30'0"	16'6"	16'7"	16'9"	17'1"	17'7"	18'2"	18'10"	19'7"	20'6"	21'6"
	(9.1m)	(5.0m)	(5.1m)	(5.1m)	(5.2m)	(5.4m)	(5.5m)	(5.7m)	(6.0m)	(6.3m)	(6.6m)
	25'0"	16'6"	16'7"	16'10"	17'3"	17'9"	18'5"	19'3"	20'2"	21'2"	22'4"
	(7.6m)	(5.0m)	(5.1m)	(5.1m)	(5.2m)	(5.4m)	(5.6m)	(5.9m)	(6.1m)	(6.5m)	(6.8m)
	20'0"	16'6"	16'7"	16'11"	17'5"	18'1"	18'10"	19'10"	20'11"	22'1"	23'5"
	(6.1m)	(5.0m)	(5.1m)	(5.1m)	(5.3m)	(5.5m)	(5.8m)	(6.0m)	(6.4m)	(6.7m)	(7.1m)
	15'0"	16'6"	16'8"	17'0"	17'8"	18'6"	19'6"	20'9"	22'0"	23'5"	24'11"
	(4.6m)	(5.0m)	(5.1m)	(5.2m)	(5.4m)	(5.6m)	(6.0m)	(6.3m)	(6.7m)	(7.1m)	(7.6m)
	10'0"	16'6"	16'8"	17'3"	18'2"	19'4"	20'8"	22'2"	23'9"	25'5"	27'1"
	(3.0m)	(5.0m)	(5.1m)	(5.3m)	(5.5m)	(5.9m)	(6.3m)	(6.7m)	(7.2m)	(7.7m)	(8.3m)
5'0"	16'6"	16'11"	17'11"	19'4"	20'11"	22'8"	24'6"	26'5"	28'3"	30'2"	
(1.5m)	(5.0m)	(5.1m)	(5.5m)	(5.9m)	(6.4m)	(6.9m)	(7.5m)	(8.0m)	(8.6m)	(9.2m)	
0'0"	16'6"	18'6"	20'6"	22'6"	24'6"	26'6"	28'6"	30'6"	32'6"	34'6"	
(0.0m)	(5.0m)	(5.6m)	(6.3m)	(6.9m)	(7.5m)	(8.1m)	(8.7m)	(9.3m)	(9.9m)	(10.5m)	
	0'0"	2'0"	4'0"	6'0"	8'0"	10'0"	12'0"	14'0"	16'0"	18'0"	
	(0.0m)	(0.6m)	(1.2m)	(1.8m)	(2.4m)	(3.0m)	(3.7m)	(4.3m)	(4.9m)	(5.5m)	
X-Axis: Lateral Offset From Anchorage											

X'X" (X.Xm)	Safe Work Zone	X'X" (X.Xm)	WARNING!
X'X" (X.Xm)	Use Caution	WORKING IN THIS AREA MAY RESULT IN SERIOUS INJURY OR DEATH	

Fall Clearance Table: Below D-ring Use (Class 2) Northstar Classic 50' LE Cable:

Y-Axis: Anchorage Setback From Working Edge	50'0"	16'3"	16'3"	16'5"	16'7"	16'11"	17'3"	17'8"	18'2"	18'9"	19'5"	20'1"	20'10"
	(15.2m)	(4.9m)	(4.9m)	(5.0m)	(5.0m)	(5.2m)	(5.3m)	(5.4m)	(5.5m)	(5.9m)	(5.9m)	(6.1m)	(6.4m)
45'0"	16'3"	16'3"	16'5"	16'8"	16'11"	17'4"	17'10"	18'4"	18'10"	19'0"	19'8"	20'6"	21'4"
(13.7m)	(4.9m)	(4.9m)	(5.0m)	(5.1m)	(5.2m)	(5.3m)	(5.4m)	(5.6m)	(5.8m)	(6.0m)	(6.0m)	(6.2m)	(6.5m)
40'0"	16'3"	16'3"	16'5"	16'8"	17'0"	17'6"	18'0"	18'7"	18'7"	19'4"	20'1"	21'0"	21'11"
(12.2m)	(4.9m)	(4.9m)	(5.0m)	(5.1m)	(5.2m)	(5.3m)	(5.5m)	(5.7m)	(5.9m)	(6.1m)	(6.1m)	(6.4m)	(6.7m)
35'0"	16'3"	16'4"	16'6"	16'9"	17'2"	17'8"	18'3"	18'11"	19'9"	20'7"	21'7"	22'7"	23'7"
(10.7m)	(4.9m)	(5.0m)	(5.0m)	(5.1m)	(5.2m)	(5.4m)	(5.6m)	(5.8m)	(6.0m)	(6.3m)	(6.6m)	(6.9m)	(7.2m)
30'0"	16'3"	16'4"	16'6"	16'10"	17'3"	17'10"	18'7"	19'4"	20'3"	21'3"	22'4"	23'5"	24'6"
(9.1m)	(4.9m)	(5.0m)	(5.0m)	(5.1m)	(5.3m)	(5.3m)	(5.4m)	(5.7m)	(5.9m)	(6.2m)	(6.5m)	(6.8m)	(7.1m)
25'0"	16'3"	16'4"	16'7"	16'11"	17'6"	18'2"	19'0"	19'11"	20'11"	22'1"	23'3"	24'6"	25'9"
(7.6m)	(4.9m)	(5.0m)	(5.0m)	(5.2m)	(5.3m)	(5.5m)	(5.5m)	(5.8m)	(6.1m)	(6.4m)	(6.7m)	(7.1m)	(7.5m)
20'0"	16'3"	16'4"	16'8"	17'1"	17'9"	18'7"	19'7"	20'8"	21'10"	23'2"	24'6"	26'0"	27'9"
(6.1m)	(4.9m)	(5.0m)	(5.1m)	(5.2m)	(5.4m)	(5.4m)	(5.7m)	(6.0m)	(6.3m)	(6.7m)	(7.1m)	(7.5m)	(7.9m)
15'0"	16'3"	16'4"	16'9"	17'5"	18'3"	19'3"	20'5"	21'9"	23'2"	24'8"	26'3"	27'10"	29'10"
(4.6m)	(4.9m)	(5.0m)	(5.1m)	(5.3m)	(5.6m)	(5.9m)	(6.2m)	(6.5m)	(7.1m)	(7.5m)	(8.0m)	(8.5m)	(9.0m)
10'0"	16'3"	16'5"	17'0"	17'11"	19'1"	20'5"	21'10"	23'5"	25'1"	26'10"	28'7"	30'5"	32'10"
(3.0m)	(4.9m)	(5.0m)	(5.2m)	(5.5m)	(5.8m)	(6.2m)	(6.7m)	(7.1m)	(7.7m)	(8.2m)	(8.7m)	(9.3m)	(9.9m)
5'0"	16'3"	16'8"	17'8"	19'1"	20'8"	22'5"	24'3"	26'1"	28'0"	29'11"	31'10"	33'10"	35'10"
(1.5m)	(4.9m)	(5.1m)	(5.4m)	(5.8m)	(6.3m)	(6.8m)	(7.4m)	(8.0m)	(8.5m)	(9.1m)	(9.7m)	(10.3m)	(10.9m)
0'0"	16'3"	18'3"	20'3"	22'3"	24'3"	26'3"	28'3"	30'3"	32'3"	34'3"	36'3"	38'3"	40'3"
(0.0m)	(4.9m)	(5.6m)	(6.2m)	(6.8m)	(7.4m)	(8.0m)	(8.6m)	(9.2m)	(9.8m)	(10.4m)	(11.0m)	(11.7m)	(12.3m)
	0'0"	2'0"	4'0"	6'0"	8'0"	10'0"	12'0"	14'0"	16'0"	18'0"	20'0"	22'0"	24'0"
	(0.0m)	(0.6m)	(1.2m)	(1.8m)	(2.4m)	(3.0m)	(3.7m)	(4.3m)	(4.9m)	(5.5m)	(6.1m)	(6.7m)	(7.3m)

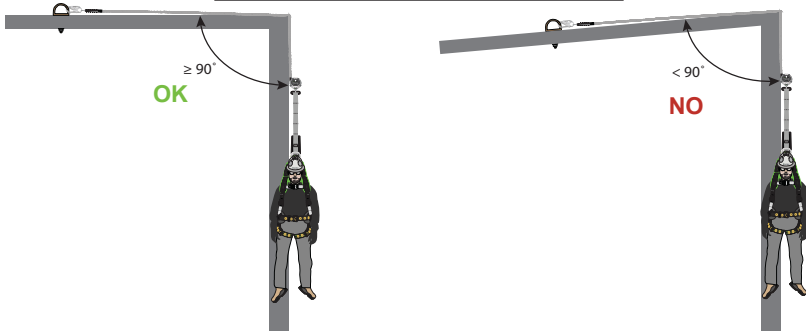
X-Axis: Lateral Offset From Anchorage

X'X"	Safe Work Zone	X'X"	WARNING!
(X,Xm)		(X,Xm)	
X'X"	Use Caution	WORKING IN THIS AREA MAY RESULT IN SERIOUS INJURY OR DEATH	
(X,Xm)			

Use of a Leading Edge SRL requires extra precautions which the user must observe:

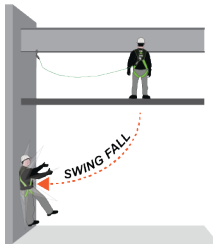
- A fall over an edge may require specialized rescue measures.
- The anchor point for Leading Edge SRLs must be situated at the same height, or higher, than the edge over which a fall may occur. An anchor point below the level of the edge is dangerous, as this causes the lifeline to redirect at a sharper than 90 degree angle (Figure 1).
- The user must not work on the far side of an opening opposite the Leading Edge SRL anchor point.
- The redirection angle of the lifeline at an edge over which a fall may occur shall be at least 90 degrees (Figure 1).

FIGURE 1: ANCHOR POINT FOR SRL-LE



- **Swing Falls:** Prior to installation or use, make considerations for eliminating or minimizing all swing fall hazards. Swing falls occur when the anchor is not directly above the location where a fall occurs. Always work as close to, or in line with, the anchor point as possible. Swing falls significantly increase the likelihood of serious injury or death in the event of a fall (Figure 2). Ensure a Competent Person includes swing fall in calculations if the hazard exists.
- **Swing Fall Drop Distance:** The additional clearance added from excess cable being paid out when working at a lateral offset from your anchorage.

FIGURE 2: SWING FALL



Swing Fall Drop Distance Table: Overhead Use (SRL)

Z-Axis: Height of Anchorage From D-Ring	X-Axis: Lateral Offset From Anchorage																			
	0'0"	0'0"	0'1"	0'2"	0'4"	0'6"	0'9"	1'0"	1'3"	1'7"	2'0"	2'5"	2'10"	3'4"	3'10"	4'5"	5'0"	5'5"	6'2"	7'0"
100'0" (30.5m)	0'0"	0'0"	0'1"	0'2"	0'4"	0'6"	0'9"	1'0"	1'3"	1'7"	2'0"	2'5"	2'10"	3'4"	3'10"	4'5"	5'0"	5'5"	6'2"	7'0"
95'0" (29.0m)	0'0"	0'0"	0'1"	0'2"	0'4"	0'6"	0'9"	1'0"	1'4"	1'8"	2'1"	2'6"	3'0"	3'6"	4'0"	4'7"	5'2"	5'7"	6'4"	7'1"
90'0" (27.4m)	0'0"	0'0"	0'1"	0'2"	0'4"	0'7"	0'10"	1'1"	1'5"	1'9"	2'2"	2'8"	3'2"	3'8"	4'3"	4'10"	4'6"	5'2"	5'7"	6'4"
85'0" (25.9m)	0'0"	0'0"	0'1"	0'3"	0'5"	0'7"	0'10"	1'2"	1'6"	1'11"	2'4"	2'10"	3'4"	3'11"	4'5"	5'2"	5'7"	6'4"	7'1"	7'8"
80'0" (24.4m)	0'0"	0'0"	0'1"	0'3"	0'5"	0'7"	0'11"	1'3"	1'7"	2'0"	2'6"	3'0"	3'6"	4'1"	4'9"	5'5"	6'0"	6'7"	7'4"	8'1"
75'0" (22.9m)	0'0"	0'0"	0'1"	0'3"	0'5"	0'8"	0'11"	1'4"	1'8"	2'2"	2'7"	3'2"	3'9"	4'5"	5'1"	5'9"	6'4"	7'1"	7'8"	8'5"
70'0" (21.3m)	0'0"	0'0"	0'1"	0'3"	0'5"	0'9"	1'0"	1'5"	1'10"	2'3"	2'10"	3'5"	4'0"	4'8"	5'5"	6'2"	6'7"	7'4"	8'1"	8'8"
65'0" (19.8m)	0'0"	0'0"	0'1"	0'3"	0'6"	0'9"	1'1"	1'6"	1'11"	2'5"	3'0"	3'7"	4'3"	5'0"	5'7"	6'4"	7'1"	7'8"	8'5"	9'2"
60'0" (18.3m)	0'0"	0'0"	0'2"	0'4"	0'6"	0'10"	1'2"	1'7"	2'1"	2'8"	3'3"	3'11"	4'7"	5'5"	6'3"	7'1"	7'8"	8'5"	9'2"	9'9"
55'0" (16.8m)	0'0"	0'0"	0'2"	0'4"	0'7"	0'11"	1'4"	1'9"	2'3"	2'10"	3'6"	4'3"	5'0"	5'10"	6'9"	7'8"	8'5"	9'2"	9'9"	10'6"
50'0" (15.2m)	0'0"	0'0"	0'2"	0'4"	0'8"	1'0"	1'5"	1'11"	2'6"	3'2"	3'10"	4'8"	5'6"	6'4"	7'4"	8'4"	9'1"	9'8"	10'5"	11'2"
45'0" (13.7m)	0'0"	0'1"	0'2"	0'5"	0'8"	1'1"	1'7"	2'2"	2'9"	3'6"	4'3"	5'1"	6'0"	7'0"	8'0"	9'1"	10'0"	10'9"	11'8"	12'7"
40'0" (12.2m)	0'0"	0'1"	0'2"	0'5"	0'10"	1'3"	1'9"	2'5"	3'1"	3'10"	4'9"	5'8"	6'8"	7'8"	8'10"	10'0"	10'9"	11'8"	12'7"	13'6"
35'0" (10.7m)	0'0"	0'1"	0'3"	0'6"	0'11"	1'5"	2'0"	2'8"	3'6"	4'4"	5'4"	6'4"	7'5"	8'7"	9'10"	11'1"	12'0"	12'9"	13'8"	14'7"
30'0" (9.1m)	0'0"	0'1"	0'3"	0'7"	1'1"	1'7"	2'4"	3'1"	4'0"	5'0"	6'1"	7'3"	8'5"	9'8"	11'0"	12'3"	13'5"	14'7"	15'9"	17'1"
25'0" (7.6m)	0'0"	0'1"	0'4"	0'9"	1'3"	1'11"	1'9"	3'8"	4'8"	5'10"	6'7"	8'4"	9'8"	11'1"	12'5"	14'1"	15'5"	16'9"	18'3"	19'7"
20'0" (6.1m)	0'0"	0'1"	0'5"	0'11"	1'6"	2'4"	3'4"	4'5"	5'7"	6'11"	8'3"	9'9"	11'3"	12'10"	14'5"	16'1"	17'5"	18'9"	20'3"	21'7"
15'0" (4.6m)	0'0"	0'2"	0'6"	1'2"	2'0"	3'0"	4'2"	5'5"	6'11"	8'5"	10'0"	11'6"	13'4"	15'0"	16'9"	18'5"	20'3"	22'0"	23'8"	25'6"
10'0" (3.0m)	0'0"	0'2"	0'9"	1'8"	2'10"	4'2"	5'7"	7'2"	8'10"	10'7"	12'4"	14'2"	16'0"	17'10"	19'9"	21'7"	23'5"	25'3"	27'1"	28'9"
5'0" (1.5m)	0'0"	0'5"	1'5"	2'10"	4'5"	6'2"	8'0"	9'10"	11'9"	13'8"	15'7"	17'7"	19'6"	21'6"	23'5"	25'5"	27'5"	29'5"	31'5"	33'5"
0'0" (0.0m)	0'0"	2'0"	4'0"	6'0"	8'0"	10'0"	12'0"	14'0"	16'0"	18'0"	20'0"	22'0"	24'0"	26'0"	28'0"	30'0"	32'0"	34'0"	36'0"	38'0"
0'0"	0'0"	0'6m	1'2m	1'8m	2'4m	3'0m	3'7m	4'3m	5'0m	5'6m	6'3m	7'0m	7'7m	8'3m	9'0m	9'6m	10'3m	11'0m	11'7m	12'4m
0'0"	0'0"	2'0"	4'0"	6'0"	8'0"	10'0"	12'0"	14'0"	16'0"	18'0"	20'0"	22'0"	24'0"	26'0"	28'0"	30'0"	32'0"	34'0"	36'0"	38'0"
(0.0m)	(0.0m)	(0.6m)	(1.2m)	(1.8m)	(2.4m)	(3.0m)	(3.7m)	(4.3m)	(5.0m)	(5.6m)	(6.3m)	(7.0m)	(7.7m)	(8.3m)	(9.0m)	(9.6m)	(10.3m)	(11.0m)	(11.7m)	(12.4m)

X'X"
(X.Xm) **Safe Work Zone**

X'X"
(X.Xm) **WARNING!**

WORKING IN THIS AREA MAY
RESULT IN SERIOUS INJURY OR
DEATH

X'X"
(X.Xm) **Use Caution**

Swing Fall Drop Distance Table: Below D-Ring Use-- Anchored at Foot Level (SRL)

Y-Axis: Anchorage Setback From Working Edge	100'0"	0'0"	0'0"	0'1"	0'2"	0'4"	0'6"	0'9"	1'0"	1'3"	1'7"	2'0"	2'5"	2'10"	3'4"	3'10"	4'5"
	(30.5m)	(0.0m)	(0.0m)	(0.0m)	(0.1m)	(0.1m)	(0.2m)	(0.2m)	(0.3m)	(0.4m)	(0.5m)	(0.6m)	(0.7m)	(0.9m)	(1.0m)	(1.2m)	(1.3m)
	95'0"	0'0"	0'0"	0'1"	0'2"	0'4"	0'6"	0'9"	1'0"	1'4"	1'8"	2'1"	2'6"	3'0"	3'6"	4'0"	4'7"
	(29.0m)	(0.0m)	(0.0m)	(0.0m)	(0.1m)	(0.1m)	(0.2m)	(0.2m)	(0.3m)	(0.4m)	(0.5m)	(0.6m)	(0.8m)	(0.9m)	(1.1m)	(1.2m)	(1.4m)
	90'0"	0'0"	0'0"	0'1"	0'2"	0'4"	0'7"	0'10"	1'1"	1'5"	1'9"	2'2"	2'8"	3'2"	3'8"	4'3"	4'10"
	(27.4m)	(0.0m)	(0.0m)	(0.0m)	(0.1m)	(0.2m)	(0.2m)	(0.3m)	(0.4m)	(0.5m)	(0.6m)	(0.8m)	(1.0m)	(1.1m)	(1.3m)	(1.3m)	(1.5m)
	85'0"	0'0"	0'0"	0'1"	0'3"	0'5"	0'7"	0'10"	1'2"	1'6"	1'11"	2'4"	2'10"	3'4"	3'11"	4'6"	5'2"
	(25.9m)	(0.0m)	(0.0m)	(0.0m)	(0.1m)	(0.1m)	(0.2m)	(0.2m)	(0.4m)	(0.5m)	(0.6m)	(0.7m)	(0.9m)	(1.0m)	(1.2m)	(1.4m)	(1.6m)
	80'0"	0'0"	0'0"	0'1"	0'3"	0'5"	0'7"	0'11"	1'3"	1'7"	2'0"	2'6"	3'0"	3'6"	4'1"	4'9"	5'5"
	(24.4m)	(0.0m)	(0.0m)	(0.0m)	(0.1m)	(0.1m)	(0.2m)	(0.3m)	(0.4m)	(0.5m)	(0.6m)	(0.8m)	(0.9m)	(1.1m)	(1.3m)	(1.4m)	(1.6m)
	75'0"	0'0"	0'0"	0'1"	0'3"	0'5"	0'8"	0'11"	1'4"	1'8"	2'2"	2'7"	3'2"	3'9"	4'5"	5'1"	5'9"
	(22.9m)	(0.0m)	(0.0m)	(0.0m)	(0.1m)	(0.1m)	(0.2m)	(0.3m)	(0.4m)	(0.5m)	(0.6m)	(0.8m)	(1.0m)	(1.1m)	(1.3m)	(1.6m)	(1.8m)
	70'0"	0'0"	0'0"	0'1"	0'3"	0'5"	0'9"	1'0"	1'4"	1'8"	2'1"	2'7"	3'2"	3'9"	4'5"	5'2"	5'9"
	(21.3m)	(0.0m)	(0.0m)	(0.0m)	(0.1m)	(0.1m)	(0.2m)	(0.3m)	(0.4m)	(0.6m)	(0.7m)	(0.9m)	(1.0m)	(1.2m)	(1.4m)	(1.6m)	(1.8m)
	65'0"	0'0"	0'0"	0'1"	0'3"	0'6"	0'9"	1'1"	1'6"	1'11"	2'5"	3'0"	3'7"	4'3"	5'0"	5'9"	6'7"
	(19.8m)	(0.0m)	(0.0m)	(0.0m)	(0.1m)	(0.2m)	(0.2m)	(0.3m)	(0.5m)	(0.6m)	(0.7m)	(0.9m)	(1.1m)	(1.3m)	(1.5m)	(1.8m)	(2.0m)
	60'0"	0'0"	0'0"	0'2"	0'4"	0'6"	0'10"	1'2"	1'7"	2'1"	2'8"	3'3"	3'11"	4'7"	5'5"	6'3"	7'1"
	(18.3m)	(0.0m)	(0.0m)	(0.1m)	(0.1m)	(0.2m)	(0.2m)	(0.4m)	(0.5m)	(0.6m)	(0.8m)	(1.0m)	(1.2m)	(1.4m)	(1.6m)	(1.9m)	(2.2m)
	55'0"	0'0"	0'0"	0'2"	0'4"	0'7"	0'11"	1'4"	1'9"	2'3"	2'10"	3'6"	4'3"	5'0"	5'10"	6'9"	7'8"
	(16.8m)	(0.0m)	(0.0m)	(0.1m)	(0.1m)	(0.2m)	(0.3m)	(0.4m)	(0.5m)	(0.7m)	(0.9m)	(1.1m)	(1.3m)	(1.5m)	(1.8m)	(2.0m)	(2.3m)
50'0"	0'0"	0'0"	0'2"	0'4"	0'8"	1'0"	1'5"	1'11"	2'6"	3'2"	3'10"	4'8"	5'6"	6'4"	7'4"	8'4"	
(15.2m)	(0.0m)	(0.0m)	(0.1m)	(0.1m)	(0.2m)	(0.3m)	(0.4m)	(0.6m)	(0.8m)	(1.0m)	(1.2m)	(1.4m)	(1.7m)	(1.9m)	(2.2m)	(2.5m)	
45'0"	0'0"	0'1"	0'2"	0'5"	0'8"	1'1"	1'7"	2'2"	2'9"	3'6"	4'3"	5'1"	6'0"	7'0"	8'0"	9'1"	
(13.7m)	(0.0m)	(0.0m)	(0.1m)	(0.1m)	(0.2m)	(0.3m)	(0.5m)	(0.6m)	(0.8m)	(1.1m)	(1.3m)	(1.6m)	(1.8m)	(2.1m)	(2.4m)	(2.8m)	
40'0"	0'0"	0'1"	0'2"	0'5"	0'10"	1'3"	1'9"	2'5"	3'1"	3'10"	4'9"	5'8"	6'8"	7'8"	8'10"	10'0"	
(12.2m)	(0.0m)	(0.0m)	(0.1m)	(0.1m)	(0.2m)	(0.4m)	(0.5m)	(0.7m)	(0.9m)	(1.2m)	(1.4m)	(1.7m)	(2.0m)	(2.3m)	(2.7m)	(3.0m)	
35'0"	0'0"	0'1"	0'3"	0'6"	0'11"	1'5"	2'0"	2'8"	3'6"	4'4"	5'4"	6'4"	7'5"	8'9"	9'10"	11'1"	
(10.7m)	(0.0m)	(0.0m)	(0.1m)	(0.1m)	(0.2m)	(0.3m)	(0.4m)	(0.5m)	(0.7m)	(0.9m)	(1.1m)	(1.3m)	(1.6m)	(1.9m)	(2.3m)	(2.6m)	
30'0"	0'0"	0'1"	0'3"	0'7"	1'1"	1'7"	2'4"	3'1"	4'0"	5'0"	6'1"	7'2"	8'5"	9'8"	11'0"	12'5"	
(9.1m)	(0.0m)	(0.0m)	(0.1m)	(0.2m)	(0.3m)	(0.5m)	(0.7m)	(0.9m)	(1.2m)	(1.5m)	(1.8m)	(2.2m)	(2.6m)	(3.0m)	(3.4m)	(3.8m)	
25'0"	0'0"	0'1"	0'4"	0'9"	1'3"	1'11"	2'9"	3'8"	4'8"	5'10"	7'0"	8'4"	9'8"	11'1"	12'6"	14'1"	
(7.6m)	(0.0m)	(0.0m)	(0.1m)	(0.2m)	(0.4m)	(0.6m)	(0.8m)	(1.1m)	(1.4m)	(1.8m)	(2.1m)	(2.5m)	(2.9m)	(3.4m)	(3.8m)	(4.3m)	
20'0"	0'0"	0'1"	0'5"	0'11"	1'6"	2'4"	3'4"	4'5"	5'7"	6'11"	8'3"	9'9"	11'3"	12'10"	14'5"	16'1"	
(6.1m)	(0.0m)	(0.0m)	(0.1m)	(0.1m)	(0.2m)	(0.3m)	(0.4m)	(0.5m)	(0.7m)	(0.9m)	(1.2m)	(1.5m)	(1.8m)	(2.3m)	(2.6m)	(3.0m)	
15'0"	0'0"	0'2"	0'6"	1'2"	2'0"	3'0"	4'3"	5'6"	6'11"	8'5"	10'0"	11'8"	13'4"	15'0"	16'9"	18'5"	
(4.6m)	(0.0m)	(0.1m)	(0.2m)	(0.4m)	(0.6m)	(0.9m)	(1.3m)	(1.7m)	(2.1m)	(2.6m)	(3.0m)	(3.5m)	(4.1m)	(4.6m)	(5.1m)	(5.7m)	
10'0"	0'0"	0'2"	0'9"	1'8"	2'10"	4'2"	5'7"	7'2"	8'10"	10'7"	12'4"	14'2"	16'0"	17'10"	19'9"	21'7"	
(3.0m)	(0.0m)	(0.1m)	(0.2m)	(0.5m)	(0.9m)	(1.3m)	(1.7m)	(2.2m)	(2.7m)	(3.2m)	(3.8m)	(4.3m)	(4.9m)	(5.4m)	(6.0m)	(6.6m)	
5'0"	0'0"	0'5"	1'5"	2'10"	4'5"	6'2"	8'0"	9'10"	11'9"	13'8"	15'7"	17'7"	19'6"	21'6"	23'5"	25'5"	
(1.5m)	(0.0m)	(0.1m)	(0.4m)	(0.9m)	(1.4m)	(1.9m)	(2.4m)	(3.0m)	(3.6m)	(4.2m)	(4.8m)	(5.4m)	(5.9m)	(6.5m)	(7.1m)	(7.7m)	
0'0"	0'0"	2'0"	4'0"	6'0"	8'0"	10'0"	12'0"	14'0"	16'0"	18'0"	20'0"	22'0"	24'0"	26'0"	28'0"	30'0"	
(0.0m)	(0.0m)	(0.6m)	(1.2m)	(1.8m)	(2.4m)	(3.0m)	(3.7m)	(4.3m)	(4.9m)	(5.5m)	(6.1m)	(6.7m)	(7.3m)	(7.9m)	(8.5m)	(9.1m)	
	0'0"	2'0"	4'0"	6'0"	8'0"	10'0"	12'0"	14'0"	16'0"	18'0"	20'0"	22'0"	24'0"	26'0"	28'0"	30'0"	
	(0.0m)	(0.6m)	(1.2m)	(1.8m)	(2.4m)	(3.0m)	(3.7m)	(4.3m)	(4.9m)	(5.5m)	(6.1m)	(6.7m)	(7.3m)	(7.9m)	(8.5m)	(9.1m)	

X-Axis: Lateral Offset From Anchorage

X'X"
(X,Xm) Safe Work Zone

X'X"
(X,Xm) WARNING!

WORKING IN THIS AREA MAY
RESULT IN SERIOUS INJURY OR
DEATH

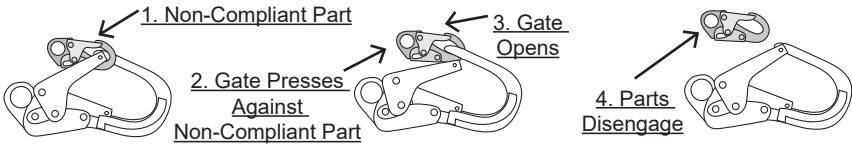
X'X"
(X,Xm) Use Caution

▶ 9.0 COMPATIBILITY OF CONNECTORS

- Safewaze equipment is designed for, and tested with, associated Safewaze components or systems. If substitutions or replacements are made, ensure all components meet the applicable ANSI requirements. Read and follow manufacturer's instructions for all components and subsystems in your PFAS. Not following this guidance may jeopardize compatibility of equipment and possibly affect the safety and reliability of the system.
- Connectors are compatible with connecting elements when they have been designed to work together in such a way that their sizes and shapes do not cause their gate mechanisms to inadvertently open regardless of how they become oriented.
- Connectors (hooks, carabiners, and D-rings) must be capable of supporting at least 5,000 lbs. (22 kN).
- Connectors must be compatible with the anchorage or other system components.
- Do not use equipment that is not compatible. Non-compatible connectors may unintentionally disengage (Figure 3).
- Connectors must be compatible in size, shape, and strength.

- Self-locking snap hooks and carabiners are required by OSHA guidelines.
- Some specialty connectors have additional requirements. Contact Safewaze if you have any questions about compatibility.

FIGURE 3: UNINTENTIONAL DISENGAGEMENT



Using a connector that is undersized or irregular in shape (1) to connect a snap hook or carabiner could allow the connector to force open the gate of the snap hook or carabiner. When force is applied, the gate of the hook or carabiner presses against the non-compliant part (2) and forces open the gate (3). This allows the snap hook or carabiner to disengage (4) from the connection point.

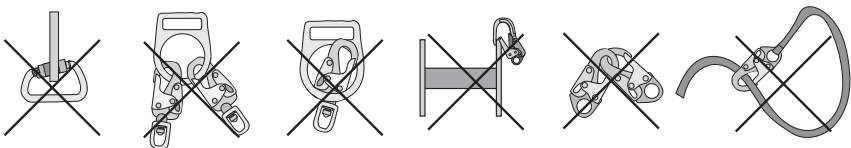
▶ 10.0 MAKING CONNECTIONS

Snap hooks and carabiners used with this equipment must be double locking and/ or twist lock. Ensure all connections are compatible in size, shape, and strength. Do not use equipment that is not compatible. Ensure all connectors are fully closed and locked.

Safewaze connectors (hooks, carabiners, and D-rings) are designed to be used only as specified in each product's manual. See Figure 4 for examples of inappropriate connections. Do not connect snap hooks and carabiners:

- To a D-ring to which another connector is attached.
- In a manner that would result in a load on the gate (with the exception of tie-back hooks).
- In a false engagement, where features that protrude from the snap hook or carabiner catch on the anchor, and without visual confirmation seems to be fully engaged to the anchor point.
- To each other.
- By wrapping the web lifeline around an anchor and securing to lifeline, except as allowed for tie-back models.
- To any object which is shaped or sized in a way that the snap hook or carabiner will not close and lock, or that roll-out could occur.
- In a manner that does not allow the connector to align properly while under load.

FIGURE 4: INAPPROPRIATE CONNECTIONS



Large throat snap hooks must not be connected to standard size D-rings or similar objects which will result in a load on the gate if the hook or D-ring twists or rotates, unless the snap hook complies with ANSI Z359.1-2020 or ANSI Z359.12-2019 and is equipped with a 3,600 lb. (16 kN) gate.

▶ 11.0 INSTALLATION / OPERATION OF NORTHSTAR CLASSIC LE SRL

Step 1: Inspect the SRL prior to use.

Step 2: Mount the carabiner of the SRL to an approved anchor point and connect its snap hook to the dorsal D-ring of a full body harness (Figure 5).

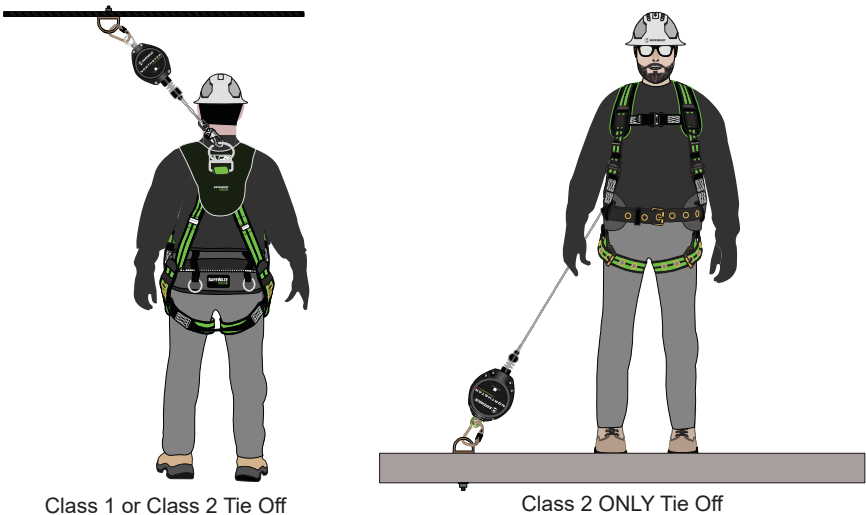
Step 3: When fully attached, the user is then free to move about within the recommended working area. When working with an SRL, always allow the lifeline to retract back into the device in a controlled manner. Do not release the unit to "free-wheel" back into itself.

When used properly, the lifeline of the SRL will extend and retract freely, with no slack or hesitation, as the user moves at normal speeds.

In the event of a fall, Safewaze SRLs are equipped with a speed-sensing braking system. The braking system will activate, stop the fall, and absorb much of the energy created by the fall. Due to the speed-sensing braking system, the user should avoid quick or sudden movements, as they may cause the SRL to inadvertently lock. If the user is performing operations near the end of the working length of the SRL, a reserve line is incorporated within the SRL to reduce fall arrest forces.

Figure 5 illustrates the harness and anchorage connection for Northstar Classic LE SRLs.

FIGURE 5: SYSTEM CONNECTION



► 12.0 INSPECTION / MAINTENANCE

The user must keep instructions available for reference and record the date of first use on Page 2.

The user must immediately remove the system from service if defects or damage are found, if visual fall indicator is deployed, or if exposed to forces of fall arrest.

Work Area:

- Inspect the work area to ensure the location is free of any damage including, but not limited to, debris, cracking, rot, decay, structural deterioration, rust, and any hazardous materials.
- A Competent Person must determine that the installation location to be utilized will support the intended loads.

Frequency:

- A Competent Person, other than the user, must inspect the Northstar Classic LE SRL at least once annually.
- While conducting inspections, the Competent Person must consider all applications and hazards that the equipment may have been subjected to while in use.
- Competent Person inspections must be recorded in the Inspection Log included in this manual (Page 24), as well as the inspection table labels on each product individually. The Competent Person must place their initials in the block which corresponds with the month and year that the inspection is performed. All individual labels on the equipment will be initialed in the same manner.
- See Table 6 for more information regarding inspection frequency requirements.

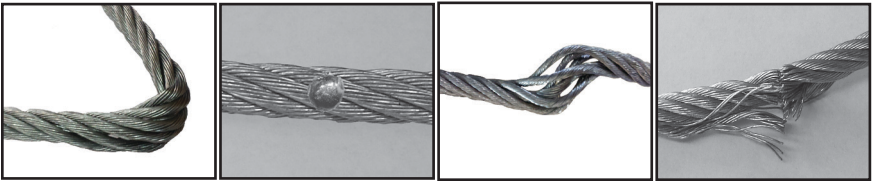
TABLE 6: INSPECTION FREQUENCY

Type of Use	Application Examples	Conditions of Use	Inspection Frequency by Competent Person
Infrequent to Light	Rescue and Confined Space, Factory Maintenance	Good Storage Conditions, Indoor or Infrequent Outdoor Use, Room Temperature, Clean Environments	Annually
Moderate to Heavy	Transportation, Residential Construction, Utilities, Warehouse	Fair Storage Conditions, Indoor and Extended Outdoor Use, All Temperatures, Clean or Dusty Environments	Semi-Annually to Annually
Severe to Continuous	Commercial Construction, Oil and Gas, Mining	Harsh Storage Conditions, Prolonged or Continuous Outdoor Use, All Temperatures, Dirty Environment	Quarterly to Semi-Annually

Directions:

- Prior to each use, inspect the Northstar Classic LE SRL for possible deficiencies including, but not limited to, missing parts, corrosion, deformation, pits, burrs, rough surfaces, sharp edges, cracking, rust, paint buildup, excessive heating, alteration, and missing or illegible labels. Inspect all components of the device including the housing, connectors, fasteners, labels, and entire length of lifeline.
- Prior to each use, the user must inspect and verify that **each individual component** (Image 2) of the Northstar Classic LE SRL is safe for use:
 1. The cable from the unit should pay out and retract smoothly.
 - b. Pull the lifeline sharply to test its locking function.
 - c. The lifeline should lock, and subsequently retract, smoothly and completely back into the unit without hesitation or stoppage.
 - d. Inspect the entire length of lifeline for any damage including, but not limited to, fraying, crushing, bird caging, chemical exposure, heat/welding spatter, and kinking. The user should always wear gloves when inspecting the lifeline to prevent injury in the event of cable damage (Image 1).

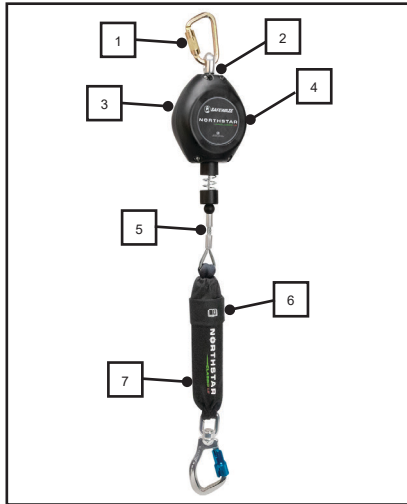
IMAGE 1: CABLE DAMAGE EXAMPLES



Maintenance:

- **Repairs:** Only Safewaze, or entities authorized in writing by Safewaze, may make repairs to Safewaze fall protection equipment.
- **Cleaning:** The Northstar Classic LE SRL can be cleaned with water and mild soap. The user should remove all dirt, possible corrosives, and contaminants from the system prior to, and after, each use. Never use any type of corrosive substance to clean the system. Excess water should be blown out with compressed air. Hardware can be wiped off with a clean, dry cloth. Do not store system if wet or damp. Allow equipment to fully dry before being stored.
- **Storage:** Prior to installation, store the Northstar Classic LE SRL in a cool, dry area where it will not be exposed to extreme light, extreme heat, excessive moisture, or possibly corrosive chemicals or materials.
- **Lifespan:** The working life of the Northstar Classic LE SRL is determined by work conditions, care, and inspection provided. So long as the system and all components pass inspection, it may remain in service.
- **Disposal:** Dispose of the Northstar Classic LE SRL if inspection reveals an unsafe or defective condition. If damaged and unserviceable, the system should be destroyed and the lifeline cut so as not to allow accidental re-use.

**IMAGE 2: NORTHSTAR CLASSIC LE
CABLE UNITS INSPECTION**



1	Carabiner
2	Swivel Top
3	Housing
4	Label
5	Cable Lifeline
6	Sew-in Labels
7	Energy Absorber*

***Deployed Energy Absorber:**



▶ 13.0 LABELS

Ø 97mm



DISCLAIMER

In accordance with ANSI Z359.14-2021 subsection 5.2.9, this warning label shall be included with each Class 2 SRL.

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.

MODEL # FS-FSP9620 DESCRIPTION: Northstar Classic LE 20' Cable SRL

SERIAL # XXXXXXX	MFG DATE XXXXXX
SAFETAZE	SAFETY CONTACTS: Materials: Steel and aluminum hardware, nylon & glass fiber cables, and 304 stainless steel cable
220 W. Hesse Ave. #100 Greener, NC 28823 800-220-0119 www.safetze.com	Working length: 20 ft. (6.1 m) Cable weight: 2.0 lbs. (0.91 kg) OSHA D30 Box (190.5 ft. kg), including webbing, tools, & equipment Average arrest force: 1500 lbs. (680.0 kg) Max. arrest force: 1800 lbs. (816.47 kg) Actual arrest distance: 5.97 ft. (1.83 cm)
64216361038	Min. free fall distance: 72 in. (183 cm) Min. free fall clearance: 10' 6" (3.2 m) Standards: ANSI Z359.14-2021, OSHA 1910.140 and OSHA 1910.66

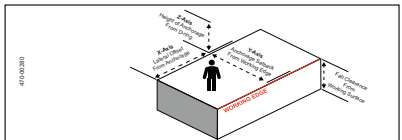
CLASS 2 UNIT (Anchor above or below dorsal D-ring)

MUST FOLLOW ALL MANUFACTURER'S INSTRUCTIONS INCLUDED WITH THIS EQUIPMENT. DO NOT REMOVE LABEL.

Fall Clearance Table Overhead Use (Class 1) Northstar Edge

Fall Arrest System	Anchorage Height Above Work Surface						Min. Free Fall Distance	Min. Free Fall Clearance
	10'	12'	14'	16'	18'	20'		
Full Body Harness	10'	12'	14'	16'	18'	20'	5.97'	10' 6"
Class 2 SRL	10'	12'	14'	16'	18'	20'	5.97'	10' 6"

Note: Values are based on a 200 lb. worker. See instruction manual for more details.



Fall Clearance Table Below D-Ring Use (Class 2) Northstar Classic 20' LE Cable

Fall Arrest System	Anchorage Height Below D-Ring						Min. Free Fall Distance	Min. Free Fall Clearance
	10'	12'	14'	16'	18'	20'		
Full Body Harness	10'	12'	14'	16'	18'	20'	5.97'	10' 6"
Class 2 SRL	10'	12'	14'	16'	18'	20'	5.97'	10' 6"

Note: Values are based on a 200 lb. worker. See instruction manual for more details.

Ø 97mm

WARNING

USE MUST READ AND UNDERSTAND ALL INSTRUCTIONS AND WARNINGS INCLUDED WITH THIS EQUIPMENT. DO NOT REMOVE LABEL.

This is a single user fall arrest device. Device must be inspected prior to each use. Connection of this device to a full body harness is to be made to the dorsal D-ring only. User must ensure that any connection to anchorage is properly secured prior to use. Make only compatible connections. Dual connections shall only be used for 100% tie-off transitions. Refer to instruction manual for minimum anchorage strength requirements. Elevate anchorage to reduce the fall clearance and limit risk when possible. Fall clearances must be calculated by a competent person prior to use. Ensure adequate fall clearance exists to avoid contact with lower level or obstructions. Avoid swing fall hazards by working directly under anchorage. If possible, avoid exposure to sharp or serrated structural edges to prevent damage to the lifeline. Avoid chemical, thermal and/or electrical hazards. This product is suitable for use horizontally and with horizontal lifelines. Adhere to the hierarchy of controls in Z359.2.

Class 2
Anchor above or below dorsal D-ring

INSPECTION LOG

Check	Pass	Fail

INSPECTION LOG

Working length: 20 ft. (6.1 m)
Minimum free fall distance: 5.97 ft. (1.83 cm)
Maximum free fall clearance: 10' 6" (3.2 m)
Average arrest force: 1500 lbs. (680.0 kg)
Max. arrest force: 1800 lbs. (816.47 kg)

Note: white space to be cut out

WARNING: This is a single user fall arrest device. Device must be inspected prior to each use. Connection of this device to a full body harness is to be made to the dorsal D-ring only. User must ensure that any connection to anchorage is properly secured prior to use. Make only compatible connections. Dual connections shall only be used for 100% tie-off transitions. Refer to instruction manual for minimum anchorage strength requirements. Elevate anchorage to reduce the fall clearance and limit risk when possible. Fall clearances must be calculated by a competent person prior to use. Ensure adequate fall clearance exists to avoid contact with lower level or obstructions. Avoid swing fall hazards by working directly under anchorage. If possible, avoid exposure to sharp or serrated structural edges to prevent damage to the lifeline. Avoid chemical, thermal and/or electrical hazards. This product is suitable for use horizontally and with horizontal lifelines. Adhere to the hierarchy of controls in Z359.2.

USER MUST READ AND UNDERSTAND ALL INSTRUCTIONS AND WARNINGS INCLUDED WITH THIS EQUIPMENT. DO NOT REMOVE LABEL.

DO NOT ATTEMPT TO SERVICE OR REPAIR THIS UNIT CONTACT SAFETAZE FOR SERVICE OR REPAIR INFORMATION. Device must be inspected prior to each use in accordance with the manufacturer's instructions. Perform the Looking Function Test (shock pack test) and retention test. Inspect the device for label legibility, any evidence of damage or defects, and missing components or parts. Inspect all components of device including the housing, connectors, fasteners, and the entire length of the lifeline for any damage or defects. Refer to instruction manual for inspection frequency. Unit must be removed from service if exposed to fall arrest forces. If visual fall indicator is deployed, immediately remove unit from service.

J	F	M	A	M	J	J	A	S	O	N	D

Inspection Log - Do Not Remove Label

LOAD INDICATOR

If tear webbing from shock pack is deployed and visible. Immediately remove from service.



SAFEWAZE

INSPECTION LOG
ANNUAL FORM

Inspection Date:	Inspector:	Pass/Fail: ▼ ▲	Comments/ Corrective Action:
		<input type="checkbox"/> <input type="checkbox"/>	
		<input type="checkbox"/> <input type="checkbox"/>	
		<input type="checkbox"/> <input type="checkbox"/>	
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		<input type="checkbox"/> <input type="checkbox"/>	



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