FRONTLINE®

FALL PROTECTION

www.FrontlineFall.com

USER INSTRUCTION MANUAL

SELF-RETRACTING LIFELINE

Class
1
Anchor at or above dorsal D-ring

ANSI
American National Standards Institute

WARNING:

This product is part of a personal fall arrest, work positioning, or rescue system.
The user must follow the manufacturer's instruction for each component of the system.
This instruction must be provided to the user of this equipment.
Manufacturer's instructions must be followed for proper use and maintenance of this equipment. Alterations or misuse of this product or failure to follow instructions may result in serious injury or death. This equipment is intended to be used by persons trained in its correct application and use.

IMPORTANT:

If you have questions on the use, care, or suitability of this equipment for your application, contact Frontline. Before using this equipment, record the product identification information from the ID label and RFID tag in the inspection and maintenance log of this manual.

This personal protective equipment is designed and used as a connecting element in fall protection system to protect users against falls from heights in working areas and is meant to be used with other certificated components.

DESCRIPTION:

Material:

For the Cable SRL: aluminum, Galvanized steel cable wire, Thermoplastic Housing, Stainless steel & non-corrosive components

For the Webbing SRL: UHMWPE & Polyester Webbing, Thermoplastic Housing, Stainless steel & non-corrosive components.

Cable SRL Use Application:

Maximum Deceleration Distance: ≤30"

Fall Clearance: 6.5 ft

Average Arresting Force: ≤1,350 lbs.

Maximum Arresting Force: ≤1,800 lbs.

Max Free Fall: 2 ft (0.6m)

Modal No#	Length	Description
RPA061S RPA062S RPA061R RPA062R RPA062RA	6'	3/4" UHMWPE & Polyester Webbing SRL (TWIN) w/snap hook(s)/ rebar hook (s). (Includes connector for twin set)
RPA091TB RPA092TB	9'	3/4" UHMWPE & Polyester Webbing SRL w/tie-back hook.
RPG10	10'	3/16" Galvanized steel cable SRL w/snap hook or rebar hook.
RPA12S RPA12R	12'	1" UHMWPE & Polyester Webbing SRL(TWIN) w/snap hook(s) or rebar hook(s). (Includes connector for twin set)
RPG20	20'	3/16" Galvanized steel cable SRL w/snap hook.
RPA20S RPA20R	20'	3/4" UHMWPE & Polyester Webbing SRL w/snap hook(s) /rebar hook(s).
RPGC30	30'	3/16" Galvanized steel cable SRL w/snap hook or rebar hook.
RPGC50	50'	3/16" Galvanized steel cable SRL w/snap hook or rebar hook.
RPGC65	65'	3/16" Galvanized steel cable SRL w/snap hook or rebar hook.

LIMITATIONS:

Capacity:

The SRLs are designed for use by one person with combined weight (person, clothing, tools, etc.) within of up to 310 lbs. for all application.

Connector:

Connectors must be compatible in size, shape, and strength.

Self-closing, self-locking connectors are required by ANSI and OSHA.

-5000 lbs. (22.2 KN) for non-certified anchorages.

-Two times the maximum arrest force permitted when certification exists

Compatibility:

Connecting Component Limitations:

A Competent Person must ensure the compatibility of all connections and that of the system.

If any other component in the system doesn't operate properly or if any connector doesn't lock, don't use the system.

Don't use if any part of the system appears to be damaged, or a body belt for fall arrest applications.

All connector gates withstand minimum loads of 3,600 lbs.

Compatible Connectors:

For Tie-Back Models Only

Incompatible connections:

INSPECTION FREQUENCY:

SRLs shall be inspected by the authorized person or rescuer before each use.
The inspection shall be conducted by a competent person other than the user.
The competent person shall use the Inspection Schedule and checking list for appropriate inspection intervals and procedures.
Results of the Competent person inspection should be recorded in the " Inspection and Maintenance Log" on the back pages of instruction.

APPLICATIONS:

Purpose:

This product is part of a personal fall arrest, restraint, work positioning, suspension, or rescue system.
A Personal Fall Arrest System (PFAS) is typically composed of an anchorage and a Full Body Harness (FBH), with a connecting device, i.e., a Shock Absorbing Lanyard (SAL), or a Self-Retracting Device (SRL), attach to the dorsal D-ring of the FBH.
SRLs are designed for use in applications where falls may occur.
SRLs covered by this manual, SRLs may be used in many situations where a combination of work mobility and fall protection is required. (i.e. inspection work, general construction, maintenance work, oil production, confined space work, etc.)

Standards:

SRLs confirm to the national standard identified on the label. Refer to local, state, and federal (OSHA)requirements governing occupational safety for additional information. The standard are **ANSI Z359.14** - *Safety Requirement for Self-Retracting Device for Personal Fall Arrest and Rescue Systems.*

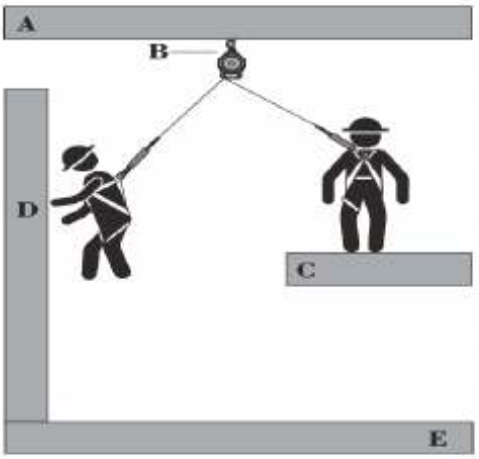
Free Fall:

When anchorage overhead, SRLs will limit the free fall distance to 2ft. (61cm), or less.
To avoid increased fall distances, anchor the SRL directly above the work level.
Avoid working where your lifeline may cross or tangle with that of another worker.
Never clamp, knot, or prevent the lifeline from retracting or being taut.

Swing Falls:

Swing falls occur when the anchorage point is not directly above the point where a fall occurs. The force of striking an object in a swing fall may cause serious injury. In a swing fall, the total vertical fall distance will be greater than if the user had fallen directly below the anchorage point, thus increasing fall clearance required to safely arrest the user.
Minimize swing falls by working as directly below the anchorage point as possible.
Never permit a swing fall if injury could occur.

Drawing 1.

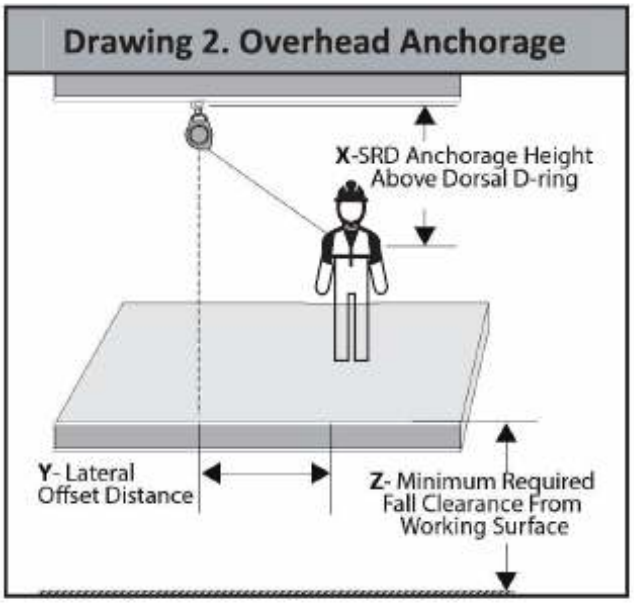


Swing Fall Hazards Non- Leading Edge	
A	Anchorage
B	Self-Retracting Lifeline
C	Walking/ Working Surface
D	Swing Fall impact after fall event
E	Next Lower Level or Obstruction

Offset Clearance requirement

The minimum required fall clearance (MRFC) is calculated using four metrics, measured from the walking-working surface: SRL Deceleration Distance, D-ring Shift and Harness Stretch, Safety Factor, Free fall and Swing Fall.

Drawing 2. Overhead Anchorage



Class 1 Clearance Chart - Read Instructions for Complete Details (Overhead Anchorage)										
		Lateral Offset Distance (Y)								
		0.00 Foot 0.00 m	2.00 Foot 0.60 m	4.00 Foot 1.20 m	6.00 Foot 1.80 m	8.00 Foot 2.40 m	10.00 Foot 3.00 m	15.00 Foot 4.57 m	20.00 Foot 6.10 m	25.00 Foot 7.62 m
SRD Anchorage Height Above Dorsal D-ring(X)	0 Foot 0 m	6.50 Foot 1.98 m	8.50 Foot 2.59 m	10.50 Foot 3.20 m	12.50 Foot 3.81 m	14.50 Foot 4.42 m	16.50 Foot 5.03 m	21.50 Foot 6.55 m	26.50 Foot 8.08 m	31.00 Foot 9.45 m
	5 Foot 1.52 m	6.50 Foot 1.98 m	7.00 Foot 2.13 m	7.50 Foot 2.29 m	9.00 Foot 2.74 m	10.50 Foot 3.20 m	13.00 Foot 3.81 m	17.00 Foot 5.18 m	22.50 Foot 6.71 m	26.50 Foot 8.08 m
	10 Foot 3.05 m	6.50 Foot 1.98 m	6.50 Foot 1.98 m	7.50 Foot 2.29 m	8.50 Foot 2.59 m	9.50 Foot 2.90 m	11.00 Foot 3.35 m	14.50 Foot 4.42 m	18.50 Foot 5.64 m	23.00 Foot 7.01 m
	15 Foot 4.57 m	6.50 Foot 1.98 m	6.50 Foot 1.98 m	7.00 Foot 2.13 m	7.50 Foot 2.29 m	8.50 Foot 2.59 m	9.50 Foot 2.90 m	13.00 Foot 3.96 m	17.00 Foot 5.18 m	21.50 Foot 6.55 m
	20 Foot 6.1 m	6.50 Foot 1.98 m	6.50 Foot 1.98 m	6.50 Foot 1.98 m	7.50 Foot 2.29 m	8.50 Foot 2.59 m	8.50 Foot 2.59 m	10.50 Foot 3.20 m	14.50 Foot 4.42 m	20.50 Foot 6.25 m
	25 Foot 7.62 m	6.50 Foot 1.98 m	6.50 Foot 1.98 m	6.50 Foot 1.98 m	7.00 Foot 2.13 m	8.00 Foot 2.44 m	8.00 Foot 2.44 m	10.00 Foot 3.05 m	13.50 Foot 4.11 m	19.50 Foot 5.94 m
	30 Foot 9.14 m	6.50 Foot 1.98 m	6.50 Foot 1.98 m	6.50 Foot 1.98 m	7.00 Foot 2.13 m	7.50 Foot 2.29 m	7.50 Foot 2.29 m	9.50 Foot 2.90 m	12.50 Foot 3.81 m	13.50 Foot 4.11 m
	35 Foot 10.67 m	6.50 Foot 1.98 m	6.50 Foot 1.98 m	6.50 Foot 1.98 m	7.00 Foot 2.13 m	7.50 Foot 2.29 m	7.50 Foot 2.29 m	9.50 Foot 2.90 m	11.50 Foot 3.51 m	13.50 Foot 4.11 m
	40 Foot 12.19 m	6.50 Foot 1.98 m	6.50 Foot 1.98 m	6.50 Foot 1.98 m	6.50 Foot 1.98 m	7.00 Foot 2.13 m	7.50 Foot 2.29 m	9.00 Foot 2.74 m	11.50 Foot 3.35 m	13.00 Foot 3.96 m
	45 Foot 13.72 m	6.50 Foot 1.98 m	6.50 Foot 1.98 m	6.50 Foot 1.98 m	6.50 Foot 1.98 m	7.00 Foot 2.13 m	7.50 Foot 2.29 m	9.00 Foot 2.74 m	11.00 Foot 3.35 m	13.00 Foot 3.96 m
	50 Foot 15.24 m	6.50 Foot 1.98 m	6.50 Foot 1.98 m	6.50 Foot 1.98 m	6.50 Foot 1.98 m	7.00 Foot 2.13 m	7.50 Foot 2.29 m	9.00 Foot 2.74 m	10.50 Foot 3.20 m	12.50 Foot 3.81 m
	55 Foot 16.76 m	6.50 Foot 1.98 m	6.50 Foot 1.98 m	6.50 Foot 1.98 m	6.50 Foot 1.98 m	7.00 Foot 2.13 m	7.50 Foot 2.29 m	8.50 Foot 2.59 m	10.00 Foot 3.05 m	12.00 Foot 3.66 m
	60 Foot+ 18.29 m+	6.50 Foot 1.98 m	6.50 Foot 1.98 m	6.50 Foot 1.98 m	6.50 Foot 1.98 m	7.00 Foot 2.13 m	7.50 Foot 2.29 m	8.50 Foot 2.59 m	10.00 Foot 3.05 m	11.50 Foot 3.51 m
Clearance Required (Z) - Includes 1.5 foot Safety Margin										

Example: If the user needs to work 6 foot (1.8m) away from directly under the SRL, the SRL needs to be anchored at least 5 foot (1.52m) above the user's Dorsal D-ring. Minimum required fall clearance is 9.0 foot (2.74m) at maximum allowable swing fall.

Not approved for free fall greater than 2 feet.

Compatibility of Components & Connectors:

Frontline equipment is designed for use with Frontline approved components and subsystems only. Non-approved components or subsystems may jeopardize compatibility of equipment and may affect complete system.

Connectors (hooks, carabiners, and D-rings) must be capable of supporting at least 5000 lbs. (22.2KN)

Non-compatible connectors may unintentionally disengage.

Per ANSI Z359 and OSHA, self-locking snap hooks and carabiners are required.

INSTALLATION:

Anchorage:

For users exceeding 310 lbs. (141kg), anchorage point must not be more than 5ft(1.52m) below the Dorsal D-Ring. For users exceeding 310 lbs. (141kg), the anchorage point must not be more than 2 ft.(0.6m) below the Dorsal D-Ring and higher when connecting off to the user's left or right side.

Use:

Frontline friendly reminder-

Do not alter or intentionally misuse this equipment.

Some subsystem and component combinations may interfere with the operation of this equipment. Use caution when using this equipment around moving machinery, electrical hazards, chemical hazards, sharp edges*(cannot use web SRL's with sharp object application)*, or overhead materials that may fall onto the lifeline. Do not loop the lifeline around structural members. (only lanyard designed for tie-back are approved for tie-back directly onto the webbing). Tie-back can be used to tie-off directly to the structure

and back to the unit itself when a suitable structure anchor is available and which can also withstand the required fall forces. Never attach the tie-back snap hook to the tie-back SRL between the shock pack and the housing of the SRL.

DO NOT extend the lifeline past the operational limit.

DO NOT allow one SRL lifeline to become tangled or twisted with another SRL lifeline during use.

DO NOT allow any lifeline to pass under arms or between legs during use.

DO NOT clamp, knot, or prevent the lifeline from retracting or being taut.

DO NOT lengthen the SRL by connecting a lifeline or similar component.

DO NOT allow the lifeline to remain outside the housing when not in use.

DO NOT allow the lifeline to freewheel back into the housing. Use a tag line to maintain tension and rewind the lifeline during periods of inactivity.

Use the tag line to retrieve the leg end connector for the next use.

DO NOT leave the tag line connected to the leg end connector when using the SRL for fall protection.

Consult your doctor if there is reason to doubt your fitness to safely absorb the shock from a fall arrest. Age and fitness seriously affect a worker's ability to withstand falls. Pregnant women or minors must not use Bexus self-retracting lifelines. Failure to heed this warning may result in serious injury or death.

Operation:

Prior to use, inspect the SRL as described in Inspection sentence. Connect the snap hook, carabiner attachment to a suitable anchorage. Ensure hooks are fully closed and locked. Once attached, the worker is free to move about within the recommended working area. If a fall occurs, the SRL will lock and arrest the fall. Upon rescue, remove the SRL from use. When working with an SRL, always allow the lifeline to retract back into the device under control.

Frontline friendly reminder-

Do not tie or knot the lifeline. Avoid lifeline contact with sharp or abrasive surfaces. Inspect the lifeline frequently for cuts, fraying, burns, or signs of chemical damage. Dirt, contaminants, and water can lower the dielectric properties of the lifeline. Use caution near power lines. Failure to heed this warning may result in serious injury or death.

After A Fall:

If a fall event occurs, tag the SRL as " UNUSABLE", remove it from service, and store it separately. Remove from service any unit that has been subjected to fall arrest forces or that exhibits damage consistent with such forces.

Body Support:

A full body harness must be worn when using SRL. Connect the SRL to the user's harness shoulder straps the back (dorsal) D-ring.

Be noted that the Dual SRLs are connected by the dual connector. When connecting it to harness, the connector should be connected on the web loop of the back harness not on the D-ring.

Frontline friendly reminder-

Do not use a body belt for free fall applications. Per OSHA 1926.502 requirement.

Making Connections:

Snap hooks and carabiners used with this equipment must be self-locking. 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, ensure unintended disengagement cannot occur.
Frontline connectors (snap hooks and carabiners) are designed to be used only as specified in each product's user's instruction.

Inspection:

Before each use of this fall protection equipment carefully inspect it to assure it is in good working condition. Check for worn or damaged parts. Ensure all bolts are present and secure. Check that the lifeline is retracting properly by pulling out the line and allowing it to slowly retract. If there is any hesitation in retraction, remove the SRL from service, mark " UNUSABLE". Inspect the lifeline for cuts, frays, burns, crushing and corrosion. Check to lock action by pulling sharply on the line.

Product Life:

The functional life of SRL is determined by work conditions and maintenance. As long as the SRL passes inspection criteria, it may remain in service.

Disposal:

Dispose of SRL if it has been subjected to fall arrest forces or inspection reveals an unsafe or defective condition. Before disposing of the SRL, cut the cable lifeline in half or otherwise disable the SRL to eliminate the possibility of inadvertent reuse.

MAINTENANCE, SERVICING, AND STORAGE

Cleaning: Cleaning procedures for SRL are as follows:
Ensure the SRL is kept free of excess paint, grease, dirt or other contaminants as this may cause to cable or retracting mechanism to malfunction. Ensure no debris enters the housing through the cable access port. Clean the exterior of the unit as required with a detergent/water solution. Do not allow water other corrosion-causing elements to enter the housing. After cleaning, pull the lifeline all the way out, allow the unit to air dry, then retract the lifeline into the unit. Do not allow the lifeline to freewheel back into the housing. Tag as " UNUSABLE" and store separately any unit in need of or scheduled for maintenance.
DO NOT use heat to dry.
DO NOT attempt to disassemble the SRL.

Service:

The SRL is designed to be used installed in an anchor cradle or attached overhead. While it may be used horizontally on a flat surface, the user may encounter a situation where the lifeline will not retract all the way due to misalignment and bunching up on the drum. If this happens, hang the SRL from a height sufficient to allow the full working length of the lifeline to be pulled off the drum, then allow the SRL to retract the lifeline completely. Maintain tension on the lifeline. Use a tag line if necessary.

Storage:

Hang the SRL in a cool, dry, clean environment out of direct sunlight. Position the SRL so excess water can drain out. Avoid exposure to chemical or caustic vapors. Thoroughly inspect the SRL after any period of extended storage.

Specifications:

SRLs have been tested and certified to the performance requirements of the standard(s) identified on the labels. SRLs documented in this instruction meet the following Arrest Force and Arrest Distance maximums when tested in accordance with ANSI Z359.14.

Average Arresting Force	≦ 1350 lbs. (6KN)
Maximum Arresting Force	≦ 1800 lbs. (8KN)
Maximum Arresting Distance	30"

*User weights above 310 lbs. are not within the scope of ANSI/ ASSE Z359.14

The above results are valid when the SRL's lifeline is secured overhead.

Dimensions:

Average working range for each kind of the SRLs are the different, such as the RPA061S, RPA062S, RPA061R, RPA062R, and RPA062RA are 6ft(1.8m), RPA091TB and RPA092TB are 9ft(2.7m), RPG10 is 10ft(3m), RPA12S and RPA12R are 12ft(3.6m), RPA20S and RPA20R are 20ft(6.1m), RPG20 is 20ft(6.1m), RPGC30 is 30ft(9.1m), RPGC50 is 50ft(15.2m) and RPGC65 is 65ft(19.8m), but will vary slightly with length differences in the various End Connector options.

Labeling:

Illustrates the SRLs labeling. All labels on the SRL must be present and fully legible.

RPA061S, RPA062S, RPA061R, RPA062R, RPA062RA

RPA091TB, RPA092TB

RPG10

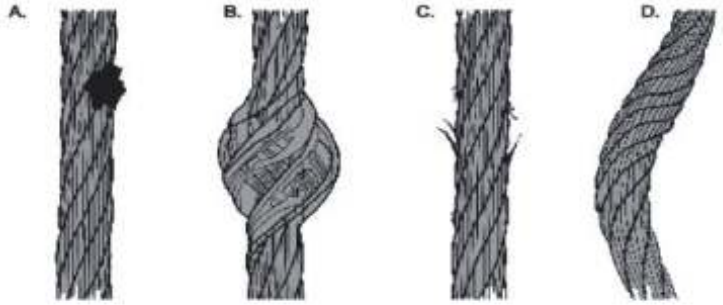
RPA12S, RPA12R

RPG20

RPA20S, RPA20R

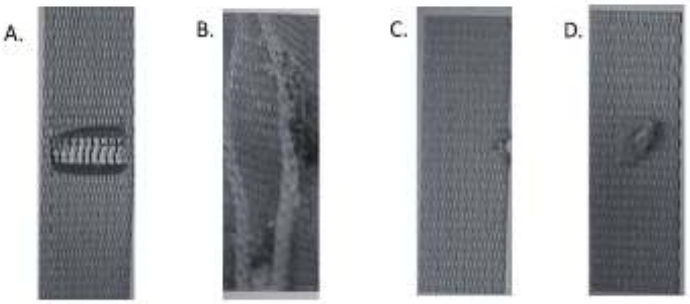
RPGC30

Drawing 3.



Incorrect Use of SRL	
A. Heat Damage from Weld Spatter or Slag	C. Broken Wires within Strands.
B. Bird Caged	D. Curled, Bent or Kinked

Drawing 4.



Incorrect Use of SRL	
A. Damage due to heat – inside fiber exposed	C. Inside fiber exposed due to cut
B. Separation of layers – stitching was broken	D. Frayed top fibers exposing core of webbing

Inspection requirements for self-retracting devices					
ANSI Z359.14-2021					
CSA Z2592.2-17					
Type of use	Application examples	Example conditions of use	Worker inspection frequency	Competent person inspection frequency	Product revalidation frequency
Infrequent to Light	Rescue and confined space, factory maintenance	Good storage conditions, indoor or infrequent outdoor use, room temperature, clean environments.	Before each use	Annually	At least every 5 years but not more than intervals required by the manufacturer.
Moderate to Heavy	Transportation, residential construction, utilities, warehouse	Fair storage conditions, indoor and extended outdoor use, all temperatures, clean or dusty environments.	Before each use	Semi-annually to annually	At least every 2 years but not more than intervals required by the manufacturer.
Severe to continuous	Commercial construction, oil and gas, mining, foundry	Harsh storage conditions, prolonged or continuous outdoor use, all temperatures, dirty environment.	Before each use	Quarterly to semi-annually	At least annually but not more than intervals required by the manufacturer.

Notes:

(1) Failure of a worker to perform [before each use] inspection or failure of an inspection by a worker shall initiate the requirement for inspection by a competent person.

(2) Failure of a competent person to perform inspections as specified in this Table, or failure of an inspection by the competent person shall initiate product revalidation or disposal.

(3) Determination of the type of use category shall be determined by a competent person.

(4) An SRL that is considered non-repairable, or not designed for disassembly such that internal inspection is not possible without rendering it unserviceable, is not subject to re-valid

※These SRL's shall have service life and other inspection requirements as provided by the manufacturer's instructions.

Component:	Inspection:	User	Competent Person
SRL	Inspect for loose or missing fasteners or damaged parts		
	Inspect the housing for distortion, cracks, or damage		
	Inspect the Harness Interface for distortion, cracks The Interface should pivot freely.		
	The Lifeline should pull out and retract fully without		
	hesitation or creating a slack line condition.		
	Ensure the SRL locks up when the lifeline is jerked		
	sharply.		
	Lockup should be positive with no slipping.		
	All labels must be present and fully legible.		
	Inspect the entire SRL for signs of corrosion.		
Lifeline	Inspect the lifeline wire rope for cuts, kinks, broken wires, bird-caging, corrosion, welding splatter, chemical contact areas, or severely abraded areas. Slide up Cable Guide Bumper and inspect ferrules for cracks or damage. The lifeline must be free of knots throughout its length.		
Harness Interface	Inspect the Locking pin to ensure it is securely closed and locked around the harness shoulder straps.		
Lanyard End Connectors	Inspect Snap hook for signs of damage, corrosion, and proper working condition. Where present: Swivels should rotate freely and gates should open, close, lock and unlock properly.		

Inspection And Maintenance Log

Serial Number:			
Model Number:			
Date Purchased:		Date of First Use:	
Inspection Date	Inspection Items Noted	Corrective Action	Maintenance Performed
Approved By:			
Approved By:			
Approved By:			
Approved By:			
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