



Trusted Quality Fall Protection

## INSTRUCTION MANUAL

ANSI Z359.14 Class B  
ANSI A10.32  
CSA Z259.2.2-98 Type 2

OSHA

*This manual is intended to meet the Manufacturer's Instructions as required by the above listed standards and should be used as part of an employee training program as required by OSHA.*



## Cable Series SRLs

**WARNING:** This product is part of a Personal Fall Arrest System<sup>1</sup>. The user must read and follow the manufacturer's instructions for each component or part of the complete system. These instructions must be provided to the user of this equipment. The user must read and understand these instructions or have them explained to them before using this equipment. Manufacturer's instructions must be followed for proper use and maintenance of this product. Alterations or misuse of this product or failure to follow instructions may result in serious injury or death.

**IMPORTANT:** If you have questions on the use, care, or suitability of this equipment for your application, contact Capital Safety.

**IMPORTANT:** Record the product identification information from the ID label in the Inspection and Maintenance Log provided this manual.

### DESCRIPTION

Rebel Cable Series Self Retracting Lifelines (SRLs) consist of a drum wound wire rope lifeline (Cable) that automatically locks at the onset of a fall to arrest the fall, but pays out and retracts lifeline during normal movement by the attached user.

### APPLICATIONS

Self Retracting Lifelines (SRLs) are used as a component in a Personal Fall Arrest System (PFAS) where a combination of worker mobility and fall protection is required (i.e., inspection work, general construction, maintenance work, oil production, confined space work, etc.).

### TRAINING

This equipment is intended to be used by persons trained in its correct application and use. It is the responsibility of the user to assure they are familiar with these instructions and are trained in the correct care and use of this equipment. Users must also be aware of the operating characteristics, application limits, and the consequences of improper use.

### STANDARDS

Refer to local, state, and federal (OSHA) requirements governing occupational safety for additional information regarding Personal Fall Arrest Systems. Refer to the following national standards on fall protection:

ANSI	Z359.14	Safety Requirements for Self-Retracting Devices for Personal Fall Arrest and Rescue Systems
ANSI	A10.32	Fall Protection Systems - American National Standard for Construction and Demolition Operations
CSA	Z259.2.2-98	Self-Retracting Devices for Personal Fall Arrest Systems

### LIMITATIONS & REQUIREMENTS

Always consider the following when using the Rebel SRL:

#### Capacity & Arresting Force/Distance:

	ANSI Z359	OSHA	CSA
Capacity* (1 person only)	310 lbs (141 kg)	420 lbs (191 kg)	310 lbs (141 kg)
Max. Arresting Force	1,350 lbs (6.0 kN)	1,800 lbs (8.0 kN)	1,350 lbs (6.0 kN)
Avg. Arresting Force	900 lbs (4.0 kN)	—	—
Max. Arresting Distance	42 in (1.1 m)	42 in (1.1 m)	54 in (1.4 m)

\* Combined Weight (1 person only, clothing, tools, etc.)

**Anchorage:** Select a rigid anchorage point that meets strength requirements for Fall Arrest and Rescue systems. In accordance with ANSI Z359.1, anchorages selected must have a strength capable of sustaining static loads applied in the directions permitted by the system of at least:

Non-Certified Anchorages:	5,000 lbs (22.2 kN)
Certified Anchorages:	2 times the Maximum Arresting Force

**NOTE:** When more than one rescue system is attached to an anchorage, the strengths set forth above shall be multiplied by the number of systems attached to the anchorage

**RESCUE PLAN:** When using this equipment, the employer must have a rescue plan and means at hand to implement it and communicate that plan to users, authorized persons, and rescuers.

**LOCKING SPEED:** Situations which do not allow for an unobstructed fall path should be avoided. Working in confined or cramped spaces may not allow the body to reach sufficient speed to cause the SRL to lock if a fall occurs. Working on slowly shifting material, such as sand or grain, may prevent the worker from falling at sufficient speed to cause the SRL to lock. A clear path is required to assure positive locking of the SRL.

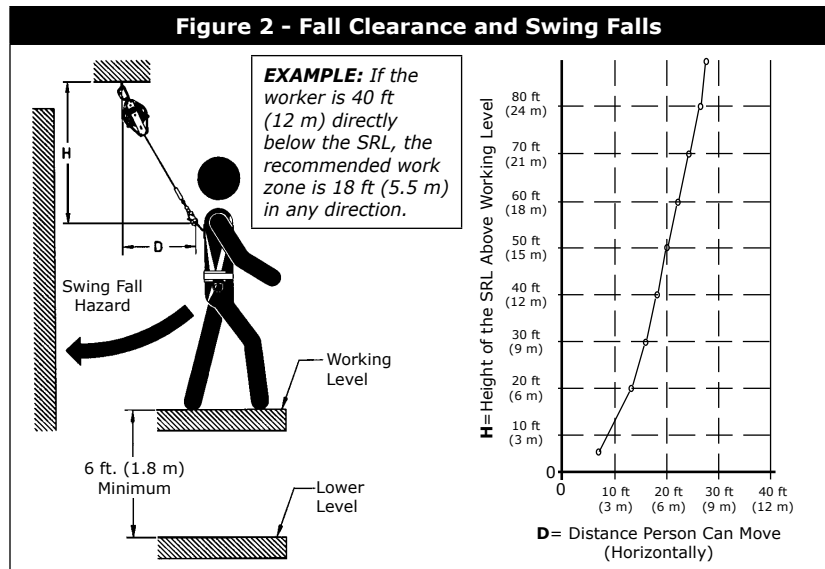
**FREE FALL:** When used correctly, SRLs limit the free fall distance to 2 ft. (.61 m) or less per OSHA. To avoid increased fall distances, do not work above the anchorage level. Avoid working where your lifeline may cross or tangle with that of another worker. Do not allow the lifeline to pass under arms or between legs. Never clamp, knot, or prevent the lifeline from retracting or being taut. Avoid slack line. Do not lengthen SRL by connecting a lanyard or similar component without consulting Capital Safety.

<sup>1</sup> PERSONAL FALL ARREST SYSTEM: An assembly of components and subsystems used to arrest a person in a free fall.

Figure 1 – Rebel™ Cable Series SRLs



**FALL CLEARANCE:** Ensure adequate clearance exists in the fall path to prevent striking an object during a fall. When connecting the SRL to fixed anchorage, a minimum of 6 feet (1.8 m) from the working level to the lower level or nearest obstruction is recommended. When connecting the SRL to an HLL, see the HLL manufacturer's instructions for fall clearance requirements. An energy absorbing component can sometimes be added in-line to further protect the worker. Compatibility and total fall distance must be considered if this is done. Contact Capital Safety before using an in-line energy absorbing component or lanyard with an SRL.



**SWING FALLS:** Swing falls occur when the anchorage point is not directly above the point where a fall occurs (see Figure 2). 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 the total free fall distance and the unobstructed area required to safely arrest the user. The SRL will activate regardless of its orientation relative to the user. The recommended work zone represents the typical acceptable work area for most applications. Review your specific application to determine what the appropriate work zone should be. Minimize swing falls by working as directly below the anchorage point as possible. Never permit a swing fall if injury could occur. If a swing fall situation exists in your application contact Capital Safety before proceeding.

**HAZARDS:** Use of this equipment in areas where surrounding hazards exist may require additional precautions to reduce the possibility of injury to the user or damage to the equipment. Hazards may include, but are not limited to: high heat, caustic chemicals, corrosive environments, high voltage power lines, explosive or toxic gases, moving machinery, or sharp edges.

**SHARP EDGES:** Avoid working where the lifeline will be in contact with or abrade against unprotected sharp edges. Provide protection for the lifeline when possible.

**BODY SUPPORT:** A Full Body Harness must be used with the Rebel Self Retracting Lifeline. The harness connection point must be above the user's center of gravity.

**WARNING:** Capital Safety strongly recommends the exclusive use of DBI-SALA or Protecta Full Body Harnesses with all of their fall protection systems. A body belt is not authorized for use with the Rebel SRLs. If a fall occurs when using a body belt it may cause unintentional release and possible suffocation because of improper body support. Substitutions of equipment or system components must not be made without the written consent of Capital Safety.

## COMPATIBILITY

**SYSTEM COMPATIBILITY:** Protecta equipment is designed for use with Protecta approved components and subsystems only. Substitutions or replacements made with unauthorized components or subsystems may jeopardize compatibility of equipment and may effect the safety and reliability of the complete system.

**COMPATIBILITY OF CONNECTORS:** Connectors are considered to be 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. Contact Capital Safety if you have any questions about compatibility.

Connectors (hooks, carabiners, and D-rings) must be capable of supporting at least 5,000 lbs. (22.2 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 (see Figure 3). Connectors must be compatible in size, shape, and strength. Self-locking snap hooks and carabiners are required by ANSI Z359 and OSHA.

**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.

Capital Safety connectors (snap hooks and carabiners) are designed to be used only as specified in each product's user's instructions. See Figure 4 for examples of inappropriate connections. Do not connect snap hooks and carabiners:

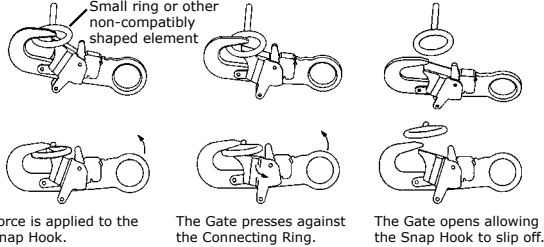
- A. To a D-ring to which another connector is attached.
- B. In a manner that would result in a load on the gate.

**NOTE:** Large throat snap hooks should 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 Z359.1-2007 or ANSI Z359.12 and is equipped with a 3,600 lb (16 kN) gate. Check the marking on your snap hook to verify that it is appropriate for your application.

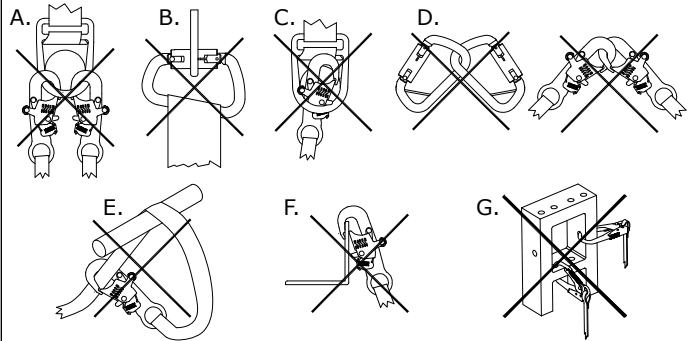
- C. In a false engagement, where features that protrude from the snap hook or carabiner catch on the anchor, and without visual confirmation seems to be fully engaged to the anchor point.
- D. To each other.
- E. Directly to webbing or rope lanyard or tie-back (unless the manufacturer's instructions for both the lanyard and connector specifically allows such a connection).
- F. To any object which is shaped or dimensioned such that the snap hook or carabiner will not close and lock, or that roll-out could occur.
- G. In a manner that does not allow the connector to align properly while under load.

**Figure 3 – Unintentional Disengagement**

If the connecting element to which a snap hook (shown) or carabiner attaches is undersized or irregular in shape, a situation could occur where the connecting element applies a force to the gate of the snap hook or carabiner. This force may cause the gate (of either a self-locking or a non-locking snap hook) to open, allowing the snap hook or carabiner to disengage from the connecting point.



**Figure 4 – Inappropriate Connections**



**NOTE:** Other than 3,600 lb. (16 kN) gated hooks, large throat opening snap hooks should 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. Large throat snap hooks are designed for use on fixed structural elements such as rebar or cross members that are not shaped in a way that can capture the gate of the hook.

## INSTALLATION

Plan your fall protection system before starting your work. Account for all factors that may affect your safety before, during, and after a fall. Consider all Limitations and Requirements defined at the start of these instructions.

**ANCHORAGE SELECTION:** Figure 5 illustrates typical anchorage for the SRL. Select an anchorage location with minimal free fall and swing fall hazards (see *Limitations & Requirements*). Select a rigid anchorage point capable of sustaining the static loads defined in *Limitations & Requirements - Anchorage*.

**SRL LOCATION:** Install the SRL above head height. Avoid working at locations with increased swing fall effect (see Figure 1).

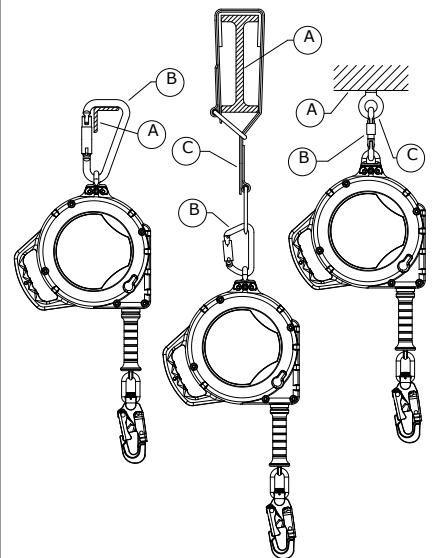
**AERIAL WORK PLATFORMS:** Special circumstances apply for SRLs anchored below shoulder height to an Aerial Work Platform (AWP). The AWP must have a guardrail system and closable gate around its perimeter unless the anchorage for the SRL is overhead. The guardrail must be continuous, smooth, and free of sharp edges. A suitable anchorage must be available for each SRL that is part of the platform. Contact Capital Safety before using the SRL in this application.

## OPERATION

**WARNING:** 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 Protecta self retracting lifelines.

**WARNING:** Do not alter or intentionally misuse this equipment. Consult Capital Safety when using this equipment in combination with components or subsystems other than those described in this manual. 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, and sharp edges. Do not loop the lifeline around small structural members.

**Figure 5 - Anchorage Connections**



**A** Anchorage **B** Connector  
**C** Anchorage Connector

**PRIOR TO EACH USE:** Inspect the Rebel SRL per the Inspection Procedures (Table 1). Do not use the SRL if inspection reveals an unsafe condition.

**AFTER A FALL:** Any equipment subjected to the forces of arresting a fall or exhibiting damage consistent with the effect of fall arrest forces (see Table 1) must be removed from service immediately and sent to an authorized service center for repair.

**MAKING CONNECTIONS:** After securing the SRL to a rigid anchorage point (see *Installation*), attach the Snaphook end of the SRL Lifeline to the dorsal D-ring on the Full Body Harness (see Figure 6).

In situations where it is necessary to use a front D-ring attachment point, such as working on a fixed ladder, a Full Body Harness with a Chest D-ring must be used. (Refer to OSHA requirements.)

**USE:** While attached to the SRL, the worker is free to move about within recommended working areas at normal speeds. The lifeline should extend smoothly and retract without hesitation. If a slack line condition is created in normal use the unit should be returned to an Capital Safety for service. Should a fall occur, the SRL will lock and arrest the fall. Upon rescue, remove the SRL from use. Inspect as described in Table 1. When working with the SRL, allow the lifeline to recoil back into the device under control. A short Tag Line may be required to extend or retract the lifeline during connection and disconnection. Allowing the lifeline to be fully extended for long periods of time may cause premature weakening of the retraction spring.

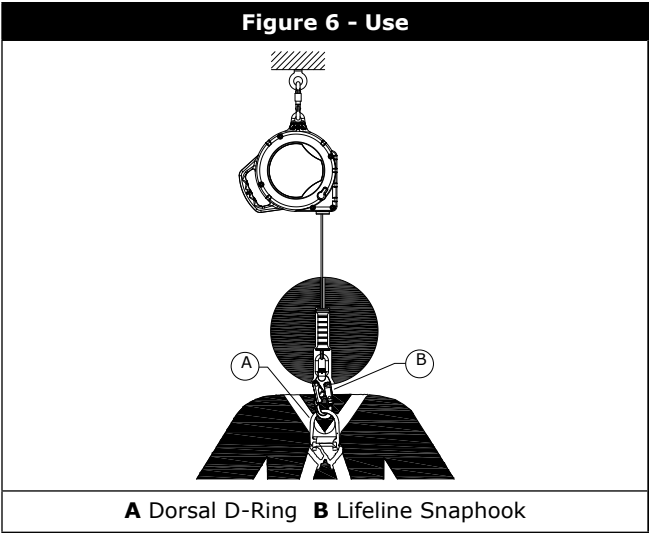


Table 1 - Inspection Procedures	
<div>SRL</div>	<ul style="list-style-type: none"><li>Inspect the SRL for loose bolts and bent or damaged parts.</li><li>Inspect the Housing (A) for distortion, cracks, or other damage.</li><li>Inspect the Swivel Eye (B) for cracks or damage and verify that it swivels freely.</li><li>Ensure the SRL locks up when the Lifeline is jerked sharply. Lockup should be positive with no slipping.</li><li>Inspect the entire unit for signs of corrosion.</li><li>Verify that all labels are present and are fully legible (see <i>Labels</i>).</li></ul>
<div>Lifeline</div>	<ul style="list-style-type: none"><li>Verify that the Lifeline pulls out and retracts fully without hesitation or slack in the line.</li><li>Inspect the Reserve Lifeline payout. If a fall has been arrested with most of the lifeline out, the Reserve Lifeline may have been deployed. Pull the Lifeline out of the SRL until it stops. If a red band (A) is visible, the Reserve Lifeline has been spent and the SRL must be serviced by an authorized service center before reuse.</li><li>Inspect the entire Lifeline Cable for cuts, kinks (B), broken wires (C), bird-caging (D), welding splatter (E), corrosion, chemical contact areas, or severely abraded areas.</li><li>Slide the Cable Bumper (F) up and inspect the ferrules (G) for cracks or damage and the cable for corrosion or broken wires.</li></ul>
<div>Snaphook</div>	<ul style="list-style-type: none"><li>Inspect the Snaphook for signs of damage or corrosion.</li><li>Verify that the Gate (A) opens and closes correctly and the Swivel (B) rotates freely.</li><li>Inspect the Snaphook Impact indicator. If the Snaphook is in 'Indicated Mode' (C); as indicated by an exposed red band (D), the SRL has been subjected to an impact load and should be removed for service by an authorized service center. Do not attempt to reset the Impact Indicator.</li></ul> <div><b>NOTE:</b> Leading Edge devices (SRL-LEs) are designed without impact indicating snaphooks. For these devices, inspect the external shock pack for deployment. If the zip tie is broken or the shock pack is deployed, the device should be removed from service.</div>
<div>Connectors &amp; Full Body Harness</div>	<ul style="list-style-type: none"><li>Inspect Anchorage Connectors for damage, corrosion, and proper working condition.</li><li>Inspect the Full Body Harness per the manufacturer's instructions.</li></ul>
<div><b>AFTER INSPECTION:</b> Record Inspection results in the Inspection &amp; Maintenance Log (see back cover). If inspection reveals an unsafe or defective condition, remove from service immediately and contact an authorized service center for repair.</div>	

INSPECTION

To ensure safe, efficient operation, the Rebel SRL must be inspected per the procedures in Table 1 at the following frequencies:

- BEFORE EACH USE:** OSHA 1910.66, OSHA 1926.502 ANSI Z359.1, and CSA Z259.2.2) require an inspection of the SRL and associated equipment before each use. See Table 1 for inspection procedures.
- ANNUAL INSPECTION:** ANSI Z359.1 requires a formal inspection of the SRL by a competent person<sup>2</sup> other than the user. More frequent inspections by a competent person may be required based on the nature and severity of workplace conditions affecting the equipment and the modes of use and exposure time of the equipment. See sections Table 1 for inspection guidelines. Record results in the *Inspection & Maintenance Log* in this instruction.

**NOTE:** In Canada, CSA requires servicing of SRLs within two year of the date of manufacture and annual inspection thereafter.

- AFTER A FALL:** The SRL should be removed from service and returned to an authorized service center for inspection and repair.

**2 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.



Clean Lifeline with water and mild soap solution. Rinse and thoroughly air dry. Do not force dry with heat. An excessive buildup of dirt, paint, etc. may prevent the Lifeline from fully retracting back into the housing causing a potential free fall hazard. Replace Lifeline if excessive buildup is present.

Additional maintenance and servicing procedures must be completed by an authorized service center. Do not attempt to disassemble the SRL.

## ***STORAGE***

Store the SRL in a cool, dry, clean environment out of direct sunlight. Avoid areas where chemical vapors may exist. Thoroughly inspect the SRL after any period of extended storage.

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## LIMITED LIFETIME WARRANTY

**Warranty to End User:** D B Industries, Inc., dba CAPITAL SAFETY USA ("CAPITAL SAFETY") warrants to the original end user ("End User") that its products are free from defects in materials and workmanship under normal use and service. This warranty extends for the lifetime of the product from the date the product is purchased by the End User, in new and unused condition, from a CAPITAL SAFETY authorized distributor. CAPITAL SAFETY'S entire liability to End User and End User's exclusive remedy under this warranty is limited to the repair or replacement in kind of any defective product within its lifetime (as CAPITAL SAFETY in its sole discretion determines and deems appropriate). No oral or written information or advice given by CAPITAL SAFETY, its distributors, directors, officers, agents or employees shall create any different or additional warranties or in any way increase the scope of this warranty. CAPITAL SAFETY will not accept liability for defects that are the result of product abuse, misuse, alteration or modification, or for defects that are due to a failure to install, maintain, or use the product in accordance with the manufacturer's instructions.

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## INSPECTION AND MAINTENANCE LOG

<b>SERIAL NUMBER:</b>			
<b>MODEL NUMBER:</b>			
<b>DATE PURCHASED:</b>			<b>DATE OF FIRST USE:</b>

INSPECTION DATE	INSPECTION ITEMS NOTED	CORRECTIVE ACTION	MAINTENANCE PERFORMED
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