



The Ultimate in Fall Protection

**SecuraSpan®**  
**Horizontal Lifeline System**  
**Loop Rebar Stanchion**

Model Numbers: (See back pages.)

**USER INSTRUCTION MANUAL**  
**HORIZONTAL LIFELINE SYSTEM**

This manual is intended to meet the Manufacturer's Instructions requirement of applicable standards defined in Section 1.2 and should be used as part of an employee training program as required by the identified agencies.

**WARNING:** This product is part of a fall protection system. Users 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.

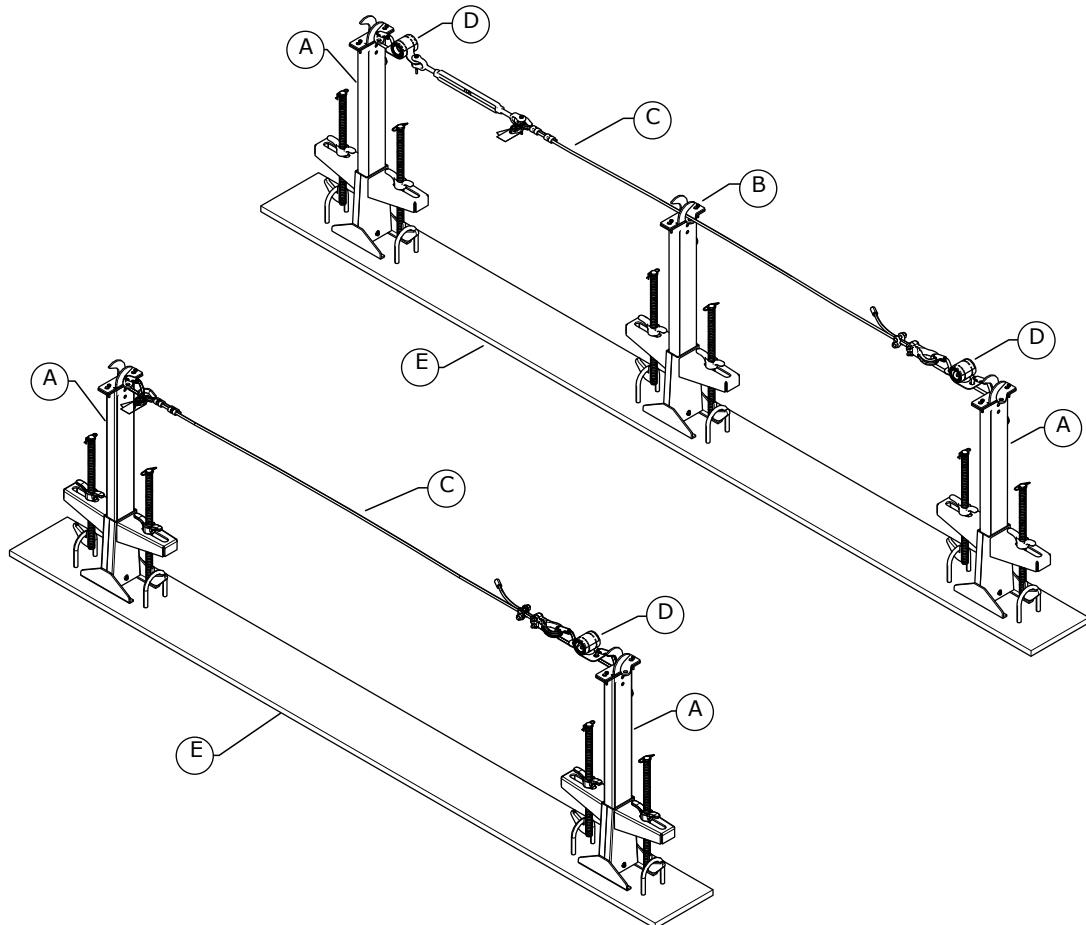
**IMPORTANT:** Record the product identification information from the ID label on the Inspection and Maintenance Log at the back of this manual.

**DESCRIPTION:**

The SecuraSpan Loop Rebar Stanchion is used as the end and intermediate Stanchions for Horizontal Lifeline (HLLs) mounted on Rebar Loop Concrete. SecuraSpan HLL systems can be comprised of a single Lifeline span or multiple Lifeline spans. Figure 1 illustrates typical SecuraSpan Loop Rebar Horizontal Lifeline Systems and key components.

**Figure 1 - SecuraSpan® Concrete Loop Rebar Horizontal Lifeline Systems**

A	End Stanchion, Loop Rebar
B	Intermediate Stanchion, Loop Rebar, Pass-Thru Bracket
C	Wire Rope Assembly
D	Zorbit™ Energy Absorber
E	Concrete, Loop Rebar





## 1.0 APPLICATION

- 1.1 PURPOSE:** SecuraSpan® Horizontal Lifeline (HLL) systems are designed to be used as an anchoring means for up to six personal fall arrest systems (PFAS). The SecuraSpan system may be used in situations where a combination of horizontal mobility and fall protection is needed. The SecuraSpan HLL system can consist of a single Lifeline span or multiple Lifeline spans. Figure 1 illustrates single span and multiple span SecuraSpan HLL configurations.

**IMPORTANT:** OSHA regulations state that horizontal lifelines shall be installed and used under the supervision of a qualified person<sup>1</sup> as part of a complete personal fall arrest system that maintains a safety factor of at least two.

- 1.2 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	Z359-0	Definitions and Nomenclature Used for Fall Protection and Fall Arrest
ANSI	Z359-1	Safety Requirements for Personal Fall Arrest Systems, Subsystems, and Components
ANSI	Z359-2	Minimum Requirements for a Comprehensive Managed Fall Protection Program
ANSI	A10-14	Safety Requirements for Safety Belts, Harnesses, Lanyards, and Lifelines for Construction and Demolition Use
OSHA	1910.66	Personal Fall Arrest System
OSHA	1926.502	Fall Protection Systems Criteria and Practices

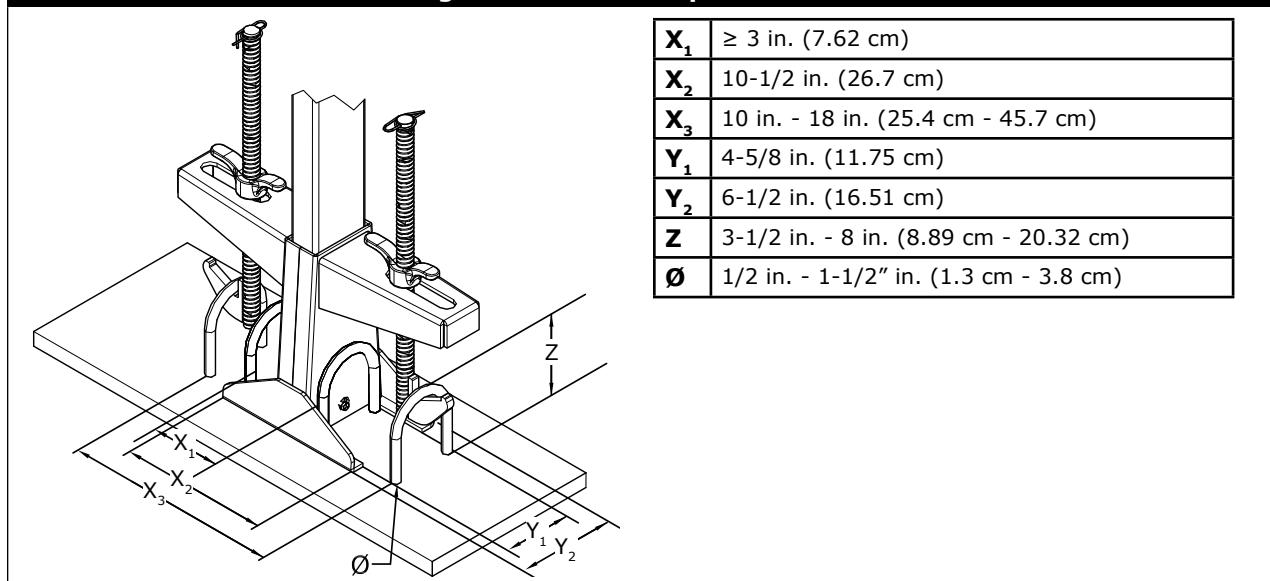
- 1.3 TRAINING:** This equipment is intended to be used by persons trained in its correct application and use. It is the responsibility of the user to assure they are familiar with these instructions and are trained in the correct care and use of this equipment. Users must also be aware of the operating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

## 2.0 SYSTEM LIMITATIONS & REQUIREMENTS

Consider the following limitations/requirements prior to installing or using this equipment:

- 2.1 HORIZONTAL LIFELINE SPAN:** The maximum horizontal lifeline span length is 60 ft. (18.3 m). The system length can be extended by using Intermediate Stanchions to create multiple spans (see Figure 1). The span length must be reduced when clearance is limited (see Figure 5 and Figure 6).
- 2.2 ANCHORAGES:** SecuraSpan HLL systems must only be installed on anchorages meeting the following requirements:
- **Rebar Loop Dimensions** - The SecuraSpan Loop Rebar Stanchions may be installed on Pre-Stressed Concrete Beams with the Rebar Loop dimensions identified in Figure 2.

**Figure 2 - Rebar Loop Dimensions**



**1 Qualified Person:** An individual with a recognized degree or professional certificate, and extensive knowledge and experience in the subject field, who is capable of design, analysis, evaluation, and specification in the subject work, project, or product. Refer to OSHA 1910.66, 1926.32, and 1926.502.

**Figure 3 - Beam Load Requirements**

End Stanchions			Intermediate Stanchions		
	AL	AM		AL	AM
X	$\pm 5,000$ lbs ( $\pm 22.2$ kN)	N/A		N/A	N/A
Y	-3,600 lbs (-16.0kN)	N/A		-3,600 lbs (-16.0kN)	N/A
Z	N/A	$\pm 15,000$ ft-lbs ( $\pm 20,337$ Nm)		N/A	$\pm 15,000$ ft-lbs ( $\pm 20,337$ Nm)

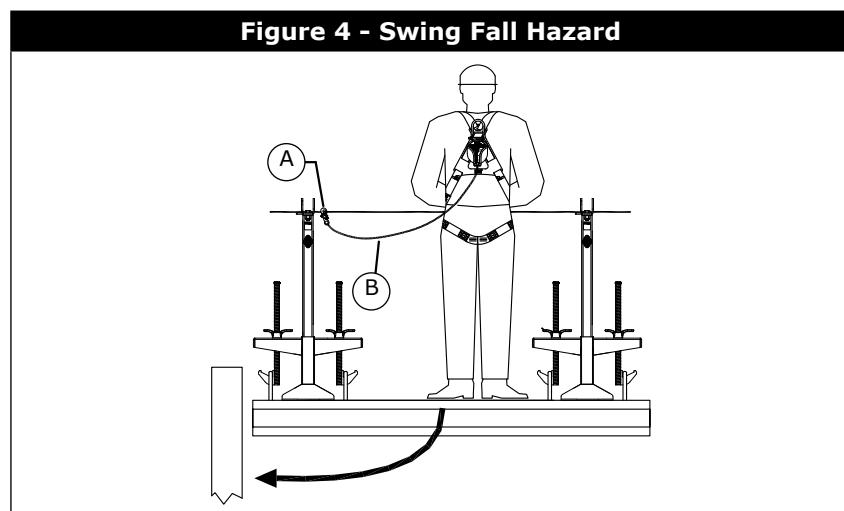
**NOTE:** The values in Figure 3 include a safety factor of two times the actual allowable applied loads.

- **Beam Load Requirements** - The beam on which the SecuraSpan HLL system is installed must support the loads applied by the system during a fall arrest. Stanchion attachment points may be subjected to horizontal and vertical forces, and torsional loads. The beam on which the horizontal lifeline stanchions are installed must be sufficiently secured to support the Applied Load (AL) and Applied Moment (AM) capacities specified in Figure 3. Cumulative loading must be evaluated when more than one system is installed on a beam.

**2.3 SYSTEM CAPACITY:** The capacity of single span systems is two persons. The capacity of multiple span systems is two persons secured on each span with a maximum of six people installed on the system. The maximum weight of each person, including tools and clothing, is 310 lbs (141 kg).

**2.4 FREE FALL:** Rig and use the personal fall arrest system such that the maximum potential free fall does not exceed government regulatory and subsystem manufacturer's requirements. Personal Fall Arrest subsystems used with the SecuraSpan Horizontal Lifeline System must limit free fall to 6 feet (1.8 m) when using an Energy Absorbing Lanyard.

**2.5 SWING FALLS:** Figure 4 illustrates a Swing Fall hazard. Swing falls occur when the Anchorage Point (A) is not in line vertically with the worker. The force of striking an object in a swing fall may cause serious injury or death. Minimize swing falls by working as directly in line with the anchorage point as possible. Do not permit a swing fall if injury could occur. Swing falls will significantly increase the clearance required when a self retracting lifeline or other variable length connecting subsystem (B) is used. If a swing fall situation exists in your application, contact Capital Safety before proceeding.



**2.6 FALL CLEARANCE:** Ensure that adequate clearance exists in the fall path to prevent striking an object during a fall. The clearance required is dependent on the type and length of connecting subsystem (rope grab, lanyard), the anchorage location and the HLL Span Length. Figure 5 and Figure 6 identify span and clearance approximations for HLL systems utilizing Energy Absorbing Lanyard or Self Retracting Lifeline subsystems.

**2.7 PHYSICAL AND ENVIRONMENTAL HAZARDS:** Use of this equipment in areas where physical or environmental 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. Contact Capital Safety if you have question regarding use of this equipment where physical or environmental hazards exist.

**2.8 BODY SUPPORT:** A Full Body Harness must be used with the SecuraSpan Horizontal Lifeline System. The harness connection point must be above the user's center of gravity. A body belt is not authorized for use with the HLL system. 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.

**Figure 5 - Fall Clearance for Energy Absorbing Lanyards**

To calculate Fall Clearance:

1. In the shaded column, locate the HLL Span Distance (Y) representing the distance between SecuraSpan Stanchions.
2. In the shaded row, locate the Lanyard Length (X) for the Energy Absorbing Lanyard used with the HLL system.
3. The minimum allowable Vertical Clearance (Z) required from lower level or obstruction to the working surface of the HLL is identified at the intersection of the row (Y) and column (X) determined in Steps 1 and 2.

HLL SPAN DISTANCE: ft. (m)	X LANYARD LENGTH: ft-in (m)			
	3 FT (.9)	4 FT (1.2)	5 FT (1.5)	6 FT (1.8)
0-10 (0-3)	11'-2" (3.4)	12'-2" (3.7)	13'-2" (4)	14'-2" (4.3)
10-15 (3-4.6)	11'-10" (3.6)	12'-10" (3.9)	13'-10" (4.2)	14'-10" (4.5)
15-20 (4.6-6.1)	12'-5" (3.8)	13'-5" (4.1)	14'-5" (4.4)	15'-5" (4.7)
20-25 (6.1-7.7)	13' (4)	14' (4.3)	15' (4.6)	16' (4.9)
25-30 (7.7-9.0)	13'-7" (4.2)	14'-7" (4.5)	15'-7" (4.8)	16'-7" (5.1)
30-35 (9.0-10.8)	14'-2" (4.4)	15'-2" (4.6)	16'-2" (4.9)	17'-2" (5.2)
35-40 (10.8-12.3)	14'-10" (4.6)	15'-10" (4.9)	16'-10" (5.2)	17'-10" (5.5)
40-45 (12.3-13.8)	15'-5" (4.7)	16'-5" (5.1)	17'-5" (5.4)	18'-5" (5.6)
45-50 (13.8-15.4)	16' (4.9)	17' (5.2)	18' (5.5)	19' (5.8)
50-55 (15.4-16.9)	16'-7" (5.1)	17'-7" (5.3)	18'-7" (5.6)	19'-7" (6)
55-60 (16.9-18.5)	17'-2" (5.3)	18'-2" (5.6)	19'-2" (5.9)	20'-2" (6.2)

**Figure 6 - Fall Clearance for Self Retracting Lifelines**

**WARNING:** Clearances at right only apply to workers located directly adjacent to the HLL with their SRL connected to the HLL immediately next to them. Working away from the point where the SRL connects to the HLL will increase fall clearance.

**WARNING:** The SecuraSpan HLL system is approved for use with DBI-SALA Talon, DBI-SALA 11-ft. Web UltraLok, and Protecta Rebel SRLs only. Clearance values may not be accurate if used with other SRL models.

Y SPAN ft (m)	Z Clearance ft-in (m)
0-10 (0-3)	10'-9" (3.3)
10-20 (3-6.1)	11'-11" (3.6)
20-30 (6.1-9.0)	13'-2" (4)
30-40 (9.0-12.3)	14'-6" (4.4)
40-50 (12.3-15.4)	15'-7" (4.8)
50-60 (15.4-18.5)	16'-8" (5.1)

**2.9 COMPATIBILITY OF COMPONENTS:** Unless otherwise noted, DBI-SALA equipment is designed for use with Capital Safety approved components and subsystems only. Substitutions or replacements made with non-approved components or subsystems may jeopardize compatibility of equipment and may affect safety and reliability of the complete system. Each person's connecting subsystem (Energy Absorbing Lanyard or SRL) must limit fall arrest forces to 900 lbs (4 kN).

**2.10 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. 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 (see Figure 7). Connectors must be compatible in size, shape, and strength. Self-locking snap hooks and carabiners are required by ANSI Z359.1 and OSHA.

**2.11 MAKING CONNECTIONS:** Use only self-locking snap hooks and carabiners with this equipment. Only use connectors that are suitable to each application. 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.

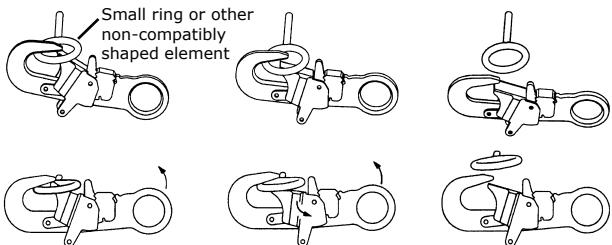
DBI-SALA connectors (snap hooks and carabiners) are designed to be used only as specified in each product's user's instructions. See Figure 8 for illustration of the inappropriate connections stated below. DBI-SALA snap hooks and carabiners should not be connected:

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

**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.

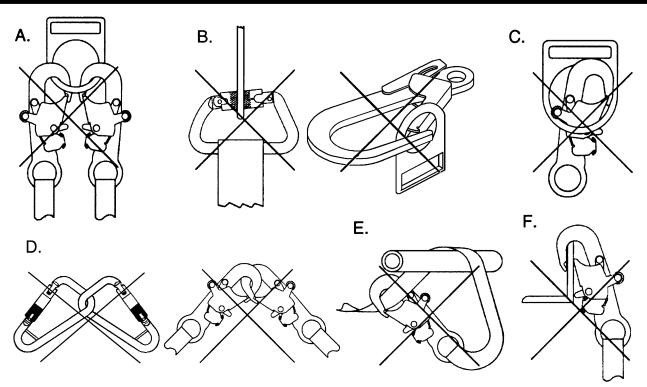
**Figure 7 - Unintentional Disengagement (Rollout)**

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.



- 7. Force is applied to the Snap Hook.
- 8. The Gate presses against the Connecting Ring.
- 9. The Gate opens allowing the Snap Hook to slip off.

**Figure 8 - Inappropriate Connections**



### 3.0 INSTALLATION

**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.

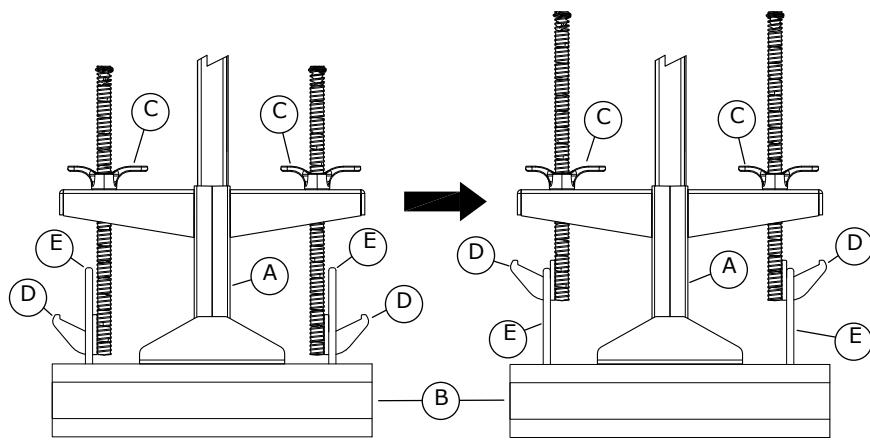
**WARNING:** Consult your doctor if there is any reason to doubt your fitness to safely absorb the shock from a fall arrest. Age and fitness seriously affect a workers ability to withstand arrest forces. Pregnant women or minors must not use DBI/SALA SecuraSpan® HLL systems.

**3.1 STANCHION INSTALLATION:** Figure 1 shows typical single span and multiple span SecuraSpan® HLL system installations. SecuraSpan HLL systems must be installed to meet the clearance requirements specified in Figure 5 and Figure 6. Details for installing the various components that comprise the SecuraSpan Horizontal Lifeline System are as follows:

- A. REBAR LOOP SIZING:** Figure 2 identifies Rebar Loop sizing and spacing requirements. Rebar diameter must be 1/2 in. - 1-1/2" in. (1.3 cm - 3.8 cm). Rebar Loops should be spaced 3 in. (7.62 cm) or further apart and 3-1/2 in. - 8 in. (8.89 cm - 20.32 cm) high. The adjustable Hook Ends can secure to Rebar Loops spaced 10 in. - 18 in. (25.4 cm - 45.7 cm) apart. Rebar Loops positioned inside the feet on the Stanchion Base must be narrower than 4-5/8 in. (11.75 cm). Rebar Loops positioned outside the feet on the Stanchion Base must be wider than 6-1/2 in. (16.51 cm)
- B. SYSTEM HEIGHT:** The stanchions must be located at a height that will limit the free fall distance to 6 ft. (1.8 m). The length of the Energy Absorbing Lanyard should be limited to reduce the potential free fall. All stanchions must be installed at approximately the same elevation. Limit the lifeline slope to five degrees or less.
- C. SYSTEM DIRECTION:** The SecuraSpan Horizontal Lifeline must be installed straight and horizontal, without turns or bends.
- D. EVALUATION OF STRUCTURE STRENGTH AND HORIZONTAL LIFELINE SPANS:** The location of the stanchions must be determined, and the strengths of the beams must be evaluated according to Beam Load Requirements defined in Section 2.2 and Figure 3.
- E. EVALUATION OF HORIZONTAL LIFELINE SPANS FOR CLEARANCE:** The elevation and length of the system span(s) must be determined to evaluate the horizontal lifeline system clearance. Fall clearance requirements vary depending on which connecting subsystem is used the SecuraSpan HLL. For Energy Absorbing Lanyards, refer to Figure 5 for minimum clearance requirements. For Self Retracting Lifelines, see Figure 6 for minimum clearance requirements. Do not begin installation until clearances have been reviewed and determined to be in compliance with Figure 5 and Figure 6.
- F. SECURING THE STANCHION ON THE BEAM:** Figure 9 illustrates installation of the SecuraSpan Loop Rebar Stanchion (A) on a Precast Concrete Beam (B). Stanchions may be attached while the beam is on the ground or when secured overhead: Loosen the Wing Nuts (C) until the Hook Ends (D) hang below the Rebar Loops (E). Slide the Loop Hooks (C) along the slots on the Stanchion Base Arms to align the Cradle of each Hook End directly below the Rebar Loop. Tighten the Wing Nuts evenly until the Rebar Loop is snuggly lodged in the Cradle of each Hook End.

**WARNING:** Use caution when lifting or transporting stanchions. The Loop Hook Assembly can become separated from the Stanchion Base.

**Figure 9 - Stanchion Installation**



**A** Stanchion **B** Concrete Beam **C** Wing Nut **D** Hook End **E** Rebar Loop

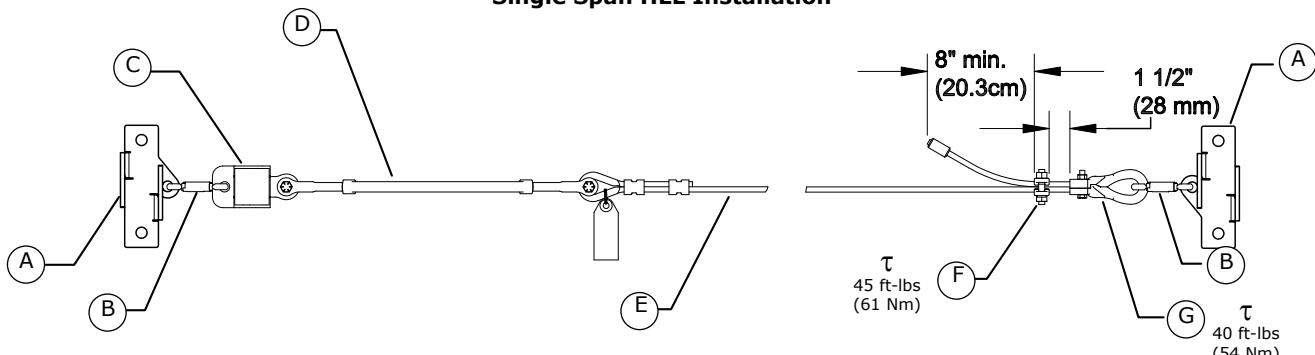
**3.2 HORIZONTAL LIFELINE INSTALLATION:** Figure 10 illustrates installation of SecuraSpan Horizontal Lifeline (HLL) in Single Span and Multiple Span system. Procedures for installing the HLL are as follows:

**CAUTION:** Multiple span SecuraSpan HLL systems require the use of a Zorbit energy absorber at both end terminations. Failure to do so could result in failure of the system and serious injury or death to the user.

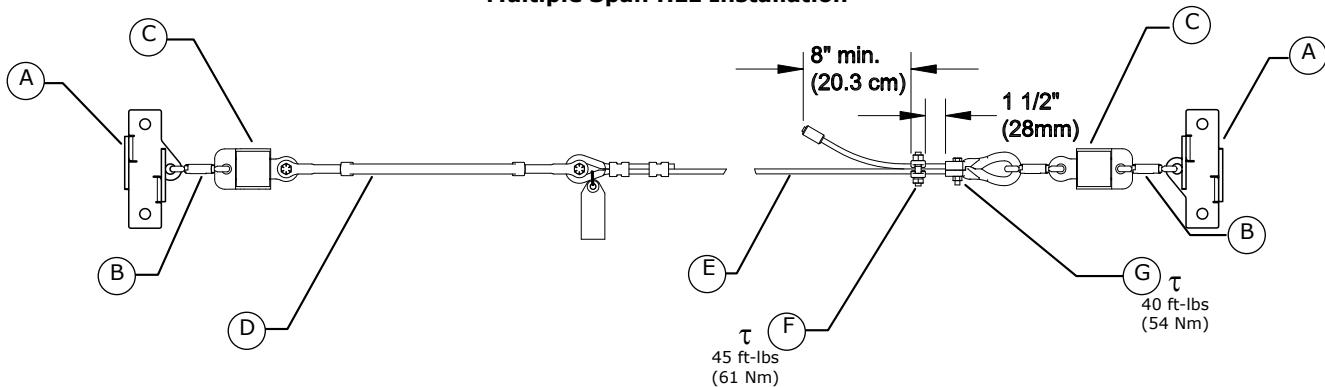
- A. Connect the Carabiner on the Turnbuckle end of the HLL assembly to the hole of the first Stanchion.
- B. Extend the Turnbuckle so 1/2 in. (13mm) of thread remains exposed in the Turnbuckle body slots.
- C. When present, route the wire rope through any pass-through brackets.
- D. Connect the Carabiner on the Thimble Clamp end of the HLL assembly to the hole of the last Stanchion. Loosen the Cable Clips at the end of the cable assembly and pull the Wire Rope tight to remove slack. Secure the Cable Clip 1 1/2 in. (28 mm) from the Thimble Clamp as shown in Figure 10. At least 8 in. (20.3 cm) of Wire Rope must extend out from the free Cable Clip. Torque Cable Clips to 45 ft-lbs (61 Nm) and Thimble Clamp Nuts to 40 ft-lbs (54 Nm).
- E. To pre-load the system, tighten the Wire Rope by rotating the Turnbuckle body. The unrestrained jaw of the Turnbuckle must be prevented from turning to prevent twisting of the Wire Rope. Tension the Wire Rope until the sag on the system at mid-span is 6 in. (15.25 cm) or less with no weight on the Wire Rope. The Turnbuckle will not over-tension the Wire Rope.
- F. After pre-loading the system, re-torque all Cable Clips to their previously specified values.

**Figure 10 - Horizontal Lifeline Installation**

**Single Span HLL Installation**

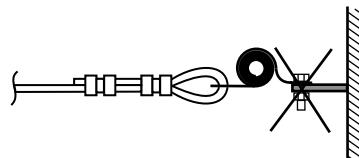


**Multiple Span HLL Installation**



**A** Stanchion **B** Carabiner **C** Zorbit **D** Turnbuckle **E** Wire Rope Assembly **F** Cable Clip **G** Thimble Clamp

**! CAUTION:** Do not rigidly mount Zorbit to structure or stanchion. May cause failure due to bending. Mount so Zorbit can pivot and move freely as shown in Figure 10.



## 4.0 OPERATION

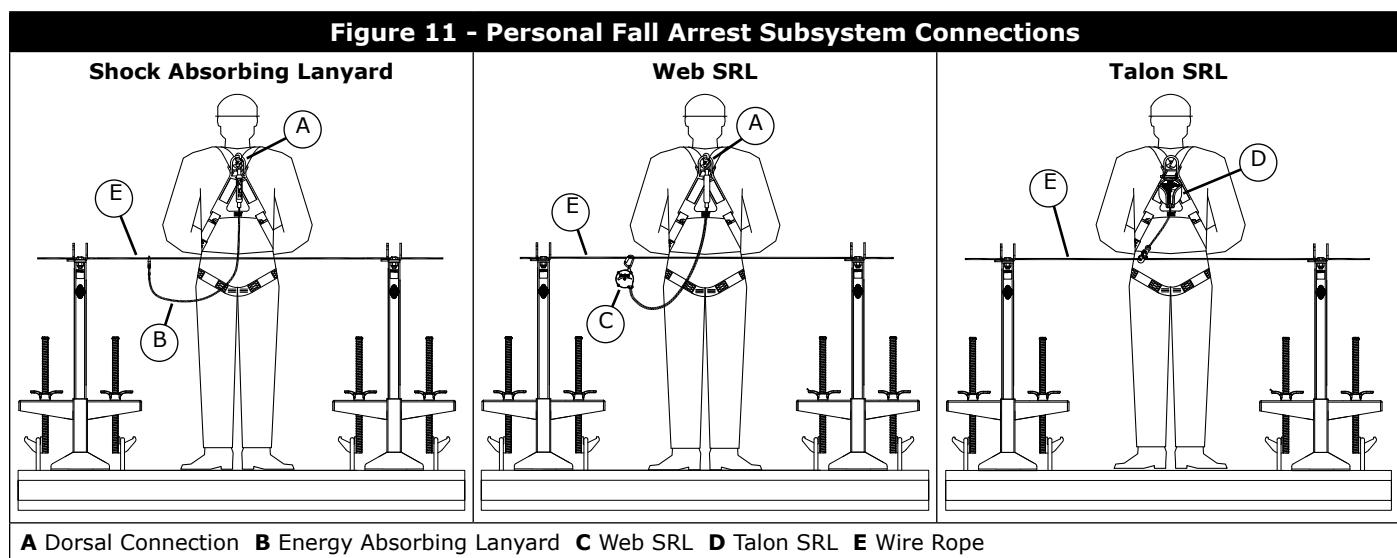
**4.1 BEFORE EACH USE:** Inspect the SecuraSpan Horizontal Lifeline System according to inspection procedures in Section 5. Do not use this equipment if inspection reveals an unsafe or defective condition. Plan your use of the fall protection system prior to exposing workers to dangerous situations. Consider all factors affecting your safety before using this system:

- Read and understand all manufacturer's instructions for each component of the personal fall arrest system. All DBI-SALA harnesses and connecting subsystems are supplied with separate user instructions. Keep all instructions for future reference.
- Review Section 1.2 and Section 2 to ensure system limitations and other requirements have been met. Review applicable information regarding system clearance criteria, and ensure changes have not been made to the system installation (i.e. length), or occurred at the job site, that could affect the required fall clearance. Do not use the system if changes are required.

**4.2 PERSONAL FALL ARREST SYSTEM COMPONENTS:** Inspect and don the Full Body Harness according to manufacturer's instructions. Attach the connecting subsystem (Energy Absorbing Lanyard or SRL) to the Dorsal Connection on the harness (see Figure 11).

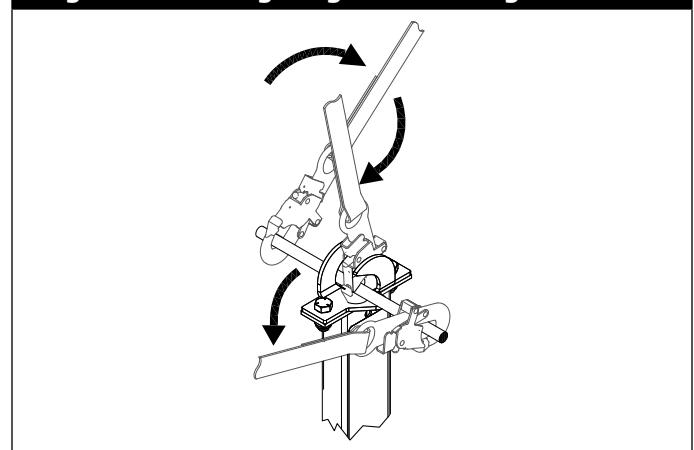
**WARNING:** Risk of swing falls is greater when using an SRL. Swing falls significantly increase the clearance required to arrest a fall and may result in serious injury or death. To avoid swing fall hazards, do not work beyond the end stanchions or at excessive distances to either side of the HLL system. Do not climb above the HLL system.

**4.3 CONNECTING TO THE HLL SYSTEM:** Approach the work area using the appropriate access equipment. Connect the Personal Fall Arrest System connector (free Snap Hook on the Energy Absorbing Lanyard or Talon SRL, Carabiner on other Web SRLs) to the Horizontal Lifeline's Wire Rope. Connectors must meet all compatibility and strength requirements.



**4.4 ONCE CONNECTED TO THE SYSTEM:** The user must remain connected to the system. When bypassing a Pass-Through Bracket, the Snap Hook must be rotated upward to navigate around each of the hook shaped guides on the bracket (see Figure 12). Large throat opening Carabiners and Snap Hooks will not allow bypass capabilities. When transferring between two adjacent SecuraSpan HLL Systems, the user must be protected during transfer from one system to the next. A 100 Percent Tie-Off Energy Absorbing Lanyard should be used to protect the user. During transfer from one SecuraSpan system to an adjacent system, attach the unused leg of the lanyard to the next SecuraSpan system before releasing the secured lanyard leg from the first SecuraSpan system.

**Figure 12 - Navigating Pass-Through Brackets**



- 4.5 HAZARDOUS SITUATIONS:** Do not take unnecessary risks, such as jumping or reaching too far from the edge of the working surface. Do not allow the connecting subsystem to pass under arms or between feet. To avoid inadequate fall clearance, do not climb above the horizontal lifeline. To avoid swing fall hazards, do not work too far from either side of the system.
- 4.6 TWO PERSONS CONNECTED WITHIN A SINGLE SPAN:** When a person falls while connected to the Horizontal Lifeline, the wire rope will deflect within the span to which the worker is connected. If two persons are connected to the system within the same span, and one person falls, the second person may be pulled off the working surface due to deflection of the HLL. The potential for the second person falling increases as the HLL span length increases.
- 4.7 FREE FALL:** The Personal Fall Arrest System must be rigged to limit free falls to six feet or less when using an energy absorbing lanyard according to OSHA requirements.
- 4.8 SHARP EDGES:** Avoid working where the connecting subsystem or other system components will be in contact with, or abrade against, unprotected sharp edges. If working around sharp edges is unavoidable, a protective cover must be used to prevent cutting of the Personal Fall Arrest System (PFAS) components.
- 4.9 IN THE EVENT OF A FALL:** The responsible party must have a rescue plan and the ability to implement a rescue. Tolerable suspension time in a full body harness is limited, so a prompt rescue is critical.

**IMPORTANT:** Use care when handling an expended Zorbit Energy Absorber. The tearing of the energy absorber material produces extremely sharp edges.

- 4.10 RESCUE:** With the number of potential scenarios for a worker requiring rescue, an on-site rescue team is beneficial. The rescue team is given the tools, both in equipment and techniques, so it can perform a successful rescue. Training should be provided on a periodic basis to ensure rescuers' proficiency.
- 4.11 SYSTEM REMOVAL:** When no longer required, the system should be removed from the job site. To slacken the wire rope, loosen the turnbuckle until tension is removed from the wire rope. Remove the carabiners that connect the wire rope to the end stanchions. Ensure there are no knots or kinks in the wire rope before storage.

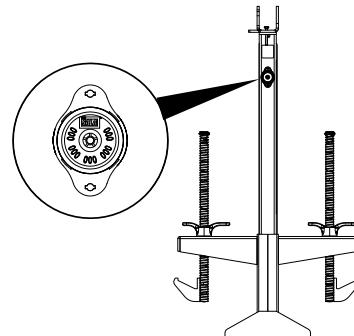
## 5.0 INSPECTION

- 5.1 FREQUENCY:** Table 1 defines the procedures for inspecting the SecuraSpan Horizontal Lifeline System. Frequency and inspector qualifications are as follows:

- **Before Each Use:** An inspection of the system by a qualified person must be completed after the system is installed and prior to each day's use. Inspect per the procedures defined in Table 1.
- **Annual Inspection:** System components must be formally inspected by a qualified person, other than the user, at least annually. Extreme working conditions may require increasing inspection frequency. Inspect per the procedures defined in Table 1. Record inspection results in the *Inspection and Maintenance Log*.

- 5.2 I-Safe™ RFID TAG:** The SecuraSpan Loop Rebar Stanchion includes an i-Safe™ Radio Frequency Identification (RFID) tag (Figure 13). The RFID tag can be used in conjunction with the i-Safe handheld reading device and web based portal to simplify inspection and inventory control and provide records for your fall protection equipment. If you are a first-time user, contact a Capital Safety Customer Service representative (see back cover); or if you have already registered, go to [www.capitalsafety.com/isafe.html](http://www.capitalsafety.com/isafe.html). Follow the instructions provided with your i-Safe handheld reader or on the web portal to transfer your data to your web log.

Figure 13 - i-Safe RFID Tag



- 5.3 IF INSPECTION REVEALS AN UNSAFE OR DEFECTIVE CONDITION:** Remove the unit from service and destroy, or contact Capital Safety for possible repair.

**IMPORTANT:** If the Horizontal Lifeline System is subjected to the forces of a fall arrest, it must be removed from service and destroyed, or returned to Capital Safety for inspection or repair.

- 5.4 USER EQUIPMENT:** Inspect Harnesses, Energy Absorbing Lanyards, and SRLs used with the HLL system according to manufacturer's instructions.

**Table 1 - Inspection**

<b>Inspection Procedures:</b>	<b>Daily</b>	<b>Before Each Use</b>	<b>Every Year</b>	<b>After a Fall</b>
1. Inspect the Turnbuckle for damage. Ensure sufficient threads are engaged into the Turnbuckle body. Look for any cracks or deformities in the metal. Inspect metal components for rust or corrosion that may affect their strength or operation.		X	X	X
2. Inspect the Wire Rope for rust, corrosion, broken wires, or other obvious faults. Inspect the Wire Rope for proper tension. Inspect all hardware (fasteners, carabiners, wire rope cable clips, etc.) securing the HLL assembly to ensure they are present and properly installed.		X	X	X
3. Inspect the Zorbit Energy Absorber for extension or deformities. There should be no tearing of the metal between holes in the Zorbit coiled section. Increase inspection frequency if the Zorbit is exposed to prolonged vibration. Extended Zorbit Energy Absorbers must be removed from service and destroyed, or marked for training only. Inspect securing hardware for strength and function.		X	X	X
4. Inspect system labels. The labels must be present and fully legible (see Section 8). Replace labels if missing or illegible.		X	X	X
5. The Stanchion wing nuts must be retightened daily.	X			

**IMPORTANT:** If inspection reveals an unsafe or defective condition: Remove the unit from service and destroy, or contact Capital Safety for possible repair.

## **6.0 MAINTENANCE, SERVICE, AND STORAGE**

- 6.1 SECURASPA<sup>N</sup> HLL COMPONENTS:** The SecuraSpan<sup>®</sup> HLL components require no scheduled maintenance, other than repair or replacement of items found defective during inspection (see Section 5). If components become heavily soiled with grease, paint, or other substances, clean with appropriate cleaning solutions. Do not use caustic chemicals that could damage system components. Store HLL components in a clean, dry, cool, enclosure.
- 6.2 CONNECTING SUBSYSTEM COMPONENTS:** Maintain, service, and store user subsystem equipment (Harnesses, Lanyards, Srls, etc.) according to manufacturer's instructions.

## **7.0 SPECIFICATIONS**

**7.1 STANDARDS:** When installed per the requirements and recommendations in this instruction manual, the SecuraSpan Horizontal Lifeline System complies with OSHA 1910.66 and OSHA 1926.502.

## **7.2 MATERIALS:**

<b>Stanchion and Base:</b>	Carbon Steel, Zinc Plated Finish
<b>Zorbit Energy Absorber:</b>	Stainless Steel
<b>Wire Rope:</b>	3/8 in. (10 mm) diameter, 7x19 galvanized wire rope. Minimum tensile strength 14,400 lbs (64 kN)
<b>Cable Assembly Components:</b>	Turnbuckle, Thimble, and Cable Clips are Galvanized Steel
<b>Mounting Hardware and Carabiners:</b>	Zinc Plated Steel

## 7.3 PERFORMANCE:

## ***Stanchion and Base:***

<b>Beam Sizes:</b>	Rebar diameter must be 1/2 in. - 1-1/2" in. (1.3 cm - 3.8 cm). Rebar Loops should be spaced 3 in. (7.62 cm) or further apart and 3-1/2 in. - 8 in. (8.89 cm - 20.32 cm) high. The adjustable Hook Ends can secure to Rebar Loops spaced 10 in. - 18 in. (25.4 cm - 45.7 cm) apart.
<b>Capacity:</b>	310 lbs (141 kg)
<b>Weight:</b>	52 lbs (23.6 kg)
<b>Height of Installed Stanchion:</b>	36" (91.44 cm)
<b>Minimum Breaking Strength:</b>	5,000 lbs (22.2 kN)

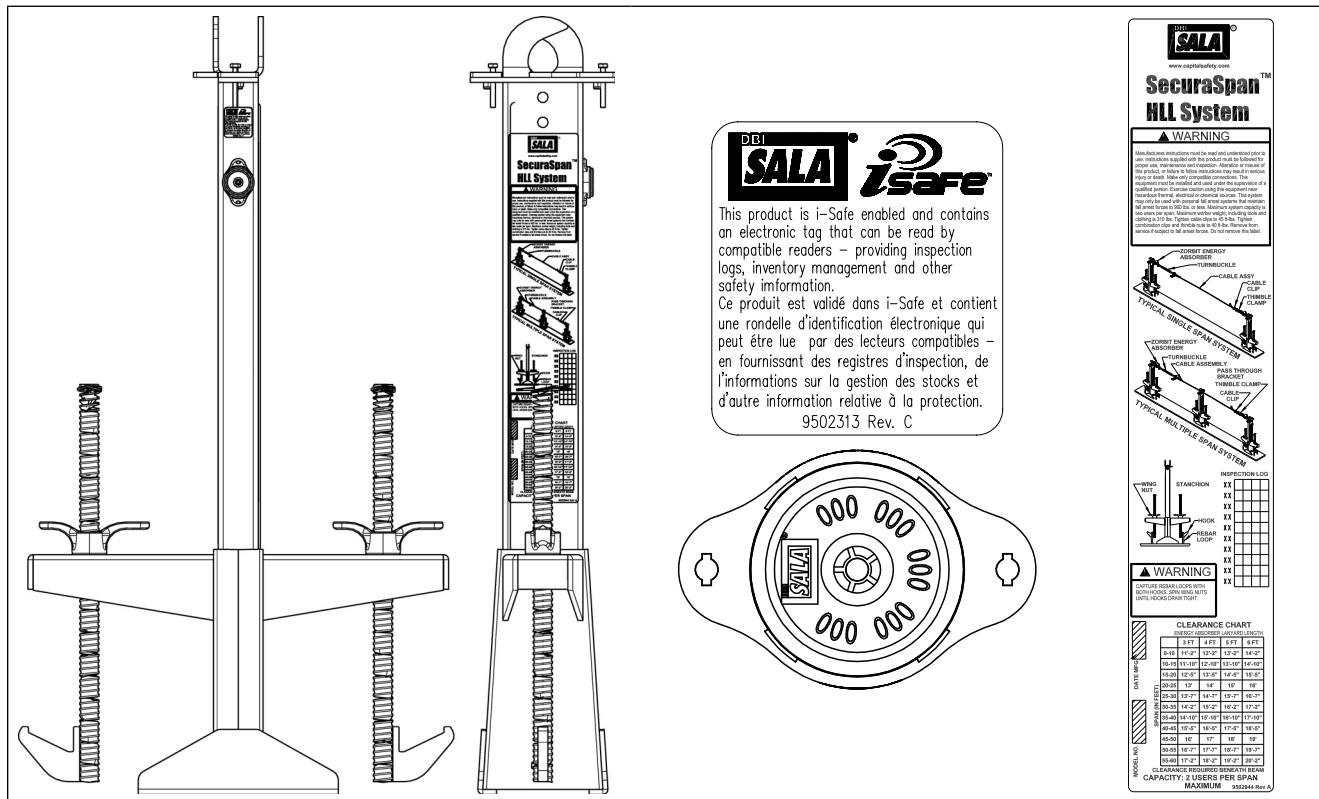
## **Zorbit Energy Absorber:**

<b>Peak Dynamic Pullout Load:</b>	2,500 lbs (11 kN)
<b>Average Dynamic Pullout Load:</b>	2,000 lbs (8.9 kN)
<b>Maximum Pullout:</b>	48.5 in (1.25 m)
<b>Minimum Tensile Strength:</b>	5,000 lbs (22.2 kN)
<b>US Patent Number:</b>	6,279,680

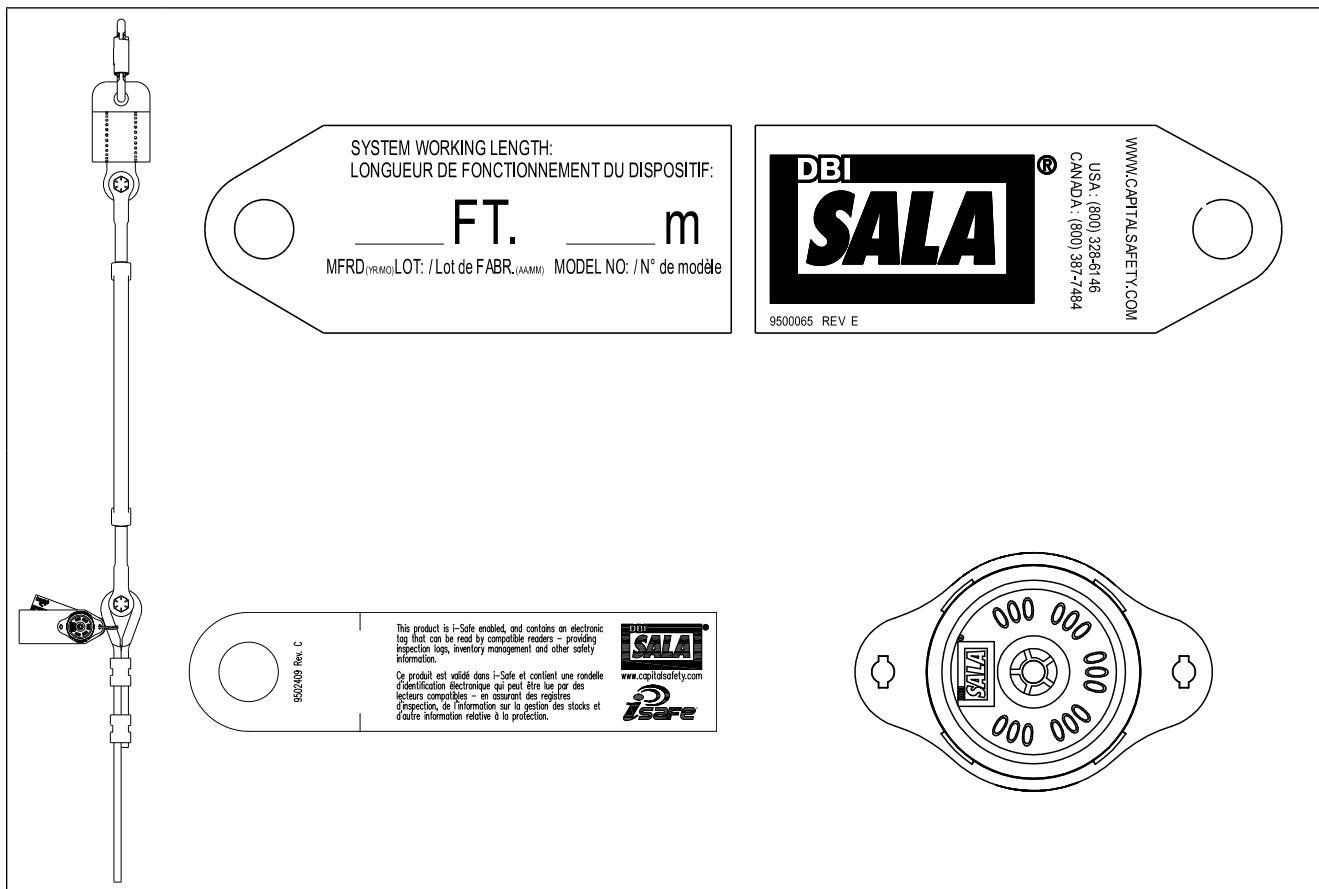
## **8.0 LABELING**

The following labels must be present and fully legible:

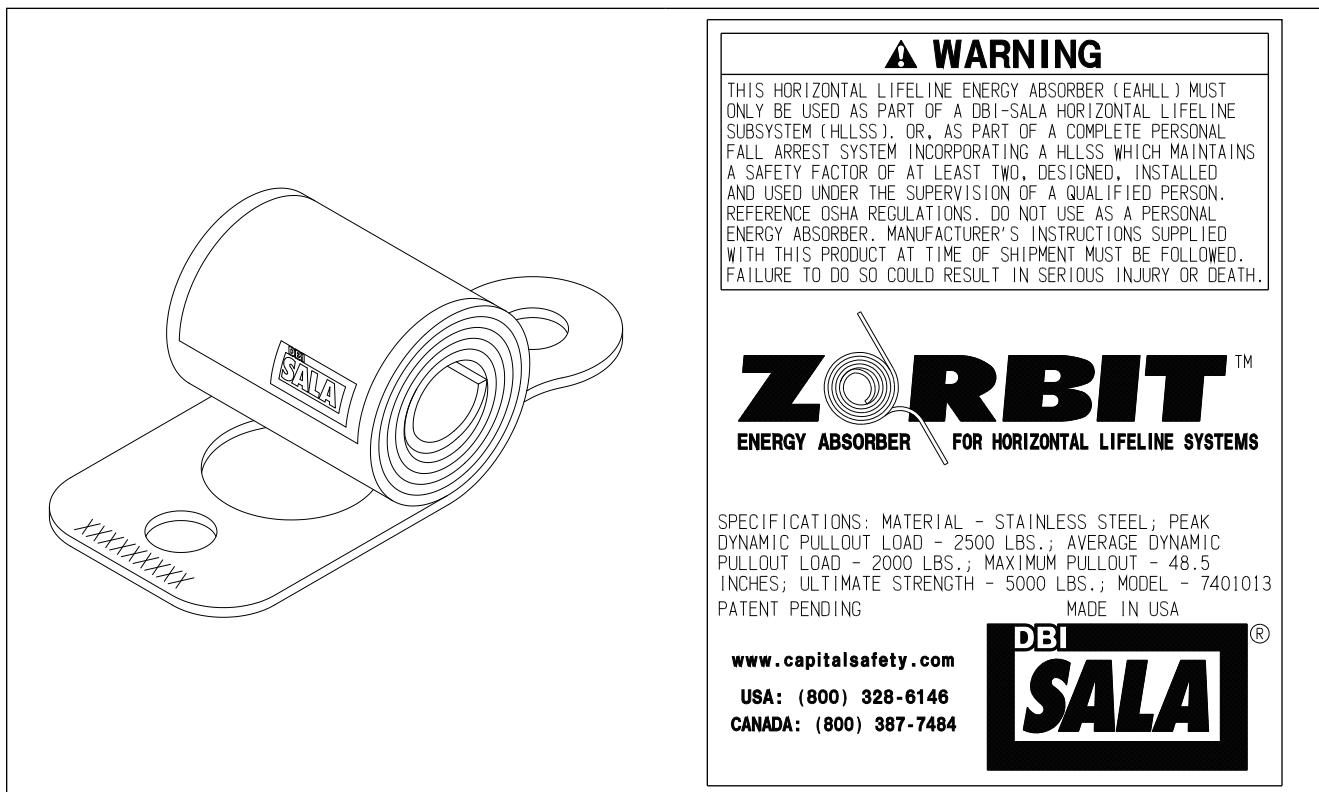
## **8.1 SECURASPIN LOOP REBAR STANCHION:**



## 8.2 HORIZONTAL LIFELINE (HLL):



## 8.3 ZORBIT ENERGY ABSORBY:



Models	Description
7400320	20 ft. Complete SecuraSpan Loop Rebar Horizontal Lifeline System
7400330	30 ft. Complete SecuraSpan Loop Rebar Horizontal Lifeline System
7400340	40 ft. Complete SecuraSpan Loop Rebar Horizontal Lifeline System
7400350	50 ft. Complete SecuraSpan Loop Rebar Horizontal Lifeline System
7400360	60 ft. Complete SecuraSpan Loop Rebar Horizontal Lifeline System
7400045	SecuraSpan Stanchion with Loop Rebar Base and Pass-Thru Bracket

## **INSPECTION AND MAINTENANCE LOG**

SERIAL NUMBER:	
MODEL NUMBER:	
DATE PURCHASED:	DATE OF FIRST USE:

## LIMITED LIFETIME WARRANTY

**Warranty to End User:** D B Industries, LLC 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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