User Manual



SafeLink I-Beam Post Base



Meets OSHA 1926.502 and 1910.140 Requirements This manual is intended to meet the Manufacturer's Instructions as required by the American National Standards Institute (ANSI) Z359 and should be used as part of an employee training program as required by the Occupational Safety and Health Act (OSHA).

220-00017



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These instructions must be provided to any person utilizing this equipment. The worker must read and understand the manufacturer's instructions for this, and all other components of the complete Fall Protection System. These instructions must be followed to ensure the proper use, maintenance, and inspection of this equipment. These instructions must be kept and made available to workers at all times. Any alteration, misuse, or use of this equipment outside the scope of the manufacturer's instructions, may result in serious injury or death.

IMPORTANT

This product is part of a complete fall protection system. This product can be used in conjunction with any Safewaze HLL's offered, or other HLL systems, so long as that system's anchor requirements are below 5,000 lbs. in order to meet the 2 to 1 safety factor on this 8,000 lbs. anchor point. User's must utilize and connect to a Safewaze HLL system with ANSI Z359 compliant restraint or Personal Fall Arrest Systems (PFAS). This product is not designed, nor should be used as a component for a Positioning, Suspension, or Rescue System. A PFAS is typically composed of a Full Body Harness, Anchorage, and a Connecting Device. Connecting Devices used with Safewaze HLL's are Energy Absorbing Lanyards (EAL's) or a Self-Retracting Lifeline (SRL). The connection point to the FBH for use of a Safewaze HLL is the Dorsal D-ring.

A comprehensive Fall Protection Plan must be kept on file and available to all employees at all times. The employer and users of this equipment must be properly trained in the installation, use, inspection, and maintenance of this equipment.

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 this equipment. Failure to heed this warning may result in serious injury or death.

The maximum weight capacity of this equipment is 310 lbs. (including tools and equipment) as specified by ANSI. Certain Safewaze products mentioned in this manual may have maximum weight capacities in excess of 310 lbs. Although certain components of the overall Personal Fall Arrest System may have weight capacities in excess of 310 lbs., use of the I-Beam Base in a Horizontal Lifeline System limits the weight of each user to 310 lbs.

Users of this equipment must read and understand this manual in its entirety prior to use.

Contact Safewaze if you have questions regarding compatibility of this equipment, that are not covered in this manual. Do not alter or misuse this equipment. Some subsystem components could affect the performance and the operation of this equipment. Do not anchor this product to moving machinery, or hazards that have chemical, electrical or gaseous characteristics. Failure to comply with this warning could result in serious injury or death.



Introduction & Scope of Use

Thank you for purchasing a SafeLink I-Beam Post Base. 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.

This manual and any other instructional material must be available to the user of the equipment. The user must understand how to safely and effectively use the SafeLink I-Beam Post Base, and all fall protection equipment used in conjunction with the base.

The SafeLink I-Beam Post Base has been designed for your safety. These bases, when used in conjunction with a Safewaze Horizontal Lifeline System (HLL), are designed to offer users a flexible and easily removable anchor point for steel I-Beams.

Applicable Safety Standards and Regulations

ANSI STANDARDS

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
ANSI	A10.32	Personal Fall Protection use in Construction and Demolition

OSHA REGULATIONS

OSHA	1910.140	Personal Fall Protection Systems
OSHA	1926.502	Fall Protection Systems Criteria and Practices

Worker Classifications



Understand the definitions of those who work in proximity of or may be exposed to fall hazards.

Qualified Person: A person with an accredited degree or certification, and with extensive experience or sufficient professional standing, who is considered proficient in planning and reviewing the conformity of fall protection and rescue systems.

Competent Person: A highly trained and experienced person who is **assigned by the employer** to be responsible for all elements of a fall safety program, including, but not limited to, its regulation, management, and application. A person who is proficient in identifying existing and predictable hazards, and who has the authority to stop work in order to eliminate hazards.

Authorized Person: A person who is assigned by their employer to work around or be subject to potential or existing fall hazards.

It is the responsibility of a Qualified or Competent person to supervise the job site and ensure safety regulations are complied with.



Product Specific Applications

Personal Fall Arrest: SafeLink I-Beam Post Bases, when installed as a component of a Safewaze Horizontal Lifeline System (HLL), are part of a complete Personal Fall Arrest System (PFAS). The structure to which the SafeLink I-Beam Post Base is attached must be capable of withstanding a load of 5,000 lbs. in all directions permitted by the system. The maximum allowable free fall is 6 ft, with the maximum combined length of the fall arrester, lanyard extension, and D-ring being 36 inches.

Connections

COMPATIBILITY OF CONNECTIONS

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. (22.2 kN). Connectors must be compatible with the anchorage or other system components (see Fig. 2). Do not use equipment that is not compatible. Non- compatible connectors may unintentionally disengage (see Fig. 1). Connectors must be compatible in size, shape, and strength. Self-locking snap hooks and carabiners are required by ANSI Z359 and OSHA guidelines. Contact Safewaze if you have any questions about compatibility.



NOTE: SOME SPECIALITY CONNECTORS HAVE ADDITIONAL REQUIREMENTS. CONTACT Safewaze WITH QUESTIONS.



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.

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 are designed to be used only as specified in each product's user's instructions. See Fig. 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.





NOTE: 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 Z359.12 and is equipped with a 3,600 lbs. (16 kN) gate. Check the marking on your snap hook to verify that it is appropriate for your application.

Specifications

Care should be taken to avoid moving machinery, and chemical or electrical hazards during installation of the SafeLink I-Beam Post Base. Contact with such hazards may cause serious injury or death.

Weight capacities defined in this manual for the SafeLink I-Beam Post Base must be adhered to in order to avoid possible failure of the system.

The I-Beam Post Base and any other associated PFAS equipment or subsystems must be removed from service if exposed to Fall Arrest Forces.

Contact Safewaze if using this equipment in a manner, or in combination with other equipment, not specifically defined in this manual.



Avoid sharp or abrasive surfaces.

Electrical hazards must be avoided. Potential Arc Flash from arc welding operations, as well as accidental Arc Flash from electrical equipment, can damage equipment and cause serious injury or death.

Never use combinations of components or subsystems that may affect, or interfere with the safe function of each other.

The SafeLink I-Beam Post Base when used with a Horizontal Lifeline System, must be inspected prior to each use for:

- Wear, damage, and other deterioration.
- All snap hooks and carabiners must be able to self-close and lock.
- Check the operation of self-retracting lifelines by pulling smoothly on the lifeline, then pull sharply on the lifeline to engage the locking mechanism.
- All rope / wire rope must be inspected for tears, cuts, fraying, abrasion, unsplicing, discoloration, corrosion, heat damage, bird caging, burrs, kinks, or other signs of wear and damage.
- Sewn terminations should be secure, complete, and not visibly damaged.
- All rope splices / cable connections should be secure.
- HLL Systems used with the SafeLink I-Beam Base must be properly tensioned per system instructions.
- No load indicators shall be deployed.
- Damaged and other deteriorated and defective components must be immediately removed from service, in accordance with the requirements of OSHA 29 CFR 1910.66 and 1926.502.

SafeLink I-Beam Base Components

Unpackage all components of the SafeLink I-Beam Post Base. Inspect all components to ensure no damage occurred during shipment (See Fig.3).





Installation and Use

SafeLink I-Beam Post Bases are designed to install on horizontal, straight steel I-Beams with no bends. When installed and used with the FS-EX5501-5 Aluminum Post (*Sold Separately*), the SafeLink I-Beam Post Base provides anchor points for a Horizontal Lifeline System at a height of 7ft 4 inches above the working surface.

Before Each Use

Users of personal fall arrest systems must have a rescue plan in place if the user cannot rescue themselves, as well as the means to carry out the rescue.

The user must read and understand these User Instructions, as well as the User Instructions for each component/subsystem of the personal fall arrest system.

The Safelink I-Beam Post Base is available with 2 clamp sizes. They are designed to fit I-Beams from 6"-14" or from 6"-36". The base secures to the top flange of an I-Beam and is designed to fit a maximum flange thickness of 2-1/4". Installation of two SafeLink I-Beam Post Bases with SafeLink Aluminum Posts provides anchorage points for Safewaze Horizontal Lifleline Systems. Some Safewaze Horizontal Lifleline systems allow for intermediate anchorages to be installed along the Horizontal Lifleline span to provide stability and possibly reduce required fall clearances. See HLL instruction Manual(s) for specific installation and use requirements.

All components of the SafeLink I-Beam Post Base must be inspected prior to installation and before each use. During pre-use inspection, all mounting bolts and wingnuts should be re-tightened to ensure proper installation of the base. Additionally, the base must be inspected by a Competent Person on an annual basis. Recording of inspections can be completed on the inspection grid of the I-Beam Base Label. Inspections can also be recorded in the Inspection Log on Page 17 of this manual.

When installing the SafeLink I-Beam Post Base with Safewaze Horizontal Lifelines (HLLs), the user must pay close attention to the instructions provided with each HLL System. Each Safewaze HLL system has unique characteristics in regard to the maximum number of users, required fall clearances, and dynamic sag. Each Safewaze HLL system must be installed per the instructions provided with the system.

If multiple users are connected to the HLL system (See specific HLL instructions for maximum number of user's allowed), the user's must be aware that in the event of a fall by one worker, the other individuals connected to the system could also be pulled off the working surface as the lifeline deflects. It is recommended that each person has an independent HLL system, or shorter span lengths are used to minimize the potential for other worker's falling.

Specific information such as fall clearances, maximum span length, maximum number of users, and other technical data is included in the individual HLL system instruction manuals.



Remove hardware from I-Beam Base with the exception of the mounting bolts. Slide the base onto the top flange of steel I-Beam (Fig. 4 - Step 1). Install the threaded beam clamps through the pre-cut slots in the base (Fig. 4 - Step 2). Tighten the mounting bolts and the beam clamps with a wrench (Fig. 4 - Step 3). Install wing nut onto each clamp, and when hand tight, strike the wing nut with a hammer to secure (Fig. 4 - Steps 4 & 5). Re-install provided Cotter Pins through the pre-drilled holes at the end of each assembly (Fig. 4 - Step 6).





Beam Clamp Sizing Diagram



Specifications Table

Fig. 6

Part #	Minimum Tensile Strength and Material	Maximum User Capacity	Standards and Regulations	I-Beam Base
022-8076 I-Beams 6"-14" Width	8,000 lbs. Minimum Tensile Strength I-Beam Base:	Refer to Safewaze HLL Instruction	OSHA 1926.502 OSHA 1910.140	
022-8077 I-Beams 6"-36" Width	Fasteners: Grade 5	Manuals		



Post Installation

The SafeLink I-Beam Post Base is designed to work with the Safewaze FS-EX5501-5 Aluminum Post (*Sold Separately*). To install the post into the I-Beam Base, slide the bottom of the aluminum post down into the base sleeve until the bottom of the post is resting on the Sleeve Bolts. The Sleeve Bolts are pre-installed into the bottom of the base sleeve (Fig. 7)



HLL System (Single Span)





HLL System (Multi-Span)



Single Point Anchorage

The SafeLink I-Beam Post Base can be used to provide a single point anchorage when used with the Safewaze Whizzler Cap (FS-EX2514 / *Sold Separately*), and the SafeLink Aluminum Post (FS-EX5501-5 / *Sold Separately*). With the SafeLink Aluminum Post installed into an I-Beam Base, remove any existing or previously installed hardware from the top of the post. Slide the Whizzler Cap down onto the top of the post and attach fall protection device to the swivel D-ring at top of cap (Fig. 10 and Fig. 11).





Expected Load Requirements - HLL End Anchorages



Safewaze HLL System	Part Number	Configuration	Α	В
2 Person Kernmantle	019-8001 / 019-8003 019-8002 / 019-8004	1 Worker	2,800 lbs.	1,500 ft-lbs.
HLL		2 Workers	5,400 lbs.	3,000 ft-lbs.
4 Person Double Braid	019-8012 / 019-8014 019-8013 / 019-8015	1 Worker	3,400 lbs.	1,500 ft-lbs.
Rope HLL		2 Workers	5,400 lbs.	3,000 ft-lbs.
2 Person	019-8016 / 019-8018	1 Worker	5,400 lbs.	1,500 ft-lbs.
Cable HLL	019-8017 / 019-8019	2 Workers	6,600 lbs.	3,000 ft-lbs.
4 Person	FS-EX10000	1 Worker	2,000 lbs.	1,500 ft-lbs.
Cable HLL	FS-EX10500	2 Workers	4,000 lbs.	3,000 ft-lbs.

Fig. 14





Inspection and Maintenance

Inspection

Prior to each installation of the SafeLink I-Beam Post Base and other system components, inspect all components for damage or excessive wear that could result in unsafe operation or use of the equipment. All components of a PFAS must be formally inspected by a Qualified Person, other than the user, at least annually. Any component of the PFAS found to be damaged or defective must be replaced. If inspection reveals unsafe or damaged component, use of the system is prohibited until component(s) have been replaced. Inspection results should be documented in the Inspection Log on page 16 of this manual.

- Inspect the I-Beam Base for cracks, corrosion, dents, deformation, or other damage.
- Inspect I-Beam Base bolts and nuts prior to each use and re-tighten as needed.
- Inspect all components of HLL system per the manufacturer's instructions supplied with each component.
- All labels must be present and completely legible.

Frequency

All components of the SafeLink I-Beam Post Base assembly must be inspected prior to each use, and annually by a "competent person" (other than the user), as defined by OSHA.

Criteria

If inspection reveals any defect, inadequate maintenance, or unsafe condition, remove from service until a "qualified person" as defined by OSHA 1926.32(m) can determine the need for authorized repair or disposal.

Maintenance

Any SafeLink I-Beam Post Base components requiring maintenance must be tagged "unusable" and removed from service. Bolts and lock nuts can be replaced if necessary, by the user if replacement is equivalent to those provided during shipment.

Cleaning maintenance may be performed by the user. DO NOT use caustic chemicals that could damage or degrade system components.

Repairs to the product may only be made by the manufacturer or entities authorized in writing by the manufacturer.

THIS SYSTEM MUST ONLY BE SERVICED BY A TRAINED AND COMPETENT INDIVIDUAL! NEVER ATTEMPT TO SERVICE THIS UNIT OR TAMPER WITH ITS FUNCTION IN ANY WAY!

Storage

When not installed, the SafeLink I-Beam Post Base should be stored in a cool, dry place out of direct sunlight. Do not store in areas where damage from environmental factors such as heat, light, excessive moisture, oil, chemicals and their vapors, or other degrading elements may be present. Do not store damaged equipment or equipment in need of maintenance in the same area as product approved for use. Equipment that has been stored for an extended period must be inspected as described in these User Instructions prior to use.



Labeling

Labels



Accessory Equipment







Inspection Log

Date	Damage or Defects	Initials





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