



User Instructions for Connectors

WARNING
This product is part of a personal fall arrest, work positioning, or rescue system. The manufacturer's instructions must be provided to users of this equipment. The user must follow the manufacturer's instructions for each component of the system. The user must read and understand these instructions before using this equipment. Manufacturer's instructions must be followed for proper use and maintenance of this equipment. Alterations to this product, misuse of this product, or failure to follow instructions may result in serious injury or death.

IMPORTANT
Questions regarding the use, care, or suitability of this equipment for your application? Contact Safewaze.

IMPORTANT
Record identification information before using this product. Identification information may be found on the equipment label (see page 11). This information should be recorded in the "Inspection Log" located at the back of this manual (p. 10).

ANSI Z359.12
This manual is intended to meet the manufacturer's instructions as required by ANSI Z359 and should be used as part of an employee training program as required by OSHA.

User Information

Date of First Use: _____
Serial#: _____
Trainer: _____
User: _____

Do not throw away these instructions!

Read and understand these instructions before using equipment!

INTRODUCTION

Thank you for purchasing an Safewaze fall protection connector. 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 read and understand these instructions or have them explained to them before using this equipment. The user must read and follow the manufacturer's instructions for each component or part of the complete system. 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.

APPLICABLE SAFETY STANDARDS

When used according to instructions, connectors included in this manual meet all applicable ANSI Z359.12 standards and OSHA regulations for fall protection. Applicable standards and regulations depend on the type of work being done, and may include state-specific regulations. Refer to local, state, and federal (OSHA) requirements for additional information concerning the governing of occupational safety regarding Personal Fall Arrest Systems (PFAS).

WORKER CLASSIFICATIONS

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

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

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

Authorized Person: "Authorized person" means a person approved or assigned by the employer to perform a specific type of duty or duties or to be at a specific location or locations at the job site.

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

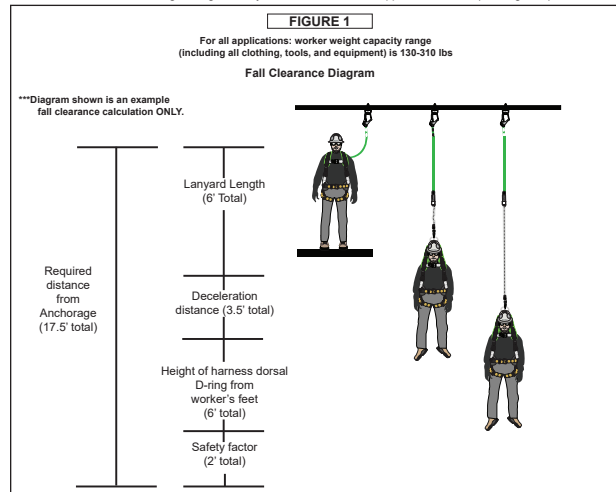
PRODUCT SPECIFIC APPLICATIONS

Purpose: Safewaze connectors are designed to be used as part of a Personal Fall Arrest System (PFAS).

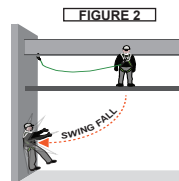
- A competent person shall train users on this equipment in accordance with OSHA and ANSI.
- Never exceed a free fall distance of 6 ft. A free fall of more than 6 ft could cause excessive arrest forces that could result in serious injury or death.
- All Safewaze connectors have a maximum capacity of 420 lbs including any tools, clothing, accessories, etc., unless otherwise rated by Safewaze.
- Anchorages for attachment of Safewaze connectors shall support a minimum of 5,000 lbs or be designed with a safety factor of two by a Qualified Person.
- All Safewaze connectors must IMMEDIATELY be removed from service if subjected to fall arrest forces.
- Safewaze connectors shall be inspected by the end user prior to each usage and by a Competent Person other than the user at least annually. These annual inspections shall be documented.
- Safewaze connectors are designed to be used as anchorage connectors or connectors for fall arrest, restraint, work positioning, suspension, or rescue systems. THEY ARE NOT TO BE USED FOR MATERIAL HANDLING

LIMITATIONS

Fall Clearance: There must be sufficient clearance below the anchorage connector to arrest a fall before the user strikes the ground or an obstruction. When calculating fall clearance, account for a MINIMUM 2' safety factor, deceleration distance, user height, length of lanyard/SRL, and all other applicable factors. (See Figure 1)



Swing Falls: Prior to installation or use, make considerations for eliminating or minimizing all swing fall hazards. Swing falls occur when the anchor is not directly above the location where a fall occurs. Always work as close to in line with the anchor point as possible. Swing falls significantly increase the likelihood of serious injury or death in the event of a fall. (See Figure 2)

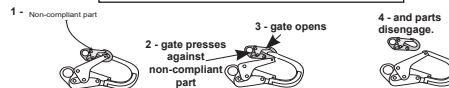


COMPATIBILITY OF CONNECTORS

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 Figure 4). 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 guidelines. Contact Safewaze if you have any questions about compatibility.

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

FIGURE 3 - UNINTENTIONAL DISENGAGEMENT



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

COMPATIBILITY

Safewaze connectors must be connected to a compatible connection (i.e. compatible D-ring). Failure to do so could cause disengagement (roll-out), or damage to the connector. Self locking connectors reduce, but cannot eliminate, the possibility of roll-out.

CAPACITY

Safewaze connectors are designed for use by persons with a combined weight weight (person, clothing, tools, etc.) of no more than 420 lbs. Only one personal protective system may be connected to the connectors/anchorage connectors at any time.

CONNECTION

Snap Hooks: Safewaze Snap Hooks/Rebar Hooks are self closing/self locking connectors. The snap hooks provide an eye for permanent attachment of a lifeline or lanyard.

Carabiners: Safewaze self locking Carabiners are self closing/self locking connectors. Some versions include a pin that may be used to retain or isolate a connected lanyard or lifeline.

Personal fall arrest systems used with Safewaze connectors must be rigged/installed in such a manner as to limit free fall as per ANSI / OSHA requirements.

MAKING CONNECTIONS

Safewaze Snap hooks and carabiners are self closing/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.

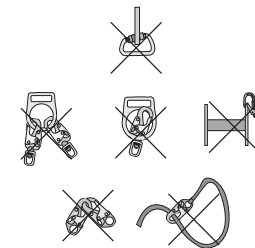
Safewaze connectors (snap hooks and carabiners) are designed to be used only as specified in each product's user's instructions. See figure 4 for examples of inappropriate connections. Do not connect snap hooks and carabiners:

- 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). NOTE: Large snap hooks must not be connected to objects which will result in a load on the gate if the hook twists or rotates.

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 Z359.1-2007 or ANSI Z359.12 and is equipped with a 3,600 lb (16 kN) gate. Safewaze Connectors are tested to Z359.12 specifications and meet the requirements regarding gate ratings of 3,600 lbs. to include side load testing. Check the marking on your snap hook to verify that it is appropriate for your application.

- 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 (see section 4.5).
- To any object which is shaped or sized in a way that the snap hook or carabiner will not close and lock, or that roll-out could occur.
- In a manner that does not allow the connector to align properly while under load.

FIGURE 4 - INAPPROPRIATE CONNECTIONS



PHYSICAL AND ENVIRONMENTAL HAZARDS

Use of Safewaze connectors in areas with physical or environmental hazards may require additional precautions to reduce the possibility of injury to the user or damage to the equipment. These hazards may include, (not limited to): heat, severe cold, chemicals, corrosive environments, high voltage, power lines, gases, moving machinery, and sharp edges.

CORROSION

Use of Safewaze connectors near seawater or other corrosive environments will require DAILY cleaning in order to ensure corrosion damage is not affecting the performance of the connector.

CHEMICAL HAZARDS

Use of Safewaze connectors in the vicinity of solutions containing acid or caustic chemicals, especially at elevated temperatures, may cause damage to connectors. Increased cleaning and inspection of connectors is recommended.

ELECTRICAL HAZARDS

Do not install Safewaze connectors where they, or the user, may come into contact with electrical power lines.

TRAINING

Safewaze connectors are intended to be installed and used by persons who have been properly trained (as per ANSI / OSHA) in their correct application and use.

OPERATION AND USE

WARNING: Do not alter or intentionally misuse this equipment. Some subsystems and component combinations may interfere with the operation of this equipment.

WARNING: Consult with your doctor prior to use of this equipment if there is reason to doubt your fitness to safely absorb fall arrest forces in the event of a fall.

CONNECTOR APPLICATIONS



Personal Fall Arrest: Safewaze connectors approved for Personal Fall Arrest applications as part of a Personal Fall Arrest System (PFAS). The structure to which the connector is attached must withstand loads applied in the directions permitted by the system of at least 5,000 lbs. Maximum allowable free fall is 6'. For Fall Arrest applications, the only allowable attachment point to harness for Safewaze connectors is the Dorsal D-ring.



Restraint: Safewaze connectors are authorized for use in Restraint applications. The structure to which the connector is attached must withstand loads applied in the directions permitted by the system of at least 1,000 lbs. **NO** free fall is permitted. Restraint systems may only be used on surfaces with slopes up to 4 / 12 (vertical / horizontal). For Restraint applications, the allowable attachment points to harness are Dorsal D-ring, Chest D-ring, Side D-rings, and Shoulder D-rings.



Work Positioning: Safewaze connectors are authorized for use in Work Positioning applications. Work Positioning allows a worker to be supported during suspension while freeing both hands to conduct work operations. The structure to which the connector is attached must withstand loads applied in the directions permitted by the system of at least 3,000 lbs. Maximum allowable free fall is 2'. For positioning applications, the allowable attachment points to harness are the Side D-rings.



Rescue/Confined Space: Safewaze connectors are authorized for use in Rescue/Confined Space applications. Rescue systems are utilized to safely recover a worker from a confined location or after exposure to a fall. Composition of rescue systems can vary based upon the type of rescue involved. The structure to which a connector is attached must withstand loads applied in the directions permitted by the system of at least 3,000 lbs. **NO** free fall is permitted. For rescue applications, the allowable attachment points to harness are Dorsal D-ring, Chest D-ring and Shoulder D-rings.

Steel Carabiner Example

Aluminum Carabiner Example

Steel Rebar Hook Example

Steel Snap Hook Example



BEFORE EACH USE of this equipment, carefully inspect it to assure it is in good working condition. Check for worn or damaged parts. Inspect for sharp edges, burrs, cracks, distortion, or corrosion. Gates must close and lock. Inspect other fall arrest or restraint equipment according to manufacturers instructions. Do not use if inspection reveals an unsafe condition.

PLAN your fall arrest system before starting your work. Consider all factors affectin your safety during use.

BEFORE EACH USE of this equipment, carefully inspect it to assure it is in good working condition. Check for worn or damaged parts. Inspect for sharp edges, burrs, cracks, distortion, or corrosion. Gates must close and lock. Inspect other fall arrest or restraint equipment according to manufacturers instructions. Do not use if inspection reveals an unsafe condition.

SHARP EDGES

Avoid working where the connecting subsystem or other system components may come in contact with unprotected sharp or abrasive edges. If working near sharp edges is unavoidable, protection against cutting must be used.

RESCUE

When using this equipment, a rescue plan must be in place as well as a means to implement it and communicate that plan to users, authorized persons, and rescuers.

AFTER A FALL

Any equipment which has been subjected to the forces of arresting a fall must be removed from service immediately and destroyed.

RETAINING PIN INSTALLATION

Some Safewaze connectors are supplied with a pin, that when installed provides a captive eye for connection of a lanyard, lifeline, or similar component. To install the roll pin, drive the pin into the pre-drilled hole in the back bar of the carabiner using a punch. The open side of the roll pin should be facing away from the lanyard or lifeline material. Continue driving the pin through the back bar and into the front bar until pin is flush on the outside of the back bar.

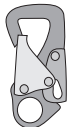


WARNING: Follow the manufacturer's instructions for associated equipment (full body harness, lanyard, lifeline etc.) used in your personal all arrest system.

OPERATION

SNAP HOOK OPERATION

To connect the snap hook to the connection point, depress the locking mechanism with index finger or pull back gate with thumb



CARABINER OPERATION

To connect the carabiner to the connection point, rotate the gate clockwise and push to the center of the carabiner. Some Safewaze carabiners have a triple locking mechanism and must be pulled up before rotating the gate in a clockwise motion. When positioned around an anchorage point, release the gate to close and lock the carabiner.

TRAINING

It is the responsibility of the users of this equipment to understand these instructions and to be trained in the correct installation, use, and maintenance of this equipment (as per ANSI, OSHA, and applicable state, provincial and federal requirements.) This user manual is not a substitute for a comprehensive training program. Training must be provided on a periodic basis (as per ANSI, OSHA, and applicable state, provincial and federal requirements) to ensure proficiency of the users.

INSPECTION

FREQUENCY:

- Before each use, visually inspect according to the steps listed below.
- The Safewaze connector must be inspected by a competent person (as defined by ANSI, OSHA, guidelines), other than the user, at least annually. Record results of each formal inspection in the inspection log at the back of this manual.

IMPORTANT: If this equipment has been subjected to a fall arrest or impact forces, it must be immediately removed from service and destroyed.

INSPECTION STEPS:

STEP 1: Inspect the Safewaze connector for damage. Pay particular attention for cracks, sharp edges, burrs, dents, or deformities. Check for bending or distortion.

STEP 2: Inspect the Safewaze connector for excessive corrosion. The gate and lock should operate smoothly, with no difficulty. Gates must fully close and engage nose of hook/carabiner.

STEP 3: Inspect markings. Markings should be present and fully legible.

STEP 4: Inspect each system component or subsystem according to manufacturer's instructions.

STEP 5: Record the inspection date and results in the inspection log.

*** If the inspection reveals a defective condition, remove the unit from service and destroy.

MAINTENANCE & SERVICING

If gate operation is sluggish, apply small amount of WD-40 or similar moisture repellent lubricating agent to the hinge end of the carabiner / hook gate **ONLY**. Remove excess with a clean, dry cloth. If carabiner / hook still does not function properly, remove from service and destroy.

WARRANTY

Safewaze warrants its products are free from defects in materials and construction under normal use and service. Liability is not accepted for abuse, modification, improper use, destructive activity and contaminated exposure.

INSPECTION LOG

Date	Inspection Items Noted	Corrective Action	Initials



SAFEWAZE

Safewaze
 225 Wilshire Ave SW
 Concord, NC 28025

 PHONE: 800-230-0319
 FAX: 704-262-9051
 EMAIL: info@safewaze.com
 Web: safewaze.com

