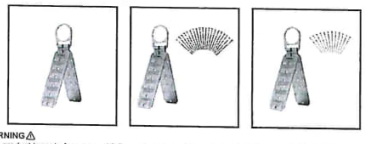
Reusable Roof Anchor Instruction Manual

SAFEWAZE

FS870 / FS870N / FS870S
Reusable Roof Anchor



WARNING⚠
This product is part of a personal fall arrest, work positioning, suspension 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. This information should be recorded in the "Inspection Log" located at the back of this manual

OSHA 1926.502(d)(15) - Anchorages for fall protection shall be capable of supporting at least 5,000 pounds (22.2 kN) per employee attached, or shall be designed, installed, and used as part of a complete personal fall arrest system which maintains a safety factor of at least two and is under the supervision of a qualified person.

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 a Safewaze Anchorage 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 understand how to safely and effectively use these anchors, and all fall protection equipment used in conjuction with the anchor.

APPLICABLE SAFETY STANDARDS
When used according to instructions, SafeWaze Anchors meet all applicable ANSI Z359.1 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 Person" 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.

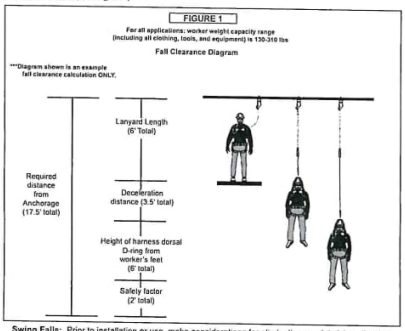
It is the responsibility of a Qualified or Competent person to supervise the job site and ensure safety regulations are complied with.

PRODUCT SPECIFIC APPLICATIONS
Purpose: Safewaze Anchors 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.
- Safewaze Anchors have a maximum capacity of ANSI 310 lbs / OSHA 420 lbs including any tools, clothing, accessories, etc..., unless otherwise rated by Safewaze.
- Structures for attachment of Safewaze Anchors shall support a minimum 5,000 lbs or be designed with a safety factor of two by a Qualified Person.
- All Safewaze anchors must IMMEDIATELY be removed from service if subjected to fall arrest forces.
- Safewaze anchors shall be inspected by the end user prior to each usage and by a Competent Person other than the user at least annually. These inspections shall be documented.

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)

FIGURE 1
For all applications: worker weight capacity range (including all clothing, tools, and equipment) is 130-310 lbs
Fall Clearance Diagram



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)

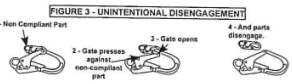
FIGURE 2



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 SPECIALITY 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.

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.

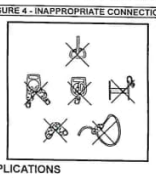
Safewaze connectors (snap hooks and carabiners) are designed to be used only as specified in each product's user's instructions. See figure 4 for examples of inappropriate connections. Do not connect snap hooks and carabiners:

- 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. Snap hooks marked with ANSI Z359.12 and are equipped with a 3,600 lb (16 kN) gate. Check the marking on your snap hook to verify its compatibility.

⚠ **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 lb (16 kN) gate. 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.
- 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



SPECIFIC ANCHOR APPLICATIONS


Personal Fall Arrest: Safewaze Anchors are designed as an anchor point to support a maximum of 1 Personal Fall Arrest System (PFAS) when utilized for fall protection applications. The structure to which the anchor 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'.



Restraint: Safewaze Anchors are authorized for use in Restraint applications. The structure to which the anchor 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 Anchors 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 Anchor 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 Anchors 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 the Anchor 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.

All above referenced applications have a worker weight capacity range of ANSI 310 lbs / OSHA Up to 420 lbs (including all clothing, tools, and equipment).



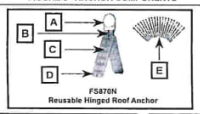
FS870
Reusable Hinged Roof Anchor

The FS870 version of the Reusable Roof Anchor does not include fasteners. The FS870 can be installed on both wooden and steel roofs. The required fasteners and installation instructions for both types of substrates are indicated in Figures 5 -10 of this manual. Fasteners used for installation must be the same or equivalent to those indicated in these instructions.

225 Wilshire Ave SW, Concord NC, 28025 Phone: 800-230-0319 Fax: 704-262-9051 Email: info@safewaze.com Web: safewaze.com

FS870N ANCHOR COMPONENTS

FIGURE 5 - ANCHOR COMPONENTS



FS870N
Reusable Hinged Roof Anchor

Anchor Components	
A	Fall Protection Connection Point
B	Hinge
C	Pre-drilled Fastener Holes
D	Anchor Leg
E	(20) 16d Steel Nails

Replacement Components



021-4065

INSTALLATION

1. The FS870N is installed over and into a roof truss at the peak, or in the field of the roof (See Figure 6, Dwg. 1 and Dwg. 3).
2. The work location should be free of debris, and other materials or equipment that could interfere with the proper installation or operation of this equipment.
3. Inspect the subsirate to which the anchor will be attached. User should inspect for the following hazards. These hazards include, but are not limited to: rot, cracks, severe weathering, soft or deleriorated areas in the sheathing, or damage from severe weather.
4. Installation of the FS870N requires that fasteners penetrate both the substrate and the truss. Substrate must be a minimum of 3/4" CDX plywood. Fasteners must go through the sheathing and penetrate the truss at least 1-1/2". Do not install or use the FS870N on either the truss or sheathing independently. Installation must capture both the sheathing and truss. The FS870N must be installed a minimum of 5' from any edge. NOTE: If the wood sheathing is of a thickness of 1-1/2" or greater, then the FS870N can be installed into the sheathing only. ALL holes must be used.
5. To install with nails, position the anchor over previously secured roof sheathing (do not attach directly the rafter or truss member). The roof anchor must be placed with the center holes lined up directly over a framing member. Drive the nails through the center holes on both plates through the sheathing and directly into framing member. To complete installation, additional nails must be installed in the outer holes of each leg. Refer to Figure 7 which indicates all required holes filled to complete anchor installation.
6. Ensure all required holes are filled and nails are fully installed. Installation on a wooden structure restricts the users allowable work zone in relation to the anchor's location. Figure 8 indicates the allowable load conditions for the FS870N. DO NOT attach a lifeline between two or more FS870N anchors (i.e, Horizontal Lifeline System).
7. PFAS connecting device can now be connected to the FS870N.

FIGURE 6 - INSTALLATION (WOOD)

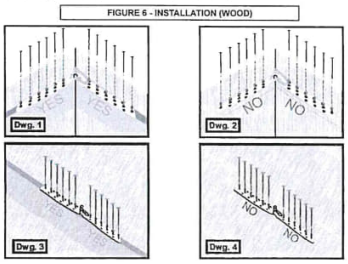


FIGURE 7 - NAIL INSTALLATION DIAGRAM

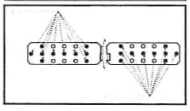
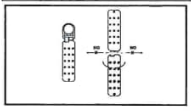
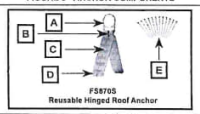


FIGURE 8 - ALLOWABLE LOAD CONDITIONS



FS870S ANCHOR COMPONENTS

FIGURE 9 - ANCHOR COMPONENTS



FS870S
Reusable Hinged Roof Anchor

Anchor Components	
A	Fall Protection Connection Point
B	Hinge
C	Pre-drilled Fastener Holes
D	Anchor Leg
E	(12) 2-1/2" Sheet Metal Screws

Replacement Components

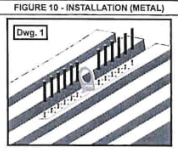


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PARALLEL INSTALLATION

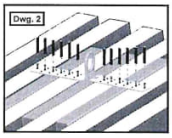
1. The FS870S can be installed in a parallel or perpendicular orientation to a metal roof/decking.
2. The work location should be free of debris, and other materials or equipment that could interfere with the proper installation or operation of this equipment. User must ensure minimum substrate requirements are met. Minimum 22 gauge metal roofing/decking over minimum 16 gauge Z-purlin.
3. Inspect the steel to which the anchor will be attached. User should inspect for the following hazards. These hazards include, but are not limited to, excessive corrosion, cracks, severe rust, excessive paint, or degradation due to intense heat or chemical exposure.
4. When installing the FS870S in a parallel configuration, the anchor must be installed to the crown of the metal roof/decking. The FS870S MUST NOT be installed into the trough of the metal roof/decking. The FS870S must be installed a minimum of 5' from any edge.
5. Install the (12) 2-1/2" Sheet Metal Screws in the center row of pre-drilled holes on each leg of the anchor (6 screws per leg / See Figure 10, Dwg. 1).
6. The sheet metal screws must penetrate both the metal sheeting AND the purlin. Never install or use anchor attached to the sheeting only, or to the purlin only. DO NOT attach a lifeline between two or more FS870S anchors (i.e., Horizontal Lifeline System).
7. PFAS connecting device can now be connected to the FS870S.
8. When installed in this configuration, the FS870S can sustain loads in all directions.

FIGURE 10 - INSTALLATION (METAL)



PERPENDICULAR INSTALLATION

1. Follow Steps 1 through 3 as indicated in Parallel installation.
2. When installing the FS870S in a perpendicular configuration, the anchor must be installed to the crown of the metal roof/decking. Wood support members must also be used. The support members are placed in the trough(s) of the roof/decking. Place the FS870S perpendicularly across the crown(s) of the decking and across wood support members (See Figure 10, Dwg. 2). The FS870S must be installed a minimum of 5' from any edge.
3. Install the (12) 2-1/2" Sheet Metal Screws in the center row of pre-drilled holes on each leg of the anchor (6 screws per leg / See Figure 10, Dwg. 2). Anchor should be placed to ensure the screws penirate both the metal sheeting AND the purlin, or are installed into the wood support members (See Figure 10, Dwg 2). DO NOT attach a lifeline between two or more FS870S anchors (i.e.
4. PFAS connecting device can now be connected to the FS870S.
5. When installed in this configuration, the FS870S can sustain loads in all directions.



⚠ WARNING ⚠

- Users should consult with their doctor to verify ability to safely absorb the forces of a fall arrest event. Fitness level, age, and other health conditions can greatly affect an individuals ability to withstand fall arrest forces. Women who are pregnant, individuals considered minors must not use any Safewaze equipment.
- Never alter any part of an anchor or add/remove components. Safewaze shall not be held responsible for injury or death due to tampering.
- Anchors that are exposed to fall arrest forces MUST be IMMEDIATELY removed from service and destroyed.
- Failure to follow these instructions and warnings could result in serious injury or death in the event of a fall.
- A preplanned rescue procedure in the event of a fall is required. The rescue plan must be specific to the project. The rescue plan must allow for employees to rescue themselves, or to be promptly rescued by alternative means.
- Harnesses or connectors selected for use with any Safewaze anchor must be compatible in size and configuration. User must ensure compatibility of snap hooks, carabiners and other connectors. Any connection which could allow disengagement must be eliminated. Snap hooks and carabiners must be self locking and self closing and must never be hooked to each other.
- A Competent Person must conduct an analysis of the workplace and anticipate where workers will be conducting their duties, the route they will take to reach their work, and the existing and potential fall hazards they may be exposed to. The Competent Person must choose the fall protection equipment to be utilized.
- Do not misuse equipment.
- Equipment designated for fall protection must never be used to lift, hang, support or hoist tools or equipment unless specifically certified for such use.

INSPECTION

- Safewaze Anchors shall be inspected prior to each use by the user, and at least annually by a Competent Person other than the user. Annual inspections shall be documented. Severity of conditions during use may necessitate increased frequency of documented inspections.
- Anchors that fail inspection MUST be removed from service.
- Prior to each use, inspect the anchor for deficiencies or damage, including, but not limited to, sharp edges, rough edges, deformations, corrosion, pits, burrs, chemical exposure, extreme heat exposure, kinked, bird nested, or otherwise damaged cable, and damaged, missing or illegible labels. If any deficiencies or defects are found, the anchor must IMMEDIATELY be removed from service.
- The anchor must be inspected at least annually by a Competent Person other than the user. Competent person inspections must be recorded in the inspection log included in this manual and on the inspection grid label on the anchor.

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.

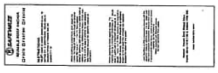
MAINTENANCE & STORAGE

Anchor can be cleaned with water and mild soap if necessary. User should remove all dirt, possible corrosives, and contaminants from the anchor prior to, and after each use. Never use any type of corrosive substance to clean the anchor.

Excess water should be blown out with compressed air. Hardware can be wiped off with a clean, dry cloth.

When not in use, store the anchor in a cool dry area where it will not be exposed to extreme light, extreme heat, excessive moisture, or possibly corrosive chemicals or materials.

LABELS



INSPECTION LOG

Date	Inspection Items Noted	Corrective Action	Initials

225 Wilshire Ave SW, Concord NC, 28025 Phone: 800-230-0319 Fax: 704-262-9051 Email: info@safewaze.com Web: safewaze.com

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