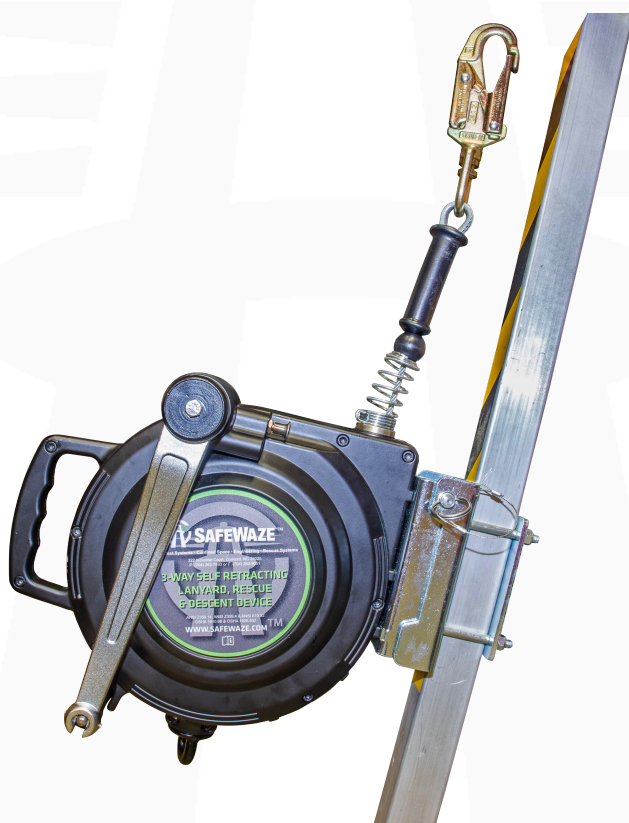




3-Way System for Confined Space Operations



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 initial usage of product on Page 2, and Page 15. Competent Person inspections are required to be documented in the Inspection Log Table on Page 15.

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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 the SafeWaze 3-Way System for Confined Space Operations. 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 3-Way Confined Space System, and all fall protection equipment used in conjunction with this system.

The 3-Way System is designed primarily for workers entering and working in confined space environments. OSHA defines confined space as any space with limited openings for entry and exit, is large enough for a worker to enter bodily and perform work, and is not designed for continuous worker occupancy.

Confined spaces include but are not limited to, utility manholes, silos, underground utility vaults, storage containers, pits, and pipelines.

The 019-11000 Confined Space Tripod serves as the support element for entry/egress into confined spaces, and also the rescue/evacuation of workers if necessary. It can also provide anchorage for fall protection, work positioning, and personnel riding systems.

APPLICABLE SAFETY STANDARDS

When used according to instructions, this product meets or exceeds all applicable OSHA 1926.502 OSHA 1910.146, OSHA 1926.21, ANSI Z359.1-2007, ANSI Z117.1-2009 ANSI A10.32-2012 standards for fall protection. Applicable standards and regulations depend on the type of work being done, and also might 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: 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

Rescue / Confined Space: The 3-Way System may be used in both Confined Space and Rescue applications. Rescue systems function to safely remove a worker from a confined space environment or after exposed to a fall. There are various configurations of rescue systems depending on the type of rescue required. Structure must withstand loads applied in the directions permitted by the system of at least 3,000 lbs. No free fall is permitted. Applicable D-rings are dorsal, chest, and shoulder.

Limitations

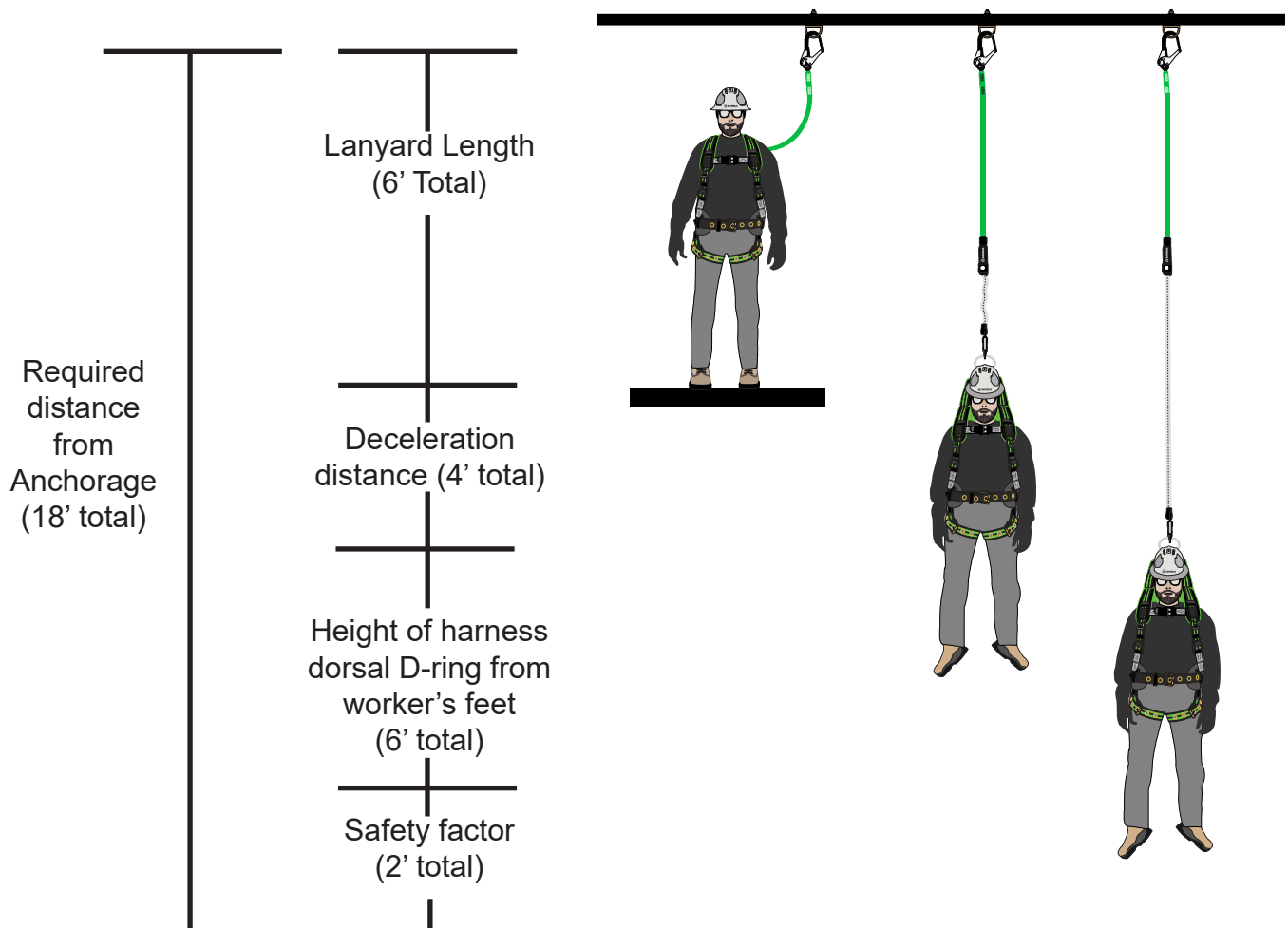
Fall Clearance: There must be sufficient clearance below the anchorage connector to arrest a fall before the user strikes the ground or an obstruction. When calculating fall clearance, account for a MINIMUM 2' safety factor, deceleration distance, user height, length of lanyard/SRL, and all other applicable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

FIGURE 1

Fall Clearance Diagram

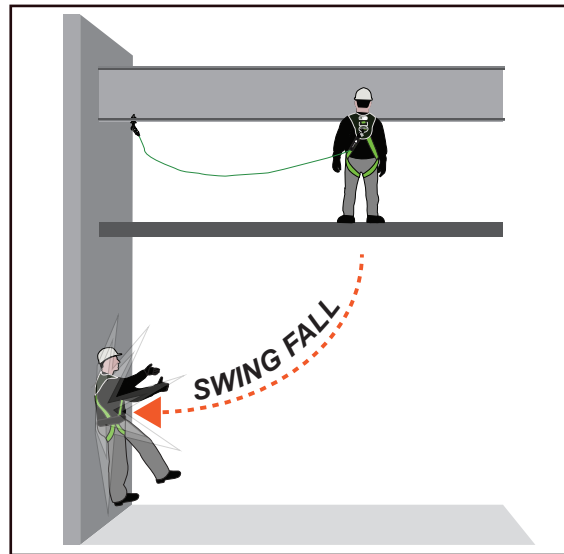
***Diagram shown is an example fall clearance calculation ONLY.

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



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 even of a fall. (See Figure 2)

FIGURE 2



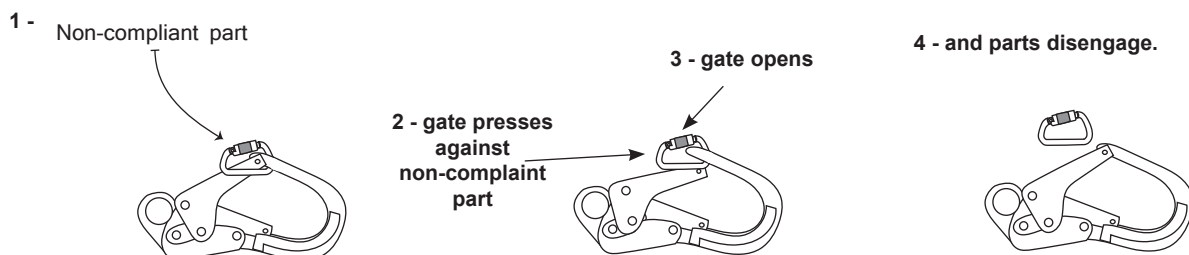
COMPATIBILITY OF CONNECTORS

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.

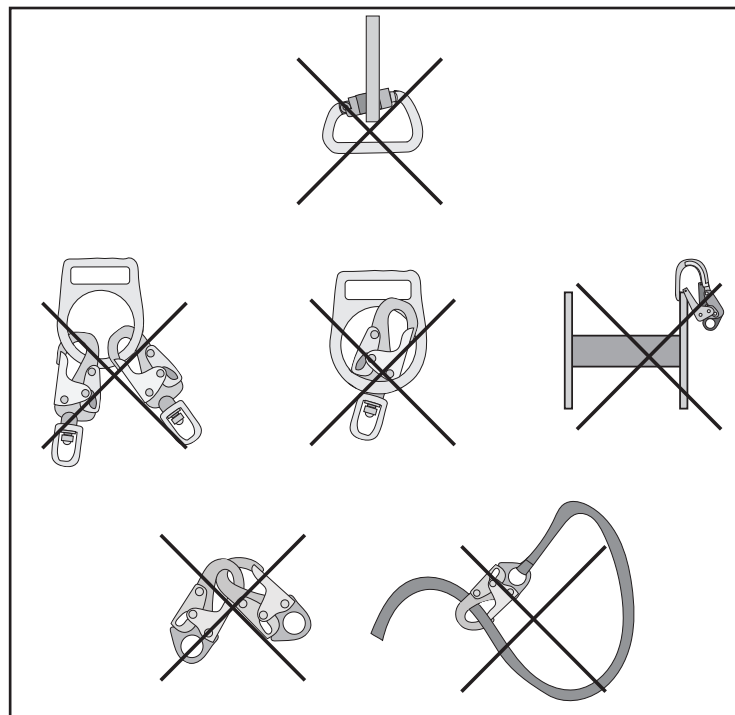
MAKING CONNECTIONS

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, unless the snap hook complies with ANSI Z359.1-2007 or ANSI Z359.12 and is equipped with a 3,600 lb (16 kN) gate. Check the marking on your snap hook to verify its compatibility.
- 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



Components and Specifications

3-way System Part Numbers and Descriptions

019-11005

65' 3-way System
with Universal Mount



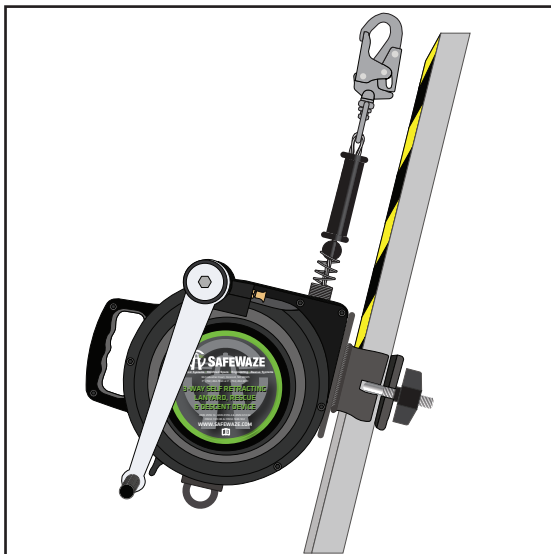
019-11015

120' 3-way System
with Universal Mount



019-11006

65' 3-Way System
with Quick Connect Mount



019-11016

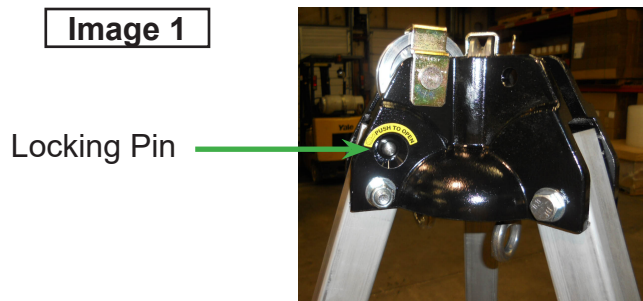
120' 3-Way System
with Quick Connect Mount



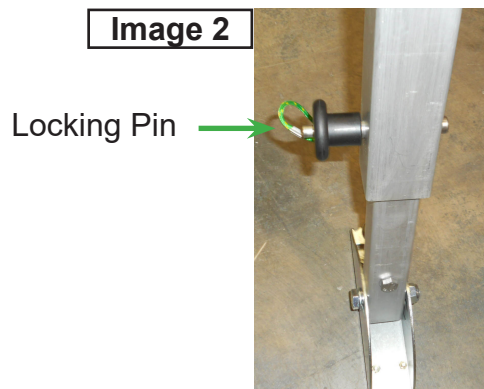
Installation and Use

Step 1: Remove tripod from tripod storage/carrying bag.

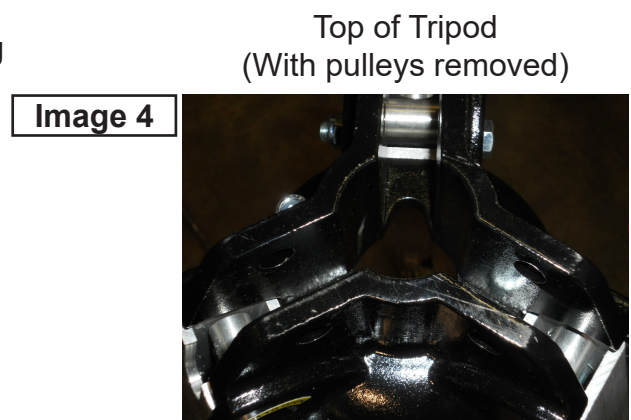
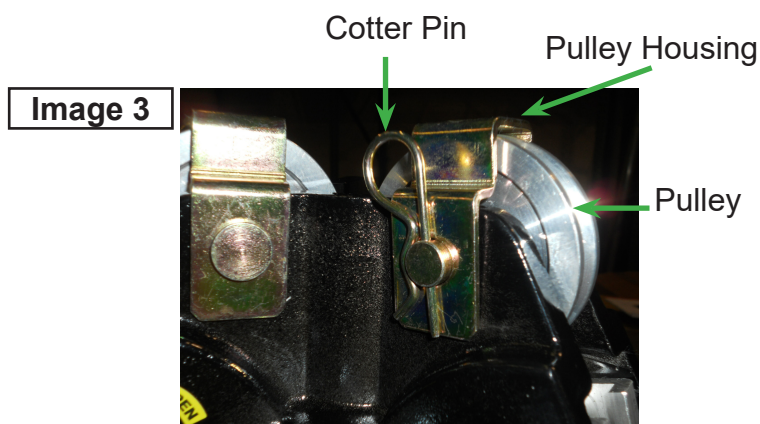
Step 2: Tripod must be mounted on a stable level surface for each leg, when positioned over opening with a Maximum Installation Diameter of 44 inches. Lift tripod to upright position. Press locking pin above each leg in the tripod head and pull leg away from center point until locking pin locks into place. Repeat with the remaining legs. (See Image 1)



Step 3: Remove Locking Pins above foot of tripod legs and extend legs to desired height. Re-insert locking pin at desired height, (See Image 2) and connect safety chains to bottom of tripod legs. Remove excess slack in the safety chain by adjusting the position of the twist link.



Step 4: This step describes actions to be taken if attaching / installing a Safewaze 3-Way Retractable, Material Winch, or Personnel Winch onto the tripod via mounting to one of the tripod legs. This step must be performed in order to ensure proper routing of component cables through the top of the tripod. Remove Cotter Pins, Pulley Housing, and pulleys from the top of tripod. (See Image 3 & 4)



Step 5: Installation of 3-Way with Universal Bracket

Install the 3-Way onto the tripod by placing the 3-Way onto the pre-installed fixture plate of the tripod. Seat the hook of the 3-Way bracket plate onto the cross bar of the tripod bracket. (See Images 5 & 6)

Image 5

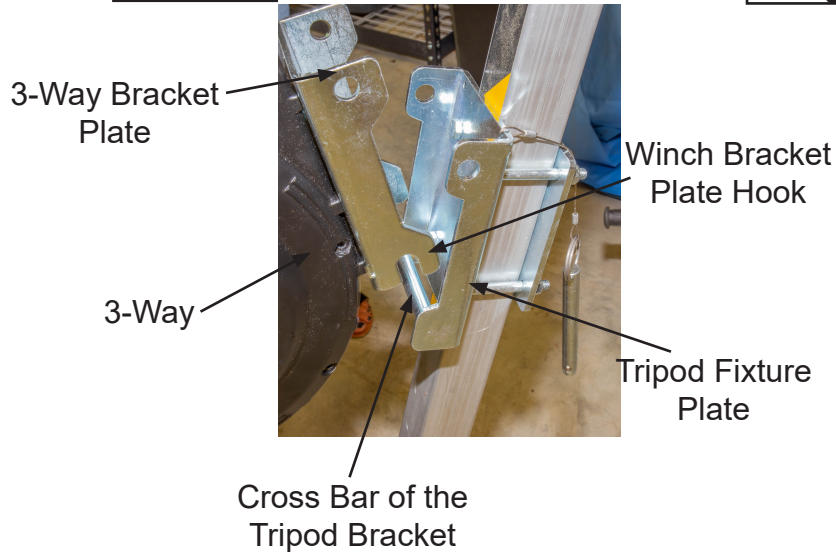
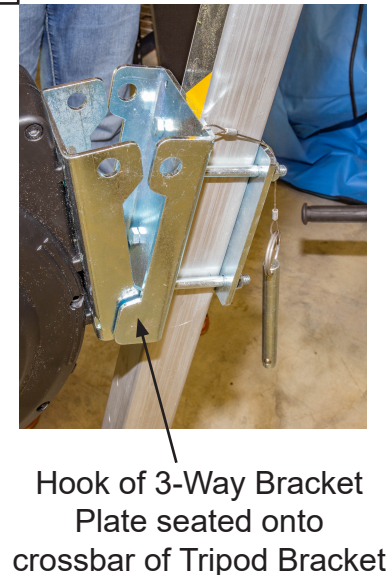


Image 6



Step 6: Rotate the 3-Way assembly forward to allow for installation of the locking pin into the pre-drilled holes in the 3-Way bracket plate and the tripod bracket. (See Images 7 & 8)

Image 7

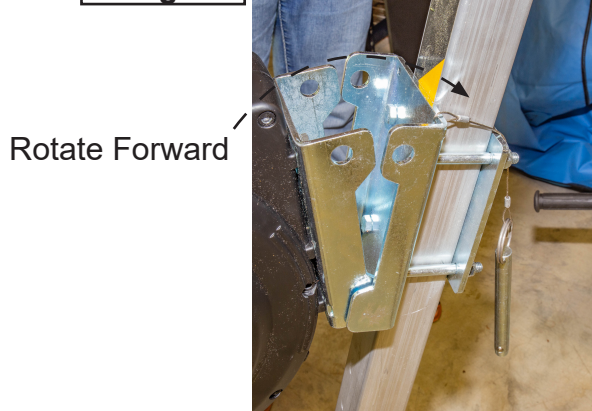
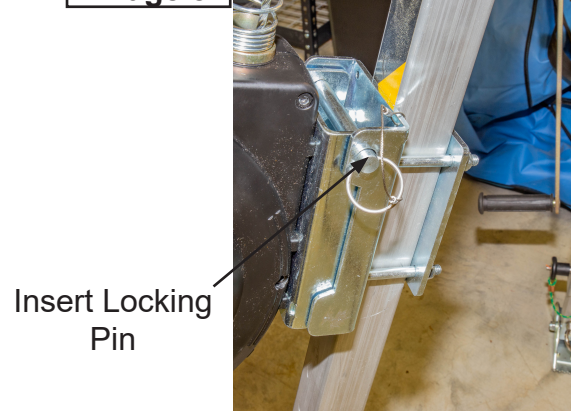
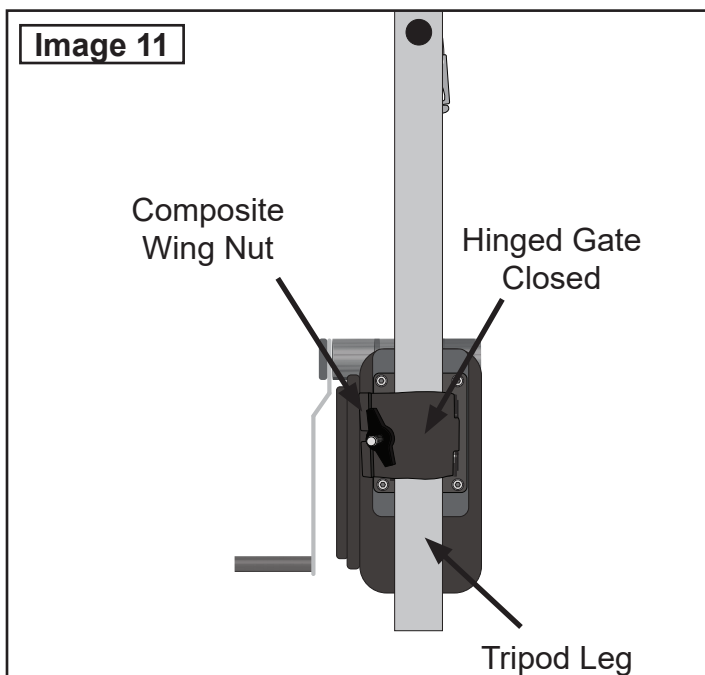
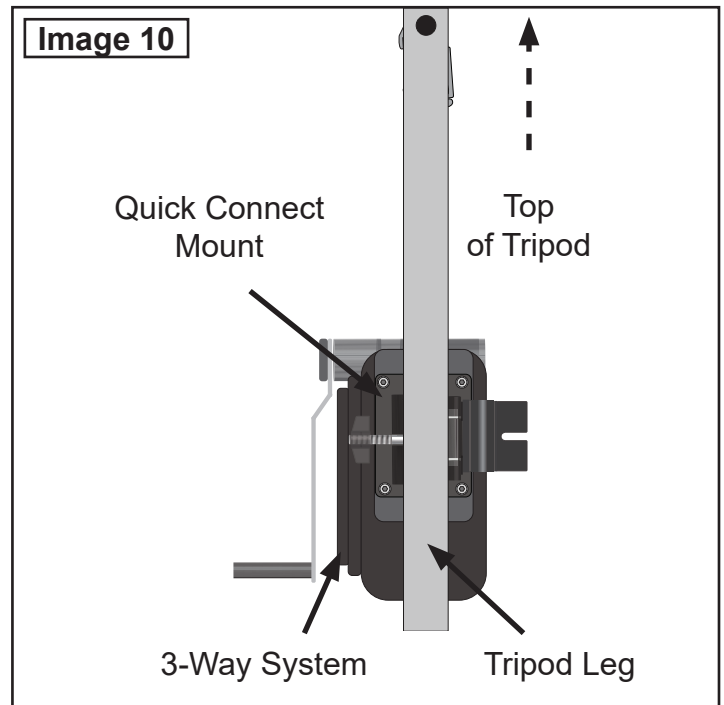
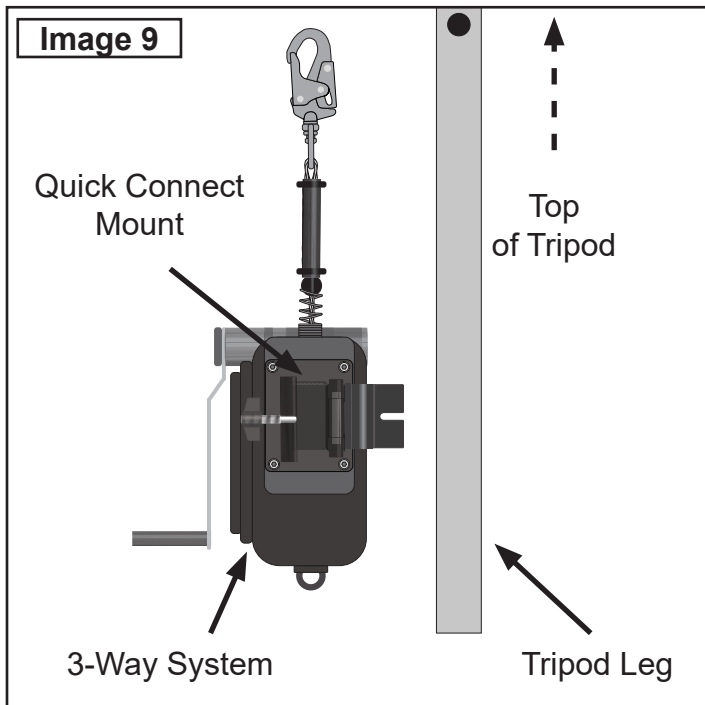


Image 8



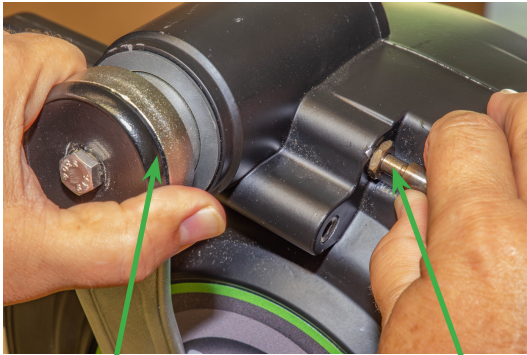
Step 7: Installation of 3-Way with Quick Connect Mount

If installing the 3-Way System with the Quick Connect Mount, align the 3-Way with one of the tripod legs. The cable and snap hook should be facing towards the top of the Tripod. (See Image 9) With the Quick Connect Mount opened, place the 3-way onto the outside of the chosen tripod leg, with the tripod leg seated in the channel of the Quick Connect Mount. (See Image 10) Swing the Quick Connect Mount hinged gate shut to enclose the tripod leg within the mount. Slide the tensioning bolt into the pre-cut slot in the hinged gate, and tighten the mount to the tripod using the composite wing nut. Tighten as tight as possible by hand. Do not use a tool to tighten further. (See Image 11) Image 12 represents the 3-Way fully installed onto the outside of the tripod leg.



Step 8: Extend cable and route through top of tripod. To extend the cable from the unit, pull the function switch button out, and then pull the crank handle base outward from the 3-Way Housing. (See Image 13a) This places the 3-way unit into it's Self Retracting Device configuration. Pull out the required amount of cable to drop through the head assembly of the tripod. Pulling out once again on the function switch and pushing the base of the crank handle assembly inward places the unit into Rescue/Recovery mode.(See Image 13b) Drape the cable over the top of the tripod and slide the snap hook down through the opening in the top of the tripod where the pulley (previously removed in Step 4) is normally seated. (See Image 14)

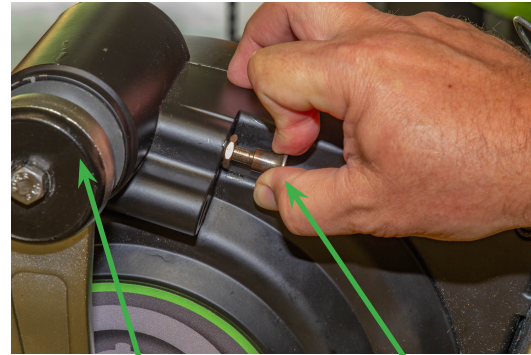
Image 13a



Pull out on base of
crank handle assembly

Pull out on function
switch button

Image 13b



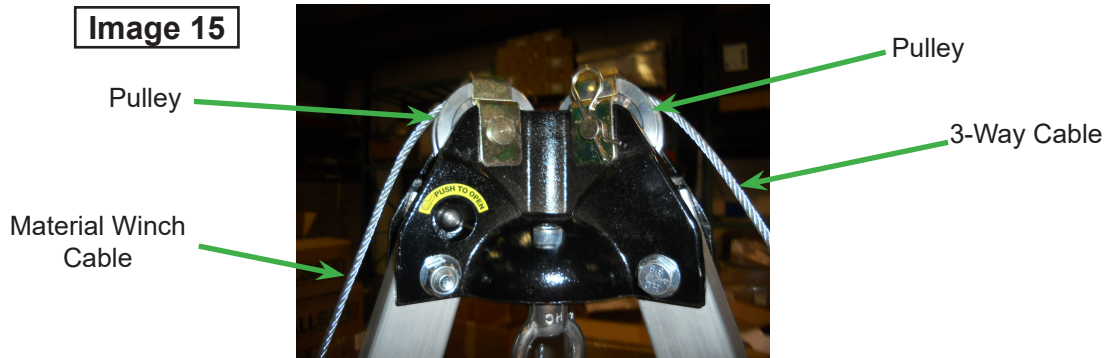
Push in on base of
crank handle assembly

Pull out on function
switch button

Image 14



Step 9: Re-install the Pulleys, Pulley Housings, and Cotter Pins in the top of the Tripod ensuring the 3-Way cable is routed over, and properly seated on the pulley. (See Image 15)



3-Way and Tripod Now Ready for Use



Operation

019-11005, 019-11015, 019-11006, 019-11016 (3-Way unit)

The Safewaze 3-Way System allows for raising and lowering a person up to 310 lbs (140.61 kg) into, or out of, a confined space environment or similar working situation. The 3-Way can also be used as a Self-Retracting Device. When being utilized as a Self Retracting Device, the snap hook must be attached to the dorsal D-ring of a full body harness. When being utilized for recovery operations, the snap hook can be attached to either the dorsal D-ring of a full body harness, or the front rescue D-ring of a full body harness if so equipped.

To operate the SafeWaze 3-Way System the crank handle grip should be extended. Grasp the crank handle and crank handle grip simultaneously. Pull the crank handle grip outward from the handle and rotate the handle grip until it extends outward and away from the 3-way housing. (See images 16-18) The crank handle assembly of the unit determines which function is to be employed by either pulling the handle outward from the body of the unit or pushing it into the body. The Crank Handle Assembly position is changed by pulling out on the function switch button and either pushing in or pulling out on the crank handle assembly. The handle assembly pushed into the body of the unit places the unit in recovery mode, (See Image 19) whereas pulling the handle assembly out from the unit places it into Self Retracting Device mode. (See Image 20)

Image 16



Pull Out on Crank Handle Grip

Image 17



Rotate Crank Handle Grip

Image 18



Crank Handle Grip in Extended Configuration

With the handle pushed in, the unit functions in recovery mode. By turning the crank handle clockwise, the cable is lowered. Turning the crank handle counterclockwise will raise the individual up. When the crank handle is pulled out from the unit, it functions as a Self Retracting Device.

Image 19



Crank Handle assembly pushed in in Rescue/Recovery Configuration

Image 20



Crank Handle assembly pulled out in Self Retracting Device Configuration

Inspection

USER MUST KEEP INSTRUCTIONS AVAILABLE FOR REFERENCE. Record Date of First Use.

Prior to each use, inspect the for possible deficiencies including, but not limited to, corrosion, deformation, pits, burrs, rough surfaces, sharp edges, cracking, rust, paint buildup, excessive heating, alteration, and missing or illegible labels. User MUST IMMEDIATELY remove the 019-11002 from service if defects or damage are found, or if exposed to forces of fall arrest.

Inspect work area to ensure that location is free of any damage including, but not limited to, debris, cracking, rot, decay, structural deterioration, rust, and free from any hazardous materials. User must confirm that work area to be utilized will support the application specific loads as referenced within this instruction manual. Work area MUST be stable.

At least annually, a Competent Person other than the user must inspect the 019-11002 Confined Space System.

Competent Person inspections must be recorded in the inspection table included in this manual as well as the inspection table labels on each product individually. The Competent Person must place his/her initials in the block which corresponds with the month and year that the inspection is performed. All individual labels on equipment will be initialed in the same manner.

While conducting inspections, the Competent Person must consider all applications and hazards that the equipment may have been subjected to while in use.

Prior to each use, the user must inspect and verify that each individual component of the 019-11002 system is safe for use.

019-11000 Aluminum Tripod inspection:

1. Inspect for bent or deformed tripod legs.
2. Inspect that all locking pins for tripod legs are present and functional.
3. Inspect tripod pulley assembly for any missing or damaged components including, pulleys, cotter pins, and pulley housings.
4. Ensure that tripod feet are clear of any debris and undamaged so that they can pivot freely.
5. Inspect tripod chain for any kinks, broken links, corrosion, chemical exposure or any other damage.
6. Inspect entire unit for any bends, cracks, corrosion, chemical exposure, or any factor that may effect integrity of the tripod unit.

019-11005, 019-11015, 019-11006, 019-11016 (3-Way unit) inspection:

1. Crank handle must move freely, and must not interfere with any other component.
2. With the crank handle pushed into unit in recovery mode, the cable from the unit should pay out and retract smoothly when rotating the handle in the corresponding clockwise or counterclockwise direction.
3. With the crank handle pulled out from the unit in Self Retracting Device mode:
 - a. Pull the lifeline sharply to test locking function
 - b. Lifeline should lock and subsequently retract smoothly and completely back into unit without hesitation or stoppage.
 - c. Inspect entire length of lifeline for any damage including, but not limited to, fraying, crushing, bird caging, chemical exposure, heat/welding spatter, and kinking. User should always wear gloves when inspecting lifeline to prevent injury in the event of cable damage.

Inspection Log

Date of First Use: _____

Product lifetime is indefinite as long as it passes pre-use and Competent Person inspections. User must inspect prior to each use. Competent Person other than the user must complete formal inspection at least annually. Competent person to inspect and initial table below:

[illegible]

**If equipment fails inspection
IMMEDIATELY REMOVE FROM SERVICE**

Safety Information



Failure to understand and comply with safety regulations may result in serious injury or death. Regulations included herein are not all-inclusive, are for reference only, and are not intended to replace a Competent Person's judgement or knowledge of federal or state standards.

Do not alter or misuse equipment.

Workplace conditions, including, but not limited to, flame, corrosive chemicals, electrical shock, sharp objects, machinery, abrasive substances, weather conditions, and uneven surfaces, must be assessed by a Competent Person before fall protection equipment is selected.

The inspection of the workplace must anticipate where workers will be performing their duties, the routes they will take to reach their work, and the potential and existing fall hazards they may be exposed to. Fall protection equipment must be chosen by a Competent Person. Selections must account for all potential hazardous workplace conditions. All fall protection equipment should be purchased in new and unused condition.

Fall protection systems must be selected and installed under the supervision of a Competent Person, and used in a compliant manner. Fall protection systems must be designed in a manner compliant with all federal, state, and safety regulations. Forces applied to anchors must be calculated by a Competent Person.

Harnesses and connectors selected must be compliant with manufacturer's instructions, and must be of compatible size and configuration. Snap hooks, carabiners, and other connectors must be selected and applied in a compatible fashion. All risk of disengagement must be eliminated. All snap hooks and carabiners must be self-locking and self-closing, and must never be connected to each other.

A pre-planned rescue procedure is required in the event a fall occurs. The rescue plan must be project-specific. The rescue plan must allow for employees to rescue themselves, or provide an alternative means for their prompt rescue. Store rescue equipment in an easily accessible and clearly marked area.

Training of Authorized Persons to correctly erect, inspect, disassemble, maintain, store, and use equipment must be provided by a Competent Person. Training must include the ability to recognize fall hazards, minimize the likelihood of fall hazards, and the correct use of personal fall arrest systems.

NEVER use fall protection equipment of any kind to hang, lift, support, or hoist tools or equipment, unless explicitly certified for such use.


Equipment subjected to forces of fall arrest must immediately be removed from use.

Safety Information (cont)

Age, fitness, and health conditions can seriously affect the worker should a fall occur. Consult a doctor if there is any reason to doubt a user's ability to withstand and safely absorb fall arrest forces or perform set-up of equipment. Pregnant women and minors must not use this equipment.

Physical harm may still occur even if fall safety equipment functions correctly. Sustained post-fall suspension may result in serious injury or death. Use trauma relief straps to reduce the effects of suspension trauma.

Labels



SAFEWAZE
CONFINED SPACE TRIPOD

019-11000	
019-11001	
019-11002	
019-11003	
019-11004	

MATERIALS: Aluminum, Zinc Plated Steel
CAPACITY: 130-310 lbs. (59-140 kg)
WORKING LOAD
 350 lbs. (159 kg) maximum
MEETS
 ANSI Z359.4 & ANSI Z117.1
 OSHA Requirements

Year	1	2	3	4	5

322 Industrial Court Concord, NC 28025
 (800) 230-0319
 www.safewaze.com


01161a

WARNING: User must read and understand all instructions provided with this product at time of shipment prior to use. Misuse of this product or failure to follow instructions may result in serious injury or death. Make only compatible connections.

USE: Tripod must be used on generally level and solid footing. Tripod leg chains should be adjusted to remove slack to avoid tripping hazard. Load must be maintained inside chain perimeter to prevent tipping. Do not allow components of any fall arrest, rescue, or personal suspension system to contact sharp edges or abrasive surfaces during use. Avoid chemical, thermal, and/or electrical hazards.

INSPECTION: Tripod must be inspected prior to each use. This product must be inspected by a competent person at least every 6 months or more frequently in harsh environments. Do not use if inspection reveals damaged components or defective condition

01161b


SAFEWAZE
 Fall Arrest Systems • Confined Space • Engineering • Rescue Systems

322 Industrial Court, Concord, NC 28025
 P: (704) 262-7893 or F: (704) 262-9051

3-WAY SELF RETRACTING LANYARD, RESCUE & DESCENT DEVICE

ANSI Z359.14, ANSI Z359.4 & ANSI A10.32
 OSHA 1910.66 & OSHA 1926.502

WWW.SAFEWAZE.COM



019-11005

65 ft Cable 3-Way Recovery Unit

MUST FOLLOW ALL MANUFACTURER'S INSTRUCTIONS INCLUDED WITH THIS EQUIPMENT. DO NOT REMOVE LABEL.

WARNING: User must read and understand all instructions, provided with this product at time of shipment, prior to use. **DO NOT ATTEMPT TO SERVICE OR REPAIR THIS UNIT! CONTACT SAFEWAZE™ FOR SERVICE OR REPAIR INFORMATION.**

USE: This is a single person fall arrester device. User must ensure that any connection to anchorage is properly secured prior to use. Full Body Harness is required for use with this device. Avoid lifeline contact with sharp or abrasive edges. Avoid chemical, thermal and/or electrical hazards. This product is not suitable for use with horizontal lifelines and horizontal positioning. Fall clearances must be calculated by a Competent Person prior to use. Avoid swing fall hazards. Fall clearance calculation for this device is based upon unit installed in an overhead vertical position in-line with the user. Not to be used for leading edge applications. For use by trained persons only.

INSPECTION: Device must be inspected prior to each use. Inspect device per instructions to include Locking Function Test (sharp pull test), retraction test, label

legibility, any evidence of damage or defects, or missing components or parts. Inspect housing, connectors, fasteners and full length of lifeline component for any damage or defects. This product must be inspected in accordance with the manufacturer's instructions. Unit must be removed from service if exposed to fall arrest forces. Fall indicator is a swivel indicating snap hook; immediately remove unit from service if swivel indicating snap hook is deployed.

Specifications:
 Working length: 65 ft (19.81 m)
 Material: 3/16 in galvanized steel cable; steel hardware; solid aluminum housing
 Capacity range: 130-310 lbs (58.96 kg-140.61 kg)
 Average arresting force: 900 lbs (408.23 kg)
 Max arrest force: 1800 lbs (816.47 kg)
 Max arresting distance: 54 in (137.16 cm)
 Free fall limit: 24 in (60.96 cm)
 Class B unit

INSERT MFG DATE AND SERIAL # HERE

Year	1	2	3	4	5

WARRANTY



SAFEWAZE™
322 Industrail Court
Concord, NC 28025

PHONE: 1-800-230-0319
FAX: 1-704-262-9051
EMAIL: info@safewaze.com

Web: safewaze.com