ANSI	Z359.4-2013
OSHA	1926.502, 1910.140
EN	341:2011, CLASS A

Rescue & Descent Systems Instruction Manual

Part No.	System Length
022-6051	50 ft. (15.2 m)
022-6052	100 ft. (30.5 m)

Part No.	System Length
022-6053	200 ft. (60.9 m)
022-6054	300 ft. (91.4 m)
022-6055	400 ft. (121.9 m)
022-6056	500 ft. (152.4 m)

Part No.	System Length
022-6059	50 ft. (15.2 m)
022-6060	100 ft. (30.5 m)

Part No.	System Length
022-6061	150 ft. (45.7 m)
022-6062	200 ft. (60.9 m)
022-6063	300 ft. (91.4 m)
022-6064	400 ft. (121.9 m)
022-6065	500 ft. (152.4 m)

This manual is intended to meet the manufacturer's instructions as required by ANSI Z359.4-2013 and should be used as part of an employee training program as required by OSHA.

Do not throw away these instructions!
Read and understand these instructions before using equipment!

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User Information

Date of First Inspection: _____

Serial#: _____

Trainer: _____

User: _____

Safewaze
225 Wilshire Ave SW
Concord, NC 28025
Phone: (800) 230-0319
email: info@safewaze.com
web: www.safewaze.com

Do not throw away these instructions!
Read and understand these instructions before using equipment!

Safety Information and Precautions:

User must read, understand, and follow all safety and usage information contained within this manual prior to use of this equipment. Failure to follow all safety and usage information can result in serious injury or death.

Intended Use:

The rescue equipment covered in this manual is intended for use as part of a complete Rescue System. Use of this equipment for any other purpose, such as material handling, sports activities, or other action not described in these User Instructions is not approved by Safewaze. Use of this equipment in a manner outside the scope of those covered within this manual can result in serious injury or death. The equipment covered in this manual is only to be used by trained personnel in workplace applications.

WARNING

Safewaze Rescue & Descent systems are pre-engineered as part of a complete rescue system. Every user must be trained in the inspection, installation, operation, and proper use of their Rescue Equipment and Rescue Plan. Unapproved or inappropriate use of this equipment could result in serious injury or death. Refer to these instructions for the proper selection, installation, maintenance, and service of this equipment. For questions regarding use of this equipment beyond the scope of this manual, contact Safewaze.

The actions listed below are designed to minimize risk associated with the use of Safewaze Rescue & Descent Systems:

- Inspect this equipment prior to each use and at least annually by a Competent Person other than the user.
- If inspection reveals an unsafe or defective condition, the equipment must be removed from service and repaired or replaced as specified in this manual.
- Do not allow impact forces on these devices. If exposed to impact forces they must be immediately removed from service and labeled “Unusable.”
- Never allow slack to form in the lifeline constituent.
- Utilize extra caution to keep the lifeline free from any obstructions including but not limited to surrounding objects, tools, equipment, moving machinery, co-workers, yourself, or possible impact from overhead objects.
- Do not use this equipment in an environment where the rescue/descent path is obstructed by machinery, equipment, or other potential hazards. User or rescuer must ensure that the descent path is clear and will not allow contact with an object that could cause or exacerbate injury.
- Follow all recommendations in this manual for connection of the Rescue & Descent System to both the anchorage and the user.
- Avoid direct contact with the descender during or immediately after use. Components of the unit can become hot during an extended descent and possibly cause burns to exposed skin.
- Rope protector and/or proper edge protection must be used if lifeline constituent will be exposed to sharp or abrasive edges.
- If the PFAS is made up of components from different manufacturers, ensure that all components of the PFAS are compatible with each other and meet all applicable standards, regulations, or requirements. A Competent or Qualified Person should always review and approve the PFAS system prior to worker use.
- This Rescue & Descent System is only to be used in rescue applications.
- Ensure that proper fall protection safety measures are adhered to during rescue operations per the workplace rescue plan.

Users should enact the precautionary measures listed below to reduce the inherent risks of working at height:

- Fall protection equipment and/or rescue systems that fail inspection must be removed from service and tagged “Unusable.” This equipment should be returned to Safewaze for repair/service (if applicable), or destroyed. For questions regarding service/repair of components, contact Safewaze.
- Never exceed the maximum allowable weight capacity of your fall protection or rescue equipment.
- Never exceed the maximum free fall distance of your fall protection or rescue equipment.
- A Rescue Plan must be in place in the event of a fall. All employees should be trained and knowledgeable in the Rescue Plan and Rescue Operations.
- Equipment must never be altered or modified. Only Safewaze, or entities authorized in writing by Safewaze, may make repairs to Safewaze fall protection equipment.
- User(s) of Safewaze fall protection equipment must ensure that their health and physical condition allows them to withstand all forces and potential risks associated with working at heights.
- Use of a body belt is not authorized for fall arrest applications. Use only a Full Body Harness (FBH).
- Always wear required personal protective equipment when installing, using, or inspecting this equipment.
- If conducting training operations with this equipment, ensure that a secondary fall protection system is installed and utilized in a manner that does not expose the trainee to unintended fall hazards.
- Immediately seek medical attention in the event a worker suffers a fall arrest incident.
- Work directly under the anchor point as much as possible to minimize swing fall hazards.
- Certain subsystems may interfere with the proper operation of the equipment in this manual. Use only compatible connections. Contact Safewaze for questions regarding compatibility of equipment or components not covered in this manual.
- Avoid objects, equipment, or surfaces that could harm the user or equipment.
- User must ensure that there is adequate fall clearance when working at height.
- Extra precautions must be taken if working in the vicinity of moving machinery, electrical hazards, chemical hazards, sharp edges, explosive or toxic gases, extreme temperatures, or below overhead equipment or materials that could impact the user and their fall protection equipment.
- If work is conducted in a high heat environment, ensure that Arc Flash or other suitable fall protection equipment is utilized.

1.0 INTRODUCTION

Thank you for purchasing a Safewaze Rescue & Descent System. 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 made available to the user of the equipment. The user must understand how to safely and effectively use this equipment, and all fall protection equipment used in conjunction with the Rescue & Descent System.

2.0 SPECIFICATIONS

System Requirements:

Anchorage:	3,100 lbs. (1406 kg) *The structure to which the system attached must be capable of withstanding force in all directions permitted by the system. To attach more than one system to a single anchorage the 3,100 lbs. requirement must be multiplied by the number of systems attached to the anchorage.
Anchorage Connector:	5,000 lbs. (22kN) *Minimum Breaking Strength
Kernmantle Rope Lifeline:	5,000 lbs. (22.2 kN) *Minimum Static Strength
Working Temperature Range:	-35°F (-40°C) to 130°F (54°C)

System Specifications:

Capacity:

Weight capacity is dependent upon the number of users, the total weight of those users, length of descent, and the number of times previously used.

Number of Users	Weight Capacity	Maximum Allowed Descent Distance (per descent)	Maximum Number of Descents
1	110 lbs.-310 lbs. (50-141 kg)	525 ft. (160 m)	15
1-2	440 lbs. (200 kg)	525 ft. (160 m)	10
2	620 lbs. (282 kg)	525 ft. (160 m)	1

Lifting distance is determined by the total amount of weight being lifted. As the weight increases, the distance the weight can be lifted decreases.

Lifting Capacity (per lift)
85 lbs. = 15 ft. Max
310 lbs. = 10 ft. Max
420 lbs. = 5 ft. Max
620 lbs. = 3 ft. Max

Component Specifications:

Part Number	Description	Materials	Breaking Strength
N/A	Evacuation Descent Device with Swivel Carabiner	Aluminum, Stainless Steel, Nylon, Zinc Plated Steel	N/A
N/A	Rescue Descent Device with Swivel Carabiner	Aluminum, Stainless Steel, Nylon, Zinc Plated Steel	N/A
FS1015	Rope Carabiner	Yellow Chromate Plated Steel	5,000 lbs. (2268 kg)
FS810-3	3’ Reinforced Cross Arm Strap Anchor	Polyester, Zinc Plated Alloy Steel	5,000 lbs. (2268 kg)

Part Number	Description	Materials	Minimum Breaking Strength
018-9000	18'' Rope Protector	Water Repellent Tarpaulin	N/A
018-9001	36'' Rope Protector	Water Repellent Tarpaulin	N/A
N/A	Kernmantle Rope Offered in Lengths from 50 ft. (15 m) to 500 ft. (152 m)	9.3 mm Nylon Core/ Polyester Cover	6,000 lbs. (2268 kg)
022-6071	Pick-off Carabiner	Anodized Aluminum	5,000 lbs. (2268 kg)
022-6070	Web Connector	Dyneema® Webbing	5,000 lbs. (2722 kg)
022-9087	Rescue Gear Bag	Water Repellent Tarpaulin	N/A
019-9007	Heavy Duty Duffle Bag	Water Repellent Tarpaulin	N/A
N/A	Rescue Pole Bag	Water Repellent Tarpaulin	N/A
022-6073	4-18' Rescue Pole Kit	Aluminum pole, stainless steel head bracket, polyester webbing with steel D-ring tool atachment, elasticated polyester webbing with aluminum carabiners	N/A
022-6072	Pole Head Bracket	Stainless Steel	N/A
SW402	Tool Attachment	Polyester Webbing, Steel D-ring	N/A
SW436	Tool Tether	Elasticated Polyester Webbing, Aluminum Carabiners	N/A

Performance Specifications:

Minimum Rated Descending Load:	110 lbs. (50 kg)
Maximum Rated Descending Load:	440 lbs. (200 kg) *Represents 1 user, or up to 2 users, if their combined weight (including clothings, tools, equipment, etc.) does not exceed 400 lbs. (200 kg)
Maximum Descending Load: (Critical Emergencies Only)	620 lbs. (282 kg) *Will accommodate 2 users at a maximum weight of 310 lbs. each (including clothing, tools, equipment, etc.)
Maximum Descent Height:	525 ft. (160 m) / per descent
Descent Velocity:	Average: 2.6 ft/s (.8 m/s) Maximum: 6.6 ft/s (2 m/s) *Velocity can vary based on the number of users, working height, ambient temperature but will not exceed 6.6 ft/s.
Descent Energy Rating (DER):	ANSI Z359.4: 300,000 ft.-lb. (406,750 joules) *Influencing factors in the Descent Energy Rating include User Weight, Descent Height, the number of previous descents, and the number of simultaneous descents. The Descent Energy Rating is the Descent Energy Classification of the descent device. DER can be calculated by using the following formula: **E = W x H x N** "E" represents the Descent Energy Rating (ft.-lb.) "W" is the User Weight (lbs.) "H" is the Descent Height (ft.) "N" is the total number of descents previously performed. Should the system device exceed the Maximum Energy Rating it must immediately be removed from service and tagged "UNUSABLE". Contact Safewaze regarding service or repair of this equipment.

3.0 APPLICATION

Safewaze Rescue & Descent Systems are pre-engineered for use as part of a complete personal fall protection rescue plan. This product is designed for a single user, but in critical emergencies can accommodate up to 2 users simultaneously. All systems described in this manual are suitable for Evacuation/Descent or Remote Assisted Rescue operations. Safewaze Rescue/Descent systems include the 019-6002 Rescue/Descent device, which comes equipped with a rescue wheel for Assisted Rescue operations. The rescue wheel uses mechanical advantage to allow lifting of a fallen worker, or both the fallen worker and the rescuer.

3.1 INITIAL PRE-USE INSPECTION

The Rescue & Descent Systems are packaged to resist humidity and moisture. Initial inspection should be documented in the Inspection Log (Page 16) and consists of examination of system packaging to ensure no damage has occurred during shipping. Do not remove the system from packaging. When unpackaged for first time use, the rescuer will quickly remove all packaging and inspect the components of the system as described in Section 13 of this manual.

3.2 INSPECTION FREQUENCY

Either the Authorized Person (User), or the Rescuer must inspect this equipment before each use. Annual inspections must be completed by a Competent Person other than the user. Results must be documented. Results should be recorded on copies of the “Inspection Log” (See Page 16) . Systems must be recertified at a minimum of every 5 years starting from first inspection date. See Section 13.2 for Recertification specifics.

3.3 RESCUE PLAN AND TRAINING

When using this equipment, employers must create a rescue plan and provide the means to implement the plan. This plan must be communicated to all equipment users, authorized persons, and rescuers. Rescue operations may require specialized equipment beyond the scope of this manual. Every user must be trained in the inspection, installation, operation, and proper usage of their Rescue Equipment and Rescue Plan. See ANSI Z359.4-2013 for specific rescue information.

NOTE: Special rescue measures may be required for a fall over an edge.

3.4 APPLICABLE SAFETY STANDARDS

When used according to instructions, this equipment meets ANSI Z359.4-2013 and OSHA 1926.502, 1910.140. 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).

4.0 WORKER CLASSIFICATIONS

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

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 their 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 jobsite.

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

5.0 PURPOSE

The rescue and descent systems are designed for the rescue/descent of one or two users. The systems may be used in repetition if multiple individuals require rescue. In a critical emergency, the rescue and descent systems can accommodate up to two users simultaneously. It allows for the user to initiate a controlled descent to the next safe lower level. The 019-6002 Rescue Device can also be utilized to lift the fallen worker to help facilitate the rescue (See Section 11.0). The device included with this system is NOT a Fall Arrester! Ensure that components used with this equipment are compatible and will not result in an unintentional disengagement. Improper or unauthorized use of this equipment other than that specified in these instructions is prohibited. Incorrect installation or improper use of this equipment can result in serious injury or death.

6.0 BODY SUPPORT/HARNESS CONNECTIONS

Use of this equipment requires a fall protection rated Full Body Harness. Refer to Figure 1 for appropriate use based upon the chosen D-ring of a Full Body Harness (FBH). Note: Appropriate use(s) listed below are for Rescue & Descent operations only. Fall Protection/Fall Arrest applications are not indicated.

FIGURE 1 - FBH D-RING(S) / APPROPRIATE USE IN EVACUATION/RESCUE/DESCENT

Front D-ring | Sternal D-ring | Dorsal D-ring

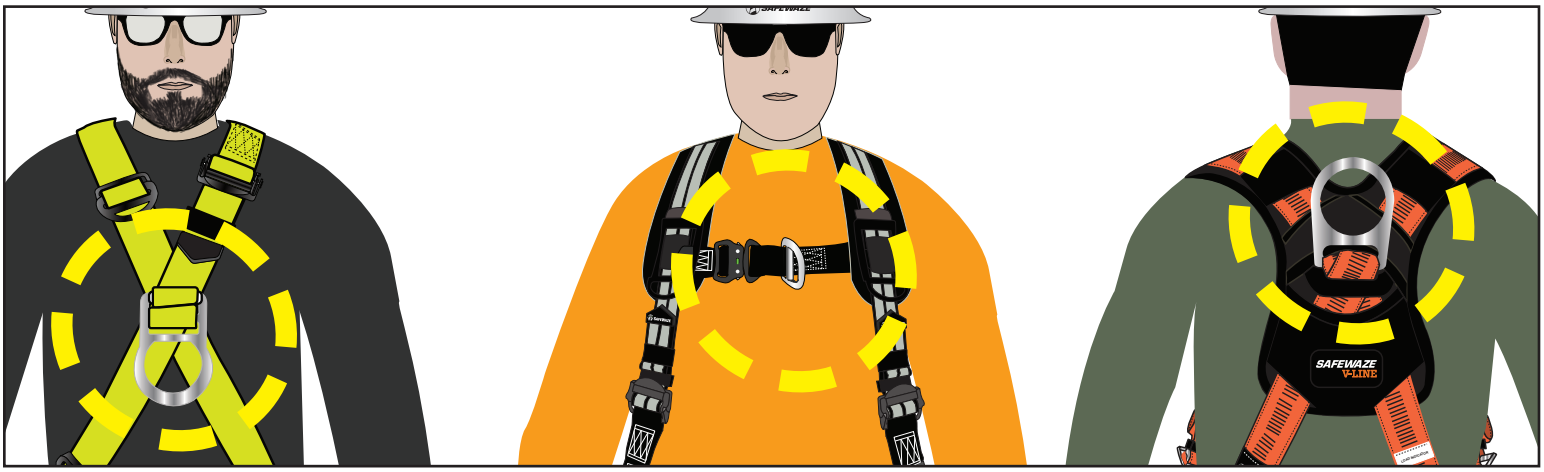
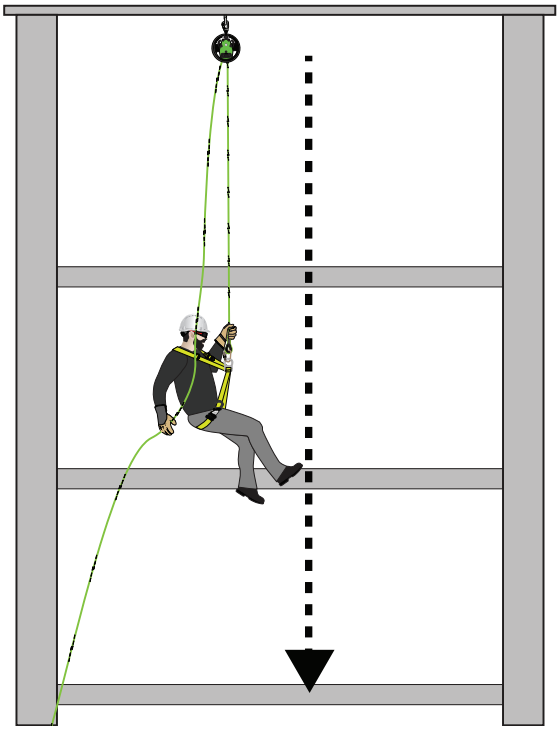


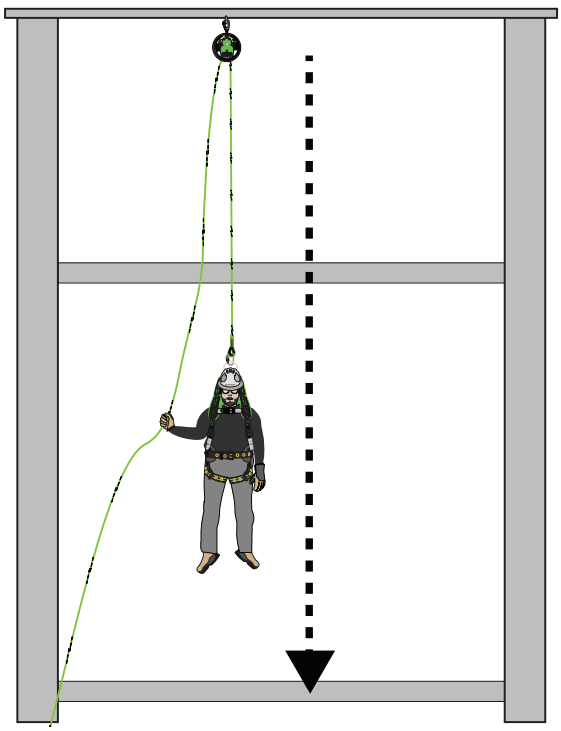
Figure 2 illustrates harness connections when using the Rescue & Descent System. When making a connection, ensure roll-out cannot occur (Figure 3). Do not use snap hooks or carabiners that will not completely close over the anchor point. Follow the manufacturer's instructions supplied with each system component.

FIGURE 2 - FULL BODY HARNESS EVACUATION CONNECTION EXAMPLES

Front/Sternal D-ring Harness Connection



Dorsal Harness Connection



7.0 COMPATIBILITY OF COMPONENTS

Unless otherwise noted, Safewaze equipment is designed for, and tested with, associated Safewaze components or systems.

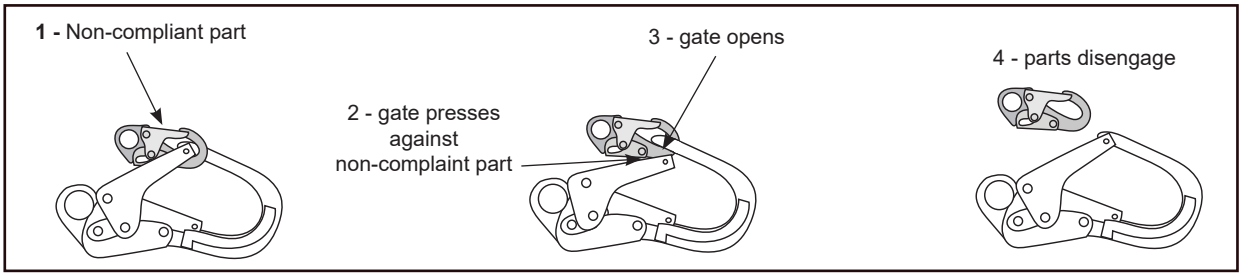
IMPORTANT: If substitutions or replacements are made to the system, ensure all components meet the applicable ANSI requirements. Read and follow manufacturer's instructions for all components and subsystems in your personal fall arrest system. Not following this guidance may jeopardize compatibility of equipment, and possibly affect the safety and reliability of the overall system.

8.0 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). Do not use equipment that is not compatible. Non-compatible connectors may unintentionally disengage (Figure 3). Connectors must be compatible with the anchorage or other system components. 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.

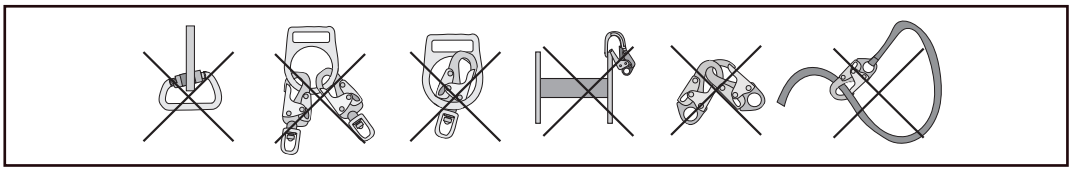
9.0 MAKING CONNECTIONS

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 (hooks, carabiners, and D-rings) are designed to be used only as specified in each product's user 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 Z359.12 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.
- 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



10.0 APPLICATION LIMITS

Precautions should be taken in the design and installation of a PFAS in order to avoid hazards such as thermal, chemical, or electrical hazards. Avoid moving machinery, sharp and/or abrasive edges, and any other hazard that could damage or degrade components of the PFAS.

IMPORTANT: The components of a PFAS used in conjunction with the Safewaze Rescue & Descent System should meet the requirements of the ANSI Z359 Fall Protection Code.

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

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

11.0 INSTALLATION AND USE (Single User Unassisted Evacuation)

Step 1: Locate a suitable location for the anchorage connector as specified in Section 2.0 of this manual. Install the FS810-3 Reinforced Cross Arm Strap. Ensure the FS810-3 is attached as directly overhead of the user as possible, with the descent path clear of hazards or obstacles. Hazards can include but are not limited to electrical, thermal, chemical sources, or other hazards. To install the FS810-3, position the strap around the anchorage and pass the small D-ring through the larger D-ring (Figure 5, Dwg 1). Tighten the strap by sliding the large D-ring up the webbing while simultaneously pulling down on the small D-ring. The cross arm strap must be tightly wrapped around the anchorage with the small D-ring hanging down for connection of the Rescue & Descent system (Figure 5, Dwg 1). The cross arm strap may be wrapped multiple times around an anchorage to shorten the length, but the small D-ring must pass through the large D-ring on each pass. User must additionally ensure that the rope lifeline WILL NOT make contact with sharp or abrasive edges. If contact is unavoidable, ensure that the rope protector is used to prevent damage to the rope lifeline (Figure 5, Dwg 2). Connect descent device to the FS810-3 cross arm strap (Figure 5, Dwg 3). Make connection to the Small D-ring ONLY. NEVER connect the device to the large D-ring of the FS810-3.

Step 2: Attach the short end of the rope lifeline to the Front/Sternal D-ring of the Full Body Harness (Figure 5, Dwg 4). The Front/Sternal D-ring is the preferred and primary connection point of the system to the user. Attachment to the Dorsal D-ring is authorized for FBHs that lack a Front/Sternal D-ring, however, the user should always connect to the Front/Sternal D-ring of their harness if so equipped. Allow free end of rope lifeline to unspool and fall to the ground or next lower safe level. Free end of the rope lifeline must be in contact with the ground, or next lower safe level, to which the use is descending. If rope length is inadequate to reach the ground or next lower safe level, the system cannot be used.

Step 3: Ensure the section of rope lifeline between their Front/Sternal D-ring and the device is tight with no slack (Figure 5, Dwg 5). Slack between the user and device is removed by pulling line out from the other side of the device (Figure 5, Dwg 5).

Step 4: To perform a Single User Unassisted Evacuation, the user steps off of the walking/working surface and allows the Rescue/Descent System to lower them (Figure 5, Dwg 6).

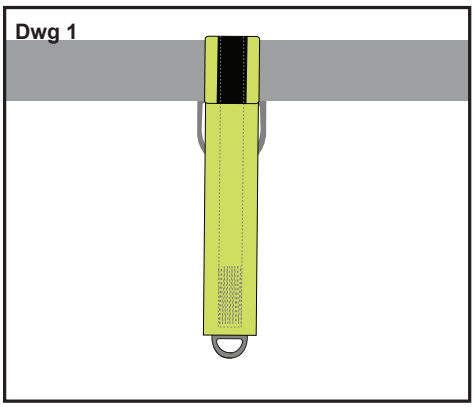
Step 5: The Rescue/Descent System is designed to lower the user at a constant rate of descent. The average rate of descent is 2.6 feet per second, with a maximum rate of descent of 6.6 feet per second (Figure 5, Dwg 6).

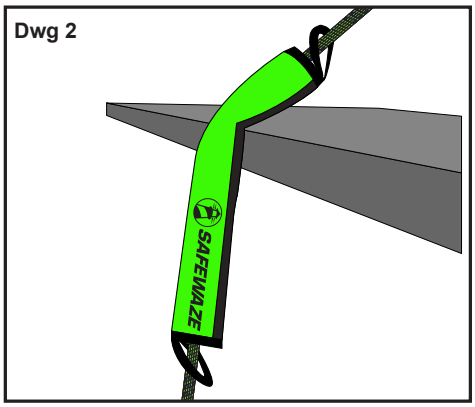
Step 6: Upon reaching a safe location, the user will disconnect from the Rescue/Descender and continue with their pre-planned rescue procedures.

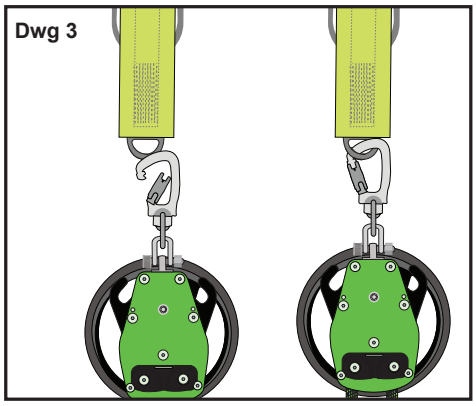
WARNING

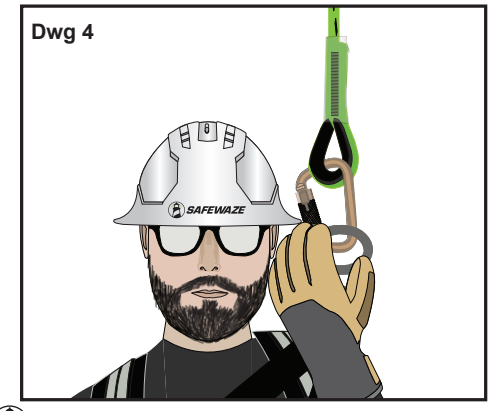
Safewaze Evacuation/Descent and Rescue/Descent Systems MUST NOT be used as part of a Fall Arrest or Fall Protection System! User must ensure that all slack between themselves and the device is removed from the rope lifeline prior to beginning ANY Evacuation/Descent/Rescue Operations! NO FREE FALL is permitted with this equipment! Failure to heed this warning could result in serious injury or death!

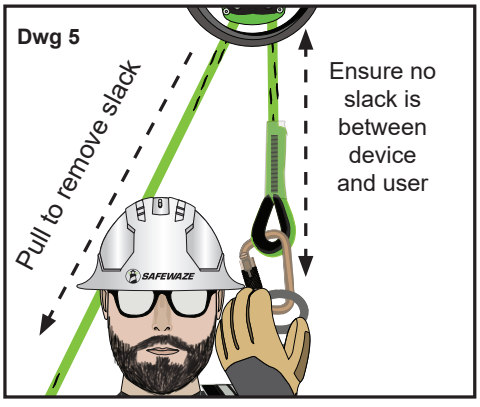
FIGURE 5 - INSTALLATION AND USE (Single User Unassisted Evacuation)

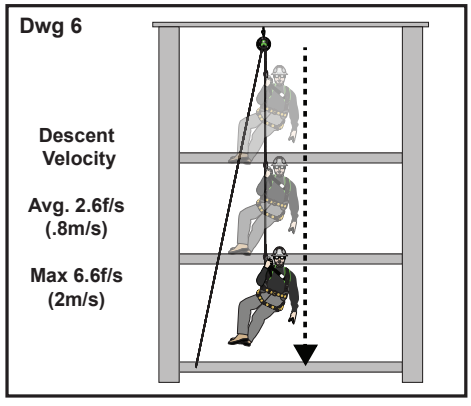






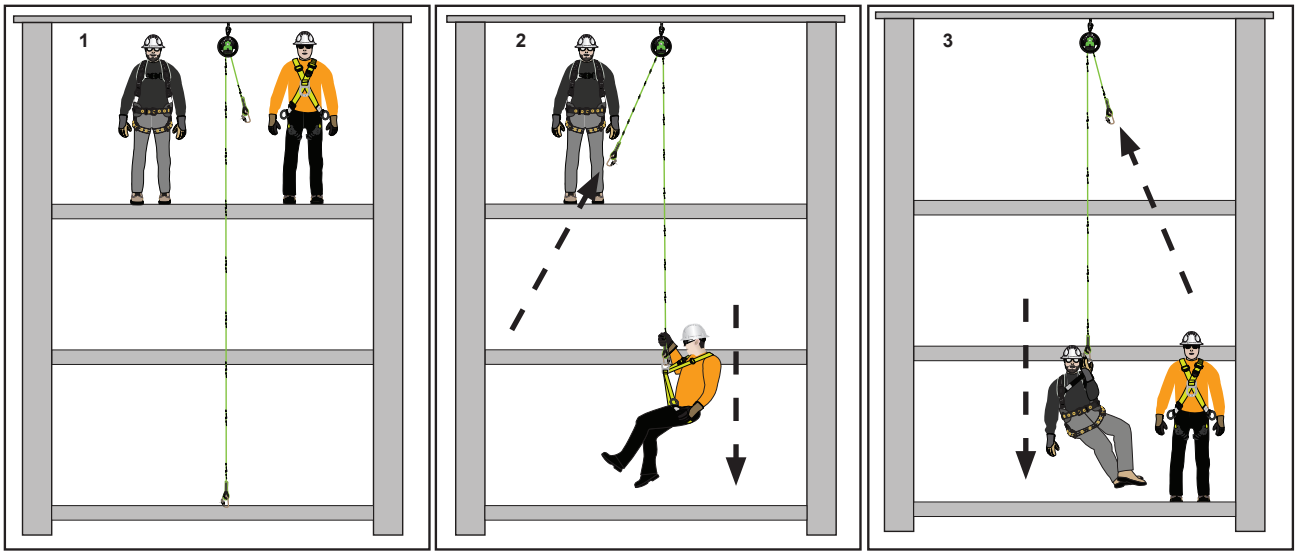






Multiple Users:
In the event there are multiple individuals requiring use of the Rescue/Descent System, the system can be used alternately by each individual until rescue/descent operations are complete. See Section 2.0 of this manual for technical data regarding number of uses, weight capacities, and length of descents.

FIGURE 6 - MULTIPLE USERS



11.1 INSTALLATION AND USE (Controlled Descent)

Controlled descent is necessary as part of all rescue and evacuation operations. These instructions only pertain to proper equipment operation for a controlled descent. Detailed rescue procedures should be covered separately in the worksite rescue plan and/or worksite rescue plan training.

Step 1: Install the FS810-3 Reinforced Cross Arm Strap as described in Section 11.0.

Step 2: Connect the device to the FS810-3 Reinforced Cross Arm Strap. Make connection to the Small D-ring ONLY. NEVER connect the device to the large D-ring of the FS810-3. Connect the Rope carabiner to the Front D-ring of the FBH. Descent is controlled by applying tension to the free end of the rope lifeline using at least one belay. Heavier users should consider using both rope belays.

Step 3: The rescuer also has the option of connecting the device directly to the Front D-ring of their FBH and descending with the device. Descent is controlled by maintaining tension on the free end of the rope lifeline and/or by routing the rope through the belays on the rescue device (Figure 7, Dwg. 2) . The more tension applied, the slower the rate of descent. (Figure 7, Dwg. 2).

Step 4: Allow free end of rope lifeline to unspool and fall to the ground or next lower safe level. Free end of the rope lifeline must be in contact with the ground, or next lower safe level, to which the user is descending. If rope length is inadequate to reach the ground or next lower safe level, the system cannot be used.

Step 5: Once verified that the system is of sufficient length to safely conduct a Controlled Descent, the user can begin their descent.

Step 6: To perform a controlled descent, the user steps off of the walking/working surface while maintaining tension on the free end of the rope lifeline. Unlike Single User Unassisted Evacuation, the user controls their descent rate by maintaining tension on the free end of the rope lifeline (Figure 7, Dwg 1) or by using a combination of the rope lifeline and integrated belays on the rescue device (Figure 7, Dwg. 2) .

Step 7: Upon reaching a safe location, the user disconnects from the Rescue/Descender and continues worksite rescue procedures.

FIGURE 7 - INSTALLATION AND USE (Controlled Descent)

11.2 INSTALLATION AND USE (Remote Assisted Rescue)

Step 1: Install the FS810-3 Reinforced Cross Arm Strap as described in Section 11.0.

Step 2: Connect the rescue device to the small D-ring of the FS810-3.

Step 3: Pull lifeline through the rescue device to a length that will allow connection to the fallen worker.

Step 4: To deploy the rescue pole, attach the small web loop of the included web connector to the red rescue carabiner (provided) or any ANSI Z359.12-2009 compliant carabiner, and install onto the end of the rescue pole (Figure 8, Dwg 1, 2 and 3).

Step 5: Attach rope lifeline to the web connector using the supplied ANSI Z359.12-2019 compliant carabiner (Figure 9).

Step 6: The rescue pole has a pre-installed tool attachment for connection of our SW436 15 lb. Elasticated Tool Tether (included). Connect the opposite end of the Elasticated Tool Tether to an object, structure or stationary piece of equipment, ensuring the rescue pole is secured in the event of an accidental drop (Figure 10).

Step 7: The rescue pole is adjustable in length and can be extended to a maximum of 18'. To make connection to the worker via the rescue pole, remove the rescue pole from the carry bag. Adjust the length of the pole by using the twist locks (Figure 11). Extend segments only until resistance is met. Do not use excessive force. Turn the twist locks clockwise to loosen and counter clockwise to tighten. All segments must be locked in place before use. Do not use the rescue pole with any twist locks in the unlocked position. In its stowed configuration, the rescue pole measures 4' in length.

Step 8: Carefully position the rescue pole in an orientation that allows the rescue carabiner to be attached to the fallen worker's Front, Sternal, or Dorsal D-ring (Figure 14). To complete the connection process, simply pull the rescue pole away with the rescue carabiner still hooked through the worker's D-ring. As the rescue carabiner disengages from the rescue pole, the carabiner's gate closes automatically. The rescuer has now made connection to the fallen worker. NOTE: If the victim's rescue D-ring(s) are laid flat against their FBH or not easily reached, the rescue pole hook may be utilized to position the D-ring for rescue connection (Figure 13).

Step 9: With the rescue carabiner hooked through the fallen worker's Front, Sternal, or Dorsal D-ring, the rescuer will remove any slack in the rope lifeline between the device and fallen worker. Using the rescue wheel on the device, the rescuer must raise the worker slightly to disengage their fall arrest subsystem. With tension released from the worker's fall arrest subsystem, the rescuer can disconnect the worker from their fall arrest device and lower them to the next lower safe level. The rescuer controls the worker's descent rate by applying tension to the free end of the rope lifeline. The rescue device will automatically limit the descent rate to Avg. 2.6 f/s (.8 m/s), Max 6.6 f/s (2 m/s). This ensures the fallen worker can descend safely even with no input from the rescuer.

NOTE: If the fallen worker can assist in making connection to their FBH the rescue pole may not be required. The rescuer can lower the Rope carabiner to the fallen worker, with the fallen worker making the connection to their FBH, or they can lower the 022-6069 Rescue Assist Sling (sold separately) to the fallen worker to facilitate rescue.

FIGURE 8 - RESCUE POLE / RESCUE CARABINER INSTALLATION

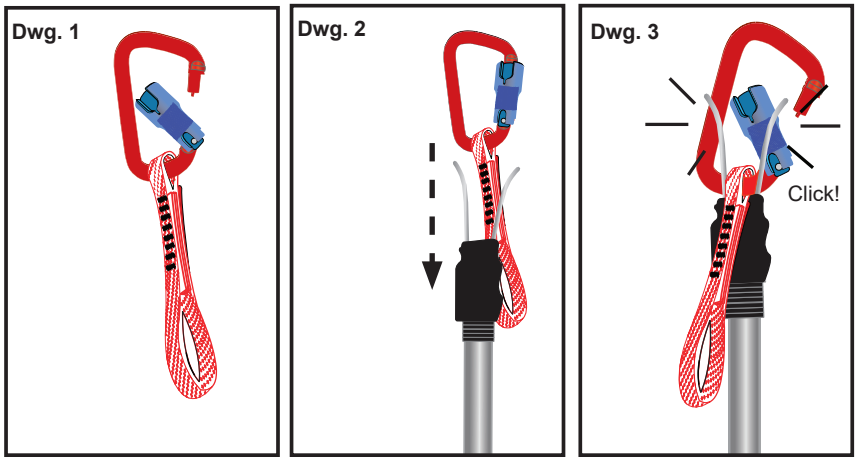


FIGURE 9 - RESCUE POLE / DEVICE LIFELINE ATTACHMENT

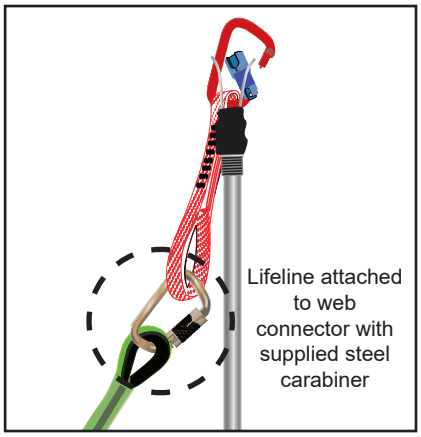


FIGURE 10 - RESCUE POLE TOOL TETHER/LANYARD

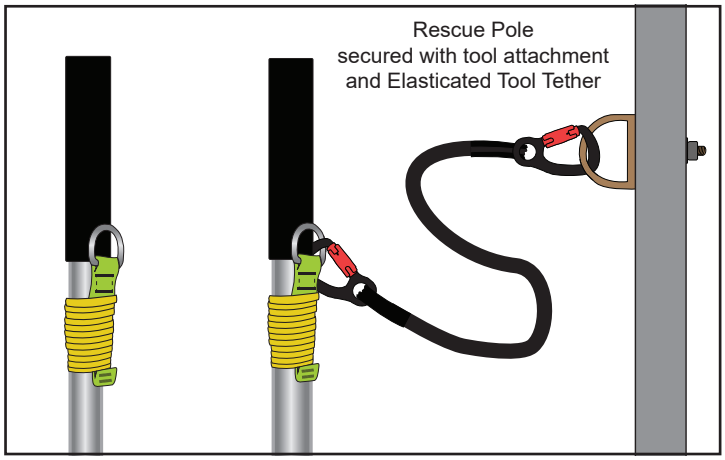
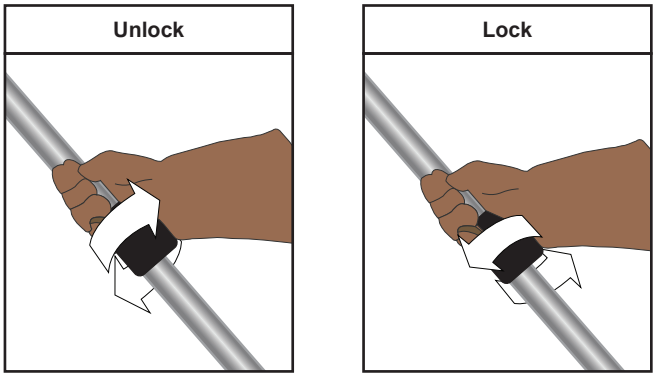


FIGURE 11 - RESCUE POLE TWIST LOCK OPERATION



Extend segments only until resistance is met. Do not use excessive force.
All segments must be locked in place before use.
Do not use the rescue pole with any twist locks in the “unlocked” position.

FIGURE 12 RESCUE POLE / HOOK USE

Tightening (cinching) of FS810-3 Reinforced Cross Arm Strap

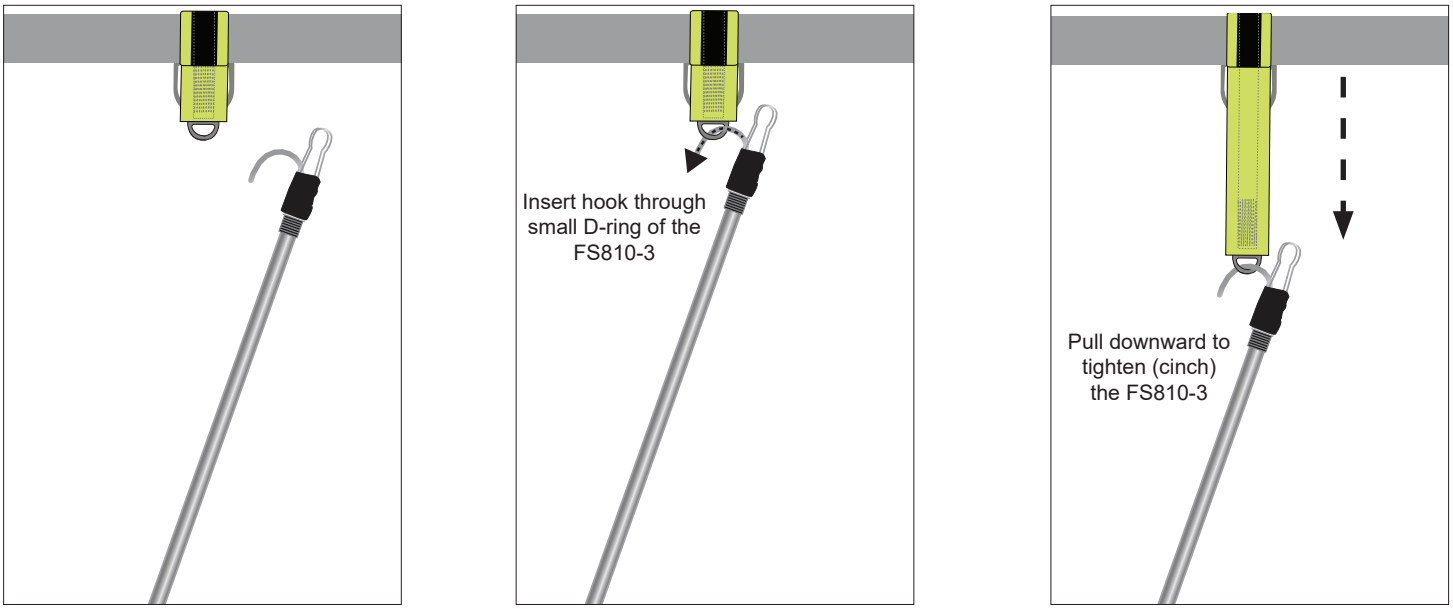


FIGURE 13 RESCUE POLE / HOOK USE

Side Control/Lateral Assist

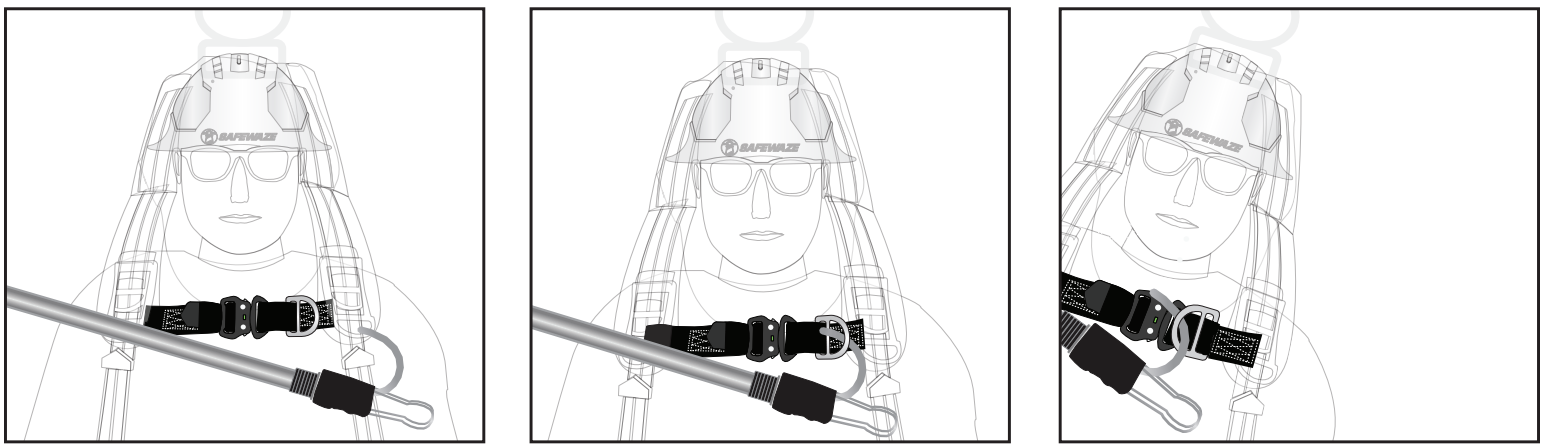


FIGURE 14 - REMOTE ASSISTED RESCUE

WARNING

In ANY situation that involves immobile suspension, it is imperative that the individual be rescued in a prompt and safe manner. Irreversible health effects can be seen in 5-6 minutes, while death can occur in as little as 10 minutes. The onsite rescue plan should ensure prompt rescue to avoid serious injury or death.

The rescuer must ensure that their lowering system is controlled and DOES NOT ALLOW THE WORKER'S BODY TO BE LAID FLAT, as they reach the next lower safe level. The worker must be kept in a sitting position for at least 30 minutes after being rescued from immobile suspension. DO NOT remove the worker's FBH or attempt to loosen the leg straps. If possible, have the worker position themselves in a seated "W" position, with their legs bent and knees towards the chest (Figure 15). Upon EMS arrival, alert rescue personnel the fallen worker has experienced immobile suspension and should not be laid flat during transport. They should be transported to the nearest hospital in a sitting position unless experiencing cardiac arrest.

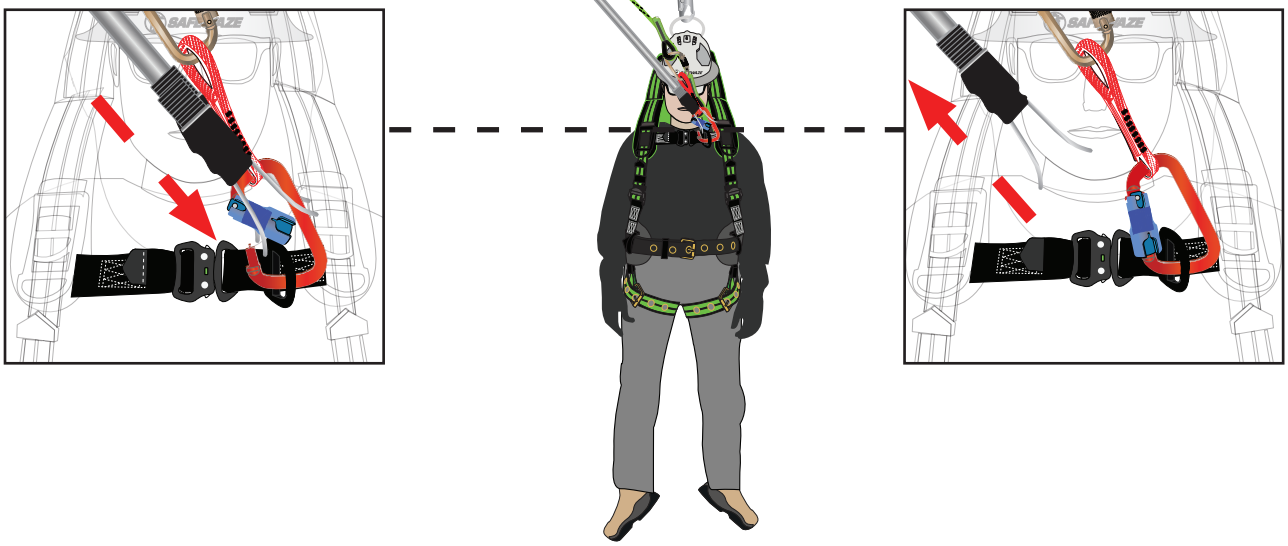


FIGURE 15 - POSITIONING OF FALLEN WORKER POST RESCUE

Worker seated in the "W" position post rescue.

11.3 INSTALLATION AND USE (Assisted Rescue)

Step 1: Install the FS810-3 Reinforced Cross Arm Strap and rescue device as previously described in Section11.0.

Step 2: Connect the short end of the rope lifeline to the small D-ring of the FS810-3 Reinforced Cross Arm Strap.

Step 3: The rescuer will then connect the rescue device to the front D-ring of their Full Body Harness.

Step 4: The rescuer controls their descent rate by maintaining tension on the free end of the rope lifeline using one or both belays on the device (Figure 17, Dwg 2).

Step 5: To stop the descent and prevent further downward movement place the free end of the rope through the belay and into the rope lock. It's important to avoid connecting the free end of the rope directly to the rope lock without routing the rope through belay first.

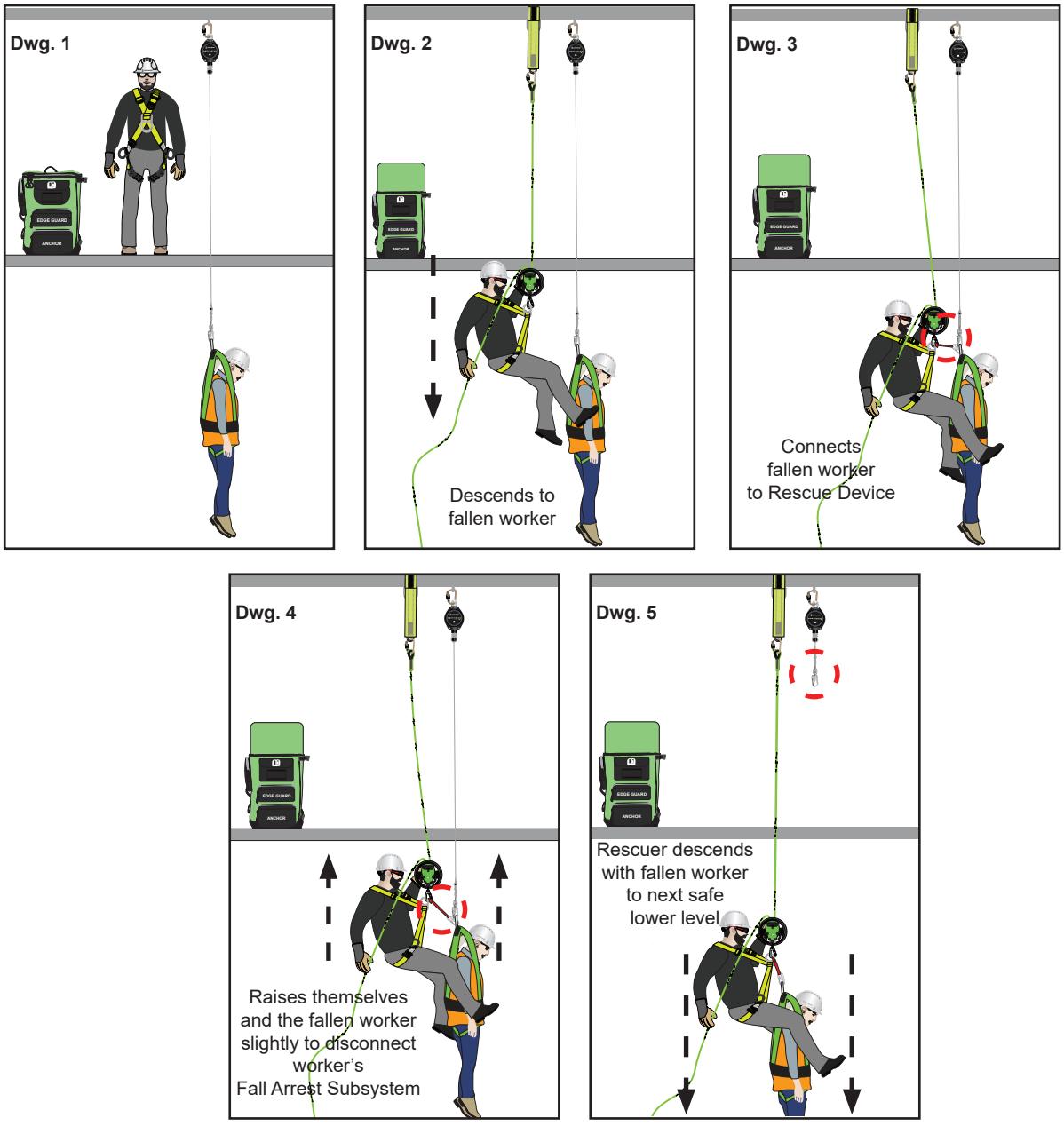
Step 6: The rescuer will then connect the worker to the decent device rope lifeline using their preferred connection method.

Step 7: With the fallen worker securely connected to the rescue device rope lifeline, the rescuer will raise both themselves and the fallen worker slightly in order to disconnect the fallen worker from their fall arrest subsystem.

Step 8: Once the fallen worker is disconnected from their fall arrest subsystem, the rescuer and worker can begin their descent.

Step 9: When the rescuer and fallen worker reach the next lower safe level, they will disconnect from the system and continue with their pre-planned rescue procedures.

FIGURE 17 - ASSISTED RESCUE / SINGLE RESCUER



11.4 INSTALLATION AND USE (Assisted Rescue-Multiple Rescuers)

Step 1: Install the rescue device in the same configuration as when performing Remote Assisted Rescue.

Step 2: The primary rescuer performing the descent connects the short end of the rope lifeline to their Front or Sternal D-ring.

Step 3: The rescuer will then initiate a controlled descent. The descent is controlled by the secondary rescuer positioned at the rescue device.
NOTE: If secondary rescuer is controlling descent with the rescue device, ensure there is adequate and clear means of communication between both rescuers. This communication ensures there is no unintentional contact with the fallen worker.

Step 4: Upon reaching the worker, the descent is stopped by the rescuer at the device.
NOTE: With a secondary rescuer at the device, the free end of the rope lifeline can be wrapped through the rope belay(s) and inserted into the rope lock to prevent further descent while the fallen worker is being secured (Figure 18, Dwg.4).

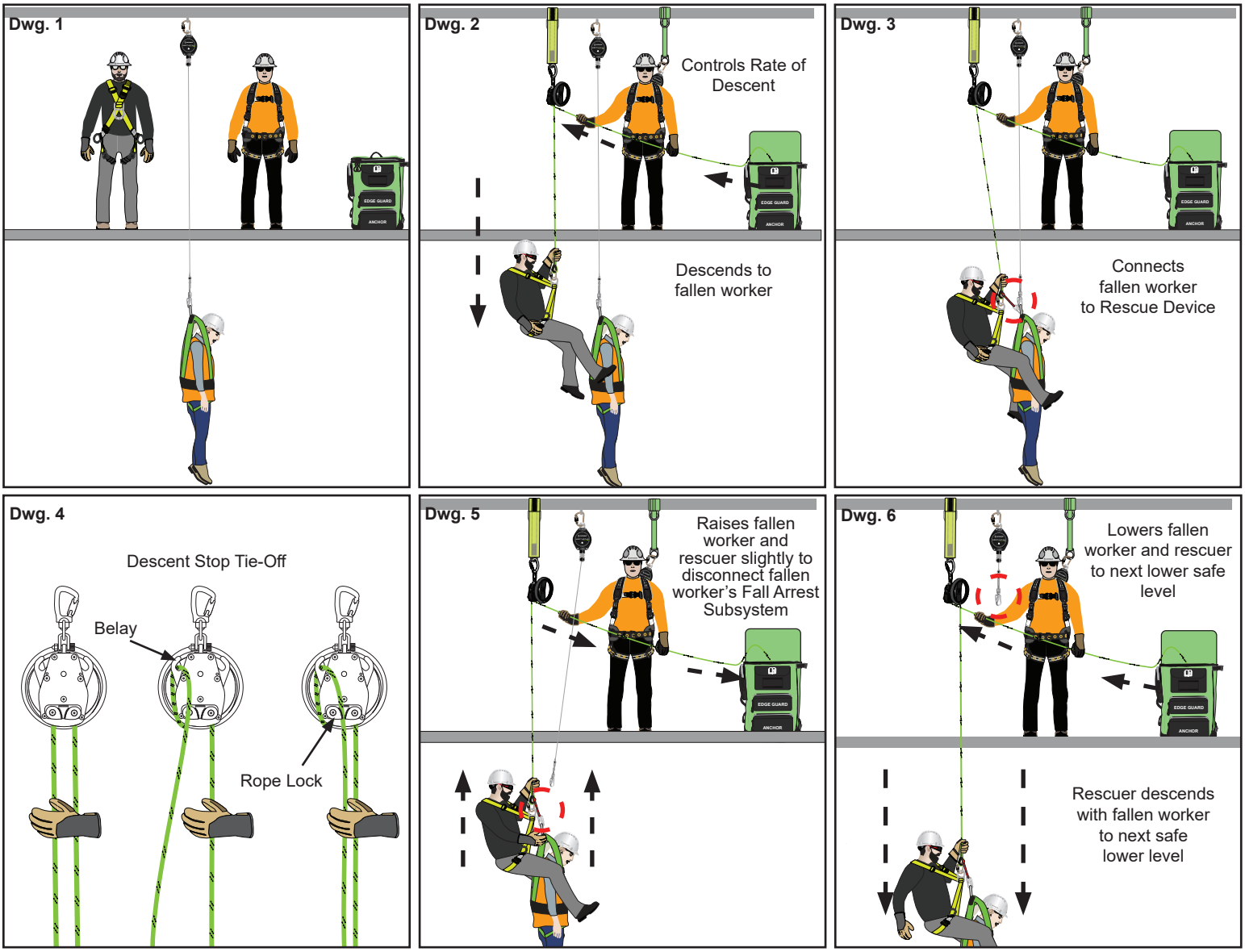
Step 5: The primary rescuer will then connect the worker to the lifeline using their preferred connection method.

Step 6: With the fallen worker securely connected, the secondary rescuer positioned at the device will raise both the primary rescuer and worker to a position which allows disengagement of the fallen worker's fall arrest subsystem.

Step 7: Once the worker is disconnected from their fall arrest subsystem, the primary or secondary rescuer can initiate descent with the fallen worker.

Step 8: When the rescuer and fallen worker reach the next lower safe level, they will disconnect from the system and continue with their pre-planned rescue procedures.

FIGURE 18 - ASSISTED RESCUE / MULTIPLE RESCUERS



11.5 AFTER A RESCUE

Following rescue or desent operations inspect the equipment for damage, log descent and/or lifting distances (Page 17), clean equipment, and repackage for future use as described in this manual. If any component of the system indicates damage IMMEDIATELY remove from service and destroy, or contact Safewaze for repair.

12.0 MAINTENANCE, CLEANING, & STORAGE

12.1 MAINTENANCE

Remove the Rescue & Descent System from use if inspection reveals an unsafe or defective condition. If unsafe or defective condition is found, dispose of the component(s) as recommended in Section 13.6. These systems ARE NOT designed for Fall Arrest or Fall Protection applications! If exposed to fall arrest forces, IMMEDIATELY remove from service.

12.2 CLEANING

Use a dry cloth to brush and clean the housing of the descender. The rope lifeline, cross arm strap, and rope protector can be cleaned with warm water and a mild soap solution. Allow components to completely dry completely before storing. DO NOT use heat. Never store any component when wet.

12.3 STORAGE

Store the Safewaze Rescue & Descent System in a cool, dry, and clean environment out of direct sunlight. Avoid areas where chemical vapors may exist. Thoroughly inspect the system after any period of extended storage.

13.0 INSPECTION

13.1 BEFORE EACH USE

User must inspect this equipment prior to each use. See Figures 19 through 21 for inspection diagrams and inspection criteria.

13.2 INSPECTION FREQUENCY

In addition to inspection prior to each use, the Rescue & Descent System must be inspected annually by a Competent Person other than the user. Severe or harsh environments may require more frequent inspections. ANSI requires any Rescue & Descent system be removed from service and recertified by the manufacturer at a minimum of every 5 years starting from the first inspection date.

13.3 RECERTIFICATION

For recertification, device must be sent to Safewaze, or a Safewaze authorized repair center along with all system components, annual Competent Person Inspection logs, and completed Inspection and Descent logs 5 years from date of first inspection.

13.4 COMPONENT INSPECTION

Equipment inspectors must be trained to look for damage to any components of the system. If inspection reveals an unsafe or defective condition, remove the system from service.

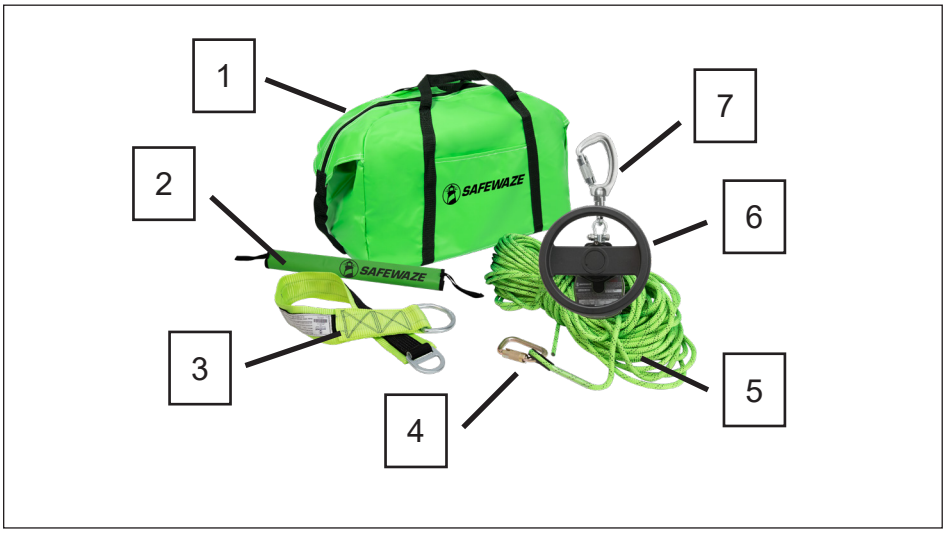
FIGURE 19 - INSPECTION DIAGRAM

System Components	
1	Bag
2	Rope protector
3	Cross arm strap
4	Rope carabiner
5	Rope
6	Evacuation/Descent device
7	Swivel carabiner

FIGURE 20 - INSPECTION DIAGRAM

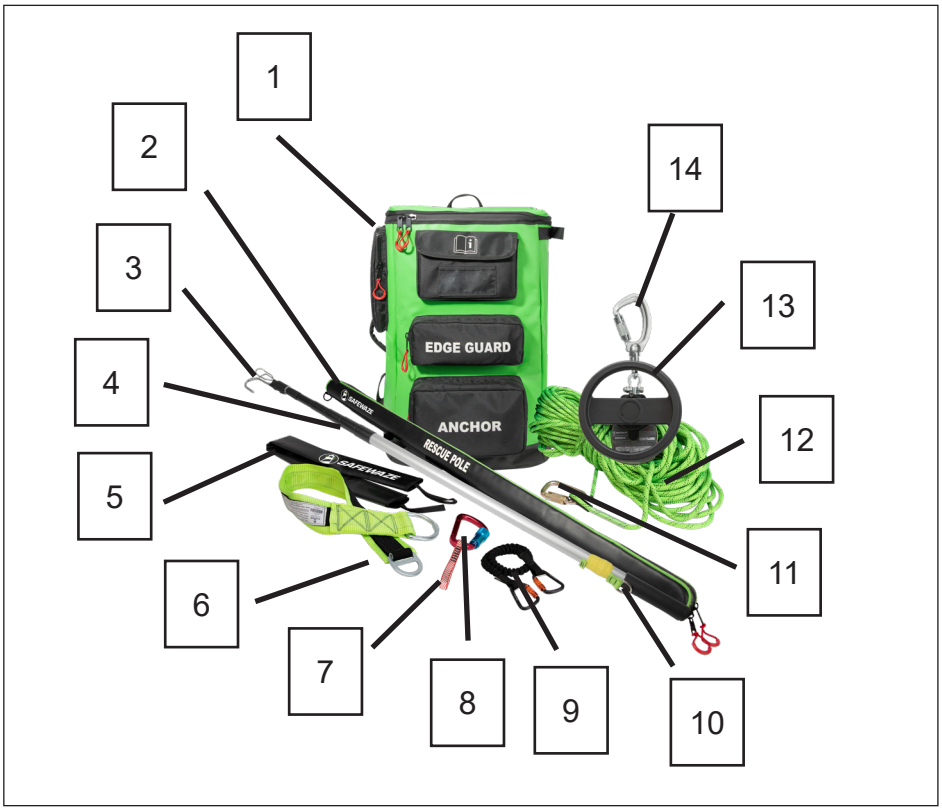
System Components	
1	Gear bag
2	Rope protector
3	Cross arm strap
4	Rope carabiner
5	Rope
6	Evacuation/Descent device
7	Swivel carabiner

FIGURE 21 - INSPECTION DIAGRAM



System Components	
1	Bag
2	Rope protector
3	Cross arm strap
4	Rope carabiner
5	Rope
6	Rescue/Descent device
7	Swivel carabiner

FIGURE 22 - INSPECTION DIAGRAM



System Components	
1	Gear bag
2	Pole bag
3	Pole Head Bracket
4	Rescue Pole
5	Rope protector
6	Cross arm strap
7	Web Connector
8	Pick-off carabiner
9	Tool Tether
10	Tool Attachment
11	Rope carabiner
12	Rope
13	Rescue/Descent Device
14	Swivel carabiner

1. Inspect the rope protector for any holes, tears, or other damage that could allow the rope lifeline to come into contact with an edge.

2. Inspect the kernmantle rope lifeline for any damage including but not limited to fraying, cuts, sheath damage, chemical exposure, heat exposure, melting, damage to end terminations, soiled condition, or buildup of paint and/or other contaminants.

3. Inspect the device body for any damage to the housing, rope lock, belays, swivel connection, missing or broken screws, bent or broken rope hooks, correct snap hook operation, excessive soil, paint, or other contaminants. During inspection, hang the device and pull 6 ft. of the rope lifeline through the assembly to ensure smooth operation. If the rope does not move freely through the device, remove from service and contact Safewaze for service or replacement.

4. Inspect the cross arm strap for excessive wear, broken stitching, hardware serviceability, wear sleeve degradation, exposure to excessive heat, welding slag, chemical contamination, or excessive soiling.

5. Inspect the carry bag for any tears, holes, or other damage that would allow components to possibly drop, or fall out of the bag.

13.5 PRODUCT LIFE

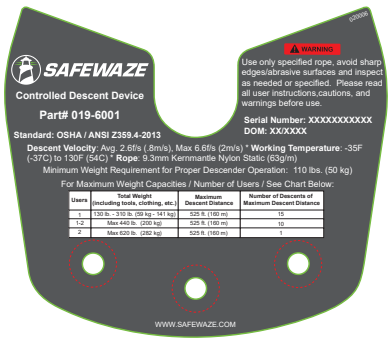
The working life of Safewaze Rescue & Descent System is determined by work conditions, care, and inspection provided. So long as the system and all components pass inspection, it may remain in service up to the date of required recertification (See Section 13.3). Do not exceed maximum cumulative descent distance. Refer to the Descent Log (Section 16) provided in this manual to record a descent, or to calculate the total cumulative descent distance on the device.

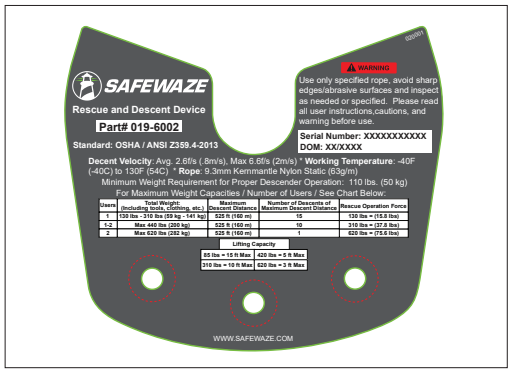
13.6 DISPOSAL

Dispose of the Rescue & Descent System if inspection reveals an unsafe or defective condition. Before disposing of the system, cut the kernmantle lifeline and cross arm strap into sections to prevent future use. Should the Rescue & Descent device be subjected to fall arrest forces, it must be immediately removed from service.

14.0 LABELING

FIGURE 21 - LABEL EXAMPLES





Part Number:
- ☐022-6053 (200 Feet)
- ☐022-6054 (300 Feet)
- ☐022-6055 (400 Feet)
- ☐022-6056 (500 Feet)
- ☐Custom_____

Standards:
ANSI: Z359.4-2013
OSHA: 1910.140, 1926.502

Weight Capacity:
Please refer to individual device labeling and manual

Components
- Descent Device
- Kernmantle Rope
- Steel Carabiner
- Rope Protector
- Cross-Arm Strap
- Rescue Gear Bag

Inspection Log

	J	F	M	A	M	J	J	A	S	O	N	D

MUST FOLLOW MANUFACTURER'S INSTRUCTIONS INCLUDED WITH EQUIPMENT.
Unit must be inspected prior to each use.
DO NOT REMOVE LABEL.

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Part Number:
- ☐022-6059 (50 Feet)
- ☐022-6060 (100 Feet)
- ☐Custom_____

Standards:
ANSI: Z359.4-2013
OSHA: 1910.140, 1926.502

Weight Capacity:
Please refer to individual device labeling and manual

Components
- Rescue Device
- Kernmantle Rope
- Steel Carabiner
- Rope Protector
- Cross-Arm Strap
- Heavy Duty Duffle Bag

Inspection Log

	J	F	M	A	M	J	J	A	S	O	N	D

MUST FOLLOW MANUFACTURER'S INSTRUCTIONS INCLUDED WITH EQUIPMENT.
Unit must be inspected prior to each use.
DO NOT REMOVE LABEL.

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15.0 INSPECTION LOG

Product is safe for use so long as it passes pre-use and Competent Person inspections and does not exceed the maximum allowed cumulative descent distance. User must inspect prior to each use. A Competent Person other than the user must complete formal inspection at least annually. ANSI requires any Rescue & Descent system be removed from service and recertified by the manufacturer at a minimum of every 5 years. For recertification, device must be sent to Safewaze, or a Safewaze authorized repair center along with all system components, annual Competent Person Inspection logs, and completed Inspection and Descent logs 5 years from date of first inspection.

INSPECTION LOG

SAFEWAZE

INSPECTION LOG
ANNUAL FORM

Inspection Date:	Inspector:	Pass/Fail:	Comments/ Corrective Action:

If equipment fails inspection
IMMEDIATELY REMOVE FROM SERVICE

16.0 DESCENT LOG

DESCENT LOG

Date of First Inspection:_____

Serial Number:_____ **Location of Use (Jobsite Name):**_____

Date	Descent Weight	Descent Distance	Descent Distance (Cumulative)**

**The table below represents the maximum cumulative descent distances based on the weight and descent distance of the user(s). If the maximum cumulative descent distance is exceeded, contact Safewaze for service.

User Weight Limits	Max. Cumulative Descent Distance
2 Users / 620 lbs. (282 kg)	525 ft. (160 m)
2 Users / 420 lbs. (191 kg)	5,250 ft. (1600 m)
1 User / 420 lbs. (191 kg)	5,250 ft. (1600 m)
1 User / 110-310 lbs. (50 kg-141 kg)	7,875 ft. (2,400 m)

If the Rescue/Descent System exceeds the maximum cumulative descent distance, it must be serviced by an authorized Safewaze repair facility. Service dates of the system must be logged in the table below.

Service Date	Service Date