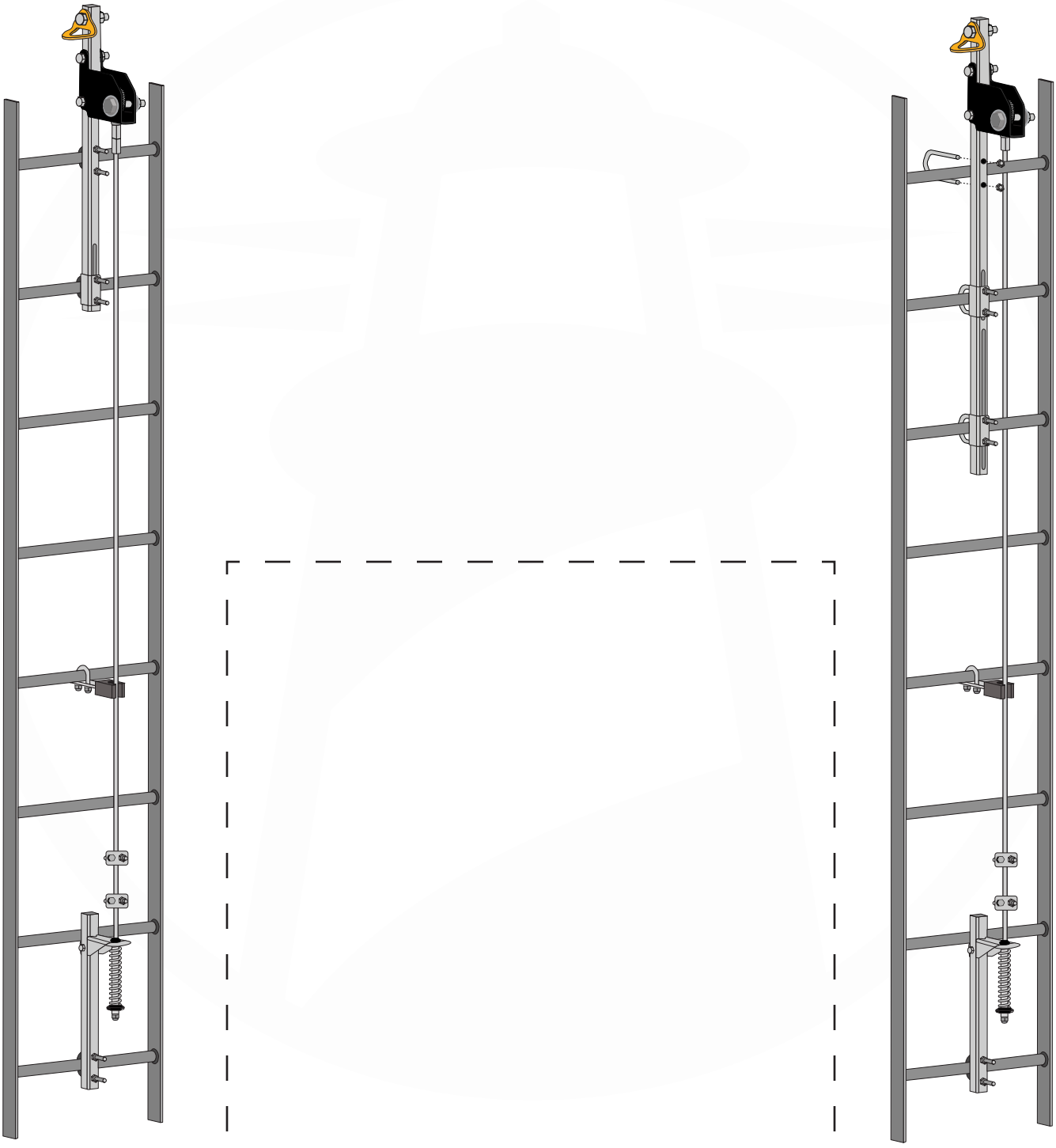
LADDER CLIMB SYSTEM
USER INSTRUCTIONS



Compliant with OSHA CFR 29 1910.66, OSHA 1926.502
ANSI Z359.1, ANSI A14.3

⚠ WARNING ⚠

These instructions must be provided to any person utilizing this equipment. The worker must read and understand the manufacturer's instructions for this, and all other components of the complete Fall Protection System. It is expected that all personnel be fully trained in the safe installation and use of this equipment. These instructions must be followed for the proper use, maintenance, and inspection of this equipment. These instructions must be kept and made available to worker's at all times. Any alteration, misuse, or use of this equipment outside the scope of the manufacturer's instructions, may result in serious injury or death. A comprehensive Fall Protection Plan must be kept on file and available to all employees at all times.

Inspect all components of this system prior to to each use and at least annually. Inspect in accordance with the user instructions. If this equipment is exposed to the forces of a Fall Arrest or Impact Force, the equipment must be removed from service and inspected by a Competent Person prior to being used again.

Do not connect to the Ladder Climb System while it is being installed. When unpacking the cable assembly, ensure that proper PPE is used as cable may rapidly uncoil when released from packing. Connections of a Full Body Harness (FBH) to the system must be made with approved connections only. The cable assembly included with this system, is the only cable constituent authorized for use with the system.

This product is part of a complete fall protection system. User's must utilize, and connect to the Safewaze Ladder Climb System with ANSI Z359 compliant restraint or Personal Fall Arrest Systems (PFAS). This product is not designed, nor should be used as a component for a Postioning, Suspension, or Restraint. A PFAS is typically composed of a Full Body Harness, Anchorage, and a Connecting Device. Connecting Devices used with the SafeWaze Ladder Climb System are Energy Absorbing Lanyards (EAL's) or a Self Retracting Device (SRD). The connection point to the FBH for use of a SafeWaze Ladder Climb System is the Sternal (Front) D-ring.

Personnel must always maintain 3 points of contact during climbing operations. If utilizing components from different manufacturer's, ensure that all components are compatible and meet all applicable standards, codes, and requirements. Before using this equipment, consult with a Competent and/or Qualified Person.

Consult your doctor if there is reason to doubt your fitness to safely absorb the shock from a fall arrest. Age and fitness seriously affect a worker's ability to withstand falls. Pregnant women or minors must not use this equipment. Failure to heed this warning may result in serious injury or death.

Never exceed the maximum allowable capacity of your fall protection equipment. Never exceed the maximum free fall distance of your fall protection equipment.

Do not use this system or any other part of a PFAS that fails pre-use or other scheduled inspections. For any questions or concerns regarding the use of this equipment, for an application not specified in this manual, contact SafeWaze technical support.

Additional precautions should be used when working in environments of high heat, electrical hazards, chemical hazards, explosive or combustible chemicals, toxic materials, sharp edges, or where equipment used above could topple onto a user below, or their fall protection equipment.

Use of a body belt for fall protection applications is not permitted. Only use an approved Full Body Harness.

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.

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

Table of Contents

1.0 Introduction & Scope of Use

The SafeWaze Ladder Climb System is to be used as part of a Personal Fall Protection System (PFAS). This Ladder System is designed to protect a worker(s) in the event of a fall while ascending or decending a fixed ladder or similar structure, with a compliant wire rope fall arrester. The SafeWaze Ladder Climb System is intended to be installed on fixed ladders, or ladder like assemblies that are part of a structure (i.e., antenna and tower structures, manways, buildings, and wood, steel, or concrete mono poles). Always wear a Full Body Harness with a Sternal (Front) D-ring attachment point that conforms with ANSI Z359.11 or relevant national standard.

2.0 Applicable Safety Standards

ANSI STANDARDS

ANSI	Z359.0	Definitions and Nomenclature Used for Fall Protection and Fall Arrest
ANSI	Z359.1	Safety Requirements for Personal Fall Arrest Systems, Subsystems, and Components
ANSI	Z359.2	Minimum Requirements for a Comprehensive Managed Fall Protection Program
ANSI	A14.3	American National Standard for Ladders - Fixed - Safety Requirements

OSHA REGULATIONS

OSHA	1910.29	Fall Protection Systems and Falling Object Protection Criteria and Parctices
OSHA	1926.1053	Stairways and Ladders

3.0 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 accredidated 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.

4.0 Product Specific Applications

Personal Fall Arrest: The SafeWaze Ladder Climb System can be used as part of a complete Personal Fall Arrest System (PFAS) for a maximum of 4 users (Part# 019-12024). The structure utilized for attachment must be capable of withstanding a load of 5,000 lbs in all directions permitted by the system.

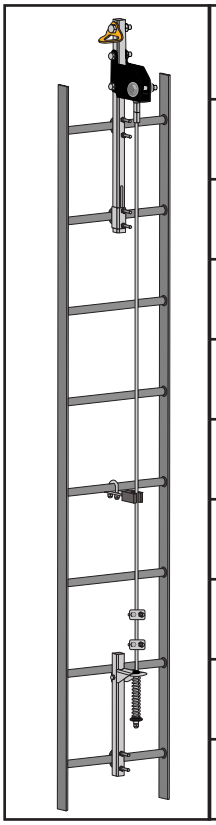
5.0 Limitations

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.

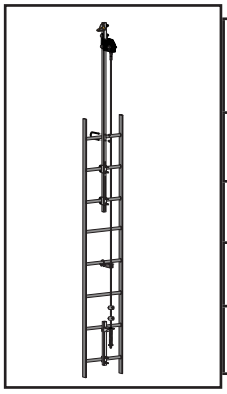
The SafeWaze Ladder Climb System is not designed, nor intended, to be installed on portable ladders. This system is designed for use on structures that primarily vertical. The system should never be used on a structure that exceeds a 15° degree angle from vertical.

Full Body Harnesses
Only Full Body Harnesses with a sternal (front) D-ring may be used with the Safewaze Ladder Climb System.
Note: Never use combinations of components or subsystems that may affect, or interfere with the safe function of each other.

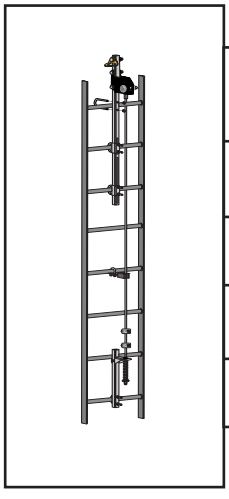
FIGURE 1 - MAX SYSTEM USER CAPACITY



Part Number	Max Users
019-12001	2
019-12002	2
019-12003	2
019-12004	2
019-12005	2
019-12006	2
019-12007	2
019-12008	2
019-12009	2



Part Number	Max Users
019-12032	2
019-12034	2
019-12036	2
019-12038	2



Part Number	Max Users
019-12041	4
019-12043	4
019-12045	4
019-12047	4

****NOTE**: Maximum User Ratings as indicated in these system charts require the use of an ANSI Z359.16 Cable Fall Arreter. If a Cable Fall Arrester is used which does not meet the ANSI requirements, then all systems are limited to the OSHA reqirements of Max. 1 user. The Number of Climbers (as defined by ANSI) for climbing Ladder Fall Arrest Systems shall be designed for a minimum of 2 simulataneous users. This is necessary to facilitate rescue. The maximum number of simultaneous users allowed on the system should be determined by a competent person based on the job site conditions and any limitations set by the manufacturer.

The following limitations must be considered prior to installing the SafeWaze Ladder Climb System:

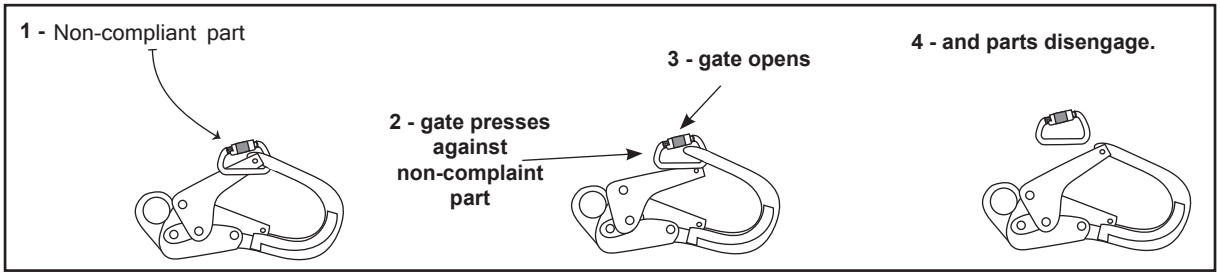
1. **Structure:** The structure to which the system is attached must be capable of withstanding the loads applied by the system in the event of a fall.
2. **System Capacity:** The maximum number of users allowed on the SafeWaze Ladder Climb System simultaneously is 2, with a maximum weight of 310 lbs per user (including clothing, tools, and equipment). System numbers 019-12041, 019-12043, 019-12045, and 019-12047 allow a maximum number of 4 users with a maximum weight of 310 lbs per user.
3. **Environmental Hazards:** Use of the SafeWaze Ladder Climb System in areas where environmental hazards exist may require additional precautions. These hazards may consist of, but are not limited to: Electrical, Chemical, Thermal,Seawater, Corrosive Agents, Explosive Gasses, Toxic Gasses, Moving Machinery, and Sharp Edges.

6.0 Compatibility Of Connections

Connectors are compatible with connecting elements when they have been designed to work together in such a way that their sizes and shapes do not cause their gate mechanisms to inadvertently open regardless of how they become oriented. Connectors (hooks, carabiners, and D-rings) must be capable of supporting at least 5,000 lbs. (22.2 kN). Connectors must be compatible with the anchorage or other system components. Do not use equipment that is not compatible. Non-compatible connectors may unintentionally disengage (See Figure 2). 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 2 - 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.

7.0 Making Connections

Snap Hooks and Carabiners must be ANSI Z359.12 compliant with a double locking gate. 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 3 for examples of inappropriate connections. Do not connect snap hooks and carabiners:

- To a D-ring to which another connector is attached.
- In a manner that would result in a load on the gate (with the exception of tie back hooks).
- In a false engagement, where features that protrude from the snap hook or carabiner catch on the anchor, and without visual confirmation seems to be fully engaged to the anchor point.
- To each other.
- By wrapping the web lifeline around an anchor and securing to lifeline except as allowed for Tie Back models.
- To any object which is shaped or sized in a way that the snap hook or carabiner will not close and lock, or that roll-out could occur.
- In a manner that does not allow the connector to align properly while under load.

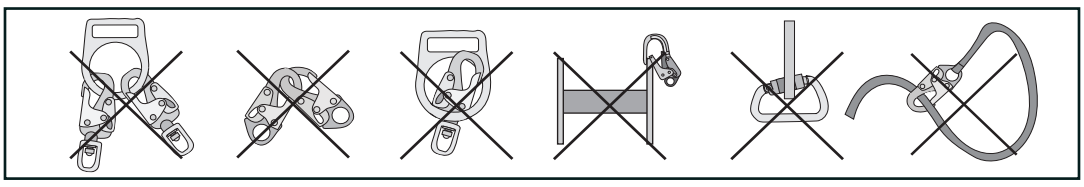
****NOTE:** Large snap hooks must not be connected to objects which will result in a load on the gate if the hook twists or rotates, unless the snap hook complies with ANSI Z359.1-2007 or ANSI Z359.12 and is equipped with a 3,600 lb (16 kN) gate. Check the marking on your snap hook to verify its compatibility.

The SafeWaze Ladder Climb System is designed for use with an ANSI Z359.16 3/8" Wire Rope Grab. The use of any other type of grab may be incompatible with the system, and could create a serious safety hazard for the user. Do not use the SafeWaze Ladder Climb System without first consulting with a Competent and/or Qualified Person at the worksite for approval. For any other questions regarding compatibility, please contact SafeWaze Technical Support

****NOTE:** ANSI Z359.1-2007 Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components, requires a Competent Person and/or a Qualified Person to "ensure that systems assembled from components and subsystems made by different manufacturers meet the requirements of the Standard."

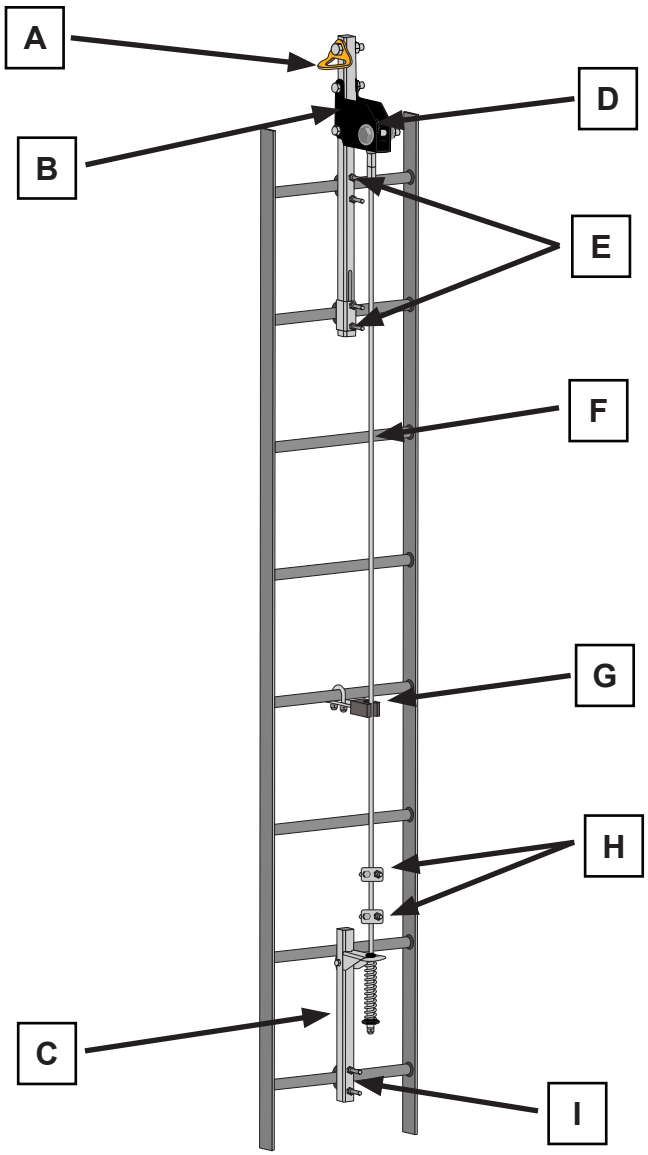
****NOTE:** Large throat snap hooks must not be connected to standard size D-rings or similar objects which will result in a load on the gate if the hook or D-ring twists or rotates, unless the snap hook complies with ANSI Z359.1-2007 or ANSI Z359.12 and is equipped with a 3,600 lb (16 kN) gate. Check the marking on your snap hook to verify that it is appropriate for your application.

FIGURE 3 - INAPPROPRIATE CONNECTIONS

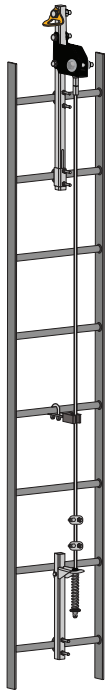


8.0 Components and Specifications

FIGURE 4 - LADDER CLIMB SYSTEM COMPONENTS



A	Anchor Point
B	Top Bracket
C	Bottom Bracket Assembly
D	Cable Attachment Point
E	Rung Clamps
F	Cable
G	Cable Stand-Off
H	Cable Fist Grips
I	Rung Clamp

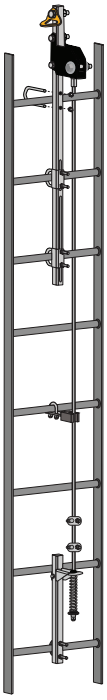


2 User Capacity

Complete System Part Number	System Length
019-12001	20 ft.
019-12002	30 ft.
019-12003	40 ft.
019-12004	50 ft.
019-12005	60 ft.
019-12006	70 ft.
019-12007	80 ft.
019-12008	90 ft.
019-12009	100 ft.

2 User Capacity (w/ 48” extension)

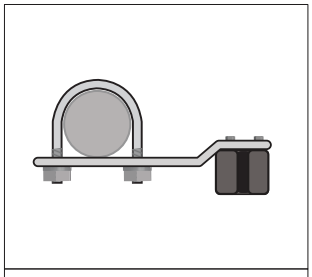
Complete System Part Number	System Length
019-12032	30 ft.
019-12034	50 ft.
019-12036	70 ft.
019-12038	90 ft.



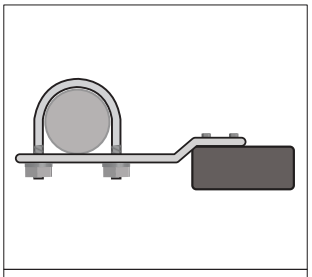
4 User Capacity

Complete System Part Number	System Length
019-12041	30 ft.
019-12043	50 ft.
019-12045	70 ft.
019-12047	90 ft.

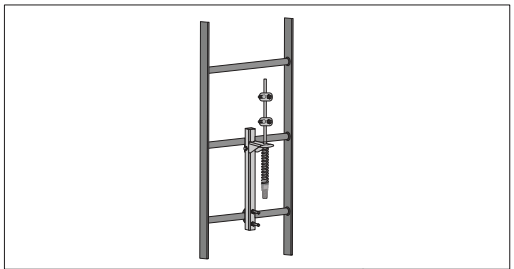
Individual Cable Assembly Part Number						
	019-12012	20 ft.	019-12016	60 ft.	019-12020	100 ft.
	019-12013	30 ft.	019-12017	70 ft.	019-12021	Custom
	019-12014	40 ft.	019-12018	80 ft.		
	019-12015	50 ft.	019-12019	90 ft.		



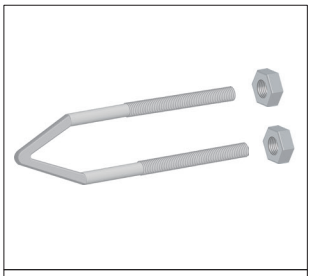
Intermediate Guide (90°)
019-12026



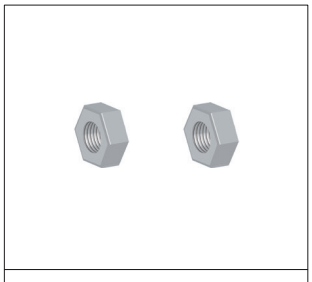
Intermediate Guide
019-12027



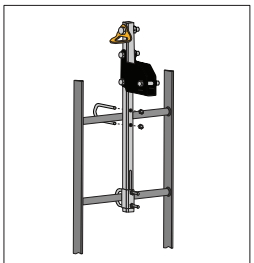
Individual Bottom Bracket Part Number (Compatible with all systems)	Max User Capacity
019-12025	4



Ladder System U-bolt
019-12028

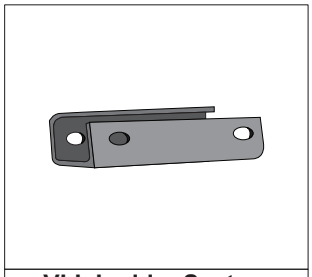


Nuts (2 pc Set)
019-12029

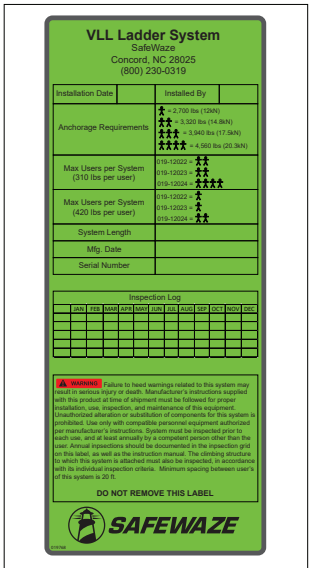


Individual Top Bracket Part Number	Max User Cap
019-12022	2

Individual Top Bracket Part Number	Max User Cap
019-12023	2



VLL Ladder System Backer Bracket
019-12030



VLL Ladder System Label
370-00004

Individual Top Bracket Part Number	Max User Cap
019-12024	4

9.0 Materials

Top and Bottom Bracket: Galvanized Steel and Stainless Steel
Cable Assembly: 3/8” 7x19 Galvanized Cable
Tensioner: Galvanized Steel Body, Stainless Steel Spring
Fist Grips: Drop Forged Steel, Hot Dipped Galvanized
Cable Stand-Off’s: Galvanized Steel Harware, Synthetic Rubber Guide
SRD Attachment Point: Forged Steel (Painted)

10.0 Structure Load Requirements

The structure to which the Ladder Climb System is attached must be capable of withstanding the total loads imposed by the system.

9.1 Static Loading: The static loads imposed on the system include the weight of the top bracket, weight of the length of cable used with the system and a Safety Factor. The following is an example of static loads imposed on the system for a 50 ft (15.24 m) system:

Top Bracket Weight = **24 lbs (10.9 kg)**
50 ft. (15.24 m) of 3/8" (9.5 mm) Galvanized Cable Weight = **13.25 lbs (6.01 kg)**

Total Static Loading: (24 lbs + 13.25 lbs) x 1.2 (Safety Factor) = 47.3 lbs

9.2 Dynamic Loading: The following are the Dynamic Loads imposed onto the Ladder Climb System per user:

One User = **2,700 lbs (12 kN)**
Two Users = **3,320 lbs (14.76 kN)**
Three Users = **3,940 lbs (17.51 kN)**
Four Users = **4,560 lbs (20.27 kN)**

9.3 Total Loading: The total load must account for the Static and Dynamic Loading indicated above for the total length of the sytem. The following is an example of the Total Loading imposed onto the structure given that the example system is 50 ft (15.24 m) in length:

Static Loading for a 50 ft. (15.24 m) system = **47.3 lbs**
Dynamic Load for Two Users = **3,320 lbs**

Total Loading = 47.3 lbs + 3,320 lbs = 3,367.3 lbs

Bottom Bracket Assembly: The bottom bracket assembly connection point must be capable of supporting the system pretension load of **350 lbs (1.6 kN)** in the direction of loading. The required bracket load may be assumed to be distributed evenly between the number of rung attachments for calculation purposes.

Total Loading of the system onto the attachment structure can be reduced by limiting the number of user's on the system.

11.0 Installation

Installation of the SafeWaze Ladder Climb System must be supervised by a Qualified Person.

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

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

The entire Safewaze Ladder Climb System, and its subsystems, must be inspected prior to each use for wear, damage, and other deterioration. All snaphooks and carabiners must be able to self-close and lock. System must be properly tensioned. No load indicators shall be deployed (See Figure 13, page 20). Damaged and other deteriorated and defective components must be immediately removed from service, in accordance with the requirements of OSHA 29 CFR 1910.66 and 1926.502.
In order to begin installation of the SafeWaze Ladder Climb System the installer needs to know the part numbers of the system, the number of Stand-Off's required, and length of the cable assembly. Inspect all components of the system prior to beginning installation to ensure no damge occurred during shipping. In the event any damage is discovered during the pre-installation inspection, contact SafeWaze for replacement guidance.

The SafeWaze Ladder Climb System is designed for easy installation onto a variety of suitable structures. For systems 50 ft. or greater in length, a cable stand-off must be used. A cable stand-off must be used every 25 ft to 30 ft on systems greater than 50 ft in length.

As a general rule, the SafeWaze Ladder Climb System should be installed from the top of the structure down.

Installation Steps:

Step 1: Install the Top Bracket onto the top two rungs of the ladder.
Step 2: Connect the cable to the Top Bracket
Step 3: Install the Cable Stand-Off's as necessary
Step 4: Install the Bottom Bracket Assembly
Step 5: Tension the Cable
Step 6: Inspect the Installation

Installation time can be reduced, and safety increased, by pre-planning the installation process.

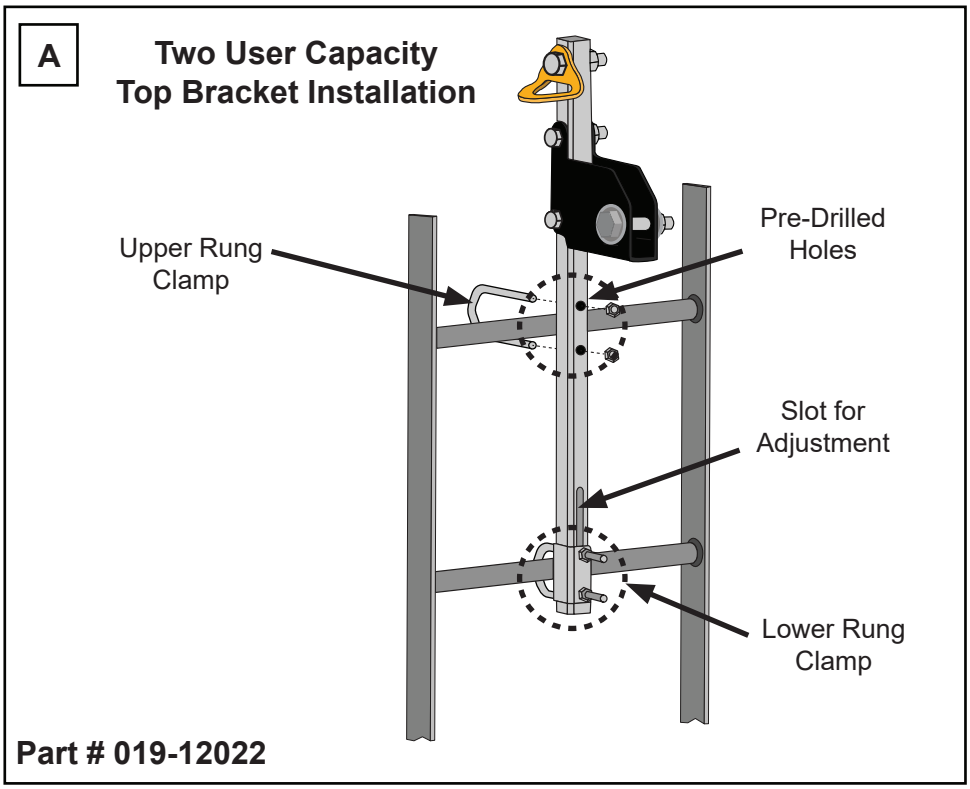
Step 1: Installation of Top Bracket
Prior to installation of the Top Bracket, a Qualified Person should determine that the structure is capable of meeting the load requirements of the system. Ensure that the Top Bracket is positioned to allow users safe access when connecting or disconnecting from the system. As a general rule, the Top Bracket is centered on the climbing structure to allow for ease of climbing. However, the bracket may be installed towards the side of the structure if necessary (See Section 10).

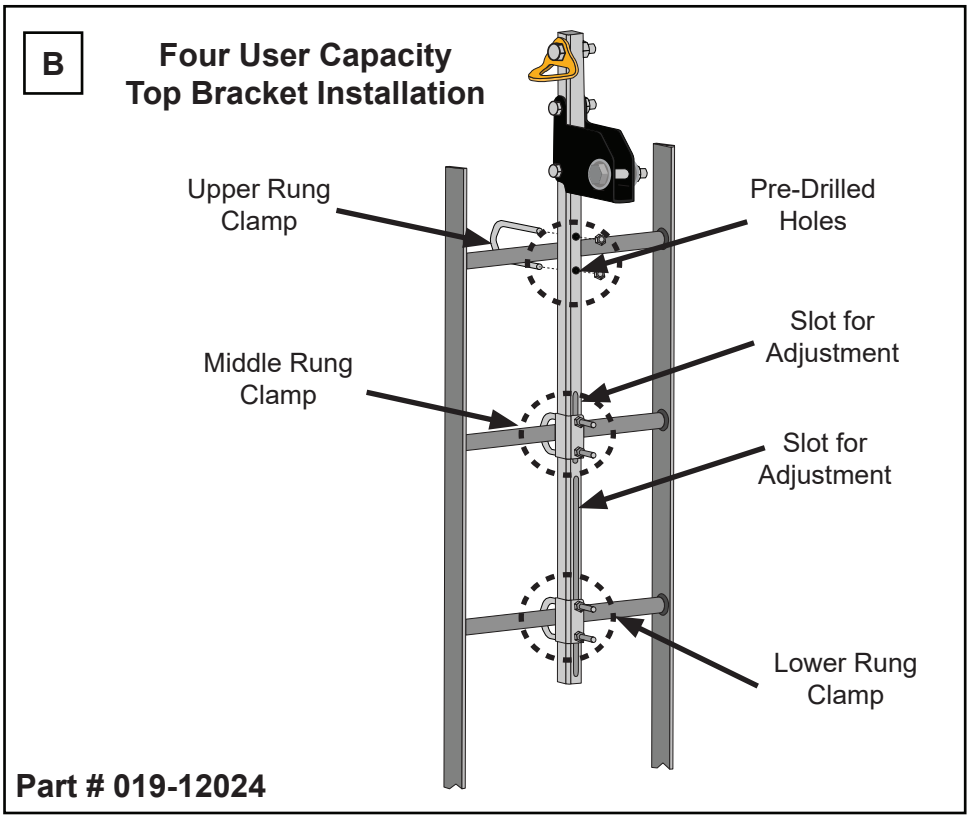
Two User Capacity Top Bracket - Part# 019-12022 (Figure 5A): Line up the pre-drilled holes on the bracket with the top rung of the climbing structure. Slide the upper rung clamp over the back of the rung and through the two pre-drilled holes in the bracket. Thread nuts onto the rung clamps and torque to 20-25 ft. lbs. The Top Bracket includes a pre-cut slot for adjustment to align the lower rung clamp with the lower rung. Position the lower rung clamp on the lower rung using the pre-cut slot, install the nuts onto the clamp, and torque to 20-25 ft. lbs.

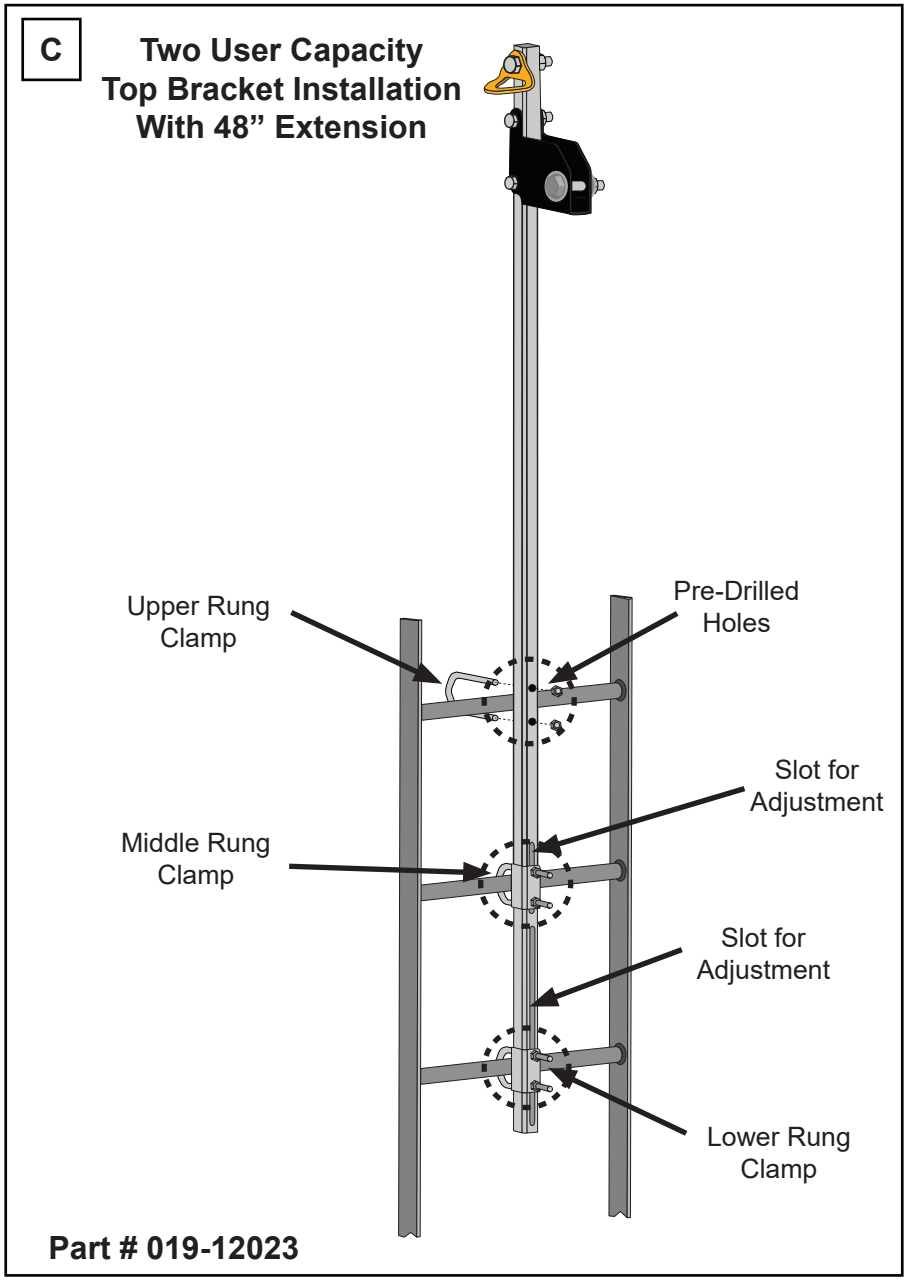
Two User Capacity Top Bracket with 48” Extension - Part# 019-12023 (Figure 5C): Line up the pre-drilled holes on the bracket with the top rung of the climbing structure. Slide the upper rung clamp over the back of the rung and through the two pre-drilled holes in the bracket. Thread nuts onto the rung clamps and torque to 20-25 ft. lbs. The Top Bracket includes pre-cut slots for adjustment to align the middle and lower rung clamps with their corresponding rungs. Position the middle and lower rung clamps on the rungs,install the nuts onto the clamps, and torque to 20-25 ft. lbs.

Four User Capacity Top Bracket - Part# 019-12024 (Figure 5B): Line up the pre-drilled holes on the bracket with the top rung of the climbing structure. Slide the upper rung clamp over the back of the rung and through the two pre-drilled holes in the bracket. Thread nuts onto the rung clamps and torque to 20-25 ft. lbs. The Top Bracket includes pre-cut slots for adjustment to align the middle and lower rung clamps with their corresponding rungs. Position the middle and lower rung clamps on the rungs,install the nuts onto the clamps, and torque to 20-25 ft. lbs.

FIGURE 5 - TOP BRACKET INSTALLATION







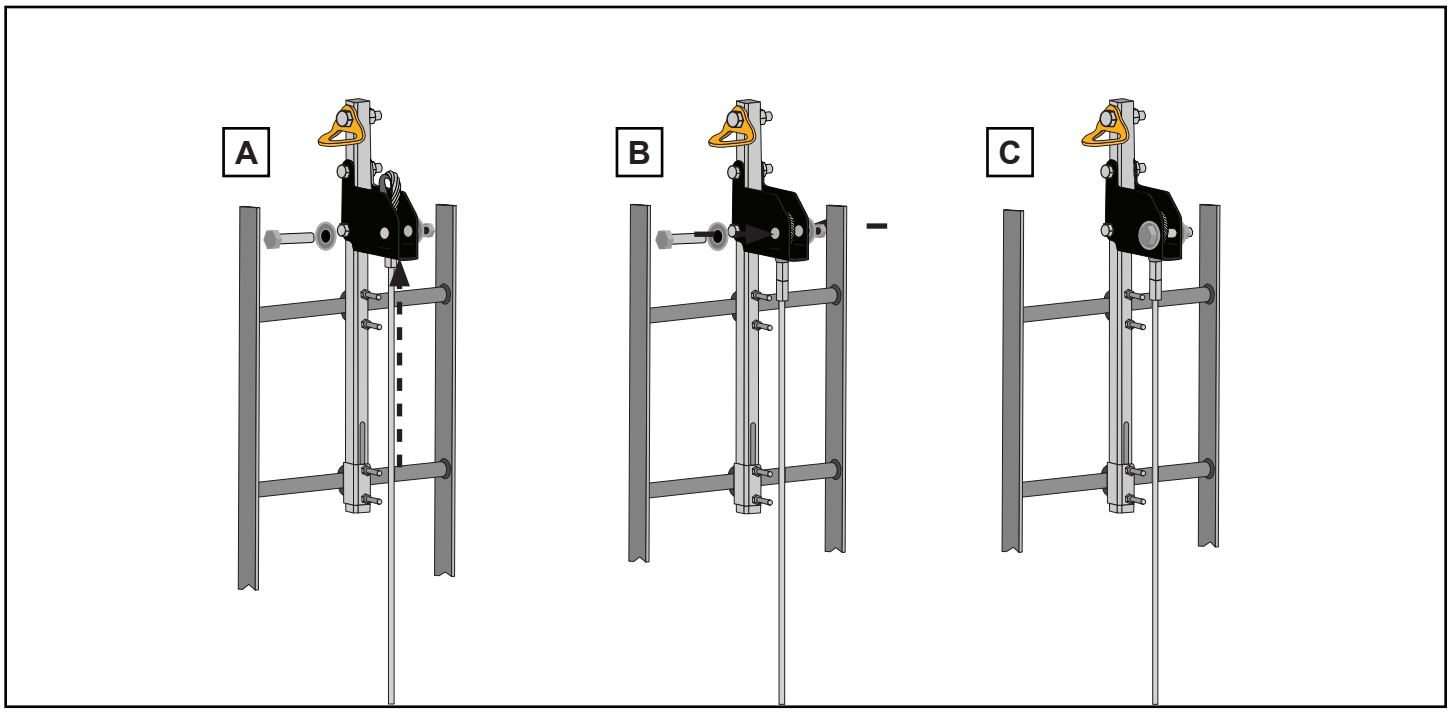
Rung Spacing and Diameter Compatibility:	
Spacing	9” - 12.25” (200mm - 310mm)
Cylindrical Rung	0.5” - 1.6” (13mm-40mm) diameter
Square Rung	0.5” - 1.6” (13mm-40mm) diameter
Diamond Rung	0.5” - 1.6” (13mm-40mm) height
Angle Iron	0.5” - 1.6” (13mm-40mm) leg height
Rectangular Rung	0.5” - 1.6” (13mm-40mm) height, 0.5” - 1.9” (13mm-48mm) width

Step 2: Connect the Cable to the Top Bracket

Prior to connecting the Cable Asembly to the Top Bracket, take the cable and uncoil it on ground in a clean area and inspect for any damage. If any shipping damage is found on the Cable Assembly, DO NOT USE.

To connect the cable to the Ladder Climb System, first remove the Cable Connection Bolt from the Top Bracket Assembly (See Figure 6A). Insert the thimble end of the cable through the pre-cut slot in the bottom of the Top Bracket Assembly (See Figure 6A). Align the thimble end of the Cable Assembly within the Top Bracket and re-insert the Cable Connection Bolt through the Top Bracket and the thimble end of cable. Thread nut onto the Cable Connection Bolt and tighten to 40 to 45 ft-lbs (See Figure 6B & 6C).

FIGURE 6 - CONNECT CABLE TO TOP BRACKET



Step 3: Install Cable Stand-Off's

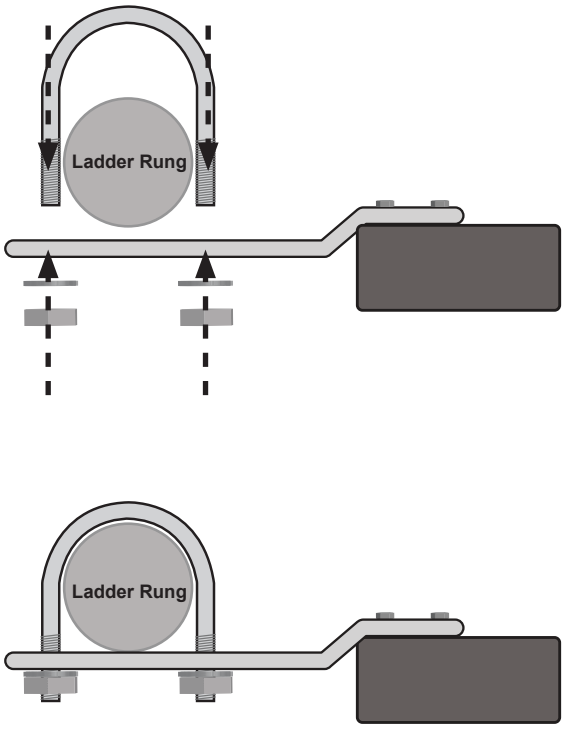
The Ladder Climb System Cable Stand-Off's are designed to prevent abrasion of the Cable Assembly on ladder rungs and to prevent excessive movement of the cable from side to side while the user is climbing. They can also be used if high winds are prevalent at the structure location to reduce harmonic vibration on the cable assembly. The Stand-Off's should be installed every 25-30 ft. along the cable between the Top and Bottom Brackets. See Figure 7A & 7B for typical installation. In instances where high winds may be prevalent, Stand-Off's that are oriented in an "L" shape can be installed. The "L" type Stand-Off's should be installed in a interval orientation to the cable (left and right) as the example indicates in Figures 7C & 7D.

FIGURE 7 - INSTALL CABLE STAND-OFF'S

A

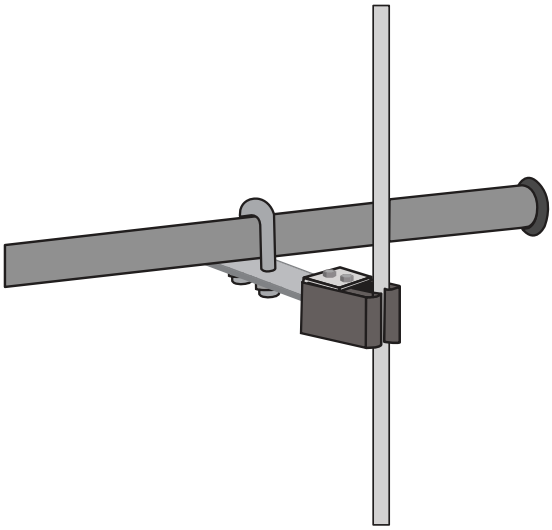
Installation (Side View)

Part# 019-12027



B

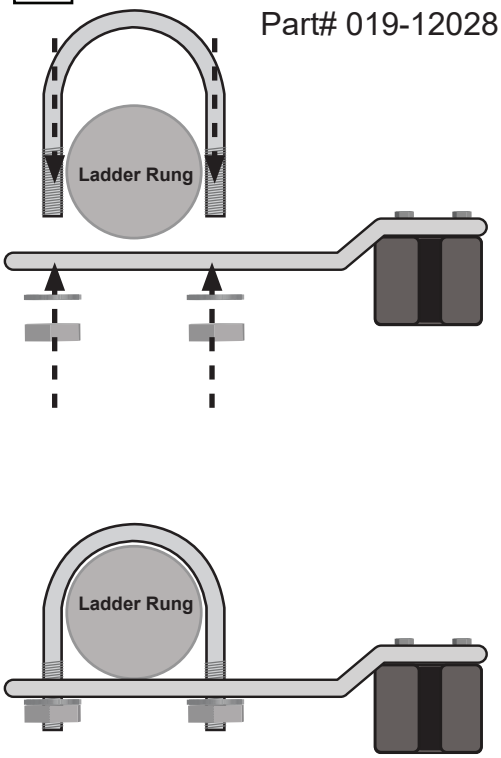
Installation
(As installed on rung)



C

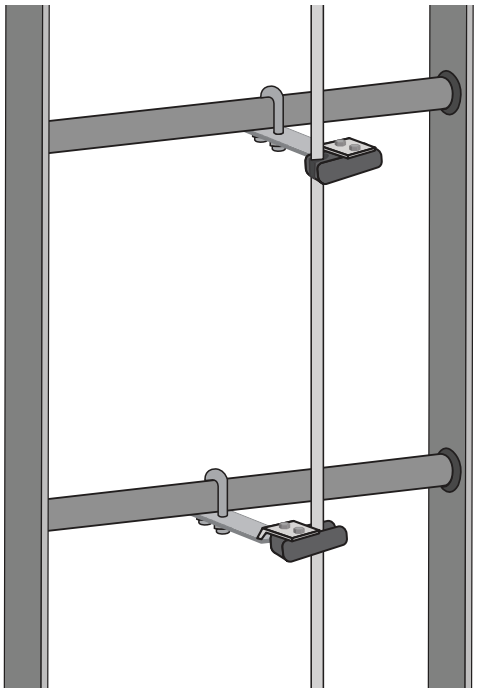
Installation (Side View)

Part# 019-12028



D

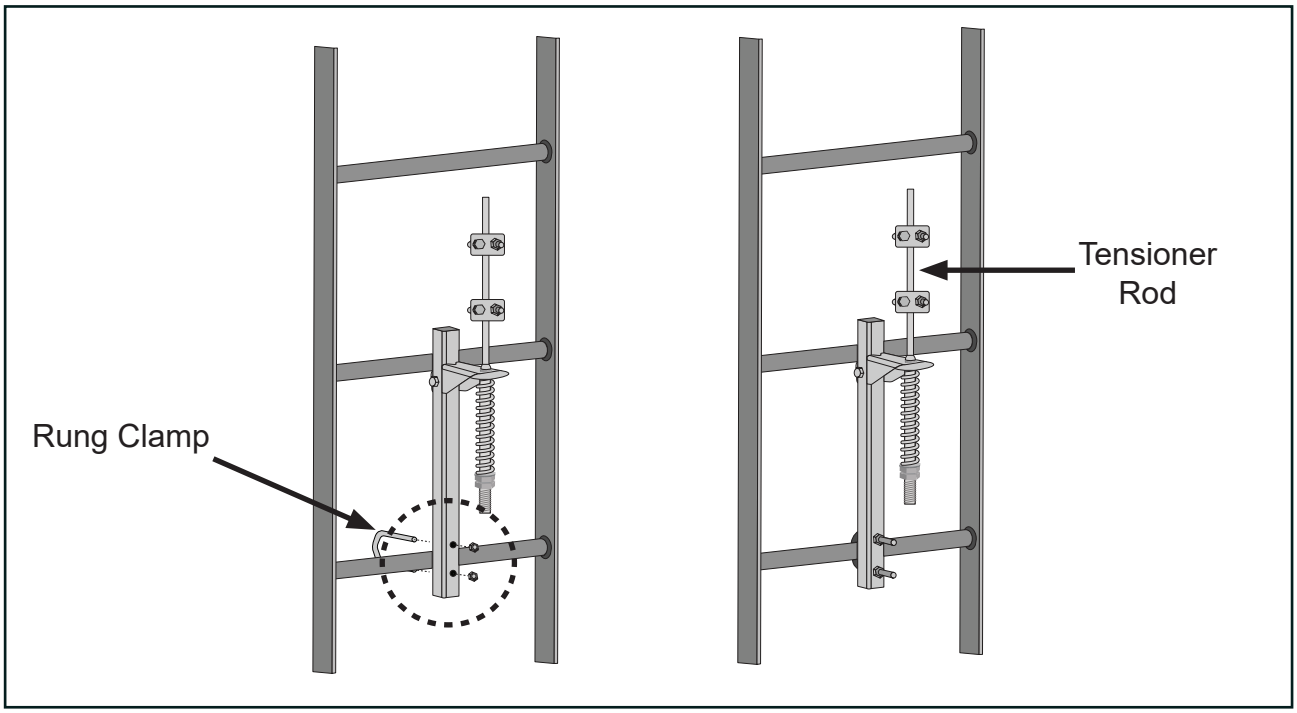
Installation
(As installed on rung)



Step 4: Install Bottom Bracket Assembly

Align pre-drilled holes on the bracket with the bottom rung of the climbing structure. Slide the rung clamp over the back of the rung and through the two pre-drilled holes in the bracket (See Figure 8). Thread nuts onto the rung clamp. Tighten the rung clamp to 20-25 ft-lbs.

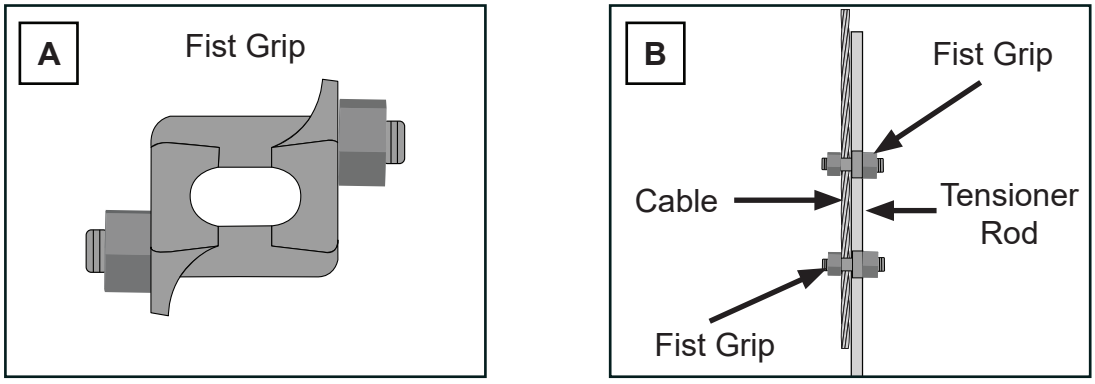
FIGURE 8 - BOTTOM BRACKET INSTALLATION



Step 5: Tension the Cable

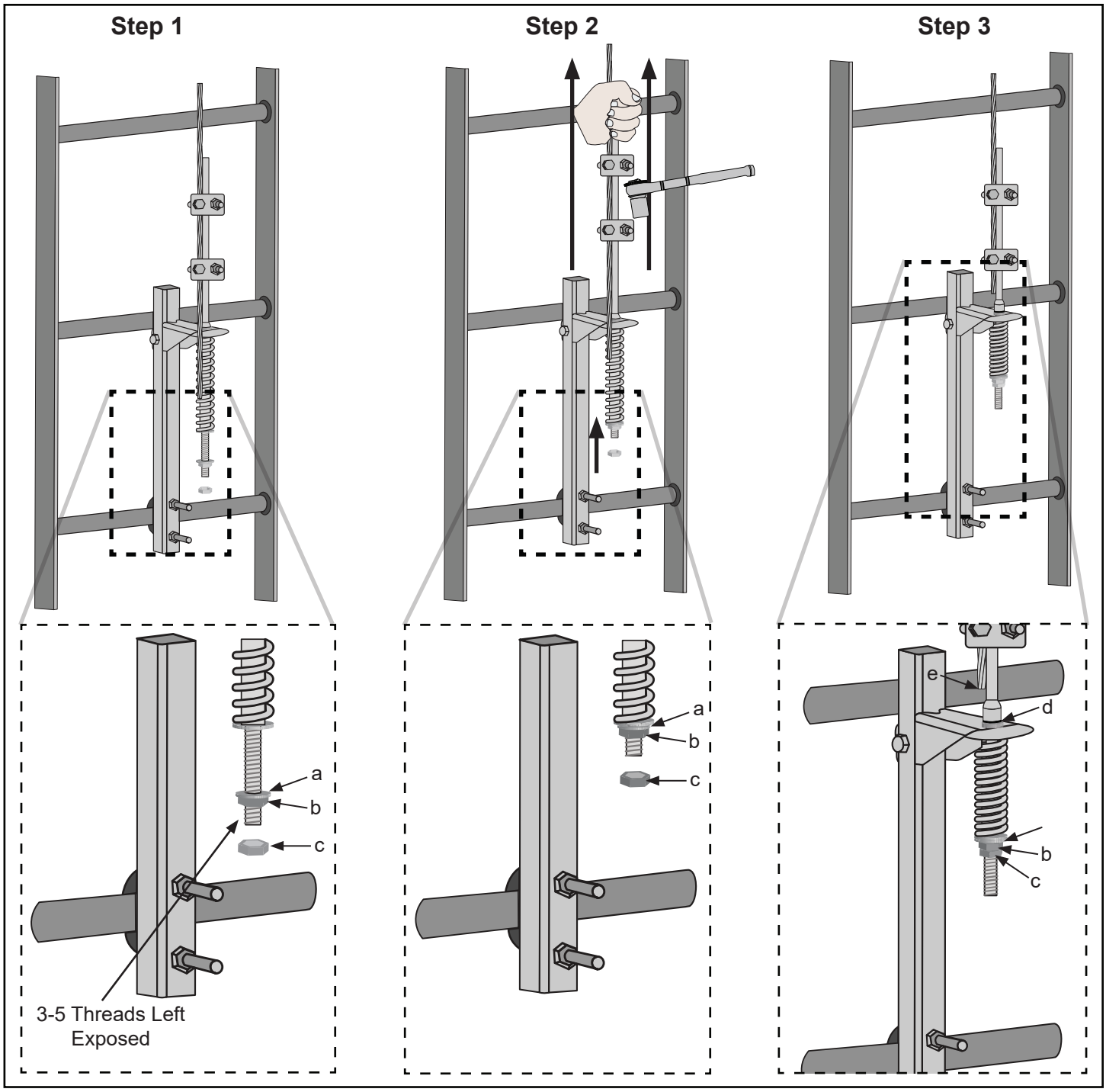
Loosen the cable fist grips to attach the cable assembly to the tensioner rod on the Bottom Bracket assembly. Insert cable through fist grips, remove excess slack from the system by hand, but do not yet fully re-tighten fist grips (See Figure 9A & 9B).

FIGURE 9 - ATTACH CABLE TO TENSIONER ASSEMBLY



Slide washer (a) onto tensioning assembly. Thread the tensioning nut (b) onto tensioner until approximately 3 to 5 threads are exposed below the nut (See Figure 10 - Step 1). Pull up on Tension Assembly until washer (a) contacts bottom of spring. Ensure excess cable slack is again removed from system and torque fist grips to 35 ft-lbs. (See Figure 10 - Step 2). Tighten tensioning nut (b) on tensioner until 1/2” of tension indicator (d) is visible or cable is taut. Tighten locking nut (c) until snug to tensioning nut (b). Cut excess slack off end of cable (e) (See Figure 10 - Step 3).

FIGURE 10 - TENSION THE CABLE



Step 6: Inspect the Installation
Affix the installation and inspection label in a prominent location on the structure (See Section 14 for example Labels).
Before installing the label mark the following:

- Installation Date
- Installer
- Maximum Number of Users per system
- System Length

After installation, the installer must inspect the system as follows:

- Ensure all fasteners are torqued to proper levels as per instructions
- Verify proper tension of the cable assembly and connection to bottom bracket
- Ensure all cable assembly components are installed as per instructions
- Visually inspect the cable assembly to confirm it does not abrade at any point on climbing structure
- Confirm that the system information is recorded on the label

12.0 System Use

After installation, labeling, and inpsection of the system as defined in Section 12.0, the SafeWaze Ladder Climb System is ready for use.

User's of this system must be trained in it's use, and must read and understand all instructions provided with the system at time of shipment.

PPE must be utilized by all user's. This should include, but is not limited to, eye protection, hard hat, appropriate footwear, gloves, and any other equipment deemed necessary by the Competent Person onsite.

A Full Body Harness (FBH) equipped with a Sternal (Front) D-ring, is required for use of this system.

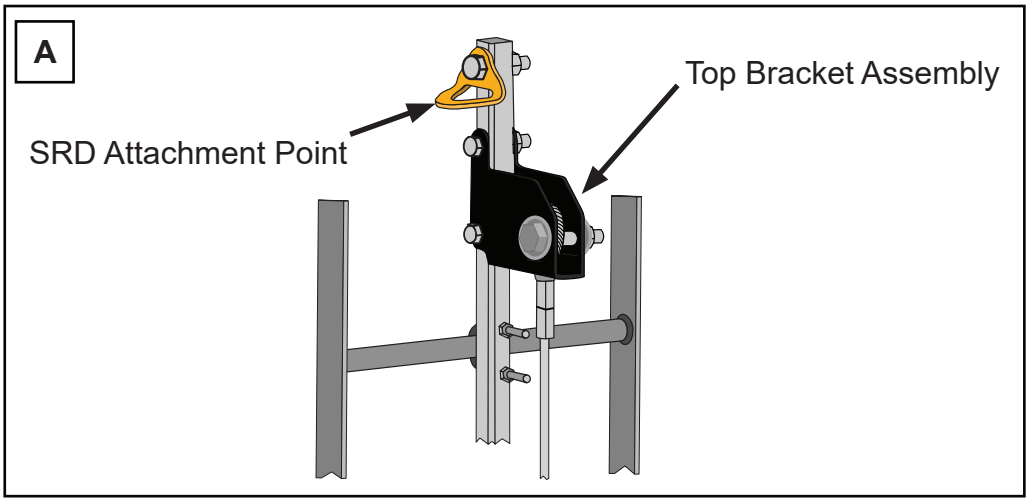
A 3/8" wire-rope grab is required in order to safely uitize the system.

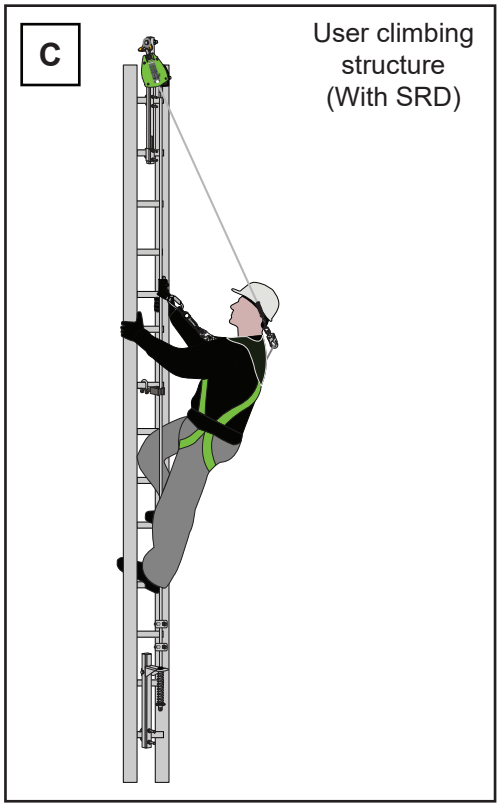
Attach the 3/8" wire-rope grab to the cable assembly prior to beginning any climing of the structure.

Once attached to the cable assembly, the user can begin climbing the structure. The user should always ensure that the wire-rope grab is as high as possible on the cable assembly, relative to their body position.

SRD Use with the Ladder Climb System System: The SafeWaze Ladder Climb System is equipped with an anchorage point on the Top Bracket Assembly for connection (See Figure 11A).An ANSI rated SRD can be left in place on the system if desired. If left in place once attached to the system, use of a tag line is recommended to prevent unnecessary wear on the main spring assembly of the SRD.

FIGURE 11 - SRD ATTACHMENT POINT

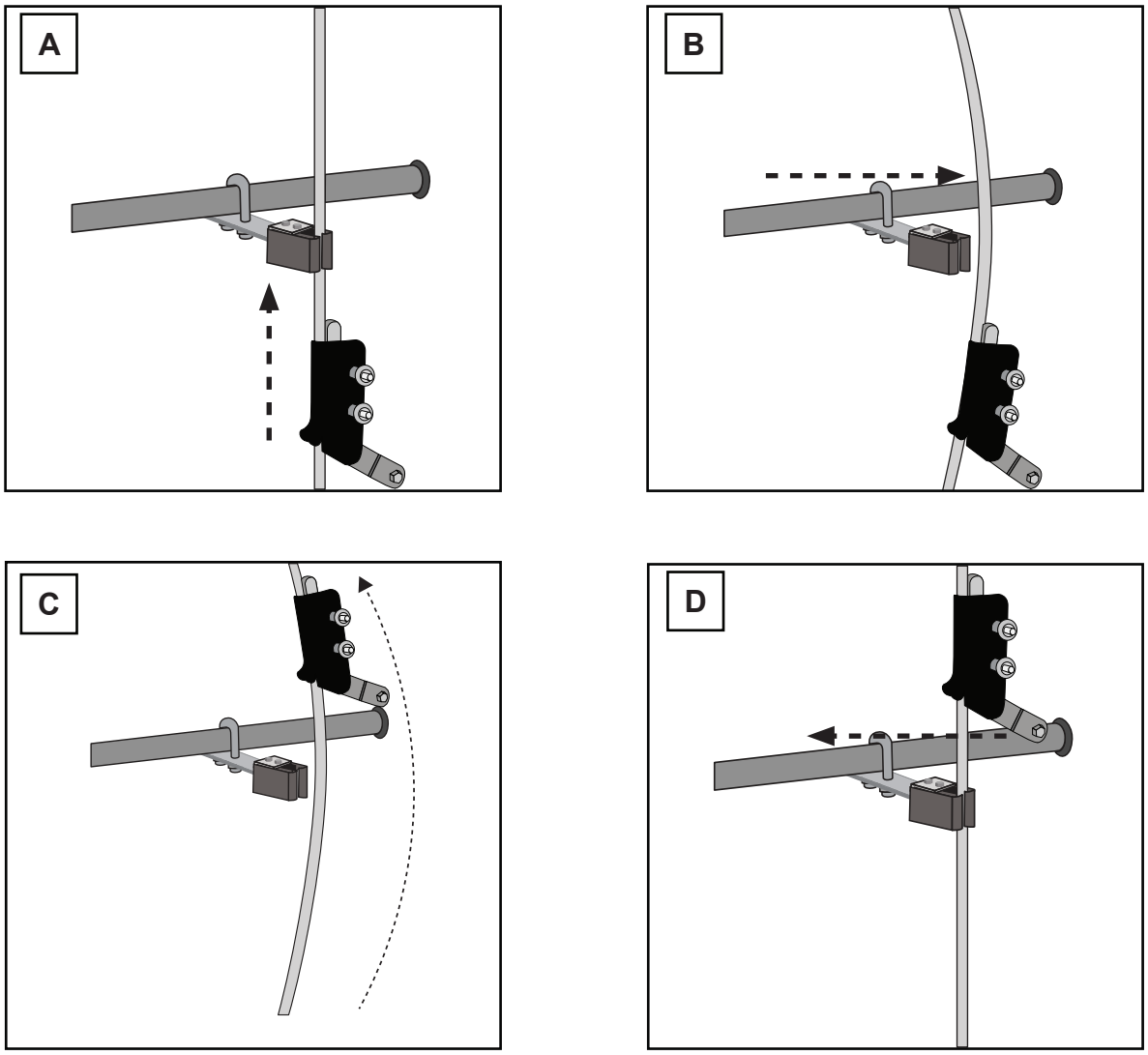




**NOTE: A Qualified Person needs to determine if an SRL anchored to the top of the system is suitable for use, as the anchor point is rated at 3,600 lbs. rather than 5,000 lbs.

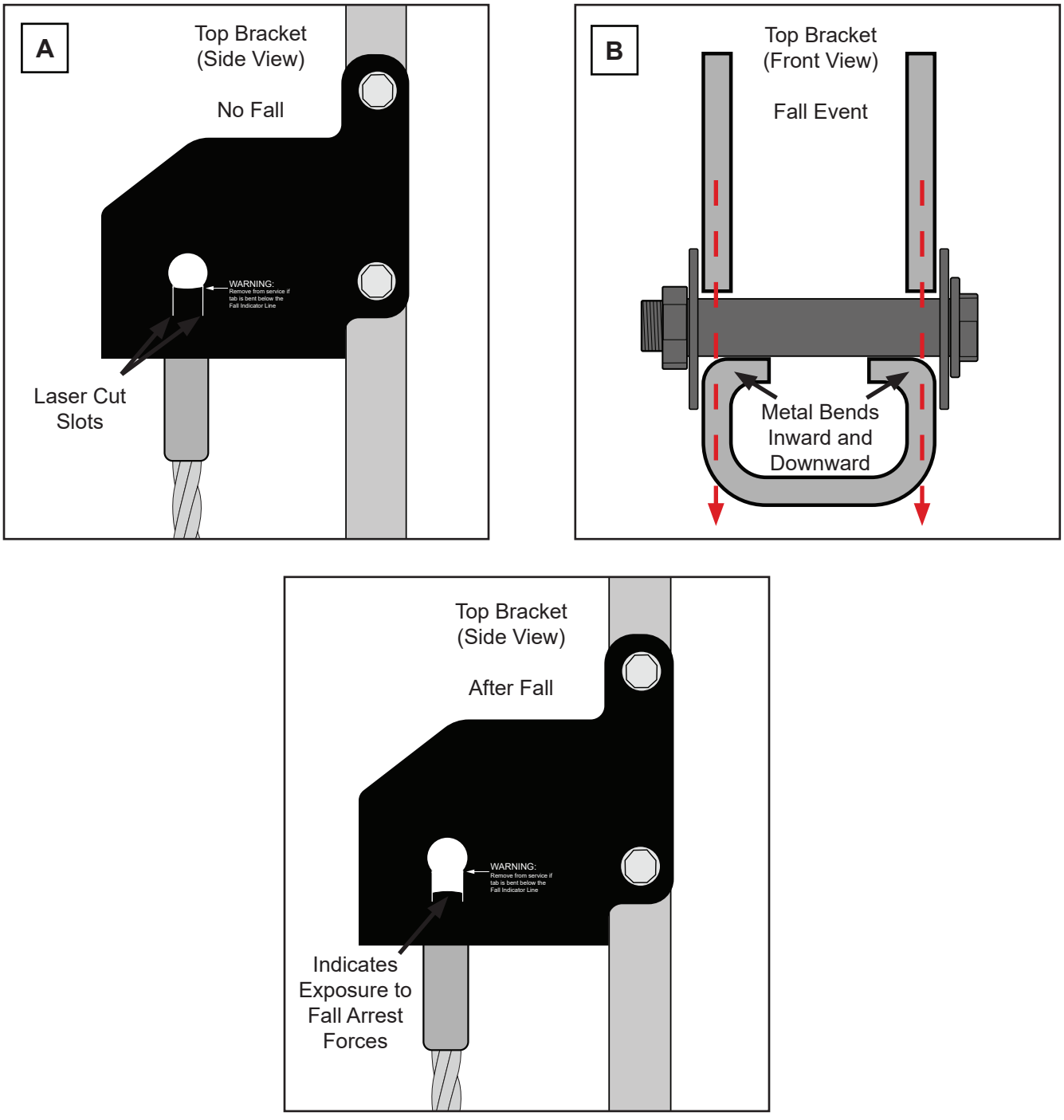
Operation of Cable Grab around Stand-Off's: If the system is of sufficient length to have required the installation of Cable Stand-Off's, the user must manually manipulate the Cable Assembly in order to "pass" the Stand-Off (See Figure 12A).This is accomplished by the user pulling out slightly on the cable assembly (See Figure 12B). This will temporarily disengage the cable from the from the Stand-Off which allows the wire-rope grab to "pass" by the Stand-Off (See Figure 12C). Once the wire-rope grab has passed the Stand-Off, the user must push slightly on the cable to ensure that it is once again held in place by the Stand-Off (See Figure 12D). DO NOT attempt to disconnect the wire-rope grab from the Cable Assembly at any time during climbing operations. Disconnection of the wire-rope grab from the Cable Assembly during climbing can result in serious injury or death.

FIGURE 12 - PASSING CABLE STAND-OFF'S



Energy Absorption/Fall Indicator: The Safewaze Ladder Climb System Top Bracket Assembly is designed to absorb fall arrest forces should a fall on the system occur. The Top Bracket Assembly has laser cut slots on each side of the assembly, at the cable connection point (See Figure 13A). In the event of a fall, the slots allow the metal to deform inward and downward to absorb fall arrest forces (See Figure 13B). This deformation of the metal indicates that the system has been exposed to fall arrest forces. It this deformation is present during inspection, DO NOT use the system.

FIGURE 13 - ENERGY ABSORPTION / FALL INDICATOR



13.0 Inspection and Maintenance

Inspection
Inspect the device and components for corrosion and/or damage.
Check all harware for signs of damge or distortion.
Inspect cable for cuts, corrosion, heat/welding damage, birdcaging or other defects.
Ensure proper torque of all fasteners.

Frequency
All components of the SafeWaze Ladder Climb System must be inspected prior to each use, and annually by a “competent person” (other than the user), as defined by OSHA.

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

Maintenance
Any SafeWaze Ladder Climb System components requiring maintenance must be tagged “unusable” and removed from service.

Cleaning maintenance may be performed by the user.

If the cable assembly becomes heavily soiled with dirt, oil, grease, paint, etc..., it may be cleaned with warm soapy water. Dry the assembly with a clean dry cloth after cleaning. Do not use forced air heat to dry. Do not use corrosive or caustic chemicals that could damage the cable assembly.

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

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

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

14.0 Labels

Ladder Climb System

SafeWaze
Concord, NC 28025
(800) 230-0319

Installation Date		Installed By	
Anchorage Requirements		1 = 2,700 lbs (12kN) 2 = 3,320 lbs (14.8kN) 3 = 3,940 lbs (17.5kN) 4 = 4,560 lbs (20.3kN)	
Max Users per System (310 lbs per user)		019-12022 = 2 019-12023 = 2 019-12024 = 4	
Max Users per System (420 lbs per user)		019-12022 = 1 019-12023 = 1 019-12024 = 2	
System Length			
Mfg. Date			
Serial Number			

Inspection Log

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

WARNING Failure to heed warnings related to this system may result in serious injury or death. Manufacturer's instructions supplied with this product at time of shipment must be followed for proper installation, use, inspection, and maintenance of this equipment. Unauthorized alteration or substitution of components for this system is prohibited. Use only with compatible personnel equipment authorized per manufacturer's instructions. System must be inspected prior to each use, and at least annually by a competent person other than the user. Annual inpsections should be documented in the inpsection grid on this label, as well as the instruction manual. The climbing structure to which this system is attached must also be inspected, in accordance with its individual inspection criteria. Minimum spacing between user's of this system is 20 ft.

DO NOT REMOVE THIS LABEL

SAFEWAZE

019768

15.0 Inspection Log

DATE	CONDITION OF SYSTEM	INSPECTED BY:

WARRANTY

SafeWaze
225 Wilshire Ave SW
Concord, NC 28025

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

Web: safewaze.com