



Pole Mount Cable Safety Climb System

CONFORMS TO THE FOLLOWING SPECIFICATIONS & RECOMMENDATIONS:

- ANSI Z359.16
- OSHA 1910/1926
- TIA-EIA 222 H



TTWG-500-BSEN Patented



RED INDICATOR

- 3/8" diameter cable system
- Meets ANSI requirements
- Automatic hands-free climbing
- Custom Pole Mount systems available
- Proudly Made in the USA

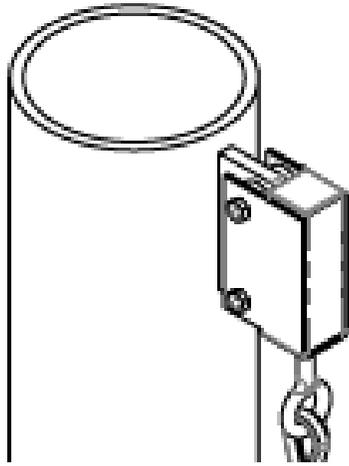
Options include but are not limited to:

- Monopole mount (galvanized)
- Monopole mount with galvanized components and stainless steel rope
- Monopole mount with stainless steel components and wire rope

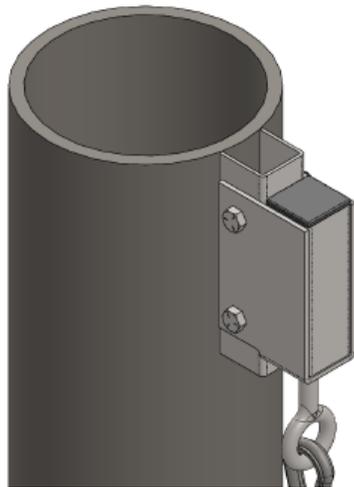


When your life depends on it.... choose double strength,
American made Tuf-Tug Safety Products

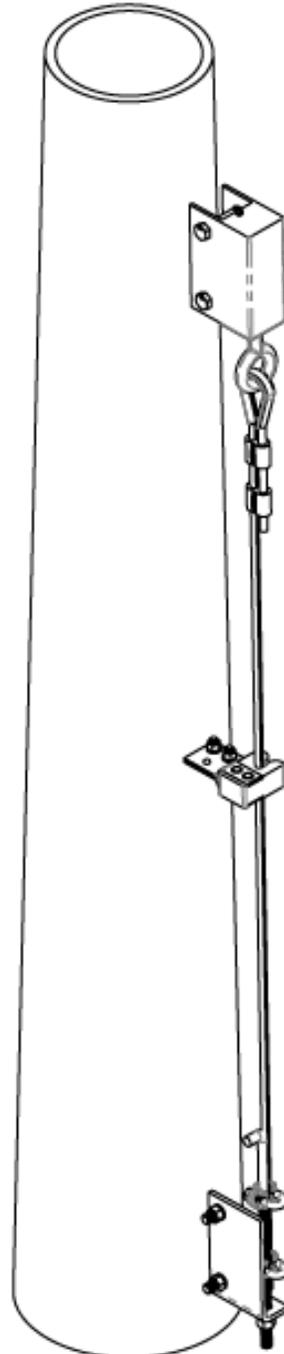
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Vertical tab mount
(includes spacer sleeves)



Channel mount



WARNING! YOU MUST READ AND FULLY UNDERSTAND OR HAVE THESE INSTRUCTIONS EXPLAINED TO YOU BEFORE USING THIS EQUIPMENT. FAILURE TO OBSERVE THE LIMITATIONS, CAUTIONS AND WARNINGS IN THESE INSTRUCTIONS COULD RESULT IN SEVERE PERSONAL INJURY OR DEATH.

Equipment users must be fully trained as a competent climber and conversant with all regulatory requirements applicable to the workplace in which the fall protection equipment is to be used. If in doubt, contact your local OSHA office for clarification. These instructions are not a substitute for a formal climbing and Fall Protection Training program. Such training should include information about local circumstances, rules and regulations applicable to the work situation, a hands-on opportunity to learn how to wear and attach equipment properly, instructions about adequate anchor points and proper techniques for securing and connecting lanyards, drop lines or lifelines, and guidance and demonstration on how to inspect and maintain the equipment.

System Requirements: Tuf-Tug Cable Safety Climb Systems are designed to meet the performance requirements of OSHA/ANSI for personnel fall arrest on fixed ladders. It utilizes a 3/8” wire rope with factory swaged sleeves to provide an anchorage capable of maintaining a min. 5,000 lb. tensile load. An impact attenuator is incorporated in the anchor head to help dampen any extreme shock loads that may occur as a result of a fall. Cable stand offs are provided with systems over 25 ft. to stabilize and maintain the cable in a good operable condition. Base anchor bracket is supplied with a line adjustment mechanism for a 220 lb. – 420 lb. system tension load.

NOTE: This cable safety climb system is intended to be used as part of a complete personal fall protection system. All components, subsystems and connectors should be compatible and meet the appropriate ANSI/OSHA requirements for the intended application. Substandard or non-approved components could compromise the reliability of the system and jeopardize the safety of the user. **USE ONLY TUF-TUG SUPPLIED OEM COMPONENTS TO ASSEMBLE THE COMPLETE CABLE SAFE CLIMB SYSTEM. DO NOT ATTACH TO OTHER MANUFACTURER’S, NON-APPROVED SAFE CLIMB MOUNT BRACKETS TO TUF-TUG CABLE AND HEAD ASSEMBLY. ALTERING SYSTEM DESIGN WILL VOID ALL CLAIMS AND WARRANTY.** The Tuf-Tug fall arrestor (TTWG-500-BSEN) and climbers/positioning full body harness (TTFBH-C/P), should be used in conjunction with the cable safety climb system to assure maximum reliability.

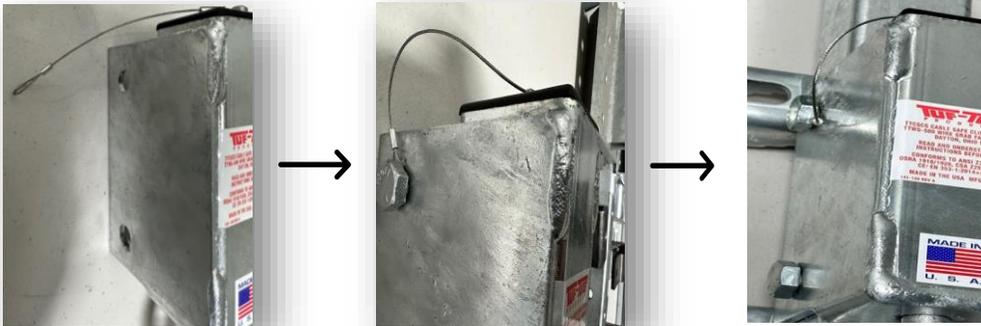
SAFE CLIMB LOADING: Factored live loads +75 lb. Average Tuf-Tug system weight = minimum top anchorage load calculations. For 2-4 climbers per OSHA/ANSI:

- (2) Person factored live loads = 3,240 lbs.
- (3) Person factored live loads = 3,705 lbs.
- (4) Person factored live loads = 4,170 lbs.

KNOW YOUR WORKPLACE: Assess the workplace for hazards such as heat, flames, chemical, electrical, environmental, sharp objects, moving equipment, unstable/uneven or slippery surfaces. Identify the potential hazards and plan for the installation to avoid dangerous paths, obstructions and zones. Have an emergency rescue/contingency plan in place in the event that an accident may occur per rescue/retrieval section.

STANDARD MONOPOLE MOUNT INSTRUCTIONS:

- A. Before the last section of the pole is set Attach Universal Head to pole adaptor bracket with ϕ 1/2" bolts and spacer sleeves. Torque to 45-foot pounds. **Note: Secure Cap Retention Tether by attaching to the 1/2" mounting bolt (See below)**
- B. Starting from the top, climb down the pole and Attach a Cable Stand-off every 25 feet (or as required) with the supplied fasteners. Alternate slot openings left to right as the stand-offs are installed and insert cable.
- C. Attach Anchor Bracket to Pole Adaptor Bracket and secure with ϕ 1/2" bolts and fasteners. Torque to 45 foot pounds.
- D. With Anchor Eye Bolt fully extended up, thread cable through thimble and loosely attach Cable Clamps. Pull on free end of cable to take slack out of line and secure nuts on cable clamps. Torque to 40 foot pounds.
- E. Tension Cable Life Line by tightening nut on anchor eye bolt until line is taut, approximately 220 lbs. – 420 lb. tension.
- F. Check security of installation by pulling down on cable to assure that the life line has been tensioned.
- G. If not, repeat steps D and E until line is taut.



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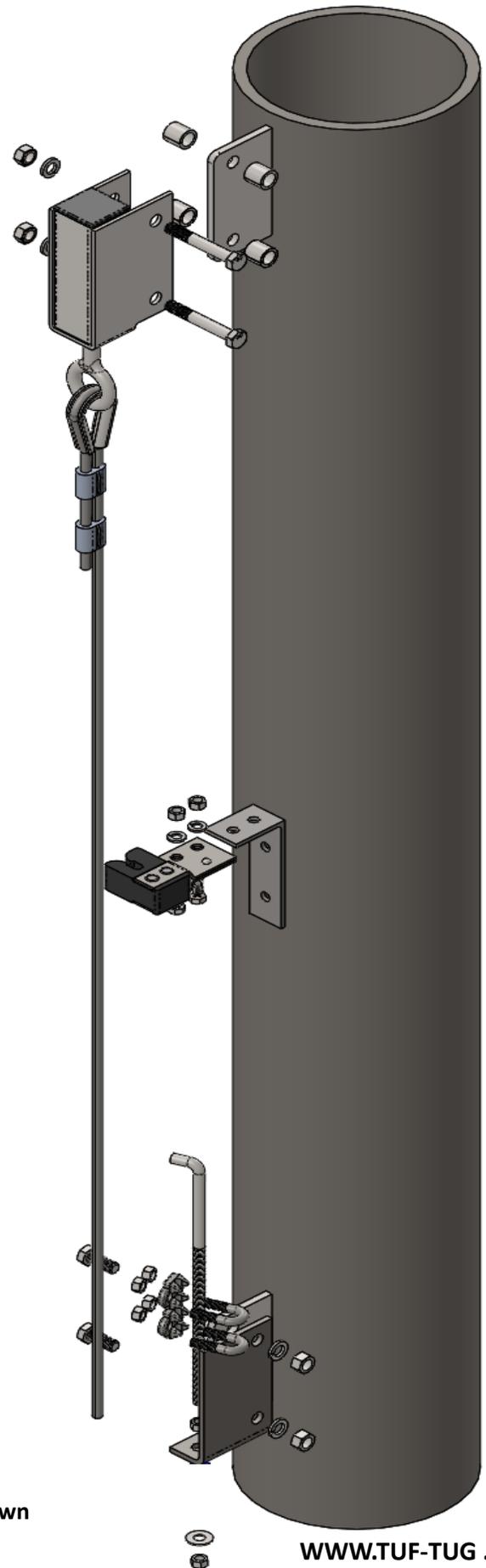
115-302 Cable and head assembly



115-303 Monopole cable guide



115-309/310 Base anchor assembly includes two 115-111 cable clips



Optional spring tensioner shown



WARNING: USE ONLY TUF-TUG SUPPLIED OEM COMPONENTS TO ASSEMBLE THE COMPLETE CABLE SAFE CLIMB SYSTEM. DO NOT ATTACH TO OTHER MANUFACTURER'S, NON-APPROVED SAFE CLIMB MOUNT BRACKETS TO TUF-TUG CABLE AND HEAD ASSEMBLY. ALTERING SYSTEM DESIGN WILL VOID ALL CLAIMS AND WARRANTY.

BEFORE EACH USE: Reference specific installation application for the climb facility in question. Inspect installation for obvious miscues from the ground. Points of caution may include one or more of the following: excessive corrosion, loose cable, loose brackets, over tensioned system/deployed eyebolt, etc. If any of these items are encountered and cannot be remedied, climb with extreme caution. A secondary fall protection system may be warranted until the issue can be identified, classified and/or corrected. Also, be aware of the current environmental hazards that these elements represent and plan for a safe climb accordingly with approved JHA/JSA documentation.

USE: Cable safety climb system should be used in accordance to the inspection outlined with the TTWG-500 Wire Rope Grab instructions that are supplied with specific bracket pack installation information. A climb log of the system's use should be kept per the specific climb facility's installation.

If the system arrests a fall, it should be removed from service and replaced to assure maximum reliability. If this is not immediately feasible, a qualified person/climber can make an assessment to the damage and provide short term recommendations/remediation.

INSPECTION: Inspect system before each use for corrosion, wear, damage and/or defects during each climb. Record findings per the climb log. If system shows signs of any hazards, contact owners for corrective action immediately. It is recommended an annual or regular scheduled inspection should be made of the Cable Safety Climb System along with the supporting structure to assure its functionality.

RESCUE/RETRIEVAL: For a safety climb that is subjected to a fall, and rescue is required, the competent rescuer executing the rescue shall be required to assess the means available to efficiently and safely rescue the climber to avoid suspension trauma. If the best means is to use the existing wire rope safety climb that has been exposed to a fall, then the competent rescuer shall be required to, at a minimum:

- A. Verify that the equipment utilized, including but not limited to the safety climb, meets the intended requirements for rescue as outlined by the manufacture(s).
- B. Visually inspect the safety climb for changed conditions from the last written PPE inspection in compliance with section 5 of the SEMC document to assess the usability of the safety climb.
- C. Communicate the plan to use the safety climb system with others involved with rescue procedures.
- D. The competent rescuer shall ensure that use of the system will not create a greater hazard than other means.
- E. Once the rescue is complete, the wire rope safety climb is to be reported and tagged out until corrective action has been taken.

Always keep these instructions and records with the system in a place that is easily accessible to all users



WARNING: All users of fall protection equipment must be in good health, must not have a medical history of conditions that could be aggravated by a fall, must be mentally fit and must not be under the influence of alcohol or drugs. Inattention to these factors could cause falls, serious injury or death.

WARNING: Any component which has arrested a fall should be removed from service and replaced.

WARNING: Never alter or use a Safety Climb System that has been altered – the potential malfunctions could result in serious injury.

WARNING: Do not attempt to repair damaged equipment. Remove from service and replace.

WARNING: Discard equipment if there is any evidence of excessive wear, damage or malfunction.

ALWAYS BE CAREFUL! Your Safety is important to us. If a situation is questionable, consult a qualified professional for proper procedures or reference appropriate specification.

WARRANTY:

“Limited 1 Year Warranty to Original Using Buyer” - TUF-TUG Cable Safe Climb Systems are warranted for 1 year against defects when operated under normal conditions, within their rated capacities and in accordance with the operating instructions and use considerations.

Any part or mechanism that is recognized as defective by TUF-TUG Products will be replaced or repaired Free of Charge during the warranted period if it is returned, prepaid, to the factory with a return authorization. Claims for labor, delays, or damages are not covered by this warranty. This warranty does not apply if the unit has been altered, modified, or repaired by any source other than TUF-TUG Products.

Environmental / Corrosion considerations

A) Macro-environmental: Installation exposure warranty for normal macroscopic rural, suburban, and temperate marine environments with moderate chemical, salinity, sulfur dioxide, and relative humidity, equals 10 years.

B) Micro-environmental: Tuf-Tug safety climbs with increased exposure to near coastal (within 25 miles), tropical marine environments, high winds, chemical exposure, salinity exposure, sulfur dioxide exposure, and high humidity locations, anticipated time to first maintenance is 5 years.

C) Extreme Micro-environmental: Direct exposure within 5 miles of the corrosive catalyst, to the aforementioned microscopic extreme environments, including, but not limited to; direct coastal exposure, continuous exposure to tropical marine environments, high winds, caustic chemicals, high salinity, streaming sulfur dioxide, and extreme high humidity could reduce the first time to maintenance warranty period to TIA inspection requirements. These sites shall be identified and targeted for additional TIA maintenance and condition assessment to assure the validity of the safe climb system installation on the structure that has extreme environment exposure. Recommended first to maintenance inspection cycle should not exceed 2-year maximum timeline.

“Quality is long remembered after the price has been forgotten”



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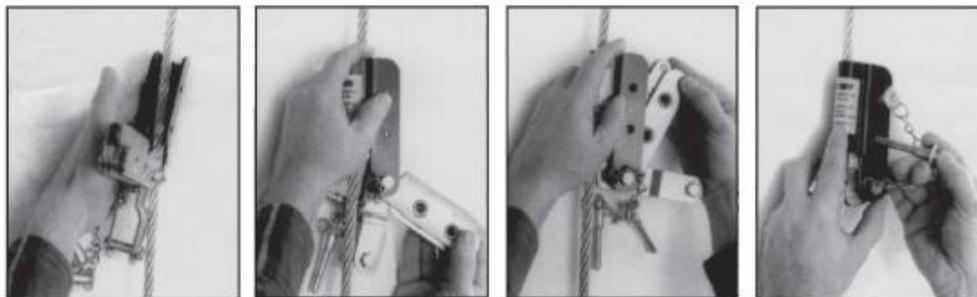
SYSTEM REQUIREMENTS: TUF-TUG Wire Rope Grabs are designed to meet the performance requirements of ANSI Z359, CSA Z259 & EN 353.1 for personnel fall arrest on fixed ladders. It is intended for use on $\phi 3/8$ " solid core cable system with an anchorage capable of maintaining a minimum of 5,000 lbs. tensile load. (NOTE: Specials are provided for other size wire rope and will be specifically identified on the housing of the mechanism. IE: $\phi 1/4$ ", $\phi 5/16$ " and/or $\phi 1/2$ "). It is recommended that the TTWG-500 be attached to a full body harness with a front "D" ring (TTFBH-C/P) with a 2" Self Locking Carabiner/Hook that meets the proper safety requirements. The maximum length of the connector to the wire grab from the harness should not exceed 9 inches.

NOTE: This Wire Rope Grab is intended to be used as part of a complete personal fall protection system. All components, subsystems and connectors should be compatible and meet the appropriate OSHA/ANSI/CSA/EN requirements for the intended application. Substandard or non-approved components could compromise the reliability of the system and jeopardize the safety of the user.

BEFORE EACH USE: Inspect mechanism for proper operation by pivoting cams back and forth. Movement should be free and easy without binding. Check units for deformation, defects, corrosion or wear that may affect the free movement and/or operation of the mechanism. Units with signs of any of the above check items, should be removed from service and discarded.

KNOW YOUR WORKPLACE: Assess the workplace for hazards such as heat, flames, chemical, electrical, environmental, sharp objects, moving equipment, unstable/uneven or slippery surfaces. Identify the potential hazards and plan the installation to avoid dangerous paths, obstructions and zones. Have an emergency rescue/contingency plan in place in the event that an accident may occur.

INSTALLATION



A

B

C

D

- A. Release pull pins by depressing end buttons and remove from unit.
- B. Open unit by pivoting clamp bar assembly away from housing
- C. Attach to cable as shown in Figures A and B with arrow up
- D. Close unit by pivoting cams onto rope, making sure that arrow is pointing up as shown in Figures B and C.
- E. Reinsert pins into housing making sure that ball detent passes through assembly (Figure D).
- F. Check security of pins by trying to remove without releasing button.
- G. Work cams back and forth and run fall arrester up and down to assure functionality and freedom of movement.
- H. A short 5-foot test climb is recommended to confirm the automatic hands-free function of the wire grab on the safe climb system.
- I. Test installation by pulling down sharply on the attachment eye to ensure that the mechanism locks onto the cable with full body weight and avoid incorrect use.

USE

- A. After wire grab has been secured to safety cable, attach to safety harness front “D” Ring with an approved double locking carabiner/hook. (Installation of wire grab to safety line can take place after harness attachment if desired). Always keep wire grab above user’s center of gravity to maximize potential for falls and potential fall distance. Sternal D Ring connection shall be used for Fall Arrest – TTWG-500 Attachment ONLY.
- B. To ascend safety cable, climb ladder in a normal fashion with torso centered and close to the mechanism. Wire grab is designed to rotate freely around cable safe climb system and will operate with the user sideways leaning up to 15° left or right off center. Thereof, the mechanism should self-align and/or follow the user up the safe climb system with a normal steady/even pull. The wire grab should also work freely up and down forward leaning on incline up to 15° off the vertical, up and down. Always keep a minimum safe operating distance between your torso and TTWG-500.
- C. If cable system has guides/supports, remove cable from stand-offs as they are encountered and reinsert after passing. DO NOT REMOVE WIRE ROPE GRAB FROM SAFETY CABLE to pass over guides, supports or standoffs, etc., If obstructed, make a secondary OSHA approved attachment to the structure (lanyard, rope grab, etc.) prior to doing so. For 100% Tie Off, never manually override Wire Grab lever during operation, this may compromise the function of the braking mechanism.
- D. To descend safety cable, again climb down ladder in a normal fashion with torso centered and close to the mechanism. This will keep the attachment lever up, disengaging the clamping cams and allow the wire grab to freely lead the climber.
- E. If the lever is pulled back past center by leaning back, the clamp cams will engage the cable and the wire grab will lock onto cable safe climb system. To unlock the mechanism, simply move upward to pivot the lever over center. This will allow the wire grab to track the user and operate freely.
- F. Always keep a safe distance of 10 ft. (3m) from potential hazards to avoid contact if a fall occurs.
- G. Make sure to check security of harness and adjust for snug fit prior to ascent and descent.
- H. IF THE WIRE GRAB ARRESTS A FALL, REMOVE IT FROM SERVICE AND REPLACE IT

CARE:

- A. After use always clean mechanism, wipe with a new towel, and lubricate pivot points with machine oil. Inspect unit for wear, damage and/or defects. If the mechanism becomes wet, allow to air dry naturally.
- B. If wire grab shows signs of excessive wear or a defective condition, remove it from service and replace it. If in doubt return it to the factory for evaluation.
- C. You must ensure that the product markings remain legible during the entire lifetime of the product.
- D. Keep your wire grab/fall arrester in a safe/dry storage location to prolong its service life and ensure its functionality.
- E. Never alter or use a wire rope grab that has been altered, the potential malfunction could result in serious injury or death.

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WARNING: Discard equipment if there is any evidence of excessive wear, damage or malfunction.

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For other TUF-TUG Safety Hardware; Confined Space Tripods, Man Winches, Rope Grabs and/or Anchor Brackets and/or Full Body Harnesses, contact us at 937-299-1213 or go to our website www.tuf-tug.com.