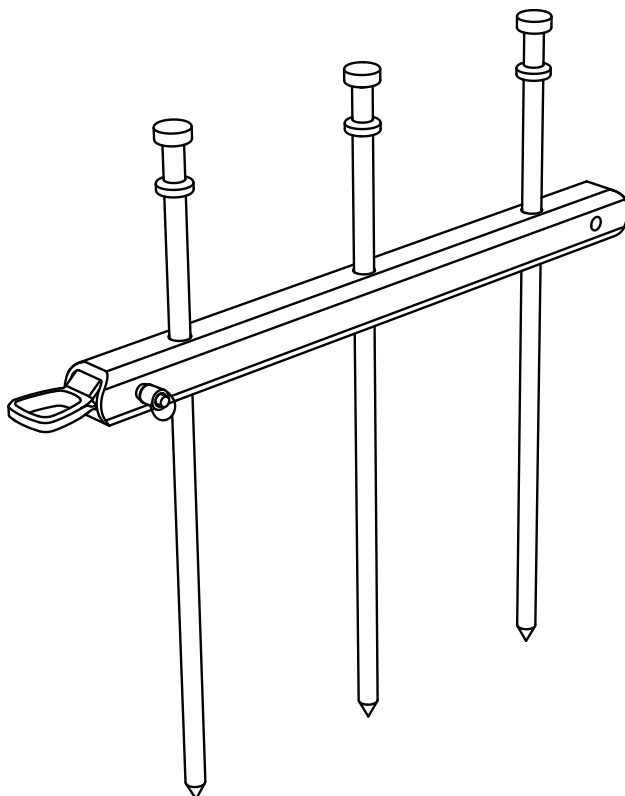




WICKED PICKET ANCHOR SYSTEM™



⚠ WARNINGS

Activities involving the use of this equipment are potentially dangerous. Special knowledge and training are required to use this product. You are responsible for your own actions and decisions. Before using this device, you must:

- Read and understand these user instructions and warnings.
- Familiarize yourself with its capabilities and limitations.
- Get specific training in its proper use.
- Understand and accept the risks involved.

FAILURE TO HEED ANY OF THESE WARNINGS MAY RESULT IN SEVERE INJURY OR DEATH.



Find the latest version and translations of this manual at cmcpro.com



NFPA CERTIFICATION INFORMATION

THIS DEVICE MEETS THE AUXILIARY EQUIPMENT REQUIREMENTS OF NFPA 1983, INCORPORATED IN THE 2022 EDITION OF NFPA 2500.

- 303517, PICKET PLATE, GENERAL USE (G) MBS 36 KN (8,093 LBF)
 - EVALUATION TO NFPA 2500 WAS NOT PERFORMED WITH THE STAKES INSTALLED IN THE GROUND AS INTENDED FOR USE
 - TESTED WITH HITCH POINT AND 5/8 INCH QUICK RELEASE PIN
- 303519, HITCH POINT, GENERAL USE (G) MBS 36 KN (8,093 LBF)

Legend

	Imminent risk of serious injury or death.		Anchor
	Imminent risk of accident or injury.		Attachment Point
	Appropriate function or use.		Load
	Equipment incompatibility.		Grip

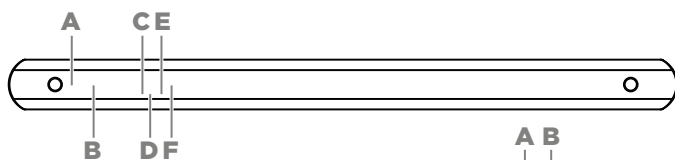
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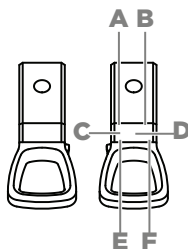
FIELD OF APPLICATION

SEE TEXT FOR MORE

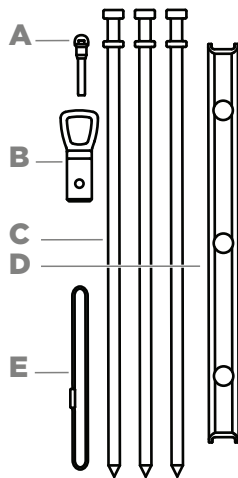
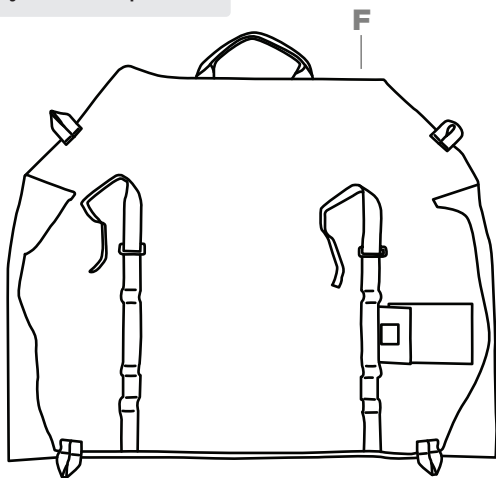
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TRACEABILITY & MARKINGS

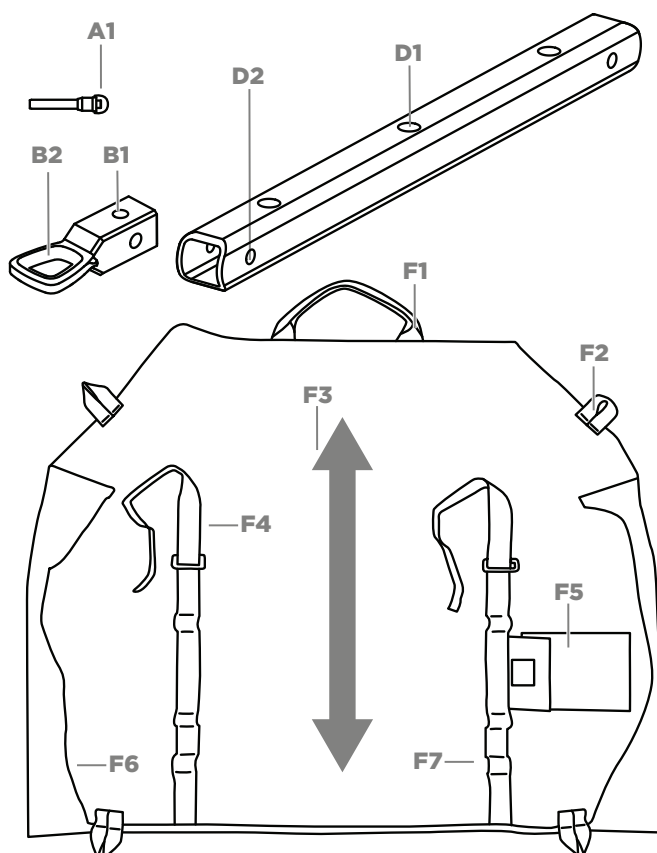
- A** Manufacturer Identification
- B** Product Name
- C** Seal of Certifying Agency
- D** NFPA Classification
- E** Part Number and Serial Number
- F** Carefully read the instructions before Use



3

NOMENCLATURE**System Components**

System Components



A Quick-Release Pin

- 1 Release Button

B Hitch Point

- 1 Pin Hole
- 2 Attachment Hole

C Pickets (3)

D Picket Plate

- 1 Picket Hole
- 2 Pin Hole

E Extraction Prusik

F Carry Bag

- 1 Carry Handle
- 2 Tie-off Loop
- 3 Rope Path
- 4 Plate Strap
- 5 Pocket
- 6 Picket Flap
- 7 Picket Loop

4

COMPATIBILITY

SEE TEXT FOR MORE

5

INSPECTION, POINTS TO VERIFY

SEE TEXT FOR MORE

6

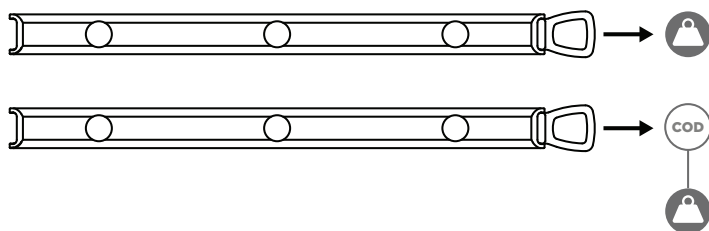
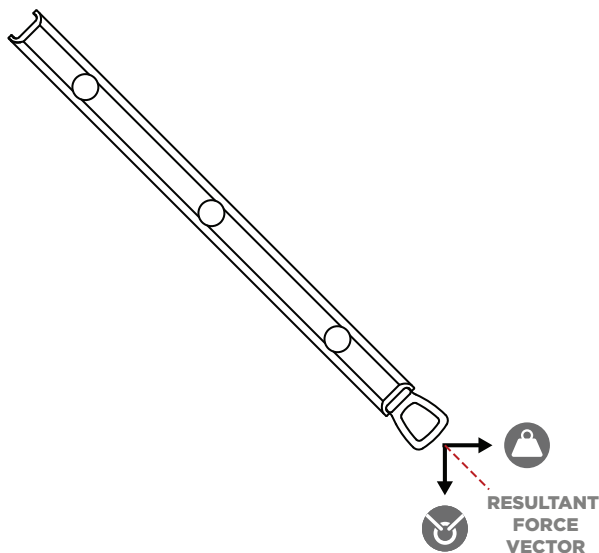
PRODUCT USE**Figure 6a : Alignment****Figure 6b-1 : Force Vectors**

Figure 6b-2 : Force Vectors

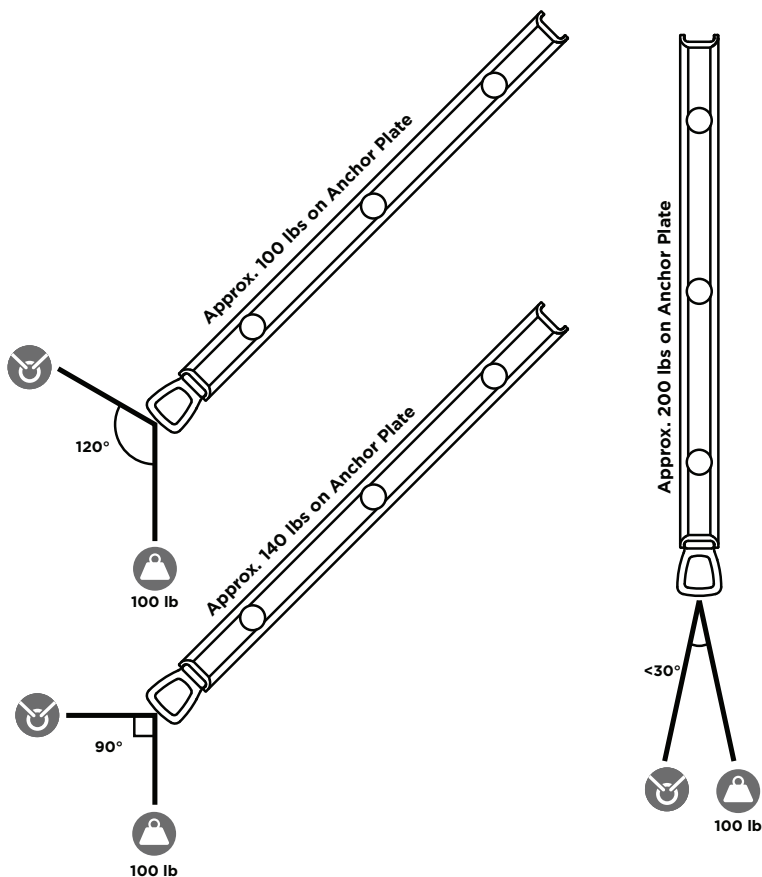


Figure 6c-1 : Angle Of Applied Force

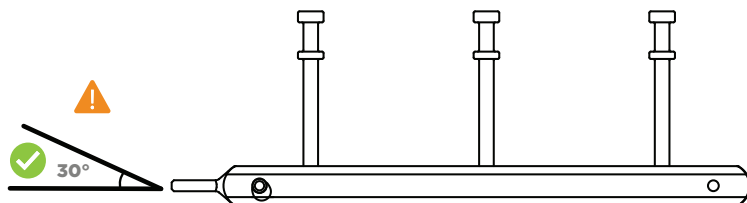


Figure 6c-2 : Angle Of Applied Force

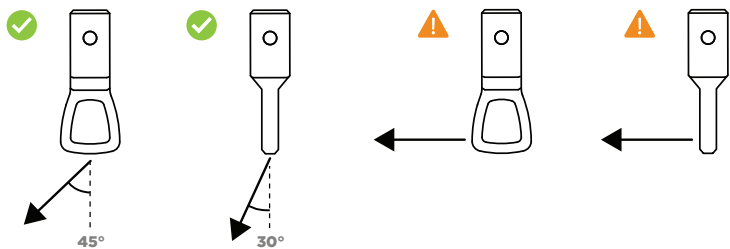
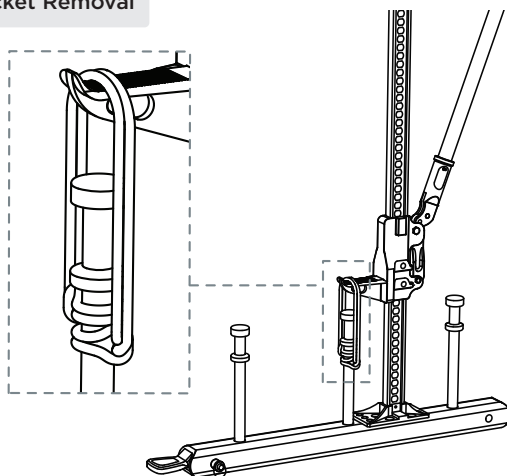


Figure 6d : Soil Guide

Consistency	Field Identification		Relative Holding Strength
	Soil Resistance	Stake Penetration Resistance (inches per blow using 16lb hammer)	
Hard (very dense)	Indented with difficulty by thumbnail	< 0.2 inches	 Maximum
Very Stiff (dense)	Readily indented by thumbnail	0.2 - 0.5 inches	
Stiff (medium-dense)	Readily indented by thumb but penetrated only with great effort	0.5 - 1.5 inches	
Medium	Can be penetrated several inches with moderate effort	1.5 - 3 inches	
Soft (loose)	Easily penetrated several inches by thumb	3 - 6 inches	
Very Soft (very loose)	Easily penetrated several inches by thumb	> 6 inches	
			Minimum

Figure 6e : Picket Removal



7

MAINTENANCE & CARE

SEE TEXT FOR MORE

8

EQUIPMENT RECORDS

SEE TEXT FOR MORE

Equipment Record Table

Product Name		Product Type	
Manufacturer Name & Address	CMC Rescue, Inc. 6740 Cortona Drive Goleta, CA 93117, US	Manufacturer Contact Information	Tel: 805-562-9120 Tel: 800-235-5741 info@cmcpro.com
User Name & Address		Product Serial #	
Year of Manufacture		Purchase Date	
First Use Date		Expiration Date	

Periodic Inspection Sheet

Check Date	Notes/Results	Inspector Name & Signature	Date of Next Check

1. FIELD OF APPLICATION

The Wicked Picket Anchor System (WPAS) is designed and manufactured as personal protective equipment (PPE) used for fall protection and restraint, work positioning, and rescue operations when other anchoring options are absent or insufficient. The Picket Plate and Hitch Point are classified to NFPA 2500 (1983), 2022 Edition as Load Bearing Auxiliary Hardware. The anchor system and individual parts shall not be used outside of their limitations, or for any purpose other than that for which they are intended.

The WPAS optimizes the pullout capacity of the system by evenly distributing the applied load through three vertical pickets. When used in the field, the soil conditions will dictate the total holding strength of the system. A comprehensive understanding of all components to be used in the system, soil conditions, and careful estimation of the load placed on the picket system and associated hardware is essential for safe operation.

RESPONSIBILITY

These instructions explain the correct use of your equipment. The warning symbols inform you of some potential dangers related to the use of your equipment, but it is impossible to describe them all. You are responsible for heeding each warning and using your equipment correctly. Any misuse of this equipment will create additional dangers. Contact CMC if you have any questions or difficulty understanding these instructions. Check cmcpro.com for updates and additional information.

Before using this equipment, you must have a rescue plan in place to deal with any emergencies that could arise and be medically fit and capable of controlling your own security in emergency situations. Motionless suspension in a harness may cause severe injury or death. Check equipment before and after use. No alterations or additions to the equipment shall be made without the manufacturer's written consent.

USER INFORMATION

User Information shall be provided to the user of the product. NFPA 1983, incorporated into the 2022 edition of NFPA 2500 recommends separating the User Information from the equipment and retaining the information in a permanent record. The standard also recommends making a copy of the User Information to keep with the equipment and that the information should be referred to before and after each use.

Additional information regarding life safety equipment can be found in NFPA 1500, and NFPA 1858 and NFPA 1983, incorporated in the 2022 edition of NFPA 2500. This document must be provided to the user by the retailer in the respective country's language and must be kept with the equipment while it is in use. Observe relevant national regulations.

2. TRACEABILITY & MARKINGS

(A) Manufacturer Identification (B) Product Name (C) Seal of Certifying Agency (D) NFPA Classification (E) Part Number and Serial Number (F) Carefully Read the Instructions before Use

3. NOMENCLATURE

(A) Quick-Release Pin (A1) Release Button (B) Hitch Point (B1) Pin Hole (B2) Attachment Hole (C) Pickets (D) Picket Plate (D1) Picket Hole (D2) Pin Hole (E) Extraction Prusik (F) Carry Bag (F1) Carry Handle (F2) Tie-off Loop (F3) Rope Path (F4) Plate Strap (F5) Pocket (F6) Picket Flap (F7) Picket Loop

4. COMPATIBILITY

Verify that this product is compatible with the other equipment in the system and that its intended applications meet current standards.

Equipment used with this product must meet regulatory requirements in your jurisdiction and/or country and provide safe, functional interaction.

The Hitch Point anchor insert is primarily designed for use with carabiners and is compatible with a variety of connectors such as anchor straps, slings, rope, and webbing. All connectors should be evaluated for risk based on the loads, redundancy, and rigging practices involved. Always verify that connectors are properly positioned before loading them. The Hitch Point Attachment Hole is designed to accept multiple connectors. Ensure the multiple connectors can move freely.

When combining this product with other equipment and/or using this product in a rescue/fall arrest system, users must understand the instructions of all components prior to use and comply with them to ensure that safety aspects of these items do not interfere with each other.

Danger may arise and functionality may be compromised by combining other equipment with this product. User assumes all responsibility for non-standard use or added components. Contact CMC if you are uncertain about the compatibility of your equipment or if you need replacement parts.

WARNING: Prolonged use with carabiners or other hardware can create dangerous wear and sharp edges that will decrease the safety of the device when used with soft goods. Minor nicks or sharp spots may be smoothed with emery cloth.

5. INSPECTION, POINTS TO VERIFY

INSPECTION

User safety depends on equipment integrity. Thoroughly inspect equipment prior to placing it into service and before and after each use. Inspect the equipment according to your department's policy for inspecting life safety equipment. In addition, CMC recommends a detailed inspection by a competent person at least once every 12 months depending on current regulations and conditions of use. Record the date, inspector name, and inspection results in the equipment log as well as any other relevant information to track the usage history.

Before and after each use, the user should:

- Confirm the device is functioning properly.
- Verify the presence and legibility of the product markings.
- Verify there is no excessive wear or indications of damage such as deformation, corrosion, sharp edges, cracks, or burrs. Minor nicks or sharp spots may be smoothed with emery cloth or similar.
- Check for the presence of dirt or foreign objects that can affect or prevent normal operation such as grit, sand, rocks, and debris.

During each use, the user should:

- Confirm all pieces of equipment in the system are correctly positioned.
- Monitor the condition of the device and its connections to other equipment in the system.
- Do not allow anything to interfere with the operation of the device or its components.
- Avoid placing the device and attached connectors against an edge or sharp corner.
- Reduce the risk of shock load by minimizing slack in the system.

RETIREMENT

CMC does not specify an expiration date for hardware because the service life depends greatly on how and where it is used. The type of use, intensity of use, and environment of use are all factors in determining the serviceability of the equipment. A single exceptional event can be cause for retirement after only one use, such as exposure to sharp edges, extreme temperatures, chemicals, or harsh environments.

A device must be withdrawn from service when:

- It fails to pass inspection.
- It fails to function properly.
- It has illegible product markings.
- It shows signs of damage or excessive wear.

- It has been subjected to shock loads, falls, or abnormal use.
- It has been exposed to harsh chemical reagents or extreme environments.
- It has an unknown usage history.
- You have any doubt as to its condition or reliability.
- When it becomes obsolete due to changes in legislation, standards, technique or incompatibility with other equipment.

Withdrawn equipment shall not be used again until confirmed in writing by a competent person that it is acceptable to do so. If the product shall be retired, remove it from service and mark it accordingly or destroy it to prevent further use.

6. PRODUCT USE

INSTALLATION

1. Select a location to install the WPAS. For best results, the area should be flat and free of rocks or other obstructions, and the soil should be dense and dry. Refer to the Soil Guide included in this Manual. Ensure there are no underground utility hazards, including natural gas, propane, water or sewer pipes, electric lines, fiber optic cables, or telecommunication lines.
2. Unclasp and unroll the Carry Bag to access system components. The Carry Bag is constructed from canvas and weather resistant tarp material. It may be used as edge protection or as a tarp for the workspace. When using the Carry Bag as edge protection, secure it in place with the sewn web loops on each corner.
3. Position the Picket Plate so that the long axis of the plate is in-line with the direction of the anticipated applied load or change of direction (COD) (Figure 6a).
4. If using the Wicked Picket Anchor System as the COD, position the plate so that the long axis bisects the interior angle formed between the anchor and the load, i.e. the resultant (Figure 6b-1).
5. Be aware of the forces acting on the WPAS as a result of the interior angle between the anchor and the load (Figure 6b-2).
6. Verify that the load path is less than 30 degrees from the horizontal plane of the anchor plate. Angles greater than 30 degrees can decrease the holding capability of the system. (Figure 6c-1).
7. Resultant force applied to Hitch Point must remain within the allowable angle of pull from the center axis as shown in the illustrations. Off-axis loading beyond the specified limits may result in reduced strength and potential system failure (Figure 6c-2).
8. Insert the picket into the guide Hole nearest to the load and drive the picket into the ground by striking the head with a sledgehammer or similar implement. Pickets should be installed by one person at a time. Using multiple people can increase the risk of being struck.
9. For maximum holding strength, drive the picket until approximately 5 inches is showing above the Picket Plate. Actual depth to which a picket can be driven, and the resulting holding strength, are dependent on soil conditions. Leaving approximately 5 inches of the picket showing allows for some plate movements when the system is loaded and provides adequate space for installing the Extraction Prusik during removal.
10. Repeat this process for additional pickets as needed for the given operation and soil conditions. It is recommended to install all three pickets to maximize holding strength.
11. Install the Hitch Point by inserting it into the end of the Picket Plate with the Attachment Hole in a horizontal orientation.
12. Align the Pin Holes on the Hitch Point and Picket Plate. Insert the Quick-Release Pin through these holes while temporarily pressing the Release Button. Be sure the Pin locks into place.
13. Attach anchoring equipment to the Hitch Point as needed to support operations.

14. Apply load to the system in a controlled manner, watching for signs of soil failure such as excessive plate movement and/or soil upheaval.
 - a. If there are any signs of soil failure, STOP!
 - b. Reassess the equipment, conditions, and operations. Make adjustments as needed.
 - c. Consider using a back-tie to prevent movement. When securing a back-tie, it is recommended to install a secondary Hitch Point at the rear of the Picket Plate to serve as an attachment point. It is possible to entrain multiple picket systems using this approach. Secondary Hitch Points and Quick-Release Pins are available from CMC.
15. Follow best rigging practices to avoid binding or torsional forces on the components or plate.

WARNING: As with all rescue equipment, be aware of load limitations, manner used, and proper technique. Allow components to align with the load; any restraint is dangerous. If you are not sure of proper application or technique, seek proper training in picket use and technical rope work.

FORCE VECTORS

When the anchor and load do not line up, a change of direction (COD) may be needed. Beware that the COD may increase the force on the anchor. At 120 degrees, the force on the COD is equal to the weight of the load. At 90 degrees, the COD sees a force equal to 1.4 times the weight of the load. At <30 degrees, the COD sees a force up to 2 times the weight of the load.

SOIL GUIDE

Local soil conditions will dictate the total holding strength of the anchor system. We have provided a soil guide below adapted from the IFAI Tent Rental Division study on Pull Out Capacity of Tent Stakes 2006 (Figure 6d). This soil guide is to be used as a reference only. The user is responsible for understanding the soil types and conditions, including the moisture level and cohesiveness present in the area where the anchor system will be deployed, and determine the impact on holding strength.

PICKET REMOVAL

Pickets should be removed by pulling directly upwards perpendicular to the Picket Plate. It is essential for the upward force to be centered over the Picket Hole to avoid binding or damaging the components. If at any time a picket becomes noticeably more difficult to remove, ensure that the picket is not binding on the Picket Plate. This is usually evidenced by the Picket Plate coming up with the picket. If this happens, press down forcefully on the Picket Plate to reset the picket-plate angle.

The WPAS includes a sewn-loop prusik that is dedicated for use in picket extraction. Begin removal activities by taking each end of this Extraction Prusik and dressing two opposing girth hitches to the shaft of the picket as shown in the illustration. Securing the prusik in this way creates an attachment point directly over the picket head, allowing the picket to be extracted without binding to the Picket Plate.

The following methods are suggested for applying force to the prusik during picket removal. Certain soil types may require the use of mechanical advantage.

High Lift Jack (Recommended) (Figure 6e)

- Place a high lift jack on top of the Picket Plate.
- Position the high lift jack so the tongue is in the bight of the Extraction Prusik.
- Operate the jack to apply force directly upward and extract the picket.

High Point and Mechanical Advantage System

- Install a high point or artificial high directional (AHD) such as a tripod or folding ladder.
- Connect a mechanical advantage system between the high point and the Extraction Prusik. Examples of mechanical advantage systems include a pulley system, chain fall, or come-along.
- Apply force through the mechanical advantage system to extract the picket. Be aware of the load limitations and proper use requirements of the high point or AHD.

Picket or Pry Bar

- Insert a picket or pry bar through the Extraction Prusik.
- Multiple people can then apply upward force on the implement by squatting and using their legs and arms, attached harnesses, or other methods.
- It may be possible to loosen pickets by striking them from the side (perpendicular to the Picket Plate) or by turning them with pliers or a pipe wrench.

WARNING: Any prusik or textile product used for picket extraction shall not be used for life safety. A Warning Tag is included with the WPAS to mark the dedicated prusik or other textile with a clear visual indicator that states "Picket Extraction Only".

VEHICLE RECEIVER

The Hitch Point is also designed to be compatible with a 2 inch vehicle receiver hitch for versatile rigging solutions.

Prior to installing the Hitch Point in a vehicle receiver, ensure the parking brake is set, the keys are removed from ignition, and the wheels are chocked. Be sure to follow the manufacturer's guidance for loading the vehicle receiver.

Before use, inspect the vehicle's hitch receiver to ensure structural integrity. Check that the Hitch Point is properly installed with the quick release pin locked and secured.

WARNING: Do not use the Hitch Point for life safety applications if the receiver hitch or its attachment to the vehicle shows any signs of damage or instability. Do not drive with the Hitch Point installed in the vehicle's receiver. Do not use the Hitch Point for towing. Do not use Hitch Point for towing or vehicle recovery.

WARNING: Resultant forces applied to the Hitch Point must remain within the allowable angle of pull from the center axis as illustrated. Off-axis loading beyond the specified limits may result in reduced strength and potential system failure.

SYSTEM PACKING

Pack the WPAS into the included Carry Bag as follows:

- Place the Hitch Point, Quick-Release Pin, and Extraction Prusik in the red pocket.
- Secure the Picket Plate using the Velcro Plate Straps.
- Insert the pickets through the Picket Loops to hold them in place. Be sure to seat each end of the pickets under the Picket Flaps.
- Make sure that all system components are secured to prevent them from dislodging from the Carry Bag.
- Roll up the bag, making sure the picket ends remain captured by the Picket Flaps.
- Close the bag clasps and tighten the closure straps.
- Carry the bag using the handle or shoulder strap.

7. MAINTENANCE & CARE

CARRYING, STORAGE, AND TRANSPORT

During all use, carrying, storage and transport, protect the equipment from sharp edges, flame, extreme temperatures, rust, strong chemicals, and mechanical damage. Clean equipment using clean fresh water to remove any dust or debris. Do not use a pressure washer for cleaning. If the equipment gets wet, remove excess moisture with a non-abrasive cloth and allow to air dry at temperatures between 10° C and 30° C. During storage and transport, protect the equipment from heat, direct sunlight, moisture, chemicals, oils, and external loads or impacts. Do not store where the equipment may be exposed to moist air.

WARRANTY & REPAIRS

If your CMC product has a defect due to workmanship or materials, please contact CMC Customer Support at info@cmcpro.com for warranty information and service. CMC's warranty does not cover damage caused by improper care, improper use, alterations and modifications, accidental damage or the natural breakdown of material over extended use and time.

The equipment should not be modified in any way or altered to allow attachment of additional parts without the manufacturer's written recommendation. If original components are modified or removed from the product, its safety aspects may be restricted. All repair work shall be performed by the manufacturer. All other work or modifications void the warranty and releases CMC from all liability and responsibility as the manufacturer.

8. EQUIPMENT RECORDS

Record the results of your detailed periodic inspection using the sample table provided in this section. Relevant information includes product type; model; manufacturer contact info; serial number or individual number; dates including manufacture, purchase, first use, next periodic inspection; problems; comments; inspector's name; and signature. If equipment fails inspection, it should be withdrawn from service and marked accordingly or destroyed to prevent further use.



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