

# BUCKINGHAM MFG.

## PN 50046, 500461, 50047 & 500471- Series TREE CLIMBER ASCENDER INSTRUCTIONS / WARNINGS

Warning: Do not use this product if you cannot understand and follow the instructions and warnings that come with it and complete all necessary functions.

### APPLICATIONS:

- PN 50046 – Gaff Mount Ascender for use with Buckingham Steel and Titanium Shank Climbers (Dowel & screw attachment style, issued Jan. 2011 or later).
  - Includes: One Ascender Assembly, One Gaff with Extra Long Dowel Pin, Two (5/16-18 x 7/8”) Gaff Screws with Thread Locking Patch, One 3/16” Hex Wrench for Gaff Screws. See Fig.1
- PN 500461 – Gaff Mount Ascender for use with Buckingham Aluminum Shank Climbers.
  - Includes: One Ascender Assembly, One Gaff with Extra Long Dowel Pin, Two (5/16-18 x 1-1/8”) Gaff Screws, One Single Use Tube of Loctite Thread Locker, One 3/16” Hex Wrench for Gaff Screws. See Fig.2
- PN 50047 – High Mount Ascender for use with Buckingham Steel and Titanium Shank Climbers
  - Includes: One Ascender Assembly, One Climber Shank Shallow Clamp, Four (8-32 x 1/2”) Climber Shank Clamp Screws, One 9/64” Hex Wrench for Climber Shank Clamp Screws. See Fig.3
- PN 500471 – High Mount Ascender for use with Buckingham Aluminum Shank Climbers.
  - Includes: One Ascender Assembly, One Climber Shank Deep Clamp, Four (8-32 x 5/8”) Climber Shank Clamp Screws, One 9/64” Hex Wrench for Climber Shank Clamp Screws.

Fig.1



Fig.2



Fig.3



Fig. 4

Buckingham Climber Ascenders offer the convenience of the user being able to wear their climbers and the ascenders at the same time rather than changing back and forth between equipment due to varying work practices. Buckingham offers both (right hand side) Gaff and (left sided) High Mount version Ascenders which may be used individually or in pairs. These climber mounted ascenders offer a convenient alternative to the standard foot and knee ascenders.

These Buckingham Ascenders can be used only on approved climbing lines with diameters from 5/16” up to 1/2”. They are rated with a Working Load Limit (WLL) to accommodate a person with a maximum weight of 310 lbs. when fully equipped.

Buckingham Climber Ascenders (left or right) are not Personal Protective Equipment (PPE). They are accessories to aid in rope climbing activities. Buckingham Climber Ascenders do not protect against falls from height.

### INSPECTION:

Thoroughly inspect ascenders and all associated equipment before each use. Inspect climbing line, climbers, pads, etc. as stated in the manufacturer’s instructions. Attached ascenders should be checked for but not be limited to the following before each use: (Critical ascender parts shown in Fig. 5).

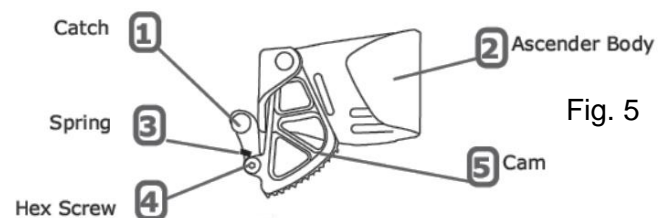


Fig. 5

- All screws holding the ascender to the mounting plate are in place and securely tightened.
- Ascenders and Gaffs are properly attached to the climber leg iron using appropriate hardware and all fasteners are securely tightened Gaff mounting screw types are shown in Fig 6.
- Ascender and mounting plates have no cracks, excessive wear or Corrosion to the mounting plates, body, cam, or catch.
- The springs are properly assembled into the body and operate correctly.
- The cam and catch move freely back and forth. Movement should be unrestricted with no binding. (Binding could be caused by burrs, packed snow, ice or debris. Ensure that the catch will latch open as intended.
- Both gaff attachment screws are in place and are properly tightened.
- Gaff dowel is in place and properly seated in leg iron.
- Gaffs are not loose, cracked, or broken.
- Leg irons are not cracked, damaged and/or exhibit burn marks.

Fig. 6



If any evidence of excessive wear or deterioration as outlined is observed, immediately cease use, destroy the product and replace it with new equipment. Should any unusual conditions not outlined above be observed, or you have reasonable doubt about a particular condition, remove the equipment from service and notify your Supervisor, Safety Director, or contact Buckingham Mfg. (1-800-937-2825) for clarification.

### ATTACHMENT TO CLIMBER – GAFF MOUNT [for Steel, Titanium and Aluminum Climbers]:

- Remove the original equipment gaff from the right side climber and discard the original gaff screws.
  - Notes:
    - Retain the original gaff if it is going to be reattached to the climber in the future without the ascender.
    - If the gaff is going to be re-used, new gaff screws supplied with a thread locker must be used for each re-attachment to prevent the screws from loosening. Use only Buckingham supplied Gaff replacement screws with a thread locker patch. Screws may not be removable if a permanent type of thread sealant is used.
    - The gaff screws supplied with the Ascenders are longer than standard gaff screws to accommodate the thickness of the mounting plate (See Fig. 6). These screws are only to be used for gaff attachment when using the ascender. The longer screws must not be used for standard Gaff attachment (i.e., without the mounting plate).
    - Gaff screws for steel & titanium versus aluminum climbers are not interchangeable.
    - Gaff screws for Ascender attachment to steel & titanium climbers are supplied with a thread locker patch.
    - Gaff screws for Ascender attachment to aluminum climbers are longer than those for steel & titanium and are supplied with a single use tube of Loctite 242 Thread Locker.
- Place the Ascender on the gaff side of the leg iron (away from leg) with the directional arrow on the Ascender pointing up (Fig. 7).
- Align the holes of the Ascender mounting plate to the holes in the climber
- Ensure the gaff dowel is securely seated in gaff prior to attaching to leg iron. Align the gaff dowel to the center hole of the Ascender mounting plate and press in on it so that the gaff dowel seats through the mounting plate and into the center climber hole (Fig. 8).
- Start one of the supplied gaff screws with thread locking patch into the top and bottom climber screw holes. Apply Loctite to gaff screws without the Thread locking patch (aluminum climbers only).



Fig. 7 – Arrow Pointing Up

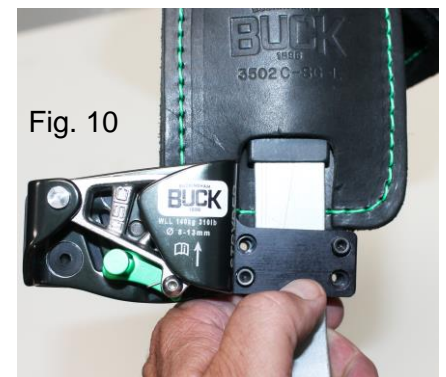


Fig. 8

- Hand tighten the bottom gaff screw (nearest the gaff tip). Repeat hand tightening on the top gaff screw. Then alternate tightening using the supplied 3/16" Allen wrench (with maximum torque to achieve complete and maximum tightness, this method can yield Buckingham's 235 inch pound tightening recommendation for these screws). Note: use of a longer wrench can yield results exceeding the 235 inch pound recommendation and result in stripping and / or fracture of the screw head. Visually inspect to ensure screw heads are flush with the inside surface of the climber leg iron.

### ATTACHMENT TO CLIMBER – HIGH MOUNT (for Steel, Titanium and Aluminum Climbers):

- The High Mount Ascenders are designed to mount to the climber shank directly below the climber sleeve.
- Remove the four screws from the climber shank clamp and remove the clamp.
- Place the Ascender on the gaff side of the leg iron (away from leg) with the directional arrow on the Ascender pointing up (Fig 9).
- Align the four holes in the Ascender Climber shank Clamp to the holes in the Ascender Mounting Plate (Fig 9).
- Start to thread each of the four screws previously removed through the Ascender mounting plate and into the Climber Shank Clamp. Then slide the Ascender up until it's bracket rests against the climber pad. (Fig. 10).
- Hand tighten all of the clamp screws by alternating tightening in a cross corner pattern. Then securely tighten them using the supplied 9/64" Allen wrench (with maximum torque to achieve complete and maximum tightness).
- Note: use of a longer wrench can yield results that strip and / or fracture of the screw head.
- Once sufficiently tightened, the Ascender should not move up or down along the climber shank.



### OPERATION PROCEDURES

Buckingham Gaff Mount and High Mount Ascenders make climbing your rope easier and more efficient and can be used in pairs or individually. These Ascenders can be used with various climbing methods such as the Double Rope Technique (DRT), Single Rope Technique (SRT) or the Rope Walking Technique when used in conjunction with a Typical Chest Ascender / Hitch Climbing System. Let the big muscles in your legs do the work! The climber mounted foot ascender makes climbing in any type of rope system more efficient. Set up a rope walker system with both the climber mounted and High Mounted (knee) ascender and speed into the canopy. These Ascenders must be used only with a compatible arborist saddle or full body harness equipped with approved chest or umbilical connection points.

Before using this equipment be sure to:

- Become professional trained in the field of arborist work and rope climbing applications.
- Read and understand all instructions and warnings.
- Get specific training in its proper use and technique.
- Become acquainted with its capabilities and limitations.
- Understand and accept the risks involved with the use of such equipment.
- Use only on approved climbing lines designed for ascender use (Buckingham recommends use of a static kernmantle type of climbing line).

Ascender attachment to the climbing line (Figs. a represents Gaff Mount, Figs. b represents High Mount):

- Pull downward on the red or green colored catch and use the catch to rotate the cam full backwards until it stops against the ascenders body (Fig. 11a & 11b).





Fig. 11a



Fig. 11b

- Allow the catch to rest against the outside of the ascender body to hold the cam in the open position (Fig. 12a & 12b).



Fig. 12a



Fig. 12b

- Insert the rope into the opening of the ascender (between the open cam and the rope slot of the ascenders body) (Fig. 13a & 13b).



Fig. 13a



Fig. 13b



- Release the catch and the cam will close and capture the rope (Fig. 14 a & 14 b).



Fig. 14a



Fig. 14b

- Repeat for the opposite side ascender if using them in pairs.

Perform an on the ground operational inspection before climbing:

- Ensure your climbing line is properly attached to an adequate anchorage point capable of supporting your body weight and all work related equipment.
- Inspect function by standing with both feet on the ground and with no slack in the climbing line.
- Attach the ascender to the climbing line and take a small step upward, slowly transfer part of your body weight into the ascender.
- The ascender should not slip on the climbing line.
- Load all of your weight into the climbing line and again, the ascender should not slip on the climbing line.
- If using the ascenders in pairs, repeat for the opposite ascender.
- If either of the ascenders slip remove them from service.

To ascend the tree:

- Attach the climbing line to either the chest or umbilical attachment point of your full body harness or arborist saddle (Dependent on your climbing style / setup).
- The Chest Ascender / Hitch Climbing System will keep your body upright and provide another point of contact for safety while climbing.
- Leave your gaff guards on your gaffs.
- Climb to your desired location and tie off as needed.
- Once at your desired location and securely tied off you can remove your Gaff Guards and use your climbers to access different areas as needed.

## WARNINGS

- Manufacturer's instructions shall be supplied to users with this product. Retain these instructions for future reference.
- Know the job and the regulations governing performance requirements and select the proper equipment.
- Read carefully, understand, and follow these and all other included instructions, as well as all instructions and warnings of all associated equipment before each use. Failure to do so could result in your serious injury or death. Should questions arise concerning the proper use or condition of your equipment, contact Buckingham Manufacturing Co. at 1-800-937-2825.
- This product is intended for use by properly trained personnel only.
- Improper use of this equipment could result in serious injury or death.

- Use PPE equipment only for the specific purpose for which it is designed and intended.
- Inspect and test before each use to ensure ascenders operate properly (all occupational protection equipment associated with this system must be inspected and thoroughly tested before each use). The entire system should be removed from service if any part/component shows damage, excessive wear, evidence of impact loading or does not function properly.
- Units that have been subjected to the forces of arresting a fall shall be removed from service, tagged "UNUSABLE" and destroyed and discarded.
- Employer - instruct employee as to proper use and warnings before use of equipment.
- Fall protection equipment, (i.e.) fall arrest, climbing, work positioning belts, retrieval, suspension etc.) should not be resold or provided to others for re-use after use by original user.
- Never use any occupational protective equipment for other than its intended use.
- DO NOT use this device near live electrical lines and other energized sources.
- Ensure that a written rescue plan, and the means to implement it, are available before climbing when using this equipment.
- This product is to be used for Positioning and Fall Restriction only, **NOT FOR FALL ARREST**. Therefore, it may be necessary to supplement arrangements for Work Positioning / Fall Restriction with collective means (i.e. safety nets) or personal means of protection against falls from a height (i.e. fall arrest system).
- As outlined by OSHA 1926.502 (e)(2) positioning devices shall be secured to an anchorage capable of supporting at least twice the potential impact load of an employee's fall or 3,000 lbf. (13.3 kN), whichever is greater versus fall arrest anchor points which must support a minimum of 5,000 lbf. (22.2 kN) per attached worker and be independent of worker support.
- The user must be securely attached to at least one anchor point at all times.
- Each anchor point, and the means of attachment to it, shall be of suitable and sufficient strength and stability for the purposes of supporting any foreseeable loading including those in an emergency.
- The system must be installed and used in such a way as to prevent unplanned or uncontrolled movement of the user.
- The potential for a fall shall be minimized at all times.
- A Work Positioning system must only be used if: a. The system includes a suitable backup system for preventing or arresting a fall (and the user is connected to it). A second structural anchor point is required especially during cutting operations; or b. Where it is not reasonably practicable to comply with a), all practicable measures are taken to ensure that the work positioning system does not fail.
- Where potential for a fall is anticipated, Fall Arrest systems must be adopted.
- DO NOT use this unit if the total working load exceeds 310 lbs. (140.6 kg).
- Use only with compatible climbing lines with diameters of 5/16" (8 mm) to 1/2" (13 mm).
- Use only with saddle or harness and compatible equipment meeting standards for intended use.
- This device is NOT to be used for towing or lifting
- Ascenders and Climbing lines must be kept clean and free of foreign matter. Guard against debris which could block the action of the cam (pebbles, twigs, ice, snow, etc.).
- Do not use if the climbing line has cuts, kinks, abrasions, broken strands or excessive wear.
- Do not knot the climbing line.
- Never expose workers to fall hazards during training.
- Avoid prolonged use in caustic or corrosive environments.
- Always wear gloves and appropriate Personal Protective Equipment when using these devices.
- Avoid contact of this equipment with sharp edged or pointed tools, high temperature surfaces, welding or other heat source (Be aware of the climbing line position / placement on the pole or tree at all times in relation to the operations being performed).
- Never allow the climbing line to pass under or get wrapped around the legs, arms, neck or torso of the user or other workers.
- For use with one person only. Never use these devices to support multiple workers.
- Make sure each ascender is properly attached to climbers.
- Buckingham ascenders must not be drilled, tapped, riveted, bonded, welded or have any other means of modification under any circumstance. Such modifications or use of aftermarket components shall void any and all warranties. Buckingham Mfg. Co. shall be held harmless for any injuries or deaths that may result from the use of such modified ascenders or aftermarket components.

- Lubricate only the pivot points of the ascender cam and catch, do not adjust, repair or modify any part of these ascenders. All repairs must be made only by the manufacturer or persons, or entities authorized in writing by the manufacture.
- Do not use this device if any instruction or warning is not fully understood. Telephone Buckingham Sales Department at (800) 937-2825 for clarification.
- Product covered under these instructions / warnings should not be resold / redistributed or re-used after use by original user.

## **STORAGE AND MAINTENANCE PROCEDURES**

1. When not in use, store ascenders in a clean, dry and cool environment out of direct sunlight. After a prolonged period of storage, thoroughly inspect ascenders before use.
2. If needed clean ascenders with water and mild soap/detergent, rinse with water and let thoroughly air dry. DO NOT use harsh chemicals.
3. Lightly lubricate the pivot points of the cam and catch of the ascender at least weekly or as often as required to maintain smooth operation (no binding) with light weight lubricant such as BuckLube, WD-40®, Etc. Never attempt to lubricate, adjust, repair or modify any other part of this device. Do not oversaturate and use caution to prevent lubricant from contacting the climbing line.

**NOTE:** Ensure proper size of product before use. This product can not be returned unless it is in new / unused condition.

## **STATEMENT of OBSOLESCENCE:**

Precise “useful life expectancy” or “shelf life” for this product is not specified, as the degree of use, conditions of use, and the degree of care and storage determines useful life. All users maintain responsibility to select proper equipment for the job, be properly trained in its use, and ensure all personnel support equipment passes inspection before each use. Upon evidence of defects, damage or deterioration, all equipment shall be removed from service immediately and tagged or marked as unusable or destroyed. Additionally, all equipment shall be inspected on a regular basis not to exceed one year by a Competent Person, as defined by OSHA/ANSI, to verify that the equipment is safe for use. In the event of any question or concern regarding the condition of such equipment, users shall remove the equipment from service for further inspection. All users must comply with OSHA/ANSI/ASTM standards prior to and in using such equipment. For more information regarding safe and appropriate use of equipment, please contact Buckingham Manufacturing at 1-800-937-2825.

## **INTERNATIONAL USERS:**

Notwithstanding the above, please know that certain international jurisdictions require manufacturers of equipment to provide customers with a maximum useful lifespan (sometimes referred to as a “Statement of Obsolescence”). To the extent required, Buckingham personal protective equipment manufactured from synthetic fiber materials including but not limited to items such as webbing and/or rope are subject to a maximum useful lifespan of ten (10) years from the date of manufacture. As stated above proper usage, storage, maintenance, and care impacts the useful lifespan of equipment. Extreme circumstances may require that product must be retired after only one use. This statement is made in conformance and compliance with BS EN 365:2004. International users must ensure that product inspections are completed by Competent Persons as defined by international standards including but not limited to British Standard (“BS”). If equipment fails any inspections, it must be immediately withdrawn from service and destroyed. For more information regarding safe and appropriate use of equipment, please contact Buckingham Manufacturing at 1-800-937-2825.

## OUR GUARANTEE:

We guarantee the equipment we manufacture to be free from defects in material and workmanship. We will repair any equipment deemed to be defective which is returned to us by the original purchaser. However, this guarantee is void if any product is changed or altered in any way, or if the product is used in a manner other than for which it is intended. This express guarantee supersedes all other expressed or implied guarantees, obligations or liabilities. There are no implied warranties of merchantability or fitness for a particular purpose and as such, all implied warranties are specifically disclaimed.

## LIMITATION ON LIABILITY:

In no event will Buckingham or buyer be liable to the other for lost revenues, lost profits or any other indirect, consequential, special or punitive losses or damages, however caused, whether in action for breach of contract, strict liability, tort, or otherwise, even if advised of the possibility of such losses or damages. In no event will Buckingham's liability exceed the total amount paid by the buyer to Buckingham for the product or equipment giving rise to such claim(s).

Please see other terms and conditions relating to this product at <https://buckinghammfg.com/terms-conditions/>

## REGISTRATION:

Before use of the product, ensure to register and confirm the product at [www.buckinghammfg.com/register](http://www.buckinghammfg.com/register).

**BUCKINGHAM MFG.**  
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