

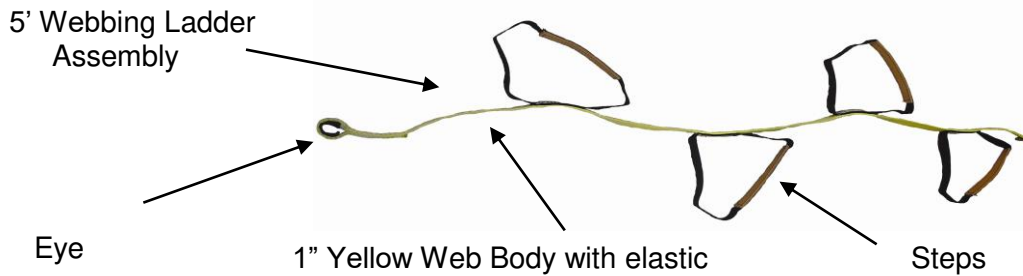
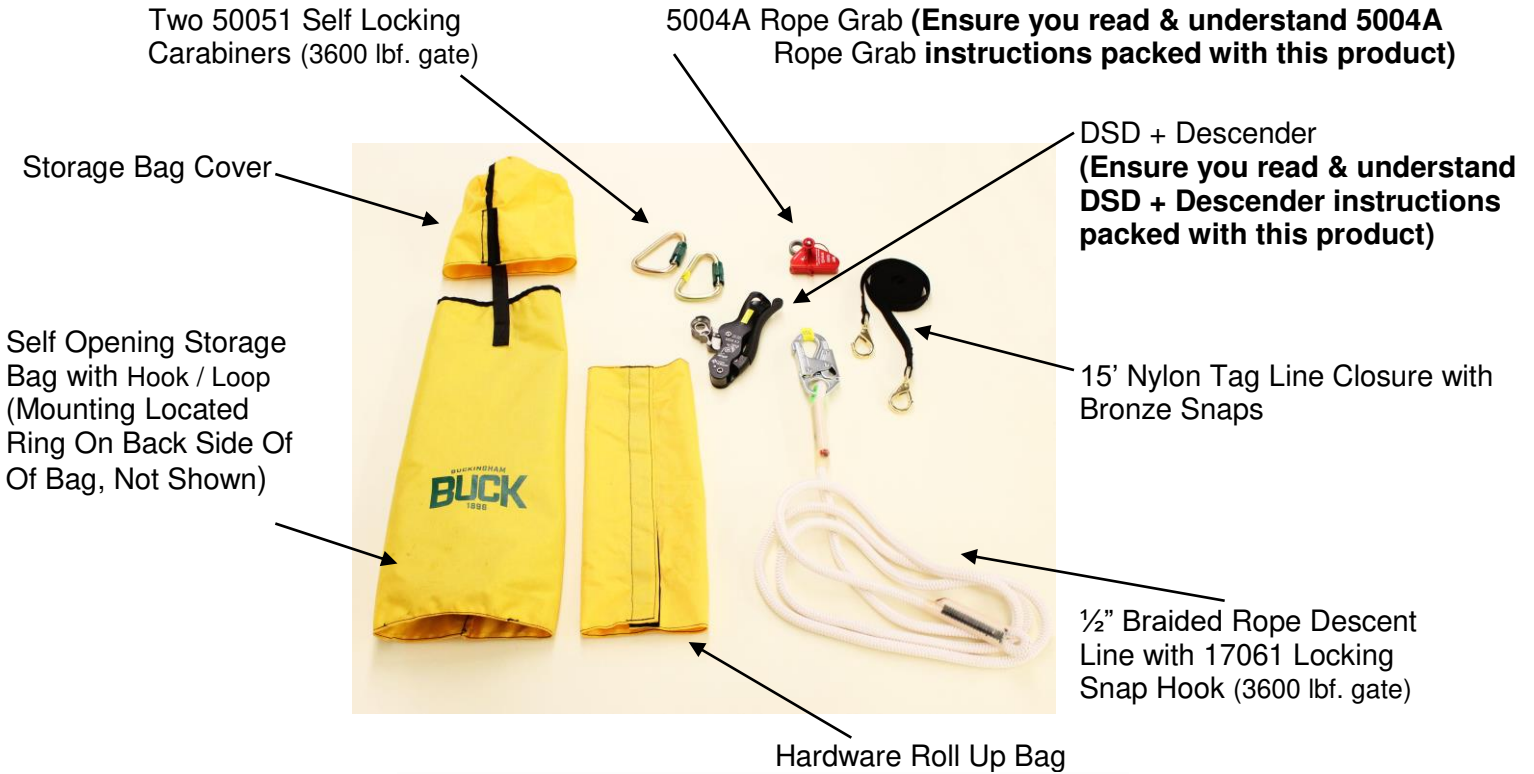
BUCKINGHAM MFG.

PN 106 – Series

BUCK SELF RESCUE SYSTEM

The Buckingham “Self Rescue System” allows a worker to safely descend to the ground in the event an individual properly donned in fall protection equipment has fallen out of the aerial basket or the aerial basket has become inoperable.

Components of the Buckingham Self Rescue System (Hardware shown below may vary)



Putting the Buck Self Rescue System into Service:

Note: Prior to each use ensure this unit is properly packed. An improperly packed unit may not deploy. See Proper Packing section of these instructions for packing procedure.

- 1) Suspend the storage bag from its steel mounting ring to a nylon bucket hook on either the inside or outside of the bucket (we suggest using the Buckingham model 2401-3). To reduce the possibility of the tag line and descent line from becoming entangled while working, suspend bag as close to the anchor point as possible. This also aides in the proper deployment of components from the storage bag.
- 2) Attach snap hook of the descent line to the anchor point on the aerial basket.
- 3) Attach one nylon tag line snap to your full body harness in the hip area where the upper and lower harness sections intersect (ideal position).

Proper Use of the Buck Self Rescue System in the Event of a Fall:

- A) Ensure completion of steps 1-3 above.
- B) Grasp tag line and pull all components from the storage bag making sure descent line is completely taught (It is possible that the entire bag may be pulled from the aerial basket, If not ensure you pull all of the



descent line out of the bag). If hard hat was lost during fall, it is recommended that you use caution as you pull tag line to ensure components or bag won't strike and possibly injure you.)

- C) Unsnap fasteners of the storage bag cover and drop cover to the ground.
- D) Remove components from hardware roll up bag and drop bag to the ground.
- E) Disconnect tag line from descender cam.
- F) Position descender on descent line so it is located just above your waist. (This is made easy by pulling line from below the cam on the descender, and then pulling the slack from the line below the descender.) Depending on how far the shock absorbing lanyard was deployed during the fall it may be necessary to move the descender DOWN the descent line. This is made easy by pulling down on the carabiner while slightly depressing the handle of the descender.
- G) Attach carabiner on descender to rappelling straps / loop on full body harness **ensuring that the handle of the descender is facing away from your body.**

For an alternate to the outlined preferred method of using the ladder for energy absorber detachment from your harness, proceed to NOTE under K) below. Otherwise, proceed to H below.)

- H) Remove steps from elastic retainers on ladder assembly and insert one foot in a ladder loop.
- I) Slide rope grab up descent line until knee is slightly bent.
- J) Step up ladder and disconnect the locking snap hook / carabiner of the shock absorbing lanyard from the dorsal attachment of your full body harness. (Depending on the position of the web ladder assembly on the descent line, 2-3 steps may be required before enough slack is put into the full body harness to remove the locking snap hook / carabiner of the shock absorbing lanyard.) Note: when climbing the web ladder your body may naturally tend to lean rearward. To ease disconnection of the dorsal attachment, grasp the descent line with one hand and pull your body to more of an upright position as shown in Fig. 1.
- K) Carefully step back down the ladder until fully supported on the DSD + descender.

NOTE – Alternate to using the ladder for energy absorber detachment from your harness: ensure steps through G) have been properly followed and slack is removed from the descent line. Next, locate your energy absorber and area to cut for its detachment from your harness. Finally, cut the energy absorber thereby transferring your secured attachment to the descent line.

- L) To begin descent, press the handle of the DSD + to the # 2 (center position). To slow or stop your descent push the handle in toward the # 3 position, or simply release the handle which will automatically return the handle to the # 1 position activating the self braking feature of the device. (see Fig. 2) (Ensure steps of the ladder assembly do not entangle with the handle of the descender).
- M) Make a slow controlled descent to the ground. The maximum permitted speed of descent is 2m/s (78.7"/s) as during the descent the device gets heated. The speed of descent must also be adapted to the weight of the users body; if the latter is more than 120 Kg (264.5 lbs. the speed of descent should not exceed 1 m/s (39.3"/s).
- N) As you descend be aware of hitting objects and your distance from the ground.

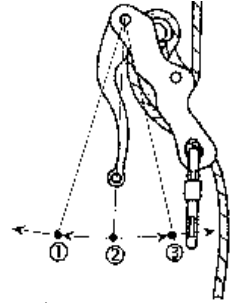


Fig. 2

NOTE: When descending with the DSD +, descent must be controlled with one hand by placing tension on the free end of the rope and the other hand on the body controlling the handle of the descender (see Fig. 3). Failure to do so could result in serious injury or death.

Proper Use of the Buck Self Rescue System from an Inoperable Aerial Basket:

- A) Ensure completion of steps 1-3 from previous page.
- B) Remove cover from self opening storage bag.
- C) Remove rope and tag line from cover by unsnapping steel fasteners.
- D) Remove hardware roll up bag and remove all components from it.
- E) Remove tag line snap from descender and full body harness and drop in bottom of bucket.
- F) Remove 5004A rope grab and webbing ladder assembly from braided rope descent line. (See # 7 under repacking below) and drop in bottom of bucket.
- G) Reposition descender so it is located approximately 2"-3" below the lip of the basket directly opposite the anchor point on the aerial basket. (This is made easy by pulling line from below the cam on the descender, and then pulling the slack from the line below the descender.)
- H) Remove self opening storage bag from nylon bucket hook and drop it and the free end of the descent line to the ground being careful not to come in contact with persons or objects below.
- I) Attach carabiner on the descender to rappelling straps/loop on your full body harness ensuring the handle of descender is facing away from the body.
- J) Disconnect locking snap / carabiner of the shock absorbing lanyard from the dorsal attachment point of full body harness.
- K) Carefully climb out of the aerial basket until fully supported on the DSD + descender.
- L) To begin descent press the handle of the DSD + to the # 2 (center position). To slow or stop your descent push the handle in toward the # 3 position, or simply release the handle which will automatically return the handle to the # 1 position activating the self braking feature of the device. (see Fig. 2)
- M) Make a slow controlled descent to the ground. The maximum permitted speed of descent is 2m/s (78.7"/s) as during the descent the device gets heated. The speed of descent must be adapted also to weight of the

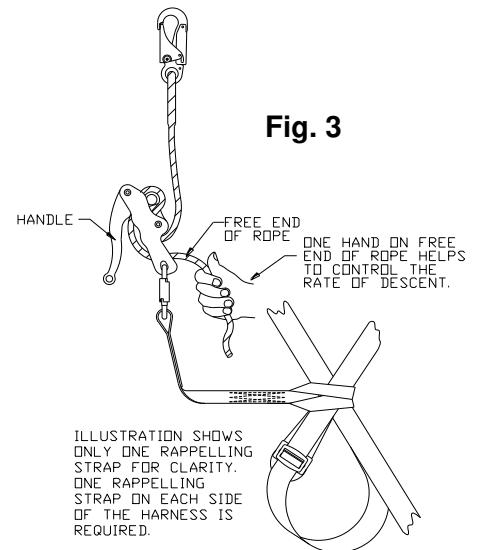


Fig. 3

- users body; if the latter is more than 120 Kg (264.5 lbs) the speed of descent should not exceed 1 m/s (39.3"/s).
- N) As you descend be aware of hitting objects and your distance from the ground.

NOTE: When descending with the DSD +, descent must be controlled with one hand by placing tension on the free end of the braided rope descent line and the other hand on the body controlling the handle of the descender (see Fig.3). Failure to do so could result in serious injury or death.

Important Notes:

- For this system to be used as an After Fall Self Rescue System it is necessary to use a shock absorbing lanyard and full body harness that utilizes a snap / carabiner connection at the dorsal attachment point on the harness allowing it to be disconnected before initializing descent.
- Only full body harnesses equipped with factory installed rappelling straps / loops should be used as installing retro fit rappelling straps is very difficult while suspending in a full body harness.

Proper Packing of the Buck Self Rescue System :

- 1) Ensure braided rope descent line and all other components are completely dry before packing into the storage bag.
- 2) Make sure an eye has been stitched in the free end of the 1/2" braided rope descent line (See 4).
- 3) Secure Hook / Loop closure and stand self opening storage bag up on a flat surface.
- 4) Properly rig the DSD + descender on braided rope descent line 12 feet below the locking snap hook. (See Fig. 5, example sketch on the DSD + body or the included DSD + descender instructions for proper rigging).
- 5) Attach one of the 5555S1 carabiners to the body of the DSD + descender (See Fig. 5 and 8 for carabiner location).
- 6) Starting with the stitched eye end of the braided rope descent line, feed the rope into the bag. Continue to feed the rope until you reach the DSD + descender.
- 7) Attach the 5004A rope grab as outlined below to descent line directly above the DSD30 descender.

Fig. 4

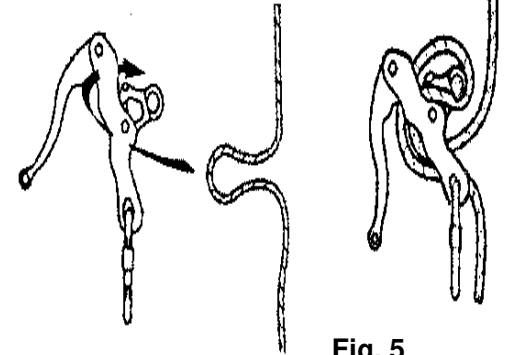
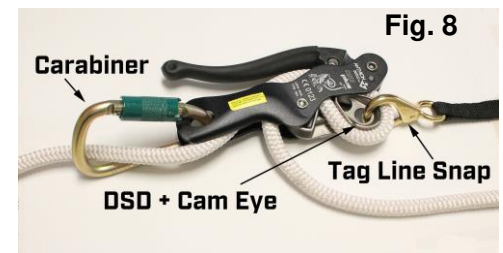


Fig. 5

- a) Grasp the rope grab in your left hand with the cam pointing up and facing your body as shown in Fig. 6.
- b) Press in on the locking pin release button and then pull the pin outward, to release the cam. (Fig. 7)
- c) Insert the braided rope descent line into the groove of the rope grab. The arrow on the device must point to the anchor. (locking snap hook end)
- d) Insert the cam back into the groove of the rope grab (on top of braided rope descent line) and align the cam to the body of the rope grab.
- e) Press in on the locking pin release button and insert the cam pivoting pin completely through the body and the cam of the rope grab.
- f) Release the locking pin release button and ensure that the spring-loaded locking pin is secured and fully seated in the rope grab.



- 8) Attach the remaining 5555S1 carabiner to the eye of the cam of the 5004A rope grab.
- 9) Check by pulling on the carabiner that the device jams in the desired direction.
- 10) Attach the eye in the web ladder to the carabiner attached to the rope grab.
- 11) Attach one of the nylon tag line snaps to the eye on DSD + SD30 descender cam assembly. (**Do not hook to the descender handle**) See Fig. 8.



- 12) Secure the steps of the ladder to the 1" yellow web using the elastic retainers (using two per step). This will prevent the possibility of the steps becoming entangled during deployment.
- 13) Place rope grab with attached carabiner and web ladder, descender with attached carabiner and tag line, in the hardware roll up bag as shown in Fig. 9. The free end of the tag line and the section of descent line above the DSD 30 descender (locking snap hook end) must extend out of the top of the hardware rollup bag. The section of descent line below the DSD+ descender (stitched eye end) must extend out of the bottom of the hardware rollup bag (see Fig. 9).
- 14) Close the hardware rollup bag and secure with Hook / Loop closure.
- 15) Position the roll up bag in the center of the storage bag (on top of rope) with the top of the hardware rollup bag up as shown in Fig. 10.
- 16) Continue to feed remainder of the descent line to the side of the hardware roll up bag leaving approximately 18 inches to remain outside of the storage bag.

- 17) Feed the remainder of the nylon tag line on the opposite side of the hardware roll up bag leaving approximately 18 inches outside of the storage bag parallel to the descent line.

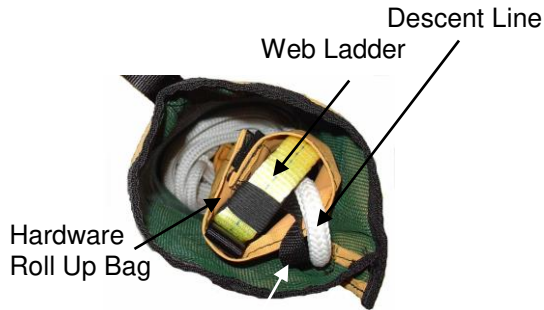


Fig.10 Tag Line



Fig. 9



Fig. 11



Fig. 12



Fig. 13



Fig. 14

- 17) Ensure instructions are packed in the storage bag prior to each use.
- 18) Position rope so it exits self opening storage bag 6" below the top of the bag (see Fig. 11). This ensures components can be deployed whether mounted on the inside or the outside of the bucket.
- 19) Place braided rope descent line and tag line in opening of storage bag cover and secure with snap fasteners as shown in Fig.12.
- 20) Place cover on storage bag and secure with Hook / Loop so that the mounting ring is exposed through the slot of the cover. Ensure that 18" of the braided rope descent line and tag line protrudes through the hole in the center of the storage bag cover and remains outside of the bag as shown in Fig. 13 (front view) and Fig. 14 (top view).

WARNINGS:

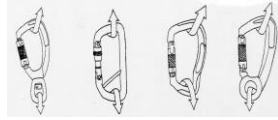
- Read understand and follow all instructions and warnings attached and or packed with this product before use.
- This equipment is intended for use by properly trained professionals only.
- Fall protection equipment, (i.e. fall arrest, work positioning belts, retrieval, suspension etc.) should not be resold or provided to others for re-use after use by original user.
- Before use: 1. Ensure that descent line is properly installed in the descender. 2. Descent line is properly attached to anchor point, 3. Operational test by loading with your bodyweight is performed.
- When descending with the DSD +, descent must be controlled with one hand by placing tension on the free end of the rope and the other hand on the body controlling the handle of the descender (see Fig.3 from use section). Failure to do so could result in serious injury or death.
- Ensure an eye has been stitched in the end of the rope to prevent the descender from slipping off the rope.
- Anchor points must support a minimum of 5000 lbs. per attached worker.
- Working load 130 to 310 lbs. (59 to 140 kg) as outlined by ANSI Z359.4. Additionally, this system can be used as follows:
 - with a load of up to 440 lbs. (200 kg) as outlined by manufacturer instructions and only in exceptional cases like an accompanied descent (i.e. hurt man rescue). This method of rescue can only be used by rescuers specially trained in this technique. In this case additional braking system must be used and no Impact loading tolerated.
 - The 106 system can additionally be rated for a single person load of 420 lbs. (190.5 kg) when used with an equivalently rated harness and accessories.

NOTE: In each of these cases, an additional braking system must be used, and no impact loading tolerated. To add additional braking to the system, the user must route the tail end of the descent line through the carabiner (Fig. 8) and control the rate of descent to 3.3 ft/sec. (1m/sec.) maximum by varying the angle of the descent line tail against the carabiner frame.

- Avoid rubbing system components against abrasive surfaces and sharp edges.
- Use this product only in combination with compatible equipment.

- Equipment subjected to impact loading must be immediately removed from service, destroyed and discarded.
- Always visually check that the snap hook / carabiner freely engages the anchor point and the keeper / gate is completely closed. Never rely on the feel or sound of a snap hook / carabiner engaging.
- Be certain the snap hook / carabiner is positioned so that its keeper / gate is never load bearing.
- Ensure loads applied to carabiners are directed in the proper orientation. (Proper and improper loading techniques are shown in Fig. 15).

Proper Loading Techniques



Improper Loading Techniques

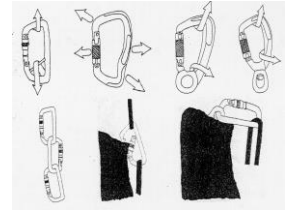


Fig. 15

- Never disable the locking mechanism on the snap hook / carabiner, punch holes in or alter a connecting device in any way.
- Do not let any part of this kit come into contact with any chemicals, corrosive materials, acids or basic solvents.
- Guard against any objects that could block the action of the cams (pebbles, twigs etc).
- Wearing gloves while using this product is highly recommended.
- Product covered under these instructions / warnings should not be resold / redistributed or re-used after use by original user
- Employer - instruct employees as to proper use, warnings and cautions before use of this equipment.

MAINTAINANCE: Proper maintenance and storage of your equipment will prolong its useful life and contribute toward its performance. Clean equipment with water and mild soap and allow to dry thoroughly without using excessive heat. Lubricate as necessary. Apart from visual examination of product before and after each use, it should be inspected at least once a year by an authorized person.

INSPECTION: Prior to and after each use, carefully inspect each component. Supplement these inspections with periodic inspections on a monthly basis even if the product has not been used. The inspection should include, but not be limited to the following:

Descender Inspect for cracks, distortion, nicks or burrs and perform an operational test as outlined in “WARNINGS” Above. Make sure the descent line is woven through the descender correctly as illustrated on the unit and in Fig. 5. Inspect for proper operation of both the brake mechanism and the descent handle mechanism. Also make sure that the descent line slides smoothly through the unit when the handle is depressed to the midpoint (position 2, Fig. 16). (Positions 1 & 3 are braking or stopping positions. Ensure the descent line will not slide when in these positions). Some corrosion on the cam of the descender is normal, especially in a wet environment. If corrosion is evident, the cam can be polished with a Scotch Brite pad, emery cloth, or equivalent. If severe corrosion or pitting is noticeable, remove from service and notify your Supervisor, Safety Director or Buckingham Mfg.

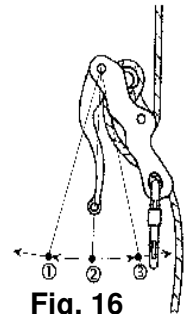


Fig. 16

Rope Grab Inspect for cracks, distortion, nicks or burrs and perform an operational test as outlined in “WARNINGS” above. Ensure the braided rope descent line is woven through the rope grab correctly “See Step #7 of **Proper Packing of the Buck Self Rescue System** above”. Inspect for proper operation of the brake mechanism. Also make sure that the braided rope descent line slides smoothly through the unit when the cam is depressed.

Rope Descent Line Inspect for cuts, kinks, abrasions burns, broken fibers, chemical or physical exposures, excessive wear, discoloration, swelling, or herniated (core popping through cover). Inspect spliced eye for excessive wear, abrasions, or broken fibers where the rope attaches to the snap hook eye. Inspect for broken, missing or unraveling thread on the whipped end.

Snap Hook and Carabiner Ensure locking device and keeper / gate operate freely and smoothly. Inspect for cracks, distortion, corrosion or nicks. If any evidence of 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. Co. for clarification. Read and understand the locking Snaphook Inspection Procedure packed with this product. Failure to carefully and completely inspect your equipment could result in serious injury or death.

NOTE: This product can not be returned unless it is in new / unused condition.

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