INSTRUCTIONS / WARNING

Industrial Body Belts / Harnesses

Manufacturer's instructions shall be provided to the user of this product. If additional copy is needed, contact Buckingham Mfg. Co. Read carefully, understand and heed these and all instructions, warnings and cautions packaged with this product before using this equipment. Failure to do so could result in your serious injury or death. Employer – instruct employee as to the proper use, warnings and cautions before use of this equipment.

ANSI Z359.1, ASTM F887, CSA Z259.10-06 and applicable OSHA regulations are standards / regulations utilized by Buckingham Manufacturing Co. for various harnesses manufactured. Harnesses are labeled to these standards as they are applicable.

Buckingham industrial body belts and harnesses are intended as personal protection equipment for use by properly trained professionals only. Each piece of equipment is important in its function and design and in its relationship to all other components. Lanyards with deceleration units should be considered as a part of a system used in conjunction with a body belt or harness. The deceleration unit must always be attached to the fall arrest attachment device included on the users equipment. Cover of deceleration unit should not be removed and will not have any effect on the shock absorbing feature. Belts must be worn around the waist with fall arrest attachment centered in back. Harnesses must be worn so the fall arrest attachment is centered in back. A connecting device and fall arrest attachment manufactured with a nylon web loop must be attached with a hitch (See detail), or carabiner except in emergencies or very infrequent situations. The nylon web loop must be carefully inspected during and after each such use. Attachment of a locking snap hook to a nylon web loop fall arrest attachment with no wear piece can cause premature wear of the nylon webbing and stitching. This degradation can cause the nylon web loop layers to separate and be incapable of supporting your weight. Only positioning connecting devices should be attached to side D-Rings, as side D-Rings are not intended for fall arrest. OSHA requires that impact force in a fall <u>not</u> exceed a 900 pound limit with a belt or an 1800 pound limit with a harness. Proper use of a harness or industrial belt with the deceleration unit will allow compliance with these limits when properly assembled.

Harnesses equipped with a front-mounted attachment element for fall arrest shall be used only as part of a personal fall arrest system that limits the maximum free fall distance to two feet and limits the maximum arrest force to 900 pounds. The fall protection frontal attachment element chest location shall be within the sternum (breastbone) area of the body. The frontal attachment element is intended for the use in rescue, work position, rope access, and other ANSI/ASSE Z359.1 recognized applications where the design of the system is such that only a limited free fall of two feet is permitted.

Selection of products should be such that they aid the worker in the performance of his job and particular work situation. Therefore, be certain this equipment is suitable for the intended use and work environment. It should only be used as personal protection equipment. If suitability for intended use is questionable, always consult your Supervisor, Safety Director or contact Buckingham Mfg. at (607) 773-2400.

No fall protection system can guarantee that you will not sustain injuries should a fall occur. Therefore, lanyards should be kept as short as possible to minimize free fall distance. OSHA specifies that maximum length of lanyard shall provide for a fall of no greater than six (6) feet. In addition other factors such as harness stretch (Buckingham's expected harness stretch value of 12" maximum), lanyard length, including deceleration unit extension, 3.5 feet maximum, should be such that the user can not fall a distance that will allow contact with any lower level. The lanyard attachment point on the user should be in the middle of the back at or above waist level. Do not lengthen a lanyard by tying or knotting to another lanyard or connecting a snap to a snap. Lanyards should not be shortened by knotting rope or webbing as this can reduce the strength by 50% or more. NOTE: The hitch detailed above is not considered a knot.

Do not alter your belt, harness or any safety product in any way. If a belt strap does not fit properly, replace it with one of the correct size. Wear belt or harness snug but not tight.

Unless the snap hook is a locking type and designed for the following connections, snap hooks shall not be engaged:

- directly to webbing, rope or wire rope
- to each other they are not intended to be used that way and could twist apart
- to a dee ring to which another snap hook or other connector is attached.
- to a horizontal lifeline
- to any object which is incompatibly shaped or dimensioned in relation to the snap hook such that the connected object could depress the snap hook keeper a sufficient amount to cause it to release.
 (See Illustration)

Thorough employee training in the selection and proper use of personal protection equipment is imperative.

Incompatibly Dimensioned

Incompatibly Shaped

Inspection

Prior to each use, carefully inspect the belt or harness for indications of wear, deterioration or impact loading. The inspection should include, but not be limited to, inspecting for:

- product with all leather strength components. If found, immediately cease use, discard and replace as product does not meet existing standards
- webbing cuts, kinks, abrasions, burns, excessive swelling, excessive wear, discoloration, cracks, charring, broken fibers, loose stitching, chemical or physical exposures and buckle holes in strap are not damaged
- loose, bent or pulled rivets, bent grommets, and broken, cut or burned threads
- tongue of buckle does not bind on buckle frame
- nicks, cracks, distortion or corrosion of hardware (buckle, "D"-ring, etc.)
- **NOTE**: Harnesses certified and marked to CSA are equipped with an impact load indicator label that is designed to deploy upon arresting a fall. An impact load will tear the thread exposing this label making the text legible. If you can read the text the harness has been impact loaded.

If any evidence of wear, deterioration or impact loading 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. for clarification.

Failure to carefully and completely inspect your equipment could result in serious injury or death.

CAUTION

- This Product is designed to be used by a person with a maximum weight of 350 lbs. when fully equipped.
- 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 as assurance can not be granted that a used product meets criteria of applicable standards and is safe for use to a subsequent user.
- Only Buckingham Mfg. Co. or those people authorized in writing by Buckingham Mfg. Co. may make repairs to this equipment.
- Equipment subjected to impact loading must be immediately removed from service, destroyed and discarded.
- In the event of a fall, the employer must have a rescue plan and the means to implement it.
- Attach only locking connecting devices meeting standards / regulations for intended use for positioning and suspension to saddle / belt D-rings and attachment points.
- Only positioning connecting devices should be attached to side D-rings, as side D-rings are not intended for fall arrest.
- Do not connect any tools, accessory loops / snaps, etc. to the positioning circle D-rings. D-rings are for attachment of connecting device locking snap hooks only.
- For units with Work Position Nylon Web Loop(s): Buckingham recommends attachment only to carabiner. Buckingham Mfg. **does not** recommend attachment of a metal connector, other than a carabiner, to a nylon web loop fall arrest attachment. Attachment of a metal connector, such as a locking snap hook, to a nylon web loop fall arrest attachment with no wear piece can cause premature wear of the nylon webbing and stitching. This degradation can cause the nylon web loop layers to separate and be incapable of supporting your weight.
- Unless using locking snap hooks, attach only compatibly sized snap hook onto rear fall arrest D-ring on belt or harness and fall arrest anchor point.
- Fall arrest anchor points must support a minimum of 5000 pounds per attached worker and be independent of worker support.
- For fall arrest, always keep anchor point above rear fall arrest attachment. If climbing above anchor point, attach to a new anchor point higher up. When anchor point to allow for connection above the fall arrest attachment device is not available, lanyard positioning must be such that free fall will be limited to a maximum of 6 feet and there will be no contact with a lower level.
- Never use a deceleration unit for positioning. Unit can open and extend which could result in a fall.
- Always attach the deceleration unit to the fall arrest attachment device included on the users equipment.
- Always visually check that: 1) each snap hook / carabiner freely engages D-ring or anchor point, 2) keeper / gate is completely closed with each use. **Never** rely solely on the feel or sound of a snap hook / carabiner engaging.
- Make sure each snap hook / carabiner is positioned so that its keeper / gate is **never** load bearing.
- Ensure there is no pressure on the snap hook locking mechanism sufficient to depress it as this will, due to its length, render it incompatible with currently designed rings and make it very susceptible to rollout.
- Never disable locking keeper / gate on snap hook / carabiner, punch holes in or alter a connecting device in any way.

- Avoid contact of this equipment with sharp edges, abrasive surfaces, high temperature surfaces, welding, or other heat sources, electrical hazards or moving machinery.
- Avoid contact of this equipment with chemicals that may damage the material. If in doubt, contact Buckingham Mfg. Co.
- This equipment is for personal use only, not towing or hoisting.
- **Never** work without independent fall arrest protection if there is danger of a fall.
- Always visually check that all buckles and snap hooks or carabiners are properly closed before use.
- Shoulder D-rings / attachments (optional) are intended for rescue / retrieval purposes only.
- Product covered under these instructions / warnings should not be resold / redistributed or re-used after use by original user.

Harness Pull Through:

An occurrence referred to as Harness Pull Through has been brought to the attention of our industry. It has been known to most likely to occur when squatting and facing your anchor point and when the anchor point is positioned at a steep angle above your head, for example when working on a sloped roof. To avoid the potential of this occurrence:

- Never work in a squatting position while facing your anchor point when your anchor point is positioned at a steep angle above your head.
- Always keep your harness properly adjusted as an improperly adjusted harness is more likely to cause the fall arrest attachment to travel up the back of your neck allowing the back of the harness to open up and slip over your head and off, causing Harness Pull Through. See photos below.
- Position yourself so you are facing away from your anchor point.
- Never let the fall arrest attachment of your harness travel any higher up your body than the center of your shoulder blades.



Cleaning / Storage

Proper maintenance and storage of your equipment will prolong its useful life and contribute toward its performance. Storage areas should be clean, dry and free of exposure to corrosive elements, fumes, etc. Nylon and polyester should be cleaned with water and mild soap (a dish washing soap that removes grease (i.e. Dawn)) and be allowed to dry thoroughly without using excessive heat.

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

Properties of Industrial Body Belt / Harness Materials

Material	Effect of Heat	Effect of Acids & Alkalis	Effect of Bleaches & Solvents	Resistance to Mildew, Aging, Sunlight, Abrasion
Polyester	Sticks at 440 to 445° F. Melts at 482° F.	Good resistance to most mineral acids. Dissolves with partial decomposition in concentrated solution of sulfuric acids. Good resistance to weak alkalis. Moderate resistance to strong alkalis at room temperature. Disintegrates in strong alkalis at boil.	Excellent resistance to bleaches & other oxidizing agents. Generally insoluble except in some phenolic compounds.	Not weakened by mildew. Excellent resistance to aging & abrasion. Prolonged exposure to sunlight causes some strength loss.
Nylon 6	Melts at 419 to 430° F. Slight discoloration at 300° F when held for 5 hr. Decomposes at 600 to 730° F.	Strong oxidizing agents & mineral acids cause degradation. Others cause loss in tenacity & elongation. Resists weak acids. Soluble in formic & sulfuric acids. Hydrolyzed by strong acids at elevated temperatures. Substantially inert in alkalis.	Can be bleached in most bleaching solutions. Generally insoluble in organic solvents. Soluble in some phenolic compounds.	Excellent resistance to mildew, aging & abrasion. Prolonged exposure to sunlight causes some degradation.
Nylon 6,6	Sticks at 445° F. Melts at 480° to 500° F. Yellows slightly at 300° F when held for 5 hr.	Unaffected by most mineral acids, except hot mineral acids. Dissolves with partial decomposition in concentrated solution of hydrochloric, sulfuric & nitric acids. Soluble in formic acid. Substantially inert in alkalis.	Can be bleached in most bleaching solutions. Generally insoluble in organic solvents. Soluble in some phenolic compounds.	Excellent resistance to mildew, aging & abrasion. Prolonged exposure to sunlight causes some deterioration.
Kevlar	Difficult to ignite. Does not propagate flame. Does not melt. Decomposes at about 900° F.	Good resistance to dilute acids and bases. Degraded by strong mineral acids and, to lesser extent, by strong mineral bases. Best chemical resistance from Kevlar 149.	Should not be bleached. Excellent solvent resistance.	Excellent resistance to mildew & aging. Prolonged exposure to sunlight causes deterioration, but fibers self-screening. Good abrasion resistance.
Nomex	Does not melt. Decomposes at 700° F.	Unaffected by most acids, except some strength loss after long exposure to hydrochloric, nitric & sulfuric. Generally good resistance to alkalis.	Unaffected by most bleaches & solvents except for slight strength loss from exposure to sodium chlorite.	Excellent resistance to mildew & aging. Prolonged exposure to sunlight causes some strength loss. Good abrasion resistance.







INDUSTRIAL BELT LABEL

BUCKINGHAM MFG. COMPANY, INC.

1-800-937-2825

www.buckinghammfg.com

Information contained in these written instructions supersedes all other information (written, audio, video etc.) produced by Buckingham Mfg. prior to the revision date of this document.

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