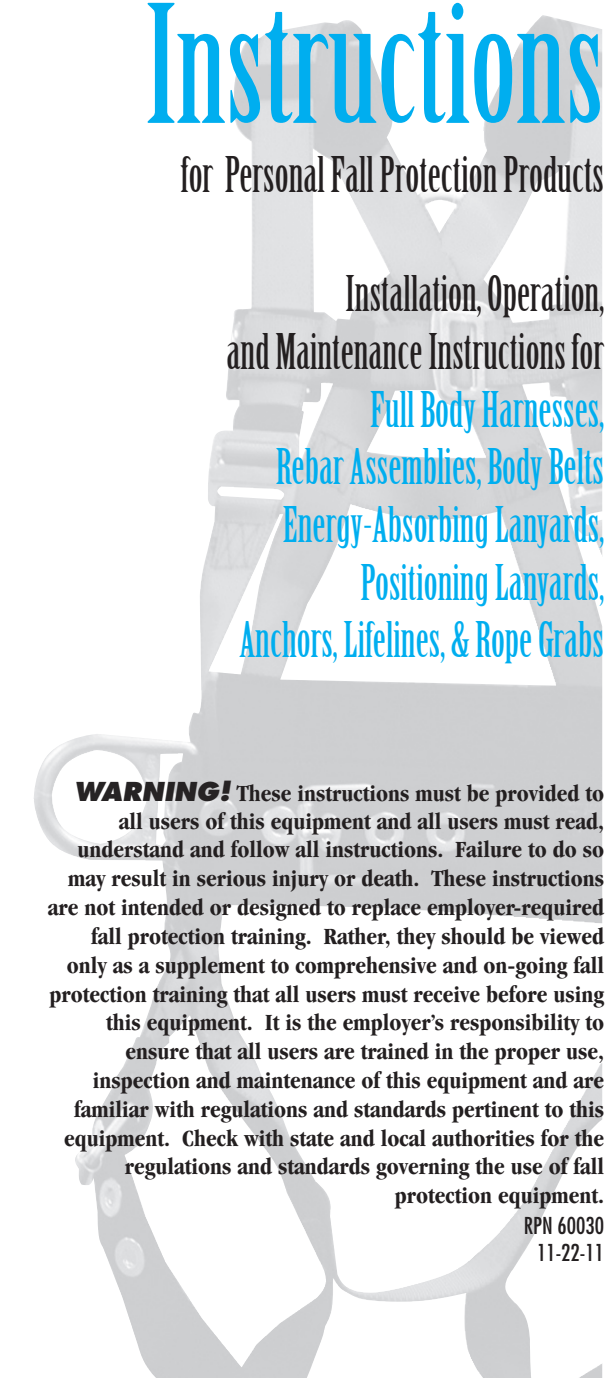
Elk River, Inc.
Personal Fall Protection

Product Instructions

for Personal Fall Protection Products

Installation, Operation, and Maintenance Instructions for Full Body Harnesses, Rebar Assemblies, Body Belts Energy-Absorbing Lanyards, Positioning Lanyards, Anchors, Lifelines, & Rope Grabs



WARNING! These instructions must be provided to all users of this equipment and all users must read, understand and follow all instructions. Failure to do so may result in serious injury or death. These instructions are not intended or designed to replace employer-required fall protection training. Rather, they should be viewed only as a supplement to comprehensive and on-going fall protection training that all users must receive before using this equipment. It is the employer's responsibility to ensure that all users are trained in the proper use, inspection and maintenance of this equipment and are familiar with regulations and standards pertinent to this equipment. Check with state and local authorities for the regulations and standards governing the use of fall protection equipment.

RPN 60030
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Elk River, Inc.
Personal Fall Protection

Where technology meets traditional values...

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Service Life

Elk River, Inc. recommends a five year maximum service life on its soft-goods fall protection products from the documented date that the product is placed into service by the end-user. Soft-goods fall protection products include harnesses, lanyards, and lifelines made of nylon, polyester, or other synthetic fibers. Elk River, Inc. fall protection products are to be inspected on a daily basis by the user and inspected, with documentation, on a semi-annual basis by a competent person.* Ultraviolet rays, abrasion, corrosive atmospheres, and severe service are among the factors that may affect and terminate a product's life prior to the five year maximum service life.

*Under OSHA 29 CFR section 1926.32(f) "Competent person means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees and who has authorization to take prompt corrective measures to eliminate them."

Service Record

Date of Manufacture:.....

Date of Purchase: .....

Initial Service Date: .....

Serial Number:.....

Issued to: .....

Please reference and use the Inspection and Maintenance Log located at the end of this manual.

1-800-633-3954
Elk River, Inc.
P.O. Box 1770
Cullman, AL 35056

Printed in U.S.A.

Chemicals That Cause Fiber Strength Loss

Listed below are chemicals that cause significant strength loss in polyester and nylon. This is not an all inclusive list. Kevlar® is degraded by strong mineral acids and strong mineral bases. If you have questions about a particular chemical not listed, please contact Elk River, Inc. at 800.633.3954.
For additional information on chemical effects go to www.DuPont.com.

Important Safety Information

These instructions **must be provided to all users** of this equipment, and must be read, understood, and followed by users trained in fall protection. Failure to do so may result in serious injury or death.

Polyester	Nylon
Acetamide	Acetic acid
Benzenesulfonic acid	Benzenesulfonic acid
m-Cresol	Benzoic acid
Dimethyl formamide	m-Cresol
Phenol	Formic acid
Tetrachloroethane	Oxalic acid
Triflouroacetic acid	Phenol
	Triflouroacetic acid

General Requirements and Warnings

- Do NOT remove the label from this equipment.
- Do NOT use this equipment unless you are properly trained.
- Do NOT connect more than one user to this equipment.
- Do NOT alter this equipment in any way.
- Do NOT use this equipment in any way other than its intended use as listed in these instructions.
- Do NOT use this equipment with a non-locking snaphook.
- Some chemicals may cause deterioration to this equipment. Contact Elk River if there is any doubt about the affect of a particular chemical on this product.
- Use extra care when using this equipment around moving machinery and/or electrical hazards..
- Use extra care when using this equipment near sharp edges and/or abrasive surfaces.
- Anchorage connection for fall arrest should always be made at or above the height of the back D-ring of the user's harness.
- Ensure that all connections are compatible with the equipment being used.

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Read the Equipment Label:

Attached to each product is a label, which includes important information and warnings that the user must read and understand before using the product. It includes the following information: Model, Mfg. Date, Size, Serial Number and Warnings. **This label must never be removed from the product during its service life.**

Users Must Receive Training:

Employers are required to provide training to all users by a competent person to recognize fall hazards and how to minimize those hazards, fall protection equipment and its use, the employee's role in fall protection, and OSHA standards relating to fall protection (OSHA 1926 Subpart M).

Rescue Plan:

The employer is responsible to have in place, prior to use of this equipment, a rescue plan and a means to implement that plan, if a fall occurs. The plan shall provide for prompt rescue of employees in the event of a fall or shall assure that employees are able to rescue themselves. (OSHA 1926 Subpart M)

Equipment Inspection and Maintenance Procedures:

Products must be inspected by a competent person at a minimum of every six months. An inspection and maintenance log, such as that which is provided on the last page of this manual, should be maintained throughout the service life of the product. In addition to periodic inspections by a competent person, all equipment must be inspected before each use. The user must thoroughly inspect the equipment for any of the following conditions: cuts, cracks, tears, abrasion, loose or damaged stitching, fraying, excessive stretching, mildew, distorted or damaged connectors, exposure to chemical, heat or other degradation, hardness or stiffness, reduction or alteration of lanyard, line length, knots, other signs of excessive wear, rust or oxidation of hardware, and insect or rodent damage. Any equipment that fails to pass inspection must be removed from service immediately.

Fall Arrest Requirements:

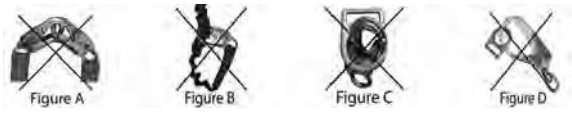
Elk River, Inc. Full Body Harnesses, Lanyards, and Lifelines are individual components of a complete personal fall arrest system. All personal fall arrest systems must have anchorages that have static load strength of at least 3,600 pounds when certification exists. If no certification exists static load strength of 5,000 pounds is required. Anchorages must not be attached to any structure used to support or suspend work platforms. When designing a fall arrest system, consideration must be given to the following requirements:

Prevent contact with any lower level or equipment.

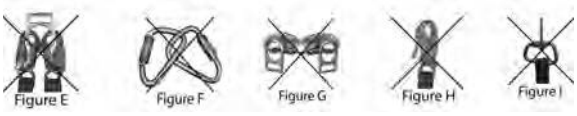
- Limit free fall to a maximum of 6 feet.
- Limit arresting force to a maximum of 1,800 lbs.
- Limit maximum deceleration distance between 48 and 60 inches. Refer to lanyard label.
- Ensure that the angle at rest after a fall would be no greater than 30 degrees.
- Limit potential for pendulum swings

Refer to OSHA 1926, ANSI A10.32, ANSI Z359., CSA Z259., and other governmental regulations and industry standards to ensure that your fall arrest system complies with all applicable requirements.

EXAMPLES OF IMPROPER CONNECTIONS*



A. Never connect two snaphooks together to make a fall protection connection.
B. Never tie-back a snaphook to a lanyard unless specifically design to do so by the manufacturer.
C. Never place a snaphook in a D-ring unless fully engaged with a D-ring to make a compatible connection.
D. Never connect a rebar, scaffold, ladder, form, or pelican snaphook to a D-ring. D-rings are designed to support a snaphook or carabiner with a gate throat opening up to one inch (25mm).



E. Never attach two or more snaphooks and/or carabiners to a D-ring.
F. Never attach two or more carabiners together to make a fall protection connection.
G. Never attach a separator snaphook to two D-rings in a position that the D-rings will engage the gates during a fall arrest. The gates must be facing in a direction away from the D-rings during positioning or a fall arrest.
H. Never make a fall protection connection that is not fully complete. The snaphook gate must be fully closed or engaged with the nose of the snaphook to make a compatible connection.
I. Never position a carabiner so that the barrel or gate is supporting the load of a fall protection connection. Turn or position the carabiner in a manner the barrel or gate of the carabiner will not become engaged in a fall arrest. Only the linear length of a snaphook or carabiner is designed to support the forces of a fall arrest.

***Note: This is not an all inclusive list. Employer training is imperative to identify inappropriate or incompatible connections specific to your jobsite or workplace.**

The requirements of ANSI Z359.12-2009 have increased fall protection hardware strength. Under this standard, the gate strength of carabiners and snaphooks has increased more than ten times-16kN or 3,600 pounds/minimum. Although this additional strength may increase gate performance, compatibility and appropriate connections are still important. Side loading a snaphook during positioning or fall arrest can cause a rollout situation which occurs when the snaphook gate opens and becomes disengaged from its anchor. Disengagement of the snaphook can result in serious injuries or death.

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FULL BODY HARNESS WARNINGS AND INSTRUCTIONS

Use and Purpose:

Elk River Inc. Full Body Harnesses are designed to provide the user safety with freedom of movement and comfort. Full Body Harnesses distribute the forces of a fall arrest across the legs, mid-torso, and chest to reduce the potential for injury in a fall arrest. Full Body Harnesses come with a center back D-ring for fall arrest connection, which slides to the proper position in a fall arrest. Other D-rings are provided depending on the model; these D-rings must not be used for fall arrest **(see figure A)**. Elk River Inc. Full Body Harnesses are man rated to 310 pounds total weight unless otherwise stated.

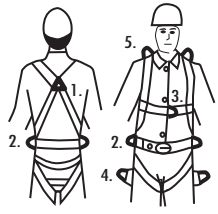
All Elk River Body Harnesses are assembled from synthetic webbing made of polyester, nylon, Kevlar® or a combination of these material fibers. You can locate the material fibers that your harness is made from on your product label.

All Elk River Body Harnesses are man-rated up to 310 pounds (141 kg) total weight. Some harnesses may be Man-rated higher than the 310 pounds. Check your product label to verify the Man-rating of your specific harness. Man-rating is the total worker mass = worker weight plus tools and equipment weight.

Harness Connections:

Elk River, Inc. Full Body Harnesses are designed to perform as stated when used as a part of a complete fall protection system. All connections and components of the system must be compatible with all other parts of the system. Compatible connections will not allow a snaphook to be side loaded in the event of a fall. Only connect snaphooks with a 1" gate opening or less to any D-ring. Fall protection systems should be designed and/or approved by a qualified person. See product label for attachment instructions. If there are any questions about compatibility with Elk River, Inc. Full Body Harnesses please contact us at 800.633.3954.

Harness D-ring Connections:



1. Fall Arrest
   CSA Class A
2. Work Positioning
   CSA Class P
3. Ladder Climbing
   CSA Class L
4. Suspension / Controlled Descent
   CSA Class D
5. Limited Access / Suspension
   CSA Class E

Warnings and Limitations:

- Anchorage connection for fall arrest should always be made at or above the height of the back D-ring of the harness.
- Remove from service any harness that a buckle or buckles do not function or connect properly.

- Never connect two snaphooks to one D-ring.
- Never connect a ladder snaphook or rebar/form snaphook to a D-Ring.
- Never connect a snaphook with a throat-opening larger than one inch (25mm) to a D-ring.

Inspection Procedures:

Harness must be inspected by a competent person at a minimum of every six months. Space in the instructions has been provided to record the dates of the inspections. Prior to each use the user must visually inspect the harness for any of the following:

Cuts, cracks, tears, abrasion, loose or damaged stitching, fraying, excessive stretching, mildew, distorted or damaged connectors, exposure to chemical, heat or other degradation.

Any harness that fails inspection must be removed from field service at once.

Harness Fitting Instructions:

In order to ensure proper performance of a Full Body Harness, it must be adjusted to fit the users body size. The harness should be snug but not tight on the user's body; the seat strap should fit at the bottom of the buttocks and stay in place during movement. Place the harness on, over the shoulders, with the sliding D-ring **(1 in figure A)** in the back at shoulder blades. All straps should be connected and tightened to be snug but not tight on the body. If the user's harness will not adjust to fit, a different size harness is needed. Remove from service any harness that has a buckle or buckles that does not function or connect properly.

figure A

Elk River, Inc. Full Body Harness straps equipped with parachute mating buckles should be adjusted as follows:

1) The smaller side of the buckle will slide along the strap to allow an adjustable fit as needed. To tighten harness straps, hold the small side of buckle and pull the free end of strap to move the buckle closer to the harness.
2) In order to loosen the harness straps, slide the small side of the buckle away from the harness while holding the strap at the end toward the harness.
3) To connect the buckle, place the smaller side of the buckle into the slot on larger side and lay flat.
4) Pull the straps on both sides of the buckle to ensure proper connection.

Elk River, Inc. Full Body Harness straps equipped with interlocking Quick-Connect or QC buckles should be adjusted as follows:

1) The Quick-Connect buckles have 2 parts, male and female part, and can be interlocked to each other. When interlocking the male and the female parts together there should be a "click" sound. This sound tells the user that the Quick-Connect buckle, or male and female part, connection is complete.

2) Pull the straps on both sides of the Quick-Connect buckle in opposite directions to ensure proper connection.
3) To disconnect the Quick-Connect buckle, apply pressure to the spring-loaded levers on both sides of the buckle simultaneously.
4) The Quick-Connect buckles have a double-locking mechanism that will not allow male and female portions of the buckle to separate from each other without applying pressure to both levers at the same time.
5) To adjust the strap, pull the free end of the strap through the friction rollers until snug but not tight on the body.
6) To loosen the strap, pull the Quick-Connect buckle away from the body thus releasing the friction roller grip.

Remove from service any harness that a buckle or buckles do not function or connect properly.

Elk River, Inc. Full Body Harness Straps equipped with tongue buckle connections should be adjusted as follows.

1) Pull strap with grommets through tongue buckle until snug but not tight.
2) Place tongue through the closest grommet.
3) Place the free end of the grommet strap into the elastic or plastic keeper above the buckle.
4) Pull the straps on both sides of the buckle to ensure proper connection.

Elk River, Inc. Full Body Pinnacle® Harnesses are designed with an integrated energy-absorber pack. This pack will provide a reduction in the arresting force through the controlled tearing of an engineered webbing.

Users of Pinnacle® Harnesses must follow the instructions for ZORBER® Energy-Absorbers as well as the instructions for Full Body Harnesses provided with this product.

The tearing of the energy absorber will add up to 4.0 feet (48 inches) of additional fall distance. This distance must be included when calculating necessary clearances for the fall arrest system.

The Pinnacle® Harness can be used with Elk River Lanyards approved for fall arrest and Elk River Energy Absorbers. The tandem use of an energy absorber with the Pinnacle® Harness will not increase the arresting force or fall distance when used within the label weight and fall distance restrictions. However the use of a non-energy absorbing lanyard is recommended.

Inspections:

Inspection of the Pinnacle® Harness and energy-absorber pack should be conducted as described in the instructions for ZORBER® Energy- Absorbers and Full Body Harnesses included with this product.

Harness Maintenance & Storage:

Elk River, Inc. Full Body Harnesses should only be cleaned with a mild detergent and warm water, toweled off to remove excess water, and then hung by D-Ring to dry. Never place these harnesses in a dryer or expose to excessive heat. All equipment should be stored in a cool dry place and not subjected to direct sunlight. Elk River, Inc. harnesses are not repairable. If

any part of the harness is damaged or if the harness is subjected to a fall arrest the harness must be removed from field service and replaced.

D-ring Extensions:

D-ring extensions are designed to extend the fall arrest D-ring for the ease of making compatible connections without the aid of a co-worker. Follow instructions for Elk River lanyards for D-ring extensions. When using a D-ring extension calculate the length of the D-ring extension plus the length of the lanyard for total free fall distance. Never allow greater than a 6 foot free fall.

Additional Information for Freedom® Reflector Vest Harness

The Reflector Vest Harness is a full body harness combined with a high visibility vest designed to be compliant with ANSI/ISEA 107-1999 Class 2.

The vest is connected to the harness by snaps. The vest can be unsnapped to allow full inspection of the harness in accordance with the full body harness instructions included in these instructions. Replace the vest by snapping the vest onto the harness and ensuring the d-rings and chest straps are placed through the reinforced slots.

ANSI/ISEA 107 Conspicuity Class 2:

Appendix B of ANSI/ISEA 107-1999 defines Conspicuity Class 2 as follows. "Conspicuity level for use in occupational activities where risk levels exceeding those in Class 1, such as where:

1. greater visibility is desired during inclement weather conditions;
2. complex backgrounds are present;
3. employees are performing tasks which divert attention from approaching vehicle traffic;
4. vehicle or moving equipment speeds exceed 25 mph; or
5. work activities take place in, or in near proximity to vehicle traffic."

BODY BELT WARNINGS AND INSTRUCTIONS

Use and Purpose:

Your Elk River Full Body Harness may have an Elk River Body Belt. It is also known as a Type Two Body Belt. It is designed to be used as part of a restraint system, a tether system, or a work positioning system; to keep the wearer at a work level, and limit any free fall to a distance of two feet or less.

- Body Belt ANSI A10.32, CSA Type 2, CSA Z259.

BODY BELT IS NOT DESIGNED FOR FALL ARREST!

Warnings and Limitations

- Do NOT use without Full Body Harness.
- Do NOT make any new holes for the buckle.
- This product is NOT designed for fall arrest.
- This product is NOT repairable.
- Only compatible components shall be used with this product.

Inspection Procedures:

1) Starting with the grommets; make sure none are missing, bent, cracked, or discolored.

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2) Next, inspect the buckle; it should not be cracked, discolored, or broken.
3) Inspect the belt, starting at one end and going to the other. Look for cuts, holes, or worn parts. Also look for discoloration and loose threads. Inspect for signs of stretching, alterations, or additions.

Body Belt Fitting Instructions:

Your Elk River Body Belt may have one, two, or three D-rings; or it could have none. The D-ring(s) are to be used in either positioning, or in a tether arrangement, to keep you from reaching a point where a fall could occur. If you are in a position where a free fall could occur, you are required to have on a full body harness.

- The body belt should be worn around the waist, at about the point of your navel.
- It should be worn tight, so as to stay in position. It should not be loose enough to slide down.
- If the belt will not fit correctly, do not use it!

Body Belt Cleaning and Maintenance:

The Elk River body belt should be cleaned in warm soapy water, and hung to dry. It should be stored in a clean, cool, dry place; and not subject to direct sunlight. Ideally the body belt should be hung by the buckle when not in use.

LANYARD WARNINGS AND INSTRUCTIONS

Energy Absorbing Lanyards Use and Purpose:

These instructions apply to two types of energy-absorbing lanyards; the ZORBER®, and the NoPac® Energy Absorbers are designed to dissipate the energy of a fall arrest by the progressive tearing of a precisely woven nylon material. The ZORBER® and NoPac® energy-absorbing lanyards are activated by a force of approximately 450 pounds. NoPac® energy-absorbing lanyards dissipate energy by the controlled stretching of a polyester core enclosed in a polyester or nylon web jacket. What force activates NoPac®? When tested by dropping a 282 pound weight six feet, the ZORBER® and NoPac® energy-absorbing lanyards will reduce the average arresting force to 900 pounds. This reduction in arresting force may reduce the possibility of injury during a fall. Energy-absorbing lanyards may extend up to 60 inches during a fall arrest. When tested by dropping a 282 pound weight twelve feet, the TX-12 NoPac® energy-absorbing lanyards will reduce the average arresting force to 1350 pounds. (ANSI Z359.13)

Warnings and Limitations:

- Anchoring must be directly above the user to prevent a pendulum fall.
- Energy absorbers and energy-absorbing lanyards may extend up 48 - 60 inches during a fall arrest, this distance must be considered when designing a fall arrest system. (See Calculating Total Fall Distances Chart)
- On twin leg lanyards, never connect the unused leg to the waist, hip or saddle D-ring for storage
- Anchorage connection for fall arrest should always be made at or above the height of the back D-ring of the harness.
- Do NOT side load or apply any force to the gate of snaphook.
- Fall protection systems should be designed and/or approved by a qualified person.

- When connecting to the anchorage use caution to prevent lanyard abrasion on corners or rough edges and surfaces.
- Do NOT connect this equipment to any high temperature or electrically charged structural member.
- Never have a lanyard placed between your legs.

Energy-Absorbing Lanyard Connections:

Elk River, Inc. energy absorbers or energy-absorbing lanyards are designed to perform as stated when used as part of a complete fall protection system. All connections and components of the system must be compatible with all other parts of the system. Only connect snaphooks with a 1" gate opening or less to any D-ring. Never connect the energy absorber or energy-absorbing lanyard back to itself unless it is specifically designed for that purpose. Depending on the model of energy absorber or energy-absorbing lanyard purchased, the energy absorber may come with integrally attached snaphooks, formed eyes, D-rings, or integrally attached lanyards.

- If snaphooks are integral, they should be used for connection to the appropriate component of the fall arrest system.
- If the energy absorber or energy-absorbing lanyard has formed eyes, or D-rings then a fall rated carabiner of appropriate size must be used.
- ZORBER® with integrally attached lanyards should have the energy absorber pouch end attached to the fall arrest D-ring on a full body harness.

Choker ZORBER® Energy-Absorbing Lanyards are designed to allow the user to connect the lanyard back to itself with the use of the triple locking carabiner. This carabiner has a gate strength in excess of 5,000 pounds (23kN). In addition the lanyard has a wear pad to protect the strength member webbing from wear. This lanyard can also be used to make standard compatible connections. Users of Choker ZORBER® Energy-Absorbing Lanyards must follow the instructions for ZORBER® Energy-Absorbers provided with this product as well as any differences listed in this addition.

In addition, the Choker ZORBER® lanyard has a green wear pad to protect the red inner strength member. **If any red is visible through the green the product shall be removed from service.** This method of connection is acceptable only for products designed for tie-back connection. Do not use a standard lanyard for tie-back connections. Elk River, Inc. Choker ZORBER® Energy-Absorbing Lanyard has been designed for this type connection.

Positioning Lanyard Connections:

- Elk River, Inc. lanyards with integral snaphooks are designed to attach to the anchorage point by means of the integral auto-locking snaphooks. All connections must be of a size compatible with the snaphook.
- Lanyards that have thimble eye ends require a fall-rated carabiner that is sized appropriately for the application. Only connect snaphooks with a 1" gate opening or less to any D-ring. Never connect the lanyard back to itself.

All connections in a fall arrest system must have a minimum tensile strength of 5,000 pounds.

Positioning Lanyard Standard Requirements:

ANSI Z359.3-2007 1.2.2 This standard addresses positioning systems and travel restraint systems. These systems shall not be used as a primary fall arrest system. Positioning systems shall be supplemented with a secondary fall protection system.

Rebar Assembly Inspection Procedures:

The rebar assembly shall be inspected prior to each use by the user, and at least annually by a competent person. We recommend frequent, regular inspections by a competent person. Start with the snaphooks and/or D-ring: make sure there are no breaks, cracks, distortions, or signs of corrosion. Ensure that the locking mechanism of the snaphooks is closing and locking properly.

Next for web assemblies, inspect the entire length of the web assembly; there is a yellow webbing, it is nylon and is the strength member. The black webbing is the wear pad, and is nylon. Both are 1 inch wide (25.4mm). The thread is white. None of the stitching should be loose. None of the black webbing should be worn away to expose the yellow webbing. Look for cuts, holes, or worn parts. Also look for discoloration and loose threads. Inspect for signs of stretching, alterations, or additions. (CSA – Class B)

For chain assemblies inspect the chain for breaks, cracks, distortions, or signs of corrosion. Ensure quick link is locked and shows no signs of tampering. (CSA – Class E)

For cable assemblies inspect the vinyl coated cable for broken wire strands, frayed wire, worn vinyl coating or signs of corrosion. Ensure the swage terminations are not damaged and show no signs of corrosion. (CSA – Class C)

If any evidence of damage is present, the rebar assembly shall be withdrawn from service immediately, marked or tagged as unusable, and destroyed.

Rebar Assembly Instructions:

Rebar assemblies are designed for worker positioning only. Free fall potential must be less than two feet to qualify as worker positioning. The large snaphook is for connection to the anchorage on the work structure. The smaller snaphooks or D-ring are for connection to the full body harness. When attaching to the anchorage or to the full body harness, the snaphooks must close and lock completely. Care must be taken not to apply loads directly to the face or side of the snaphook gate.

LANYARD INSPECTION PROCEDURES:

Some ZORBER® models have an integrally attached elastic web lanyard.

- Inside the yellow elastic web region is a black inner core. If any black can be seen through the yellow outer core the ZORBER® must be removed from service.
- Prior to each use check energy absorber for any signs of activation of the energy absorber.

On ZORBER® models the stitching on the pouch will be broken and/or the woven material inside the pouch will be torn.

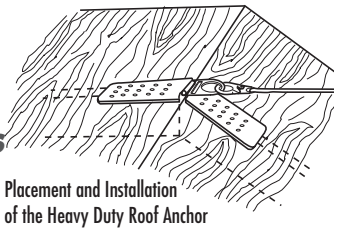
On NoPac® models, the length of the lanyard will be much longer than what

is stated on the label and/or the words "REMOVE FROM SERVICE" will be visible next to the label. Any energy absorber or energy-absorbing lanyard that fails inspection must be removed from field service at once.

Lanyard Maintenance and Storage:

- Elk River, Inc. lanyards are soft goods that must be kept free of grease, dirt, and oil.
- All equipment should be stored in a cool dry place and should not be exposed to harsh weather conditions. Lanyards should not be stored in direct sunlight.
- Elk River, Inc. lanyards are not repairable. If any part of the lanyard is damaged, or if the lanyard is subjected to a fall arrest, the lanyard must be removed from field service and replaced. See the inside cover of this manual for a partial list of chemicals that cause significant strength loss in polyester and nylon. If there are any questions about a particular chemical not listed, please contact Elk River, Inc. at 800.633.3954

ROOF ANCHOR INSTRUCTIONS AND WARNINGS



Placement and Installation of the Heavy Duty Roof Anchor

Roof Anchor Use and Purpose:

Elk River, Inc. Heavy Duty Roof Anchors are designed to be used as an anchorage connector in a complete fall arrest system. It may also be used as an anchorage connector in a worker positioning system. The Heavy Duty Roof Anchor has a strength in excess of 5,000 pounds (22.2 kN) as required by ANSI Z359.1. Single use anchors are designed for one use only. This anchor is designed for single use only. **Never install the anchor more than once unless designated as a reusable anchor.**

Roof Anchor Connections:

Elk River, Inc. Heavy Duty Roof Anchors are designed to perform as stated when used as part of a complete fall protection system. All connections and components of the system must be compatible with all other parts of the system. Compatible connections will not allow a snaphook to be side loaded in the event of a fall. Do not use a snaphook with a throat opening larger than 1" to connect to the anchor D-ring. Fall protection systems should be designed and or approved by a qualified person. If there are any questions about compatibility with Elk River, Inc. Heavy Duty Roof Anchor please contact us at 800.633.3954.

Roof Anchor Inspection Procedures:

Start with the D-ring; make sure there are no breaks, cracks, distortions, or signs of corrosion. Inspect the label, make sure it is legible. Follow any precautions or warnings on the label.

Roof Anchor Installation:

Elk River, Inc. Heavy Duty Roof Anchors, when installed in accordance with these instructions, will provide an anchorage connection point at the peak of a roof that is suitable for use with a fall arrest or work positioning system. These anchors should be used in conjunction with roofing bracket supported walk planks when installing conventional roofing systems on truss, rafter, and

plywood sheathing construction. When installing the anchor, the following procedures must be followed:

1. Begin by placing the first anchor along the peak of the roof at a point five feet from the beginning of the roof line. Additional anchors should be placed no more than every ten feet with the last anchor set five feet from the end of the roof anchor lines.
2. Remove ridge vents when installing anchors.
3. Each anchor should be fastened to the roof, using 16d nails or furnished # 9 x 2" woodgrip screws. A full set of screws or nails (32 each) is provided with the anchor. The center row of holes must be secured to the roof rafter. The outer two rows of holes must be secured to the plywood sheathing. Use all holes provided in securing the roof anchor to the building structure.
4. Inspect the rafter from inside the attic area to ensure that the wood is structurally sound and free of rot or other signs of deterioration.
5. Also ensure the center row of nails or wood screws have not broken through the rafter.

When only working on one side of a pitched roof, the Elk River, Inc. Heavy Duty Roof Anchor can be installed on the flat surface by extending the two flat fastening plates out leaving the D-ring in the middle of the installed anchor. Fasten as described above. When installed as an anchor point on a flat surface, the lifeline or lanyard connecting the full body harness to the anchor cannot extend over the peak of the roof. If it becomes necessary to work on the other side of the peak, another anchor must be installed at the peak or on the flat surface being worked on.

Roof Anchor Maintenance and Storage:

Always handle this product and all fall protection equipment with care. Do not throw this product from a building or on to a truck. No part of this product is field serviceable.

LIFELINE WARNINGS AND INSTRUCTIONS

Rope Lifelines Use and Purpose:

Elk River, Inc. Rope Lifelines are most commonly used as vertical lifelines, but may also be used as horizontal lifelines. Horizontal lifelines must be designed, installed, and used under the supervision of a qualified person. Vertical lifelines are generally used in conjunction with a Rope Grab, giving the user freedom of movement up or down while providing a passive fall arrest system. Elk River, Inc. Rope Lifelines are 100% nylon or polyester blend and available in 5/8" and 3/4" diameters in lengths up to 600 feet. All Elk River, Inc. Lifelines have a minimum breaking strength of 5,000 pounds. All Elk River, Inc. nylon rope lifelines are covered by these instructions.

Warnings and Limitations:

- Lifelines may elongate as much as 25% during a fall arrest, this distance must be considered in total fall distance when designing a fall arrest system.
- There must be a minimum of 12 feet of the lifeline below the rope grab securing point.
- Prevent contact with any lower level or equipment.
- Ensure that the angle of the body, at rest, after a fall would be no greater than 30 degrees.

- Limit potential for pendulum swings
- Lanyards used in conjunction with a rope grab must never exceed three feet in length.

Lifeline Connections:

Elk River, Inc. lifelines with integral snaphooks are designed to attach to the anchorage point by means of the integral auto-locking snaphooks. Anchorage connections must be of a size compatible with the snaphook. Lifelines that have thimble eye ends require a fall-rated carabiner that is sized appropriately for the application. Never connect the lifeline back onto itself. All connections in a fall arrest system must have a minimum tensile strength of 5,000 pounds. When connecting to the anchorage use caution to prevent lifeline abrasion on corners or rough edges and surfaces. If there are any questions about connection compatibility with Elk River, Inc. lifelines, please contact us at 800.633.3954

Lifeline Inspection Procedures:

Prior to each use check thimble eyes for cracks, breakage or discoloration. These are indications that the lifeline has been subjected to a fall arrest.

Lifeline Maintenance and Storage:

Elk River, Inc. lifelines must be kept free of grease, dirt, and oil. All equipment should be stored in a cool dry place and should not be exposed to harsh weather conditions. Lifelines should not be stored in direct sunlight. Elk River, Inc. lifelines are not repairable. If any part of the lifeline is damaged, or if the lifeline is subjected to a fall arrest, the lifeline must be removed from field service and replaced. **See Page 1 (Chemicals That Cause Fiber Strength Loss)** for a list of chemicals that cause significant strength loss in polyester and nylon. This is not an all inclusive list. If there are any questions about a particular chemical not listed, please contact Elk River, Inc. at 800.633.3954.

ROPE GRAB WARNINGS AND INSTRUCTIONS

Rope Grabs Use and Purpose:

The Elk River Series rope grabs are designed to attach to a 5/8" Elk River nylon or polyester rope vertical lifeline to provide a means of fall arrest. The 19250 Elk River rope grab is designed to attach to 5/8" or 3/4" rope. It is designed to be used on vertical lifelines, not horizontal ones. This rope grab is only one part of a total fall protection system. For full security, the use of compatible hardware is essential. The rope grab consist of an automatically actuated rope grabbing device. A rope grab protects a worker from falling while climbing up and down, allowing the worker free movement. In the event of the fall, the rope grab is automatically locked onto the rope with a safety controlled stop action that arrests the downward movement of the worker. This rope grab is man rated to 310 pounds total weight. A lanyard is most often the connection between the harness and the rope grab. Elk River will not furnish a rope grab with a integral attached lanyard longer than 3 feet. The user of a rope grab with a lanyard longer than 3 feet should always maintain the rope grab at shoulder height or above. If the rope grab will not close properly, it must be removed from field service at once and Elk River notified.

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The Elk River 19250 rope grab has the anti-inversion gravity slide mechanism that is designed to disable the user from installing the rope grab in the wrong direction or arrow indicator in the downward position on the lifeline. When the arrow is pointing in an upward direction the anti-inversion gravity device allows the user to install the rope grab properly on the lifeline and close the rope grab on the lifeline. Never by-pass the anti-inversion device.

The 19260 5/8" rope grab has a built in anti-panic device in addition to the anti-inversion. The anti-panic prevents the user from holding the rope grab in an open position during a fall arrest. See 19260 detailed instructions supplied with the equipment at time of shipment from the manufacturer.

Warnings and Limitations:

- Do NOT attach more than one person to a single rope grab.
- Use of this product is not suitable in situations where the user is positioned on an unstable surface, fine grain material, or particular solids such as sand or coal.
- Do NOT hold rope grab while moving.
- Do NOT attach a harness directly to rope grab with a carabiner.
- **Any rope grab that has been subjected to a fall arrest must be removed from service and replaced.**
- There must be a minimum of 12 feet of the lifeline below the rope grab securing point.
- Lanyards used in conjunction with a rope grab must never exceed three feet in length unless otherwise designed by Elk River, Inc.

Fall Arrest Distance:

When tested in accordance with the requirements of ANSI Z359.1, this rope grab fall arrestor will not exceed a fall arrest distance of 54 inches. When tested in accordance with ANSI A10.32, this rope grab will not slip on the lifeline more than 42 inches.

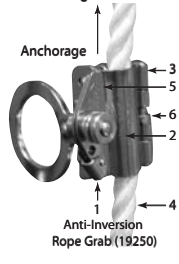
Fall Arresters:

Lanyards used in conjunction with a rope grab must never exceed three feet in length unless otherwise designed by Elk River, Inc.

Rope Grab Connections:

Elk River, Inc. rope grabs are designed to perform as stated when used as a part of a complete fall protection system. All connections and components of the system must be designed and/or approved by a qualified person. If there are any questions about compatibility with Elk River, Inc. rope grabs, please contact us at 800.633.3954.

Figure 1.



Rope Grab Inspection Procedures:

Rope grabs must be inspected by a competent person at least every six months. Any rope grab that fails inspection must be removed from field service at once. Records of inspection should be maintained for review. Prior to each use the user must visually inspect the rope grab for any of the following:broken spring, cracks, abrasion, loose or damaged attachments, excessive wear, mildew, distorted or damaged connectors, signs of exposure to chemical, heat or other degradation. Prior

to each use the user must ensure all parts move freely. Always check to see if the brake functions correctly when attached to a lifeline. Any rope grab that fails inspection must be removed from field service at once. Ensure all hardware is clean, rust-free and gate locks in closed position automatically, check for broken spring, loose or damaged attachments. Prior to each use the user must ensure all parts move freely. Always check the rope grab to see if the brake functions correctly when attached to a lifeline. **See Figure 1**.

a. Ensure diameter and type rope matches the size marked on the rope grab.
b. Lift security latch (1), fully unscrew the locking thumbscrew (2), and open hinged section (3).
c. Position the device on an Elk River lifeline (4) with the arrow pointing in the up direction, as marked (5) and the anti-inversion anti-gravity device in the hinge (6).
d. Close the hinged section (3). Turn locking thumbscrew (2) until fully engaged (do not force), close security latch (1).
e. Check to see that the lanyard is properly attached to the ring of the rope grab.
f. After installing, test by pulling down sharply on the lanyard to assure that the rope grab will lock securely on the lifeline.
g. The lifeline should be anchored or weighted at the bottom with approximately ten pounds so that it remains tight and the rope grab will move freely.

Rope Grab Maintenance and Storage:

Elk River, Inc. rope grabs must be kept free of grease, dirt, and oil. All equipment should be stored in a cool dry place and should not be exposed to harsh weather conditions. Elk River, Inc. rope grabs are not repairable. If any part of the rope grab is damaged, or if the rope grab is subjected to a fall arrest, the rope grab must be removed from field service and replaced.

INSPECTION AND MAINTENANCE LOG

This product should be inspected by a competent person at a minimum of every six months.		
Date Inspected	Inspector	Comments

Any PRODUCT that has been subjected to a fall arrest or evidence of damage is present; the product MUST be removed from field service immediately, marked or tagged as unusable, destroyed, and replaced.

Manufacturer's instructions shall be provided to user. If there are any questions about this equipment please contact us.

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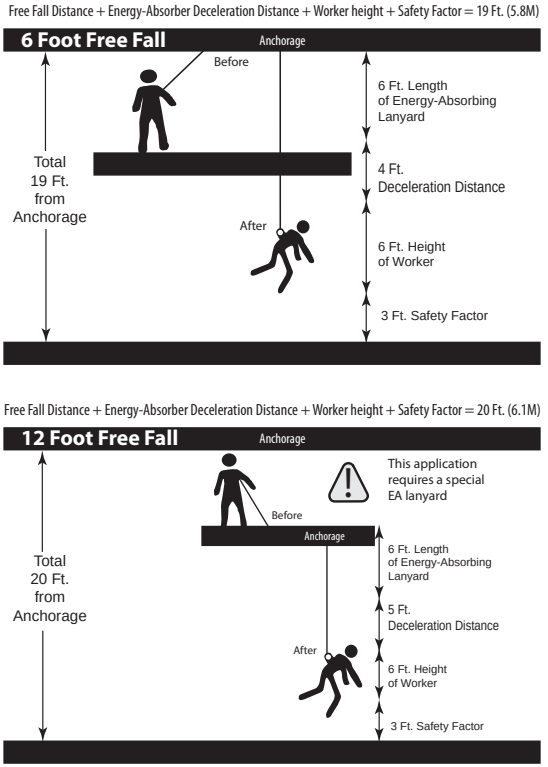
CALCULATING TOTAL FALL DISTANCES

Total Fall Clearance below worker is calculated from Anchorage Connection. Free Fall Distance + Energy-Absorber Deceleration Distance + Worker height + Safety Factor. Care must be taken to ensure that the total fall distance is clear of obstructions, such as equipment, to avoid contact with a lower level.



ANSI Z359.13-2009 Effective Date, November 16, 2009.