KLEIN TOOLS
For Professionals…Since 1857®

Instructions for the Proper Use and Care of Klein® Harnesses

Introduction

These instructions explain how to use, inspect and maintain Klein Harnesses.

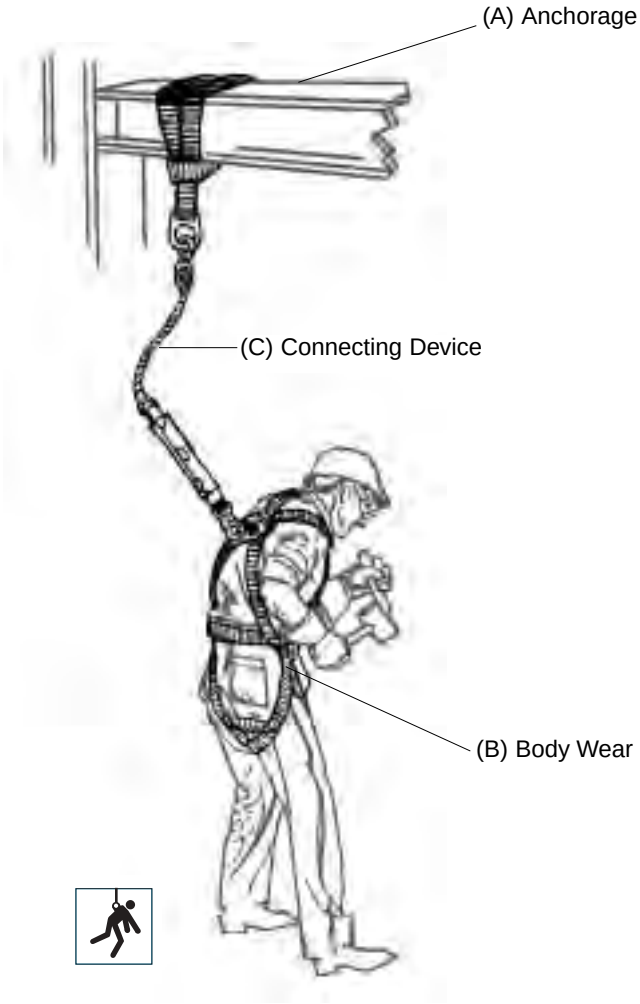
Klein manufactures a full line of occupational Protective Equipment (OPE). Each product is a specific component of an OPE system for fall protection. As required by OSHA, Klein harnesses are designed to arrest free falls and to distribute impact forces over thighs, pelvis, waist, chest and shoulders. In addition to fall-arrest protection, many Klein Full-Body Harnesses feature additional OPE applications (such as positioning, suspension and retrieval) in selectable integrated units.

Workers who use Klein OPE Harnesses must be instructed on how to use them correctly. They must also read, understand and follow all instructions and warnings contained in this booklet and any warnings or instructions attached to and/or packed with this product and all other tools, devices and equipment before each use.

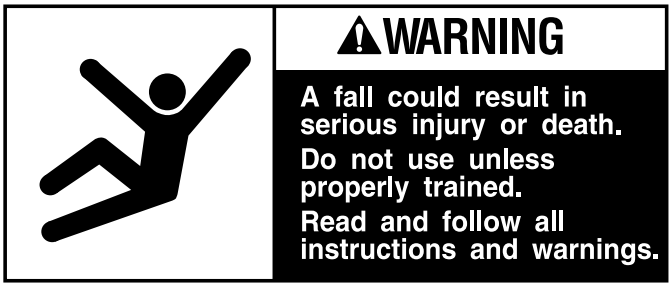
Remember the A-B-C Rule:

To be complete, an OPE system must include at least one piece of equipment from each of the A-B-C components (for an example, see Figure 1). Some OPE systems may include more than one piece of equipment in each component. Choosing the proper equipment depends on the job-site and the application. A competent person, as defined by OSHA, must make these equipment decisions.

Figure 1



⚠WARNING: Klein harnesses must NOT be used by anyone who has not read, understood and followed all the instructions and inspection procedures contained in this booklet. Failure to observe these instructions and inspection procedures could lead to serious injury or death. Training and instruction review should be repeated at regular intervals by the user and his or her employer.



Introduction (continued)

OPE Systems and The A-B-C Rule

An OPE system is more than just a combination of equipment. To function properly, the system must be custom designed for the specific application, environment and work-site requirements. Follow the **A-B-C Rule** when assembling an OPE system. The system must contain all of the following components: **(A)** anchorage, **(B)** body wear, and **(C)** connecting device.

(A) Anchorage

OSHA defines anchorage as "a secure point of attachment for lifelines, lanyards or deceleration devices". Choosing the proper anchorage is determined by the type of fall protection needed (fall arrest, or fall arrest combined with positioning, suspension and/or retrieval functions). The anchorage must be identified and evaluated by a competent person, as defined by OSHA, at the job-site before the appropriate OPE equipment can be selected. Typical anchorages could be an I-beam or other structural members.

(B) Body Wear

The second component of an OPE system is body wear (OPE harnesses and belts). To select the right harness for the job-site requirements, a competent person, as defined by OSHA, must determine the type of fall protection needed (such as fall arrest, or fall arrest combined with positioning, suspension and/or retrieval capabilities). Whenever there is a risk of a fall, fall-arrest protection must be used. OSHA prohibits the use of a body belt for fall arrest.

(C) Connecting Device

The third component of an OPE system is the connecting device. Examples include lanyards, rope grabs and deceleration devices. As with anchorages and body wear, choosing a proper connecting device is dictated by other system components and job-site requirements. Only use connecting devices equipped with locking snap hooks. OSHA prohibits the use of connecting devices without locking snap hooks in any fall-protection system.

How OPE Systems Are Used

Klein offers personal fall protection equipment in four OPE system categories. Each system and its associated equipment is designed to help protect against different kinds of risks. The risks which require the use of OPE systems and the proper use of OPE equipment must be fully understood. OPE equipment and systems must be used only for the specific purpose for which they are designed and intended.

The following section introduces the basic kinds of OPE systems: fall arrest or fall arrest combined with positioning, suspension and/or retrieval functions.

Personal Fall-Arrest System

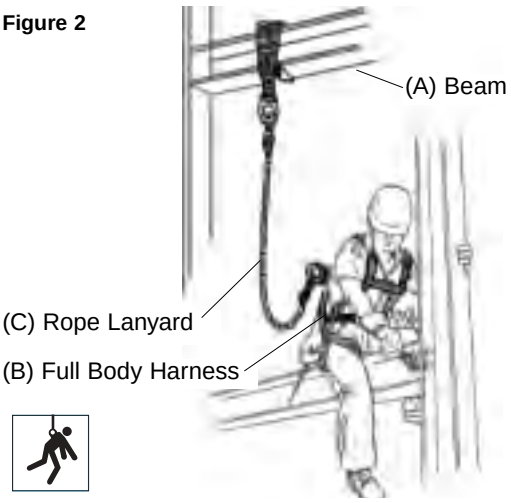
A personal fall-arrest system is required if there is any risk of a worker falling from an elevated position (generally, six feet or more). **NOTE: Know the specific OSHA regulations which pertain to your industry.**

OSHA defines a personal fall-arrest system as a “system used to arrest an employee in a fall from a working level.” It consists of **(A)** a fall-arrest anchorage capable of supporting at least 5,000 lbs. per attached worker and independent of the worker’s support; **(B)** a full-body harness designed to distribute the fall-arrest forces over thighs, pelvis, waist, chest and shoulders and equipped with a circle D-ring at the back for attaching a fall-arrest connecting device, and **(C)** a fall-arrest connecting device such as a lanyard, deceleration device, lifeline or a combination of these devices equipped with locking snap hooks.

A personal fall-arrest system is a passive protection system which only comes into service when a fall occurs, similar to a seat belt in a car which restrains the wearer only upon impact.

For example, as shown in Figure 2, a fall-arrest system would be used by an ironworker bolting steel beams together for a skyscraper. Following the **A-B-C Rule**, this OPE system includes: **(A)** beam, **(B)** full-body harness, and **(C)** lanyard.

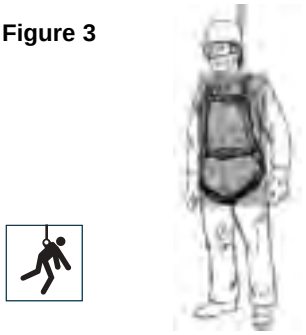
Figure 2



Personal Fall-Arrest System (continued)

The shaded area in Figure 3 shows the impact-force distribution for a typical full-body fall-arrest harness. OSHA requires that impact force in a fall NOT exceed an 1,800 lbs. (8kN) limit with a harness. At a given weight, the longer the free fall, the greater the resulting impact force. To stay under the 1,800 lbs. (8kN) limit, minimize slack in the fall-arrest connecting device or use a deceleration unit.

Figure 3



Remember, a personal fall-arrest system only becomes active in a fall. If equipment is required to help hold or place a worker in position, a separate suspension or positioning system must be used in addition to the fall-arrest system. A personal fall-arrest system is designed only to aid a worker once a fall occurs, and must be used whenever there is danger of falling. When a worker may be in danger of being killed or injured in a fall, equipment specifically designed for fall arrest must also be used.

Personal Positioning System

A personal positioning system is required if a worker must be held in place while his hands are free to work. OSHA defines a positioning system as "a body belt or harness system rigged to allow an employee to be supported on an elevated vertical surface, such as a wall, and work with both hands free." If there is risk of a worker falling from an elevated position, (generally, six feet or more), personal fall-arrest protection must also be used.

The ironworker in Figure 4 is using both a personal positioning system and a personal fall-arrest system. Each system has its own A-B-C components.

Since the worker's job requires that both hands be free, he is using a personal positioning system. The **(A)** component is the vertical support beam that serves as a positioning anchorage. Positioning anchorages must be capable of supporting at least twice the potential impact load of the worker's fall or 3,000 lbs., whichever is greater. The **(B)** component is the worker's full-body harness, which is equipped with a D-ring at each side for attaching a positioning connecting device.

The **(C)** component is the positioning lanyard which has a locking snap hook at each end. Rig positioning connecting devices so that a worker cannot free fall more than 2 feet.

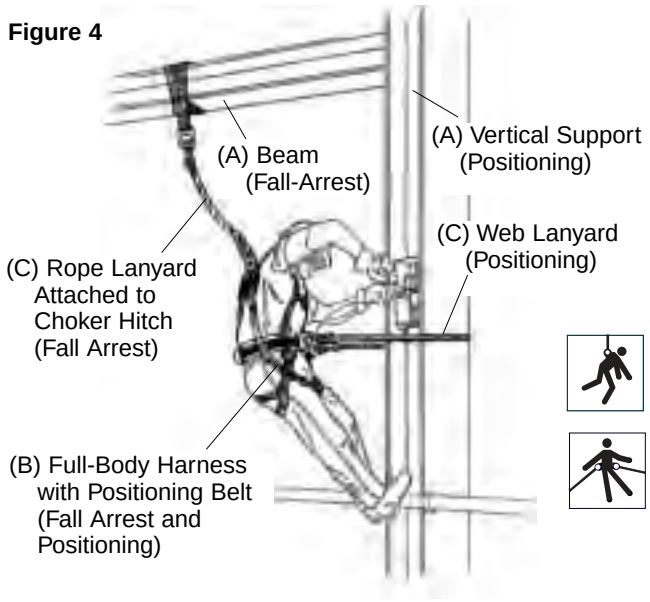
Since the worker is at risk of falling, he is also using a personal fall-arrest system. The **(A)** component is the horizontal beam which serves as a fall-arrest anchorage. Fall-arrest anchorages must be capable of supporting at least 5,000 lbs. and must be independent of the worker's support. The **(B)** component is the worker's full-body harness which is equipped with a D-ring at the back for attaching a fall-arrest connecting device. The **(C)** component is the fall-arrest lanyard equipped with a locking snap hook at each end.

In some cases, fall-arrest protection is not possible when using a personal positioning system. For example, a worker building highway pillars or similar structures may have no overhead anchorages available. In these situations, alternative fall-arrest protection devices such as safety nets must be used.

A positioning system is an active system and is in use whenever the worker leans back. The positioning body wear provides solid midriff support, leaving the worker's hands free to get the job done.

Remember, a positioning system is only designed to help hold a worker in place while leaving his hands free to work. When used with a fixed anchorage, this system can help prevent a fall. However, positioning equipment is **never** a replacement for fall-arrest protection. A positioning system must be used only for the positioning assistance for which it was designed. Do not rely upon a positioning system to provide fall arrest or any other kind of protection.

Figure 4



Personal Suspension System

A personal suspension system is required when it is necessary to suspend and position a worker from above. A typical system involves the use of a winch, cable and either a Bosun's chair or specially designed suspension harness. A suspension system is an active system (used constantly). Fall-arrest protection must always be used with a suspension system.

For example, the painter shown in Figure 5 is using both a personal suspension system and a personal fall-arrest system. Each system has its own **A-B-C** components.

Since the worker must be suspended from above in order to get to his work area, he is using a personal suspension system. The **(A)** component is the winch that serves as a suspension anchorage. Suspension anchorages must be capable of supporting at least twice the potential impact load of a worker's fall or 3,000 lbs., whichever is greater. The **(B)** component is the worker's Bosun's chair harness with a front suspension D-ring. The **(C)** component is the winch cable which is equipped with a locking snap hook.

Since the painter is at risk of falling, he is also using a personal fall-arrest system. The **(A)** component is the structural beam with the eye bolt which serves as a fall-arrest anchorage. Fall-arrest anchorages must be capable of supporting at least 5,000 lbs. and must be independent of the worker's support. The **(B)** component is the worker's Bosun's chair harness which is also equipped with a D-ring at the back for attaching a fall-arrest connecting device. The **(C)** component is the vertical lifeline equipped with a locking snap hook.

Remember, a suspension system is designed to lower, raise and suspend a worker at an elevated work station. The suspension attachment points on the harness, such as the front D-ring or seat-strap D-rings, are NOT designed to properly distribute the impact forces that result in arresting a free fall. A suspension system cannot be relied upon to provide fall-arrest protection. Always use the fall-arrest features of a suspension harness. **NOTE: Klein suspension harnesses provide a rear D-ring which must be used for fall-arrest protection.**

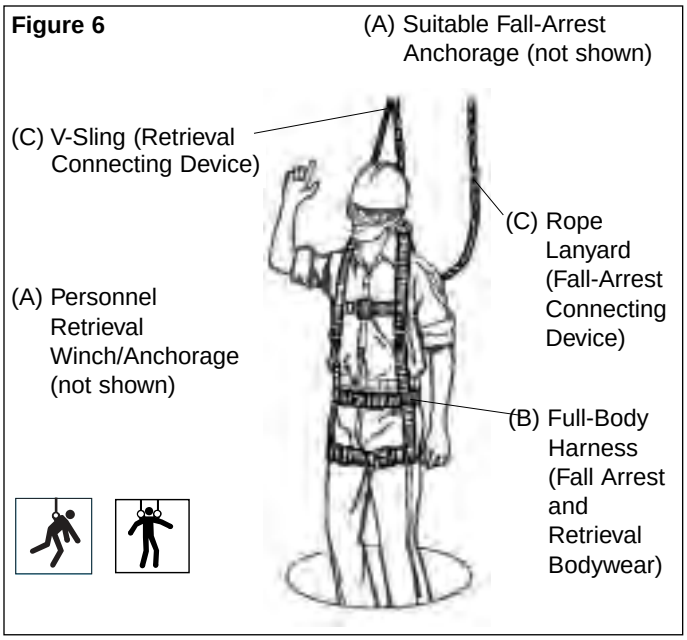
Figure 5

Personal Retrieval System

A personal retrieval system is required where a worker may need to be rescued from a work environment.

For example, the worker shown in Figure 6 is using both a personal retrieval system and a personal fall-arrest system. Each system has its own **A-B-C** components.

Figure 6



Since this worker is in an area that may contain potentially hazardous conditions, he is using a personal retrieval system. The **(A)** component (not shown) is the personnel retrieval winch that serves as part of the retrieval anchorage.

Retrieval anchorages must be capable of supporting at least twice the potential impact load of worker's fall or 3,000 lbs., whichever is greater. The **(B)** component is the worker's retrieval harness with shoulder D-rings. The **(C)** component is a V-sling, which is equipped with locking snap hooks.

Since the worker is at risk of falling, he is also using a personal fall-arrest system. The **(A)** component (which is not shown) could be any suitable fall-arrest anchorage. Fall-arrest anchorages must be capable of supporting a minimum of 5,000 lbs. and must be independent of the worker's support. The **(B)** component is the harness which is also equipped with a D-ring at the back for attaching a fall-arrest connecting device. The **(C)** component is the fall-arrest lanyard which is equipped with a locking snap hook at each end.

When used in accordance with OSHA 1910.146 Permit Required Confined Space procedures, the rear fall-arrest D-ring may also be connected to retrieval connecting devices that meet OSHA standards.

Like a fall-arrest system, a retrieval system is a passive system which only becomes active when the worker needs to be removed from the work location.

Remember, a retrieval system is designed to remove a worker from a work location, not to provide fall-arrest protection. Therefore, the worker may also need the fall-arrest and positioning functions.

The retrieval shoulder D-rings are NOT designed to properly distribute impact forces caused by arresting a free fall. Do not rely upon a retrieval system by itself for fall-arrest protection. Always use the fall-arrest features of a retrieval harness.

NOTE: Klein retrieval harnesses with shoulder retrieval D-rings also provide a rear D-ring which must be used for fall-arrest protection.

Always Use Fall Protection if There is a Risk of a Fall

Although OSHA regulations generally require workers to use fall protection when exposed to a fall of six feet or more, Klein strongly recommends using fall-arrest protection when working at any elevated position. When in doubt, contact your regional OSHA office. Also, OSHA regulations prohibit body belts from being used alone as a fall-arrest system.

Know the appropriate regulations. Learn about the types of protective equipment and systems which must be used on the job. OSHA requires employers to know and follow the OSHA regulations pertaining to their industry and to provide a workplace free from hazards that might cause injuries. OSHA provides free consultation assistance to employers who need help in training and implementation. **If you have questions or any doubt as to what regulations apply to you or what safety equipment is required, contact your regional OSHA office.**

How to Select OPE System Components

When selecting OPE equipment, employers must understand the government regulations and the purposes for which specific items are intended. They need to know the specific working conditions and how that equipment must be combined with an anchorage to form a complete OPE system. Also, employers must train their workers to identify, maintain, and use OPE equipment correctly. The next section explains the equipment selection process.

1. Understand the job. Are workers going where they will need fall protection? Will positioning equipment be needed to get the job done? Will it be necessary for a person to be suspended from a structure? Does the job environment require retrieval equipment? Consider all potential risks. Understand and be prepared to follow rescue procedures. Do you need to hold a job-site meeting before starting the work?

2. Identify the specific job requirements. Determine suitable anchorages. In addition to personal fall protection, does the job require nets, hand rails or other non-personal fall protection? Decide if additional anchorages will be needed and/or if any special engineering will be required to meet safety regulations. If an engineered system for personal fall-arrest protection is required, it shall be designed, installed, and used under the supervision of a **qualified person**, as defined by OSHA, and under regulations set forth by OSHA.

3. Know the appropriate regulations. Learn about the types of OPE equipment and systems which must be used on the job. Know and follow state and local regulations which pertain to your industry. OSHA requires employers to know and follow OSHA regulations pertaining to their industry and to provide a workplace free from hazards that might cause injuries. OSHA provides free consultation assistance to employers who need help in training and implementation. If you have any questions or any doubt as to what regulations apply to you or what safety equipment is required, contact your regional OSHA office.

4. Determine which OPE system(s) are needed. Based on job requirements and appropriate regulations, choose that fall-arrest system or fall-arrest system combined with positioning, suspension or retrieval systems that will satisfy the specific requirements. Always follow the **A-B-C Rule.** Each system must contain at least one **(A)** anchorage, one **(B)** body wear, and one **(C)** connecting device.

5. Select the proper OPE equipment. The major criteria for selecting OPE equipment is dictated by the OPE system(s) required. In 1994, OSHA issued its Final Rule of Fall Protection in the Construction Industry. This Final Rule requires workers to use fall protection when exposed to a risk of a fall of six feet or more. It also mandates the use of fall-arrest harnesses and locking snap hooks. Therefore, fall-arrest body belts and non-locking snap hooks can no longer be used.

Types of OPE systems:

Fall-arrest system: Used to arrest an employee in a fall from a working level. It consists of an **(A)** anchorage, **(B)** full-body harness, and **(C)** connecting device. Fall-arrest protection is required if there is a risk of falling (generally, six feet or more).

Positioning system: Allows an employee to be supported on an elevated vertical surface while working with both hands free, and rigged so that a worker cannot free fall more than two feet. It consists of (A) anchorage, (B) full-body harness with a positioning belt, and (C) connecting device(s). If there is risk of falling, fall-arrest protection must also be provided. **NOTE: Klein positioning harnesses also provide a rear D-ring which must be used for fall-arrest protection.**

Suspension system: Required when a worker must be suspended from above. It consists of (A) anchorages, (B) full-body harness, and (C) connecting device(s). Do not rely upon a suspension system alone for fall-arrest protection; use an additional fall-arrest system. **NOTE: Klein suspension harnesses also provide a rear D-ring which must be used for fall-arrest protection.**

Retrieval system: Required when a worker may need to be rescued from a work environment. This system consists of (A) anchorages, (B) full-body harness, and (C) connecting device(s). Do not rely upon a retrieval system alone for fall-arrest protection. If there is risk of a fall, a fall-arrest system must also be used. **NOTE: Klein retrieval harnesses also provide a rear D-ring which must be used for fall-arrest protection.**

How to Select OPE System Components (continued)

6. Select the proper connecting device. Choose a connecting device which is compatible with the OPE system you wish to use. Also, OSHA's Final Rule of Fall Protection in the Construction Industry prohibits the use of connecting devices with non-locking snap hooks. Make sure your connecting devices are equipped with locking snap hooks.

Some examples of connecting devices are: deceleration units, rope grabs, lanyards with wire pigtail, nylon V-slings, nylon rope, cable or webbing lanyards. The decision to use a particular connecting device or a combination of connecting devices (such as one for suspension, and another for fall arrest) in your fall-protection system is based not only on the specific job, but also on your job-site environment. Sharp-edged fall-arrest anchorages, such as I-beams, may require a nylon lanyard with wire pigtail; whereas exposure to welding splatter requires a steel cable lanyard. Know the job before selecting the connecting device.

7. Use Klein's identifying symbols. These symbols tell at a glance the intended purpose for each piece of OPE equipment. Symbols help assure selection of the proper equipment.

Fall Arrest

Positioning

Suspension

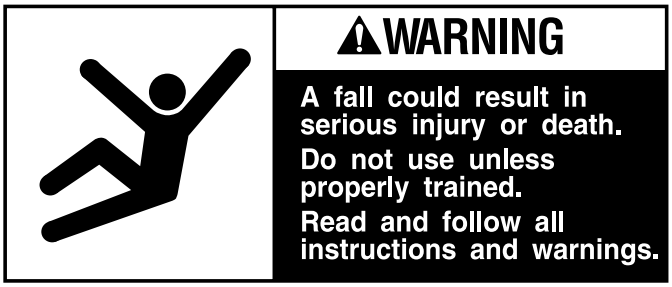
Retrieval

8. For technical product information, call the Klein Tools Sales Department, toll free, at 1-800-553-4676.

⚠WARNING: Whenever there is a risk of a fall, personal fall-arrest protection must be used. Therefore, when working at an elevated position, always attach the fall-arrest D-ring in the back of the harness to an approved anchorage with a suitable lanyard or other connecting device. When not possible, use alternative fall-arrest protection.

⚠WARNING: It is important that a competent person, as defined by OSHA, select OPE system components to fit the specific job requirements. Incorrect component choices can cause serious injury or death.

⚠WARNING: Never attempt to repair or modify any part or component of a harness.



Materials Used in Klein Harnesses

Nylon Webblng. Klein uses high-quality, commercial-grade nylon. The web is impregnated with latex or resin for extra durability.

Polyester Webbing. Used in certain Klein lightweight harnesses. Polyester resists a wider variety of chemicals than nylon does.

Softee™ Pads. These pads, which are stitched onto many Klein belt components, are made of soft, nonabrasive nylon with rounded edges for comfort.

Ultra-Hyde™. This highly durable, leather-like material with high density and a "tight" surface is used primarily for belt linings and pads. It is well suited for severe-service environments. Klein does not use Ultra-Hyde as the load-bearing material in OPE harnesses.

Drop-Forged Steel. Klein D-rings and snap hooks are manufactured from drop-forged steel with a corrosion-resistant finish and are tested to meet or exceed applicable OSHA regulations.

Buckles. Klein Harnesses have single-tongue buckles, friction-style buckles and/or easy-connect buckles. All buckles are made of steel that is tested to meet or exceed applicable OSHA regulations. Adjustments to single-tongue buckles are made through holes that are reinforced with solid brass grommets. Friction-style buckles provide a continuous range of adjustment. Easy-connect buckles also have friction slide adjusters which hold straps in place, so the user does not need to readjust for each use.

Physical Properties

Type of Material	Exposure to Excessive Heat	Exposure to Chemicals	Exposure to Molten Metal or Flame	Exposure to Paints or Solvents	Exposure Near Live Electrical Lines & Equipment
Nylon	Poor resistance. Becomes brittle, has a shriveled brown appearance. Fibers will break when flexed.Weakens at 300°F (149°C).	Generally good resistance, except around strong acids and phenolic compounds, which cause it to become brittle.	Poor resistance. Strands fuse together and form hard shiny spots. Has hard and brittle feel. Will not support combustion.	Generally offers good resistance. However, paint can penetrate into the weave and dry. This can cause webbing to become hard and brittle and can eventually break the fibers. Some solvents may affect fibers (see "Exposure to Chemicals").	Poor protection (no dielectric strength). Provides no protection against exposure to live electrical lines or equipment.
Polyester	Poor resistance. Fibers become brittle and will shrivel and turn brown in color and break when flexed. Should not be used above 180°F (82°C).	Good resistance to most chemicals, including hydrochloric acid, aqueous alkalies, and many solvents. Exposure to incompatible chemicals may cause fibers to change color and texture, similar to a brownish smudge or smear. Also will become less elastic, with transverse cracks resulting from bending.	Poor resistance. Fiber strands fuse together and become hard, brittle, and shiny.	Generally offers good resistance. However, paint can penetrate into the weave and dry. This can cause webbing to become hard and brittle and can eventually break the fibers. Some solvents may affect fibers (see "Exposure to Chemicals").	Poor protection (no dielectric strength). Provides no protection against exposure to live electrical lines or equipment.

Types of Klein Harnesses and General Rules for Proper Use

1. Fall-Arrest Harness has a fall-arrest D-ring attached to the upper middle of the back. Klein offers four styles of this full-body harness.

The *87020 style* harnesses have seat, chest and leg straps and a waist belt with friction-style buckle, designed to distribute impact forces of a fall over thighs, pelvis, waist, chest and shoulders. This harness can also provide a positioning function by adding a Klein positioning belt, which inserts through special belt loops on the harness backstraps.

The *87074 style* harnesses are designed for workers on transmission towers and other elevated sites. They have an Ultra-Hyde lined waist belt and leg straps designed to distribute impact forces of a fall over thighs, pelvis, waist, chest and shoulders. The *87140 style* harness has seat, chest and leg straps. The legs straps have easy-connect hardware. It has lightweight polyester webbing.* The *87141 style* harness has seat, chest and leg straps. The leg straps have tongue buckles. It has lightweight polyester webbing.*

When using a fall-arrest harness, only attach connecting devices meeting government regulations for fall arrest to the adjustable D-ring in the upper middle of the harness back. The fall-arrest anchorage must support at least 5,000 lbs. (22.2kN) per attached worker and be independent of worker support. OSHA also requires that impact forces in a fall NOT exceed 1,800 lbs. (8kN) with a harness. To stay under that limit, work with minimum slack in the connecting device or use a deceleration unit.

In rigging a fall-arrest OPE system, you must also be sure that, in the event of a fall, you won't come in contact with any structures below your work position. The free-fall distance must not exceed 6 feet (1.8m). If you are using a deceleration unit, add 3-1/2 feet to the free-fall distance to allow for unit extension.

*other Klein harnesses have nylon webbing

2. Fall-Arrest/Positioning Harness has a fall-arrest D-ring attached to the upper middle of the back and positioning D-rings attached to each side. Klein offers five styles of this full-body harness. These harnesses are designed to hold a worker in place while leaving his hands free to work.

The *87810 style* harnesses have seat, chest and leg straps, a waist belt with a tongue buckle and a Softee Pad. It also features an integral positioning tool belt.

The *87820 style* harnesses have seat, chest and leg straps, a waist belt with a friction buckle and a Softee Pad. It also features an integral positioning tool belt. The *87080 style* harnesses have Ultra-Hyde lined leg straps and an Ultra-Hyde lined waist belt with a tongue buckle. It also features an integral positioning tool belt.

The *87144 style* harness has seat, chest and leg straps. The leg straps have easy-connect hardware. It has lightweight polyester webbing.* The *87145 style* harness has seat, chest and leg straps. The leg straps have tongue buckles. It has lightweight polyester webbing.*

To use these harnesses: (1) Attach a fall-arrest connecting device to the fall-arrest D-ring in the upper middle of the harness back. (2) Attach a positioning connecting device to the side D-rings.

⚠WARNING: Fall-arrest anchorage must be independent of worker support and be able to support a minimum of 5,000 lbs. per attached worker.

⚠WARNING: Only use connecting devices equipped with locking snap hooks.

⚠WARNING: Never alter or modify a harness. Always select a harness that fits properly without modification.

Types of Klein Harnesses and General Rules for Proper Use

3. Fall-Arrest/Retrieval Harness has a fall-arrest D-ring (attached to the upper middle of the back) and two retrieval D-rings (attached to the harness shoulder straps). Klein offers two styles of this full-body harness.

The 87840 style harnesses have leg, seat, waist, chest, and shoulder straps. These harnesses can also provide a positioning function by adding a Klein positioning belt, inserted through special belt loops on the harness backstraps. The 87090 style harnesses have an Ultra-Hyde lined waist belt and leg straps.

These harnesses are designed for retrieval of a worker from a tank, manhole, shaft, tunnel, or other confined or non-confined space.

When used in accordance with OSHA 1910.146 Permit Required Confined Space procedures, the rear fall-arrest D-ring may also be connected to retrieval connecting devices that meet OSHA standards.

4. Fall-Arrest/Suspension Harness has a fall-arrest D-ring (attached to the upper middle of the back), and two attached suspension D-rings (positioned in the lower front portion of the harness). Klein's *87012 style* harness is a parachute-type, full-body harness with leg, seat, waist, chest, and shoulder straps, and it includes a V-sling suspension connecting device.

This harness keeps the worker in an upright position when the V-sling is held taut. The V-sling and front D-rings on the harness are for suspension purposes only and are NOT to be used for fall-arrest.

To use this harness: (1) Attach the suspension V-sling connecting device to the seat strap D-rings in the lower front portion of the harness. (2) Attach a fall-arrest connecting device to the fall-arrest D-ring in the upper middle of the harness back.

5. Fall-Arrest Suspension Harness with Bosun's Chair features a fall-arrest D-ring (attached to the upper middle of the back), a suspension D-ring (attached in front), and an integral suspension chair (Bosun's chair) for extra comfort in normal use. Klein's *87044 style* harness has leg, waist, chest and shoulder straps that distribute fall-arrest forces over thighs, pelvis, waist, chest and shoulders.

To use this harness: (1) Attach the suspension connecting device to the top front D-ring on the Bosun's chair. (2) Attach the fall-arrest connecting device to the fall-arrest D-ring in the upper middle of the harness back.

⚠WARNING: Fall-arrest anchorage must be independent of worker support and be able to support a minimum of 5,000 lbs. per attached worker.

Types of Klein Harnesses and General Rules for Proper Use

6. Fall-Arrest/Positioning/Retrieval Harness has a fall-arrest D-ring (attached to the upper middle of the back), two positioning D-rings (one attached to each side), and two retrieval D-rings (one attached to each of the harness shoulder straps). Klein's *87850 style* harnesses have leg, seat, chest, and shoulder straps, and an integral positioning/tool belt with tongue buckle.

This harness allows for retrieval of workers from tanks, manholes, or other areas where retrieval may be required.

To use this harness: (1) Attach a fall-arrest connecting device to the fall-arrest D-ring in the upper middle of the harness back. (2) Attach a positioning connecting device to the side D-rings. (3) Attach a retrieval connecting device to the shoulder D-rings.

⚠WARNING: Only use connecting devices equipped with locking snap hooks.

⚠WARNING: Never alter or modify a harness. Always select a harness that fits properly without modification.

7. Fall-Arrest/Positioning/Suspension Tree Trimmer's Harness features a fall-arrest D-ring (attached to the upper middle of the back), two positioning D-rings (one attached to each side of the belt), and two upward-facing suspension D-rings (attached to each side of the harness seat straps).

Klein's *87891 style* saddle harness also features leg, seat, chest and shoulder straps, an integral positioning/suspension saddle-style belt with tongue buckle, and a Softee™ pad back and seat straps.

This specialized harness, designed for tree-trimming professionals, meets ANSI Z-133.1. Know and follow ANSI Z-133.1 guidelines before using this harness.

⚠WARNING: Fall-arrest anchorage must be independent of worker support and be able to support a minimum of 5,000 lbs. per attached worker.

Types of Klein Harnesses and General Rules for Proper Use

8. The Lineman's Harness (Fall Arrest/ Positioning) is a special-order harness that has a permanently-attached lineman's body belt.

This harness has a fall-arrest D-ring attached to the upper middle of the back. It also features leg, seat, chest, and shoulder straps, easy-connect buckles, and detachable shoulder pads made of synthetic lamb's wool. The lineman's body belt has positioning D-rings attached to each side.

This harness is available with five different belts:

- The LH5278 style has a deluxe full-floating* body belt, with a glove bag ring, two-way knife snap, two pocket tabs, four belt-suspender rings, a tape thong, and leather hand stitching.
- The LH5249 style has a full-floating* body belt with a glove bag ring, two-way knife snap, two pocket tabs, four belt-suspender rings, a tape thong and a tool area hood.
- The LH5282 style has a full-floating* body belt with a glove bag ring, two-way knife snap, two pocket tabs, four belt-suspender rings, and a tape thong.
- The LH5266 style has a semi-floating* body belt with a glove bag ring, two-way knife snap, two pocket tabs, four belt-suspender rings, a tape thong, and a No. 5133 hand-line clip.
- The LH5268 style has a fixed-style* body belt with a glove bag ring, two-way knife snap, two pocket tabs, four belt-suspender rings, and a tape thong.

To use these harnesses: (1) Attach a fall-arrest connecting device to the fall-arrest D-ring in the upper middle of the harness back. (2) Attach a lineman's positioning strap (or other positioning connecting device) to the side D-rings on the belt.

NOTE: For information on proper use of the body belt that's attached to this harness, see the *Instructions for the Proper Use and Care of Klein Lineman's Body Belts and Positioning Straps,* a separate instruction sheet which is also packed with this product. To get additional copies of this instruction sheet, call Klein Tools toll-free at 1-800-553-4676.

NOTE: For information on ordering the Lineman's Harness, call the Klein Tools Sales Department, toll-free at 1-800-553-4676.

⚠WARNING: Fall-arrest anchorage must be independent of worker support and be able to support a minimum of 5,000 lbs. per attached worker.

⚠WARNING: Only use connecting devices equipped with locking snap hooks.

⚠WARNING: Never alter or modify a harness. Always select a harness that fits properly without modification.

* Full-floating belts allow lateral movement of the D-rings during use. Semi-floating belts only allow lateral movement prior to wearing. Fixed-style belts are lightweight and the most economical.

Construction of Klein Harnesses

① **Fall-arrest D-ring:** All Klein harnesses have an adjustable D-ring attached to the upper back for attaching a fall-arrest connecting device.

② **Positioning D-rings:** All Klein positioning harnesses have two positioning D-rings, one on each side of the harness.

③ **Retrieval D-rings:** All Klein retrieval harnesses have two retrieval D-rings, one on each of the harness shoulder straps.

④ **Suspension D-rings:** All Klein suspension harnesses have suspension D-ring(s) located in the lower front of the harness, in an upward-facing position.

⑤ **Softee™ Pads** are made of soft, non-abrasive nylon with rounded edges for maximum comfort during prolonged use. Some Softee™ Pads overlap the buckle assembly for added comfort.

⑥ **Contrasting color construction** helps identify different parts of a harness to aid the user in putting it on.

⑦ **Buckles.** Three types of forged-steel buckles are used in Klein Harnesses:

a) *Single-Tongue Buckles* adjust easily and securely over a range of sizes. Steel grommeted holes assure durable and positive buckle connection.

b) *Friction-Style Buckles* allow adjustment over a continuous range of sizes.

c) *Easy-Connect Buckles* attach quickly and easily; the user simply inserts one buckle through the other. Friction slide adjusters hold straps in place so the user does not need to readjust for each use. Belt end holders secure the belt ends to reduce the chance of the ends being caught on an object.

⑧ **Seat strap** adds extra comfort in normal use as well as support after a fall.

⑨ **Chest, waist and leg straps** adjust fully to fit most individuals and to add support after a fall.

Belt adjuster pads on some harnesses are used to integrate waist belts to the harness while allowing complete horizontal and vertical adjustment of the belt for maximum comfort and a snug fit.

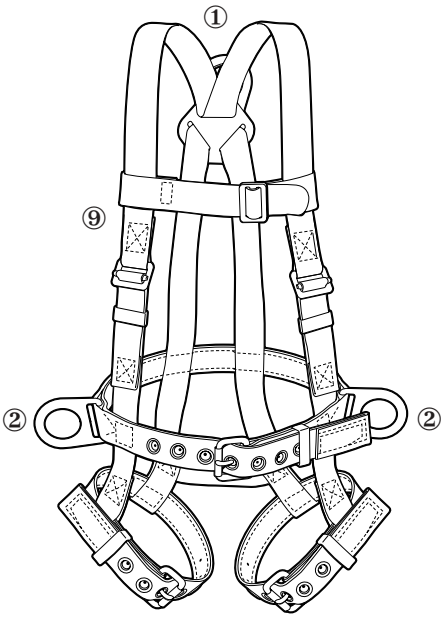
All Klein **D-rings** are made of forged steel with a corrosion-resistant finish for strength and durability. D-rings with rollers minimize friction and excessive wear. All Klein D-rings are proof-loaded to meet OSHA regulations.

Identity and Warning Tags (not illustrated here) are reminders of the proper application and inspection procedures. The Klein name, model, date of manufacture and OPE-system application symbol(s) are permanently and clearly inscribed on each tag.

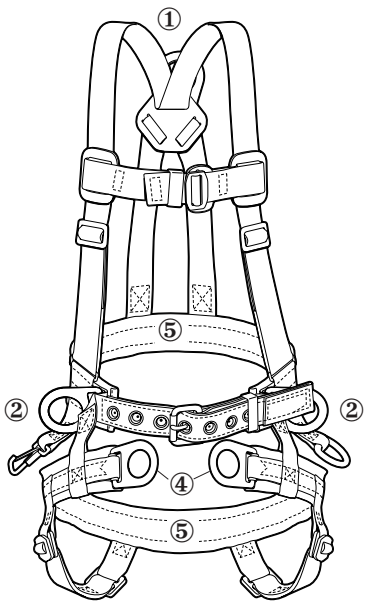
Nylon is high-quality, commercial-grade that is impregnated with resin or latex for abrasion resistance and added durability.

Polyester is lightweight, and it resists a wider variety of chemicals than nylon does.

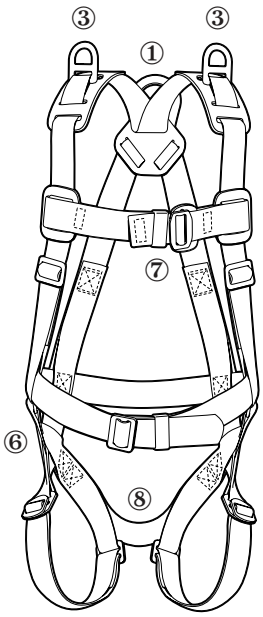
Ultra-Hyde™, which lines waist belts and leg straps, is a material that looks and feels like leather, yet is virtually maintenance-free.



Fall Arrest/Positioning Harness



Fall Arrest/Positioning /Suspension Harness



Fall-Arrest/Retrieval Harness

General Inspection Procedures

1. Check for wear and deterioration.

Before each use, carefully inspect your harness for signs of wear, deterioration, or evidence of impact loading. Visually inspect for loose threads, pulled rivets, burns, cuts, distortions, abrasions, or any other evidence of chemical or physical deterioration that may have weakened the material or assembly.

2. Inspect hardware for malfunctions and cracks.

Check all snap hooks, buckles, and D-rings.

3. Remove from service and replace all worn or damaged equipment.

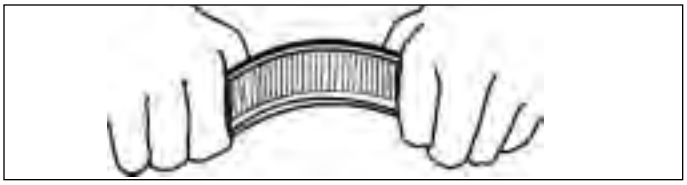
If any part does not pass inspection, immediately remove the harness from service and destroy it.

⚠WARNING: Should any unusual condition be noted during inspection which is not specified here, do not use the suspect harness until a competent person as defined by OSHA has made a decision on its usability.

Harness Inspection Procedures

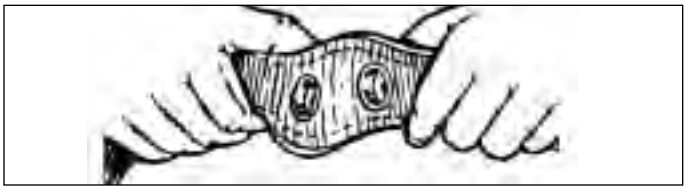
1. Inspect stitching and webbing.

Check stitching for broken, burned, cut or pulled stitches. Broken strands appear as tufts on the surface. To inspect, hold the webbing with your hands six to eight inches apart. Bend the webbing in an inverted “U” to cause surface tension, exposing problem areas. Inspect all web areas. Damage from cuts, abrasion, corrosives, heat, or chemicals should be apparent.



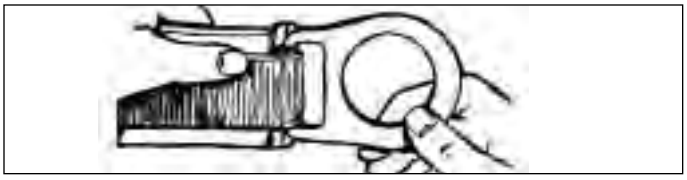
2. Inspect buckle and belt ends.

Inspect the ends of all straps, which can wear from repeated opening and closing. Enlarged or distorted holes may indicate excessive wear or damage through impact loading. Harnesses with unusually enlarged or distorted holes should fail inspection.



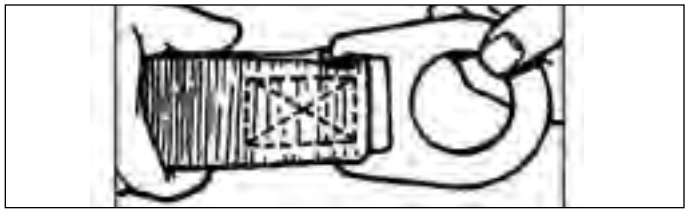
3. Inspect D-Rings.

Check all D-rings for distortion. Check D-ring attachment points for unusual wear or damaged fibers. Badly pitted D-rings indicate chemical corrosion, and they should fail inspection.



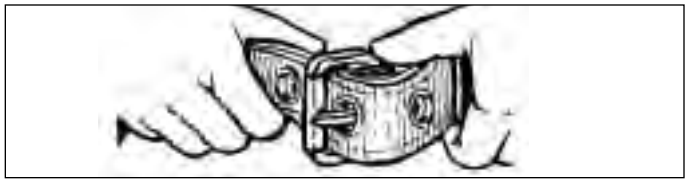
4. Inspect stitching or rivets at hardware attachment points.

For stitched attachment points, check that stitching is not broken, burned, cut, or pulled. Check all riveted attachment points for tightness. Badly-pitted rivets indicate chemical corrosion, and should fail inspection.



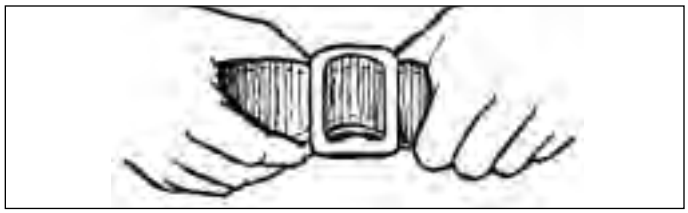
5. Inspect tongue buckles.

Check all tongue buckles for distortion, sharp edges, and cracks. The tongue should move freely and overlap the frame. Rollers should not be distorted and should roll freely.



6. Inspect friction slide adjusters.

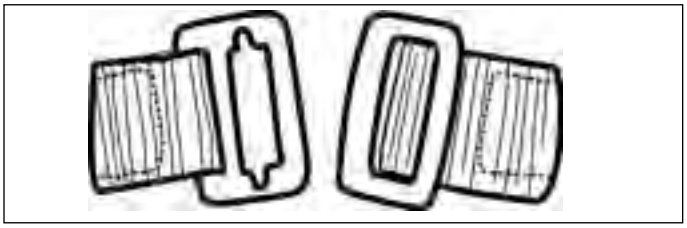
Check all friction slide adjusters for distortion, sharp edges, and cracks. Make sure outer bars and center bars are straight. Also check corners and attachment points for wear and cracks.



Harness Inspection Procedures (continued)

7. Inspect easy-connect buckles.

Check easy-connect buckles (square rings) for distortion, sharp edges, and cracks. For stitched attachment points, check that stitching is not broken, burned, cut, or pulled.



8. Inspect friction-style buckles.

Check friction-style buckles for sharp edges, cracks, and distortion. Make sure that outer bars and center bar are straight. Also check corners and attachment points for wear.

9. Inspect leather.

Leather should be soft and supple. Inspect leather for cracks, tears, burns, brittleness, and other signs of damage, age, or abuse. While the leather components of the system are not load bearing, damaged leather is a sign that the entire harness MAY NOT be in acceptable condition. Re-inspect entire system. Leather should both look and feel good.

10. Destroy or replace worn or damaged harnesses.

If evidence of excessive wear, deterioration or mechanical malfunction is found, the harness should be destroyed. Never work with worn or damaged equipment. Using worn or damaged equipment can cause serious injury or death.

11. The inspector is the most important part of any inspection procedure.

Check all equipment thoroughly and follow all safety procedures and guidelines. Don't take any shortcuts. **Important Note:** OSHA requires all employers covered by the Occupational Safety and Health Act to inspect and maintain all tools and equipment used by employees — whether owned by the employees or by the company. All OPE equipment should be inspected before each use, and immediately removed from service if equipment does not pass inspection.

Note - Lineman's Harness:

For information on inspection and maintenance of the body belt that's attached to the Lineman's Harness, see the *Instructions for the Proper Use and Care of Klein Lineman's Body Belts and Positioning Straps,* a separate instruction sheet which is also packed with this product.

To get additional copies of this instruction sheet, call Klein Tools toll-free at 1-800-553-4676.

Maintenance Procedures

A written log of all servicing and inspection dates for this equipment should be maintained by the company safety officer or other competent individual.

Clean and maintain equipment in accordance with recommended practice. Wash nylon and polyester in warm water and mild detergent. Avoid harsh chemical agents such as degreasing compounds, turpentine, paint thinner, gasoline and other solvents. Allow nylon and polyester objects to dry naturally. Do not use heat to speed up the process.

Maintain leather parts with Neat's-foot oil, saddle soap or equivalent to help prolong life. Allow leather to dry slowly at room temperature.

Inspect and lubricate all snap hooks after cleaning to make sure they operate properly and close securely. Use Klein Cinch® aerosol lubricant or light motor oil.

⚠WARNING: A Klein Harness must be destroyed or reconditioned by Klein if subjected to an impact load.

⚠WARNING: Remove from service any Klein harness that is torn, frayed, or otherwise damaged and destroy it.

⚠WARNING: On all harness straps with friction-style buckles, the strap end must extend a minimum of 3" (76 mm) beyond the buckle.

⚠WARNING: Klein strongly recommends that Klein components NOT be interchanged with other components made by other manufacturers, because Klein cannot guarantee that other manufacturers' components are free of defects in materials or workmanship.

How To Use Klein Harnesses

1. Read all warning tags and instructions provided with the harness. They contain important information on usage and care. Keep all tags and instructions for future reference.

NOTE: Highly-durable warning and instruction tags or labels are permanently attached to each Klein Harness. If any of these tags or labels becomes unattached, lost or damaged, call the Klein Tools Sales Department, toll-free, at 1-800-553-4676 for information on how to get new tags free of charge. (Warning tags are not shown in the product illustrations in this instruction booklet for clarity.)

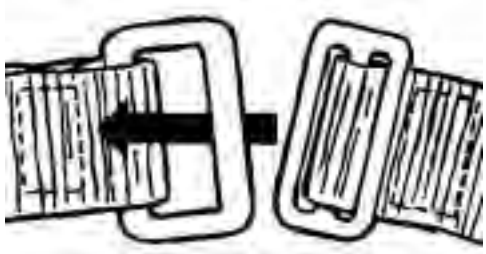
2. Use all the capabilities of your harness, including the fall-arrest capability, when working at an elevated position. When not possible, use alternative fall protection.

3. Be sure to inspect the entire harness before each use (see pages 14-15 in this instruction booklet for inspection procedures).

4. Hold the harness by the back or top of the harness to help untangle it. Fit the harness across your shoulders so the D-ring on the back of the harness lies flat against the upper middle of your back.

Buckle all the straps securely around your waist, chest and legs, and secure the ends through the belt keepers, making sure they do not interfere with tool access.

To connect the easy-connect buckle used on some harnesses, insert the smaller square ring through the large square ring at an angle. After insertion, the smaller square ring must lie flat against the larger square ring for secure attachment. Use the friction slide adjuster so that the strap fits snugly.



5. Attach a connecting device that meets government regulations for fall arrest to the center back fall-arrest D-ring on the harness. **ONLY USE fall-arrest connecting devices equipped with locking snap hooks. When attaching the snap hook, make sure the snap hook freely engages the harness D-ring and that the keeper is closed completely after each hookup. Also, have a co-worker check for proper attachment.**

6. Keep the **fall-arrest anchorage** at or above shoulder height. Allow minimum slack in the fall-arrest connecting device to reduce the impact force from a fall.

Attach the free end of the fall-arrest connecting device to a fall-arrest anchorage that meets OSHA regulations. The fall-arrest anchorage must support at least 5,000 lbs. (22.2kN) per attached worker and must be independent of worker support.

Make sure by visual inspection that the snap hook freely engages the anchorage and that the keeper is closed completely after each hook-up.

Rig to avoid contact with structures below in a fall. The free-fall distance must not exceed 6 feet (1.8m). If using a deceleration unit, add 3-1/2 feet (1m) to the free-fall distance to allow for unit extension.

7. To use the **positioning function** of a harness, be sure the positioning D-rings are equally spaced on either side of your body. Attach one end of the positioning connecting device to one of the positioning D-rings. Pass connecting device around or through a positioning anchorage, and then attach the free end of the device to the other positioning D-ring.

Make sure by visual inspection that both snap hooks of the positioning device freely engage the positioning D-rings and that both keepers are closed completely after each hook-up. Never attach anything to the side D-rings other than the locking snap hooks of a positioning connecting device. Attaching another object to any D-ring may prevent or falsely indicate snap hook engagement.

How To Use Klein Harnesses (continued)

8. To use the **suspension function** of a harness:

With a Tree-Trimmer's Saddle – Attach a suspension connecting device only to the upward-facing D-rings attached to the web seat. Never attach anything to the suspension D-rings other than the locking snap hooks of a V-sling (or other suspension device meeting government and industry regulations for tree-trimming professionals). Tree-trimmer's saddle must only be used by tree-trimming professionals. Know and follow ANSI Z-133.1 regulations. **Make sure by visual inspection that the snap hook(s) of the suspension device freely engage the suspension D-ring(s) and that the keepers are closed completely after each hook-up.**

With a Web Seat – Attach a V-sling suspension connecting device only to the upward-facing seat-strap D-rings. Never attach anything to the suspension D-rings other than the locking snap hooks of a V-sling (or other suspension device meeting government regulations). Thread the V-sling locking snap hooks through the shoulder clips, and attach them to the upward-facing seat-strap D-rings. Only attach the eye of the V-sling to an anchorage connecting device attached to man-rated hoist or winch. **Make sure by visual inspection that the snap hook(s) of the suspension device freely engage the suspension D-ring(s) and that the keepers are closed completely after each hook-up.**

With a Bosun's Chair – Attach suspension connecting device only to the front D-ring. Never attach anything to the suspension D-ring other than the locking snap hook of a suspension device. **Make sure by visual inspection that the snap hook(s) of the suspension device freely engage suspension D-ring(s) and that the keepers are closed completely after each hook-up.**

9. To use the **retrieval function** of a harness, attach the two locking snap hooks of a V-sling only to the shoulder D-rings. Only attach eye of V-sling to a retrieval device meeting OSHA standards.

Make sure by visual inspection that both snap hooks of the retrieval device freely engage the retrieval D-rings, and that both keepers are closed completely after each hook-up. Never attach anything to the retrieval D-rings other than the locking snap hooks of a retrieval connecting device. Attaching another object to any D-ring may prevent or falsely indicate snap hook engagement.

10. Remember, if there is any risk of a worker falling from an elevated position (generally, six feet or more), personal fall-arrest protection must also be used.

⚠WARNING: Shoulder D-rings are for retrieval purposes only, and are NOT to be used for fall arrest.

⚠WARNING: All system components must meet government standards for intended job-site use as determined by a competent person, as defined by OSHA.

⚠WARNING: The attachment of another object to any D-ring may prevent or falsely indicate snap-hook engagement.

⚠WARNING: The use of Klein Harnesses without the proper instructional materials and training could result in serious injury or death. Klein Tools will supply additional instruction materials, warnings tags, or will answer questions on any piece of Klein occupational protective equipment free of charge. Call the Klein Tools Sales Department, toll-free at 1-800-553-4676.

⚠WARNING: In computing the total-fall distance, add 3-1/2 feet (1m) to the free-fall distance to allow for deceleration-unit extension.

⚠WARNING: On all harness straps with friction-style buckles, the strap end must extend at least 3 inches (76mm) beyond the buckle.

⚠WARNING: Always check visually to assure that buckles are fully closed, and that all tabs are securely in their keepers before use.

Klein Harness Warning Tags

Klein permanently attaches highly durable warning and instruction tags and/or labels to its harnesses. In the event any of these tags and/or labels become unattached, lost, or damaged, contact the Klein Tools Sales Department, toll-free at 1-800-553-4676 for information on how to have the tags and/or labels replaced free of charge.

Tag for Lightweight Fall-Arrest Harnesses

87140, 87141

For Fall Arrest Use Only

DO NOT REMOVE THIS LABEL

READ BEFORE USE

Model: **Size:** **Date:**

READ BEFORE USE

⚠WARNING
A fall could result in serious injury or death.
Do not use unless properly trained.
Read and follow all instructions and warnings.

■ **Read, understand and follow** all instructions, cautions and warnings attached to and/or packed with this and all other occupational protective equipment before each use.
■ For use by **properly trained professionals** only.
■ Harness **must** be worn so that the fall-arrest D-ring is centered in back.
■ **Fall-arrest anchorage must** support a minimum of 5,000 lbs. (22.2kN) per attached worker and be independent of worker support.
■ Attach fall-arrest connecting devices that meet OSHA standards only to the rear fall-arrest D-ring.
■ **Rig to avoid contact with structures below in the event of a fall.** The free-fall distance must not exceed 6 ft. (1.8m). If using a deceleration unit, add 3-1/2 ft. (1m) to free-fall distance to allow for unit extension.
■ **For fall arrest, always** keep anchorage at or above shoulder height to minimize fall distance.
■ For **personal** use only. **NOT** for towing or hoisting.
■ **NOT** for recreational or sporting use.
■ Harnesses **must** be properly sized and adjusted to fit user. **Always** wear harness snug to avoid injury.
■ **Only use** locking snap hooks.
■ OPE equipment must **only** be used for the specific purpose for which it is designed and intended.
■ OPE equipment **must be destroyed** if subjected to impact loading.
■ OSHA requires that impact force in a fall **NOT** exceed an 1,800 lb.. (8kN) limit with a harness. At a given weight, the longer the free fall, the greater the resulting impact force. Therefore, minimize slack in fall-arrest connecting device or use deceleration unit to stay under 1,800 lbs. (8kN).

■ Whenever there is risk of a fall, personal fall-arrest protection must be used. Therefore, when working at an elevated position, always attach the fall-arrest D-ring in the back of the harness to an approved fall-arrest anchorage with a suitable fall-arrest lanyard or other connecting device. Where not possible, use alternative fall-arrest protection.
■ **Always visually check** that: 1) each snap hook freely engages the intended D-ring or anchorage, and 2) the snap-hook keeper (latch) is completely closed with each use. Have a co-worker visually check to make sure that the locking snap hook attached to the fall-arrest D-ring (centered in the back of the harness) is properly secured. **Never** rely solely on feel or sound in attempting to determine that a snap hook is engaged.
■ **Always visually check** that all buckles and connectors are properly closed before each use.
■ Assume the responsibility for determining that your OPE harness and equipment are in excellent condition at all times.
■ **Before each use check that:** OPE equipment is free of burns, cuts, abrasions, broken strands or stitches, kinks, knots or excessive wear, 2) rivets are not bent, loose or missing, 3) buckles, D-rings and other hardware are not distorted or cracked, 4) buckle tongue does not bind on buckle and buckle holes are not damaged, and 5) hook keepers are free of burrs, functioning properly, clean and not bent. **If the OPE equipment does not pass the inspection, it should be removed from service immediately and destroyed or re-inspected by a competent person as defined by OSHA to determine its usability.**
■ **Never** punch additional holes in or alter any OPE equipment in any way.
■ **Never** attach ladder or rebar hooks onto a D-ring.
■ **Never** attach multiple snap hooks onto a D-ring.
■ **Never** attach anything to a D-ring other than a single, locking snap hook. The existence of another object attached to a D-ring may prevent or falsely indicate snap-hook engagement.
■ Store your OPE equipment in a clean, dry area such as a tool chest or storage room.
■ **Employer –** Before allowing the use of this equipment, instruct your employees as to its proper use and alert them to these warnings.
■ Klein strongly recommends that Klein components **NOT be interchanged** with other components made by other manufacturers, because Klein cannot guarantee that other manufacturers' components are free of defects in materials or workmanship.

QUESTIONS?
Call TOLL FREE 1-800-553-4676
Klein Tools, Inc.
OSHA 1910, 1915 & 1926.
ANSI A10.14, ANSI Z359.1 **Made in U.S.A.**

T-126
998

Tag for Lightweight Fall-Arrest/Position. Harnesses

87144, 87145, LH5249 style, LH5266 style, LH5268 style, LH5278 style, LH5282 style

For Fall-Arrest and Positioning Use Only

DO NOT REMOVE THIS LABEL

READ BEFORE USE

Model: **Size:** **Date:**

READ BEFORE USE

⚠WARNING
A fall could result in serious injury or death.
Do not use unless properly trained.
Read and follow all instructions and warnings.

■ **Read, understand and follow** all instructions, cautions and warnings attached to and/or packed with this and all other occupational protective equipment before each use.
■ For use by **properly trained professionals** only.
■ **Employer –** Before allowing the use of this equipment, instruct your employees as to its proper use and alert them to these warnings.
■ Harness **must** be worn so that the fall-arrest D-ring is centered in back.
■ **Fall-arrest anchorage must** support a minimum of 5,000 lbs. (22.2kN) per attached worker and be independent of worker support.
■ Attach fall-arrest connecting devices that meet OSHA standards only to the rear fall-arrest D-ring.
■ Attach positioning connecting devices that meet OSHA standards only to the side D-rings. Side D-rings are **NOT** for fall arrest.
■ **Positioning anchorages must** support at least twice the potential impact load of an employee's fall or 3,000 lbs. (13.3kN), whichever is greater.
■ **Rig to avoid contact with structures below in the event of a fall.** The free-fall distance must not exceed 6 ft. (1.8m). If using a deceleration unit, add 3-1/2 ft. (1m) to free-fall distance to allow for unit extension.
■ **For fall arrest, always** keep anchorage at or above shoulder height to minimize fall distance.
■ OPE equipment **must be destroyed** if subjected to impact loading.
■ OSHA requires that impact force in a fall **NOT** exceed an 1,800 lb. (8kN) limit with a harness. At a given weight, the longer the free fall, the greater the resulting impact force. Therefore, minimize slack in fall-arrest connecting device or use deceleration unit to stay under 1,800 lbs. (8kN).
■ Whenever there is risk of a fall, personal fall-arrest protection must be used. Therefore, when working at an elevated position, always attach the fall-arrest D-ring in the back of the harness to an approved fall-arrest anchorage with a suitable fall-arrest lanyard or other connecting device. Where not possible, use alternative fall-arrest protection.
■ **Always visually check** that: 1) each snap hook freely engages the intended D-ring or anchorage, and 2) the snap-hook keeper (latch) is completely closed with each use. Have a co-worker visually check to make sure that the locking snap hook attached to the fall-arrest D-ring (centered in the back of the harness) is properly secured. **Never** rely solely on feel or sound in attempting to determine that a snap hook is engaged.
■ **Always visually check** that all buckles and connectors are properly closed before each use.
■ **Before each use check that:** OPE equipment is free of burns, cuts, abrasions, broken strands or stitches, kinks, knots or excessive wear, 2) rivets are not bent, loose or missing, 3) buckles, D-rings and other hardware are not distorted or cracked, 4) buckle tongue does not bind on buckle and buckle holes are not damaged, and 5) hook keepers are free of burrs, functioning properly, clean and not bent. **If the OPE equipment does not pass the inspection, it should be removed from service immediately and destroyed or re-inspected by a competent person as defined by OSHA to determine its usability.**

■ **Never** allow this equipment to come in contact with fire, high-temperature surfaces, welding sparks, or other heat sources.
■ Harnesses **must** be properly sized and adjusted to fit user. **Always** wear harness snug to avoid injury.
■ **Only use** locking snap hooks.
■ OPE equipment must **only** be used for the specific purpose for which it is designed and intended.
■ **Never** punch additional holes in or alter any OPE equipment in any way.
■ **Never** attach ladder or rebar hooks onto a D-ring.
■ **Never** attach multiple snap hooks onto a D-ring.
■ **Never** attach anything to a D-ring other than a single, locking snap hook. The existence of another object attached to a D-ring may prevent or falsely indicate snap-hook engagement.
■ For **personal** use only. **NOT** for towing or hoisting.
■ **NOT** for recreational or sporting use.
■ Assume the responsibility for determining that your OPE harness and equipment are in excellent condition at all times.
■ Store your OPE equipment in a clean, dry area such as a tool chest or storage room.
■ Klein strongly recommends that Klein components **NOT be interchanged** with other components made by other manufacturers, because Klein cannot guarantee that other manufacturers' components are free of defects in materials or workmanship.

INSPECTION GRID

Competent person, as defined by OSHA, must inspect equipment every 6 months. Mark month of current year if it passes. Remove from service if it is not inspected every 6 months; if it fails, remove and replace.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
20____												
20____												
20____												
20____												
20____												

Name of User _____

Date Into Service (Month/Year) _____

QUESTIONS?
Call TOLL FREE at 1-800-553-4676
Klein Tools, Inc.
OSHA 1910, 1915 & 1926
ANSI A10.14, ANSI Z359.1 **Made in U.S.A.**
Klein-Lite®, Klein-Lok®, Klein-Kord®, Softee™, Ultra-Hyde™

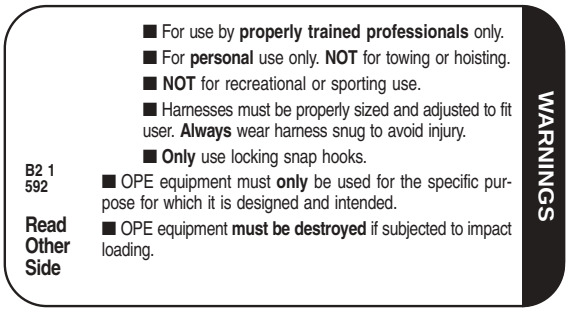
139132
T-127
201

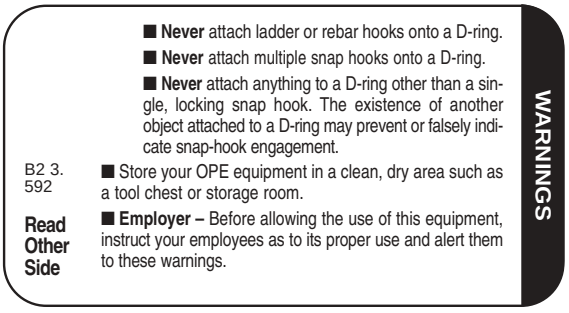
Klein Harness Warning Tags (continued)

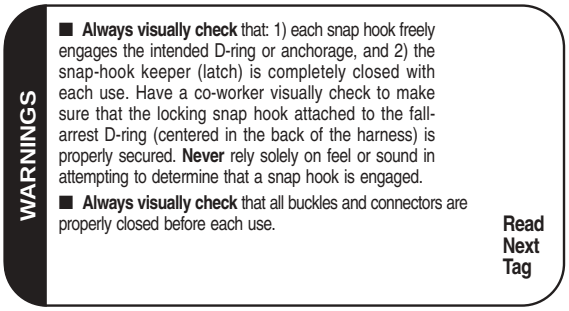
Klein permanently attaches highly durable warning and instruction tags and/or labels to its harnesses. In the event any of these tags and/or labels become unattached, lost, or damaged, contact the Klein Tools Sales Department, toll-free at 1-800-553-4676 for information on how to have the tags and/or labels replaced free of charge.

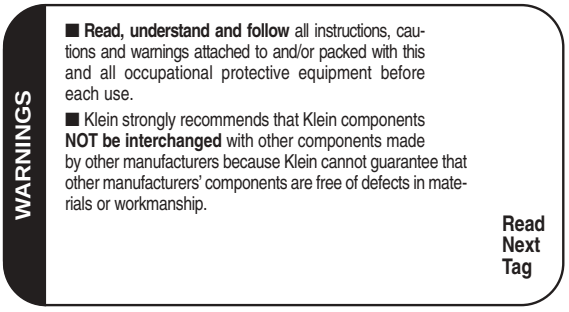
General Tags for Harnesses

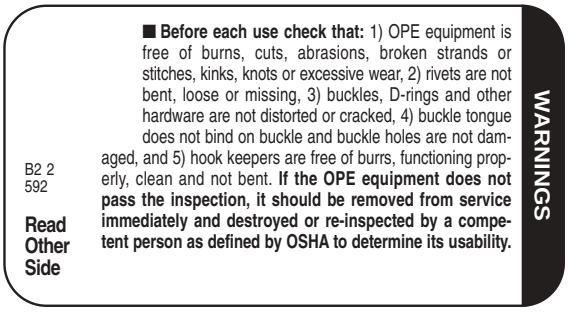
87012, 87020, 87021, 87022, 87023, 87044, 87074, 87075, 87076, 87080, 87081, 87082, 87090, 87091, 87092, 87093, 87810, 87811, 87812, 87813, 87814, 87820, 87821, 87822, 87823, 87824, 87829, 87830, 87831, 87832, 87840, 87841, 87842, 87850, 87851, 87852, 87853, 87854, 87890, 87891, 87892, 87893, 87962, 87963, 87964, 87965

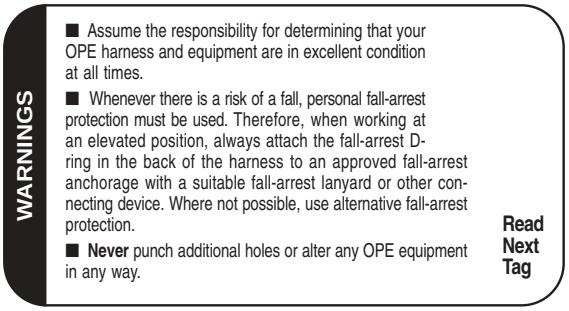












Klein Harness Warning Tags (continued)

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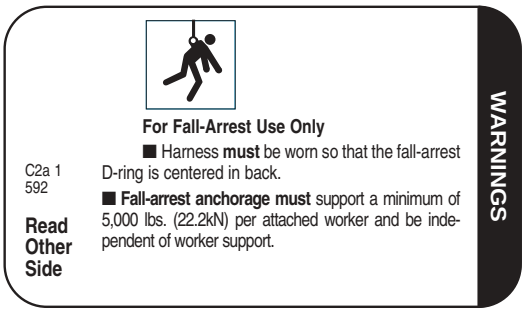
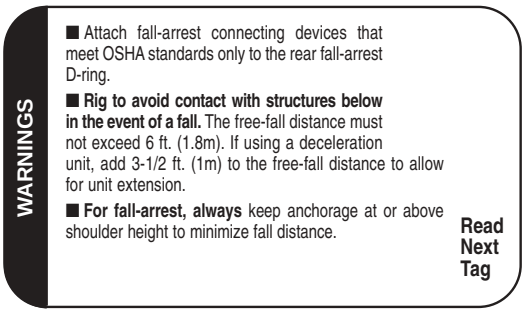
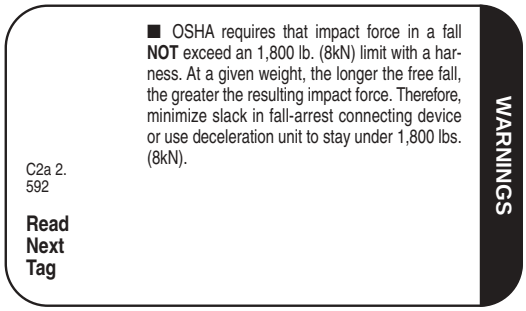
Specific Tags for Fall Arrest Harnesses

87020, 87021, 87022, 87023,
87074, 87075, 87076

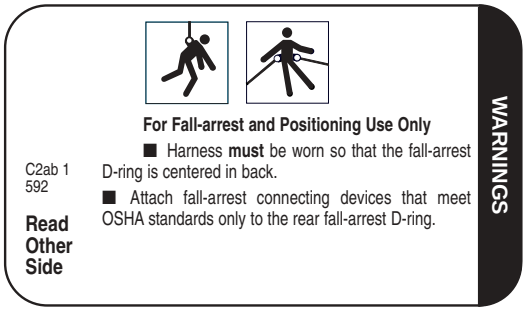


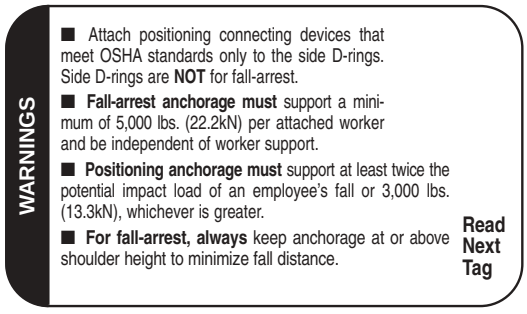


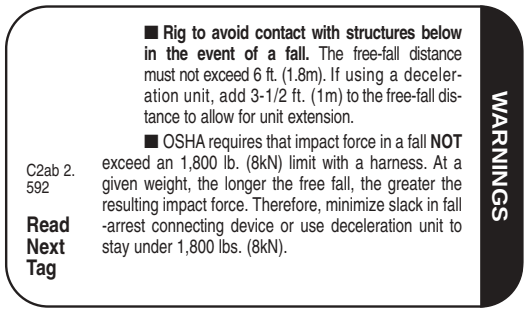


Specific Tags for Fall Arrest/Position Harnesses

87080, 87081, 87082, 87810, 87811, 87812, 87813, 87814, 87820, 87821, 87822, 87823, 87824, 87829, 87830, 87831, 87832, 87962, 87963, 87964, 87965







Klein Harness Warning Tags (continued)

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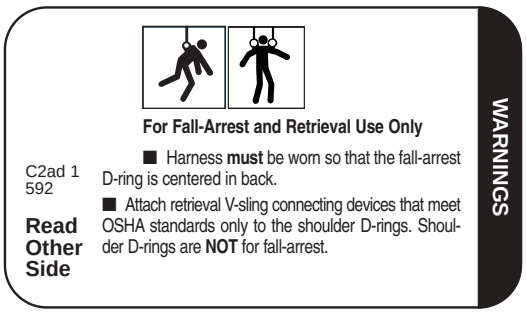
Specific Tags for Fall Arrest/Retrieval Harnesses

87090, 87091, 92, 93, 87840, 87841, 87842



WARNINGS

For Fall-Arrest and Retrieval Use Only

C2ad 1 592

- Harness **must** be worn so that the fall-arrest D-ring is centered in back.
- Attach retrieval V-sling connecting devices that meet OSHA standards only to the shoulder D-rings. Shoulder D-rings are **NOT** for fall-arrest.

Read Other Side

WARNINGS

- Attach fall-arrest connecting devices that meet OSHA standards only to the rear fall-arrest D-ring.
- **Fall-arrest anchorage must** support a minimum of 5,000 lbs. (22.2kN) per attached worker and be independent of worker support.
- **To use the retrieval function of this harness,** attach the two locking snap hooks of the V-sling only to the shoulder strap D-rings. Attach rope thimble eye of V-sling only to a retrieval device meeting OSHA standards.

Read Next Tag

C2ad 2. 592

Read Other Side

WARNINGS

- **Retrieval anchorage must** support at least twice the potential impact load of an employee's fall or 3,000 lbs. (13.3kN), whichever is greater.
- **Rig to avoid contact with structures below in the event of a fall.** The free-fall distance must not exceed 6 ft. (1.8m). If using a deceleration unit, add 3-1/2 ft. (1m) to the free-fall distance to allow for unit extension.
- **For fall-arrest,** always keep anchorage at or above shoulder height to minimize fall distance.

WARNINGS

- OSHA requires that impact force in a fall **NOT** exceed an 1,800 lb. (8kN) limit with a harness. At a given weight, the longer the free fall, the greater the resulting impact force. Therefore, minimize slack in fall-arrest connecting device or use deceleration unit to stay under 1,800 lbs. (8kN).

Read Next Tag

Specific Tags for Fall Arrest/Suspension/Bosun's Chair/Harness

87044

WARNINGS

For Fall-Arrest and Suspension Use Only

C2ac 1 592

- Attach suspension connecting devices that meet OSHA standards only to the top front D-ring on **Bosun's Chair** harness.
- Attach fall-arrest connecting devices that meet OSHA standards only to the rear fall-arrest D-ring.
- Harness **must** be worn so that the fall-arrest D-ring is centered in back.

Read Other Side

WARNINGS

- **For fall-arrest, always** keep anchorage at or above shoulder height to minimize fall distance.
- **Fall-arrest anchorage must** support a minimum of 5,000 lbs. (22.2kN) per attached worker and be independent of worker support.
- **Suspension anchorage must** support at least twice the potential impact load of an employee's fall or 3,000 lbs. (13.3kN), whichever is greater.
- **Rig to avoid contact with structures below in the event of a fall.** The free-fall distance must not exceed 6 ft. (1.8m). If using a deceleration unit, add 3-1/2 ft. (1m) to the free-fall distance to allow for unit extension.

Read Next Tag

WARNINGS

- **Rig to avoid contact with structures below in the event of a fall.** The free-fall distance must not exceed 6 ft. (1.8m). If using a deceleration unit, add 3-1/2 ft. (1m) to the free-fall distance to allow for unit extension.
- OSHA requires that impact force in a fall **NOT** exceed an 1,800 lbs. (8kN) limit with a harness. At a given weight, the longer the free fall the greater the resulting impact force. Therefore, minimize slack in fall-arrest connecting device or use deceleration unit to stay under 1,800 lbs. (8kN).

C2ac2 2. 592

Read Next Tag

Klein Harness Warning Tags (continued)

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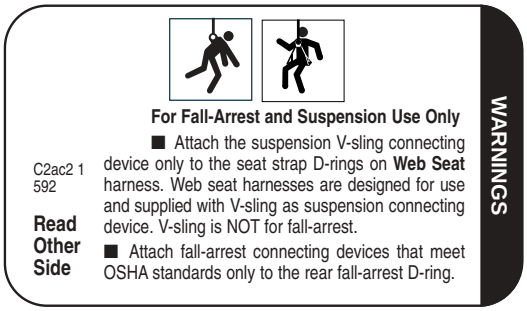
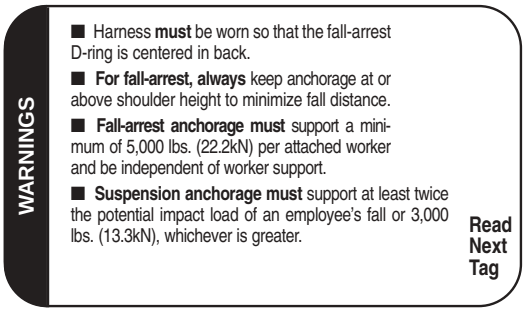
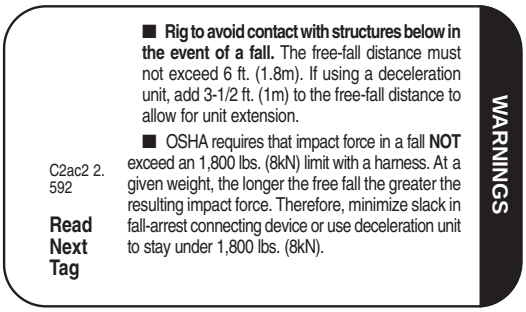
Specific Tags for Fall Arrest/Suspension/ Web Seat Harness

87012

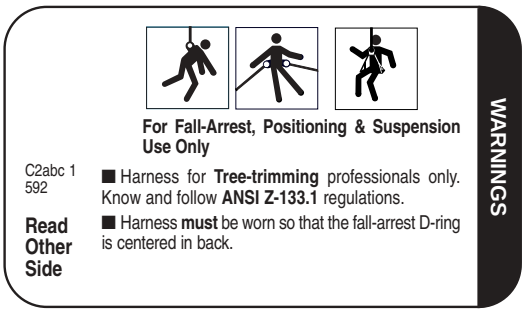


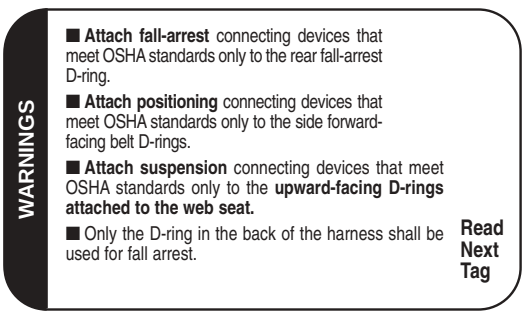


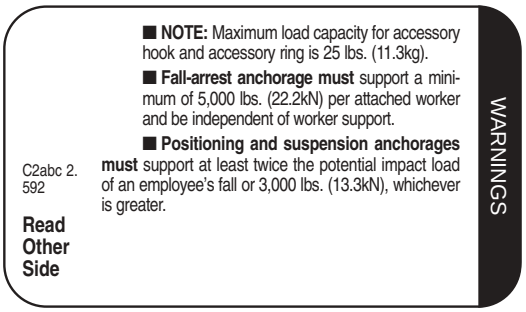


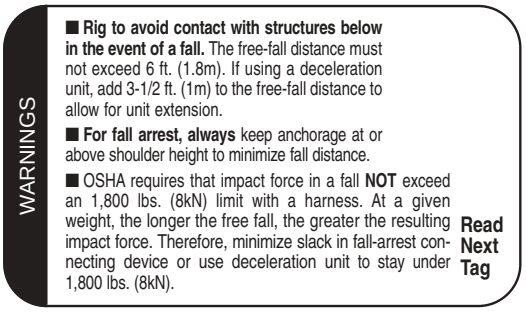
Specific Tags for Fall Arrest/Positioning/ Suspension Tree-Trimmer's Harness

87890, 87891, 87892, 87893









Klein Harness Warning Tags (continued)

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Specific Tags for Fall Arrest/Positioning/ Retrieval Harness

87850, 87851, 87852, 87853, 87854