



... when your life is on the line™

INSTRUCTION, CARE & MAINTENANCE GUIDE FULL BODY HARNESSSES (FBH)

Applicable Model #s (applies to all harnesses with listed prefixes)					
822	872	952	3005	6204	FPO
832	875	955	3010	6205	FPV
833	900	959	3015	846377	VP
842	922	965	6200	846427	
855	932	972	6201	C846377	
859	933	975	6202	C922	
865	942	3000	6203	FPC	

**A COPY OF THESE INSTRUCTIONS SHALL BE
PROVIDED TO ALL USERS.**

Warning

You must read and fully understand all instructions, or have all instructions explained to you, before attempting to use this equipment. Equipment must not be installed, operated or inspected by anyone who does not understand this Guide. Failure to observe these instructions could result in serious injury or death. Careless or improper use of this equipment can result in serious injury or death. Training and instruction review should be repeated at regular intervals. If you have any questions regarding these instructions or need additional copies, call Gemtor, Inc. at 1-800-405-9048.

This instruction guide applies to:

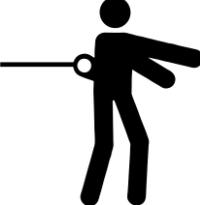
Affix Product Label Here

1. APPLICATION

1.1 BODY HARNESS ANSI CLASS III, OSHA

Used for positioning, restraint, fall arrest, rescue/retrieval or suspension. Full-Body Harnesses distribute the fall arresting forces throughout a large area of the body. When used for fall arrest an approved energy absorber should be used whenever possible. If conditions do not allow for the use of an energy absorber, the system must be used so that forces imposed on the body do not exceed OSHA'S limit of 1800 lbs. (8kN). **Expected harness stretch is 6" (152mm), make sure this distance along with other factors such as D-ring/connector length, settling of the user's body and all other contributing elements are considered when calculating the clearance required below a worker where there is a possibility of falling.**

Use these icons to determine the appropriate use for Gemtor equipment. Equipment must only be used for the purpose for which it is designed. Products with more than one appropriate use will have icons for all accepted uses.

	<p>Fall Arrest: Personal fall arrest systems typically include a Full Body Harness and a connecting subsystem (Energy Absorbing Lanyard, Self-Retracting Device, etc.). Maximum arresting force must not exceed 1,800 lbs. (8kN). Attachment Points: Dorsal, Sternal (<i>Limited applications</i>)</p>
	<p>Work Positioning: Work positioning systems typically include a Full Body Harness, positioning lanyard, and a back-up personal fall arrest system. For work positioning applications, connect the work positioning subsystem (example: lanyard, Y-lanyard, etc.) to the lower (hip level) side or belt mounted work positioning attachment anchorage elements (D-Rings). Never use these connection points for fall arrest. Attachment Points: Front, Hip</p>
	<p>Restraint: The Full Body Harness is used as a component of a restraint system to prevent the user from reaching a fall hazard. Restraint systems typically include a Full Body Harness and a lanyard or restraint line. Attachment Points: Dorsal, Sternal, Frontal, Hip</p>
	<p>Climbing: The Full Body Harness is used as a component of a climbing system to prevent the user from falling when climbing a ladder or other climbing structure. Climbing systems typically include a Full Body Harness, vertical cable or rail attached to the structure, and climbing sleeve. For ladder climbing applications, harnesses equipped with a frontal D-Ring in the sternal location may be used for fixed ladder climbing systems. Attachment Points: Sternal</p>
	<p>Rescue/Retrieval: The Full Body Harnesses is used as a component of a rescue system and are configured depending on the type of rescue. A harness may be equipped with shoulder D-rings for confined space applications where worker profile is an issue. Attachment Points: Dorsal, Sternal, Frontal, Shoulder</p>
	<p>Descent/Suspension: Harnesses equipped with a single sternal level D-Ring, or a pair of connectors originating below the waist (such as a seat sling) may be used for connection to a descent or suspension system. An independent fall arrest system attached to an OSHA compliant anchorage must be used with a suspension system. Attachment Points: Sternal, Seat Sling</p>

1.2 ANCHOR SLINGS

Provide an OSHA-compliant anchor point when attached to a structural support capable of supporting at least 5,000 lbs. (22.2kN).

1.3 WEB LANYARDS

Used for positioning or restraint. **Not to be used for fall arrest unless an energy absorber is used.** Web lanyards alone are not used for fall arrest since fall arrest forces will exceed OSHA'S maximum allowable arresting force of 1800 lbs. (8kN).

1.4 ROPE LANYARDS

Used for positioning or restraint. When rope lanyards are used for fall arrest, care must be taken to ensure that fall arrest forces do not exceed 1800 lbs. (8kN). A fall of more than three (3) feet would generally exceed this limit.

1.5 ENERGY ABSORBERS (DECELERATION DEVICES)

For fall arrest, an energy absorber lanyard is recommended. When used properly, the energy absorber will limit maximum arresting forces to less than 900 lbs. (4kN).

IMPORTANT: Energy absorbers can increase total fall distance by up to 42 in. (1.1m) or more. It is essential that it be determined before use whether the fall space permits the use of an energy absorber.

2. USE REQUIREMENTS

2.1 BODY BELTS & HARNESSSES

Body Belts and Harnesses are to be worn snug around the body. If a belt or a harness does not fit properly, replace it with the correct size. The fall arrest connection on the harness must be positioned in the center of the wearer's back near shoulder level.

DO NOT USE A BODY BELT FOR FALL ARREST.

2.2 ANCHORAGE

Secure point of attachment for lifelines, lanyards or deceleration devices. Anchorages used for attachment of personal fall arrest equipment shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 lbs. (22.2kN) per employee attached. Certified Anchorages must be able to support at least two (2) times the potential (foreseeable) impact load. Positioning devices shall be secured to an anchorage capable of supporting at least twice the potential impact load of an employee's fall or 3,000 lbs. (13.3kN), whichever is greater.

2.3 LANYARDS

Lanyards shall be kept as short as possible to minimize free fall distance. Free fall distance shall not exceed 6 ft. (1.8m).

2.4 ENERGY ABSORBERS

It is **HIGHLY RECOMMENDED** that an energy absorber be part of a fall arrest system whenever possible. Energy absorbing lanyards shall be kept as short as possible to minimize free fall distance. Free fall distance shall not exceed 6 ft. (1.8m).

2.5 HARDWARE

Belts, harnesses, lanyards, lifelines and accessory equipment are supplied with snaphooks, D-rings and other hardware designed specifically as matched elements. Use of incompatible hardware can be unsafe! Use of mismatched hardware can result in the inadvertent release of the snaphook (roll-out) caused by external pressure on the snaphook gate. In all cases the user must check any attachment method to make sure it cannot bring pressure on the snaphook gate in a manner to permit accidental opening. Snaphooks should not be snapped to other snaphooks. Snaphooks shall not be snapped to a D-ring if the snaphook gate opening is larger than $\frac{3}{4}$ of an inch. Snaphooks shall have a 5000 lbs. (22.2kN) minimum tensile strength rating. ANSI Z359 and A10.32 require that connector gates have a minimum gate strength of 3600 lbs. (16kn) Visually examine the connection for positive snaphook engagement. Use locking snaphooks for all connections.

Figure 1. Locations and Markings



3. STANDARDS COMPLIANCE

All listed harnesses meet all applicable OSHA Standards including 1910.66 and 1926 Subpart M as well as ANSI Z359.1-07, ANSI Z359.11-14, ANSI A10.32-12. Some harnesses may also be compliant with other international and/or consensus standards including but not limited to CSA, NFPA, etc. Refer to the harnesses labels for additional information regarding standards compliance and certifications.

4. CAUTIONS

Items subjected to **FALL ARREST** or **IMPACT FORCES** must be immediately removed from service and destroyed. Any item showing **EXCESSIVE WEAR OR DETERIORATION** shall be destroyed. Inspect all equipment before each use. Failure to observe proper inspection and usage procedures could result in **INJURY** or **DEATH**.

ENVIRONMENTAL HAZARDS must be considered in selecting the appropriate equipment. Exposing the equipment to chemicals and their vapors, heat, flames, or other environmental conditions may result in **INJURY** or **DEATH**. Recommendations where chemicals, high temperature or other unusual conditions exist may be addressed to Gemtor, Inc.

Extra care must be taken when using equipment around moving machinery and electrical hazards.

Avoid working where the equipment will be in contact with sharp or abrasive surfaces. If this is unavoidable, the equipment should be protected from contact by using padding or other means.

Avoid prolonged exposure to sun light or other conditions that may lead to UV degradation. Store in a cool dark place.

5. EMPLOYEE TRAINING CONSIDERATIONS

Thorough employee training in the selection and use of personal fall arrest systems is imperative. Employees must be trained in the safe use of the system. This should include the following: application limits; proper anchoring and tie-off techniques; estimation of free fall distance, including determination of deceleration distance, and total fall distance to prevent striking a lower level; methods of use; and inspection and storage of the system. Careless or improper use of the equipment can result in serious injury or death. Employers and employees should become familiar with the material in related OSHA regulations, ANSI standards, as well as manufacturer's recommendations, before a system is used. Of uppermost importance is the reduction in strength caused by certain tie-offs (such as using knots, tying around sharp or rough edges, etc.) and the maximum permitted free fall distance. Also, to be stressed are the importance of inspections prior to use, the limitations of the equipment, and unique conditions at the worksite such as which may be important in determining the type of system to use. Any questions may be addressed to Gemtor, Inc.

6. LABELING

Label Locations



Fall Arrest Indicator

Label pack under cover on harness connection end

Exemplar Product Labels

ANSI Z359.11-2014

ANSI Z359 Recognizes the use of this
Harness only within the capacity range of:
130-310 lbs.

DO NOT REMOVE THIS LABEL

Model: SAMPLEHSD-2
Size/Grandeur: Univ
Material: Polyester
Meets: OSHA, ANSI A10.32-12, ANSI Z359.11-14
Date: 11/17
Capacity: 350* lbs.
 Gemtor, Inc.
 Matawan, NJ

GEMTOR™

*Z359 applies to users 130-310 lbs.
Union Made in USA

CAUTION, Read and Understand all Instructions!

This full-body harness is designed as fall protection for personnel while working at heights. To be used with appropriate safety lanyard only. Refer to supplied instruction manual for additional information. Visual inspection is required before each use. Equipment showing signs of wear or damage must not be used. The suitability of this harness for the intended purpose shall be determined prior to use. CARELESS OR IMPROPER USE OF THIS EQUIPMENT MAY RESULT IN SERIOUS INJURY OR DEATH.

If there are any questions as to the correct use of this or any GEMTOR product, DO NOT USE, call toll-free 800-405-9048

Serial#: 00711417
INSPECTION LOG

	2018	2019	2020	2021	2022	2023	
							Insp Date
							Insp by
							Insp Date
							Insp by

Assigned to
(use permanent marker):

INSPECT
STRESS INDICATOR

DO NOT USE
THIS UNIT HAS BEEN
IMPACT LOADED

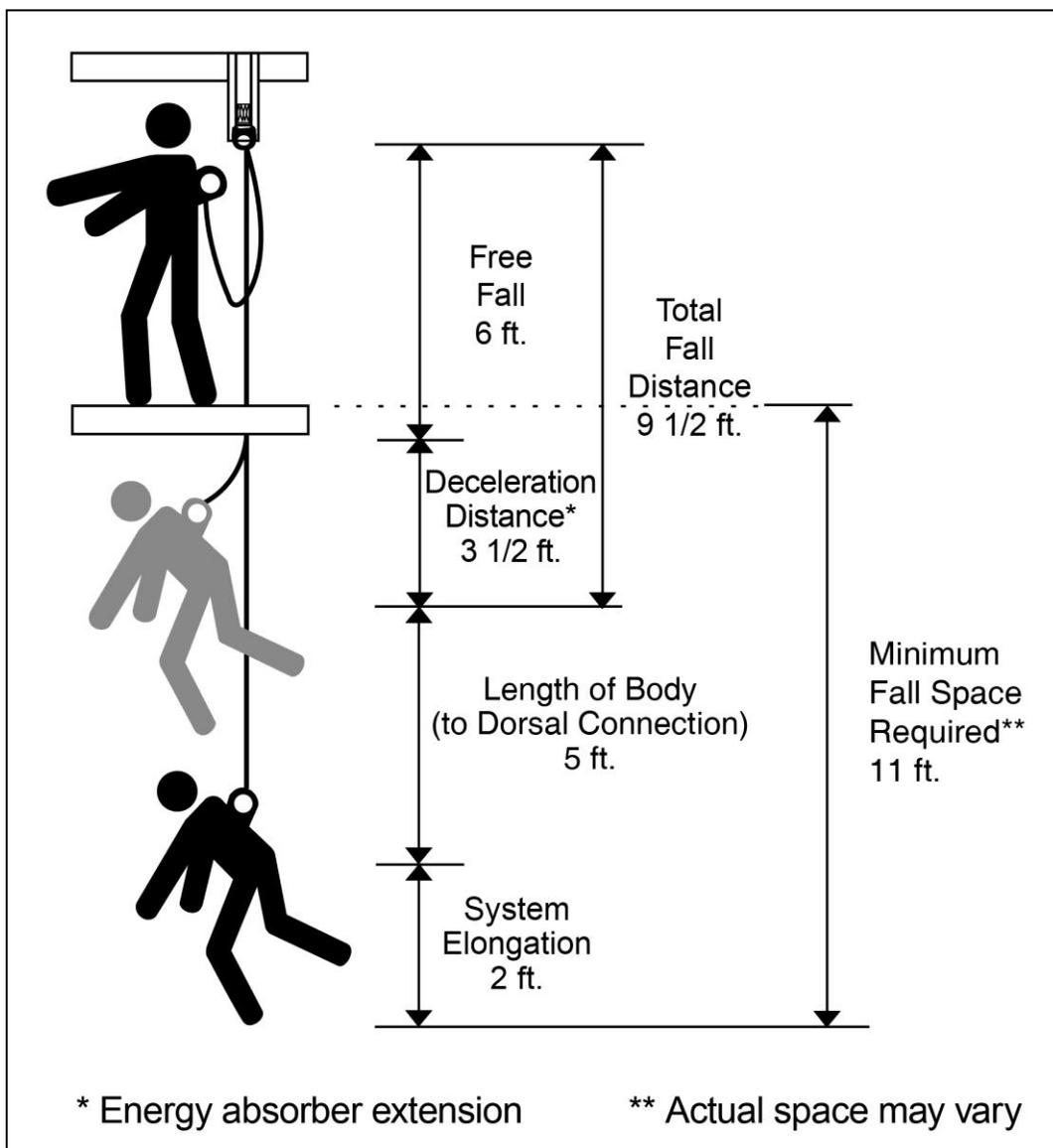
8. LIMITATIONS AND SPECIFICATIONS

8.1 Free Fall Considerations - Free fall distance should be kept to a minimum, and as required by OSHA, in no case shall exceed 6 ft.(1.8m) unless allowed by OSHA and designed and used under the supervision of a qualified person. The tie-off attachment point to the lifeline or anchor should be located at or above the connection point of the fall arrest equipment on harness.

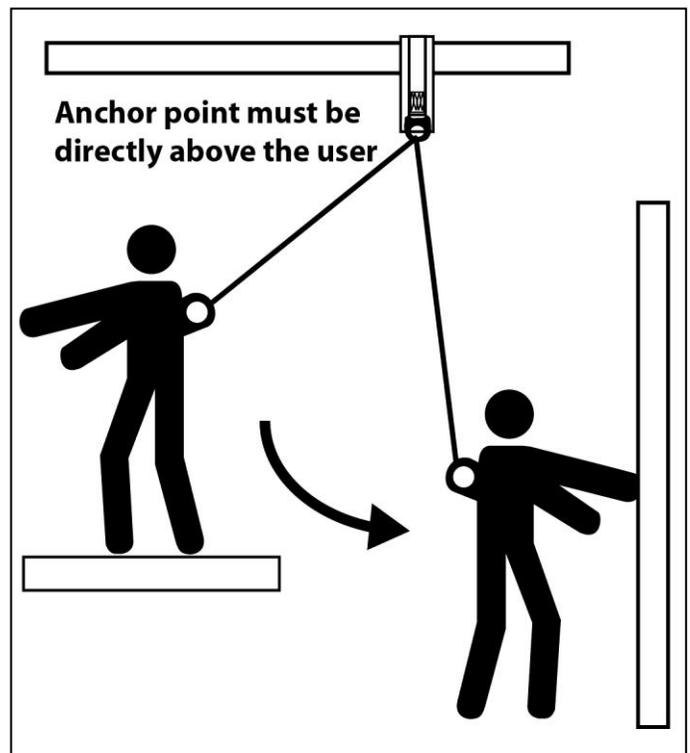
8.2 Capacity - The Full Body Harness is designed for use by persons with a combined weight (clothing, tools, etc.) ranging from 130 lbs. (59kg.) to 310 lbs. (140kg.). Make sure all the components in your system are rated to an appropriate capacity for the application. **NOTE:** 310 lbs. (140kg.) is the maximum capacity allowed by ANSI Z359.11. The harness may have been designed and tested to a higher capacity. Refer to the harness label for more information including specific capacities.

8.3 Fall Clearance - Use the diagram below to calculate required clearance. The numbers are representative examples, substitute the actual distances associated with your jobsite and the equipment being used. In the example below, Minimum Required Fall Space = 11 ft. The lengths and distance for the actual components being used must be substituted for the exemplar numbers shown below. Remember expected Gemtor harness stretch is 6" (152mm). Note: some energy absorber may have greater deceleration distances.

Minimum Required Fall Space = Free Fall + Deceleration Distance + Length of Body + Elongation



8.4 Swing Fall Hazard - Work directly under your anchorage whenever possible. If a swing fall can occur, ensure that there are no hazards in the swing fall path. Total fall distance is greater in a swing fall than in a vertical fall. Ensure that you account for the added distance when calculating Minimum Required Fall Space.



9. RESCUE PLAN

9.1 When using this full-body harness and connected components and sub-systems, the user/employer must have a rescue plan and the means at hand to implement the plan.

10. INSPECTION

10.1 Users shall establish their own formal routine inspection according to prevailing conditions and applicable standards and regulations. ANSI Z359 requires inspection by a competent person other than the user at intervals of no more than one year. Use the inspection grid to record your results. A minimum of two formal inspections per year is recommended. Visual inspection is required before each use, for mildew, wear, damage and other deterioration. Defective components shall be removed from service and destroyed.

10.2 Buckles, D-rings, snaphooks, thimbles and other hardware shall not be distorted, or have any sharp edges, burrs, cracks, worn parts or corrosion. Make sure buckles work freely. The snaphook gate spring shall provide tension to keep the snaphook gate closed in a locked position; it shall close flat against the snaphook and exhibit no sideways movement or play. Rivets and grommets shall be tightly set in the material with no distortion.

10.3 All webbing shall be free of frayed or broken fibers, pulled stitches, tears, abrasions, mold, burns or discoloration. Rope splices shall be tight with five tucks. Thimbles shall be held by the splice. Inspect rope by twisting. Inspect webbing by bending and/or pressing over a 1½ inch diameter object.

10.4 Inspect Fall Arrest/Stress Indicator:

Location: vertical rear straps just above the back strap or label pack.

Purpose: This indicator is designed to deploy if the equipment has been subjected to fall arrest forces.

DO NOT USE if any fall arrest/stress indicator has deployed.

10.5 All Labels should be present and legible

NOTE: THE PRECEDING INSPECTION PROCEDURES ARE A MINIMAL METHOD OF INSPECTION. THE INSPECTION PROCEDURE MUST REFLECT THE USE APPLICATION.

AN INTACT FALL ARREST/STRESS INDICATOR DOES NOT INDICATE THAT THE EQUIPMENT IS FIT FOR USE.

DO NOT attempt to repair or modify any Gemtor Fall Protection equipment. Repairs and/or modifications shall only be performed by the manufacturer or persons or entities authorized in writing.

11. HOW TO CLEAN EQUIPMENT

11.1 Proper cleaning and storage of Gemtor equipment will pay dividends in the form of added safety and longer product life. Take care that your storage area is clean and dry, and not exposed to damaging chemicals, fumes, or sunlight.

11.2 ROPE & WEBBING

1. Dampen sponge in plain water and wipe off all surface dirt.
2. Squeeze sponge dry.
3. Dip sponge in solution of water and mild detergent.
4. Rub down rope/webbing vigorously, working up a thick lather.
5. Wipe dry with clean cloth.
6. Hang away from heat to dry.

12. ANSI Z359.11 - Annex A – Normative

Note: This information from the Z359.11 standard is required to be included in the instruction manual for the end user:

ANSI/ASSE Z359 Requirements for Proper Use and Maintenance of Full Body Harnesses (Note: These are general requirements and information provided by ANSI/ASSE Z359, the Manufacturer of this equipment may impose more stringent restrictions on the use of the products they manufacture, see the Manufacturer's instructions.)

1. It is essential that the users of this type of equipment receive proper training and instruction, including detailed procedures for the safe use of such equipment in their work application. ANSI/ASSE Z359.2, *Minimum Requirements for a Comprehensive Managed Fall Protection Program*, establishes guidelines and requirements for an employer's managed fall protection program, including policies, duties and training; fall protection procedures; eliminating and controlling fall hazards; rescue procedures; incident investigations; and evaluating program effectiveness.
2. Correct fit of a Full Body Harness is essential to proper performance. Users must be trained to select the size and maintain the fit of their Full Body Harness.
3. Users must follow manufacturer's instructions for proper fit and sizing, paying attention to ensure that buckles are connected and aligned correctly, leg straps and shoulder straps are kept snug at all times, chest straps are located in the middle chest area and leg straps are positioned and snug to avoid contact with the genitalia should a fall occur.
4. Full Body Harnesses which meet ANSI/ASSE Z359.11 are intended to be used with other components of a Personal Fall Arrest System that limit maximum arrest forces to 1800 pounds (8 kN) or less.
5. Suspension intolerance, also called suspension trauma or orthostatic intolerance, is a serious condition that can be controlled with good harness design, prompt rescue and post fall suspension relief devices. A conscious user may deploy a suspension relief device allowing the user to remove tension from around the legs, freeing blood flow, which can delay the onset of suspension intolerance. An attachment element extender is not intended to be attached directly to an anchorage or anchorage connector for fall arrest. An

energy absorber must be used to limit maximum arrest forces to 1800 pounds (8 kN). The length of the attachment element extender may affect free fall distances and free fall clearance calculations.

6. Full Body Harness (FBH) Stretch, the amount the FBH component of a personal fall arrest system will stretch and deform during a fall, can contribute to the overall elongation of the system in stopping a fall. It is important to include the increase in fall distance created by FBH Stretch, as well as the FBH connector length, the settling of the user's body in the FBH and all other contributing factors when calculating total clearance required for a fall arrest system.

7. When not in use, unused lanyard legs that are still attached to a Full Body Harness D-ring should not be attached to a work positioning element or any other structural element on the Full Body Harness unless deemed acceptable by the competent person and manufacturer of the lanyard. This is especially important when using some types of "Y" style lanyards, as some load may be transmitted to the user through the unused lanyard leg if it is not able to release from the harness. The lanyard parking attachment is generally located in the sternal area to help reduce tripping and entanglement hazards.

8. Loose ends of straps can get caught in machinery or cause accidental disengagement of an adjuster. All Full Body Harnesses shall include keepers or other components which serve to control the loose ends of straps.

9. Due to the nature of soft loop connections, it is recommended that soft loop attachments only be used to connect with other soft loops or carabiners. Snaphooks should not be used unless approved for the application by the manufacturer.

Sections 10-16 provide additional information concerning the location and use of various attachments that may be provided on this FBH.

10. **Dorsal** – The dorsal attachment element shall be used as the primary fall arrest attachment, unless the application allows the use of an alternate attachment. The dorsal attachment may also be used for travel restraint or rescue. When supported by the dorsal attachment during a fall, the design of the Full Body Harness shall direct load through the shoulder straps supporting the user, and around the thighs. Supporting the user, post fall, by the dorsal attachment will result in an upright body position with a slight lean to the front with some slight pressure to the lower chest. Considerations should be made when choosing a sliding versus fixed dorsal attachment element. Sliding dorsal attachments are generally easier to adjust to different user sizes, and allow a more vertical rest position post fall, but can increase FBH Stretch.

11. **Sternal** – The sternal attachment may be used as an alternative fall arrest attachment in applications where the dorsal attachment is determined to be inappropriate by a competent person, and where there is no chance to fall in a direction other than feet first. Accepted practical uses for a sternal attachment include, but are not limited to, ladder climbing with a guided type fall arrester, ladder climbing with an overhead self-retracting lifeline for fall arrest, work positioning and rope access. The sternal attachment may also be used for travel restraint or rescue. When supported by the sternal attachment during a fall, the design of the Full Body Harness shall direct load through the shoulder straps supporting the user, and around the thighs. Supporting the user, post

fall, by the sternal attachment will result in roughly a sitting or cradled body position with weight concentrated on the thighs, buttocks and lower back. Supporting the user during work positioning by this sternal attachment will result in an approximate upright body position.

If the sternal attachment is used for fall arrest, the competent person evaluating the application should take measures to ensure that a fall can only occur feet first. This may include limiting the allowable free fall distance. It may be possible for a sternal attachment incorporated into an adjustable style chest strap to cause the chest strap to slide up and possibly choke the user during a fall, extraction, suspension, etc. The competent person should consider Full Body Harness models with a fixed sternal attachment for these applications.

12. Frontal – The frontal attachment serves as a ladder climbing connection for guided type fall arresters where there is no chance to fall in a direction other than feet first, or may be used for work positioning. Supporting the user, post fall or during work positioning, by the frontal attachment will result in a sitting body position, with the upper torso upright, with weight concentrated on the thighs and buttocks. When supported by the frontal attachment the design of the Full Body Harness shall direct load directly around the thighs and under the buttocks by means of the sub-pelvic strap.

If the frontal attachment is used for fall arrest, the competent person evaluating the application should take measures to ensure that a fall can only occur feet first. This may include limiting the allowable free fall distance.

13. Shoulder – The shoulder attachment elements shall be used as a pair, and are an acceptable attachment for rescue and entry/retrieval. The shoulder attachment elements shall not be used for fall arrest. It is recommended that the shoulder attachment elements be used in conjunction with a yoke which incorporates a spreader element to keep the Full Body Harness shoulder straps separate.

14. Waist, Rear – The waist, rear attachment shall be used solely for travel restraint. The waist, rear attachment element shall not be used for fall arrest. Under no circumstances is it acceptable to use the waist, rear attachment for purposes other than travel restraint. The waist, rear attachment shall only be subjected to minimal loading through the waist of the user, and shall never be used to support the full weight of the user.

15. Hip – The hip attachment elements shall be used as a pair, and shall be used solely for work positioning. The hip attachment elements shall not be used for fall arrest. Hip attachments are often used for work positioning by arborists, utility workers climbing poles and construction workers tying rebar and climbing on form walls. Users are cautioned against using the hip attachment elements (or any other rigid point on the Full Body Harness) to store the unused end of a fall arrest lanyard, as this may cause a tripping hazard, or, in the case multiple leg lanyards, could cause adverse loading to the Full Body Harness and the wearer through the unused portion of the lanyard.

16. Suspension Seat – The suspension seat attachment elements shall be used as a pair, and shall be used solely for work positioning. The suspension seat attachment elements shall not be used for fall arrest. Suspension seat attachments are often used for prolonged work activities where the user is suspended, allowing the user to sit on the suspension seat formed between the two attachment elements. An example of this use would be window washers on large buildings.

User Inspection, Maintenance, and Storage of Equipment

Users of personal fall arrest systems shall, at a minimum, comply with all manufacturer instructions regarding the inspection, maintenance and storage of the equipment. The user's organization shall retain the manufacturer's instructions and make them readily available to all users. See ANSI/ASSE Z359.2, Minimum Requirements for a Comprehensive Managed Fall Protection Program, regarding user inspection, maintenance and storage of equipment.

1. In addition to the inspection requirements set forth in the manufacturer's instructions, the equipment shall be inspected by the user before each use and, additionally, by a competent person, other than the user, at interval of no more than one year for:

- Absence or illegibility of markings.
- Absence of any elements affecting the equipment form, fit or function.
- Evidence of defects in, or damage to, hardware elements including cracks, sharp edges, deformation, corrosion, chemical attack, excessive heating, alteration and excessive wear.
- Evidence of defects in or damage to strap or ropes including fraying, unsplicing, unlaying, kinking, knotting, roping, broken or pulled stitches, excessive elongation, chemical attack, excessive soiling, abrasion, alteration, needed or excessive lubrication, excessive aging and excessive wear.

2. Inspection criteria for the equipment shall be set by the user's organization. Such criteria for the equipment shall equal or exceed the criteria established by this standard or the manufacturer's instructions, whichever is greater.

3. When inspection reveals defects in, damage to, or inadequate maintenance of equipment, the equipment shall be permanently removed from service or undergo adequate corrective maintenance, by the original equipment manufacturer or their designate, before return to service.

Maintenance and Storage

1. Maintenance and storage of equipment shall be conducted by the user's organization in accordance with the manufacturer's instructions. Unique issues, which may arise due to conditions of use, shall be addressed with the manufacturer.

2. Equipment which is in need of, or scheduled for, maintenance shall be tagged as unusable and removed from service.

3. Equipment shall be stored in a manner as to preclude damage from environmental factors such as temperature, light, UV, excessive moisture, oil, chemicals and their vapors or other degrading elements.

