

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 particular 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 particular 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.



GT ANSI - Ref.216901

**Full body harness for suspension,
fall-arrest, work positioning and restraint.
ANSI/ASSE Z359.11-2014**



is a brand owned by

CAMP SPA
CONCEZIONE ARTICOLI MONTAGNA PREMANA

Via Roma, 23 23834 Premana (LC) ITALY
Tel. +39 0341 890117 Fax +39 0341 818010

www.camp.it
contact@camp.it

February 2017 - Rev. 0 - © C.A.M.P. S.p.A.



Specific ANSI/ASSE instructions

This leaflet must be read in conjunction with the instruction booklet also supplied with the harness. Both leaflet and booklet must be provided to the end user. In addition to the instructions contained in the leaflet and the booklet, user shall also refer to applicable regulations governing occupational safety.

The attachment points of the harness must be used exclusively for the following scopes:

- **Dorsal attachment (A):** main fall-arrest point.
- **Sternal attachment (A):** secondary fall-arrest point (length of fall must be limited to 2 feet maximum).
- **Frontal attachment:** suspension, ladder climbing with guided type fall-arresters and work positioning.
- **Hip attachments** (used as a pair): work positioning.
- **Waist rear attachment:** restraint.

Length of the full body harness stretch (HS maximum: 1 ft) and other factors such as length of D-rings and connectors must be considered for the calculation of the minimum safe clearance distance.

Repairs to the harness can be done exclusively by the manufacturer or authorized persons or entities.

Remove equipment from service if it has been subjected to the forces of arresting a fall. Remove the harness from service in case of the activation of the fall indicators located in the dorsal and sternal attachment points (when the green load indicator labels deploy and becomes green).

Use this harness only in combination with compatible equipment and connected to anchor points known to be 5000 lbs (22.2 kN) strong or certified to be the double of the maximum force generated by the system during the fall.

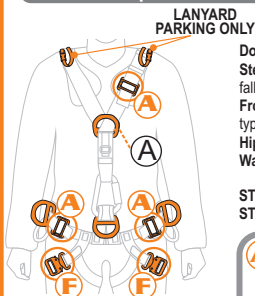
The harness is equipped with two lanyard parking attachment that will break at a load of not more than 120 pounds (0.5 kN), working load limit 22 lbs (10 kg): do not use lanyard parking attachments for any other use.

Avoid exposure to chemicals, heat, flames, sharp edges, abrasive surfaces or other environmental conditions which may affect the safety and the performances of the product; prolonged exposure to light can produce UV degradation. Consult the manufacturer in case of any doubt about the safety of the product.

Additional safety measures shall be taken when working around moving machinery or electrical hazards.

Other information related to use, accessories, limitations, responsibility, warranty, lifetime, inspection procedures, criteria for discarding the equipment, maintenance, storage, transportation, rescue plan shall be read in the instruction booklet also supplied with the harness.

Attachment points and adjustment buckles



**LANYARD
PARKING ONLY**

Dorsal attachment (A): main fall-arrest point.

Sternal attachment (A): secondary fall-arrest point (length of fall must be limited to 2 feet maximum).

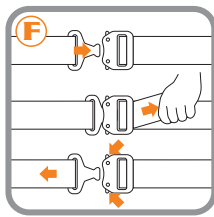
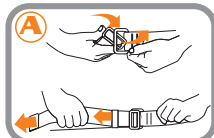
Frontal attachment: suspension, ladder climbing with guided type fall-arresters and work positioning.

Hip attachments (used as a pair): work positioning.

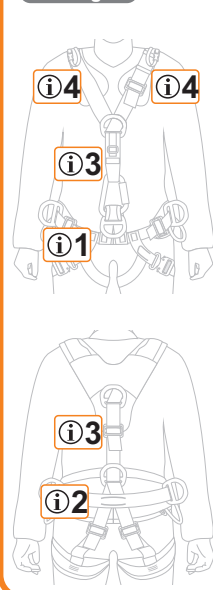
Waist rear attachment: restraint.

STRENGTH OF ATTACHMENT POINTS: 15 kN – 3600 lbs

STRENGTH OF LANYARD PARKING POINTS: 0.5 kN – 120 lbs



Markings



i1 Name of the manufacturer

i2 Conformity marking according to European directive 89/686

i3 No. of the notified body controlling the manufacturing of the product

i4 Suitable norm and year of publication

i5 Name of the device

i6 Reference number of the product

i7 Month and year of manufacture

i8 Serial number

i9 Size

i10 Read the instructions for use

i11 Maximum use weight

i12 Main material

i13 ANSI/ASSE Z359.11 weight limitations

i14 Fall indicator labels placed on sternal and dorsal attachment points deploy and become red in case of major fall: remove the harness from service.

i15 Attachment points for lanyard parking only, do not use lanyard parking attachments for any other use, working load limit 22 lbs (10 kg)

i1

CAMP

Safety

i2

CE

0123

i3

EN 361:2002

i4

EN 358:1999

i5

ANSI/ASSE Z359.11-2014

i6

EN 813:2008

i7

EN 361:2002

i8

EN 358:1999

i9

EN 813:2008

i10

EN 361:2002

i11

EN 358:1999

i12

EN 813:2008

i13

EN 361:2002

i14

EN 358:1999

i15

EN 813:2008

i1

EN 361:2002

i2

EN 358:1999

i3

EN 813:2008

i4

EN 361:2002

i5

EN 358:1999

i6

EN 813:2008

i7

EN 361:2002

i8

EN 358:1999

i9

EN 813:2008

i10

EN 361:2002

i11

EN 358:1999

i12

EN 813:2008

i13

EN 361:2002

i14

EN 358:1999

i15

EN 813:2008

i1

EN 361:2002

i2

EN 358:1999

i3

EN 813:2008

i4

EN 361:2002

i5

EN 358:1999

i6

EN 813:2008

i7

EN 361:2002

i8

EN 358:1999

i9

EN 813:2008

i10

EN 361:2002

i11

EN 358:1999

i12

EN 813:2008

i13

EN 361:2002

i14

EN 358:1999

i15

EN 813:2008

i1

EN 361:2002

i2

EN 358:1999

i3

EN 813:2008

i4

EN 361:2002

i5

EN 358:1999

i6

EN 813:2008

i7

EN 361:2002

i8

EN 358:1999

i9

EN 813:2008

i10

EN 361:2002

i11

EN 358:1999

i12

EN 813:2008

i13

EN 361:2002

i14

EN 358:1999

i15

EN 813:2008

i1

EN 361:2002

i2

EN 358:1999

i3

EN 813:2008

i4

EN 361:2002

i5

EN 358:1999

i6

EN 813:2008

i7

EN 361:2002

i8

EN 358:1999

i9

EN 813:2008

i10

EN 361:2002

i11

EN 358:1999

i12

EN 813:2008

i13

EN 361:2002

i14

EN 358:1999

i15

EN 813:2008

i1

EN 361:2002

i2

EN 358:1999

i3

EN 813:2008

i4

EN 361:2002

i5

EN 358:1999

i6

EN 813:2008

i7

EN 361:2002

i8

EN 358:1999

i9

EN 813:2008

i10

EN 361:2002

i11

EN 358:1999

i12

EN 813:2008

i13

EN 361:2002

i14

EN 358:1999

i15

EN 813:2008

i1

EN 361:2002

i2

EN 358:1999

i3

EN 813:2008

i4

EN 361:2002

i5

EN 358:1999

i6

EN 813:2008

i7

EN 361:2002

i8

EN 358:1999

i9

EN 813:2008

i10

EN 361:2002

i11

EN 358:1999

i12

EN 813:2008

i13

EN 361:2002

i14

EN 358:1999

i15

EN 813:2008

i1

EN 361:2002

i2

EN 358:1999

i3

EN 813:2008

i4

EN 361:2002

i5

EN 358:1999

i6

EN 813:2008

i7

EN 361:2002

i8

EN 358:1999

i9

EN 813:2008

i10

EN 361:2002

i11

EN 358:1999

i12

EN 813:2008

i13

EN 361:2002

i14

EN 358:1999

i15

EN 813:2008

i1

EN 361:2002

i2

EN 358:1999

i3

EN 813:2008

i4

EN 361:2002

i5

EN 358:1999

i6

EN 813:2008

i7

EN 361:2002

i8

EN 358:1999

i9

EN 813:2008

i10

EN 361:2002

i11

EN 358:1999

i12

EN 813:2008

i13

EN 361:2002

i14

EN 358:1999

i15

EN 813:2008

i1

EN 361:2002

i2

EN 358:1999

i3

EN 813:2008

i4

EN 361:2002

i5

EN 358:1999

i6

EN 813:2008

i7

EN 361:2002

i8

EN 358:1999

i9

EN 813:2008

i10

EN 361:2002

i11

EN 358:1999

i12

EN 813:2008

i13

EN 361:2002

i14

EN 358:1999

i15

EN 813:2008

i1

EN 361:2002

i2

EN 358:1999

i3

EN 813:2008

i4

EN 361:2002

i5

EN 358:1999

i6

EN 813:2008

i7

EN 361:2002

i8

EN 358:1999

i9

EN 813:2008

i10

EN 361:2002

i11

EN 358:1999

i12

EN 813:2008

i13

EN 361:2002

i14

EN 358:1999

i15

EN 813:2008

i1

EN 361:2002

i2

EN 358:1999

i3

EN 813:2008

i4

EN 361:2002

i5

EN 358:1999

i6

EN 813:2008

i7

EN 361:2002

i8

EN 358:1999

i9

EN 813:2008

i10

EN 361:2002

i11

EN 358:1999

i12

EN 813:2008

i13

EN 361:2002

i14

EN 358:1999

i15

EN 813:2008

i1

EN 361:2002

i2

EN 358:1999

i3

EN 813:2008

i4

EN 361:2002

i5

EN 358:1999

i6

EN 813:2008

i7

EN 361:2002

i8

EN 358:1999

i9

EN 813:2008

i10

EN 361:2002

i11

EN 358:1999

i12

EN 813:2008

i13

EN 361:2002

i14

EN 358:1999

i15

EN 813:2008

i1

EN 361:2002

i2

EN 358:1999

i3

EN 813:2008

i4

EN 361:2002

i5

EN 358:1999

i6

EN 813:2008

i7

EN 361:2002

i8

EN 358:1999

i9

EN 813:2008

i10

EN 361:2002

i11

EN 358:1999

i12

EN 813:2008

i13

EN 361:2002

i14

EN 358:1999

i15

EN 813:2008

i1

EN 361:2002

i2

EN 358:1999

i3

EN 813:2008

i4

EN 361:2002

i5

EN 358:1999

i6

EN 813:2008

i7

EN 361:2002

i8

EN 358:1999

i9

EN 813:2008

i10

EN 361:2002

i11

EN 358:1999

i12

EN 813:2008

i13

EN 361:2002

i14

EN 358:1999

i15

EN 813:2008

i1

EN 361:2002

i2

EN 358:1999

i3

EN 813:2008

i4

EN 361:2002

i5

EN 358:1999

i6

EN 813:2008

i7

EN 361:2002

i8

EN 358:1999

i9

EN 813:2008

i10

EN 361:2002

i11

EN 358:1999

i12

EN 813:2008

i13

EN 361:2002

i14

EN 358:1999

i15

EN 813:2008

i1

EN 361:2002

i2

EN 358:1999

i3

EN 813:2008

i4

EN 361:2002

i5

EN 358:1999

i6

EN 813:2008

i7

EN 361:2002

i8

EN 358:1999

i9

EN 813:2008

i10

EN 361:2002

i11

EN 358:1999

i12

EN 813:2008

i13

EN 361:2002

i14

EN 358:1999

i15

EN 813:2008

i1

EN 361:2002

i2

EN 358:1999

i3

EN 813:2008

i4

EN 361:2002

i5

EN 358:1999

i6

EN 813:2008

i7

EN 361:2002

i8

EN 358:1999

i9

EN 813:2008

i10

EN 361:2002

i11

EN 358:1999

i12

EN 813:2008

i13

EN 361:2002

i14

EN 358:1999

i15

EN 813:2008

i1

EN 361:2002

i2

EN 358:1999

i3

EN 813:2008

i4

EN 361:2002

i5

EN 358:1999

i6

EN 813:2008

i7

EN 361:2002

i8

EN 358:1999

i9

EN 813:2008

i10

EN 361:2002

i11

EN 358:1999

i12

EN 813:2008

i13

EN 361:2002

i14

EN 358:1999

i15

EN 813:2008

i1

EN 361:2002

i2

EN 358:1999

i3

EN 813:2008

i4

EN 361:2002

i5

EN 358:1999

i6

EN 813:2008

i7

EN 361:2002

i8

EN 358:1999

i9

EN 813:2008

i10

EN 361:2002

i11

EN 358:1999

i12

EN 813:200