

### Introduction

Thank you for Purchasing Madaco Safety Products. This manual will explain how to use your equipment correctly. This manual must be read and understood in its entirety. This and any other included instructions must be made available to the user of equipment. The user must understand how to safely and effectively use Madaco Safety Products and all Madaco fall safety equipment used in combination with the Full Body Harness.

### Safety Information

Please read, understand and follow all safety information contained in these instructions, prior to use of this Madaco Safety Product. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY OR DEATH. These instructions must be provided to the user of the equipment. Retain these instructions for future reference.

Alterations or misuse of this product, or failure to follow instructions, may result in serious injury or death. This product is used as part of a complete fall protection system. All users must be fully trained in the safe installation and operation of their complete fall protection system. It is the responsibility of the worker and the purchaser of this equipment to assure that users of this equipment are properly trained in its use, maintenance, and storage. Proper training must be repeated at regular intervals, by a competent person or establishment.

Consult with a doctor if there is reason to doubt your fitness to safely absorb the shock of a fall event. ANSI limits the weight of fall protection equipment users to a maximum of 310 lbs. (140kg). CSA limits the weight of fall protection equipment users to a maximum of 350 lbs. (160 kg). Products in this manual may have a rated capacity exceeding ANSI and CSA capacity limits. Heavy users experience more risk of severe injury or death due to falls because of increased fall arrest forces placed on the user's body. Also, the onset of suspension trauma after a fall even may be accelerated for heavy users.

NOTE: For more information consult the ANSI Z359/CSA Z259 body of standards.

# ! WARNING!

Failure to understand and comply with safety regulations may result in serious injury or death. Regulations included herein are not all-inclusive, are for reference only, and are not intended to replace a Competent Person's judgment or knowledge of federal or state standards.

## 1

### WARNING!

- 1.1 Fall Protection harnesses are made to withstand the impact forces of a fall only once. REMOVE FROM SERVICE immediately if any equipment subjected to fall arrest forces. Remove from service even if there is no visible damage to the harness.
- 1.2 Do not make any alteration, modifications or repairs to the harness, unless authorized by Madaco Safety Products. Unauthorized modifications or repairs may result in injury or death.
- 1.3 Do not intentionally misuse equipment, misuse or abuse of equipment will automatically void the manufacturers warranty.
- 1.4 Immediately remove harness from service if any equipment fails inspection, and clearly tag product "DO NOT USE". Destroy or repair the product as required by these instructions.
- 1.5 Consult with a Madaco Safety Products consultant when using equipment combinations with components or subsystems other than those described in this manual. Only use compatible devices with this harness.
- 1.6 Avoid sharp and/or abrasive surfaces and edges.
- 1.7 Avoid hazards including, but not limited to: chemical exposure, moving machinery, thermal, electrical and/or chemical hazards as contact may cause serious injury or death. If harness is subjected to these environments, the harness must be removed and destroyed from service immediately.
- 1.8 Inspect product BEFORE EACH USE and after any fall event by a competent person.
- 1.9 Do NOT twist, tie, knot or allow slack in the lifeline.
- 1.10 Do NOT exceed the number of allowable users specified in these instructions.
- 1.11 Ensure harness is appropriately sized, adjusted, donned and worn as described in these instructions.
- 1.12 The user of this harness should maintain a documented rescue/Fall Protection plan on file and available for review by all users.
- 1.13 Do NOT work under suspended loads.
- 1.14 Avoid exposure to light due to UV degradation.

## 2

### Description

Full Body Harnesses (FBH) comprises the Body Wear component of your Personal Fall Arrest System (PFAS). This manual will discuss the various connection points with their specific application. Madaco Safety Product's Full Body Harnesses are available in a wide variety of configurations to address the specific needs in most workplaces. This is shown by type and location of the D-ring/s on the FBH. Figure 1 illustrated the applications available to harnesses covered by these instructions.

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In 2007, ANSI revised and published the Z359.1 standard for fall protection in general industry and suggested that the gate strength on all connectors be increased to 3,600 lbs. Madaco Safety Products currently offers both the "old" and "new" style connectors to accommodate all users. There are several important issues for users and employers to consider with regard to how these standards have an effect on the jobsite:

1. The ANSI Z359 standards apply to general industry. ANSI also publishes standards for the Construction and Demolition industry under the A10.32 designation – A10 does not presently require 3,600 lb. gates on connectors.
2. Title 29 CFR 1910.66 App. C and 1926 Subpart M also do not require 3,600 lb. gates on connectors.
3. ANSI Z359 and A10 do not bear the force of law in most states – Some states do, however, incorporate these standards by reference within their own standards language. It is the responsibility of the employer to know which standards may be enforced in their work location(s).
4. Many government jobsites are required to use products meeting the ANSI Z359 standards, particularly those that are managed by the Army Corps of Engineers. Be aware of the requirements on your jobsite if you are a government contractor or sub-contractor.
5. Regardless of the standard, all fall arrest products that are made to comply with any of these standards is safe when used properly – there is no substitute for doing the right thing regardless of which product or products you select.

- 29 CFR 1926 (Subpart M)  
1926.500: Scope, Application and Definitions  
1926.501: Duty to Have Fall Protection  
1926.502: Fall Protection Systems Criteria & Practices  
1926.503: Training Requirements

ANSI standards are voluntary consensus standards, and are generally regarded among the best practices within the fall protection community. Some states have incorporated one or more of the ANSI standards by reference, meaning that they may be enforced by some state or local agencies. Check with your State Department of Labor for further details. ANSI standards are available for purchase through the e-standards store at [www.ansi.org](http://www.ansi.org).

Title 29 CFR, section 1926.500 – 503 requires that an employer have a written fall protection plan where fall hazards exist. The best way to address a fall hazard is to eliminate it entirely or to employ a passive system to restrict access to the hazard (i.e. guardrails, netting, covers, etc.) Fall arrest products are the last line of defense in the hierarchy of fall protection, and should be used as a last resort by employees who have been properly trained.

Section 5: Anchorage Considerations OSHA 1910.66 and 1926.502 state that anchorages used for attachment of a PFAS must be independent of any anchorage being used to support or suspend platforms, and must support at least 5,000 lbs. per user attached, or be designed, installed and used as part of a complete PFAS which maintains a safety factor of at least two, and is supervised by a qualified person (architect, structural engineer, etc.).

The anchorage to which this SAL is attached must be capable of sustaining static loads in directions applied by the personal fall arrest system of at least 3,600 lbs. (or at least twice the expected dynamic load) with certification of a qualified person (architect, structural engineer, etc.), or 5,000 lbs. in the absence of certification. If multiple personal fall arrest systems are being attached to the same anchorage, the minimum values stated above must be multiplied by the number of users.

Ensure that the anchorage connector that you are using is compatible with the anchor point to which you are attaching it. If you are using this SAL with a Horizontal Lifeline, tripod or davit, ensure that it is compatible with these systems by checking the manufacturer's instructions for these systems for the minimum performance requirements of deceleration devices.

Be sure that your anchorage is mounted overhead or above the level of the back d-ring of your full body harness. Be sure to calculate your clear-fall (as discussed in above) and to avoid swing fall hazards.

Ensure the fall path is clear of obstructions and impalement hazards Madaco Safety Products maintains the position that compliance with the Z359 family of standards on the jobsite are an industry best-practice and that connectors with 3,600 lb. gates do provide an additional measure of protection. However, 3,600 lb. gates are not impervious to destruction and connector compatibility is still an important issue for consideration. Making incompatible connections with Z359 products are a dangerous practice and can result in serious injury or death. Do not use Z359 connectors in any manner that you would not typically use "A10 or OSHA" connectors. If you have questions about connector compatibility, please consult a competent person immediately or contact Madaco Safety Products for further assistance.

### 3: Harness Capacity

Madaco Safety Products Full Body harnesses are ANSI/ASSP Z359.11—2021 and OSHA Compliant. ANSI User Capacity range is 130-310 lbs. including gear, tools, clothes, etc. OSHA rated capacity is 425lbs. including gear, tools, clothes, etc. Always ensure the full body harness is adjusted to fit the user properly.

ANSI	130 lb. to 310 lb.
OSHA	Up to 420 lb.

3.4 Rescue Plan: The purchaser and/or employer must have a written rescue plan and the means to implement and communicate that plan to users, authorized persons and rescuers. Training should be provided on a periodic basis to ensure rescuer proficiency. Rescuers are to be provided with these instructions. Rescue operations require specialized equipment that is beyond the scope of this manual. See ANSI Z359.4 or CSA Z259.2.3-16.

3.5 Application Limits: Avoid moving machinery, sharp edged, abrasive surfaces, and thermal, electrical and chemical hazards as contact may cause damage to fall protection equipment which could lead to injury or death.

3.6 Extended Free Falls: Madaco's FBH's are rated for a maximum free fall of 6 feet.

### 4 System Requirements

4.1 Capacity: The user capacity of a complete fall protection system is limited by its lowest-rated maximum capacity component. See the manufacturer's instructions for each component of your system for capacity requirements. To maintain ANSI Z359 compliance, limit per user weight to a range of 130-310 lbs.

4.2 Compatibility of connectors: Connectors must be compatible with the anchorage or other system components. Do not use equipment that is not compatible. Connectors are compatible with connecting elements when the size and shape of either component does not cause the connector to inadvertently open, regardless of orientation. ALL CONNECTORS SHOULD COMPLY WITH APPLICABLE STANDARDS.

4.3 Making Connections: Ensure all connections are compatible in size, shape and strength. Connectors are designed for use only as specified in each product's user instruction manual.

OSHA 1910.66 and 1926.502 state that anchorages used for attachment of a PFAS must be independent of any anchorage being used to support or suspend platforms, and must support at least 5,000 lbs. per user attached, or be designed, installed and used as part of a complete PFAS which maintains a safety factor of at least two, and is supervised by a qualified person (architect, structural engineer, etc.).

The anchorage to which this SAL is attached must be capable of sustaining static loads in directions applied by the personal fall arrest system of at least 3,600 lbs (or at least twice the expected dynamic load) with certification of a qualified person (architect, structural engineer, etc.), or 5,000 lbs in the absence of certification. If multiple personal fall arrest systems are being attached to the same anchorage, the minimum values stated above must be multiplied by the number of users.

Ensure that the anchorage connector that you are using is compatible with the anchor point to which you are attaching it. If you are using this SAL with a Horizontal Lifeline, tripod or davit, ensure that it is compatible with these systems by checking the manufacturer's instructions for these systems for the minimum performance requirements of deceleration devices.

Be sure that your anchorage is mounted overhead or above the level of the back d-ring of your full body harness. Be sure to calculate your clear-fall (as discussed in section 2.9) and to avoid swing fall hazards.

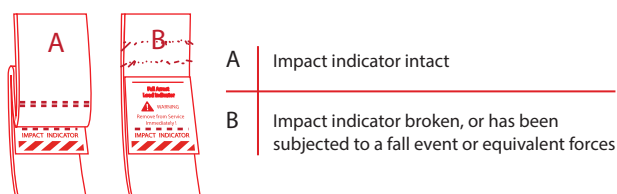
Ensure the fall path is clear of obstructions and impalement hazards Madaco maintains the position that compliance with the Z359 family of standards on the jobsite are an industry best-practice and that connectors with 3,600 lb. gates do provide an additional measure of protection. However, 3,600 lb. gates are not impervious to destruction and connector compatibility is still an important issue for consideration. Making incompatible connections with Z359 products are a dangerous practice and can result in serious injury or death. Do not use Z359 connectors in any manner that you would not typically use "A10 or OSHA" connectors. If you have questions about connector compatibility, please consult a competent person immediately or contact Madaco for further assistance.

### 5 Inspection

5.1 Before each use:

1. Check webbing for cuts, fraying and signs of damage from excess wear or abrasion. Also check for excessive dirt, grease, oil, paint or other surface contamination or discoloring. If any of these conditions are present during inspection, remove harness from use and label as UNUSABLE.
2. Check all stitching. Make sure there are no loose, frayed, or torn threads. If any of the stitch locations shows signs of damage or excessive wear remove harness from use and label as UNUSABLE.
3. Look for signs that the harness has been exposed to fall arrest forces. If impact indicator warning is exposed, remove the harness from service and label as UNUSABLE.

Label Figure 2.



4. All labels are to be legible and present. If the labels and warnings are missing or illegible, remove the harness from service.

Label Figure 1. Harness Connection Points			
CSA Class	Application	Pictogram	Explanation
Class A	Fall Arrest		The dorsal D-ring is the attachment point is located on the back of your full body harness (FBH). It is to be used for fall arrest or restraint only, connecting devices for these applications include Energy Absorbing Lanyards, Self-Retracting Lifelines, and Restraint lanyards.
Class P	Work Positioning		Work positioning D-rings are located adjacent to each hip, the intended use is with a positioning lanyard when positioning on a vertical surface (e.g. tower applications, rebar tying, etc.). This system is a primary system and should always be used in conjunction with a fall arrest system.
Class E	Rescue		Located on each shoulder of the FBH, these D-rings are intended for confined space entry and retrieval. They can also be used in other rescue applications where limited access is an issue.
Class D	Decent		May be located at the sternal position of the harness or have one or two D-rings located below the waist (e.g. bosun's chair).
Class L	Ladder Climbing		Harnesses with a sternal D-ring can be attached to a vertical ladder climbing system. The sternum location can be used in conjunction with a ladder climbing device which allows for no more than a 9-inch (22.5 cm) connection.

### Application

3.1 Purpose: Madaco's FBH provide users with the means to connect to Fall Protection systems, providing a combination of industries and applications the mobility and fall protection required while in the field.

3.2 Personal Fall Arrest System: Fall Protection Systems are typically composed of an anchorage and a full body harness, with an energy absorbing connecting device or subsystem attached to the dorsal D-ring. All components used in a Fall Protection system should comply with ANSI/ASSP and OSHA Standards. Nonpermitted use of equipment not authorized by MSP is dangerous and may lead to injury or death.

3.3 Training: This equipment must be inspected, used and installed by competent person following these instructions. These instructions are to be used as part of an employee training program.

5. Inspect all metal hardware. There should NEVER be bent, cracked or deformed on an in-service harness. Ensure there is no corrosion or excess build up of dirt, grease, oil, paint or any other contaminant.

6. Inspect buckles and adjusters for proper operation. Buckles should hold webbing tight when under tension.

7. If there is any doubt on the integrity of the harness, remove the harness from service immediately. If the product cannot be repaired—permanently remove harness from service and destroy harness or return back to Madaco Safety Products.

5.2 Inspection frequency: All harnesses are to be inspected by a competent person at least once a year or more. The competent person inspection shall be recorded on an inspection log, including all deficiencies.

After equipment had been removed from service, it may not be returned to service until a competent person confirms in writing that it is acceptable to do so.

Label Figure 3. Harness Connection Points				
Type of Use	Application Examples	Example Conditions of Use	Worker Inspection Frequency	Competent Person Inspection Frequency
Infrequent to Light Use	Work Positioning	Good storage conditions, indoor or infrequent outdoor use, room temperature, clean environments	Before each use	Annually
Moderate to Heavy Use	Rescue	Fair storage conditions, indoor and extended outdoor use, all temperatures, clean or dusty environments	Before each use	Semi-annually to annually
Severe to Continuous Use	Decent	Harsh storage conditions, prolonged or continuous outdoor use, all temperatures, dirty environments	Before each use	Quarterly to semi-annually

5.3 Life Span: The functional life of the product is determined by work conditions and maintenance. As long as the product passes inspection criteria, it may remain in service.

5.4 Service Life: There is not an issued fixed service life. A product may be used indefinitely as long as it passes both the pre-inspection and the competent person inspection.

## 6 Installation **WARNING!**

Do not alter or intentionally misuse this equipment. Consult Madaco Safety Products when using this equipment in combination with components or subsystems other than those described in this manual. All components or subsystems used with the FBH discussed in this manual must be in compliance with ANSI Z359, CSA Z259, and/or OSHA.

Do not use rebar hooks, large carabiners, or large snap hooks to connect to the FBH dorsal D-rings or to any small diameter non-compatible anchor point as this may cause a roll-out condition and/or unintentional disengagement. Use caution. Take action to avoid sharp and/or abrasive surfaces and edges when possible.

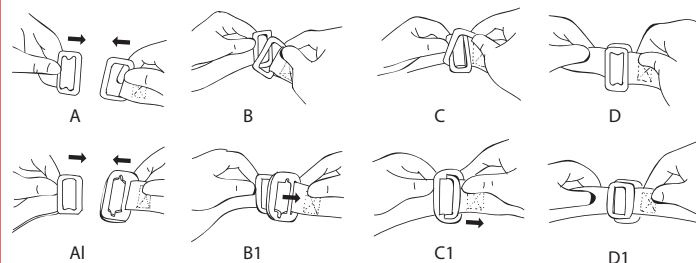
6.1 Planning: When planning your Fall Protection system, take into consideration the work area and take action to address hazards. Account for all factors that may affect your safety before, during and after a fall.

A. Anchorage B. Minimum Required Fall Clearance (MRFC) C. Swing Fall and Expanded Work Zone D. Overhead (above the FBH D-ring) Anchorage E. Non-Overhead (below the FBH D-ring) Anchorage F. Rescue Plan

6.2 Buckles: Madaco Safety Products uses different buckles for fastening different parts of the harness.

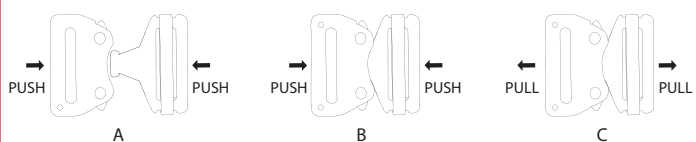
Label Figure 4. Tongue and Buckle Instructions	
A	Grasp each end of the fastener.
B	Pass the tongue end of the strap through the buckle and find the proper hole for the desired tightness.
C	Fasten together
D	To check proper fit, a flat hand may pass under the strap, but cannot form a fist.
E	Ensure all loose ends are properly tucked into webbing keepers so any loose webbing will not get tangled in equipment.

Label Figure 5. Pass Through and Slotted Pass Through Buckle Instructions



A & AI	Grasp each end of the fasteners
B & B1	Turn the pass-through end of keeper sideways so it will pass into the keeper's holder.
C & C1	Allow the pass-through end to turn back to its correct angle so it will not dislodge from the keeper
D & D1	To check proper fit, a flat hand may pass under the strap, but cannot form a fist.
Ensure all loose ends are properly tucked into webbing keepers so any loose webbing will not get tangled in equipment	

Label Figure 6. Quick Connect Buckle Instructions

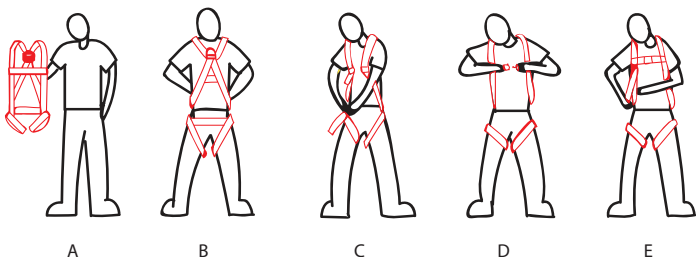


A	Grasp the male end of the keeper and the receiver.
B	Insert the male end into the receiver and push to ensure closure
C	Check the verification indicators to ensure the male end is properly seated.

Ensure all loose ends are properly tucked into webbing keepers so any loose webbing will not get tangled in equipment.

6.3 Donning and Fitting the Full Body Harness: When wearing a FBH, all adjusters should be made to fit snugly. The user should be able to move around freely without the harness causing restriction in movement. Failure to properly don, wear, and adjust the FBH can result in severe injury or death in the event of a fall.

Label Figure 7. Donning Instructions



A	After inspecting the harness, grab the dorsal (back) D-ring and shake the harness to ensure all straps are untangle free.
B	Unfasten all buckles. Place one arm through the harness. Ensure the dorsal D-ring is on the back. Place the other arm through the other side of the harness and position all the straps.
C	Reach between the legs and pull one leg strap forward. Pass the end of the leg strap through the buckle. Repeat for the other leg strap. The leg straps are attached to the harness at the sub-pelvic strap. This strap is one of the main load bearing strap in the harness. Ensure the sub-pelvic strap fits snug under the buttocks.
D	Connect chest strap by attaching the mating buckle. Adjust torso straps, and readjust the leg straps and the chest strap if necessary. Ideal position for the chest strap is about six inches below the shoulders. Adjust waist belt to a snug fit, if applicable.
E	To check proper fit, a flat hand may pass under the strap, but cannot form a fist.

Reach between the legs and pull one leg strap forward. Pass the end of the leg strap through the buckle. Repeat for the other leg strap. The leg straps are attached to the harness at the sub-pelvic strap. This strap is one of the main load bearing strap in the harness. Ensure the sub-pelvic strap fits snug under the buttocks.

To check proper fit, a flat hand may pass under the strap, but cannot form a fist.

- Chest strap to be six inches below the throat
- Torso length adjustment does not apply unnecessary pressure on the shoulder or allows leg straps to sag
- Dorsal D-ring is in between the shoulder blades
- Leg straps tightened to allow no more than a flat hand to pass through

## 7 Maintenance, Service and Storage

7.1 Cleaning: Clean full body harness with a mild bleach-free detergent and then rinse. Allow for harness to air dry. Do not allow excessive build-up of dirt, paint, or other agents that may cause damage or hardening of the webbing fibers.

8.2 Storage: Hang to store, do not allow in direct sunlight. Avoid exposure to chemical agents and vapors, airborne debris, and water ingress. Store in a cool, dry and clean environment away from sunlight.

Stored units tagged as "UNUSABLE" in a clearly marked area to prevent inadvertent use.

8.3 Service: Upon permanent removal from service, cut the harness straps or otherwise render the harness unusable before disposing of it or return to Madaco Safety Products.

## 8 Labels

Labels must be present and legible      ANSI Z359.11 Annex A

Note: This information from the Z359.11 standard is required to be included in the instruction manual for the end user: ANSI/ASSP 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 (8kN) 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 (8kN). 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 Fully 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. Snap hooks should not be used unless approved for the application by the manufacturer.

Sections 11-17 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 adjustment 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.

## 9 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 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 designee, 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.

Madaco warrants to the buyer that all products are free from defect in material and workmanship at the time of shipment. Obligation under this warranty is limited to product replacement for the period of two (2) years from the date of installation or use by the owner, provided that this period shall not exceed two (2) years from the date of shipment. This warranty is not transferable. No other person or firm is authorized to assume or assign for Madaco any other warranty in connection with the sale or use of this product.

Furthermore, this warranty is void if any product is changed or altered in any way, or if the product is used in a manner other than for which it is intended. This warranty only covers defects in material and workmanship; it does not cover conditions resulting from normal wear and tear, neglect abuse or accident.

## 10 Mandatory Disclosures

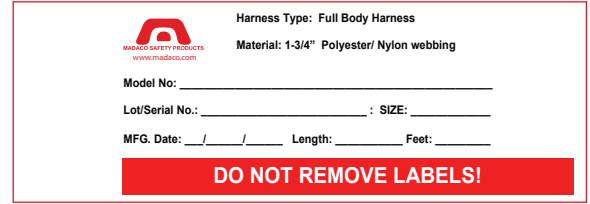
This instruction manual addresses foreseeable hazards, uses and applications. If you have questions about your application that are not addressed in this document, contact Madaco for additional guidance.

It is the responsibility of the employer/issuer of this equipment to ensure that it is used in a manner consistent with these instructions. Failure to do so could result in series injury or death.

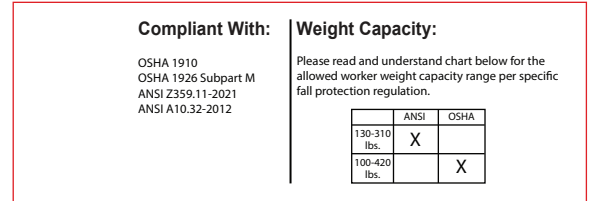
# Warning Label



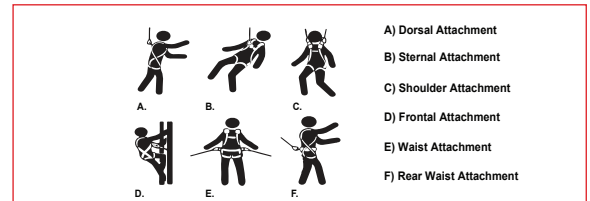
P1



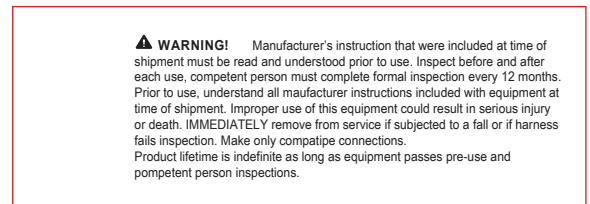
P2



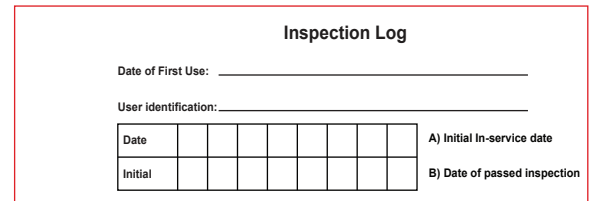
P3



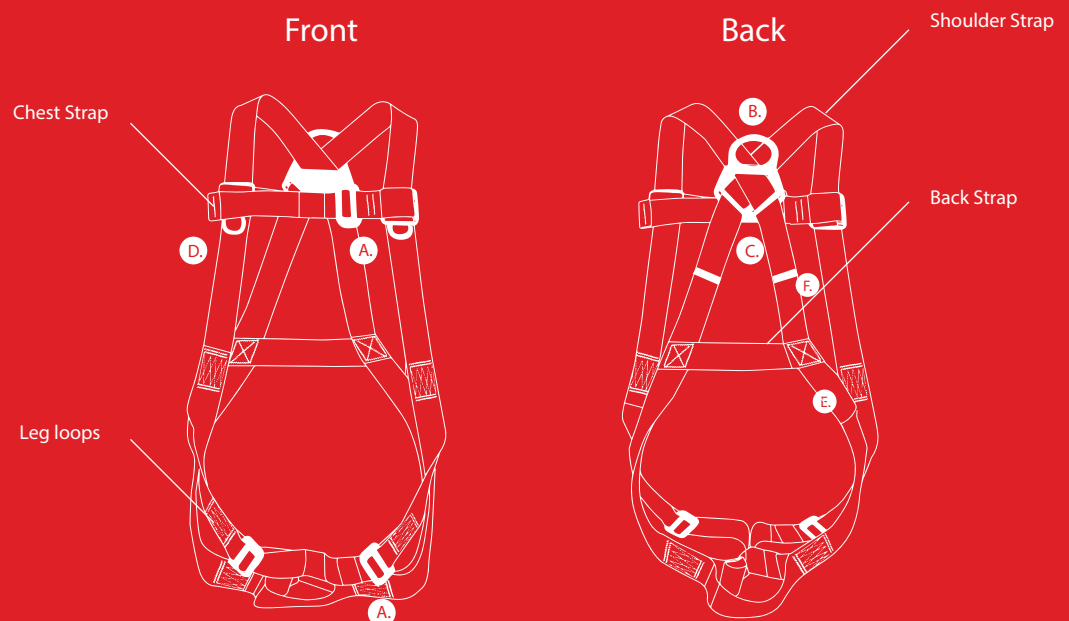
P4



P5



P6



# INSPECTION AND MAINTENANCE LOG

SERIAL NUMBER:			
MODEL NUMBER:			
DATE PURCHASED:	MFG. DATE:	DATE OF FIRST USE:	

INSPECTION DATE	INSPECTION ITEMS NOTED	CORRECTIVE ACTION	MAINTENANCE PERFORMED
Approved By:			
Approved By:			
Approved By:			
Approved By:			
Approved By:			
Approved By:			
Approved By:			
Approved By:			



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