The comments should be included in the check card of the equipment.
After the periodic examination, the next due date for periodic examination will be determined. During periodic inspection it is necessary to check the legibility of the equipment marking.

The check card should be filled in before the first use. All information about the personal protective equipment (name, serial number, date of purchase and date of putting into operation, user name, periodic examination and repair history, and next periodic examination date) shall be noted into de check-card. All records in the check card can only be filled in by a competent person. Do not use the personal protective equipment without a duly filled check card.

PERIODIC INSPECTIONS AND REPAIR

EQUIPMENT RECORD				
Product:				
Model & Type Identification	Trade name		Manufacturer Number	
Manufacturer	Address		Telephone / Fax / Email / website	
Year of Manufacture/Life Expiry date	Purchase date		Date first put into use	
Other relevant information (e.g. document number)				
PERIODIC EXAMINATION AND REPAIR HISTORY				
Date	Reason for entry (periodic examination or repair)	Defects noted, repairs carried out and other relevant information	Name and signature of competent person	Periodic examination next due date

maxisafe® height safety gear

Techware Pty Ltd
03 9369 7000
www.maxisafe.com.au

maxisafe® height safety gear

USER INSTRUCTION MANUAL

ZBH FULL BODY HARNESS SERIES

CERTIFIED PRODUCT

AUSTRALIA & NZ STANDARDS

Certified to AS/NZS 1891.1:2020
Issued by BSI
Lic. No.: BMP 692698

BKLMAX 06

Do not skip this instruction manual. Read Instruction manual carefully before using equipment. Failure to do so may cause injury or death.

This manual applies to – ZBH – H Full Body Harnesses

Manufacturer	:	**Techware Pty Ltd, 03 9369 7000, www.maxisafe.com.au**
Certification & Ongoing Assessment Body	:	**BSI Group ANZ Pty Limited, A.B.N. 72 078 659 211, Suite 2, Level 7, 15 Talavera Road, Macquarie Park NSW 2113 Australia**

1. This manual must be read and understood in its entirety and used as part of fall protection training program as required by safety policy or any state regulatory. These instructions are intended to meet the manufacturer instructions as required by AS/NZS1891.1:2020. The user must fully understand the proper equipment use and limitation.

Description:

Full Body Harnesses are Personal Protective Equipment (PPE) used against falls from a height according to AS/NZS1891.4. The Full Body Harness a basic component of the fall arrest system which connects with a shock absorbing lanyard and anchor in an appropriate manner arresting the fall and maintaining the forces within bearable limits.

2. **GENERAL USE INFORMATION:** Fall Protection Equipment is essential for your safety so we recommend that prior to use you inspect your equipment for any of the following evidence:

- Involved in a fall
- Labels removed, missing or illegible
- Exposed to high heat (Kilns, forge works and on the back seat of your car)
- Exposed to extreme cold (freezer rooms)
- Acid, caustic or organic solvent burns
- Excessive abrasive wear
- General corrosion, pitting, cracks, distortion, burrs, worn or broken hardware
- Old, hardened knots in any part
- Broken fibres, tears, cuts, snags, splinters, slivers, stitching unravelling
- Deterioration or stretching of any kind
- Weld burns
- Loss of resilience
- Discolouration that causes doubt
- Mechanisms not moving freely
- Reduction in cross-sectional area of rope or webbing
- Excessive contamination
- If the shock absorber looks like it has been used excessively or is beginning to unravel
- It is not more than 10 years old

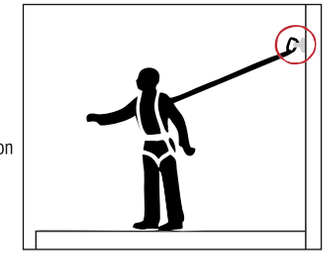
If you are in any doubt whatsoever about the safe condition of this product or if the product has been used to arrest a fall, it is essential for safety that it is withdrawn from use and returned to the manufacturer or discarded and destroyed immediately.

Ensure that the instructions for other components used in conjunction with these products are complied with as stated.

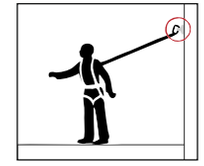
3. **APPLICATION:** The use of full body harness within a fall arrest system must be compatible with the operating instructions for each component of the system and Industry Standards – AS/NZS1891.1-5.

4. **PRODUCT SELECTION:**

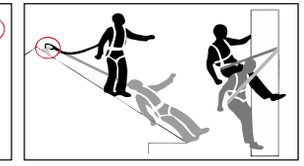
- **Work Restraint:**
  Working in restraint would be the preferred option when working at height. The purpose of working in restraint is to use PPE that will prevent or restrain a person from entering an area where a risk of falling from height exists.



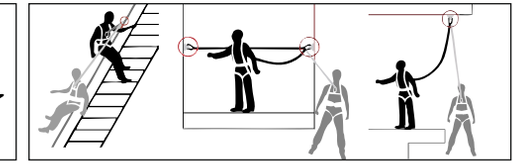
Total Restraint



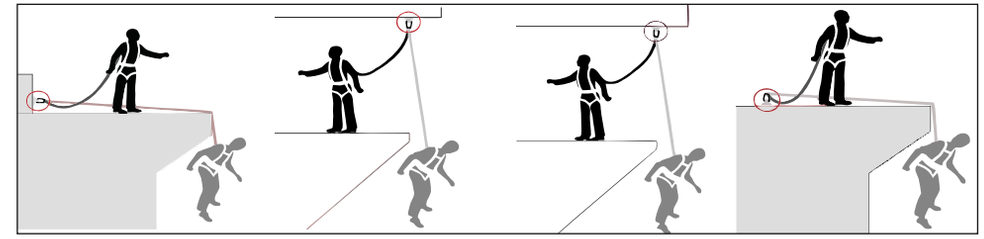
Restrainted fall



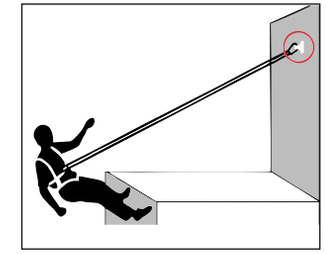
Limited Free Fall <600mm



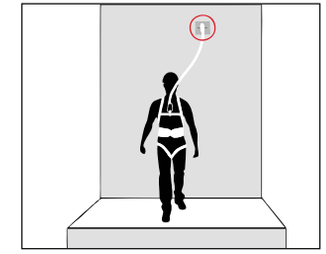
Free Fall Arrest 600mm<Fall<2000mm



- **Work Positioning:**
  Work Positioning is a technique using PPE to support the worker by means of tension. An example of Work Positioning is using a Pole when using Pole Straps. This technique must be used in conjunction with a fall arrest system.



- **Fall Arrest**:
  Fall Arrest is the form of fall protection which involves using PPE resulting in the safe stopping of a person already falling.



MAXISAFE FULL BODY HARNESSES

Full Body Harnesses are an assembly of interconnected shoulder and leg straps designed for the attachment of a shock absorbing lanyard or fall arrest device (to front and rear - dorsal). In its basic form it is –

- Basic Fall Arrest Harness
- Basic Fall Arrest Harness with Integral Web Shock Absorbing Lanyard
  In addition to the above it may be provided with loops or D-Rings shoulder points which can be used for attachment of Confined Space Spreader Bar enabling the raising/lowering of users. In this form it is –
- Confined Space Harness
  Additionally it may be provided with side D-Rings for pole strap attachment allowing user to work position. This is -
- Utilities Harness or Pole Workers Harness
  NOTE: This equipment is referred to in AS/NZS 1891.4 and AS/NZS 4488.1 as a fall-arrest harness

DONING THE FULL BODY HARNESS

Step 1: Hold the harness by the dorsal D ring as shown in **Fig. 1.**

Step 2: Insert your arms into the shoulder straps and close. The buckle on the chest strap as shown in **Fig.2.**

Step 3: Pull the leg straps one by one around your thighs. Outwards to your front as shown in **Fig. 3.**

Step 4: Close the buckles of the leg straps one by one as. Shown in **Fig. 4-5.**

Step 5: Tighten the leg straps by pulling the free ends of the straps until the harness fits perfectly to the body and adjust leg straps so that flat hands may fit through between webbing and leg but not fist as shown in **Fig. 5.**

Step 6: Use the back D-ring or the front as anchor point for fall arrest systems. To locate the anchor points on the harness, check for the "A" marking near them.

Fig. 1

Fig. 2

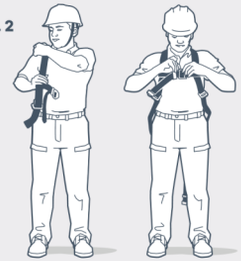


Fig. 3

Fig. 4

Fig. 5

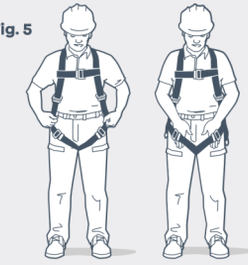


Fig. 6

FALL ARREST SYSTEM ELEMENTS

A.Harnesses:

Full Body Harnesses are designed to hold you in upright position if you're involved in a fall. If there is a risk of fall using this group of products you must use either an item from category c) or an inertia reel block or a system that will absorb most of the forces that could be generated during a fall. When using this the maximum force permitted to be transferred to a person during a fall is 6kN.

Snap hooks and Karabiners	Distortion of Hook or Latch Cracks or forging folds Wear st swivels and latch pivot pins Open Rollers Free movement of the latch over its full travel Broken, weak or displaced latch springs (compare where possible with new snap hook/karabiner) Free from dirt or other obstructions – eg Rust
D-Rings	Excessive 'vertical' movement of the straight portion of the D-Ring where it is retained by the webbing, so that the corners between the straight and curved sections of the D become completely exposed. NOTE: Excessive vertical movement of the ring in its mounting can allow the nose of larger snap hooks to become lodged behind the straight portion of the D, in which position the snap hook can often accidentally 'roll out' of the D under load. Cracks, especially at the intersection of the straight and curved portions
	Distortion or other physical damage of the D-Ring Excessive loss of cross section due to wear
Buckles and Adjusters	Distortion or other physical damage Cracks and forging laps where applicable Bent Tongues Open Rollers
Sewing	Broken, cut ore worn stitches Damage or weakening of threads due to contact with heat, corrosives, solvents or mildew
Ropes	Cuts Abrasion or Fraying Stretching Damage due to contact with heat, corrosives, solvents etc Deterioration due to ultraviolet light or mildew
Chains	Physical damage Security of attachments to snap hooks, rings or similar components

Attachment points -			
- for free-fall arrest (centre-line front or dorsal)- FALL ARREST	Harnesses	AS/NZS1891.1:2007	AS/NZS1891.1:2020
- centre-line rear waist - RESTRAINT	Harnesses		AS/NZS1891.1:2020
- centre-line front - lower body harness - LIMITED FALL ARREST	Harnesses		AS/NZS1891.1:2020
- for limited free-fall arrest - LIMITED FALL	Harnesses	AS/NZS1891.1:2007	
- for restrained fall arrest for pole straps (side-waist) - POLE STRAP	Harnesses	AS/NZS1891.1:2007	AS/NZS1891.1:2020
- for retrieval purposes (shoulder) - RETRIEVAL	Harnesses	AS/NZS1891.1:2007	AS/NZS1891.1:2020
If an attachment point requires two attachment elements to be bought together, markings to indicate that they must be used together shall be shown near the attachment point	Harnesses	AS/NZS1891.1:2007	AS/NZS1891.1:2020
Maximum allowable free-fall 2m	Lanyards	AS/NZS1891.1:2007	AS 1891.5:2020
Pictogram to indicate the necessity for users to read the instructions before use.	Harnesses Lanyards Pole Straps		AS/NZS1891.1:2020 AS 1891.5:2020
Minimum and maximum user mass limits	Lanyards		AS 1891.5:2020
Lanyard Capacity Table - User Capacity / Minimum Fall Clearance	Lanyards		AS 1891.5:2020

1.Instructions For Periodic Examinations
It is necessary to carry out regular Periodic Inspections. The safety of the users depends upon the continued efficiency and durability of the equipment.
Harnesses, Lanyards and Pole Straps shall be subject to regular Periodic Inspection every 6 months. This regular Periodic Inspection can only be carried out by a recognized Height Safety Inspector and are to be documented.
In addition to checking Markings and their legibility equipment should be inspected for the following:

Component	Condition or fault to be checked
Webbing	Cuts or Tears Abrasion damage especially where there is contact with hardware Excessive Stretching Damage due to contact with heat, corrosives or solvents Deterioration due to rotting, mildew or ultra violet light exposure Fall Indicator activation (if fitted)

B.Pole Strap:
A Pole Strap is to be used in such a way that only a restrained fall could occur. Care should be taken at all times when using this product to ensure that no free fall is possible and that the connection is secure and visible to the user.

C.Shock Absorber
The Shock Absorber will tear apart when subjected to a fall keeping the force on the body to below 6kN at all times when the fall is less than 3.8m. When Shock Absorbing Lanyards are used with harnesses free falls must not permitted greater than 2m. Refer MAXISAFE AND FALL CLEARANCES for detailed information relating to fall clearances and rated loads.
Warning: If any additions or alterations are made to any part of any safety equipment, the effectiveness of these life saving devices may be compromised and such alterations and/or additions are not agreed to by the manufacturer.
Advice: Your Lanyard Assembly should be secured to an anchorage point which is at a level which will result in the minimum free fall and the least total fall distance consistent with the wearer's ability to carry out work tasks.

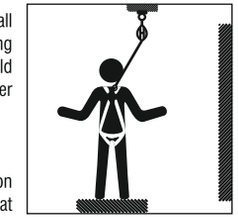
Warning: If any part of the assembly is to be exposed to chemicals, e.g. cleaning material or hazardous atmospheres, the user should consult the manufacturer to determine whether the equipment is suitable for the application proposed. Should the equipment be exposed to significant occasions of the above inspection by an accredited Height Safety Equipment Inspector should be obtained. Following inspection by the accredited Equipment Inspector which reveals excessive deterioration of harness and/or lanyard assembly the equipment should be removed from service and destroyed.

Advice: Connections between Harnesses and Lanyards unite the two pieces of equipment. To ensure connection between these, connection should be made under self approval before donning harness or under approval of second person once harness is donned.
The uniting of harness and lanyard exposes both to all environmental extremes. Inspections of both harnesses and lanyards will ensure continued functionality of both harness and Shock Absorbing Lanyard.

Warning: Be aware that shock absorbers that absorb energy by permanent deformation or destructive action should be discarded if that process has commenced. Every time you wear your Full Body Harness in conjunction with shock absorbing lanyard you must fill out the user inspection log supplied within this manual. If equipment shows evidence of damage the equipment (Full Body Harness or shock absorbing lanyard) should be formally inspected by an accredited Height Safety Equipment Inspector. Any corrective action should be approved and provided by the manufacturer.

Advice: Only corrective action recommended or authorised by the manufacturer can be construed as life saving action. Do consult AS 2626 or NZA 5811.2 for guidance on selection, use and maintenance matters.

Warning: For twin tail lanyards do not “back hook” the free tail to any point on yourself, your equipment or the lanyard.
Advice: When not in use the “free” tail should be connected to the lanyard keeper available on the harness.



Swing Falls: Swing falls occur when the anchorage point is not directly above the point where a fall occurs. The force of striking an object in a swing fall may cause serious injury or death. Minimize swing falls by working as close to the anchorage point as possible. Do not permit a swing fall if injury could occur. Swing falls will significantly increase the clearance required when a self retracting lifeline or other variable length connecting subsystem is used.

Extended Suspension: A fall arrest full body harness is not intended for use in extended suspension applications. If the user is going to be suspended for an extended length of time it is recommended that some form of seat/support be used. Maxisafe recommends a seat board, suspension work seat, seat sling, or a boatswain chair. Fall Arrest harnesses fitted with Side D-Rings capable of accepting connection to Pole Straps can provide prolonged work positioning when used as prescribed . Contact Maxisafe for more information on these items.

Environmental Hazards: Use of this equipment in areas with environmental hazards may require additional precautions to prevent injury to the user or damage to the equipment. Hazards may include, but are not limited to; heat, chemicals, corrosive environments, high voltage power lines, gases, moving machinery, and sharp edges.

Compatibility of Components: Unless otherwise noted, Maxisafe equipment is designed for use with Maxisafe approved components and subsystems only. Substitutions or replacements made with non-approved components or subsystems may jeopardize compatibility of equipment and may affect safety and reliability of the complete system.

Compatibility of Connectors: Connectors are considered to be compatible with connecting elements when they have been designed to work and are rested together in such a way that their sizes and shapes do not cause their gate mechanisms to inadvertently open regardless of how they become oriented. Connectors (hooks, carabiners, and D-rings) must be capable of supporting at least 23 kn spine strength and 6kN Gate Strength. Connectors must be compatible with the anchorage or other system components. Do not use equipment that is not compatible. Non compatible connectors may unintentionally disengage (see Figure 6). Connectors must be compatible in size, shape, and strength.

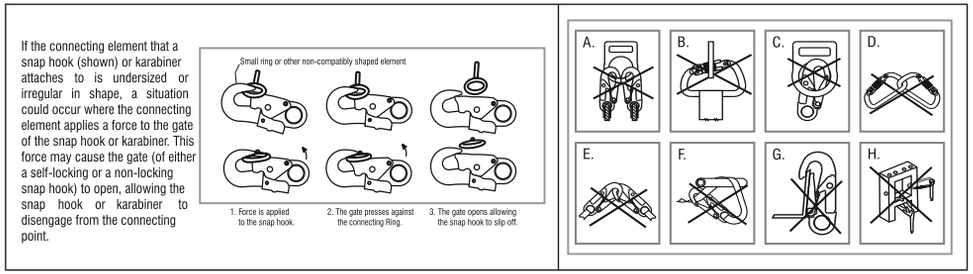
Making Connections: Use only self-locking snap hooks and carabiners with this equipment. Only use connectors that are suitable to each application. Ensure all connections are compatible in size, shape and strength. Do not use equipment that is not compatible. Ensure all connectors are fully closed and locked. Maxisafe connectors (snap hooks and carabiners) are designed to be used only as specified in each product's user's instructions. See Figure below for illustration of the inappropriate connections stated below. Maxisafe snap hooks and carabiners should not be connected:

- To a D-ring to which another connector is attached.
- In a manner that would result in a load on the gate.
- In a false engagement, where features that protrude from the snap hook or carabiner catch on the anchor and without visual confirmation seems to be fully engaged to the anchor point.
- To each other.
- Directly to webbing or rope lanyard or tie-back (unless the manufacturer's instructions for both the lanyard and connector specifically allow such a connection).
- To any object which is shaped or dimensioned such that the snap hook or carabiner will not close and lock, or that roll-out could occur.

NOTE: Large throat opening snap hooks with 16 kn (3600lbs) gate strength can be connected to D rings or similar objects which may result in load on gate when used. Large throat opening snap hooks should not be connected to standard size D-rings or similar objects which will result in a load on the gate if the hook or D-ring twists or rotates. Large throat snap hooks are designed for use on fixed structural elements such as rebar or cross members that are not shaped in a way that can capture.

Other Restrictions:

- Do not make connections where the hook locking mechanism can come into contact with a structural member or other equipment and potentially release the hook.
- Do not connect a snap hook into a loop or thimble of a wire rope or attach in any way to a slack wire rope.
- The snap hook must be free to align with the applied load as intended (regardless of the size or shape of the mating connector)
- A carabiner may be used to connect to a single or pair of soft loops on a body support such as a body belt or full body harness, provided the carabiner can fully close and lock. This type of connection is not allowed for snap hooks.
- A carabiner may be connected to a loop or ring connector that is already occupied by a choker style connector. This type of connection is not allowed for snap hooks.



Connecting Sub-systems:

Connecting subsystems (self-retracting lifeline, lanyard, rope grab and lifeline, cable sleeve) must be suitable for your application. See subsystem manufacturer's instructions for more information. Some harness models have textile loops connection points. Do not use snap hooks to connect to textile loops. Use a self-locking carabiner to connect to a textile loop. Ensure the carabiner has 6kN gate strength and cannot cross-gate load (load against the gate rather than along the backbone of the carabiner). Some lanyards are designed to choke onto a textile loop to provide a compatible connection. Lanyards may be sewn directly to the web loop forming a permanent connection. Do not make multiple connections onto one textile loop, unless choking two lanyards onto a properly sized web loop.

Marking:

Below find table outlining markings required by relevant standards –

Marking required for Harnesses, Lanyards and Pole Straps			
Required Marking	Item	Australian Standard	
Manufacturer's name, trade name or trademark	Harnesses Lanyards Pole Straps	AS/NZS1891.1:2007	AS/NZS1891.1:2020 AS 1891.5:2020
Serial Number	Harnesses Lanyards Pole Straps	AS/NZS1891.1:2007	AS/NZS1891.1:2020 AS 1891.5:2020
Model and type/identification	Harnesses Lanyards Pole Straps	AS/NZS1891.1:2020 AS/NZS1891.5:2020	AS/NZS1891.1:2020 AS 1891.5:2020
Standard Number and year to which it conforms	Harnesses Lanyards Pole Straps		AS/NZS1891.1:2020 AS 1891.5:2020
The words "Only competent users should use this equipment"	Harnesses Lanyards Pole Straps	AS/NZS1891.1:2007	AS/NZS1891.1:2020 AS 1891.5:2020
The words "Manufacturer's instructions must be followed"	Harnesses Lanyards Pole Straps	AS/NZS1891.1:2007	AS/NZS1891.1:2007
Marking required for Harnesses, Lanyards and Pole Straps			
Required Marking	Item	Australian Standard	
Where a device has a specific application, a statement of this.	Harnesses Lanyards Pole Straps	AS/NZS1891.1:2007	
Month and year of manufacture	Harnesses Lanyards Pole Straps	AS/NZS1891.1:2007	AS/NZS1891.1:2020 AS 1891.5:2020
Month and year by which the item must be removed from service, which shal be not more than 10 years from date of manufacture	Harnesses Lanyards Pole Straps	AS/NZS1891.1:2007	AS/NZS1891.1:2020 AS 1891.5:2020
Any necessary assembly, fitting and putting on instructions	Harnesses	AS/NZS1891.1:2007	
The Words "The maximum allowable freefall is 2m" (full body harnesses)	Harnesses	AS/NZS1891.1:2007	AS/NZS1891.1:2020
Maximum Freefall - 600mm for lower body harnesses	Harnesses	AS/NZS1891.1:2007	

- Abrasion - scuff marks on the webbing
- Cuts, nicks or score marks on the webbing,
- chemicals - grease, paint, acidic contact with the webbing,
- heat evidence on the webbing loops of the shock absorber and the webbing itself,
- burn marks or shiny patches.

Information & Advice

- A rescue plan shall be in place to deal with any emergencies that could arise during the work.
- It is forbidden to make any alterations or additions to the equipment without the manufacturer´s prior written consent.
- Personal protective equipment shall not be used outside its limitations, or for any purpose other than that for which it is intended.
- Before use ensure the compatibility of items of equipment when assembled into a system. Ensure that all items are compatible and appropriate for the proposed application. It is forbidden to use combinations of items of equipment in which the safe function of any one item is affected by or interferes with the safe function of another. Periodically check the connection and adjustment of the components to avoid accidental disconnection and loosening.
- Personal protective equipment must be withdrawn from use immediately when any doubt arises about its condition for safe use and not used again until confirmed in writing by a competent person that it is acceptable to do so.
- Personal protective equipment must be withdrawn from use immediately after it has been used to arrest a fall.
- It is essential to verify the clearance required below the user at each location when working at height to ensure that in the event of a fall there will be no collision with the ground or other obstacle in the fall path. The clearance required should be obtained from the instruction manual of the equipment used.
- There are many hazards that may affect the performance of the equipment and corresponding safety precautions that have to be bserved during equipment utilization, some of these are:
- Trailing or looping of lanyards or lifelines over sharp edges,
- Any defects like cutting, abrasion, corrosion
- Climatic exposure,
- Swing falls,
- Extreme temperatures
- Chemical reagents,
- Electrical conductivity
- It is essential for the safety of the user that if the product is re-sold outside the original country of destination the reseller shall provide instructions for use, for maintenance, for periodic examination and for repair in the language of the country in which the product is to be used.

Lifetime:

- The maximum product life for textile products (Harnesses, Lanyards and Ropes) is 10 years. The following factors can reduce the lifetime of the product : intense use, contact with chemical substances, specially aggressive environment, extreme temperature exposure, UV exposure, abrasion, cuts, violent impacts, bad use or maintenance.
- Bi-annual inspections are required by Australian Standards. These validate the correct functioning of the equipment. It is compulsory that the equipment is inspected by a competent person (the manufacturer or authorized representative) every 6 months.
- In case that it has been used to arrest a fall, the equipment must be withdrawn from use.

Transport:

- The Personal Protective Equipment must be transported in a package that protects it against moisture or mechanical, chemical and thermal attacks.

Instructions For Maintenance

1. Cleaning: The personal protective equipment must be cleaned without causing adverse effect on the materials used in the manufacture of the equipment. For textile (webbing and ropes) and plastic parts wipe with cotton cloth or a soft brush. Do not use any abrasive material. For intensive cleaning wash the harness at a temperature between 30ºc and 60ºc using a neutral detergent. Metallic parts incorporated in the harness should be wiped with a damp cloth. When the equipment becomes wet, either from being in use or when due to cleaning, it shall be allowed to dry naturally, and shall be kept away from direct heat.

2. Storage: Personal protective equipment should be stored loosely packed, in a dry and well- ventilated place, protected from direct light, UV degradation, dust, sharp edges, extreme temperature and aggressive substances.

3. Repair: Any repair shall only be carried out by equipment manufacturer or his authorized representative following manufacturer's procedures.

Rescue Plan:

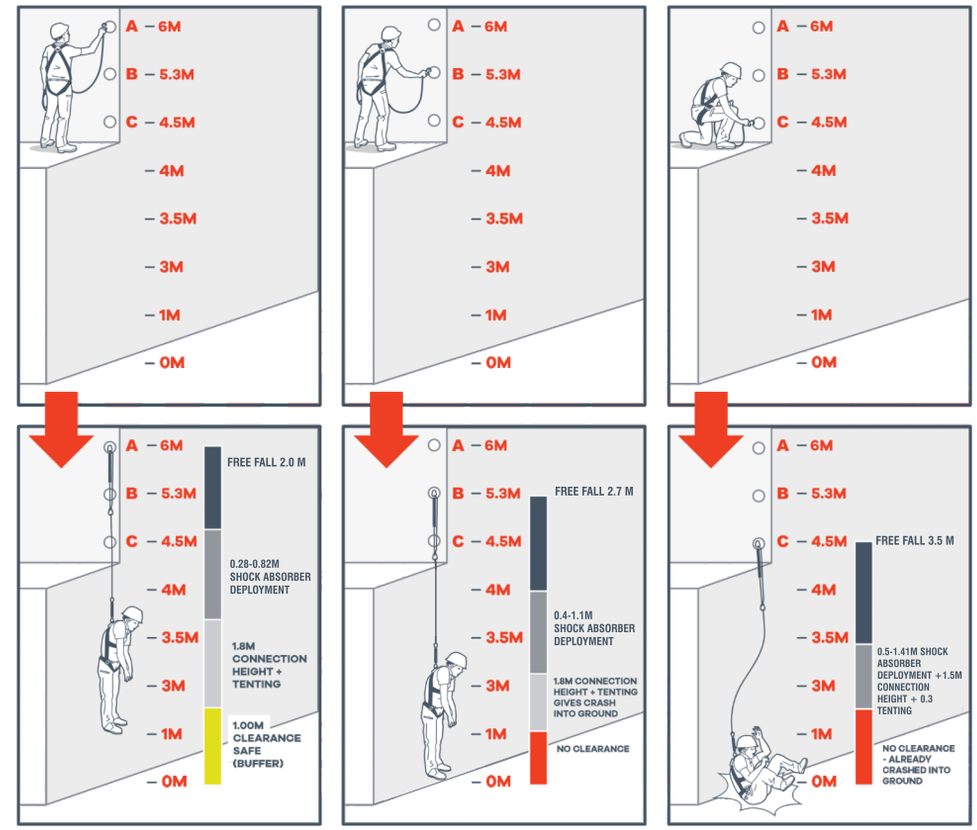
Rescue operation must be performed by the trained and competent personal. The rescue operation must be performed under the supervision of the rescue expert team or personal. It is advised that while working on site work in pairs. Before going to do the work the user must have the rescue plan according to the work.

If Equipment Is Subjected To A Fall: Remove the equipment from service immediately if it has been subjected to the forces of a fall arrest and remove from service then destroy. Contact your distributor or Maxisafe about policies regarding replacement of Maxisafe components involved in a fall.

Specific Instructions: Maxisafe harness is designed to arrest the victim of fall and hold the user till the rescue process has been performed, until then the harness needs to be attached to the anchorage through a proper attachment system. So it is important that the whole system must have the all the essential components before going for the use. The whole fall arrest system must be used by the trained/competent person. It is advisable to make a checklist of the essential components required to make up the fall arrest system and rescue plan before going for work.

Use of Fall Arrest System: The Shock Absorbing Lanyard of the fall arrest system MUST ONLY be connected to the back attaching element on the harness provided for the purpose (”D” ring or webbing attachment extension) OR to the chest anchorage points (webbing link or ”D” link). The chest anchorage points must be used together. The D-rings on the belt and the ventral anchorage point must only be used for the attachment of a work positioning or retaining system and never with a fall arrest system. During use, check regularly the adjustment and/or attachment ,

MAXISAFE AND FALL CLEARANCE – HEAVY DUTY SHOCK ABSORBING LANYARDS (AS/NZS1891.5:2020)



AS1891.5:2020 requires presentation of fall clearances required for minimum, optimum and maximum rated loads – below find Maxisafe fall clearance information:
In practice there are many possibilities when connecting a MAXISAFE 2m Heavy Duty Lanyard. HD Lanyards are rated for 60-140kG. Let's look at three examples of each of these which summarize these –
A.Connection to anchor at shoulder level
B.Connection to anchor at waist level
C.Connection to anchor at foot level

The results of the above graphics are explained below-
A.In the event of a fall when a MAXISAFE 2m Heavy Duty Shock Absorbing Lanyard is connected at shoulder level - say 1.5m above standing level while working at height (this is same height as connection to harness) –

RATED LOAD	**60kG**	**100kG**	**140kG**
Freefall	2000mm	2000mm	2000mm
Shock Absorber Deployment	280mm	530mm	820mm
Harness tenting	300mm	300mm	300mm
(tenting/stretch is where D Ring moves away from body while suspended)			
Safe Clearance	1000mm	1000mm	1000mm
Total	3580mm	3830mm	4120mm

To be safe when connecting a MAXISAFE 2m Heavy Duty Shock Absorbing Lanyard at Shoulder Level the user's feet can vary subject to weight of user – the table below summarises –

Weight of User (kG)	Freefall F (mm)	Shock Absorber Deployment E (mm)	Harness tenting (mm)	Safe Clearance (mm)	TOTAL Feet Height above nearest obstruction (mm)	Minimum Anchor Height (F+E+2800mm)
60	2000	280	300	1000	**3580**	5080
100	2000	530	300	1000	**3830**	5330
140	2000	820	300	1000	**4120**	5620

(Shock Absorber Deployment data from manufacturer's testing)

B. In the event of a fall when a MAXISAFE 2m Heavy Duty Shock Absorbing Lanyard is connected at waist level - say 0.8m above standing level while working at height (this is 0.7m below connection point on harness) –

RATED LOAD	**60kG**	**100kG**	**140kG**
Freefall	2700mm	2700mm	2700mm
Shock Absorber Deployment	400mm	700mm	1100mm
Harness tenting	300mm	300mm	300mm
(tenting/stretch is where D Ring moves away from body while suspended)			
Safe Clearance	1000mm	1000mm	1000mm
Total	4400mm	4700mm	5100mm

To be safe when connecting a MAXISAFE 2m Heavy Duty Shock Absorbing Lanyard at waist level the user's feet can vary subject to the weight of the user – the table below summarises –

Weight of User (kG)	Freefall F (mm)	Shock Absorber Deployment E (mm)	Harness tenting (mm)	Safe Clearance (mm)	TOTAL Feet Height above nearest obstruction (mm)	Minimum Anchor Height (F+E+2800mm)
60	2700	400	300	1000	**4400**	5900
100	2700	700	300	1000	**4700**	6200
140	2700	1100	300	1000	**5100**	6600

(Shock Absorber Deployment data from manufacturer's testing)

C. In the event of a fall when a MAXISAFE 2m Heavy Duty Shock Absorbing Lanyard is connected at foot level - say 0m above standing level while working at height (this is 1.5m below connection point on harness) –

RATED LOAD	**60kG**	**100kG**	**140kG**
Freefall	3500mm	3500mm	3500mm
Shock Absorber Deployment	500mm	900mm	1410mm
Harness tenting	300mm	300mm	300mm
(tenting/stretch is where D Ring moves away from body while suspended)			
Safe Clearance	1000mm	1000mm	1000mm
Total	5300mm	5700mm	6200mm

To be safe when connecting a MAXISAFE 2mHeavy Duty Shock Absorbing Lanyard at foot level the user's feet can vary subject to the weight of the user – the table below summarises -

Weight of User (kG)	Freefall F (mm)	Shock Absorber Deployment E (mm)	Harness tenting (mm)	Safe Clearance (mm)	TOTAL Feet Height above nearest obstruction (mm)	Minimum Anchor Height (F+E+2800mm)
60	3500	500	300	1000	**5300**	6800
100	3500	900	300	1000	**5700**	7200
140	3500	1410	300	1000	**6200**	7700

(Shock Absorber Deployment data from manufacturer's testing)

A quick review of the above reveals that irrespective of weight of user the smaller the freefall the smaller the distance from foot level to nearest obstacle can be (closer to ground). Smaller freefalls can also be achieved by –
- Raising the anchor point to reduce the freefall distance or
- Shorten the lanyard to reduce the freefall distance or
- Shorten Freefall distance

IMPORTANT NOTE:- When tested to AS/NZS1891.5:2020 Shock absorbing lanyards are tested by dropping mass through 3800mm (freefall) without failure so whilst fall arrest systems should be set up so that there is no more than 2000mm freefall in the instances where it freefall is greater the shock absorbing lanyard will not fail up to freefall of 3800mm.

Limitations For Use:
- Personal protective equipment should be a personal issue item
- The anchor point where the fall arrest system is going to be fixed should always be placed above the position of the user and should have a minimum static strength of 15kn
- Personal protective equipment must not be used by a person with medical condition that could affect the safety of the equipment user in normal and emergency use.
- Personal protective equipment shall only be used by a person trained and competent in its safe use.

Attention
- A full body harness is the only acceptable body holding device that can be used in a fall arrest system.
- The fall protection system must on be connected the appropriate harness attachment points. Fall Arrest points are identified with a capital letter or the term “Fall Arrest”.
- For harnesses equipped with work positioning belt, the pole strap must only be connected to the side D rings on the belt. These points can be identified by the term “POLE STRAP”. Points which can be used for retrieval/rescue purposes are marked “RETRIEVAL”.
- The maximum allowable free fall for shock absorbing lanyard is 2 m.
- Connection to the anchor point and other equipment must be done through compatible connectors.
- Before each use of personal protective equipment it is obligatory to carry out a pre-use check of the equipment, to ensure that it is in a serviceable condition and operates correctly before it is used.
- During pre-use check it is necessary to inspect all elements of the equipment in respect of any damages, excessive wear, corrosion, abrasion, and degradation due to UV, cuts or misuse, especially take into account webbings, seams, anchor D rings, buckles and adjusting elements.
- Shock Absorbing Lanyards should be inspected at least once every 6 months but should be checked before each use for Date of manufacture and pre-use acceptability; the shock absorbing lanyard cannot be older than 10 years from date of manufacture. Checks for –