

MAXSAFE®

USER INSTRUCTION MANUAL

LANYARDS

THESE INSTRUCTIONS APPLY TO THE FOLLOWING MODELS:

MLWPD-KR-RA-2m, MLEEA-W-1LR-1.8m, MLEEA-W-2LR-1.8m,
MLEA-KR-2LR-1.8m, MLWPD-W-RH, MLWPD-KR-GA-2m, MLWPD-W-ADJ,
MLE-W-450mm, MLR-W-1.8m, MLR-KR-1.8m, MLEA-W-1L -1.8m,
MLEA-W-2LR-1.8m, MLEA-W-1LR -1.8m, MLEA-KR-1L -1.8m,
MLEA-WR-1L -1.8m, MLEA-WR-2LR-1.8m, MLT1, MLT2

USER MUST READ AND UNDERSTAND INSTRUCTIONS PRIOR TO USE



This product is marked with BSI's Benchmark Product Certification Mark. This indicates that the conformity of our product is based upon technical documentation and an annual review of our manufacturing and quality control process to monitor our ability to consistently produce products in compliance with AS/NZS **1891.1 2007**. Client BMP No **672688**.

This Product Certification Mark is accredited by the Joint Accreditation System of Australia and New Zealand (JAS-ANZ) see: www.jas-anz.com.au

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INTRODUCTION

MAXSAFE® are the producers and suppliers of Products, Training and Services for the height safety industry and working at heights. This instruction manual has been designed to assist all users in the prevention of accidents and to make good, informed choices.

The registered offices of Maximum Safety NZ Ltd are located at: 46 Vickerman Street, Port Nelson, Nelson 7010, New Zealand. PO Box 697, Nelson 7040, New Zealand. Telephone: 0800 262 972. Email: sales@maxsafe.co.nz

WARNING

DO NOT SKIP THIS INSTRUCTION MANUAL. READ THE INSTRUCTION MANUAL CAREFULLY BEFORE USING THE EQUIPMENT. FAILURE TO DO SO MAY CAUSE SERIOUS INJURY OR DEATH.

This manual must be read and understood in its entirety and used as part of the users fall protection training program as required by AS/NZS. These instructions are intended to meet the manufacturer's instructions as required by AS/NZS 1891. The user must fully understand the proper equipment use and limitations.

This product is part of a Personal Fall Arrest System, work positioning, suspension, or rescue system. The user must read and follow the manufacturer's instructions for each component or part of a complete system. These instructions must be provided to the user of this equipment. The user must read and understand these instructions or have them explained to them before using this equipment. Manufacturer's instructions must be followed for proper use and maintenance of this product. Alterations or misuse of this product or failure to follow instructions may result in serious injury or death.

1. GENERAL REQUIREMENTS, WARNINGS AND LIMITATIONS:

- This equipment is designed for use as a part of a personal fall protection system. Components must not be used for any other operation other than that for which it has been designed and approved. Fall Arrest Systems are designed to comply with AS/NZS standards. Fall Restraint Systems must be designed by a Qualified Competent Person, and must be installed and used under the supervision of a Competent Person.
- All authorized persons/users must refer to the regulations governing occupational safety, as well as applicable AS/NZS standards. Please refer to product labeling for information on specific regulations, and AS/NZS standards met by the product.
- Proper precautions should always be taken to remove any obstructions, debris, material, or other recognized hazards from the work area that could cause injuries or interfere with the operation of the system. All equipment must be inspected before each use according to the manufacturer's instructions. All equipment should be inspected by a Qualified Competent Person on a regular basis as required by legislative controls.
- To minimize the potential for accidental disengagement, a competent person must ensure system compatibility.
- Equipment must not be altered in any way. Repairs must be performed only by the Manufacturer, or persons or entities authorized in writing by the Manufacturer.
- Any product exhibiting deformities, unusual wear, or deterioration must be immediately discarded. Any equipment subject to a fall must be removed from service.
- The authorized person/user shall have a rescue plan and the means at hand to implement it when using this equipment.
- Never use fall protection equipment for purposes other than those for which it was designed. Fall protection equipment should never be used for towing or hoisting.
- All synthetic material must be protected from slag, hot sparks, open flames, or other heat sources. The use of heat resistant materials is recommended in these applications.
- Never use natural materials (manila, cotton, etc.) as part of a fall protection system.
- Do not expose this equipment to chemicals which may have a harmful effect on the materials used to construct it. Be especially aware of caustic environments, or those that contain high levels of organic acids or bases. If you are uncertain about the safe operation of this equipment in any environment, contact MAXSAFE® for further instructions.
- Do not use this equipment near sharp edges and abrasive surfaces.
- Do not use this equipment around moving machinery or electrical hazards.

MAXSAFE® LANYARDS should be used only with the combinations of components, sub-systems or both which will not affect or interfere with the safe function of one another. Be certain that connecting devices and other elements of the PFAS are safe to use and compatible before use. Contact MAXSAFE® for further instructions.

LANYARD RANGE

MAXSAFE CODE	DESCRIPTION
MLWPD-KR-RA-2m	LANYARD WORK POSITIONING DEVICE WITH RING ADJUSTER (KERNMANTLE ROPE)
MLEEA-W-1LR-1.8m	LANYARD 1.8 SINGLE LEG EXPANDABLE
MLEEA-W-2LR-1.8m	LANYARD 1.8 DOUBLE LEG EXPANDABLE ENERGY ABSORBING ANSI STEEL SNAP HOOK AND 2 REBAR HOOKS
MLEA-KR-2LR-1.8m	LANYARD 1.8 DOUBLE LEG 11mm KERNMANTLE ROPE - ENERGY ABSORBING ANSI STEEL SNAP HOOK & 2 REBAR HOOKS
MLWPD-W-RH	LANYARD WORK POSITIONING DEVICE WITH ANSI REBAR HOOK (WEBBING)
MLWPD-KR-GA-2m	LANYARD WORK POSITIONING DEVICE WITH GRIP ADJUSTER (KERNMANTLE ROPE)
MLWPD-W-ADJ	LANYARD RING ADJUSTER WEBBING WITH ANSI SNAP HOOKS 1.2 - 2m (ADJUSTABLE)
MLE-W-450mm	EXTENSION LANYARD 450mm WITH ANSI SNAP HOOK PN 146 AND DR 016
MLR-W-1.8m	RESTRAINT WEBBING LANYARD WITH ANSI SNAPHOOK AT EACH END. 1.8 MTR
MLR-KR-1.8m	RESTRAINT KERNMANTLE ROPE LANYARD BOTH SIDE LOOP 1.8 MTR
MLEA-W-1L -1.8m	LANYARD 1.8 SINGLE LEG - ENERGY ABSORBING ANSI STEEL SNAP HOOK
MLEA-W-2LR -1.8m	LANYARD 1.8 DOUBLE LEG - ENERGY ABSORBING ANSI STEEL SNAP & 2 X REBAR HOOKS
MLEA-W-1LR -1.8m	LANYARD 1.8 SINGLE LEG - ENERGY ABSORBING ANSI STEEL SNAP & REBAR HOOK
MLEA-KR-1L -1.8m	LANYARD 1.8 SINGLE LEG 1mm KERNMANTLE ROPE - ENERGY ABSORBING LANYARD ANSI SNAP HOOKS
MLEA-WR-1L -1.8m	LANYARD 1.8 SINGLE LEG WIRE ROPE - ENERGY ABSORBING LANYARD ANSI SNAP HOOKS
MLEA-WR-2LR-1.8m	LANYARD 1.8 DOUBLE LEG WIRE ROPE - ENERGY ABSORBING ANSI STEEL SNAP HOOK & 2 X REBAR HOOKS
MLT1	TOOL LANYARD SINGLE
MLT2	TOOL LANYARD DOUBLE

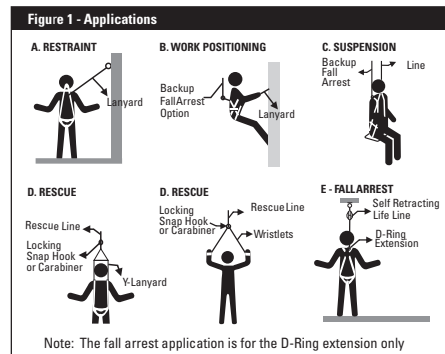
1.0 SPECIFIC INSTRUCTIONS:

1.1 Purpose: MAXSAFE® Lanyards are used as part of a Personal Fall Arrest System, work positioning, suspension, or rescue system. The D-ring extension assembly may also be used as part of a Personal Fall Arrest System (PFAS) only if it is attached to a self-retracting lifeline or an energy absorbing lanyard. Applications include: inspection work, construction, demolition, maintenance, oil production, and confined space rescue.

2.0 MATERIAL:

All MAXSAFE® Lanyards have been manufactured by using polyester yarn.

- A. Restraint:** The lanyard is used to prevent the user from reaching a hazard, such as leading edge work. No vertical free fall possible (see Figure 1 - Applications).
- B. Work Positioning:** The lanyard is used to position or support (with a harness or body belt) the user at the work position, such as window washing or steel workers. 600mm maximum free fall.
- C. Suspension:** The lanyard (generally a Y-type) is used with a chair or other support system to suspend or transport the user vertically, such as in an Easy Seat. No vertical free fall possible.
- D. Rescue:** The lanyard (generally a type) is used to retrieve a victim in a rescue, such as confined space rescue and retrieval. No vertical free fall possible.
- E. Fall Arrest:** The D-ring extension is used in-line with a personal fall arrest system to assist in attachment to the system.



2.1 Limitations: The following application limitations must be recognized and considered before using this product:

- A. Free Fall:** Lanyards used for work positioning applications must be rigged to minimize any potential vertical free fall. In no case should the potential free fall be greater than 600mm. For situations where the free fall may exceed 600mm, a backup fall arrest system should be used. If the D-ring extension assemblies are used in conjunction with a self-retracting lifeline or an energy absorbing lanyard in a fall arrest application, the length of the D-ring extension assembly must be taken into account when calculating the free fall distance and the fall clearance requirements.
- B. Fall Clearance:** Always ensure fall clearance distance before using lanyards equipped with the MAXSAFE® Shock Pack. If there is a risk of fall or if the only anchorage is below the attachment points on the harness, it is essential to use a lanyard provided with an energy absorber. Before using a shock-absorbing lanyard, check that there is sufficient fall clearance below the user to prevent any collision with the structure or the ground (See Figure 2).
- C. Backup Fall Arrest System:** Some applications of this equipment may require the use of a backup fall arrest system; such as when using a Y-Lanyard to suspend a person in an Easy Seat.
- D. Physical and Environmental Hazards:** Use of this equipment in areas with physical or environmental hazards may require additional precautions to reduce the possibility of 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. Contact MAXSAFE® if you have any questions about using this equipment where any physical or environmental hazards exist.
- E. Training:** This equipment must be used by persons who have been properly trained in its correct application and use.

2.2 Refer to legislation requirements governing this equipment for more information on lanyards and associated system components.

3.0 SYSTEM REQUIREMENTS:

3.1 Compatibility of Components: MAXSAFE® equipment is designed for use with approved components and sub-systems only. Substitutions or replacements made with non-approved components or sub-systems may jeopardize compatibility of equipment and may affect the safety and reliability of the complete system.

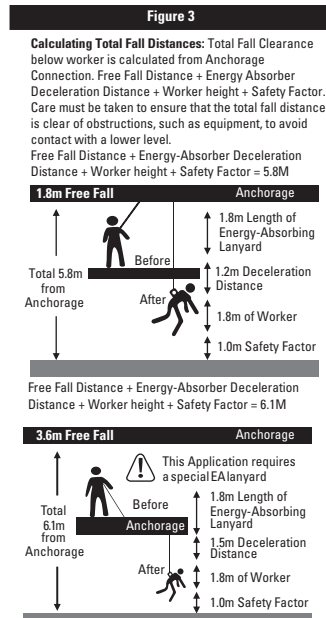
3.2 Compatibility of Connectors: Connectors are considered to be compatible with connecting elements when they have been designed to work together in such a way that their sizes and shapes do not cause their gate mechanisms to inadvertently open regardless of how they become oriented. Contact MAXSAFE® if you have any questions about compatibility. Connectors (hooks, karabiners, and D-rings) must be capable of supporting at least 15kN. 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 4). Connectors must be compatible in size, shape, and strength. Self-locking snap hooks and karabiners are required by AS/NZS 1891.

3.3 Making Connections: Only use self-locking snap hooks and karabiners 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.

MAXSAFE® Connectors (snap hooks and karabiners) are designed to be used only as specified in each product's user's instructions. See Figure 4 for inappropriate connections. MAXSAFE® snap hooks and karabiners should not be connected:

- A. To a D-ring to which another connector is attached.
- B. In a manner that would result in a load on the gate.
- C. In a false engagement, where features that protrude from the snap hook or karabiner catch on the anchor and, without visual confirmation, seems to be fully engaged to the anchor point to each other.
- D. 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).
- E. To any object which is shaped or dimensioned such that the snap hook or karabiner will not close and lock, or that roll-out could occur.

NOTE: 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 the gate of the hook.



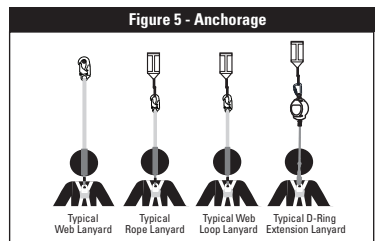
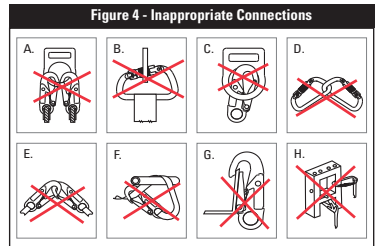
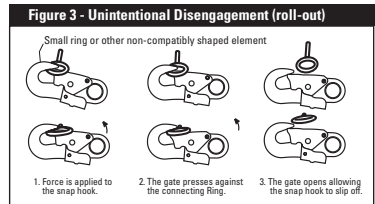
Unintentional Disengagement (Fig. 3). If the connecting element that a snap hook (shown) or Karabiner attaches to is undersized or irregular in shape a situation could occur where the connecting element applies a force to the gate of the snap hook or Karabiner. This force may cause the gate (of either a self-locking or a non-locking snap hook) to open, allowing the snap hook or karabiner to disengage from the connecting point.

WARNING: ANCHORAGES USED FOR RESTRAINT, RESCUE, OR SUSPENSION MAY ONLY BE USED WHERE THERE IS NO POSSIBLE VERTICAL FREE FALL. THESE ANCHORAGES DO NOT HAVE SUFFICIENT STRENGTH FOR WORK POSITIONING OR FALL ARREST. DO NOT CONNECT WORK POSITIONING OR FALL ARREST SYSTEMS TO THESE ANCHORAGES. ANCHORAGES INTENDED FOR WORK POSITIONING MAY NOT BE SUITABLE FOR USE FOR FALL ARREST SYSTEMS (FALL GREATER THAN 600mm) AND SHOULD NOT BE USED FOR FALL ARREST UNLESS SPECIFICALLY DESIGNED TO DO SO. SEE FIGURE 5.

4.0 OPERATION AND USAGE:

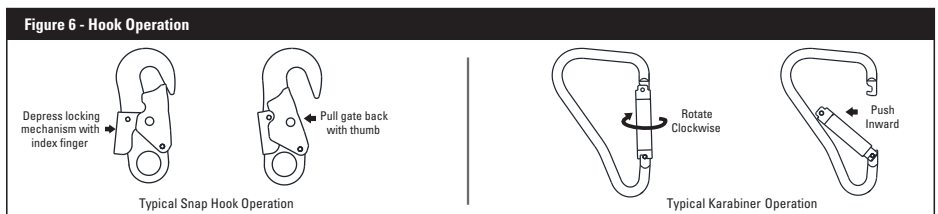
WARNING: DO NOT ALTER OR INTENTIONALLY MISUSE THIS EQUIPMENT. CONSULT MAXSAFE® WHEN USING THIS EQUIPMENT IN COMBINATION WITH COMPONENTS OR SUB-SYSTEMS OTHER THAN THOSE DESCRIBED IN THIS MANUAL. SOME SUB-SYSTEM AND COMPONENT COMBINATIONS MAY INTERFERE WITH THE OPERATION OF THIS EQUIPMENT. USE CAUTION WHEN USING THIS EQUIPMENT AROUND MOVING MACHINERY, ELECTRICAL HAZARDS, CHEMICAL HAZARDS, AND SHARP EDGES.

WARNING: CONSULT YOUR DOCTOR IF THERE IS REASON TO DOUBT YOUR FITNESS TO SAFELY ABSORB THE SHOCK FROM A FALL ARREST. AGE AND FITNESS SERIOUSLY AFFECT A WORKER'S ABILITY TO WITHSTAND FALLS. PREGNANT WOMEN AND MINORS MUST NOT USE THIS EQUIPMENT.



4.1 Before each use of this equipment, carefully inspect it to ensure that it is in serviceable condition. Check for worn or damaged parts. Ensure that all hardware is present and secure. Inspect for sharp edges, burrs, cracks, or corrosion. Ensure self-locking snap hooks or karabiners work properly (See Figure 6). Inspect the rope or webbing for wear, cuts, burns, frayed edges, breaks, or other damage. Refer to section 6.0 for further inspection details. Do not use this equipment if inspection reveals an unsafe condition.

4.2 Plan your restraint, work positioning, suspension, or rescue system before starting your work. Consider all factors that affect your safety at any time during use. The following list gives some important points to consider when planning your system:



- A. Free Fall:** Depending on the lanyard type and the application, for a 1.8m Lanyard the maximum free fall allowed is 1.8m.
- B. Maximum Arrest Force and Maximum Elongation/Maximum Deployment Distance.** See Fig.2.
- C. Fall Clearance:** Should a fall occur, there must be sufficient clearance in the fall area to arrest the fall before striking the ground or other objects.
- D. Backup Fall Arrest:** Some suspension and work positioning applications of this equipment may require a backup fall arrest system and independent fall arrest anchorage. See legislation guidelines when designing the system.
- E. Sharp Edges:** Avoid working where the lanyard, sub-system, or other system components will be in contact with, or abrade against unprotected sharp edges. Do not loop the lanyard around small diameter structural members. If working with this equipment near sharp edges is unavoidable, protection against cutting must be provided by using a heavy pad or other means over the exposed sharp edge.
- F. Rescue:** Should a fall occur, the user (employer) must have a rescue plan and the means at hand to implement it.
- G. After a Fall:** Any equipment which has been subjected to the forces of arresting a fall must be removed from service immediately and destroyed.

WARNING: FOLLOW THE MANUFACTURER'S INSTRUCTIONS FOR ASSOCIATED EQUIPMENT (FULL BODY HARNESS, WORK SEAT, ETC.) USED IN YOUR RESTRAINT, WORK POSITIONING, SUSPENSION, OR RESCUE SYSTEM.

5.0 TRAINING:

It is the responsibility of all users of this equipment to understand these instructions, and to be trained in the correct installation, use, and maintenance of this equipment. These individuals must be aware of the consequences of improper installation or use of this equipment. This User Manual is not a substitute for a comprehensive training program. Training must be provided on a periodic basis to ensure proficiency of the users.

WARNING: TRAINING MUST BE REPEATED PERIODICALLY & CONDUCTED WITHOUT EXPOSING THE TRAINEE TO A FALL HAZARD.

6.0 INSPECTION

6.1 Frequency:

- Before each use visually inspect the equipment.
- The lanyard must be inspected by a competent person other than the user at least annually. See section 6.2 for guidelines. Record the results of each inspection in the Inspection & Maintenance Log found in section 7.5

IMPORTANT: If this equipment has been subjected to forces resulting from the arrest of a fall, it must be immediately removed from service and destroyed.

IMPORTANT: Extreme working conditions (harsh environment, prolonged use, etc.) may require increasing the frequency of inspections.

6.2 Inspection Steps:

6.2.1 Inspection criteria for the equipment shall be set by the user’s organization and the inspection criteria shall equal or exceed the criteria established by AS/NZS legislation or the manufacturer’s instructions.

6.2.2 Inspection criteria shall include:

- Absence or illegibility of markings
- Absence of any elements affecting the equipment form, fit or function
- Inspect the lanyard hardware (snap hooks, adjusters, thimbles, spreader bar, etc.). These items must not be damaged, broken, distorted, or have any sharp edges, burrs, cracks, worn parts, or corrosion. Ensure the connecting hooks work properly. The hook gates must move freely and lock upon closing. Ensure the adjusters, if present, work properly.
- Inspect the webbing. The material must be free of frayed, cut, or broken fibers. Check for tears, abrasions, mold, burns, or discoloration. Inspect the stitching. Check for pulled or cut stitches.
- The webbing must be free of knots, excessive soiling, heavy paint buildup, and rust staining. Check for chemical or heat damage, indicated by brown, discolored, or brittle areas. Check for ultraviolet damage, indicated by discolouration and the presence of splinters or slivers on the webbing surface. All of these above factors are known to reduce the webbing strength. Damaged or questionable webbing should be replaced.

6.3 Inspect the labels. All labels must be present and fully legible (See section 7.3).

6.4 Record the inspection date and results on the inspection log (See section 9.0).

6.5 If inspection reveals a defective condition, remove the unit from service immediately and destroy.

IMPORTANT: ONLY MAXSAFE® OR PARTIES AUTHORIZED IN WRITING MAY MAKE REPAIRS TO THIS EQUIPMENT.

7.0 LABELING & GENERAL MARKING REQUIREMENTS

7.1 Markings are provided in English

7.2 The legibility and attachment of required markings shall endure for the life of the component, sub-system or system being marked.

7.3 Equipment shall be marked with the following:

- Part Number and Model Designation
- Year of Manufacture
- Manufacturers Name or logo
- Capacity Rating
- Serial Number
- Standard Number
- Manufacturer’s Instructions for the use of equipment and warnings to be followed to avoid contact with sharp edges, abrasive surfaces and need to make only compatible connections.
- Material of Construction
- Length of Equipment
- Maximum Elongation, Maximum Arrest Force, Average Arrest Force, Maximum Free Fall Distance
- 1.8m personal energy absorber is marked in black print on a contrasting background with text fonts compliant to standards
- 3.6m personal energy absorber is marked in black print on a contrasting background with text fonts compliant to standards.



WARNING: USER MUST ENSURE THAT THE UNUSED LEG OF THE TWO LEG LANYARD IS SAFELY STORED AND IT DOES NOT CAUSE OBSTRUCTION.

7.4 Two Leg Lanyard 1.8m free fall has a dynamic hip test failure warning label on both connecting ends instructing users to safely store the unused leg of lanyard.

8. OTHERS:

INSPECTION

Visually inspect the system before each use to ensure that it is in a serviceable condition and is operating correctly. If during inspection, doubts are raised about the safety of the system or a component, these should be replaced either by the manufacturer or a competent person.

CLEANING

Cleaning after use is important for maintaining the safety and longevity of the product. Remove all dirt, corrosives, and contaminants from the product before and after each use. If the product cannot be cleaned with plain water, use mild soap and water, then rinse and wipe dry. NEVER clean the product with corrosive substances.

COMPATIBILITY

To optimize protection, in some instances it may be necessary to use the product with suitable boots/gloves/helmet or earmuffs. In this case, before carrying out the risk-related activity, consult your supplier to ensure that all your protective products are compatible and suitable for your application.

STORAGE

When not in use, store the product away where it will not be affected by heat, light, excessive moisture, or other degrading elements and away from heavily acidic or chemically hazardous environments. Never place heavy items on top of it.

DAMAGED PRODUCT & WITHDRAWAL FROM USE

- If the product becomes damaged it will not provide the optimum protection and therefore should be immediately replaced. Withdraw it from use. Never use damaged products.
- If the system has been used to arrest a fall, it should be removed from service immediately and destroyed.

PERIODIC EXAMINATION

- It is important to conduct regular periodic examination of the product because the safety of the user depends upon the continued efficiency and durability of the product.
- The frequency of examination should be at least once in a year. However, it can be more than once if legislation requires, or frequency of use is high or environmental conditions have an adverse affect on it (eg. excessive rain, sea side environment, excessive heat etc).
- It is emphasized that the examination be conducted only by a competent person and strictly in accordance with the manufacturer's periodic examination procedures.
- It is also advised the competent person be correctly trained and authorized by the manufacturer.
- Ensure that all markings on the product are legible and can be clearly read.
- It is the responsibility of the User to keep the Inspection & Maintenance Log up-to-date (refer to Back Cover).

9. INSPECTION AND MAINTENANCE LOG

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

INSPECTION DATE	INSPECTIONS ITEMS NOTED	CORRECTIVE ACTION	MAINTENANCE PERFORMED
Approved by:			
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Maximum Safety NZ Ltd - PO Box 697, Nelson 7040,
 New Zealand Phone: 0800 262 972
www.maxsafe.co.nz