

Technical Bulletin

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Subject: Type 1 fall arrestors – DBI-SALA Lad-Saf[®] and Railok[™] Vertical Safety Systems – Inspection Requirements

Background

AS/NZS1891.4 2009 provides users of fall arrest equipment with a detailed set of guidelines as to the use and performance requirements of products designed to keep personnel safe when working at height. The Standard was upgraded from the previous version published in 2000, being released in December 2009.

There have been a significant number of changes to this Standard in relation to many aspects of inspection, training and product use. This document has been prepared to explain how these changes relate to vertical systems in general, and how they specifically affect the installers, users and those responsible for the administration/control of structures with DBI-SALA Lad-Saf systems and other vertical lifelines and rails such as the Railok[™] Vertical Rail System.

A summary of the most relevant extracts relating to these changes is as follows:

Section 9.3 Regular Scheduled Periodic Inspection

9.3.1 General

"All items of equipment which are in regular use shall be subject to periodic inspection and where applicable, servicing at the manufacturers recommended intervals."

9.3.2 Harnesses, Lanyards and Associated Equipment

"All items of equipment shall be checked in accordance with manufacturer's instructions to determine whether there is excessive wear or any other faults liable to render the item unsafe during fall arrest."

9.3.5 Horizontal and Vertical Lifelines and Rails

The inspection shall be carried out in accordance with manufacturer's instructions, with particular attention being paid to the following check list:

- A) Inspection of line anchorage points;
- B) Any modification or deterioration of the parent structure;
- C) Condition and tension of the line;
- D) Evidence of wear, such as cuts, wear, looseness, corrosion, fraying of steel cable;
- E) Integrity of cable terminations.

Relevant Training Levels

Specific training needs for users of equipment as well as for equipment inspection have now been more clearly defined:

Section 2.2 Safe Use of Equipment and Systems

2.2.11 Training and Competency

Users of fall arrest equipment and all people taking tasks associated with harness based work at heights **shall** be trained and assessed, this may include;

- A. Height Safety Theory
- B. Height Safety Operator
- C. Height Safety Supervisor
- D. Height Safety Equipment Inspector
- E. Height Safety Manager

Training is essential in providing users with a degree of competency in successfully implementing work practices that comply with the legislative obligations and to manage risk. In addition to these role definitions, Appendix E is provided to assist organisations in the assembly of the systems and training is provided to determine the extent of competencies required. For a detailed explanation of these education and training levels, refer directly to AS/NZS1891.4 2009.

Capital Safety has designed a Nationally Recognised Training course to meet each of these specific training needs for each of these roles. For further information, contact our office on **1800 245 002** or visit our Web site www.capitalsafety.com

Inspection Frequencies – Guidelines in the Standard

The most significant change in the Standard in relation to vertical systems has been an extension in the permissible timeframe between the inspection frequency for the vertical lifelines and rails. Previously the maximum time was 1 year between inspections by a Competent Person, regardless of manufacturer's guidelines.

The Standard now allows a manufacturer to provide a frequency of up to **5 years** between inspections, with the default remaining at 1 year in the absence of such guidelines. An extract from the Standard may be found on the following page.

Table 9.1 Summary of inspection frequencies

9.1 SUMMARY OF INSPECTION REQUIREMENTS

Requirements for the inspection of equipment are summarized in Table 9.1.

TABLE 9.1
SUMMARY OF INSPECTION FREQUENCIES

Items	Reference	Inspection frequency (Note 1)
Personal equipment including harnesses, lanyards, connectors, fall-arrest devices including common use devices	Clause 9.2	Inspection by a height safety operator (see Note 2) before and after each use.
Harnesses, lanyards, associated personal equipment	Clause 9.3.2	6-monthly inspection by a height safety equipment inspector (see Note 3)
Fall-arrest devices (external inspection only)	Clause 9.3.4(a)	
Ropes and slings	Clause 9.7	
Anchorage—drilled-in type or attached to timber frames	Clause 9.3.3	12-monthly inspection by a height safety equipment inspector (see Note 3)
Anchorage—other types	Clause 9.3.3	Frequency of inspection by a height safety equipment inspector as recommended by the manufacturer to a maximum of 5-yearly. 12-monthly inspection in the absence of such recommendations (see Note 3)
Fall-arrest devices—full service	Clause 9.3.4(b)	Frequency of service by a height safety equipment inspector as recommended by the manufacturer to a maximum of 5-yearly. 12-monthly service in the absence of such recommendations (see Note 3)
Horizontal and vertical lifelines—steel rope or rail	Clause 9.3.5	Frequency of inspection by a height safety equipment inspector as recommended by the manufacturer to a maximum of 5-yearly. 12-monthly inspection in the absence of such recommendation (see Note 3)
Horizontal or vertical lifelines —fibre rope —webbing	Clauses 9.3.5 and 9.7	6-monthly inspection by a height safety equipment inspector (see Note 3)
All items of personal and common use equipment	Clause 9.4	Inspection by a height safety equipment inspector on entry or re-entry into service (see Note 3)
All items which have been stressed as a result of a fall.	Clause 9.5	Inspection by a height safety equipment inspector before further use (see Note 3)

NOTES:

- 1 Where used in harsh conditions, more frequent inspection may be required.
- 2 If the user or operator of the equipment is not competent to carry out this inspection it is to be undertaken by another person who is competent, see Clause 9.2.
- 3 All inspections except those by the operator are to be documented (see Clause 9.10).

Inspection Frequency for Lad-Saf Cable Systems and Railok™ Rail Systems by a Competent Person

Both the DBI-SALA Lad-Saf system and Railok Rail System have been designed to provide a safe working environment in normal working conditions well in excess of 10 years. In areas with harsh environmental conditions and daily product use, this may necessitate a more regular inspection regime following a comprehensive risk assessment.

Where these systems are assembled and installed by a Trained/Accredited installer, following a formal inspection they will have a metal certification label attached to the structure containing the installation date, name of installation company, number of users allowed on the assembly at one time, the inspection frequency required for the system and have provision for service inspection records to be recorded. An *Inspection and Maintenance Log* will also be provided with the operator's manuals.

Accredited installers have the ability to record an inspection frequency of up to **5 years** for the lifeline or rail from date of first installation. Harsh environments identified during the site survey may require the installer to recommend an installation frequency less than 5 years. Capital Safety always recommends using a trained and accredited installer that has completed the accreditation training to ensure they have factored all relevant elements during such an installation.

Important Note:

*Where a trained, accredited installer has not been used to complete an installation, the default inspection frequency will be **1 year**.*

User Inspections – Before Every Use

Visual inspections are required to be carried out prior to each use by a competent Height Safety Operator to ensure that the following factors are reviewed and considered safe before climbing;

- A) Check the maximum users allowed on the system and that it is within the operational service date shown on the system data plate;
- B) Consider the hazards associated with connecting and disconnecting from the system;
- C) Check the hazards in the work area;
- D) Ensure that minimum fall clearances are taken into account;
- E) Check for any signs of corrosion, excessive wear or distortion on any system components.

In addition, for the Lad-Saf cable System:

- A) Visually check the wire assembly for excessive looseness/wobble;
- B) Visually check that the cable terminations are in place;
- C) Visually check the wire assembly is not damaged;
- D) Visually check bracket assemblies are not broken or distorted.

In addition, for the Raillok System:

- A) Visually check the rail for any missing nuts, bolts or missing sections of rail;
- B) Visually check there are no loose bolts, nuts and rail sections;
- C) Visually check there is no excessive corrosion along rail components.

In the event any of these conditions are found, the system must be tagged out of service and not used until inspection and recertification is completed by a trained or accredited person.

The User Instruction Manual provided with each Lad-Saf or Raillok System assembly provides a more detailed list of inspection criteria of the systems.

Lifeline and Rail System Traveller Sleeves / Trolleys

Whilst the inspection frequency on the rail and cable lifeline systems have been extended to a period of up to 5 years, the traveller sleeves or trolleys fall under the category in the Standard as a Type 1 fall arrestor. As such, these devices must still be inspected **at least annually** by a trained and certified Height Safety Equipment Inspector.

For more information about inspection criteria, refer directly to AS/NZS1891.4:2009. For more information about DBI-SALA vertical systems, contact Capital Safety on telephone **1800 245 002** (Australia) or **0800 212 505** (New Zealand).