Subject: Servicing and Inspection of Self-Retracting Lifelines and Retrieval Winches

This Technical Bulletin has been updated to reflect recent changes in AS/NZS1891.4:2009.

Servicing and inspection of mechanical fall protection devices, such as Self Retracting Lifelines (SRLs) are important requirements in any effective safety program. The frequency of the servicing/inspection as well as who should perform these activities are critical issues.

Capital Safety SRLs feature the highest quality components to ensure conformance to world standards. The company’s position is a proactive one: work with customers to make servicing and inspection more convenient and economical, and maintain the highest level of safety.

The following questions and answers will develop further understanding of the issues relating to the inspection/servicing of SRLs.

What does AS/NZS 1891.4 Standard require for inspection and servicing?

AS/NZS 1891.4 regulations specifically address inspection of products such as SRL’s. The Standard requires:

1. Inspect before and after use;
2. Inspection by a height safety equipment inspector every 6 months;
3. Service by a height safety equipment inspector as recommended by the manufacturer to a maximum of 5 yearly, every 12 months by the manufacturer in the absence of such recommendations.

AS/NZS 1891.4 defines a height safety equipment inspector as: A person who is competent in the skills needed to detect faults in height safety equipment and to determine remedial action.

Listed below are criteria that must be checked during an inspection. The SRL must be removed from service and sent to an authorised repair centre if any of the below conditions are not met.

Ensure the SRL casing is free of:
- Grime / Dirt
- Cracks
- Corrosion
- Significant Dents
- Burns
- Loose screws / bolts
- Distortion

Ensure the SRL locking mechanism works correctly when the line is pulled

Ensure hooks, karabiners and thimbles are free of:
- Grime / Dirt
- Burrs / Sharp edges
- Cracks
- Corrosion
- Distortion / Wear
- Fall indicator deployment

Ensure the locking mechanism on all hardware is working correctly. Swivel hooks
Ensure wire cable is free of:
- Broken wires
- Kinks
- Separation of strands
- Corrosion
- Distortion
- Wear
- Birdcaging

Ensure webbing is free of:
- Cuts / Holes
- Frays / Broken Fibres
- Broken Stitches / Loose Threads
- Abrasions / Burns
- Excessive Soiling (including paint)
- Discolouration
- Knots

Ensure the following are legible on labels:
- Serial number
- Product number / Model number
- Date of manufacture
- Date of last service

What is typically found during a servicing/inspection?
Approximately 40% of SRL lifelines need their cable/web assemblies to be replaced. This is the result of broken wires, kinks, or corrosion (wire rope models). Often on web lifelines there are extreme wear/abrasion, cuts, burns, or excessive dirt.

Approximately 25% of retraction springs are replaced due to corrosion or weakening from prolonged use. Proper retraction is a primary function of a self retracting lifeline to limit fall distance.

How often should Capital Safety SRLs be serviced?
Refer to the chart below for recommended service intervals. There are applications where work environment, frequency of use, and the lack of job controls dictate more frequent servicing. The customer should contact Capital Safety to establish a servicing program that will provide effective safety measures for users.

<table>
<thead>
<tr>
<th>Inspection by</th>
<th>Sealed Type 2 &amp; Type 3 devices</th>
<th>Unsealed Type 2 &amp; Type 3 devices</th>
<th>Non-repairable SRLs</th>
<th>Retrieval Winches</th>
</tr>
</thead>
<tbody>
<tr>
<td>e.g. Sealed Block</td>
<td>Ultralok, Rebel, Talon</td>
<td>**Rebel &amp; **Nano-lok</td>
<td>Salalift II, Digital</td>
<td></td>
</tr>
<tr>
<td>The Product User</td>
<td>Before &amp; after each use</td>
<td>Before &amp; after each use</td>
<td>Before &amp; after each use</td>
<td>Before &amp; after each use</td>
</tr>
<tr>
<td>Height Safety Equipment Inspector</td>
<td>6 monthly</td>
<td>6 monthly</td>
<td>6 monthly</td>
<td>6 monthly</td>
</tr>
<tr>
<td>Manufacturer / Accredited Service Agent</td>
<td>2 Years *</td>
<td>1 Year *</td>
<td>Warranty coverage only. Refer to Manufacturer’s User’s manual.</td>
<td>2 Years *</td>
</tr>
</tbody>
</table>

* Note: Harsh environmental conditions and daily product use may call for more frequent inspection following a risk assessment

** Note: For further information on non serviceable SRLs Technical bullitens;
Non Serviceable SRLs

Non serviceable SRLs manufactured by Capital Safety carry a limited lifetime warranty against manufacturer defects in materials and workmanship. ‘Lifetime’ of these SRLs is defined to a period of up to 5 years, in accordance with Section 9 of the Australian/New Zealand Standard (AS/NZS 1891.4), provided they continue to pass defined inspection requirements.

These SRLs should be inspected before and after each use and every 6 months by a height safety equipment inspector (competent person), as per AS/NZS 1891.4. The user manual provided by the manufacturer gives details of the inspection guidelines, these are also listed above (at the bottom of page 1).

The product must be immediately withdrawn from service if it does not meet inspection criteria or if it has been involved in a fall.

Why Should I have my SRL serviced?
The Australian / New Zealand AS/NZS 1891.4 standard requires SRLs to be serviced. SRLs used in regions where this standard applies must be serviced to be in compliance with this standard. Servicing performed according to the frequency of the standard will keep product in compliance and help provide an effective fall protection program. Servicing by a manufacturer accredited service agent involves inspection and replacement (as necessary) of internal parts such as brake assemblies, retraction springs and energy absorbing components.

What is done to a Capital Safety SRL during servicing?
The SRL is completely dismantled, cleaned, and inspected. All components are checked for wear, corrosion or other damage. Parts are replaced only as needed. The critical energy absorbing brake element is re-calibrated to ensure performance. The label is replaced, as needed, and the entire unit is assembled and inspected. Certification is issued for each completed unit.

What is being done by Capital Safety to make servicing of SRLs easier and more economical at a reduced turn-around time?
Regional repair facilities are being set up to provide more localized service. This will also help reduce the turn-around time.

Are the components of competitive SRLs more durable and longer lasting when compared to Capital Safety?
No. Capital Safety, in fact, uses only the most durable components in its designs. Critical components are made of hardened materials and treated or coated to prevent corrosion and increase life expectancy. In many cases, stainless steel materials are used. Capital Safety’s exclusive patented sealed SRL design is a perfect example of a design that can extend the life of SRLs by making them more durable. There is no other environmentally sealed SRL on the market today.
What types of “back-up” features does Capital Safety use and how does this compare to the competition?
Capital Safety uses several “back-up” systems in its SRLs. This includes multiple locking pawls, reserve lifeline features, and anti-ratcheting designs. Most of the competitive units do not contain these systems.