

Anchor Management: Managing Anchor Points used for Fall Protection

Until relatively recently there were no standards prescribing how an anchor point must be tested to confirm that it meets the load rating criteria. However, the release of *AS/NZS 5532:2013 - Manufacturing requirements for single-point anchor device used for harness-based work at height* details a consistent test methodology for manufacturers to follow. Anchor points are commonly installed to roof areas to enable harness-based work at height. Given that the failure of an anchor point will invariably lead to serious injury or death, property owners and managers need to ensure that this important safety measure is installed and maintained correctly.

What are the legal or other requirements that apply to anchor points?

The use and maintenance of anchor points should follow recommendations in *Australian Standard AS 1891, Industrial fall arrest systems and devices* and its relevant parts. Part 4 of the Standard outlines specific requirements with regard to the selection, use and maintenance of anchor points.

It is imperative that anchor points are properly installed and used according to manufacturers' specifications. The main performance criteria specified by the Standard is that anchor points should be designed to withstand a load of 15 kN if intended to be used by one person. The load rating should be increased to 21 kN if two people are likely to use the same anchor point at the same time.

AS/NZS 5532:2013 - Manufacturing requirements for single-point anchor device used for harness-based work at height details a consistent test methodology enabling manufacturers to certify that their anchor points meet the load rating criteria. Prior to the release of this Standard in October 2013, the load rating specified by installation engineers or manufacturers was determined through a variety of methodologies which is likely to have resulted in some variance in the specified load ratings.



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What maintenance of anchor points is required?

AS1891.4 recommends that anchor points be subject to periodic assessments to confirm their suitability for ongoing use. The recommended frequency and scope of these assessments is dependent on the type of anchor point and the substrate it is affixed to as outlined below:

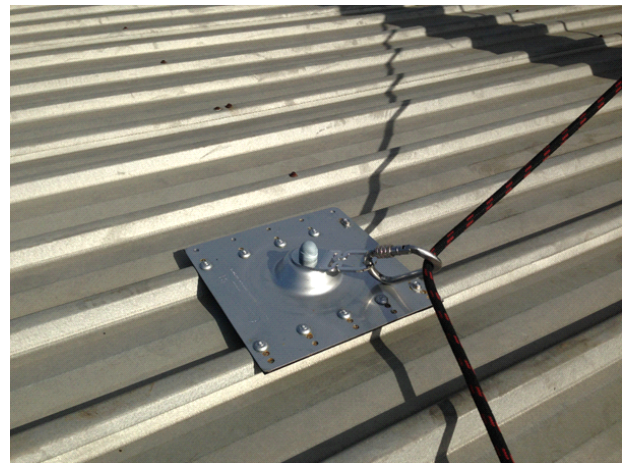
- Drilled in (typically to concrete or masonry) anchor points such as glued-in or friction type anchors should be inspected annually. The inspection should also include proof load testing of the anchor point to 50% of the design load;
- Anchor points attached to timber frames should be visually inspected annually; and
- All other types such as those attached to steel roofing profiles should be visually inspected at a frequency recommended by the manufacturer (to a maximum of 5-yearly) or annually in the absence of guidance from the manufacturer.

The anchor point installation (including the substrate) should be inspected by a competent person for deterioration or modifications which might lead to loss of anchorage strength. More frequent inspections (6 monthly) are recommended where the anchorages are used under harsh conditions (e.g. where anchor points are subject to chemical attack, corrosion, abrasion or weather extremes).

It is noted that there is some variance with regard to the frequency of inspections recommended in State and National Codes of Practice.

In particular:

- The Victorian *Compliance Code for Prevention of Falls in General Construction (September 2008)* specifies that permanently fixed anchor points should be inspected by a competent person, at no less than **six-monthly** intervals; and
- The Safe Work Australia Code of Practice *Managing the Risk of Falls at Workplaces* specifies that inspection of anchor points should be undertaken “**at regular intervals**”.



This frequency of inspection is also adopted in Codes of Practice in South Australia, NT, NSW Queensland and Tasmania under harmonised WHS legislation. The Code also indicates that “*each anchorage point should comply with the requirements in AS/NZS 1891:4*” which would indicate that an **annual** inspection regime should generally be adopted.

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In summary, in the absence of more rigorous specifications issued by manufacturers or site specific conditions likely to accelerate deterioration of anchorages or the substrate, an annual inspection/testing frequency of installed anchor points is generally considered appropriate in jurisdictions other than Victoria. In Victoria, the statutory obligation to identify hazards, assess risks and eliminate or reduce the risk as far as is reasonably practicable, may require a 6 monthly inspection regime. This higher frequency of inspection would apply where a risk assessment of alternate risk mitigation factors does not support the generally accepted annual inspection regime.



What installation and maintenance records are required?

AS 1891.4 requires that signs be displayed at each anchorage point or alternatively, on a plan prominently displayed at the entry to the area. The sign should display installation details including the name of the installer and installation date, or if an existing structure has subsequently been certified, the name of the certifier and the certification date.

The Standard also requires that a record card, history sheet or similar record (e.g. certification plate) shall be kept for each anchor point that documents the maintenance and servicing history. This information should be readily available to contractors or personnel undertaking work requiring the use of the anchor points.

What are the implications of the 2013 Standard (AS/NZS 5532:2013) for existing installations?

It is clear that building owners and managers should ensure that all future anchor point installations are manufactured and certified to the AS/NZS 5532 standard. The new uniform testing requirements now enable manufacturers of anchor points to provide greater assurance and certification that their product meets the specified load rating criteria. The application of AS/NZS 5532 to anchor points manufactured and installed prior to the release of the standard (October 2013) is less clear.

It is anticipated that many manufacturers of anchor point devices will undertake testing of their anchor points with different roof sheet profiles with the objective of being able to certify that their product(s) meet the requirements of AS/NZS 5532. With this in mind, building managers should contact the installer or manufacturer of their anchor point installations and seek certification confirming that the product meets the performance specifications of the new Standard. If the installer/manufacturer is able to provide this certification, then the installation should be suitable for continued use on the proviso that it was installed according to manufacturer's specifications and has been maintained in accordance with the requirements outlined previously.

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If certification documentation (to AS/NZS 5532) is not able to be obtained, the existing anchor point installation should be assessed to determine its suitability for continued use; in particular that it is capable of withstanding the required load. In undertaking this assessment, specific attention should be given to confirming:

- Engineering reports or similar documentation to certify that the initial anchor point installation met the 15 kN (or 21 kN) load rating criteria; and
- Documentary evidence that the required maintenance inspections have been undertaken to confirm that the condition of the original certified installation is suitable for continued use.

If insufficient information is available to verify that the anchor point installation meets the load rating criteria, the anchor points should not be used and be tagged out as such. To address situations where it is not clear whether the anchor point installation will meet the load rating criteria:

- An engineering assessment of the anchor point installations should be undertaken by a competent person (e.g. suitably qualified and experienced structural engineer) to certify that the installed anchor points and roofing substrate are capable of meeting the load rating criteria; or
- The existing anchor points should be removed and replaced with anchor points manufactured and certified to the AS/NZS 5532 standard.



In many cases, the site operating conditions may have changed significantly from the time when the anchor points were originally installed. Furthermore, there have been significant developments in the range of available fall protection products. Consequently, before committing to comprehensive recertification or replacement programs it is strongly recommended that risk assessments of the work at height tasks be completed. These assessments should be undertaken with reference to the hierarchy of control of risks associated with falls and may identify alternative higher level controls such as the provision of walkways, working platforms and guard rails.