

Protection against mechanical damage of electrical installations at the base of Tower Cranes

WorkSafe ACT has recently identified non-compliance in relation to electrical installations at the base of Tower Cranes on construction and demolition sites in the ACT.

[Division 4.7.5](#) of the [Work Health and Safety Regulation 2011](#) (the Regulation) outlines additional duties in relation to electrical equipment and installations and construction work.

Section of the Regulation ([163 - Duty of person conducting business or undertaking](#)) specifies that a person conducting a business or undertaking (PCBU), that includes the carrying out of construction work, must comply with AS/NZS 3012:2019 (Electrical installations – Construction and demolition sites). The standard may be purchased at www.standards.org.au.

Through recent inspection activities, WorkSafe ACT Inspectors have identified that electrical installations at the base of some tower cranes in the ACT do not comply with AS/NZS 3012:2019. Inspectors have observed that non-compliance has occurred because the PCBU has failed to assess the risk and ensure protective controls are in place to prevent mechanical damage occurring on construction cabling where it is required, or no risk assessment has been carried out.

Section 2.5 of AS/NZS 3012:2019 relates to Construction wiring. Subsection 2.5.3 relates to Protection against mechanical damage. The subsection states that prior to cables being installed, or when a change occurs, a risk assessment must be carried to determine the likelihood of cables being exposed to mechanical damage.

Where the risk assessment identifies a risk of mechanical damage to cables the hierarchy of controls must be applied. If reasonably practical, the cables should be repositioned eliminating the risk of mechanical damage. If that is not reasonably practical the cables shall be protected to a standard greater than or equal to the requirements of section 2.5.3 of AS/NZS 3012:2019.

The risk associated with the construction cabling was identified throughout a recent workplace visit at a site where a tower crane was erected

Following the identification of this issue, WorkSafe ACT Inspectors proactively contacted crane companies operating in the ACT to ensure they were aware of this requirement and could put systems in place to address the issue immediately.

WorkSafe ACT wishes to make it clear that a PCBU's obligation to ensure that electrical installations on construction or demolition sites comply with AS/NZS 3012:2019 extends beyond this specific requirement.

PCBUs must ensure all electrical installations on construction and demolition sites comply with the requirements of AS/NZS 3012:2019. Section [149 – Unsafe electrical equipment](#) of the Regulation specifies that a person conducting a business or undertaking at a workplace must ensure that any unsafe electrical equipment at the workplace:

- (a) is disconnected (or isolated) from its electricity supply; and
- (b) once disconnected (or isolated)
 - is not reconnected until it is repaired or tested and found to be safe; or
 - is replaced or permanently removed from use.

Electrical equipment or a component of electrical equipment is unsafe if there are reasonable grounds for believing it to be unsafe.