

Amendment Number Two

AS/NZS 3000:2007

Late last year 2012, while we were getting set for Christmas and our holidays the Australian Standards Committee ELI gave the electrical industry an early Christmas present and released the 2nd amendment to the Wiring Rules.

The actual publication date was the 14th December 2012 however due to some miss-communication we in Victoria did not get notified until the week ending the 21st December 2012.

In Victoria the date of publication also became the implementation date, therefore compliance with AS/NZS 3000:2007 incorporating amendments No 1 and 2 is mandatory and has been since the 14th December 2012.

The amendments only run to some 45 pages therefore I have selected some of the more important amendments to highlight in this article, also I have only quoted parts of some clauses. RECs and electricians need to familiarise themselves with the entire list of amendments and their ramifications within the work place.

Residual Current Devices: - A reminder note has been inserted to highlight the requirement of the Medical Standard (AS/NZS3003:2011), that in a domestic installation where medical equipment has been installed for patient treatment, a 30ma RCD **is not permitted** upstream of a 10ma RCD, as sufficient discrimination between the two RCD's would not be provided.

An RCD that is used for leakage protection in medical areas including where permitted, an RCD incorporated in a socket outlet or installed adjacent to the socket outlet and intended for protection of the socket outlet, shall interrupt the active and neutral conductors (double poled device).

Within residential electrical installations the smoke detector has been added to the list of electrical equipment regarded to be a lighting point, therefore protection by an RCD is now required for the smoke detector.

Equipment identification: - All switchboard labels (identification) are now not only required to be legible and durable but they also need to be in English, no other language is permitted, regardless of the nationality of the workers or owner of the premises.

Colour of the cable sheathing (outer layer): - Clarification on the sheath of cables used for installation wiring cannot utilise, green, yellow or green/yellow combination. Therefore cables sold as environmentally friendly for solar installations with a green sheath are now prohibited.

Mixing of different identification systems: - Cables with AS/NZS identification and European identification are no longer permitted to be installed within the same enclosure or multi-core cable.

Different Installations (multiple occupancies):- The Rules now prohibits the enclosure of cables supplying the different installations /occupancies from being installed within the same wiring enclosure and where cables from different installations/occupancies terminate within the one enclosure they shall be effectively segregated from each other. Exception this requirement need not apply to switchboards where the circuit originates.

Installing earth electrode near water pipes: - The restriction on how close an electrode can be installed from a bonded water pipe has been removed, you may install them next to each other if you so desire.

Unfixed socket outlets: - Socket outlets installed in a location that is not readily accessible can now be installed without being fixed in position (e.g. suspended ceiling), providing there is no undue stress on the cable connections, the wiring where likely to be disturbed is supported and any cables where the sheath has been removed are enclosed.

Recessed Luminaires: -Many changes have been made to this section with the main points to remember being;

- Clauses of this section apply to **all** types of recessed luminaires, not only halogen and incandescent, and now picks up LEDs, compact fluorescents etc.
- All recessed luminaires are to be installed as per the manufacturer's instructions.
- Where there are no manufacturer's instructions the default clearances must be used, once again for all types of recessed luminaires
- The manufacturer's instructions will detail the suitability of the recessed luminaire and its associated equipment to be used with a barrier. Where there are no manufacturer's instructions available the recessed luminaire may not be suitable for use with a barrier.
- The default clearances for recessed luminaires have also changed.
- Where recessed luminaires have been installed in an accessible roof space a warning notice shall be placed at the manhole as detailed in clause 4.5.2.3.2 and figure 4.8.
- When installing recessed luminaires, care shall be taken to ensure surrounding material does not exceed a maximum of 90°C, heat dissipation methods such as air circulation can be used to reduce the temperature.

Electric cooking with open cooking surface: - Open cooking surfaces incorporating electric heating has had the word "element" removed, therefore the requirement to install an isolating switch at the cooking appliance now includes, induction, infrared and ceramic cooking surfaces, the switch shall operate in all active conductors, be installed near the appliance in a visible and readily accessible position. The switch shall be labelled as to what it controls.

Gas appliances: - A gas appliance connected to an electric supply requires the installation of a switch and or socket outlet located in a position where it is accessible with the gas appliance in its installed position. Any switch **not** forming part of the socket outlet shall switch all live (active and neutral) conductors. The switch shall be labelled as to what it controls.

Airconditioning and heat pump systems: - A slight change for Victorian Electricians the isolating switch that has been installed on or adjacent the unit containing the compressor for the past few years can now only be installed adjacent to the unit and **not** on the unit.

Where the manufacture requires a socket outlet for the internal part of a split airconditioning system, then the isolating device installed at the external unit shall also control the socket outlet at the internal unit, in all cases there will be an isolating device installed at the external unit.

Conductive pool structures: - Where pool structures are conductive all extraneous conductive parts are to be bonded to a bonding conductor connection point, these parts include but are not limited to:

- The exposed conductive part of electrical equipment in the classified pool zones
- Any exposed conductive part in contact with the pool water.
- Conductive parts attached to the pool e.g. ladders and diving boards.
- Fixed conductive parts within arm's reach of the pool edge e.g. fences, lamps and metallic pipe work.
- Reinforcing metal of the pool shell or deck.

Pool zone bonding conductor connection point: - A connection point protected against mechanical damage and corrosion shall be provided (in all cases) and should be located at the pool or spa area (equipment) in an accessible position. This may be a junction box or pit, the bonding conductor connection point shall be constructed so as to allow for additional bonding conductors to be connected to it in the future.

The location of the bonding conductor connection point shall be recorded at the switchboard from which the pool circuits and or bonding conductor originate.

Lift, Passenger lift: - In the scope section the wording "for which there is no alternative supply" has been removed which removes all the confusion. All electrical installations containing safety services with or without an alternative supply shall comply with clause 7.2 of the Wiring Rules and the 2009 Electricity Safety (Installation) Regulations.

Mandatory standards: - In appendix "A" the normative (mandatory) list has been expanded by the addition of several Australian Standards e.g. Recessed luminaire barriers, stand-alone power supplies, electrical installation design etc.

A reminder that this article was only part of the 45 page amendment document, NECA members can contact Roy in the Melbourne Office for free, to discuss the amendments, or you could take the opportunity to invite Roy along to one of your tool box meetings and put discussion of the Australian Standards on the agenda.

Spiral bound AS/NZS 3000:2007 standards incorporating amendments No1 and 2 are available through NECA for members at a special discounted rate and can be ordered on line or through the office on 03 9645 5533.