



Office of **Energy**

Office of *ENERGY* WA

Electrical FOCUS

New Edition of Wiring Rules Transitional Arrangements

As notified in Electrical Focus No. 15 – October 1999, Standards Australia has published the new Standard to replace AS 3000-1991 SAA Wiring Rules. The new Standard is AS/NZS 3000:2000 and is known as the Australian/New Zealand Wiring Rules.



The major change in the new Wiring Rules is the introduction of internationally accepted performance based fundamental safety requirements. Many of the previously prescriptive 'work practices' have been deleted or reworded, allowing the use of other methods that achieve the same fundamental safety outcomes.

In Western Australia, the Wiring Rules has been called up in legislation as of 1 June 2000, as foreshadowed in the October 1999 Energy Bulletin.

However, following the recent Standards Australia seminars for the new Wiring Rules, a number of persons including the Electrical Contractors Association have asked for an additional transition period extending beyond 1 June 2000.

Therefore, from 1 June 2000 until 1 December 2000, completed electrical installations may comply with either AS 3000-1991 or AS/NZS 3000:2000.

However, all installations completed after the 1 December 2000 must comply in all respects with AS/NZS 3000:2000.

Where there are genuine cases of hardship involving a new installation or alterations to existing installations that were commenced after 1 June 2000 and completed after 1 December 2000, the matter should be discussed and resolved with the relevant electricity supply authority. Electricity supply authorities have the authority to exercise discretion if absolutely necessary, on this matter.

Amendment No. 1/00 to WA Electrical Requirements

The WA Electrical Requirements is amended by Amendment No. 1/00.

The amendment will apply as follows:

- Where an installation is to comply with AS/NZS 3000:2000 Wiring Rules, Amendment No. 1/00 will apply from 1 June 2000.
- In all other instances, Amendment No. 1/00 will apply from 1 December 2000.

Genuine cases of hardship involving an installation or alterations to existing installations meeting this amendment should be discussed and resolved with the relevant electricity supply authority. Electricity supply authorities have the authority to exercise discretion if absolutely necessary, on this matter.

A copy of the amendment sheet is included as a supplement to this Electrical Focus.

New Cable Standard – AS/NZS 5000

Cables manufactured to AS/NZS 5000:2000 are acceptable in Western Australia under either AS 3000-1991 or AS/NZS 3000:2000.

However, the cables must meet the relevant clauses in AS 3000-1991 or AS/NZS 3000:2000 as appropriate. For example, the cable must meet the insulation temperature limits and the earth conductor must be multi-stranded if less than 10mm².

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It is noted that Clause 5.5.2.1 (c) of AS/NZS 3000:2000 permits solid earthing conductors if permitted by a cable standard. However, the AS/NZS 5000:2000 series of Standards do not specifically permit this arrangement but refer to AS 1125. Also, Table 2.3 in AS 1125 states that seven stranded conductors are intended for earthing conductors.

Therefore, solid earthing conductors below 10mm² are not acceptable in Western Australia even after the mandating of AS/NZS 3000:2000 (only if AS/NZS 3000:2000 is amended some time in the future might this become acceptable).

Single-Phase Air Conditioners — Starting Current Problems

Some single-phase air conditioners recently available in WA have been refused connection to the electricity supply by the electricity supply authority. In some instances, the units have been disconnected after installation.

The single phase DOL starting current was found to be far in excess of that allowed by Section 16.13.4 of the WA Electrical Requirements (WAER), and therefore could cause interference or interruption of supply.

To avoid such problems, installers of air conditioners should ensure that starting currents do not exceed the limits specified in the WAER.

If the current exceeds the specified level, then the matter needs to be discussed with the relevant electricity supply authority before installation of the air conditioner.

PROSECUTIONS FOR BREACHES OF THE ELECTRICITY (LICENSING) REGULATIONS 1991 1 November 1999 to 29 February 2000

<i>Breach</i>	<i>Name (and suburb of residence at time of offence)</i>	<i>Licence No.</i>	<i>Fine & Court Costs (\$)</i>
<i>Unlicensed electrical work Regulation 19</i>	<i>S Clamp (Gosnells)</i>	<i>EW 125548</i>	<i>1,500.00</i>
	<i>S Clamp (Gosnells)</i>	<i>EW 125548</i>	<i>1,500.00</i>
	<i>D Hahn (Stratton)</i>	<i>NLH</i>	<i>1,000.00</i>
	<i>F Law (Herne Hill)</i>	<i>NLH</i>	<i>400.00</i>
<i>Carried on business as an electrical contractor without a licence Regulation 33</i>	<i>P Goodall (Padbury)</i>	<i>EW 127246</i>	<i>700.00</i>
	<i>Ian Talbot T/A Talbot Electrics (Kalamunda)</i>	<i>EC 001828</i>	<i>700.00</i>
<i>Substandard electrical work Regulation 49</i>	<i>C Bager (Lansdale)</i>	<i>EW 119939</i>	<i>1,400.00</i>
	<i>G Caputi (Bibra Lake)</i>	<i>EW 125891</i>	<i>3,200.00</i>
	<i>M Costello (Rockingham)</i>	<i>EW 116673</i>	<i>407.70</i>
	<i>R Cutler (Dianella)</i>	<i>EW 129973</i>	<i>917.70</i>
	<i>D Geneve (Stirling)</i>	<i>EW 125016</i>	<i>917.70</i>
	<i>L Grodzicki (Beldon)</i>	<i>EW 116284</i>	<i>1,250.00</i>
	<i>D Pusenjak (Craigie) [2 offences]</i>	<i>EW 129801</i>	<i>1,025.00</i>
<i>Caused or permitted unsafe wiring to be connected or remain connected to an installation Regulation 50A</i>	<i>V Wakefield (Innaloo)</i>	<i>EW 125698</i>	<i>910.00</i>
	<i>D Brown (Belmont)</i>	<i>EW 129156</i>	<i>1887.70</i>
<i>Submitted a Notice of Completion prior to completing the work Regulation 52</i>	<i>P Sweeney (Collie)</i>	<i>EW 122730</i>	<i>1,500.00</i>
	<i>DBR Holdings P/L T/A DBR Electrical Contractors (West Perth)</i>	<i>EC 00582</i>	<i>3,750.00</i>

NLH No Licence Held

Note: There were five other prosecutions finalised in this period. The details of these prosecutions are not included above as they resulted in either a spent conviction order or a conditional release order being issued.

ELECTRICAL FOCUS SUPPLEMENT

Amendment No. 1/00 to WA Electrical Requirements

The WA Electrical Requirements document is amended as described hereunder and will apply as follows:

- Where an installation is to comply with AS/NZS 3000:2000 Wiring Rules, Amendment No. 1/00 will apply from 1 June 2000.
- In all other instances, Amendment No. 1/00 will apply from 1 December 2000.

The requirements detailed below override or are in addition to (as relevant) the requirements in the new 'Wiring Rules', in accordance with Regulation 49 of the *Electricity (Licensing) Regulations 1991*.

Section 1.2 Customer's Installation

Add the new Section 1.2.4

1.2.4 Thermal Insulation Zone

Cables installed in a domestic installation shall be deemed to be either partially or completely surrounded in thermal insulation for the calculation of the cable's current carrying capacity, if installed within 100mm above the ceiling, in the roof space.

A length of cable not exceeding 150mm, which passes through bulk thermal insulation eg. for connection to a lighting point, shall not be considered as being surrounded by thermal insulation.

Cables shall not be considered as being surrounded by thermal insulation where they are installed in such a manner that permits the free circulation of air around the cables, eg. in a wiring enclosure of adequate dimensions and in any case not less than 50mm x 100mm.

Section 2.1 Consumer's Mains and Submains

Replace the existing paragraph with the following:

Consumer's mains cables shall have a minimum current carrying capacity as follows:

- (a) Single domestic installations
 - (i) Single-phase - 63 A
 - (ii) Multiphase - 32 A per phase
- (b) Multiple installations which incorporate a domestic installation
 - (i) Single-phase - 63 A
 - (ii) Multiphase - 63 A per phase
- (c) All other cases
 - (i) Single-phase - 32 A
 - (ii) Multiphase - 32 A per phase