



Electricity Industry Bulletin No: 39 June 2000

ATTENTION COMPANY MANAGERS

Please ensure your nominated manager and electricians see this circular.

This is an extract of an article from the Office of the Chief Electrical Inspector of Victoria.

1. SAFETY WARNING REGARDING METALLIC ELECTRICAL CONDUITS

Recently a person installing security alarm wiring died as a result of inadvertently contacting a live electrical metallic conduit in the ceiling space of a commercial premises. The electrical conduit system used was split conduit, also known as plain conduit.

This type of conduit was manufactured from mild steel, formed almost into a complete circle without the seam being joined and was painted black. Conduit fittings included elbows, tees, junction boxes and couplings and these were connected to the conduit by clamping.

PICTURE MISSING

These conduit systems were designed to enclose single insulated cables and were required to be earthed. The earthing continuity was dependent on paint being removed from the ends of the conduit prior to the conduit being inserted into the fittings and that the screws on the fittings were adequately tightened.

When these types of wiring systems (split conduit) are encountered on older electrical installations, the metallic conduit should be tested by a suitably qualified and competent person to ensure that the conduit is not live before touching or working in the vicinity of it.

2. NOTIFICATION OF SERIOUS ELECTRICAL ACCIDENTS

You are deemed to have complied with the *Electricity Industry Safety and Administration Act 1997* section 72, if you notify this office (acting on behalf of the Regulator), of any serious electrical accident, as soon as possible. A written report must also be provided within 21 days of the event.

The recommended precautionary check up for all shock victims does not deem the accident "serious".

If medical treatment were necessary as a result of a shock, then it would be considered to be a serious electrical

accident as defined in the Act and must be reported.

Examples of this would be burns or administering of medication. Testing (ECG) or monitoring by medical persons does not, by itself deem an accident serious. Please ensure you read this section of the Act.

Ph: 1300 366 322 All hours
Fax: 6233 8338

*between the hours of 9:00am and 5:00pm
(Please address to Electricity Standards and Safety).*

The revision to AS3000-1991 wiring rules, became mandatory on the 1st June. All installations must now comply to the revised standard. Only exceptional cases will be considered for dispensation.

3. CABLE CURRENT RATINGS

Appendix B of the 1991 edition of the Wiring Rules included current carrying capacities of general building cables 25mm² and below. For convenience these current ratings were rounded up or down to meet the nearest circuit breaker size. As the current ratings are no longer included in the revised edition, the more accurate values tabled in AS/NZS 3008.1.1 - 1998 must be used. Previously where an anomaly existed between the two standards the higher assigned value was accepted.

Example 1

16mm² (V75) single-phase sub-mains installed underground by a category "A" method.

AS 3000 - 1991 Table B2
current value assigned 100 amps

AS/NZS 3008.1.1 - 1998 Table 3
current value assigned 91 amps
(2x single core)

AS/NZS 3008.1.1 - 1998 Table 9
current value assigned 88 amps
(1x two core)

Assuming all the other requirements of the Wiring Rules have been met then the nearest available (non-adjustable) circuit breaker would be 80 amps.

Example 2

6mm² twin & earth (V75) clipped to ceiling joists through a ceiling space containing thermal insulation.

AS 3000:1991 Table B2
current value assigned 32 amps
AS/NZS 3008.1.1 - 1998 Table 3
current value assigned 31 amps

AS/NZS 3000:2000 clause 2.4.3.2 states
 I_B shall be less than or equal to I_N which shall be less than or equal to I_Z

Where I_B = the current for which the circuit is designed
eg. maximum demand

I_N = the nominal current of the protective device ie. C/B
current rating

I_Z = the continuous current-carrying capacity of the cable
(as stated in AS/NZS 3008.1.1)

Therefore the nearest size standard circuit breaker to satisfy the above is 25amps.

There will be no more rounding up to the nearest size circuit breaker.

If you require more from the cable, then change the installation method or change the type of cable.

4. AS/NZS 3018:1997

Amendment No 1 has been published to reflect the new changes in AS/NZS 3000:2000, however not all the provisions of this standard are consistent with the new wiring rules. A complete revision of AS/NZS 3018 is being conducted to correct these inconsistencies and to incorporate a number of additional developments to the standard.

5. REMINDER: TAFE COURSE AS/NZS 3000:2000

TAFE Tasmania is running courses consisting of approximately 10 hours on AS/NZS 3000:2000. Contact Burnie, Launceston or Hobart TAFE and enrol now.

6. AS/NZS 3000:2000 ZONE 3 - DAMP SITUATIONS.

Section 7 may seem impractical in some installations. Consequently Regulators within Australia have generally agreed to a proposed amendment to zones in damp situations. However the final wording is not yet resolved and publication may be some months away.

Until such time as an amendment is published the following will be allowed.

Zone 3 will include the floor and extend 300mm above floor level beyond zone 2. **(The zone does not extend beyond the boundaries of the room or area).**

7. GENERAL SAFETY ISSUES

- i) In a past bulletin we highlighted the serious safety issue of leaving switchboards unattended with exposed live parts where the escutcheon panel has been removed. It had been reported recently that an Electrical Contractor found such a situation at a primary school. This type of incident is very serious and disciplinary action may be taken against any Electrical Contractor or Electrician using this practice.
- ii) An Electrical Contractor has reported that he knows of three incidents where a RCD has been bypassed, possibly due to what is commonly called “nuisance tripping”. In most cases the RCD is carrying out its proper function and this type of practice could lead to someone receiving a serious electric shock. If you find one, Fix It. If you know who did it, report it.
- iii) The Department of Mines in Queensland is investigating five incidents where children have received serious burns after standing on an open door of a freestanding range causing it to tilt forward. In all cases the range had not been secured to a surface as per the manufacturers instructions. It is important that before installing a wall oven, range or hot plate, that you read the installation instructions for the appliance carefully.

8. ELECTRICAL EQUIPMENT INSTALLED ABOVE HAZARDOUS AREAS

We remind electrical contractors that when selecting a location for a point of attachment (P of A) that the requirements relating to electrical equipment installed above or adjacent hazardous areas are taken into consideration.

AS/NZS 2381.1:1999 (Electrical equipment for explosive atmospheres-selection, installation and maintenance Part 1) clause 3.9.4.2 sets out the requirements for equipment installed above hazardous areas.

This clause makes reference to fuses that may produce arcs, sparks or hot particles. Recently on two occasions service fuses have failed, allowing hot particles to fall within close proximity of LP Gas cylinders. The immediate area around a gas cylinder is classified as a hazardous area. (defined in AS/NZS 2430 series).

9. 10 AMP SOCKET INLET

We recently had an incident reported where a person was using a garden waste mulcher fitted with a 10amp socket inlet. A new flexible cord extension set, fitted with a cord extension socket with a 360° projection (shroud) was being used. This flexible cord socket did not fit correctly into the mulcher socket inlet damaging the active pin. New 10 amp socket inlets have a 360° recess to accommodate the projection of the socket. This will not apply to 15amp socket inlets, used for caravans as it is not mandatory for a 15amp flexible cord socket to have a 360° projection.



RECALL NOTICES

Arlec Micathermic Heater
Model R202 and R202T
Customer Enquires (03) 9727 8777

Food Dehydrator Model Ezidri Ultra
serial No. 97 3426 to 97 3924
Purchased since 16 June 1999
Customers Enquires 1800 671 109

Dick Smith Electronics World Travellers Plug
Set Cat No M Enquiries: 1800 818 459

Recently purchased Ringgrip/Chevron
Electric Blankets
Enquiries 1800 686 572

Licensing Talk

11. INSURANCE RENEWALS

We acknowledge there are difficulties for contractors providing public liability insurance one month prior to it being renewed. As a result we no longer expect (although we would like for administration reasons), applications to arrive in this office one month prior to the commencement of your licensing period.

Applications for renewals will now be sent to contractors approximately five weeks prior to the commencement of the new licensing period.

Your application must be received (at the latest) by close of business on the day of expiry.

As a result there may be a time lag in processing applications and contractors may receive their renewed licence after the start date of the licence period. This will not effect the "current status" of licences.

NOTE: Electrician's licences are still required 1 month prior to the expiry date.

12. HOLDERS OF PROVISIONAL LICENCES CAN NOT SUPERVISE TRAINEES

Section 20 (1) of the *Electricity Industry Safety and Administration Act 1997* indicates that the holder of an electrical contractor's licence must ensure that work carried out under the licence is done by holders of electrical technician's licences or by those undergoing a course of training approved by the Regulator whose work is supervised by the holder of an electrical technician's licence of the relevant class.

The Regulator has not determined that holders of restricted or provisional licences are suitable to supervise apprentices or that apprentices can supervise (refer to Aurora S&I guide - "Guide to Supervision").

It follows that electrical contractors cannot allow their apprentices to do electrical work while being supervised by holders of restricted or provisional electrical technician's licences.

If an accident occurs, the repercussions in terms of disciplinary action and civil litigation are to be feared.

13. STATISTICS

The first cycle for contractor renewals under the new licensing system finished on 30 April 2000. Contractor renewals numbered 703. This is 60% of contractors who were licensed prior to the new system (April 1998). The drop in numbers can be attributed to a number of reasons (interstate movement, natural attrition, change of vocation, economy, etc). Many contractors holding dormant licences for their own benefit (ie as a second job, or safety net) did not renew.

Bear in mind nominated managers for contractors may come back into the system without the need for assessment up to three years from the date they were last registered.

Electricians renewing after the first year (A to Hd) were just below 60%. At the beginning of the system we had just over 6000 electricians on our database. Indications are that approximately 40% of these will not renew. We believe there are a number of electricians not receiving renewal notices because we haven't received updated addresses. It is the electricians' responsibility to renew, not our responsibility to chase them.

14. ANNUAL INDEXATION INCREASES FOR LICENCE APPLICATIONS

(there is no GST payable on these fees)

TYPE	OLD FEE \$	NEW FEE \$	TOTAL FEE \$
Electrical contractors			
Application Fee	30.00	30.60	
Licence fee	202.00	204.00	234.60
Late application fee	101.00	102.00	
Electricians			
Application Fee	30.00	30.60	
Licence fee	90.50	91.80	122.40
Late application fee	50.50	51.00	
Provisional			
Application fee	30.00	30.60	
Licence fee	30.00	30.60	61.20
Sundry fees			
Register inspection	10.10	10.20	
Register extract	5.00	5.10	
Duplicate Licence	15.10	15.30	

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