



Electricity Industry Bulletin No: 44 October 2001

ATTENTION COMPANY MANAGERS

Please ensure your nominated manager and electricians see this circular.

1. THERMAL INSULATION AND RECESSED DOWNLIGHTS

A recent incident occurred where an electrician made no provision for surrounds (barriers, shrouds) around extra-low voltage downlights as no thermal insulation was installed at the time and the installation was non-domestic. Shortly after this, the occupant installed fibreglass insulation over the 30 or so downlights, including the transformers.

A strong burning smell was detected and fortunately the only damage was to the ELV transformers that required replacing. The result was costly and could have been disastrous.

In edition 40 of this bulletin, we stated that thermal insulation should be considered to be installed to a depth of 100mm in domestic ceilings, regardless of whether it exists at the time of wiring. Non-domestic installations may be assessed based on the presence of insulation at the time the electrical work takes place. This does not remove the responsibility to discuss any future requirements with the owners, regardless of the type of installation.



Electrical compliance inspectors (Aurora Energy) will ask for these surrounds around all downlights in domestic installations. If they are not installed then the electrical contractor will need to justify why.

2. FUNCTIONAL SWITCHES ON ROOM HEATERS

It has come to our attention that there are heaters on the market with two on/off switches.

AS/NZS 3000 clause 4.3.5.1 states in part “an individual functional switch shall be provided for each room heater or for each group”. Provision is made to allow the switch to be on the heater but if the heater has two switches it may be said not to comply.

It seems unnecessary to require another switch to be installed when there are switches on the heater that are suitable as functional switches.

We have requested a ruling from Standards Australia committee EL/1.

In the mean time we hold the following view:

A room heater with more than one switch controlling separate sections of the heater may be deemed to meet the functional switch requirements of clause 4.3.5.1., provided each switch meets the requirements of clauses 2.8.6 and 4.3.5.2 (a).

3. LADDERS THAT CONDUCT ELECTRICITY

Many electrical contractor's vans still carry aluminium ladders and possibly there are still some with wire-reinforced wooden types. The time has long past to change to those that are more safe and usually more stable. Preventative action is always better than reactive action or as we have often found, ducking for cover after a serious accident has occurred.

An electrical worker would not use uninsulated pliers so why should they use conductive ladders?

In the last edition we mentioned the release of AS/NZS 4836 Safe Working on Low Voltage Electrical Installations and that this standard will be used as the benchmark for investigations into serious electrical accidents. Clause 4.3.1 states in part "Metallic, wire-reinforced or otherwise conductive ladders shall not be used on or near equipment if an electrical hazard may result from their use", the message is clear. Standards Australia (Hobart office) have informed us that sales of this standard have been extremely slow, in fact only 27 have been sold. Please purchase one now, read it and use it as part of company policy to avoid electrical accidents.

4. COMPETENT TO PERFORM THE TASK

Those licensed as electrical technicians (electricians) are permitted to perform electrical work but are they up to the task. Electrical work includes a vast array of different tasks however, no one should undertake to perform work for which they are not suitably trained.

Examples of electrical work that may require specific training additional to that obtained during an apprenticeship are:

- high voltage
- hazardous areas
- overhead line work
- underground cablejointing
- industrial process equipment
- heavy industrial mechanical equipment

5. RESTRICTED ELECTRICAL LICENCES

Letters have been sent to 250 workers who hold chlorofluorocarbon (CFC) licences (except those who hold electrical licences). These licences are administered by the Department of Primary Industries, Water and Environment and permit the holder to work with refrigerant gases. The letters stated the further statutory obligation to hold an electrical licence when performing electrical work and also that there is a category of restricted licence relating to the refrigeration industry.

This category of restricted licence is limited to the disconnection and reconnection of existing electrical equipment in order for the worker to carry out their primary trade. There is an allowance within this licence for minor fault finding in order to determine the exact area where the equipment has failed.

6. INVESTIGATION OF UNLICENSED ELECTRICAL WORK

Recently a qualified refrigeration mechanic was found performing what appeared to be electrical work on a domestic heatpump. The final subcircuit and the interconnecting wiring

between the indoor and outdoor units was apparently not done by a licensed electrician. An electrical installation notice was submitted by an electrical contractor who, it appears, only completed work at the switchboard end of the circuit. The contractor certified the whole circuit including part of that work where a green/yellow covered conductor was used as an active. The investigation is still in progress.

7. KAMBROOK ELECTRIC FRYPAN MODEL KEFO15

Due to a possible manufacturing defect this product may present an electrical shock hazard. Owners should immediately cease using the frypan and return the product to the place of purchase for an exchange or full refund.

Further information ring Kambrook on 1300 139 798

8. TUMBLE DRYER SAFETY

Following a number of fires involving domestic tumble dryers, Standards Australia, electrical safety committee EL/2 has introduced a new requirement to the standard AS/NZS 3350.2 11 1999 (Safety of household and similar electrical appliances, Part 2.11: particular requirements – Tumble dryers).

All new tumble dryers sold will including the following information.

To minimise the risk of fire in a tumble dryer the following should be observed:

Items that have been spotted or soaked with vegetable or cooking oil constitute a fire hazard and should not be placed in a tumble dryer.

Oil-affected items can ignite spontaneously, especially when exposed to heat sources such as in a tumble dryer.

If it is unavoidable that fabrics containing vegetable oil, cooking oil or hair care products, be placed in a tumble dryer, they should first be washed in hot water with extra detergent – this will reduce, but not eliminate, the hazard. The cool down cycle of tumble dryers should be used to reduce the temperature of the items. They should not be removed from the tumble dryer or piled or stacked while hot.

Items that have been previously cleaned in, washed in, soaked in or spotted with petrol/gasoline, dry cleaning solvents or other flammable including acetone, denature alcohol, petrol/gasoline, kerosene, spot removers (some brands), turpentine waxes and wax remover or explosive substances should not be placed in the tumble dryer.

Items containing foam rubber (also known as latex foam) or similarly textured rubber like materials should not be dried in a tumble dryer on a heat setting.

Fabric softeners or similar products should not be used in a tumble dryer to eliminate the effects of static electricity unless this practise is specially recommended by the manufacture of the fabric softener or product.

Plastic articles such as shower caps or babies waterproof nappy covers should not be placed in a tumble dryer, together with rubber backed articles, clothes fitted with foam rubber pads, pillows, galoshes and rubber-coated tennis shoes.

9. DANGEROUS POWER TOOLS

Recently the Department of Fair Trading (NSW) have taken steps to alert the general public of the risk of serious injury or death from buying unapproved imported power tools.

Although there has been no reports of unapproved power tools being offered for sale in Tasmania, Electricity Standards and Safety is providing the following information as a precaution.

Many of the power tools are being offered for sale through outlets including local markets, car boot sales, building sites, pubs, at rural field days and liquidation auctions.

These dangerous power tools are designed to look like trusted brands, they have well known brand labels or very similar names with only one letter change. They include drills, hammer drills, sanders, jigsaws and tile saws.



Following investigation some of the hazards found include:

- A hammer drill where the chuck could become live when power is turned on.
- Two circular saws that failed three safety tests and had five other non-approved features.

- A drill that sounded like a coffee grinder when turned on.
- A soft plastic carry case where red pigment easily rubs off.
- Drill bits and chuck keys that are so soft they jam the tools in a few hours.



Indicators that the tools are unsafe imported models include:

- They have rewirable power plugs instead of the normal Australian moulded plug.
- They do not have a C-Tick mark or an Australian approval number on the nameplate.
- Some are rated at 220 volts instead of 240volts
- They have no warranty card or instructions.
- Where there is more than one tool in a set, the tools are different colours.

Electricity Standards and Safety ask that if you have been offered cheap unfamiliar branded power tools, that you contact Tony Millhouse 6233 75 85