



Safety Alert

PORTABLE ELECTRICAL INVERTORS FOR CONSTRUCTION WORK

issued by WorkCover NSW



10 February 2006

Because of a serious electrical safety problem being experienced with some portable electrical inverters, WorkCover NSW warn users about the continued use of this type of equipment for construction work until the safety problems have been resolved.

Background

The warning relates to some portable inverters with 240 volt ac output and 12 volt dc or 24 volt dc (or similar) input, which, under certain conditions, may develop a hazardous voltage between the battery terminals to the exposed metal of the appliances or the inverter.

WorkCover warns that where the inverter design does not ensure appropriate insulation between the battery supply and the 240 volt output supply for an electrical appliance there is the possibility that, under a fault condition, the battery terminal or any metal connected to the battery could become energised to a dangerous level.

WorkCover is concerned that the use of some types of portable inverters may cause the operator of the inverter to be at risk.

There have been reports of accidents and a fatality (not in NSW) with these inverters possibly because of the way portable inverters are treated and used on construction sites. There has been a noticeable increase in their use within the construction industry within New South Wales particularly the residential housing sector. They are frequently used to supply power to small plug-in portable appliances such as power tools.

The use of inverters has been allowed for construction work since the publication of the 2003 edition of Australian / New Zealand Standard - AS/NZS 3012 Electrical installations-Construction and demolition sites. However, the Standards Committee including WorkCover has decided, that as no current national safety standard exists for portable inverters, specific requirements will be developed for inverters used in construction work. A review has commenced on the types of inverters used in construction work.

What should be done?

Until the review is completed by the Standards Committee, WorkCover advises that portable electrical inverters should not be used for construction and demolition work. The Committee has requested that safety regulators advise stakeholders as a matter of urgency. WorkCover endorses this direction until a solution is provided to this problem.

WorkCover also recommends that users of portable inverters in other workplace environments be cautious when selecting an inverter, especially those with warnings such as 'improper use can result in fatal voltages on the battery terminals, failure of the inverter and or fire.'

It should be noted that Victoria, Queensland, Western Australia and Tasmania have also issued similar warnings on the use of portable electrical inverters used for construction and demolition work.

Guidance should be obtained from the manufacturer or supplier to enable the selection of a safe type for the intended use.

Further information can be obtained by contacting the WorkCover Information Centre on 13 10 50.

Produced by State Coordinator- Electrical Plant Team, Hazard Management Group.

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