



16th November 2009

The President
RVCMANZ
PO Box 6047
Glenview Centre
HAMILTON

Dear Sir/Madam

RE: Electrical Compartment Design

It has come to the Department of Labours attention in New Plymouth that several custom built motorhomes have been designed and manufactured with wetcell batteries and 230volt electrical circuit switches located in the same unventilated compartment.

Wet cell or acid batteries produce fumes which can escape the battery container. If unventilated, the fumes can accumulate and ignite causing a fire hazard. Electrical switches are a well known ignition source, making this particular design potentially dangerous. The compartment pictured below was located under the bed, increasing the potential for harm if ignition occurred while occupants were asleep. The manufacturer involved has since recalled their motorhomes and swapped the wet cells with gel ones. They are also reconsidering their design to ensure switches are now completely separated from any batteries.

As you know all motorhomes and caravans must have a Warrant of Electrical Fitness which is valid for four years. The motorhome concerned had an Electrical WoF signed off before the acid batteries were put into the compartment. Electrical WoF's are only required for 230 volt wiring and not the 12 volt wiring required for batteries. Unfortunately this meant that having an Electrical WoF certificate did not ensure the compartment was fire safe, as the work completed after the inspection did not require compliance to any electrical standard. Therefore the compartment was not designated as a recognised hazardous area by the Electrical Inspector.

Could you please consider informing your members, either through your website, your next newsletter, magazine or as you see fit, of the dangers of such a design.

It is the Department's advice that:

- Where possible, manufacturers should use sealed batteries (Gel or A.G.M) if located inside motorhomes or caravans.
- Motorhome designers should locate acid or wet cell batteries away from electrical switches in mobile dwellings.
- Manufacturers should ensure compartments containing wet cell batteries are well ventilated to the outside of the vehicle.
- If in doubt about the fire safety of your battery compartment, speak to a registered the electrical inspector.

Thank you for your consideration. If you have any queries please feel free to contact me on 06 759 9404.

Yours sincerely

Jo-Ann Pugh
Acting Service Manager
Department of Labour

Photo: Unventilated compartment showing the wetcell batteries and electrical switches housed together

