

Workplace Health and Safety Queensland

SAFETY ALERT

Safe storage and transportation of gas cylinders in vehicles

Purpose

The purpose of this safety alert is to highlight the potential dangers associated with the storage and transportation of flammable gas cylinders in confined spaces of vehicles.



Photograph 1: The damage to the Toyota HiAce van where the MAPP gas cylinder was stored.

Background

There have been a number of incidents throughout Australia involving the explosion of gas cylinders in work vehicles. A recent incident in South East Queensland involved an explosion of a MAPP gas cylinder in a Toyota HiAce van parked outside a worker's home. Photograph 1 shows the force of the explosion and the structural damage to the building.

At the time of the incident the MAPP gas cylinder was fitted with a welding torch. Preliminary investigations indicate that the MAPP gas cylinder was found to be the source of fuel for the explosion. The MAPP gas cylinder had been placed in a storage rack within the vehicle overnight. The owner came out the next morning and activated the remote control for the central locking system

to open the van when the explosion occurred.

The fitting of the welding torch to the MAPP gas cylinder depresses the main valve of the cylinder to allow the flow of gas to the welding torch. The control valve on the welding torch is the only means of controlling the flow of the gas from the cylinder to the welding torch.



Photograph 2: The welding torch fitted to the disposable MAPP gas cylinder.

The occurrence of such an incident in a highly populated public area has the potential for devastating and catastrophic results to both human life and property.

Recommended control measures

Engineering controls

The fitting of a gas storage cabinet in the rear of the vehicle is the optimum solution. These gas storage cabinets are sealed and vented to atmosphere outside the vehicle.

The gas storage cabinets are to be installed in accordance with the manufacturer's instructions and have a flammable gas sticker affixed to the outside of the cabinet. Regular inspection and maintenance of all seals is to be conducted in accordance with manufacturer's specifications.



Photograph 3: A typical gas storage cabinet showing the warning sticker

Administrative controls

When storing MAPP gas cylinders or any other type of disposable gas cylinder in a vehicle or toolbox, ensure that the welding torch is removed from the cylinder.



Photograph 4: The welding torch removed from the disposable MAPP gas cylinder.

For the storage of any other gas cylinders in a confined space ensure:

- it is compliant with AS2865
- the main valve of the gas cylinder is shut off
- any control valves on the welding torch are firmly shut off.

Ensure that any obvious ignition sources are kept well away from any gas cylinders stored in a confined space.

More information

For more information visit the Workplace Health and Safety Queensland website at www.worksafe.qld.gov.au or call the Workplace Health and Safety Infoline on 1300 369 915.

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