

Vehicle Standards Guide 27 (VSG-27)

Labelling requirements for Hydrogen and Electric-powered vehicles

Revised December 2024

This guide provides advice to manufacturers and operators of hydrogen and electric-powered vehicles (including hybrid vehicles) regarding labelling requirements that commenced 1 January 2019.

Introduction

Vehicles powered by gaseous fuels, such as liquefied petroleum gas (LPG), liquefied natural gas (LNG) or compressed natural gas (CNG), must be fitted with labelling on their number plates. This labelling is to assist emergency service responders identify vehicles powered by alternate fuels and take any necessary precautions when responding.

From 1 January 2019, the requirement for number plate labelling was expanded to include Hydrogen and electric-powered vehicles (including hybrid vehicles). The existing requirements for other alternate fuel systems are unchanged.

What vehicles require a warning label

The *Heavy Vehicle (Vehicle Standards) National Regulation* (the Regulation) sets the labeling requirements for vehicles powered by alternate fuel systems.

hydrogen-powered vehicle means a heavy motor vehicle that is powered by a hydrogen fuel system and has one or more hydrogen fuel containers fitted to the vehicle for the system.

electric-powered vehicle means a heavy motor vehicle that is powered by one or more electric motors or traction motors.

hybrid vehicle means a heavy motor vehicle that is powered by an internal combustion engine (regardless of fuel type) and at least one electric motor or traction.

Label requirements

The label must be:

- fixed conspicuously to front and rear number plates
- affixed to a plate made of metal that is at least 1mm thick

- compliant with class 2 of AS 1906.1 ‘Retroreflective Materials and Devices for Road Traffic Control Purposes—Retroreflective Sheeting’
- fixed to the number plates so that the letters on the label are in an upright position
- does not wholly or partly obscure any characters on the number plates

For electric-powered vehicles (including hybrid vehicles not fuelled with hydrogen):

- The metal plate and label size shall be an equilateral triangle shape each side of which is 30 mm in length
- The label colour shall be retroreflective blue, complying with AS/ NZS 1906.1, Class 2
- It is marked ‘EV’ in a white capital letters that are at least 10 mm in height



Figure 1: example label for electric-powered vehicles

For hydrogen-powered vehicles:

- The metal plate and label size shall be a regular pentagon shape each side of which is 20 mm long
- The label colour shall be retroreflective yellow, complying with AS/ NZS 1906.1, Class 2
- It is marked ‘H’ in a black capital letter that is at least 10 mm in height

Note: Where a vehicle is fitted with more than one hydrogen fuel container two labels must be affixed to the front and rear number plates.



Figure 2: example label for hydrogen-powered vehicles

Note: The example labels shown in Figures 1 and 2 are for illustrative purposes only and do not represent the label’s actual size, dimensions or colour.

For hybrid vehicles fuelled with hydrogen and electricity:

Vehicles fitted with an electric or traction motor in conjunction with a hydrogen fuel system for the propulsion of the vehicle must comply with the requirements for Hydrogen-powered vehicles. Electric vehicle labels need not be applied in addition to the Hydrogen labels.

Complying with the Heavy Vehicle National Law

The operator of a heavy vehicle must ensure that their vehicle complies with the relevant *Australian Design Rules* (ADRs) and the National Regulation. Using or permitting another person to use a defective heavy vehicle on a road is an offence.

A defective heavy vehicle is a vehicle that:

- does not comply with the heavy vehicle safety standards; or
- has a part that does not perform its intended function; or
- has deteriorated to an extent that it cannot be reasonably relied on to perform its intended function.

Penalties can include on-the-spot fines or prosecution. Formal warnings or a defect notice may also be issued. More information can be found at [Heavy vehicle defects - https://www.nhvr.gov.au/hv-defects](https://www.nhvr.gov.au/hv-defects).

For more information:
 Visit: www.nhvr.gov.au/vehiclestandards
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 Email: vehiclestandards@nhvr.gov.au
 Phone: 13 NHVR (13 64 87)*

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