

VEHICLE STANDARDS INFORMATION

Conversion of Vehicles to Motor Homes

5

For further information please write to the Manager – Vehicle Safety & Policy
60 Denmark Street, Kew, 3101 or contact your local Customer Service Centre.

Introduction

Regulation 257 of the Road Safety (Vehicles) Regulations 2009 requires that all modifications to a vehicle either have specific approval from VicRoads or be carried out in accordance with guidelines published by VicRoads.

For the purposes of Regulation 257, this document is a guideline published by VicRoads.

The conversion of an existing motor vehicle to a motor home is a modification and must be carried out in accordance with the guidelines published in this document.

An Approval Certificate is required for the registration or change of description of a vehicle converted to a motor home.

Reference will need to be made to any Regulation, Vehicle Standards Information (VSI), Australian Design Rule (ADR) or Australian Standard referred to in this document.

Definitions

Approval Certificate

An "Approval Certificate" is a technical assessment certificate issued by a participant in the Vehicle Assessment Signatory Scheme (VASS). The certificate is evidence that the modified vehicle has been inspected and that all modifications have been carried out and completed in accordance with recognized standards and codes of practice and that the vehicle in its modified form continues to comply with the Standards for Registration.

A list of VASS Signatories is available from any VicRoads Registration and Licensing office, the VicRoads internet site or by contacting VicRoads on 1300 360 745.

Approved material

Additional or replacement glazing material means material which meets the requirements for glazing material as detailed in Australian Design Rule (ADR) 8/- Safety Glazing Material. Alternatively, approved material means material with the same characteristics as material mentioned in any of the following standards (as applicable at the time of conversion) –

- Australian Standard AS R1-1965 Safety Glass for Land Transport;
- Australian Standard AS R1-1968 Safety Glass for Land Transport;
- Australian Standard AS 2080-1977 Safety Class for Vehicles;
- British Standard BS 857: 1967 Specification for Safety Glass for Land Transport;
- British Standard BS 5282: 1975 Road Vehicle Safety Glass;
- British Standard BS AU178: 1980 Road Vehicle Safety Glass;
- Japanese Industrial Standard JIS R 3211-1979 Safety Glasses for Road Vehicles;
- American National Standard ANSI Z26.1-1980 Safety Code for Safety Glazing Materials for Glazing Motor Vehicles Operating on Land Highway;

Carrying Capacity

The carrying capacity of a vehicle is the difference between its Gross Vehicle Mass and its Unladen Mass.

Gross Vehicle Mass (GVM)

The Gross Vehicle Mass is the maximum permissible laden mass of a vehicle. This figure is normally specified by the original vehicle manufacturer and shown on the vehicle compliance plate or in specifications published for that vehicle.

Motor Home

A motor home referred to in this information sheet is a mainly enclosed motor vehicle designed or equipped for human occupation when stationary and includes sleeping facilities.

Unladen Mass

The Unladen Mass is the mass of the vehicle ready for service, unoccupied and unladen with all fluid reservoirs filled to nominal capacity including fuel and all standard equipment (such as stove, refrigerator, sink, water tanks and bunks).

Certification

An Approval Certificate is required for a vehicle converted to or registered as a motor home.

Vehicle Suitability

The vehicle should be of a type that is suitable for conversion to a motor home. Some aspects that need to be considered before purchasing a vehicle or commencing work on the modification are:

- Is the vehicle's general mechanical and structural condition sound?
- Is there enough space available for seating, bunks, stove, sink, refrigerator and general living requirements?
- Is the load carrying capacity of the vehicle sufficient to accommodate the additional weight of equipment, accessories, passengers and luggage?
- What category of driver licence is required to drive the vehicle?

General Safety Requirements

In addition to items covered in this publication, motor homes must continue to comply with all the applicable standards and Australian Design Rules (ADRS) including the requirements in ADR 42/. and ADR 44/. that apply to motor homes.

The vehicle must not be modified or fitted with any object, fitting or appliance unless the design, construction and fitting of the modification, object, fitting or appliance is such that it will reduce to a minimum the risk of bodily injury to any person.

Interior fittings are to be designed and located so as to prevent injury to any occupant. All chairs, tables and equipment should be secured in such a way that they will not be likely to become dislodged in normal operating conditions.

Sufficient cupboard space should be provided to store all items such as cooking utensils, cutlery, and crockery while travelling. The cupboard doors should be fitted with latches and hinges of sufficient strength to hold the doors closed in normal driving conditions.

Equipment such as stoves, refrigerators, water, fuel and waste tanks should be installed in positions so that:

- the load is evenly distributed;
- no axle or wheel is overloaded; and,
- the vehicle remains in a level attitude.

Vehicle Mass

It is essential that the vehicle has a carrying capacity adequate for its intended use. In addition to all equipment and fittings including the stove, refrigerator, generator, air conditioner, sink, cupboards, water tanks and bunks allowance must be made for:

- A mass of at least 65kg plus 15kg for luggage for each passenger the vehicle is designed to carry.
- The mass of water, fuel and any waste tanks when full.
- Cooking utensils, food, bedding, and other associated items.

The Gross Vehicle Mass of the motor home remains that specified by the original vehicle manufacturer and must not be exceeded unless the vehicle has been appropriately upgraded and an Approval Certificate submitted.

Dimensions

The following dimensions must not be exceeded:

Maximum length:	12.5 metres.
Maximum width:	2.5 metres
Maximum height:	4.3 metres
Rear overhang:	the lesser of 60% of the wheel base or 3.7 metres

Items or equipment mounted on the rear of the vehicle (for example toolboxes or a rack to carry a motorcycle or gas bottles) are included in the measurement of rear overhang.

Lighting

The vehicle must be fitted with lights that comply with the applicable standards as required by the Road Safety (Vehicles) Regulations 2009.

All vehicles must be fitted with turn signal lamps regardless of the date of manufacture.

All mandatory lamps must not be obscured by any equipment or fittings and continue to comply with the applicable standards.

Driver's View

The driver of the vehicle must have a full and uninterrupted view of the road and any traffic ahead and to each side of the vehicle and, by use of rear vision mirrors a clear reflected view of any following or overtaking vehicle

Seating Positions

A motor home must be fitted with an adequate number of seating positions designed for use while travelling.

The number of such seating positions must not be less than the number of sleeping berths provided in the motor home. For example, a motor home, which has four berths, must have at least four seating positions designed for use while travelling.

It is preferred that these seating positions be forward facing and are those that would most likely be occupied when travelling, such as seats immediately behind the front row of seats rather than those at the rear of the vehicle.

Swivelling seats, if intended to be used as seating positions when travelling, must be capable of being locked against rotation in the position in which they will be occupied when the vehicle is in motion.

Seats, which are additional to the minimum number of seating positions intended for use when travelling, need not comply with seat strength and seat belt requirements specified but should not be occupied while the vehicle is travelling.

Seat Belts

Seat belts must be fitted to all seating positions, intended for use while travelling.

For vehicles not addressed in VSI 21 the general requirements for seat belts are that:

- Forward facing seating positions which are within 200mm of the internal sidewall of the vehicle must be provided with lap sash seat belts.

- Side facing seats may only be fitted with lap seat belts.
- The seat belts fitted must comply with Australian Standard 2596.

Child Restraint Anchorages

Child restraint anchorages must be fitted to a row of forward facing seats behind the driver if required by VSI 21 for that category vehicle. This normally applies to at least three seating positions in that row or the total number of adult seating positions if less than three. Where the seat back is divided into two or more sections which may be folded independently of each other and the division lies close to the centre of a seating position then a child restraint anchorage is not required for that position.

In addition to meeting the requirements contained in the applicable Australian Design Rule (ADR), the driver of a vehicle must ensure that each child passenger is wearing a properly fitted and fastened child restraint or booster seat suitable for their age as detailed in Victorian Road Safety Rules.

Windows

Transparent material used in any windscreen, window or interior partition must be an approved material if the vehicle was manufactured after June 1953 or the material was fitted to the vehicle after June 1953.

The light transmittance of any window available to the driver to obtain a view of the road or other road users must not be less than the figure specified in VSI 2 – Window Tinting.

Access and Ventilation

Suitable access must be provided to both the travelling and living areas of the motor home. The motor home must have outward opening or sliding doors. At least one of these doors must be located on the left hand side or the rear of the vehicle to provide direct access to the living area.

Sufficient ventilation must be provided for all vehicle occupants both when travelling and stationary. Unless other satisfactory means of ventilation are provided at least 50% of the windows must be able to be opened.

Adequate permanent ventilation must be provided for all gas appliances.

Liquefied Petroleum Gas (LPG) Installations

All gas operated appliances installations must comply with the applicable requirements of Australian Standard AS 5601 – Gas Installations.

In addition any specific installation requirements specified by the appliance manufacturer, such as ventilation, and minimum clearance requirements, must be complied with.

Electrical Installations

Electrical installations must comply with Australian Standards AS – 3001 Electrical Installations – Movable premises (including caravans) and their site installations.

Fire Extinguisher

At least one fully maintained fire extinguisher of at least 5B rating must be fitted in accordance with the version of Australian Standard AS 2444 current at the time of conversion, in a position so as to be readily available for use. The mounting bracket must be designed and fitted so that the extinguisher will be not likely to become dislodged in normal operating conditions.

Television and Visual Display Units

Any television receiver or visual display unit and associated equipment must be securely mounted in a position which:

- Does not obscure the driver's vision;
- Does not impede driver or passenger movement in the vehicle;
- Is unlikely to increase the risk of occupant injury, and;
- Unless a driver's aid, no part of the image on the screen is visible to the driver from the normal driving position.

Toilets Sinks and Showers

Any toilet, sink or shower fitted to the vehicle must comply with the following:

- The contents of the toilet pan or urinal must not discharge directly onto the road but must empty into an externally vented tank which is securely attached to the vehicle;
- The contents of any basin, sink or shower must not drain into any toilet pan or urinal or into any tank into which a toilet pan or urinal empties.
- The toilet, urinal and tank must vent directly to atmosphere.

Exhaust Outlet

The exhaust outlet on a diesel engine vehicle with a GVM over 4.5 tonne and manufactured after 1976, other than a bus, must be at least 3m above the ground. The outlet must discharge upwards either:

- (a) vertically; or
- (b) within 30° of the vertical and to the rear within 45° either side.

If a vertical exhaust outlet is fitted with a rain cap it must be hinged at approximately 90° to the centerline of the vehicle.

Note: This vertical exhaust requirement does not apply to vehicles certified to meet the vehicle emission standards specified in the ADR 80/01 published by the Australian Government Department of Infrastructure, Transport, Regional Development and Local Government and have a horizontal exhaust that discharges on the driver's side of the vehicle towards the centre of the road.