

Light Motorhome Conversion

Vehicle Standards Fact Sheet



MR806

6.18

This Fact Sheet provides the minimum safety requirements for light motorhome conversion in South Australia.

A motorhome includes a campervan and any other motor vehicle incorporating seats, tables, cooking facilities, storage facilities and/or sleeping accommodation.

These features must be rigidly fixed to the motorhome, but it is acceptable if tables are designed to be easily removed, for example to convert the area to sleeping accommodation.

The primary function of a motorhome is to provide living accommodation for the driver and passengers. If the vehicle is designed to perform another function as well (e.g. to carry horses or cars, or as a mobile workshop) it may not be registered as a motorhome in South Australia.

A light motorhome is a vehicle with the vehicle manufacturer's Gross Vehicle Mass (GVM) up to and including 4.5 tonnes.

For a motorhome with GVM greater than 4.5 tonnes, please see the [National Heavy Vehicle Regulator Vehicle Standards Guide 5: Converting a vehicle into a motorhome](#).

General requirements

All objects, fittings and appliances installed in a motorhome must be installed with a 'safety first' approach that minimises the risk of injury to all persons when the motorhome is both stationary and travelling.

The maximum laden mass of a converted motorhome must not exceed the vehicle manufacturer's GVM. Please make

sure the vehicle has a GVM that is sufficient for the motorhome conversion.

If you intend to tow a trailer or car, you should also consider if the vehicle has an adequate Gross Combination Mass (GCM). The GCM is the total maximum loaded mass of the motor vehicle and any vehicles it may lawfully tow at any given time.

Size and dimensions

Motorhomes must not exceed:

- Length: 12.5 metres.
- Width: 2.5 metres. This includes items or equipment mounted on the side (e.g. awnings).
- Height: 4.3 metres.
- Rear overhang: 3.7 metres or 60% of the wheel base, whichever is lesser. This includes items or equipment mounted on the rear.

Ventilation

At least half the number of windows must be capable of being opened or the motorhome must be provided with an alternative method of ventilation.

At minimum this should be an inlet air vent and at least two rotary vents or a hatch in the roof towards the rear of the passenger compartment.

Adequate permanent ventilation must be provided for all gas appliances, including where appliances (such as barbeques) are fitted externally to the vehicle and may be operated under an annexe or an awning.

Further information

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Installation of Liquefied Petroleum Gas (LPG)

Liquefied Petroleum Gas (LPG) appliances, such as stoves and water heaters, must be installed by a licenced gas installer and each appliance must be accompanied by an Installation Compliance Certificate, which identifies the vehicle by its Vehicle Identification Number (VIN) or chassis number. Gas appliances must comply with the Australian Standards and the manufacturer's specifications.

Where the motorhome's engine runs on LPG fuel, gas appliances must not be connected to, or derive fuel from, the engine's fuel system.

Gas piping must be protected from abrasion where it passes through partitions or parts of the vehicle. Piping must not be exposed to the living space of the motorhome. LPG cylinders must be stored securely and separately from the living space of the motorhome in a storage compartment that is constructed and ventilated to the Australian Standard AS/NZS 5601.

Australian Standard AS/NZS 5601 specifies the requirements relating to:

- location of gas cylinder(s).
- gas cylinder compartments.
- prohibited appliances.
- location of flues.
- appliance ventilation.
- consumer instructions that need to be displayed.

For information on LPG requirements please contact your gasfitter or the Technical Regulator on (08) 8226 5500.

240V Electrical installations

240V electrical installations and connections must be carried out by a licensed electrician and the motorhome must contain an Electrical Safety Certificate showing compliance with Australian Standards AS/NZS 3000 and AS/NZS 3001.

If you are installing a solar panel or solar generated electricity you will need to comply with the Australian Standard AS/NZS 5033. It is recommended to engage the services of an electrician to do this.

For information on 240V electrical requirements please contact your electrician or the Technical Regulator on (08) 8226 5500.

All other electrical wiring must be done in accordance with the [Road Traffic \(Light Vehicle Standards\) Rules 2018, Part 4, Division 1, Section 40](#).

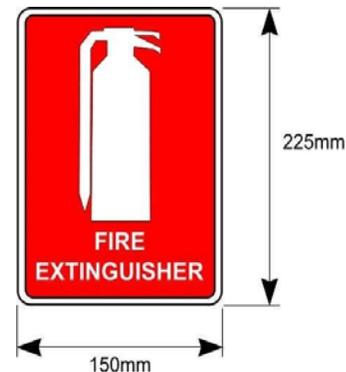
Fire extinguishers

Every motorhome must contain at least one fire extinguisher with a minimum rating of 5B, which also complies with Australian Standard AS 2444. At least one of these fire extinguishers must be securely mounted in the living space of the motorhome, in a readily visible and accessible position no higher than 1.2 metres from the floor of the living space.

The mounting bracket must also comply with Australian Standard AS 2444. It must be able to withstand a force of 10 times the fire extinguisher's weight and must be designed such that the fire extinguisher does not dislodge during travel.

Vehicles with multiple living compartments must have a fire extinguisher complying with the requirements of this section installed in each compartment.

If a fire extinguisher is fitted inside a cupboard, locker or bin a sign must be affixed in a location adjacent to that enclosure so as to be clearly visible and in accordance with Australian Standard AS 2444.



Glazing

The glass used in the windscreen of all vehicles must be laminated safety glass complying with Australian Design Rules (ADR) 8/.. .

Transparent materials, including glass, used in any newly fitted window or interior partition must be an approved material complying with Australian Standard AS 2080. In addition, glass fittings must be clearly marked with compliance information and have a luminous transmittance complying with the [Road Traffic \(Light Vehicle Standards\) Rules 2018, Part 4, Division 1, Section 44](#).

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Household type light fittings, mirrors and cupboard fronts made from non-safety glass should not be used. Those that are, must be adequately enclosed or otherwise protected to minimise the risk of injury caused by broken glass in an accident.

Interior fittings

All chairs, tables and other living area fittings must be secured in such a way that they will not dislodge during travel and must be able to withstand substantial vibration and impact and securely hold their contents (for example when driving over unsealed or corrugated roads).

Positive latches on internal doors, including cupboard doors, are recommended and all interior fittings should be secured to withstand a force of 10 times its weight.

Interior fittings must be designed and fitted so as to prevent injury to occupants. Hazardous projections, sharp edges and sharp corners are not permitted.

Some examples of hazardous projections that may cause injury are:

- sliding window latches and internal fly screen fittings.
- 240/12V light fittings and plug sockets.
- fire extinguishers and mounting brackets.
- hooks used for hanging clothes or curtains.
- lift-up roof and sun roof retaining clips and winders.
- edges or corners of cupboards, benches and stoves.

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. For rear vision, in addition to rear vision mirrors a rear mounted camera is acceptable.

Lighting and reflectors

Motorhomes must be fitted with lights and reflectors that comply with the standards applicable to your particular vehicle. These will be found in the [Road Traffic \(Light Vehicle Standards\) Rules 2018, Part 7](#).

Mandatory lights must not be obscured by any equipment or fittings.

Seating positions

A designated seating position is a seat that is used when travelling on a road.

A motorhome must have at least one designated seating position for each sleeping berth in the motorhome (e.g. a two berth motorhome must have a designated seating position of at least two).

Designated seating positions designed to swivel or adjust must be capable of being locked against rotation in the position in which they will be occupied when the vehicle is in motion.

Installing a new designated seating position, or moving an existing designated seating position to a new position or orientation is a modification that should be assessed and certified by a recognised Light Vehicle Engineering Signatory.

Seat belts

Seatbelts must be fitted to all designated seating positions. The [Vehicle Standards Bulletin 5](#) specifies the type of belt and anchorages required (for additional seats) depending on the type of seat.

Installing new seatbelts or seatbelt anchorages, is a modification that should be assessed and certified by a recognised Light Vehicle Engineering Signatory.

Seat belts or child restrains must not be attached or installed to seats which are not a designated seating position.

For any questions about installing new seatbelts or seatbelt anchorages, please contact Vehicle Standards on 1300 882 248.

Child Restraint Anchorage

For a vehicle manufactured after 1 June 1988, child restraint anchorages (CRA) are required for every rear forward facing seat position, up to a maximum of three. Installing new CRA or CRA bars is a modification that may be assessed and certified by a recognised Light Vehicle Engineering Signatory.

Access

The accommodation area of every motorhome must be fitted with at least one outward opening or sliding door on the left hand side or the rear of the vehicle. Outward security doors fitted over bi-fold or inwards folding doors are not categorised as outward opening doors for this purpose.

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Doors must provide a clear and direct path of access between the outside and inside of the accommodation area of the motorhome. The door must not be obstructed by any items such as furniture or a designated seating position. The door should be of a size which allows an average sized person to easily and directly enter and exit the residential area of the motorhome.

The door must be sufficiently close to the ground so that it can be accessed without steps or with a minimal number of fixed steps and does not require portable steps of any kind.

TV and monitors

All television receivers or visual display units and associated equipment must be secured to withstand a force of 10 times its weight and 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.
- is not visible to the driver from the driving position—with the exception of driver aids (e.g. satellite navigations systems).

Toilet, sinks and showers

Any toilet installed in a motorhome must empty into a tank which must:

- be securely attached to the motorhome;
- vent directly to the atmosphere; and
- contain non-inflammable and non-irritant chemicals which form an efficient deodorant and germicide.

Systems that discharge directly to the ground are prohibited.

Any sink or shower installed in a motorhome must drain into a tank that must vent directly to atmosphere and must not drain into any toilet pan or into any tank to which a toilet pan empties.

Water tanks

Any clean and waste water tanks installed in a motorhome must be securely mounted to the vehicle. Tanks should be easily accessible for repairs, maintenance, removal and replacement and should be located with consideration given to the distribution of the mass of the tank when full. Shut-off valves and threaded connections to the tanks should be easily accessible for connecting hoses for drainage.

Body modification

Properly fabricated body components, including body panels, must be used for all new, additional or replacement panels.

Panels and brackets similar to those utilised on high volume manufactured motorhomes may be used, provided that the panels are at least equivalent in thickness and strength and attached in accordance with good engineering practice.

Where sharp edges exist, they should be capped with fully welded steel covers or pinch weld or equivalent.

Where panels are intermittently welded, they must be fully sealed to prevent the ingress of exhaust gases into the cabin.

Roof modifications must be designed so that:

- the strength of the roof is maintained with adequate perimeter bracing and roof support beams wherever necessary;
- the centre of gravity of the vehicle is not increased to the point where handling, and thus the safety of the vehicle, is compromised; and
- removable bunks and mattresses intended for use in the *hi-top* or *pop-top* area can be safely stored or locked down whilst the vehicle is in motion.

Other modifications

For any modifications that are not described in this Fact Sheet, please contact Vehicle Standards on 1300 882 248.

The information and data on this fact sheet is subject to change without notice. The Government of South Australia may revise this information at any time by updating this factsheet.

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