

Vehicle Standards Information 8

October 2021

This information sheet supersedes all previous copies of VSI 8.

Guide to modification for motor vehicles

This Vehicle Standards Information sheet outlines the requirements when modifying a vehicle. The vehicle operator is responsible for ensuring the vehicle is modified in accordance with the standards for registration.

This information sheet applies to vehicles with a Gross Vehicle Mass (GVM) of 4.5 tonne or less. For heavy vehicle requirements please refer to the National Heavy Vehicle Regulator website at nhvr.gov.au

Introduction

Modifications to vehicles have the potential to adversely affect a vehicle's compliance with the Standards for Registration, its structural integrity, the operation of its safety systems or its handling characteristics. It is for this reason that Regulation 293 of the *Road Safety (Vehicles) Regulations 2021* states that a person must not use on a highway a modified vehicle unless the modification has been approved by VicRoads or has been carried out in accordance with guidelines published by VicRoads.

From time to time, vehicles and vehicle designs change. Accordingly, the modifications that are approved will change. Modifiers must ensure that they are working from the most recent version of this document before they modify a vehicle.

However, the requirements of this Information Sheet are not retrospective. This means that, in general, modifications undertaken in accordance with the version of VSI 8 current at the time the modification is carried out will remain acceptable into the future unless a future version of VSI 8 specifically states otherwise.

VicRoads has approved some of the more common and simpler modifications which generally do not affect a vehicle's continued compliance with the Standards for Registration. A list of these approved modifications is set out below.

Some more complex modifications to vehicles have also been approved provided those modifications have been carried out in accordance with the National Code of Practice for Light Vehicle Construction and Modification published on the Commonwealth Department of Infrastructure, Transport, Regional Development and Communications (DITRDC) website as Vehicle Standards Bulletin 14 (VSB 14). Particulars are set out below. Some modifications that are not addressed by VSB 14 are also included below.

Standards for registration

Victoria's Standards for Registration are set out in Schedule 2 of the *Road Safety (Vehicles) Regulations 2021*. To be eligible for registration in Victoria, a vehicle must comply with the Standards for Registration applicable at its date of manufacture. Registered vehicles are required to continue to comply with the applicable Standards for Registration.

Vehicle Assessment Signatory Scheme (VASS) Approval Certificate

A VASS Approval Certificate is a certificate that can be accepted as evidence that a modified vehicle has been inspected and that all modifications have been carried out and completed in accordance with the National Code of Practice for Light Vehicle Construction and Modification (see below) or in a manner that is otherwise acceptable to VicRoads. An Approval Certificate can only be issued by a Signatory authorised under the Vehicle Assessment Signatory Scheme (VASS).

The list of VASS signatories is available from any VicRoads Customer Service Centre or the VicRoads website.

In general, an Approval Certificate is required for a modification to any part of a vehicle that is covered by an Australian Design Rule (ADR) or that has the potential to adversely affect the structural integrity, safety systems or handling characteristics or exhaust emissions compliance of the vehicle.

Note: Any modification not specifically listed as an approved modification in this Information Sheet will require a VASS Approval Certificate or may be prohibited. It is recommended to contact a VASS signatory before conducting any modification not listed in this Information Sheet.

Approved modifications

For the purposes of Regulation 35 of the *Road Safety (Vehicles) Regulations 2021*, fitment of, or changes to the following are approved modifications:

- additional lighting, forward and rearward facing lamps which comply with the Standards for Registration
- air filter (including pod-type air filters) on EFI vehicles if there are no other intake modifications, all sensors remain in place and the filter is a dry (non-oiled) type.
- air horns (single tone only)
- an alarm and immobiliser as long as this does not have a "remote start" feature
- bull bars, which comply with the requirements in VSI 1 Bull Bars
- cargo barriers complying with AS/NZS 4034
- 'catch can' in the engine crankcase ventilation system that is plumbed in (atmospheric ventilation is prohibited)
- gas shock absorbers (provided the vehicle maintains its original attitude)
- heating, ventilation and air conditioning. If this modification alters the windscreen demist performance, VASS certification is required
- markings, painting, speed strips (See VSI 12 Flashing lights, Other Lights and Reflectors for reflective (prism pattern) film)
- mesh stone shields (windcreens and lamps) which comply with VSI 29 *Drivers Field of View Requirements*
- mudflaps, spats and pebble guards
- radio and sound systems including aerials, speakers and fittings where no structural modification takes place

- rear vision mirror extensions for towing
- roof racks
- stabiliser bars, torque rods and traction rods, provided the ground clearance requirements are still met
- supplementary mirrors not interfering with or significantly reducing the area of the mirrors required by the Standards for Registration
- sun visor (exterior) and rear window louvres
- tow bars, which comply with AS 4177 and designed to fit that make, model and year of vehicle, and are supplied with detailed fitment instructions
- window tinting, which complies with the requirements in VSI 2 Window Tinting
- equipment or accessories equivalent in quality, performance and safety to those fitted to the vehicle or supplied or recommended by the vehicle manufacturer as original equipment or accessories
- modifications to vehicle electrical systems other than modifications that affect safety systems, vehicle dynamic and primary control systems, exhaust emissions, hybrid drive systems, any electrical system operating at over 28V or compliance with the Standards for Registration.

In addition to the above, modifications which do not affect the structure, suspension, handling, restraints, safety systems, emissions systems or the compliance with ADRs or relevant Standards for Registration for the vehicle are also approved modifications.

Note: This approval does not apply to a modification that has been carried out in a manner that does not comply or would cause the vehicle not to comply with a Standard for Registration.

Vehicle Standards Bulletin 14 (VSB 14)

National code of practice for light vehicle construction and modification

VSB 14 is published on the Commonwealth Department of Infrastructure, Transport, Regional Development and Communications (DITRDC) website. This code of practice has been developed in consultation with industry, user groups and government agencies with an interest in light vehicle construction and modification. VSB 14 has been endorsed by State and Territory vehicle registration authorities. Regulation 22(3)(c) of the *Road Safety (Vehicles) Interim Regulations 2020* requires that any modification or addition to a light vehicle be certified as complying with VSB 14 or be otherwise approved by VicRoads. VSB 14 cannot and does not address every conceivable modification. While modifications not addressed by VSB 14 are generally not permitted, there may be some circumstances where these modifications are allowable. In such cases it is essential that the vehicle owner consult a VASS Signatory before commencing any work. In all cases it is recommended to speak with a VASS Signatory before commencing any certifiable modification.

Most of the modifications covered by VSB 14 require a VASS Approval Certificate. However, some modifications do not require certification provided that they have been carried out in accordance with the General Requirements section of the relevant Modification Code in VSB 14. More specific information is set out below. It is strongly recommended that readers of VSB 14 familiarise themselves with the Important Information for Users and the General Requirements sections of each of the relevant VSB 14 modification codes before commencing work on a vehicle.

The following approved modifications are identified using the applicable VSB 14 Modification Code. Also included

are guidelines for other related modifications that are not specifically addressed by VSB 14. Where indicated, a VASS Approval Certificate is required.

Persons contemplating a modification that will require a VASS Approval Certificate are strongly advised to consult a VASS Signatory before commencing any work.

Engines

VSB 14 Modification Code LA

Modifications listed under section 1.1 and 4 of VSB 14 section LA are considered to be approved modifications when conducted in accordance with instructions and compliance with Standards for Registration are maintained.

In all cases, if the engine is modified such that the resulting power increase is greater than 20% it must be certified by a VASS Signatory under the relevant Code of Section LA.

Off Road and Passenger Vehicles manufactured on or after January 1986 and Commercial vehicles below 2.7 tonnes GVM manufactured on or after July 1988 must not have any modification that significantly increases engine performance or otherwise affects exhaust emissions unless certified by a VASS Signatory.

Fitting replacement original equipment, equivalent or better components that have no influence on engine performance or exhaust emissions (e.g. higher volume oil pump than original, fitment of an aftermarket intercooler, intake filters) is allowed.

Note: It is the registered operator's responsibility to notify VicRoads of any change of engine number within seven days.

Exhaust systems

The following applies instead of Section 2.7 of VSB 14 Modification Code LA. Modified and alternative exhaust systems are permitted if they satisfy the following requirements:

- the exhaust system must not allow direct entry of exhaust gases into the occupant compartment

- the exhaust system fitted to a motor vehicle must be constructed to ensure that exhaust gases are only emitted from a place designed by the manufacturer to emit such gases
- no part of the exhaust system may pass through the passenger compartment
- for vehicles fitted with one or more catalytic converters as original equipment, the catalytic converter(s) must be retained in their original location and all exhaust gas must flow through the converters at all times. Similarly, any sensors and particulate filters positioned in the exhaust system as original equipment must be retained in their original locations and operational
- no exhaust system whether it be functional or ornamental is to be mounted in such a manner as to create a hazardous situation particularly from hot surfaces or projections
- all piping and muffler systems must be adequately supported
- the vehicle must continue to comply with the ground clearance requirement
- exhaust extractors may be fitted to a motor vehicle manufactured before July 1976, provided they do not foul any part of the steering, suspension, braking or fuel systems. In all other cases, evidence either in the form of an Approval Certificate or acceptable evidence from the extractor manufacturer to show that the vehicle continues to comply with all applicable emission regulations will be required

Evidence from the extractor manufacturer is acceptable if it includes information:

- identifying the extractors as appropriate for the particular vehicle make and model
- certifying that the extractors have all the features and fittings necessary to allow the vehicle's emission control system to be reconnected and work properly

- describing how the extractors should be fitted.
- There must be no escape path for exhaust gases other than the exhaust outlet
- The vehicle must continue to comply with the noise emission standards applicable to it. For further details, refer to the EPA website.

Transmission

VSB 14 Modification Code LB

Modifications listed under section 1.1 and 4 of VSB 14 section LB are considered to be approved modifications when conducted in accordance with instructions and compliance with Standards for Registration are maintained.

The following transmission modifications are prohibited:

- "re-flashing" of transmission control units other than as approved by the vehicle manufacturer
- permanent locking of a differential or fitting a "spool".

Note: It is a requirement that vehicles manufactured after June 1988 have a functioning and accurate speedometer. The speedometer of a vehicle that has had a transmission or final drive change may need to be recalibrated to maintain its pre-modification accuracy.

Brakes

VSB 14 Modification Code LG

Modifications listed under section 1.1 and 4 of VSB 14 section LG are considered to be approved modifications when conducted in accordance with instructions and compliance with Standards for Registration are maintained.

Body and chassis

VSB 14 Modification Code LH

Modifications listed under section 1.1 and 4 of VSB 14 section LH are considered to be approved modifications when conducted in accordance with instructions and compliance with Standards for Registration are maintained.

VicRoads VSI 2 must be referred to for information on window tinting and films in place of VSB 14 section LH.

External gauges

Gauges may be mounted externally forward of the windscreen in a position visible to the driver provided the gauge and gauge mounting structure complies with the requirements for bonnet scoops and projections in VSB 14 Section LH.

If the gauges have instrument lighting then the intensity of the light must not be greater than that of the interior instrument panel.

It is recommended that pressure gauges are of a type that are electrically controlled, however if pressure lines are required to operate the gauges then the lines must be suitable for the pressures and temperatures involved, braided type lines are preferred. The lines must be appropriately supported and routed so that they are not likely to fail or be damaged during normal use.

Protrusions

A modification to a vehicle must not result in:

- any object or fitting, protruding from any part of the vehicle in a manner likely to create the risk of bodily injury to any person
- any component, feature object or fitting on the vehicle whose design, construction and/or condition and the manner in which it is affixed, is likely to create the risk of bodily injury to any person
- any bumper bar which does not have its ends turned towards the body of the vehicle to a sufficient extent to avoid any risk of hooking or grazing any person.

Vertical supports forward of the windscreen for use in conjunction with overhead carriers must not adversely affect the vehicle driver's forward field of view (see VSI 29 *Drivers Field of View Requirements* for more information).

Glazing (windscreen and windows)

All replacement or modified windscreens, windows, glazed partitions, etc. must be of appropriate automotive safety glass or other

approved material and must comply with the Standards for Registration.

The luminous transmittance of all glazing material including any applied tinting must also comply with the Standards for Registration.

Refer to VSI 2 *Window tinting and films* for further information on glazing and window tinting.

Seating and occupant protection Modifying seats or seating capacity

Refer to VSI 19 *Additional or Replacement Seats* for guidelines regarding the modification of seats or seating capacity of a vehicle.

Note: It is the Registered Operator's responsibility to notify VicRoads of any change to the number of adult seating positions.

Child restraint anchorages

Refer to VSI 17 *Child restraint anchorages* for guidelines on the fitment of child restraint anchorages.

Wheelchair accessible vehicles

Wheelchair accessible vehicles must be certified by a VASS Signatory.

Internal rollcages

Internal rollcages must be certified by a VASS Signatory as complying with either VSB 14 Modification Code LK8 or with Codes LK9 and LK10 (as applicable).

Motorcycles and three wheeled vehicles

VSB 14 Modification Code LL

Modifications listed under section 1.1 and 4 of VSB 14 section LL are considered to be approved modifications when conducted in accordance with instructions and compliance with Standards for Registration are maintained.

Seat conversions

Conversion of a two-seat motorcycle to a single seater or conversion of a modified motorcycle to its original seating configuration does not require certification providing the motorcycle frame is not cut, drilled or welded and the modifications are carried out in accordance with section 5 of VSB 14 section LL Specific Requirements for Seat Conversions.

Sidecars

The fitting, or removal, of a sidecar is permitted provided the motorcycle frame is not cut, drilled or welded. Sidecars must only be fitted to the left-hand side of a motorcycle.

Rear Mudguards

Motorcycle mudguard coverage requirements for rear axles were revised in November 2018 by removing specific dimensional requirements. Under the revised version of ADR 42 *General Safety Requirements*, the mudguard on the rear axles must continue to:

- cover the entire width of the tyre
- protect other road users, as far as practicable, against thrown-up stones, mud, ice, snow and water
- reduce the dangers due to contact with the moving wheels.

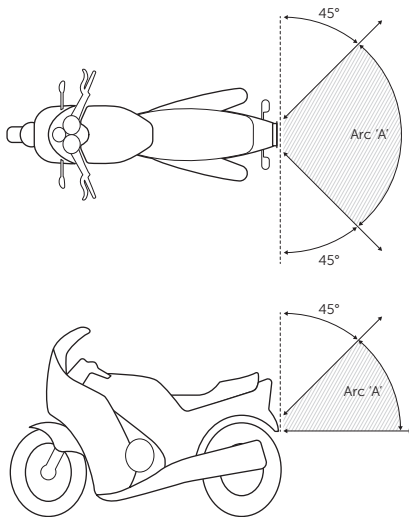
The 45° angle requirement for mudguard coverage has been removed from ADR 42.

If you have a motorcycle that was built to meet the previous version of ADR 42 (built prior to November 2018), VicRoads recommends that you do not modify the mudguards or remove any mudguard extension fitting, as this configuration will still comply with all the current requirements.

However, if it can be determined that the mudguard extension was only fitted to your motorcycle so that it met the previous 45° angle requirement, it may be removed. If the extension is removed, the following requirements must be met:

- Only the mudguard extension may be removed. No other part of the body or mudguard may be removed from the vehicle.
- Any lights or reflectors that are mounted to the mudguard extension must be re-installed on the motorcycle in a way that meets the installation requirements outlined in ADR 19 *Installation of Lighting and Light Signalling Devices on L-Group Vehicles*.

- The remaining mudguard (which may include part of the motorcycle's body that acts as a mudguard) must cover the entire width of the tyre.
- If the number plate for the motorcycle was attached to the mudguard extension, it must be remounted and continue to meet the number plate mounting requirements.



The number plate must be visible from 20m at all points within the arcs marked 'A'.

Other modifications

Other modifications to motorcycles that affect the structure, suspension, handling safety systems, emissions systems (including the fitment of alternative engines) or compliance with ADRs must be approved by a VASS Signatory.

Fuel systems

Note – Nitrous oxide injection systems must not be fitted. This prohibition includes a partial installation or a disconnectable nitrous oxide system that is fitted to the vehicle ready for use.

VSB 14 Modification Code LM

Modifications listed under section 1.1 and 4 of VSB 14 section LM are considered to be approved modifications when conducted in accordance with instructions and compliance with Standards for Registration are maintained.

Replacement fuel tanks

Replacement fuel tanks must meet the following requirements:

- The vehicle must have a minimum loaded ground clearance of 100mm and meet the minimum ground clearance requirements as defined in ADR 43 *Vehicle Configuration and Dimensions*.
- No part of any fuel tank or fuel system component must lie below a plane created as a component of that vehicle's Departure Angle (Departure Angle is the greatest angle between the horizontal plane and the plane from the static loaded rear tyres to the lowest, rearmost extremity of the Original Equipment Manufacturer's (OEM) permanent body work).
- Any fuel tank or fuel system component must be at least 100mm inboard of the OEM permanent body work (excluding the filler neck and assembly).
- Any fuel tank or fuel system component with a ground clearance of 200mm or less must be adequately protected by shields or adjacent vehicle components.
- In the event of any tyre being deflated, no parts of the fuel tank or fuel system may touch the road surface.
- If a replacement tank of a 125% or larger capacity than the original uses the original mountings, their strength must be checked and shown to be adequate by a VASS Signatory.
- Replacement fuel tanks must not adversely affect the suspension travel, controllability, handling or road holding of the vehicle.
- The fuel filler inlet and cap should be located on the outside of the vehicle. Where an inlet is located inside a vehicle, it must not be inside the passenger compartment and the inlet must be separately sealed from the rest of the vehicle to ensure fumes do not enter the passenger cabin and that provisions are made to ensure any fuel spills are localized and drain outside the vehicle.

- The fuel tank and filler shall be so arranged that any overflow or leakage of fuel cannot accumulate or contact the exhaust or electrical systems.
- Any apertures created to allow for the installation of the fuel tanks must be suitably sealed to prevent the entry of exhaust, road or fumes into the cabin of the vehicle.

In addition, the following apply to vehicles fitted with Evaporative Emission Control Systems:

- All of the original fitment fuel tank evaporative controls for ventilation of the tank must be retained and operational to prevent hydrocarbon emissions entering the atmosphere.
- Where a replacement fuel tank is fitted that has a greater capacity than the largest optional fuel tank available for the vehicle, an additional or larger carbon canister of sufficient capacity must be fitted.
- Vehicles originally fitted with fuel tanks with expansion / vapour spaces must continue to provide these facilities (e.g. modified fuel tanks must have expansion / vapour spaces proportional to their new capacity).
- Vehicles originally equipped with independent liquid / vapour separators must have either an additional separator or that provision built into the new tank.

Other fuel system modifications

The following modifications may be carried out without certification provided they do not affect compliance with the Standards for Registration and provided they meet the following general safety requirements:

- Replacement carburettors may be fitted to any motor vehicle provided the vehicle continues to comply with the exhaust emission requirements applicable to it.
- Any drip tray positioned under the carburettor must be constructed so that any overflow of fuel will not remain in the tray nor flow onto any exhaust pipe, starter

motor, alternator or other potential ignition source.

All LPG, LNG and CNG installations must be conducted in accordance with VSI 27 *LPG/LNG/CNG conversions and repairs*.

Note: It is the registered operator's responsibility to notify VicRoads of a change to operate on LPG, LNG or CNG using the conversion report in VSI 27.

Tyres, rims, suspension and steering

Introduction

Vehicle manufacturers design the suspension systems of their vehicles to have appropriate stiffness and damping, combined with sufficient travel to provide acceptable handling characteristics and an acceptable level of comfort for the occupants on all road surfaces likely to be encountered during operation.

In the following, references to vehicle ride height relate to the vehicle manufacturer's original specifications. Manufacturers usually specify ride height as the vertical distance from the centre of a wheel to the centre of the wheel arch immediately above it. Changes in ride height due to modified suspension or body mounting is measured using this method. Changes in ride height due to the fitment of different wheels and tyres must also be factored when measuring the total change in ride height. Ride height is measured unladen with the vehicle sitting on a level surface.

Increases in ride height resulting from replacing or resetting springs that have sagged in service to restore the original ride height are not considered a modification but rather as maintenance.

Lowering or raising the ride height of a vehicle by altering its suspension will alter the amount of suspension travel. For example, lowering a vehicle by fitting shorter springs will reduce the amount of available suspension travel in the "bump" or upward direction. Similarly raising a vehicle by fitting longer springs will reduce the amount of available travel in a downwards or "droop" direction.

VSBS 14 Modification Code LS

Modifications listed under section 1.1 and 4 of VSBS 14 section LS are considered to be approved modifications when conducted in accordance with instructions and compliance with Standards for Registration are maintained.

Raising of four wheel drive vehicles – alternative to VSBS 14 Modification Code LS

In the case of raising the height of an off road type 4WD of ADR Category NA, NB1, MC or MD, and only in this case, the following applies as an alternative to meeting the suspension lift requirements of Section LS of VSBS 14:

- A combination of suspension lift and the fitting of larger diameter tyres that results in a total lift of up to 75mm without the need for the testing and certification normally required by VSBS 14 for lifts above 50mm
- The vehicle's suspension may be raised by up to 50mm, provided that sufficient suspension travel in either direction is retained.
- Only commercially available suspension kits may be used.
- Such kits must be:
 - manufactured and supplied by a Corporation;
 - specifically designed and tested by the suspension lift kit manufacturer for the make/model/variant of the vehicle being modified to ensure no adverse effect on the modified vehicle's propensity for rollover, handling characteristics, braking performance and structural integrity when assessed at the combined suspension lift (up to 50mm) and tyre radius increase (up to 25mm), i.e. a total increase in ride height of up to 75mm; and
 - fitted in accordance with the kit manufacturer's instructions, abiding by any conditions or limitations advised by the suspension kit manufacturer and include a written statement (to be retained by the vehicle

owner) of the suitability of the suspension lift kit for the make/model/variant of the vehicle being modified whether or not installed in combination with the permissible tyre diameter increase.

- Tyres up to 50mm larger in diameter than that specified by the vehicle manufacturer may be fitted to an off-road type 4WD provided:
 - When in the straight ahead position, the wheels and tyres do not project beyond the extreme width of the mudguards when viewed from above
 - The tyres do not foul the bodywork, braking system or any suspension or steering component under any combination of suspension and steering movement.

Aluminium alloy wheels

Aluminium alloy wheels (mags) are acceptable provided they have a load rating of at least that stipulated on the vehicle's tyre placard, meet the rim width requirements of VSBS 14 and are legibly and durably marked to show compliance with one of the following standards:

- AS 1638 Australian Standard
- DOT Department of Transport USA
- JWLT Japanese Light Alloy Wheel Truck and Bus
- JWLT Japanese Light Alloy Wheel
- JIS Japanese Industry Standard
- KBA German TUV Certification
- VIA Vehicle Inspection Association Japan.

Note: Repaired or damaged alloy wheels are not acceptable.

Airbag suspension

The replacement of conventional coil and/or leaf springs by airbags is acceptable provided that:

- a VASS Approval Certificate has been issued in respect of the modification
- the ride height of an individual wheel or axle cannot be altered while the vehicle is in motion

- at least two thirds of the original suspension travel in either direction is retained at all selectable ride heights while the vehicle is in motion
- the original attitude of the vehicle is maintained at all selectable ride heights while the vehicle is in motion
- a minimum running clearance of 100mm is maintained at all selectable ride heights while the vehicle is in motion and when parked. Where the airbag suspension system is fitted with a servicing and diagnostic mode, this mode must be disabled while the vehicle is being driven on public roads
- air supply must be of suitable capacity to supply the system and re-plenish the system sufficient to maintain vehicle height under all operating conditions. A non-return valve is incorporated to ensure continued inflation of the airbags in the event of compressor failure. The air tank is required to have a valve so water vapour can be drained periodically
- air supply and control airline must be manufactured to an appropriate automotive standard such as SAE J844
- storage reservoirs or tanks must be manufactured to an appropriate automotive standard such as SAE J10
- an audible or visual indicator visible to the driver in their normal seated position is fitted to alert the driver of any height or pressure change or compressor failure.

Modifications to vehicles equipped with Electronic Stability Control (ESC)

Modification to the tyres, rims, suspension and steering of a vehicle fitted with Electronic Stability Control (ESC) can affect the operation of this important safety system.

For modification codes contained in **Tyres, rims, suspension and steering** of this document and Section 4 of Section LS in VSB14, evidence should

be obtained either from the vehicle manufacturer, kit manufacturer or through testing to determine the impact on the ESC system. To remain within the scope of this section, a vehicle fitted with ESC must not be modified if the operation of the ESC is adversely affected unless the ESC system is adjusted to restore its original operational parameters.

Any modification to these components outside the requirements as set out in the above or outside vehicle manufacturer's specifications will require a VASS Approval Certificate. The VASS Signatory will need to confirm the ongoing operation of the ESC system through appropriate evidence or testing in accordance with the ADR.

Note: vehicles equipped with ESC must not have the ESC control unit disconnected.

Additional lamps and lamp covers Introduction

Clause 118 (4) of the Standards for Registration (Schedule 2 of the *Road Safety (Vehicles) Interim Regulations 2020*) requires that a vehicle must not be fitted with a light or reflector not mentioned in the Vehicle Standards without the written approval of VicRoads.

The Standards for Registration specify colour and performance requirements for lamps on a vehicle. To ensure continued compliance with these requirements, any lamp cover fitted to a vehicle must be clear, untinted, uncoloured and clean.

Refer to VSI 12 for information regarding the fitment of any lamps or lighting systems that are not of a type required or permitted by the Standards for Registration such as flashing or rotating warning lamps.

Lamps designed for marine or aircraft applications are not permitted.

Additional forward lighting

Additional forward lights must be white in colour and project their main beam of light ahead of the vehicle. The light must not reflect off the vehicle into the driver's eyes.

Lights fitted in pairs must be symmetrical about the vehicle centre and at the same height above ground level. Pairs of lights must also project approximately the same amount of light of the same colour.

A maximum of four additional headlights (Including LED light bars) may be fitted to a vehicle in addition to the vehicle main beam headlights

Where a singular LED light bar is fitted it must be mounted on the vehicle centreline.

Driving lamps may be fitted above the roof line. The driving lamps must be fitted to the front half of the vehicle, when measured from the front to the rearmost point of the vehicle.

Driving lamps and LED light bars must only be able to be activated by switch when the high beam headlamps are on and must turn off when the high beam headlamps are turned off.

Additional lights must not be mounted in a manner that may increase risk of injury to pedestrians.

Other modifications

Motorhomes and vehicles with gas or electrical installations

VicRoads VSI 5 *Conversion of Vehicles to Motor Homes* provides guidance on the requirements when converting a vehicle to a motorhome or campervan, or when incorporating gas or mains-style electrical systems into a vehicle such as for food service vehicles.

Advanced vehicle safety technologies

Many vehicles are now being equipped with advanced vehicle safety technologies that offer potentially life-saving crash avoidance assistance to the driver. These technologies, such as Auto Emergency Braking, Adaptive Cruise Control, Lane Support Systems and Blind Spot Monitoring, rely on an array of sensors and cameras. Modifications to a vehicle in a manner that interferes or renders the sensors and safety systems inoperable are not acceptable.

Modifications to Vehicle Primary Controls

Modifications to the control systems of vehicles to automate fundamental vehicle control functions that contribute to the dynamic driving task (e.g. steering, brakes, acceleration) are prohibited.

This requirement does not apply to vehicles operating under an Automated Driving System (ADS) permit issued by VicRoads for controlled research and development purposes.

For further information

Further information is available on the VicRoads website: **[vicroads.vic.gov.au](https://www.vicroads.vic.gov.au)** or by calling VicRoads on **13 11 71** (TTY **13 36 77**, Speak and Listen **1300 555 727**).