



This Fact Sheet is to provide a general guideline to the safe and legal requirements relating to light vehicle modifications. The information is not intended to cover all of the technical aspects of modifications to a vehicle. If something is not covered in this document please contact Vehicle Standards on 1300 882 248. Modifying critical areas such as brakes, steering and suspension should only be carried out by qualified persons.

Modifications to a vehicle, which contravene the requirements of the Road Traffic Act, will require a Certificate of Exemption to cover the area of modification. This Exemption will identify the modification and any conditions that are applicable. The following requirements are the basis for the granting an Exemption from the Road Traffic Act and Regulations.

The Department of Planning, Transport and Infrastructure (DPTI) may request a report prepared by a Light Vehicle Engineering Signatory (LVES) be submitted for vehicles, which have been extensively modified, to demonstrate that the vehicle's safety features and compliance with relevant Australian Design Rules and Vehicle Standards Rules have been maintained.

It is recommended that you contact DPTI before making any modifications to check if a Statement of Requirements is required for the proposed modification. It is also recommended that you notify your vehicles insurer regarding any modifications undertaken.

An 'Application to Modify a Motor Vehicle' can be found at the DPTI website www.sa.gov.au or by contacting Vehicle Standards on Ph. 1300 882 248 to request an application.

Once the Application to Modify is submitted it will be assessed and if approved, you will receive a Statement of Requirements which will specify the modifications and any conditions that may apply.

After the vehicle has passed the roadworthy inspection, Vehicle Standards will issue a Certificate of Exemption for your modifications. Any further modifications will need to be re-assessed by Vehicle Standards. It is recommended that you keep a copy of your Certificate of Exemption inside the vehicle and the original copy in a safe place. If you sell the vehicle it is recommended that you give this documentation to the new owner.

AUSTRALIAN DESIGN RULES (ADRs)

The ADRs are federal requirements that vehicle manufacturers must comply with and cover issues such as occupant protection, seatbelts, lighting, noise, engine exhaust emissions and braking requirements to name a few.

The ADRs for Motor Vehicle Safety are incorporated in State Legislation under the Road Traffic Act 1961. If modifications to a vehicle are being considered it is important to establish the date of manufacture of the vehicle so that it may be determined which rules may be affected.

Under the Road Traffic Act a motor vehicle that was manufactured to comply with an ADR must continue to comply with that specific ADR unless a Certificate of Exemption is issued. Engine changes for example may effect the emission control requirements of the ADRs.

Vehicles complying with ADRs are fitted with a compliance plate that identifies the vehicle, its category and other certification information.

For information on the Australian Design Rules please visit the website: www.infrastructure.gov.au

Procedure to obtain a Statement of Requirements for a proposed vehicle modification

1. An 'Application to Modify Motor Vehicle' form can be obtained at any Service SA Centre or at the DPTI website www.sa.gov.au
2. Complete and submit to Vehicle Standards the 'Application to Modify a Motor Vehicle' form together with any other relevant documents eg engineering reports in the case of extensively modified vehicles.
3. If the proposal is acceptable DPTI will issue a Statement of Requirements. If the proposal is not acceptable you will be advised in writing.

4. On completion of the alteration you or your representative, must arrange a vehicle inspection. When making a booking for inspection please quote the reference number listed on the Statement of Requirements. A non refundable booking fee is to be paid upon making a booking. A vehicle inspection fee is also required for the inspection. To arrange a booking please telephone DPTI Bookings on 13 10 84 or visit www.sa.gov.au to make an online booking.
5. It is advised that the person presenting the vehicle arrive at least 10 minutes prior to the allocated time so that the necessary paperwork can be checked and the inspection fee paid.
6. The Statement of Requirements and any other requested information is to be handed to the inspector.
7. After the vehicle has passed inspection a Certificate of Exemption will be posted to the registered owner.

Engine changes

An alternative engine may be fitted to replace one that is no longer serviceable, or to achieve an increase in capacity, power and/or torque.

Under the Road Traffic (Miscellaneous) Regulations 2014, the fitting of an engine of greater capacity than an engine available as an option for the vehicle is not permitted unless a Certificate of Exemption is issued by DPTI.



Several factors are taken into account when considering an application to increase the engine capacity of a vehicle. Consideration is given to the weight of the engine, the power and torque output in relation to braking, strength of the vehicle, effect on steering and suspension components, and the effect on vehicle handling characteristics.

DPTI does not specify an absolute maximum capacity power and/or torque for passenger vehicle engines. It is advised that a 'Statement of Requirements' is lodged to Vehicle Standards prior to commencing the modification.

Engine changes that require reports from a Light Vehicle Engineering Signatory (LVES).

Complex or highly modified vehicles may require a report from a LVES. Any requirements from Vehicle Standards will be stipulated in the Statement of Requirements. The report must demonstrate, based upon accepted engineering principles, that the vehicle can be safely driven on public roads and that it complies with the relevant Australian Design Rules and Vehicle Standards Rules.

The report may include results of testing as described in:

- MR807 – Lane Change test procedures
- MR132 – Brake system test procedures
- MR810 – Torsional stability requirements
- IM240 – Emission testing.



These fact sheets can be also found online here at : www.sa.gov.au

Where appropriate it is advisable that you contact an engineer at the earliest possible stage to arrange for the engineer to inspect the vehicle at the appropriate stages throughout the modification process. On completion of the modification and confirmation by the engineer that the modifications have been undertaken in accordance with the engineers report, the vehicle must be presented and pass a roadworthiness inspection. The engineers report is to be submitted to Vehicle Standards 5 days prior the inspection for assessment.

A list of Light Vehicle Engineering Signatories (Fact Sheet MR426) is available by visiting the DPTI website at : www.sa.gov.au

Engine Reconditioning

There are no restrictions on normal reconditioning provided that the manufacturers recommended limits are not exceeded. However, where ADRs 27A, 27B, 27C and 37 apply, the vehicle is subject to emission standards and therefore modifications are restricted, as specified below.

Emission control requirements - for vehicles operating on petrol

Passenger Cars

All vehicles manufactured on or after **1 January 1972 must comply with ADR 26.**

Vehicles built from 1971 must be fitted with an operational positive crankcase ventilation valve (PCV).

All vehicles manufactured on or after the **1 July 1976 to 1 January 1986 must comply with either ADR 27A, 27B & 27C.** Vehicles must be fitted with an effective evaporative emission control system. A carbon canister must be fitted, operational and connected to the fuel tank and induction system. The vehicle must also be fitted with sealed engine rocker cover(s), regardless of engine fitted, which is vented via the engines induction system. The exhaust system must **not** emit more than 2.5% carbon monoxide and 250 parts per million of hydrocarbons at engine idle speed.

All vehicles built from **1 January 1986 must comply with ADR 37/00.** This category of vehicle may only be fitted with an ADR 37 or later complying engine (i.e. an engine designed to only operate on unleaded fuel), which incorporates all associated components. The fitting of an engine other than an original or optional engine requires approval from DPTI.

If the vehicle was originally fitted with a catalytic converter by the manufacturer, the vehicle must continue to operate with one.

No alterations to the engine's camshaft, inlet manifold, carburettor/fuel injectors, engine control unit or the catalytic converter are permitted. Airflow meters must not be disconnected. Modified or aftermarket plenum chambers or throttle bodies are not permitted. Extra or larger fuel injectors or variable fuel pressure regulators are also not permitted.

Engines originally manufactured to comply with ADR 37, or an equivalent overseas emission requirement must remain unmodified and retain all associated original emission control equipment including the catalytic converter or alternatively the engine may be tested using a IM240 emission test to verify compliance.

Passenger car derivatives i.e. Panel Vans and Utilities under 4.5 tonne GVM

The requirements for passenger car derivatives manufactured on or after the 1st July 1976 are identical to those for passenger cars. For vehicles manufactured prior to this date there are no requirements except for Positive Crankcase Ventilation (PCV).

Fuel lines

Fuel lines must meet the following requirements:

- The material used for fuel lines must be suitable grade for use with automotive fuels.
- Fuel lines must be securely fastened and must not leak.
- Push-on type hose connections must be fitted with hose clamps or clips.
- Fuel lines must be clear of the exhaust system and any turbocharger.
- Where fuel lines pass through panels, bulkheads or the chassis they must be adequately supported and protected from chafing or damage.
- When fitted under a vehicle, the lines must be protected from road debris and damage either by chassis/body members or shielding.

Fuel Filters and Pumps

The fitting of additional fuel filters and/ or alternative or replacement fuel pumps may be fitted providing that:

- the installation is in accordance with good engineering practice
- no pump, fuel line or filter is located within the occupant compartment
- all components used are unmodified
- the fuel pump stops when the engine has turned off.
- the alternative/ replacement fuel filter/ or fuel pump are secured, shielded against heat and damage and that there are no leaks.

Emission control requirements for vehicles operating on L.P. gas or petrol and L.P. gas

Conversion of a vehicle to operate on Liquefied Petroleum Gas (LPG) must be performed to AS/NZS 1425-LP Gas Fuel Systems for Vehicle Engines.

Only a licensed person is allowed to carry out the installation or repair of LPG equipment. A current identification plate must be fitted to certify that the LPG system meets the requirements of AS/NZS 1425.



Dual fuel

Vehicles that are equipped to operate on dual fuel LPG (eg. the vehicle can operate on either petrol or LPG) must retain all original emission control equipment, except for the air cleaner, carburetion, heated inlet air and associated equipment which may require modifications to facilitate the installation of the LPG intake system. The vehicle must also comply with the petrol related regulations. Any emission control systems that were fitted (eg catalytic converters and oxygen sensors) must remain operational.

Dedicated (single) fuel

Vehicles which are not required to comply with ADR 37 (pre 1 February 1986) which are running solely on LPG are not required to be fitted with emission control equipment, providing that the following requirements are met:

- That the vehicle exhaust emits less than 4.5% Carbon Monoxide at recommended engine idle speed.
- That the petrol pump, fuel tank, carburettor, fuel supply lines and any other associated equipment related to the petrol fuel system is removed from the vehicle.
- Vehicles built to comply with ADR 37 and later, must retain all emission control equipment including the catalytic converter.

As from 13 December 1993, vehicles originally designed to operate with a closed loop engine management system shall be installed with a LPG closed loop management system which results in exhaust emission levels for LPG operation that are not inferior to the levels produced by the original vehicle prior to L.P. gas fitment.

Replacement fuel tanks

The fitting of replacement or additional fuel (petrol) tanks to vehicles manufactured prior July 1976 does not contravene the requirements of Road Traffic Act and Regulations providing that sufficient ground clearance is retained and they are fitted externally.

For vehicles manufactured on or after 1st July 1976 the ADR requirements for Evaporative Emission Controls would have to be met including:

- All fittings and devices fitted to the fuel tank by the vehicle manufacturer would have to be retained/duplicated and fully functional in the replacement fuel tank.
- The fuel tank and filler shall be arranged so that any overflow or leakage of fuel cannot accumulate nor contact the exhaust or electrical systems.
- Fuel tanks fitted to the vehicle are normally required to be filled and vented externally.
- If a filler 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 or fuel spillage does not enter the passenger cabin. All lighting connections and internal lights including wiring must be sealed from the area where the fuel filler is located.
- The minimum ground clearance of 100mm is retained.



Engine management systems

The vehicles engine management system (computer) of modern vehicles is an integral part of the emission control system. Re-calibrating the engine management system by either changing the chip, re-programming or replacing the unit with an aftermarket computer may result in non-compliance with the emission control ADR applicable to the vehicle. Testing a production vehicle for compliance with ADR emission control standards is a lengthy and expensive process and can only be undertaken on testing equipment acceptable to DPTI.



DPTI may consider the fitting of an aftermarket engine management system where an engine upgrade is occurring, however this will be conditional to an IM240 emission test being undertaken. An Application to Modify a Motor vehicle must be submitted to Vehicle Standards.

Turbo-charging/super-charging petrol engine vehicles

Turbo-charging or super-charging an engine effectively increases the power of the engine and may increase the exhaust emissions, fuel consumption and reduce the service life of the engine.

Passenger cars and passenger car derivatives (car type utilities and panel vans) manufactured prior to **1 July 1976**, fitted with petrol engines, can be fitted with a turbocharger or supercharger to the original manufacturers engine without DPTI approval.



Due to the complexity of the ADRs after **1 July 1976** the fitting of a turbocharger or supercharger would require one of the following:

- the vehicle is fitted with a Second Manufacturers plate to demonstrate compliance with all ADRs,
- the vehicle to pass an IM240 Emissions test.
- the converted vehicle is identical to the production turbo/supercharged vehicle.

In all cases a Statement of Requirements is required and the vehicle passes a roadworthy inspection. Certification from a Light Vehicle Engineer may also be required.

Turbo timers



Turbo timers are **not** to be fitted to vehicles manufactured on or after **1 January 1972**. ADR 25 (Anti-Theft Locks) requires that the normal function of the engine only occurs when the ignition lock is in the engine 'on' position.

Turbocharger boost controllers

Alteration to an engines turbo boost pressure is not acceptable. This is specified and set by the vehicle manufacturer to ensure compliance with the ADRs.



Blow off valves

The fitting of an aftermarket blow off valve can affect the vehicles ability to comply with the exhaust emission requirements specified in the ADRs and therefore not acceptable. External wastegates on turbocharged engines are also not permitted.

Intercoolers

Intercoolers are permitted to be fitted to vehicles providing:

- There are no sharp projections ahead of the front bumper that may increase the risk of injury to other road users including pedestrians
- The intercooler is fitted and secured in a manner in accordance with normal automotive engineering practices and that no part of the vehicles structural integrity has been affected.
- That adequate provision is made for a complying numberplate to be fitted in an approved position.



Oil 'Catch Cans'

An Oil Catch Can can be fitted provided they are vented back into the vehicles crankcase so that any oil or fumes do not escape to atmosphere. Venting any engine emissions to the atmosphere is not permitted.

Exhaust systems and noise

Modifications to exhaust systems are permitted providing that the modifications do not conflict with any other requirements outlined in any other rules and regulations.

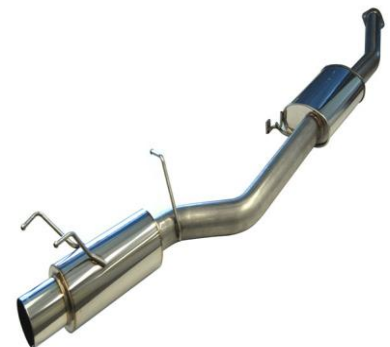
Vehicles may be fitted with extractors provided that any emission control devices, which were originally fitted to the exhaust system, are re-connected and operative including catalytic convertors. The extractors must not foul any part of the steering, suspension, braking or fuel systems. Catalytic convertor/s and exhaust sensors that have been replaced are to be positioned in the same exhaust flow location as with the original system.

Extractors and aftermarket exhaust systems may be fitted provided that the sound levels specified in the Road Traffic (Light Vehicle Standards) Rules 2013 are not exceeded. Passenger cars, derivatives and panel vans manufactured:

- before 1 January 1983 the stationary noise level when tested must not exceed 96 dB(A).
- on or after 1 January 1983 the stationary noise level when tested must not exceed 90 dB(A).

Vehicles also must meet the following requirements:-

- The exhaust outlet exits beyond the last door or window opening on the side or rear of the vehicle;
- The exhaust outlet is as close as possible to the outer edge of the vehicle but not outside or underneath the vehicle;
- The exhaust system, if contactable, is adequately shielded and any sharp or hazardous projections are suitably treated.
- The outlet of the exhaust system fitted to a motor vehicle must exit to the rear and extend at least 40 millimetres beyond the furthestmost outboard or rearmost joint of the floor pan that is not continuously welded or permanently sealed.
- The exhaust outlet, if to the side of the vehicle, must discharge to the right hand side of the vehicle and downwards at an angle to the horizontal of not less than 15 degrees and not more than 45 degrees.
- The exhaust outlet, if to the rear, shall discharge at not less than 10 degrees above or 45 degrees below the horizontal.
- No exhaust outlet is to extend beyond the perimeter of the vehicle when viewed in plan.
- The vehicle must also comply with ground clearance requirements.



Steering conversions

All vehicles converted from left hand drive to right hand drive must be converted in accordance with the National Code of Practice for Steering Conversions for Left Hand Drives, Vehicle Standards Bulletin (VSB) Number 4.

For all steering conversions an engineering report prepared by a Light Vehicle Engineering Signatory (LVES) must be submitted which specifies that the requirements of VSB Number 4 have been met. A Statement of Requirements is required from Vehicle Standards DPTI before a vehicle can be booked for inspection.

Vehicles fitted with welded steering components must comply specifically with the requirements set out in Vehicle Standards Bulletin (VSB) Number 4. Welded steering components are not acceptable unless certified by a LVES.

Left hand drive vehicles

Under the Road Traffic (Light Vehicle Standards) Rules 2013 all motor vehicles must be right-hand drive.

However, DPTI does allow for specific left hand drive vehicles to be registered. DPTI has approved the issue of 'Left Hand Drive Exemptions' to vehicles that meet specific criteria. For more information please read 'Fact Sheet MR 629 - Left Hand Drive Vehicles'.



Modified steering components

The welding, heating or chroming of axles, stub axles, steering arms and steering knuckle supports is not acceptable unless an engineering report prepared by a LVES is presented, which demonstrates that the modifications are at least as strong as the original and contain no latent defects.

Steering wheels

Steering wheels are an important component in your vehicles safety. They are designed to minimise injury to the driver during a vehicle accident.

In the case of replacement steering wheels you should make sure that the steering wheel fitted complies with Australian Design Rule (ADR) requirements.

Replacement steering wheels must be not less than 330mm in diameter. If the original steering wheel was designed with a recessed or padded hub, the replacement wheel must be of similar design.

A non-standard aftermarket steering wheel may be fitted to passenger cars and derivatives manufactured prior to 1971. When selecting a replacement steering wheel ensure that it is firmly padded and is constructed such that it will bend on impact without splintering or cracking and that no parts of the wheel are loose or cracked.



Passenger vehicles built after 1970 are required to comply with ADR 10. The replacement steering wheel must have the appropriate markings indicating that it complies with ADR 10. There are a number of steering wheels certified to ADR 10, so prior to purchasing an aftermarket steering wheel contact Vehicle Standards to ensure that it is acceptable.

Passenger vehicles manufactured after June 1995, which are required to comply with ADR 69/.. (Full frontal impact occupant protection), may only be fitted with steering wheels certified by the vehicle manufacturer as suitable for that vehicle eg if your vehicle is standard with an air bag steering wheel the replacement must be the same. The fitting of an aftermarket steering wheel to a vehicle that has an airbag in the original steering wheel is not acceptable.

Suspension

Lowering Vehicle Height

A common modification undertaken is to lower or raise the ride height of a vehicle. A vehicle's suspension system has been designed for adequate strength and durability as well as its level of ride, comfort and handling. It is acceptable to fit upgraded springs, shock absorbers or anti-rollbars provided they are correctly fitted and suitable for the vehicle. Some vehicle manufacturers also have optional suspension equipment available.

DPTI have a list of acceptable 'eyebrow heights' (the measurement from the centre of the wheel vertically upward to the edge of the mudguard) or 'Bump rubber clearance heights' (the clearance between the bump rubber and corresponding contact point) for most passenger vehicles.



Here are some requirements for **lowering** a vehicle:

- When lowering a vehicle body, either front or rear, the suspension travel must not be reduced by more than one third of that specified by the vehicle manufacturer.
- The vehicle must also retain 100 millimetres ground clearance which is measured between any part of the vehicle and the ground.
- All measurements must be carried out with the vehicle on level ground in its normal operating but unladen state.
- Coil springs must not be shortened by cutting and no suspension component is to be subjected to heating.
- Lowering blocks may be used on leaf spring suspensions provided they are manufactured from steel, aluminium, or metal and to be positively located to the axle spigot hole and the spring centre bolt.
Note: the axle mounting "U" bolts are not permitted to be below the lower rim height.

Raising vehicle height

The raising of a vehicle is not generally recommended due to the cornering and braking instability that may result. Often vehicles are raised because the owner wants to fit large wheels and tyres that would otherwise contact the mudguards. In these cases the wheels and tyres may themselves be unacceptable. The body of a vehicle can be raised by up to 50mm by the fitting of spacer blocks between the vehicle chassis and body at their mounting points. The blocks must be manufactured from steel, aluminium, or metal. It is important to note that a total lift of more than 50mm requires prior approval and a report from a Light Vehicle Engineering Signatory (LVES). In some cases the steering shaft may have to be extended as well as longer brake hoses fitted. If there is any alteration or replacement of the original steering components, prior approval will be required from Vehicle Standards. A roadworthiness inspection will also be required.

Vehicle ride height can not be increased by any of the following methods:

- The use of extended or adjustable shackle plates.
- Relocating a leaf spring on the opposite of an axle to that of the vehicle manufacturer.
- Spacer blocks mounted above or below the coils spring or mounted between the top of the suspension strut and vehicle body.
- Wedges or blocks located between the coils.
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Auxiliary Suspension Devices



The fitting of auxiliary suspension devices may be fitted. Sway Bars may be fitted to your vehicle. Sway Bars add roll stiffness at the front which may increase understeer and additional roll stiffness at the rear may create an increase in oversteer, this could lead to unpredictable handling. Track Rods/Traction Bars may be fitted to control rear spring 'wind-up' provided that they meet the minimum ground clearance requirements. Strut Braces may be fitted between suspension strut and spring mounting towers.

Aftermarket Coil-over suspension components are suspension units that incorporate an external thread on the main body and corresponding threaded spring saddle that allows the vehicle's suspension height to be varied. If fitting aftermarket or coil over suspension components you must submit an Application to Modify a Motor Vehicle and a report from a Light Vehicle Engineering Signatory (LVES).

The report must specify and include the following points:



- The measured suspension travel of both the original equipment manufacturer suspension arrangement and that of the aftermarket replacement.
- The fitment of a rubber bump stop to limit travel to ensure there is clearance between the coils when the suspension is at full bump.

On receipt of an acceptable engineering report to Vehicle Standards, a Statement of Requirements will be sent to you detailing the modifications and any applicable conditions. The vehicle will also be required to pass a roadworthiness inspection.

Airbag Suspension

Airbag suspension replaces the conventional coil and /or leaf springs with an air bag or an air strut. Each air bag or strut is connected to a valve to control the amount of air allowed into it which is activated by a compressor. This pressurizes the air, using compressed air as a spring. The purpose of airbag suspension is to provide a smooth ride quality and in some cases self-leveling.

If fitting airbag suspension you must submit an Application to Modify a Motor Vehicle and a report from a LVES. Airbag suspension is acceptable provided that:

- That the front and rear suspension is fitted with the original suspension bump rubbers in the original manufacturers positions.
- That the vehicle maintains a 100mm minimum ground clearance at all times.
- If the airbag system fails and the air is vented, no part of the vehicle must fall below rim height.
- That the airbag line pressure and vehicle height cannot be adjusted from within the cabin of the vehicle.
- That there is no transfer of air between one side of the vehicle and the other. Fore and aft movement is acceptable.
- The vehicle must be fitted with a front to rear automatic levelling device that does not incorporate a manual override. This value is to operate at all times when the vehicle is running not just on engine "crank".
- That the system must incorporate a lock out function that prevents the vehicle being moved or driven without the air spring being correctly inflated and the vehicle being at its normal ride height.



Wheels and tyres

Changing your tyre and wheel combination can alter the handling of your vehicle. Therefore all wheels and tyres fitted must comply with the Road Traffic Act.

From 1973 all cars are to be fitted with a tyre placard (usually fitted in the glove box, the engine bay or on a door pillar). This specifies the wheel and tyre combinations recommended by the vehicle manufacturer. This placard also specifies load capacity, speed rating and the recommended tyre air pressure.

Replacement wheels and tyres may be fitted provided that they comply with the following requirements:

Wheels:

- When selecting aftermarket wheel rims for a motor vehicle, ensure that the replacement wheel has been designed for that particular hub/axle and have the same bolt/stud pitch circle diameter and the same centre location method. The wheel nuts or bolts must have the same taper as the wheel.
- Ensure that the offset of the rim does is not reduced by more than 13mm from the original rim fitted by the vehicle manufacturer. The wheel track must not be increased by more than 26mm beyond the maximum specified by the vehicle manufacturer. Maximum allowable track measurements for individual vehicle models can be obtained from DPTI. The wheel track is the distance measured across the vehicle from the centre-line of one tyre to the centre-line of the other tyre on the same axle.
- Spacers are not permitted between the hub and wheel unless originally fitted by the vehicle manufacturer.
- Rims that have been widened by inserting a spacer band are not permitted. Rims must have no more than one circumferential weld. Welding must be carried out in accordance with recognised engineering standards, and the rims must comply in all respects with specifications contained in the Tyre and Rim Association of Australia - Standards Manual.
- The wheels and tyres must not foul the body, suspension or any part of the vehicle under any operating conditions and must not project beyond the bodywork when the wheels are in the straight ahead position and viewed from above.
- If the wheels of a vehicle are retained by multiple nuts or set screws, not by splines and a single nut, then the wheel nuts must match the tapered holes in the wheel and the nuts must be engaged for their full depth of thread.
- Wheel rims fitted to passenger cars manufactured after 1st July 1985, which are not original equipment or an original equipment replacement by the vehicle manufacturer must be indelibly marked with the wheels nominal diameter, width and offset and with identification of the manufacturer of the wheel and the standard to which the wheel was manufactured. This should be checked before the wheels are purchased.
- The use of composite wheels (two or three piece) is permitted. They must be manufactured and marked in accordance with the standards described above if fitted to vehicles manufactured on or after 1 July 1985.
- Modifications to disc brake callipers, hubs and suspension and steering components to enable the fitting of replacement wheels is not allowed without a certificate from a Light Vehicle Engineering Signatory (LVES).



Tyres:

- For **light vehicles**, the overall diameter of a wheel and tyre fitted is not to be more than 15 mm greater than the largest tyre size listed on the tyre placard and not more than 15 mm less than the smallest tyre size listed on the placard.
- For **4WD vehicles**, the overall diameter of a wheel and tyre fitted is not to be more than 50 mm greater than the largest tyre size listed on the tyre placard and not more than 15 mm less than the smallest tyre size listed on the placard.
- Specifications for overall tyre diameters are listed in the Tyre and Rim Association of Australia - Standards Manual. Note: If tyres are to be fitted with a diameter outside of this requirement then an 'Application to Modify a Motor Vehicle' and a report from a Light Vehicle Engineering Signatory (LVES) would be required.
- The tyres fitted must be suitable for the rim. The tyre retailer should have information about matching tyres and rims. Specifications for overall tyre diameters are listed in the Tyre and Rim Association of Australia -Standards Manual.
- The tyres must be free of any apparent defect that could make them unsafe.
- The replacement tyres must have a load capacity not less than the lowest load rating specified on the tyre placard.
- The speed rating of the tyres fitted to vehicles for off-road must be of at least 140 km/h ("N") when the tyre placard requires a higher speed rating than "N".
- The speed rating of the tyres fitted to a passenger vehicle must be at least 180 km/h ("S") when the tyre placard requires a higher speed rating than "S", for all other vehicles a speed rating of at least 120 km/h applies ("L").
- It is a requirement that the tyres fitted to an axle of a vehicle must be of the same size and carcass construction.
- Tyres fitted to vehicles manufactured after 1972 must be made of the same carcass construction ie radial, cross ply etc.
- Tyres fitted to passenger cars may not be treated by recutting or re-grooving of the tread unless the tyre is constructed to do so and marked as such.
- Tyres fitted to a vehicle, which do not have tyre wear indicators, must have a tread pattern at least 1.5 millimetres deep on all parts of the tyre that normally come into contact with the road surface. If the tread has worn down to any of the tyre wear indicators, or there is less than 1.5 millimetres of tread depth on the tyre, the tyre is then considered to be unroadworthy.



Brakes

It is recommended braking modifications are to be carried out using production components which themselves do not require modification.

When brakes are upgraded using components or systems which were not standard options for the vehicle a Statement of Requirements or a report from a Light Vehicle Engineering Signatory (LVES) may be necessary. When the brake system of an early model vehicle is modified, a dual or split circuit brake system should be fitted. Brakes must not be altered in any way that would reduce the braking efficiency. This includes the fitting of smaller drums or discs and machining drums or discs beyond those limits set by the component manufacturer. All brake components shall clear other vehicle components such as wheels, suspension and steering components, the vehicle chassis and must be mounted in areas where they are not likely to be struck by foreign objects from the road. They also must be protected from excessive heat and abrasion. The use of copper tubing for hydraulic brake pipe is not allowed. Joining hydraulic brake pipes by brazing, silver soldering, etc is not allowed.

If brakes are upgraded eg. front brakes changed from drum to disc, it is essential that:



- The correct master cylinder is fitted;
- That the brake master cylinder has adequate brake fluid in the reservoir (disc brake systems usually require a larger reservoir);
- Front to rear brake balance is compatible and does not result in excessive wheel lockup of one axle during braking;
- That all components of the braking system are compatible and are unmodified
- The installation is in accordance with the manufacturers specifications
- All brake tubing and flexible brake hoses must conform with ADRs.

Fully floating rear axles assemblies

An engineering report prepared by a LVES is required by DPTI addressing the fitment of a fully floating axle that alters the wheel track, suspension mounting position or braking components.

The report from the engineer is to address the following:

- A handling evaluation test in accordance with the Fact Sheet MR807 - Lane Change Test Procedures, or a statement from the engineer may be acceptable stating that the handling of the vehicle has not deteriorated as a result of the axle change.
- A statement from the engineer that the vehicle's suspension is not affected by the fitment of the axle. Alternatively this may be satisfied by the handling test in accordance with Fact Sheet MR807 - Lane Change Test Procedures.
- A statement from the engineer that the mounting of the rear suspension at both the axle and the body of the vehicle is to an acceptable standard.
- Details of the wheels and tyres to be used on the vehicle. Details are required for both front and rear wheels and tyres. Tyre information must include size designation, speed and load rating. Wheel information must include width, diameter, offset, flange to flange and the vehicles maximum track measurement.
- For vehicles manufactured on or after 1 January 1973 details and location of the revised tyre placard. The tyre placard must display all relevant details of the tyres and rims fitted to the vehicle.

Wheel tubs

The fitting of wheel tubs i.e. alterations to the inboard structure of the rear wheel housing, will be acceptable to DPTI providing that:

- It does not weaken the vehicles structure.
- There are no modifications to body structural members, chassis members or suspension mounting points and that there are no body modifications undertaken within 200mm of any seat anchorage or seat belt anchorage. Alterations may be permitted providing that an engineering report prepared by a Light Vehicle Engineering Signatory (LVES) is submitted demonstrating that the original strength has not been decreased.
- The wheels or tyres do not foul any part of the vehicles suspension, brake lines or bodywork for the full range of suspension movement.



Body and chassis alterations

The lengthening or shortening of a vehicles body is acceptable providing that an engineers report prepared by a Light Vehicle Engineering Signatory (LVES) is presented which demonstrates that the modified vehicle meets the following;

- That it continues to comply with all applicable ADRs
- That the vehicle meets the requirements of 'Fact Sheet MR132 - Brake System Test Procedure'
- That the vehicle meets the requirements of 'Fact Sheet MR807 - Lane Change Test Procedure'
- That the vehicle meets the requirements of 'Fact Sheet MR810 - Torsional Stability Requirements'

An Application to Modify a Motor Vehicle and a Statement of Requirements is required for any chassis modification.

Convertibles

The upper body structure or roof of a passenger car contributes significantly to the total strength of the body of a monocoque construction vehicle and its removal can seriously affect structural integrity of the original design of the vehicle.

There are no specific regulations under the Road Traffic Act that makes it an offence to remove the roof or upper body structure of a motor vehicle. However, in the case of passenger cars and passenger car derivatives manufactured on or after 1st January 1969 the removal of a vehicles roof may interfere with the ADR 5A, 5B or 5/00, relating to the upper seat belt anchorages.

Consequently, passenger cars and derivatives manufactured on or after 1st January 1969 will only be acceptable to DPTI if an engineering report prepared by a Light Vehicle Engineering Signatory (LVES) is supplied.

The report must demonstrate that the modified vehicle continues to comply with all applicable ADRs, and that the vehicle meets with Fact Sheet MR810 - Torsional Stability Requirements.

In the case of passenger cars and derivatives manufactured prior to 1st January 1969 no approval or inspection of the modified vehicle is required, however, it is recommended that the services of a Light Vehicle Engineering Signatory (LVES) are engaged to ensure that the integrity of the vehicle has not been compromised.

Seating

Additional or replacement seats must be installed in accordance with the current issue of Vehicle Standards Bulletin VSB 5a (Commercial Manufacture and Installation of Additional seats) or Vehicle Standards Bulletin VSB 5b (Construction and Installation of Additional Seat by Individuals)

The addition or removal of seats will require a 'Seating Inspection' from DPTI. The vehicle will then be fitted with a seating label to reflect the new seating arrangement.

The removal of seats and/or seatbelts to achieve a reduction in seating capacity must not interfere with the vehicles supplementary restraint system (SRS). eg removing a front seat and seatbelt with pretensioners may disarm the entire vehicles SRS and therefore would not be approved.



Seat belts

Under the Road Traffic Act and Regulations seat belts are required in the drivers and front outboard seating position as from 1 July 1967. Seat belts for all front seating positions became mandatory from the 1st January 1969 and for all seating positions from 1st January 1971.

The level of safety provided by seat belts must not be reduced. Seat belts must not be replaced by belts of a lesser standard or with second hand seat belts. There is no objection to seats belts of a higher standard being fitted, however, it is recommended that DPTI is contacted to gain advice to ensure that the belts are of the correct type and can be correctly fitted.

Seat belt anchorage points are carefully chosen and tested by the vehicle manufacturer therefore it is not permitted to alter the location or the strength of the seat belt anchorage points without advice from a LVES.

The fitting of harness type belts to passenger vehicles manufactured on or after 1/1/69 but prior to 1/1/75 would only be considered on presentation of an engineering report prepared by a LVES which demonstrates continued compliance with ADR 5A - Seat Belt Anchorages and there is no rear seating position.

The fitting of harness seat belts to passenger vehicles manufactured to comply with ADR 4B - Seat Belts, i.e. manufactured on or after 1/1/75, is not permitted as the ADR requires the inclusion of a dual locking retractor system.

Windscreens and windows

A vehicle windscreen provides protection to the vehicle occupants and permits the driver to maintain a clear view. Any replacement glass fitted to a motor vehicle, including an interior partition, after June 1953 must be of appropriate automotive safety glass or other approved material and must comply with the Standards. Some manufacturers incorporate the windscreen and rear window in to the structural design of the vehicle and if improperly secured may reduce the crash worthiness of the vehicle.

Vehicle glazing must comply with the same characteristics as material mentioned in any of the following standards:

- AS208, ECE R43/00, BS AU178, JIS R 3211, AN Z26.1 or NZS 5443.
- The glass must carry the indelible mark or marks of the relevant standards visible when the glass is fitted in the vehicle. The mark must identify the type of glass and the relevant standard to which the glass conforms.
- All replacement transparent material must be of a type that will not shatter.
- The section of the windscreen directly in front of the driver, (known as the primary vision area) must be free from scratches, cracks or chips.

Window tinting

Surface films reduce light transmission through windscreens and windows. This can significantly reduce a driver's vision, particularly at night and during periods of low visibility.

The windscreen of a motor vehicle must have a luminous transmittance of at least 70%.

The windscreen of a vehicle cannot be fitted with a film that reduces visible light transmittance except for the area above the highest point swept by the windscreen wipers of the upper 10% of the windscreen.



If the windows of a motor vehicle are coated to reduce light transmittance, the following requirements apply;

- Visible light transmittance must not be less than 35% when measured through glass and the film together.
- Reflectance in the visible light range must not exceed 10%.

For more information please read the Fact Sheet MR430 – Window Tinting on Vehicles

Bonnet pins and mascots

The use of bonnet pins that protrude through the bonnet are not acceptable. Bonnet pins that were original equipment from the manufacturer may be acceptable. The use of bonnet securing devices that are flush with the contours of the bonnet may be used.

Mascots are acceptable if they were provided as original equipment by the manufacturer for a particular make and model of vehicle.

Bonnet scoops

The fitting of a bonnet scoop (forward or rearward facing) to a motor vehicle is only acceptable provided that it is designed, built and fitted in a way that it minimises the likelihood of injury to a person accidentally making contact with the vehicle.

For more information please read the Fact Sheet for Bonnet Scoops MR 804.

Hazardous projections

An object fitted to a vehicle must be designed, built and fitted to the vehicle in a way that minimises the likelihood of injury to a person making contact with the vehicle.

All equipment inside the vehicle such as fire extinguishers, GPS Navigation or additional gauges etc should be securely fastened. It is recommended that cargo anchorage systems should be capable of withstanding a force equal to twenty times the mass of the equipment. Cargo barrier protection screens are available for many station wagon and light commercial vehicles and are highly recommended.

However, if the vehicle was designed before 1965 and such object was part of the design of the vehicle this may be permissible.

No vehicle must be equipped with:

- any object or fitting, not technically essential to such vehicle, which protrudes from any part of the vehicle so that it is likely to increase the risk of bodily injury to any person;
- any object or fitting technically essential to such vehicle unless its design, construction and conditions and the manner in which it is affixed to the vehicle are such as to reduce to a minimum the risk of bodily injury to any person;
- any object or fitting which, because it is pointed or has a sharp edge, is likely to increase the risk of bodily injury to any person; or
- any bumper bar the end of which is not turned towards the body of the vehicle to a sufficient extent to avoid any risk of hooking or grazing.



Roll cages

Due to the increased risk of occupant injury in vehicle accidents the fitting of full roll cages are not permitted. However, the fitting of a half roll cage rearward of the driver may be acceptable providing that:

- No part of the roll cage is contactable by vehicle occupants when positioned in their normal seating position.
- The roll cage is at least 150 millimetres rearward of the front seat occupants when the front seats are located in the most rearward adjusted position.
- All rear seats and seat belt assemblies fitted in the rear compartment are removed.
- The operation and effectiveness of the front seat belt assemblies is not affected in any way by the roll cage.
- That no person travels in the rear of the vehicle at any time.
- That the vehicle has a 'Seating Inspection' carried out by DPTI.



Bull bars

Bull bars must be designed and fitted so that the safety of the vehicle is not affected and not be of danger to other road users including pedestrians. Bull bars must be fitted correctly and be free of sharp protrusions. They must not obscure the drivers view or any vehicle lights including indicators. The fitting of fishing rod holders to the front of the bull bar is not accepted.

Vehicles fitted with an airbag or manufactured to comply with ADR 69 – Offset Frontal Impact Occupant Protection or both ADR 69 and ADR 73 – Offset Frontal Impact Protection, can only be fitted with a bull bar which has been certified by the vehicle manufacturer as a suitable for the vehicle or has been demonstrated by the bull bar manufacturer that it complies with the ADRs 69 & 73. For further requirements and more information please see the Vehicle Standards fact sheet MR 1505 - Bull bars (Frontal Protection System).

Tilt fronts

"Tilt front" is a term used to describe a type of forward pivoting integral engine bonnet, grille and front mudguard assembly for front engine vehicles. Examples of production vehicles fitted with this type of engine access are the Jaguar "E" Type and the Chevrolet Corvette.

The fitting of a tilt front will be acceptable to DPTI providing that:

- The new body sections are designed and constructed with no dangerous or sharp projections so that in the event of an accident the risk of injury to pedestrians and cyclists is minimised.
- The new body sections do not obstruct the visibility of lamps fitted to the front of the vehicle and in particular the direction turn signal lamps or headlamps.
- The new body sections do not obstruct the field of view of the driver. The field of view requirements are determined as follows;
 - With the drivers seat in the rearmost position, it shall be possible to see, unobstructed for the full width of the vehicle, a line drawn on the roadway 11 metres ahead of the "driver's eye position" when looking over the bonnet. For the purpose of this requirement the "driver's eye position" shall lie at the bottom of the of the 95th percentile eye ellipse (reference ADR 15/01 clause 15.1.5.1).
 - Alternatively the "driver's eye position" can be taken as a point 750 millimetres above and 270 millimetres forward of the junction of the seat cushion and seat squab with the seat in the lowest and rearmost position.
- All lights fitted meet the requirements of Road Traffic (Light Vehicle Standards) Rules 2013 and where applicable ADR 6/00.
- The anchoring, hinge and latching mechanisms are durable and have sufficient strength to secure the hinged section. DPTI may request a submission from a Light Vehicle Engineering Signatory (LVES) if doubt exists concerning the strength of components.
- In the case of passenger cars and derivatives manufactured on or after 1st January 1969, an engineering report presented by a LVES may be required, which demonstrates that the vehicle continues to comply with Australian Design Rule requirements in addition to the above.

Mudguards and mudflaps

Mudguards must be fitted to all road wheels and must cover the full width of the tyre when viewed from directly above. They must prevent direct contact with the upper half of the wheel in forward collisions and be designed to reduce the dangers to road users, due to contact with moving wheels. They must deflect downwards any stones, mud, water or other material thrown upwards by the rotation of the wheels. For vehicles manufactured on or after 1st July 1988, specific requirements relating to the design and construction are contained in ADR 42.

The wheel guard including the mudflap (if fitted) is not to be less than 230mm from the ground and for off-road vehicles 300mm.

Fibreglass or carbon fibre panels

The use of custom made fibreglass or carbon fibre body panels is acceptable provided that the structural integrity of the body is not adversely affected and the vehicle continues to comply with all relevant ADRs. When fitting a carbon fibre bonnet, it must be manufactured in a way that, it is of equal strength of the original and that it retains the under bonnet ribbing/structure and is mounted via the original bonnet catch and hinges.

Spoilers and wheel guard flares



Cosmetic body modifications such as side skirts and front/rear spoilers are permitted without DPTI approval provided that they are fitted with regard to the safety of other road users. They must meet ground clearance requirements of 100mm. It is recommended that air flow for brake cooling is not adversely affected.

Rear spoilers must be within the original body profile of the vehicle.

There must not be any sharp edges that could increase the severity of injuries to pedestrians and other road users.

The fitting of a rear spoiler that incorporates a brake light requires the original equipment eye level brake light, where fitted, to be disconnected.

Lighting

Additional lighting systems are to be fitted strictly in accordance with South Australian legislation and must be marked to be compliant to ADR specifications.

You may fit up to a maximum of four additional lights, in pairs, providing the lights show a white beam only. Lights fitted must not affect the drivers view and must be mounted symmetrically. Additional driving lights must extinguish automatically when low beam is selected.

All headlamps must be mounted at the front of the vehicle.

Front Fog lights

A pair of fog lights, showing a beam of white or yellow light may be fitted to the front of a motor vehicle with the centres no higher than the top of the dipped beam headlight. The light must be mounted symmetrically not less than 600mm apart.

Fog Lights must be capable of being switched on and off independently of any headlights but must only be able to be switched on when the parking lights are on. Fog lights can only be used in fog or conditions with reduced visibility.



Coloured lights

Red and blue lights are not allowed on any vehicles except emergency vehicles (for example police, fire and ambulance). Red lights and reflectors must only face to the rear of the vehicle. White lights and reflectors must face forward. Yellow/Amber lights are permitted for indicators, fog lights and for side clearance lights on large vehicles and buses.

With the exemption of indicators, amber flashing lights are not permitted on any vehicle, except special vehicles for use in hazardous situations and emergency vehicles.

Some modern halogen bulbs provide superior illumination to traditional bulbs. These bulbs contain less red/yellow and bluer frequencies of light to achieve a whiter appearance. Replacement head light bulbs must display compliant ADR or equivalent markings.

Daytime running lamps

Daytime running lights are bright white forward-facing lights that improve the visibility of a vehicle in the daytime. A pair of daytime running lamps may be fitted to a motor vehicle. The lights must be wired so they are not illuminated while the vehicles main headlights are on. They also must conform to requirements outlined in the Australian Design Rules 76/00.



HID (high-intensity discharge) headlamps

HID light bulbs, also know as Xenon lights, produce a light by creating an electrical arc across two electrodes, resulting in a much brighter white/blue light than normal halogen light bulbs. The fitting of HID headlamps is permissible providing that they are fitted with automatic headlamp levelling devices and headlamp cleaners. They must also conform to any requirements in set in ADR 13.

Instrument panels

Manufacturers have been required by ADR 21 to provide crash padding for the instrument panel in vehicles manufactured on or after 1st January 1973. If any additional equipment such as gauges, switches, audio systems etc. are installed they must not protrude beyond the dash padding or be mounted on top of or below the dash where they are likely to cause reduced vision or increase injury in a accident.

Visual display screens

DVD screens, television receivers, visual display screens may be installed in a motor vehicle. The screen must not be visible to the driver from the normal driving position except, when the screen turns off when the vehicle is moving, or it is a drivers aid eg GPS Navigation or reversing camera.

The sceens must not be fitted so that it obscures the driver's view of the road or impede the movement of anyone in the vehicle and increases the likelihood of injury to the driver and passenger.



Registration number plates

Only approved number plates issued by DPTI can be fitted to motor vehicles. The bottom edge of the plate is to be at least 30cm above ground level and that every figure and letter of the registered number is upright and that the whole of the plate is visible from the front and rear of the vehicle.

The plate must be clearly visible in daylight to a person standing on the same plane as the vehicle at any point not less than 3 metres or more than 18 metres from the plate looking at the plate along an imaginary line approximately at right angles to the plate. The front number plate must be mounted parallel to the front axle. The number plate must be clean and legible at all times.

Kit cars and new construction passenger vehicles

Individually Constructed Vehicles (ICV) are vehicles where the body and chassis are new, even though the sub-assemblies and components used may be derived from other production vehicles. Most ICVs are 'passenger car type' vehicles which includes sedans, station wagons, coupes, and tourers.

For more information about ICV's please contact Vehicle Standards for a copy of the Information Manual MR850 - Individually Constructed Vehicles or a copy can be downloaded at www.sa.gov.au



Street rods

The definition of a Street Rod appears in the National Code of Practice for Street Rods which states: "A Street Rod shall mean a vehicle that has a body and frame that were built before 1949, that has been modified for safe road use, or a replica of a vehicle the body and frame of which were built before 1949."

Note that vehicles manufactured in 1949 or later that are carry over models of a vehicle model manufactured prior to 1949, eg Ford Anglia, are included in the Street Rod classification.

A Street Rod must therefore have a separate body and chassis, both of which are of pre-1949 manufacture, or may be recently built replicas of the chassis and body of a pre-1949 vehicle and must also comply with the requirements of the National Code of Practice for Street Rods.



The vehicle may be built from the "ground up" using reproduction parts of a pre-1949 vehicle.

Vehicles built outside of these guidelines, whilst they may have the appearance of a Street Rod, will be classified as Individually Constructed Vehicles. Vehicles classified as ICVs will need to comply with the ICV requirements specified in the fact sheet "MR 850 - Individually Constructed Vehicles".

For more information on the National Guidelines for the Construction and Modification of Street Rods in Australia please visit the website www.infrastructure.gov.au

Frequently asked questions...

Does my windscreen demister have to work?

Vehicles built from 1971 require a demister to work on the front windscreen. There is no requirement for a rear demister to be fitted.

Does my car need to be fitted with a working windscreen washer?

All passenger vehicles manufactured after 1972 are required to have windscreen wipers that have operative windscreen washers.

How many Driving lights can I have on my motor vehicle?

A maximum of four driving headlamps are permitted on a motor vehicle in addition to the standard headlamps. The lights must be wired so they only operate with the vehicles High-beam lights. The mounting of these lights must be at the front of the vehicle.

I don't like the Convex Mirrors that have been fitted to my new vehicle can I take them off?

Yes, and they can be replaced with a flat mirror of the same size.

Can I fit Nitrous Oxide Injection to my vehicle?

Nitrous oxide injections systems must not be fitted. This also includes any partial installation or any that is disconnectable.

Does my speedometer have to work?

All motor vehicles manufactured after June 1988 must be fitted with a functioning speedometer and odometer calibrated in kilometres per hour and kilometres.

Can I buy a 2nd hand seat belt?

No, it is illegal to sell a 2nd hand seat belt.

Can I fit retreaded tyres to my vehicle?

Retreads can only be fitted to vehicles where the retreaded tyre casing has a load rating equal or greater than that specified on the tyre placard.

Can I fit different tyres/tread patterns on my car that what is already on the vehicle?

Passenger cars and derivatives manufactured before 1973 maybe fitted with tyres which are of a different carcass construction provided the tyre carcass type across any axle is the same and if there is a mix of conventional and radial ply tyres the radial ply ones should be fitted on the rear axle. A passenger car or derivatives manufactured after 1972 must be fitted with tyres of the same carcass as specified by the vehicle manufacturer on the tyre placard. However there is no requirement for the tread pattern to be the same on each tyre.

Do I need a spare wheel or a jack for the roadworthy inspection?

No, there is no requirement, though it is advisable.

When can I use the fog lights on my vehicle?

Using fog lights when not driving in fog or other hazardous weather conditions is an offence.

Can I sell my defected vehicle?

Yes you may sell a defected vehicle provided that it is for the purposes of dismantling or wrecking and the registration is to be cancelled.

Can I fit spot lights to my roll bar on my 4WD?

Yes. Providing the light or lights are facing forward and don't obscure the drivers view of the road. The lights are to be fitted so that they do not dazzle the driver or any other road user either directly or indirectly eg. through the rear view mirrors and or other reflecting surfaces of the vehicle.

Can I fit coloured under-car neons to my vehicle?

No. This type of lighting system is not approved. A vehicle can not show coloured light other than what is specified in the Road Traffic (Light Vehicle Standards) Rules 2013, and the Australian Design Rules.

Can I put a battery in the boot of my vehicle?

You may fit a battery in the boot of your vehicle providing that it is securely mounted in a battery box and that it is a battery that emits fumes that it is vented externally to the atmosphere. If the battery is a 'sealed' type there is no requirement to have it vented to the atmosphere.

Following is a list of Applications and Vehicle Standards Fact Sheets are available from Vehicle Standards or online at www.sa.gov.au

- MR25 - Light Vehicle Towing
- MR132 – Brake system test procedure
- MR143 – Vehicle 4.5 tonnes or less carrying loads
- MR259 – Carrying loads
- MR294 – Motorised wheelchairs safety and law
- MR322 – Code of practice Historic vehicles
- MR426 – Chartered professional engineers
- MR430 – Window tinting for your vehicle
- MR628 – Requirements for imported vehicles manufactured prior 1989
- MR629 – Left hand drive vehicles
- MR648 – Conversion to Electric drive
- MR800 – Hazardous projections
- MR804 – Bonnet scoops
- MR805 – A-frame towing
- MR806 – Caravans and Motorhomes
- MR807 – Lane change test procedures
- MR808 – Motorcycles and Sidecars
- MR809 – Track and suspension specifications
- MR810 – Torsional stability requirements
- MR850 – Individually constructed vehicles
- MR857 – Defective vehicles
- MR864 – Internal padding material for occupant protection
- MR925 – Repaired written-off vehicles inspection requirements
- MR1135 – Power assisted Bicycles
- MR1136 – Requirements for lowering or raising your vehicle ride height
- MR1292 - Child restraint anchorages in personally imported cabriolets with active rollover protection systems
- MR1324 - Nissan Elgrands imported for conversion to campers
- MR1457 - Modifications to Passenger Cars, Utilities, Panel Vans and 4WD Passenger Vehicles
- MR1505 - Bullbars front protection system
- MR1517 - LED light bars and additional driving lights
- MR1540 - Motorcycle mudguards and tail ties
- MR1545 - Seatbelt Safety

Further information

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