

Light vehicle modifications

A guide to modifications requiring certification under the *Vehicle Safety Compliance Certification Scheme*

Purpose

This Vehicle Standards Information (VSI) No. 6 is intended to help vehicle owners and modifiers determine what modifications to vehicles up to and including 4.5 tonnes gross vehicle mass require certification.

Introduction

Vehicle owners sometimes modify their vehicle to give it a distinctive appearance, improve its performance, add features, change the engine, change the suspension, add a long-range fuel tank, or for a combination of reasons. Others modify their vehicles so that they are better suited to a specialised purpose.

Vehicle owners who intend to modify their vehicles need to follow the standards and guidelines that apply to the modification of vehicles for use on roads and/or road-related areas. This will ensure that each completed vehicle is safe for use and that the level of safety afforded by a vehicle to its passengers and other road users is not compromised by any modification/s.

Certification of significant modifications

When modifications to a vehicle are significant, the vehicle will require a compliance certificate issued by a person accredited as a licensed certifier on the Roads and Maritime Services (RMS) Vehicle Safety Compliance Certification Scheme (VSCCS).

To make it clear to vehicle owners and modifiers when a modified vehicle requires a compliance certificate, a new legal document has been developed. The document, the *Vehicle Safety Compliance Certification Scheme Declaration of Modification or Class of Modification Order 2013* (the Order) contains a list of modifications that require certification.

This VSI No. 6 is intended to clarify technical content of the Order. It provides examples and tips when modifying a light vehicle, and will assist you in determining whether your vehicle requires certification. Following these guidelines will assist you in ensuring that your vehicle meets all applicable New South Wales regulations and that its safety levels are maintained.

This VSI No. 6 should be read in conjunction with the Order.

Roads and Maritime Services

Level 4, 99 Phillip Street, Parramatta NSW 2150
PO Box 1120 Parramatta NSW 2124 | T 1300 137 302 | F 02 8837 0037 | E tech_enq@rms.nsw.gov.au
www.rms.nsw.gov.au | 13 22 13

Compliance with vehicle safety standards

VEHICLE STANDARDS LEGISLATION

Vehicles registered in NSW must (unless exempted) meet Schedule 2 of the Road Transport (Vehicle Registration) Regulation 2017, including compliance with the design standards set out in the applicable Australian Design Rules (ADRs). A vehicle that is modified and certified according to the Order must continue to meet the applicable requirements as set out above.

AUSTRALIAN DESIGN RULES

Any modification to a vehicle (whether or not listed in the Order) has the potential to affect one or more ADRs. Unless exempted by RMS (or ADRs do not apply to that vehicle), any modification that affects an applicable ADR will require certification; for example, a pole-mounted information technology (IT) screen is likely to affect one or more ADRs, and if this is the case, a VSCCS certificate will be required for the modification.

CODE OF PRACTICE FOR LIGHT VEHICLE MODIFICATIONS

Vehicle Standards Bulletin (VSB) No.14 *National Code of Practice for Light Vehicle Construction and Modification* outlines the minimum design, construction, installation and performance requirements for modifications to light vehicles, for building individually constructed vehicles (ICVs) and for the certification of certain imported vehicles. Following the guidance provided in VSB 14 will help ensure that work undertaken will meet the standards set down in NSW regulations. Most of the modifications listed in the Order have corresponding practical guidance in VSB No.14.

VSB No.14 is available on the [Commonwealth] Department of Infrastructure and Transport website – see page 18 for contact details.

Does your vehicle modification require certification?

The tables on pages 3 – 16 of this VSI No. 6 list the significant modifications included in the Order, and provide additional information to help determine what modifications require certification. The item numbers in the tables match the item numbers in the Order.

Be aware that while some of the listed modifications apply to specific vehicle types (eg items 49 to 52 apply specifically to motorcycles), the significant modifications shown in the tables may apply to all vehicle types.

Modifications that do not require certification

A vehicle that is modified by incorporating optional components offered by its manufacturer, or otherwise modified so that it continues to comply with the manufacturer's specifications, does not require certification. To check if the modification complies, contact the vehicle manufacturer to determine the vehicle's original specifications and/or options.

Other modifications that do not require certification are:

- (a) Replacement of parts or components by identical parts or components.
- (b) Replacement parts or components with parts or components with equivalent functional performance.
- (c) Optional parts or components as prescribed by the vehicle's manufacturer.

Items (a), (b) and (c) above apply to all of the systems described in the tables on following pages 3 - 16.

Seek advice

The examples of modifications ‘requiring’ or ‘not requiring’ certification provided in the following tables do not cover all situations. It is recommended that before undertaking any modification/s to your vehicle, you seek advice regarding the impact they may have on your vehicle’s continuing compliance with ADRs and the Regulation. If you have any doubt about whether or not your intended vehicle modification/s may require certification, you should contact RMS Technical Enquiries or a VSCCS licensed certifier for more information – see page 18 for contact details.

Significant modifications requiring certification

ENGINE	
Item	Modification
1	<p>An engine that is not of an original family of engine for the series of models, or any engine more than 20% larger than the largest original optional engine for that series.</p> <p><u>Examples requiring certification:</u></p> <ul style="list-style-type: none"> • Replacement of 2.0 litre Honda engine with 2.0 litre Mitsubishi engine. • Replacement of 2.0 litre engine with an engine capacity greater than 2.4 litres. <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none"> • Replacement of a 2.0 litre engine with an engine of 2.4 litres capacity or less and from the same vehicle series.
2	<p>Fitting of turbochargers or superchargers not originally offered by the engine or vehicle manufacturer, or increasing the original power output by more than 20%.</p> <p><u>Examples requiring certification:</u></p> <ul style="list-style-type: none"> • Fitting a turbocharger/supercharger to any vehicle of a make and model not offered with a turbocharger/supercharger by the manufacturer. • Modifications to a vehicle with a power output of 100 kilowatts, which results in a power output of greater than 120 kilowatts.
3	<p>Conversion to an electric motor or hybrid driveline other than drivelines offered by the first manufacturer as standard or optional.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none"> • Converting a petrol driveline to an electric driveline on any vehicle of a make and model not offered with an electric driveline by the manufacturer. <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none"> • Converting a petrol driveline to an electric driveline, where the manufacturer offers an electric driveline in a variant of that make and model. <p>Note: Petrol and hybrid vehicles may have different body designs. If you are going to convert from a petrol to a hybrid driveline and you are modifying the vehicle body, certification is required.</p> <p>Tip: Contact the vehicle manufacturer to confirm the original vehicle's optional engines.</p>

ENGINE (continued)	
Item	Modification
4	<p>Modification of an electric motor or hybrid driveline resulting in an increase in the maximum power output of more than 20% than offered by the first manufacturer as standard or optional.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none"> • Modifications to a vehicle with a power output of 80 kilowatts which results in a power output greater than 96 kilowatts.
5	<p>Modification to engines and/or exhausts that impacts* the emissions levels applicable to those ADRs specified for the vehicle.</p> <p>* 'impacts' means an increase in emissions levels specified in the ADRs.</p> <p><u>Examples requiring certification:</u></p> <ul style="list-style-type: none"> • Fitting non-original valve train components. • Fitting non-original or non equivalent carburettors or fuel injection equipment. • Removal of bypass or emission control equipment including exhaust gas recirculation (EGR), positive crankcase ventilation (PCV), catalytic convertors, engine management sensors. • Fitting non-original or non-equivalent air intake manifolds. • Replacing original engine control unit. <p>Note: Fitting pressure relief valves or other devices that vent directly to atmosphere is not allowed.</p> <p><u>Examples not requiring certification:</u></p> <ul style="list-style-type: none"> • Alternative exhaust systems that retain the original or equivalent emission control equipment eg headers, mufflers, complete exhaust systems. • Alternative engine intake and filtration systems that retain the original emission control equipment eg replacement filter elements/assemblies, intercoolers, cold air intakes, snorkels. • Oil separation systems where no part of the PVC system vents to atmosphere. <p>Note: If non-original components such as camshafts, carburettors or engine control modules (ECM) are fitted in an ADR emissions complying vehicle, it must be demonstrated that emission levels are retained.</p> <p>Tip: To confirm vehicle emissions are within acceptable standards certifiers may require RMS emissions testing. These are conducted free of charge at RMS Heavy Vehicle Inspection Station (HVIS) Botany or Penrith – contact the RMS HVIS on 1300 364 847 to make a booking. Alternatively, a 4 or 5 gas analyser test may be conducted at a vehicle repairer.</p>

TRANSMISSION AND DRIVELINE

Item	Modification
6	<p>Fitting of any manual or automatic transmission or transaxle which does not fit within the original transmission tunnel and also bolts directly to the engine, original transmission mounting(s) and original tailshaft and/or driveshafts.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none"> • Fitting a manual or automatic transmission and/or transaxle which requires modification of the floor or the cross-members of the vehicle in any way. <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none"> • Fitting a manual or automatic transmission and/or transaxle which fits within the original transmission tunnel and bolts to the engine directly, or by the use of an adapter plate.
7	<p>Alterations of gearbox speedometer drive ratio or final drive gear ratio if speedometer accuracy is affected.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none"> • Fitting a 3.45 ratio differential into a vehicle originally fitted with a 2.77 ratio differential. <p><u>Examples not requiring certification:</u></p> <ul style="list-style-type: none"> • Alteration of gearbox ratio if final drive ratio not affected. • Where speed sensing is independent of driveline. • Where change of final drive ratio includes speedometer correction device or matching speedometer drive and driven gears. <p>Tip: To confirm the vehicle's speedometer is accurate, an accuracy test should be conducted.</p>
8	<p>Fitting of any drive axle assembly (including differential and brakes) from a different make or model vehicle.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none"> • Fitting a Ford 9 inch differential into a Commodore. <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none"> • Fitting aftermarket internal drive axle components eg differential locks.
9	<p>Any modification to transmission/driveline involving fabrication of components.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none"> • Any modification to the transmission or driveline of a vehicle which involves the fabrication of components such as mounting cross-members and/or structural components. <p><u>Examples not requiring certification:</u></p> <ul style="list-style-type: none"> • Non structural transmission or driveline components that have been fabricated eg transmission sump, cooling system, oil cooler. • External reinforcements eg driveline braces or stiffeners, driveshaft hoops.

TRANSMISSION AND DRIVELINE (continued)

Item	Modification
10	<p>Addition of axles (eg 'lazy' axle conversions and tandem drive conversions).</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none">• Fitting an additional rear axle (dual rear axles) to a single rear axle ute.

STEERING

Item	Modification
11	<p>Any modification to the steering involving fabrication of components, modification of mountings, or fitting steering components not original for the vehicle series.</p> <p><u>Examples requiring certification:</u></p> <ul style="list-style-type: none">• Modification of steering system with fabricated components.• Fabrication or modifications to steering components and/or mountings.• Conversion from steering box to steering rack. <p><u>Examples not requiring certification:</u></p> <ul style="list-style-type: none">• Fitting a bolt-on uprated steering damper.• Replacement of vehicle's steering components with aftermarket components designed for the same make and model. <p><u>Notes regarding vehicles modified for persons with disabilities:</u></p> <ul style="list-style-type: none">• Steering aids (excluding spinner knobs), or other modifications that assist persons with disabilities require certification.• If any modification (eg installation of a spinner knob) affects supplementary restraint systems, or any ADRs are affected, the vehicle will require a written exemption from RMS. <p>Tips:</p> <ul style="list-style-type: none">• Refer to VSI No.21 <i>Vehicles modified for people with disabilities</i> for more information.• Contact RMS Technical Enquiries for information regarding exemptions.

SUSPENSION

Item	Modification
12	<p>Altering vehicle ride height by more than one third of the manufacturer's suspension travel in the direction of the ride height change.</p> <p><u>Examples requiring certification:</u></p> <ul style="list-style-type: none"> • Conversion from coil to leaf springs. • Any modification to the suspension configuration. • Fitting a suspension of a different design eg from a different make and model (eg from coil springs to leaf springs). • Fabrication of suspension mounting points. <p><u>Examples not requiring certification:</u></p> <ul style="list-style-type: none"> • Modification of suspension with components or parts which meet or exceed the original vehicle manufacturer's specifications. • Fitting uprated roll (sway) bars, shock absorbers, springs, struts or manufacturer's options for that particular year make and model.

WHEELS AND TYRES

Item	Modification
13	<p>Replacement of tyres that change tyre overall diameter by more than 7% of the overall original diameter*.</p> <p>* 'overall original diameter' means the maximum outside diameter of the largest tyre specified by the vehicle's original manufacturer as an option for the vehicle, as shown on the vehicle's tyre placard.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none"> • Replacing 215/65R17 (712 mm overall diameter) tyres with 265/65R17 (776 mm overall diameter) tyres, an increase in overall diameter of 64 mm, or 8%. <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none"> • Replacing 215/65R17 (712 mm overall diameter) tyres with 235/65R17 (738 mm overall diameter) tyres, an increase in overall diameter of 26 mm, or 4%. <p>Tip: To determine if the tyres you have selected require certification you need to look at the tyre placard fitted to the vehicle by the manufacturer. Sometimes the tyre placard will show more than one tyre size, allowing optional tyres of that size to be fitted. If one of the tyre sizes marked on the placard (eg 215/65R17) matches the marking on the tyre sidewalls, certification is not required.</p>

WHEELS AND TYRES (continued)

Item	Modification
14	<p>Replacement of wheels where the rim width exceeds the largest wheel combination specified by the manufacturer by greater than 25 mm.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none">Fitting a wheel with a width of greater than 225 mm, when the greatest wheel width specified by the manufacturer is 195 mm. <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none">Fitting a wheel with a width of 205 mm, when the greatest wheel width specified by the manufacturer is 195 mm. <p>Tip: Refer to VSI No.9 <i>Guidelines for alternative wheels and tyres</i> for more information.</p>
15	<p>Replacement of wheels and tyres where the wheel and tyre combination does not comply with the manufacturer's minimum load carrying capacity specifications.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none">Fitting car tyres to a van or any goods-carrying vehicle for which 'light truck' rated tyres are specified. <p>Tip: The manufacturer's minimum load carrying specifications will be detailed on the tyre placard fitted to the vehicle.</p>

BRAKES

Item	Modification
16	<p>Fitting of disc or drum brakes that are not a manufacturer's option for that series.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none">Replacement of front-wheel drum brakes with disc brakes on a vehicle not optioned with front disc brakes by the manufacturer eg fitting disc brakes from a VT model Commodore to a base model LC Torana originally fitted with drum front brakes. <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none">Replacement of front-wheel drum brakes with disc brakes on a vehicle available from the manufacturer with front disc brakes as an option where all the parts from that option are fitted eg fitting a base model LC Torana which has drum front brakes with the disc front brakes originally supplied to the GTR model LC Torana.

BRAKES (continued)

Item	Modification
17	<p>Substitution of brake master cylinders, wheel cylinders, callipers and other components with components not equivalent to original for the braking system configuration.</p> <p><u>Examples requiring certification:</u></p> <ul style="list-style-type: none"> • Replacing a single master cylinder on a dual circuit brake system with a twin master cylinder from a single circuit brake system, or vice versa. • Fitting part, or all of, the braking system from a VB Commodore to an EH model Holden. • Replacing single-piston callipers with multiple-piston callipers. • Fitting a master cylinder that is not an original option for that vehicle.
18	<p>Fitting or modification of brake balance and pressure limiting devices not equivalent to original for the braking system configuration.</p> <p><u>Examples requiring certification:</u></p> <ul style="list-style-type: none"> • Modifying or removing brake balance and limiting devices eg brake proportioning valves fitted by the manufacturer. • Replacing brake balance and limiting devices fitted by the manufacturer with devices which do not meet the manufacturer's original specifications. <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none"> • Replacing brake balance and limiting devices with devices which meet the manufacturer's original specifications.
19	<p>Relocation of the brake pedal position for left-hand or right-hand drive or fitting of an additional brake pedal.</p> <p><u>Examples requiring certification:</u></p> <ul style="list-style-type: none"> • Relocation of brake controls for a left-hand drive to right-hand drive, or fitting an additional brake pedal or control. • Fitting dual controls. <p>Note: Converting a right-hand drive vehicle to left-hand drive is not allowed.</p>
20	<p>Fitting or modification of trailer brakes to trailers.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none"> • Fitting or modifying brakes on commercially available, ie proprietary branded, manufactured trailers. <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none"> • Fitting or modifying brakes on home-made trailers not exceeding 4.5 tonne aggregate trailer mass (ATM) that are built to the requirements of VSB No.1. <p>Tip: In addition to VSB No.14, refer to VSB No.1 <i>Building small trailers</i> for information regarding construction of trailers not exceeding 4.5 tonnes aggregate trailer mass (ATM).</p>

BODY AND CHASSIS

Item	Modification
21	<p>Fitting wheel tubs where the modification(s) involve the alteration or movement of structural members, subframe or chassis sections.</p> <p><u>Examples requiring certification:</u></p> <ul style="list-style-type: none"> • Fitting wheel tubs where the modification involves the alteration or movement of structural members, subframe or chassis sections. • Fitting wheel tubs where the modification involves removal of chassis cross-members. • Fitting wheel tubs where the modification involves removal of a section of the floor in a monocoque-type vehicle. • Fitting wheel tubs where the modification involves cutting, notching, extending or shortening the chassis. <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none"> • Fitting wheel tubs where structural modification of the vehicle is not required.
22	<p>Fitting of fibreglass body panels where the original panels were welded on or where structural integrity is affected.</p> <p><u>Examples requiring certification:</u></p> <ul style="list-style-type: none"> • Fitting fibreglass body panels where the original panels were welded on. • Fitting fibreglass body panels causing any change to the structure or the body of the vehicle. <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none"> • Replacing original bolt-on mudguards, bonnet, or boot lid with identical fibreglass panels.
23	<p>Change of body style (eg convertible conversions; panel vans to utilities; sedans to coupes and 'tudors'; 'chop top' conversions; and tilt front conversions) or changes to body that affect structure.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none"> • Conversion from a sedan or a coupe to a convertible. <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none"> • Fitting a fibreglass canopy on the back of a ute where the original structure is unaltered.
24	<p>Extension of cabins with additional seating (eg crew cabin).</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none"> • Extending the cabin of a Toyota Hilux single-cab ute and fitting a second row of seats. <p>Note: A cabin is a safety structure and you cannot change it without affecting the structure of the vehicle.</p>

BODY AND CHASSIS (continued)

Item	Modification
25	<p>Replacement of vehicle bodies (eg re-bodied vehicles).</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none">• Replacing the body of a monocoque constructed vehicle. <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none">• Replacing the body of a vehicle that has a full chassis with a 'like for like' body.
26	<p>Reinforcement of the chassis (eg boxing chassis or fitting ¾ chassis/body reinforcing kits).</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none">• Fitting additional structural members to a chassis. <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none">• Fitting a strut tower brace.
27	<p>Structural alterations to vehicle chassis that result in a change to the manufacturer's wheelbase specifications, notwithstanding normal suspension travel.</p> <p><u>Examples requiring certification:</u></p> <ul style="list-style-type: none">• Chassis modifications that alter the vehicles wheelbase.• Fabrication of suspension mounting points. <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none">• Alterations of a vehicle's original wheelbase due to suspension travel.
28	<p>Installation of a sun roof (that is not fitted by a manufacturer) where it affects the vehicle's structural integrity.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none">• Fitting a sunroof where it is necessary to remove or modify a section of roof reinforcing. <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none">• Fitting a sunroof where the roof structure is not affected.
29	<p>Fitting of an alternative transmission tunnel or modification to an existing transmission tunnel, resulting in a configuration not originally optional for the series or equivalent.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none">• Replacing the transmission tunnel to fit a manual or automatic transmission and/or transaxle.

BODY AND CHASSIS (continued)

Item	Modification
30	<p>Conversion of a vehicle to campervan/motorhome.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none">• Conversion of a bus or ute to a motorhome by structural modifications or modifications that affect the vehicle's ADR category. <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none">• Slide-on campers attached to tray bodies or utes. <p>Note:</p> <ol style="list-style-type: none">1. Structural modifications may include; a 'pop-top' roof, and cabin modifications.2. Campervans and motorhomes converted prior to first registration require Federal approval which is known as 'second stage compliance'.
31	<p>Attachment of tow coupling (including fifth wheel type) and fittings that are not certified as ADR compliant by the tow coupling manufacturer (where applicable) or the fitting of any tow coupling not attached to vehicle manufacturer's original mountings.</p> <p><u>Examples requiring certification:</u></p> <ul style="list-style-type: none">• Fitting a tow coupling or fifth wheel coupling to mounting points not specified for that purpose by the vehicle's manufacturer. <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none">• Fitting an aftermarket towbar or fifth wheel coupling designed for that make and model and installed to the vehicle manufacturer's specifications. <p>Note: Tow couplings and fittings are certified by their manufacturer and a plate will be positioned on the towbar that indicates this.</p>
32	<p>A-frame towing equipment.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none">• Fitting A-frame towing equipment. <p>Tip: Refer to VSI No.41 <i>Guidelines for A-frame towing</i> for more information.</p>
33	<p>Fitting of body mountings, a body lift kit or mounting points other than those designed by the vehicle manufacturer.</p> <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none">• Fitting optional body lift kits or mountings that are designed for that make and model of vehicle and meet or exceed manufacturer's specifications.

BODY AND CHASSIS (continued)

Item	Modification
34	<p>Installation of powered goods loading device.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none">• Fitting any powered goods loading device if cutting or welding of the chassis is required, or if the vehicle structure will be altered. <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none">• Fitting a powered hoist to a vehicle provided it does not require cutting or welding of the chassis, or alters the vehicle's structure. <p>Note:</p> <ol style="list-style-type: none">1. The vehicle manufacturer, and the manufacturer of the loading device, should be consulted and their recommendations on special mounting requirements obtained before a loading device is installed.2. If considering drilling a vehicle's chassis, first check with the vehicle's manufacturer to determine if this is acceptable for the particular vehicle.
35	<p>Construction and or modification of a tow truck including lift equipment and tilt tray.</p> <p><u>Examples not requiring certification:</u></p> <ul style="list-style-type: none">• Modification of lift equipment not requiring modifications to the chassis or cross members.• Modifications that don't have an effect on the lift capacity. <p>Note: A tow truck assessment form must be completed and submitted if the tow truck is fitted with a partial lift device. Contact RMS Technical Enquiries on 1300 137 302 for more information.</p>
36	<p>Replacement of tow truck lifting components with specifications differing from original manufacturer.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none">• Replacement of lifting components with components of specifications that are different from those specified by the original manufacturer. This equipment must be certified or re-certified.
37	<p>Design and capabilities of a tow truck including testing/certifying and rating of lifting/towing components.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none">• Modifications which affect the design and capabilities of a tow truck, including testing/certifying and rating of lifting/towing components. This equipment must be certified or re-certified.

BODY AND CHASSIS (continued)

Item	Modification
38	<p>Installation of wheelchair loader.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none">• Fitting a wheelchair loader which requires modifications to, or interferes with, the design of the vehicle and its structural members, doors and/or emergency exits. <p>Note: Wheelchair loaders must comply with <i>AS/NZS 385.Parts 1 and 2 - Hoists and ramps for people with disabilities - vehicle mounted</i>.</p>
39	<p>Change in seating capacity resulting in re-classification of the vehicle category.</p> <p><u>Examples requiring certification:</u></p> <ul style="list-style-type: none">• Altering the seating capacity of a bus from 14 seats to 12 seats.• Conversion of a panel van into a small bus or a 'people mover'.

SEATS AND OCCUPANT PROTECTION

Vehicle manufacturers achieve a high level of vehicle safety by ensuring that the fitting of seats, seat mountings, seat belts and seat belt mountings meet the requirements of the Australian Design Rules (ADRs). Any modifications to these key safety components will require certification to ensure compliance with the ADRs is not compromised.

Item	Modification
40	<p>Fitting of seats to non-original seat anchorages.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none">• Fitting seats using anchorages not originally supplied by the manufacturer.
41	<p>Fitting of seats to original anchorages that are ADR compliant, where the seats are not ADR compliant to the make and model of the vehicle.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none">• Fitting non-ADR compliant seats to original ADR compliant anchorages.
42	<p>Fitting of or alterations to seat anchorages or seat belt anchorages.</p> <p><u>Examples requiring certification:</u></p> <ul style="list-style-type: none">• Any modifications to seat anchorages or seat belt anchorages.• Any modification to seat belt location.

SEATS AND OCCUPANT PROTECTION (continued)

Item	Modification
43	<p>Fitting of a non-original seat belt.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none">Replacing a 'lap-only' type seat belt with a 'lap-sash' type seat belt. <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none">Fitting an alternate or optional complying aftermarket seat belt for that vehicle series.
44	<p>Mounting of seat belt anchorages integrally on a seat where that anchorage is not originally provided by the manufacturer.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none">Replacement of a floor-mounted seat belt with a seat-mounted seat belt.
45	<p>Roll bar installations.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none">Installation of a roll bar which interferes with seat belt or child restraint anchorages, curtain airbags or any secondary restraint system, or impinges on the head impact area, the entry and exit to the vehicle, or visibility.
46	<p>Wheelchair restraint and wheelchair occupant restraint installations.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none">Installation of wheelchair restraints and wheelchair occupant restraints. <p>Tip: Refer to VSI No.21 <i>Vehicles modified for people with disabilities</i> for more information.</p>

FUEL SYSTEM

Item	Modification
47	<p>Fuel system modifications affecting emission ADRs.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none">Modifications that change a vehicle's fuel system or components from its original design. <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none">Conversion from petrol to LPG, natural gas or dual fuel by an approved gas installer. <p>Tip: To confirm vehicle emissions are within acceptable standards certifiers may require RMS emissions testing. These are conducted free of charge at RMS Heavy Vehicle Inspection Station (HVIS) Botany or Penrith – contact the RMS HVIS on 1300 364 847 to make a booking. Alternatively, a 4 or 5 gas analyser test may be conducted at a vehicle repairer.</p>

FUEL SYSTEM (continued)

Item	Modification
48	<p>Fitting/adding an alternative fuel tank or repositioning an existing fuel tank to non-original mounting points.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none">• Fitting an alternative fuel tank or repositioning of an existing fuel tank to non-original mounting points. <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none">• Fitting a replacement fuel tank of equal capacity using the original manufacturer's mounting points.

MOTOR CYCLES

Item	Modification
49	<p>Fitting of or modification to front forks other than those provided by the manufacturer.</p> <p><u>Examples requiring certification:</u></p> <ul style="list-style-type: none">• Conversion from telescopic forks to leading link forks.• Extensions to front forks. <p><u>Examples not requiring certification:</u></p> <ul style="list-style-type: none">• Replacement or modification of the front forks with forks of equivalent performance to those specified by the manufacturer.• Modification to the spring and dampening rate at which the shock absorbers perform.
50	<p>Addition of a side-car and associated modifications.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none">• Fitting a side-car and associated modifications.
51	<p>Modify frame.</p> <p><u>Example requiring certification:</u></p> <ul style="list-style-type: none">• Structural modifications to the frame of a motor cycle. <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none">• Relocation of the foot pegs without structural modifications.
52	<p>Attachment of tow coupling and fittings other than those provided by the original manufacturer.</p> <p><u>Example not requiring certification:</u></p> <ul style="list-style-type: none">• Fitting a towbar to manufacturer's specifications. <p>Note: Tow couplings and fittings are certified by their manufacturer and a plate will be positioned on the towbar that indicates this.</p>

Additional information for light vehicle modifications

Australian Design Rules (ADRs)

The ADRs are a series of vehicle construction and performance requirements that have been prepared for the purpose of:

- Reducing the possibility of accidents occurring, through such measures as improved lights and signals, windscreen washers, wipers and demisters, safety rims and rear vision mirrors.
- Mitigating the effects of accidents that do occur, through such measures as seat belts, air bags, energy absorbing steering columns and instrument panels, anti-burst door latches and head restraints.
- Reducing the undesirable effects of motor vehicles on the environment by limiting the noise and pollutants emitted.

In New South Wales, the Road Transport (Vehicle Registration) Regulation 2017 requires that vehicles manufactured after particular dates meet the requirements of relevant ADRs and continue to comply with those ADRs or later versions of those ADRs.

ADRs are administered by the [Commonwealth] Department of Infrastructure and Transport – see page 18 for contact details.

Road Transport (Vehicle Registration) Regulation 2017 (the Regulation)

Schedule 2 of the Regulation sets standards for the construction and performance of motor vehicles, trailers and combinations that are registered for use on roads or road-related areas in NSW.

The standards set by Schedule 2 are intended to:

- Promote, throughout the life of motor vehicles, trailers and combinations, their safe use and efficiency and protection of the environment.
- Reduce the cost of transport administration.

The Regulation is issued under NSW legislation – see page 18 for contact details.

Vehicle Safety Compliance Certification Declaration of Modification or Class of Modification Order 2013 (the Order)

This document declares what modifications, or classes of modifications to a vehicle, are deemed to be modifications which:

- May pose a risk of harm to any person or affect the safe operation of a vehicle.
- To which Part 5 of the Road Transport (Vehicle Registration) Regulation 2017 applies.

The Order is published in the NSW Government Gazette – see page 18 for contact details.

FURTHER INFORMATION

Roads and Maritime Services (RMS)

www.rms.nsw.gov.au | T 13 22 13 for details of your nearest motor registry

- VSI No. 9 *Guidelines for alternative wheels and tyres*
- VSI No. 21 *Vehicles modified for people with disabilities*
- VSI No. 41 *Guidelines for A-frame towing*

RMS Technical Enquiries

PO Box 1120, Parramatta NSW 2124

E tech-enq@rms.nsw.gov.au | T 1300 137 302 | F (02) 8837 0037

- Vehicle construction and registration requirements in NSW
- Tow truck assessment form

RMS Vehicle Safety Compliance Certification Scheme (VSCCS)

www.rms.nsw.gov.au/vsccs | E vsccs@rms.nsw.gov.au | T 1300 336 206

- VSCCS Bulletin No.1 *Licensed certifiers*
- VSCCS Bulletin No.2 *Modified or individually constructed vehicles - means to demonstrate compliance with Third Edition Australian Design Rules*
- VSCCS information and/or feedback

New South Wales Legislation

www.legislation.nsw.gov.au | T 02 9321 3333

- Road Transport (Vehicle Registration) Regulation 2017

New South Wales Government Contact Centre

www.nsw.gov.au/gazette/index | T 133 679

- NSW Government Gazette

Department of Infrastructure and Transport

GPO Box 594 Canberra ACT 2601

www.infrastructure.gov.au | T (02) 6274 7111

- VSB No. 1 *National Code of Practice – Building Small Trailers*
- VSB No. 14 *National Code of Practice for Light Vehicle Construction and Modification*
- Australian Design Rules