



# Queensland Light Vehicle Inspection Manual

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Queensland Government



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# PART 1 - QLVIM Overview

## 1. Introduction

### 1.1 Purpose

This *Queensland Light Vehicle Inspection Manual* (QLVIM) provides an assessment framework for the detection of vehicle defects or unsafe vehicle conditions. This QLVIM aligns with nationally harmonised vehicle standards and provides a framework with practical, easy to understand information for identifying and managing defects in light vehicles, light trailers and L-Group Vehicles.

The QLVIM was formerly titled Code of Practice – Light Vehicle Inspection Guidelines.

### 1.2 Authority

The QLVIM is given effect under Section 148 of the Transport Operations (Road Use Management) Act 1995, and Section 6(5) of the Transport Operations (Road Use Management – Vehicle Standards and Safety) Regulation 2021.

Approved examiners are accredited to provide light vehicle safety inspections under the *Transport Operations (Road Use Management—Accreditation and Other Provisions) Regulation 2015* (the Accreditation Regulation).

### 1.3 Application

The QLVIM applies to the assessment of light vehicles, light trailers and L-Group vehicles, which must have a safety inspection for the purpose of:

- transferring a vehicle to another person, or
- registering an unregistered vehicle, or
- transferring a vehicle into Queensland from another State or Territory
- verifying the repair of defects for the clearance of a Defect Notice.

#### 1.3.1 Approved examiners

Approved Examiners will utilise their trade qualifications and experience in motor vehicle repairs and maintenance and refer to any relevant information regarding vehicle manufacturer's specifications to ensure, as far as practicable, that the vehicle meets the requirements of the Act.

### 1.4 Out of Scope

Heavy Vehicle inspections must be performed in accordance with the National Heavy Vehicle Inspection Manual, published by the National Heavy Vehicle Regulator. The current version for use in Queensland is available online at:

<https://www.nhvr.gov.au/safety-accreditation-compliance/vehicle-standards-and-modifications/national-heavy-vehicle-inspection-manual>

## 2. Definitions

Unless otherwise stated, words and expressions used in the QLVIM have the same meanings as those defined in the Transport Operations (Road Use Management) Act 1995 or the Transport Operations (Road Use Management—Vehicle Standards and Safety) Regulation 2021.

**ADR** means the Australian Design Rules, the national standards for vehicle safety, anti-theft and emissions

**AIS** means an Approved Inspection Station

**Anchorage** means the part of a vehicle designed to transfer loads from a seatbelt assembly to the vehicle or seat and includes bolts, spacers, and other hardware designed for the attachment of a seatbelt assembly

**Approved Person** means a suitably qualified and experienced individual accredited by The Department of Transport and Main Roads to inspect and certify vehicle modifications for light and/or heavy vehicles

**AS** means an Australian Standard

**ATM** means the Aggregate Trailer Mass, the total mass of the laden trailer when carrying the maximum load recommended by the manufacturer. This includes any mass imposed onto the towing vehicle when the combination vehicle is resting on a horizontal supporting plane. Therefore, the ATM is the mass of the fully laden trailer when it is not connected to the towing vehicle

**Brake component** means, for an air or vacuum brake system, the brake components including all components such as any air lines, hoses, compressors, pumps, valves, chambers, switch controls, actuators and any associated componentry

**Brake pedal** means the brake pedals including any brake levels and components associated with the pedal or lever

**Bull bars** means bull bars including Roo bars, nudge bars, carry racks, and any structure mounted on or to the front bumper bar area of a motor vehicle

**Chain** means either a chain or belt

**CNG** means Compressed Natural Gas, also known as natural gas for vehicles

**Coupling device** means the components including tow bars, tow hooks, automatic pin type couplings, fifth wheels/turntables, skid plates, kingpins, mounting bolts, and any attachments for any of the items listed

**Door component** means the components including doors, hatches, catches, safety catches, removable covers, internal and external handles, and any fastening used

**ESC** means Electronic Stability Control

**Frame component** means the components including a vehicle's chassis and body

**GTM** means the Gross Trailer Mass, the mass transmitted to the ground by the axle or axles of the trailer when coupled to a towing vehicle and carrying its maximum load approximately uniformly

**GVM** means the Gross Vehicle Mass, the maximum laden mass recommended by the manufacturer

**Hand brake component** means the components including a handle, pedal, actuator (i.e. an electric solenoid), or associated component of a hand brake or park brake system

**Inspection Certificate** means a Safety Certificate and a Certificate of Inspection

**Lap anchorage** means an "Anchorage" provided to facilitate pelvic restraint

**Lighting component** means the components including lamps, reflectors, lens, and lamp reflectors

**LPG** means Liquid Petroleum Gas

**Mudguard** means the mudguard including any mudflap fitted

**NCOP** means the Vehicle Standard Bulletin 14: National Code of Practice for Light Vehicle Construction and Modification

**NG** means Natural Gas, includes both Compressed Natural Gas (CNG) and Liquid Natural Gas (LNG)



**Permanent structure** means the structure that cannot be readily removed within a short time using hand tools

**Powertrain** means the engine and transmission

**Primary vision area** means the area of the windscreen swept by the original vehicle manufacturer's wiper blades

**Route service omnibus** means an omnibus specially designed with spaces for standing passengers

**Safety chain** means the safety chains including any cable that performs the same function

**Safety glass** means non-shatterable transparent material

**Seat** means a structure provided to seat the driver and/or passengers

**Seating component** means the components including cushions, backrests, head restraints, frames and slides, and other controls (other than lumbar support controls)

**Suspension dampening components** means any part of the vehicle's suspension dampening system and includes shock absorbers and suspension struts

**TMR** means the Department of Transport and Main Roads

**Transmission** means the transmission including any gearbox

**VSS Regulation** means the [Transport Operations \(Road Use Management – Vehicle Standards and Safety\) Regulation 2021](#)

## 2.1 Vehicle Classifications

**Light Vehicle (LV)** means a vehicle that is propelled by a motor that forms part of the vehicle and has a gross vehicle mass (GVM) not exceeding 4.5 tonnes but excluding L-Group vehicles except for LEP or LEG classified vehicles.

**Trailer (T)** means a trailer with a Gross Trailer Mass (GTM) not exceeding 4.5 tonnes. When GTM is not available, ATM is to be used.

**L-Group Vehicle (LG)** means a moped (with 2 or 3 wheels), motorcycle (whether or not a side car is attached) and a motor tricycle,

excluding LEP and LEG classified vehicles. **Heavy Vehicle** means a vehicle, including trailer, which has a GVM or GTM exceeding 4.5 tonnes.

## 3. Modified Vehicles

Many vehicles have been modified from their original vehicle manufacture specifications. When inspecting these vehicles, it is important to ensure the modifications meet the defined standards and that they have been correctly approved. To assist in determining the appropriate standards and means of approval, the following information is provided.

### 3.1 Modifications categories

Modifications fall into four categories, depending on their complexity. The level of approval or certification required increases with the complexity and risk associated with the modification.

**Minor modifications** pose the lowest risk to vehicle safety and, as such, do not require formal approval or certification. However, the vehicle must continue to meet Queensland vehicle standards. More information on minor modifications is provided in [Vehicle Standards Instructions - Minor Modifications](#) available on the Queensland Government Publications portal.

**Basic modifications** are changes to a vehicle that are more significant than a minor modification. They do not require formal approval or certification but must meet the “basic modifications” standards provided in *NCOP* and the Queensland Code of Practice: Vehicle Modifications.

**Complex modifications** cover modifications such as engine substitutions, gearbox and rear axle changes, vehicle body modifications, and steering and brake replacements. These are significant modifications that can seriously affect the safety of a vehicle if not performed properly. Complex modifications are certified by approved persons who affix a modification plate to confirm the certification. A list of modification codes is provided in [Information Sheets 1\(a\), 1\(b\) and 1\(c\) in Part 3 Information Sheets for Approved Examiners](#).

**Specific modifications** fall outside the scope of the codes of practice and therefore cannot be certified by an Approved Person. As such, specific modifications must be approved by the Vehicle Standards Unit of TMR before being certified by an Approved Person. This approval will be provided in writing and must be produced when the vehicle is being inspected.

The [Motor Vehicle Modification Application form \(F1854\)](#) must be used when applying to the Department of Transport and Main Roads for a specific modification. Please email the application form and your submission to [vehiclestandards@tmr.qld.gov.au](mailto:vehiclestandards@tmr.qld.gov.au) or send it to:

Vehicle Standards  
Department of Transport and Main Roads  
PO Box 673  
Fortitude Valley QLD 4006

Applicants should supply as much vehicle and engineering detail as possible to allow the modification to be assessed and avoid delays in processing of submissions.

**Note:** Applications to modify a vehicle outside the requirements of an approved code of practice will only be considered by TMR if there is a genuine operational need for the modification.

For further advice regarding vehicle modifications, contact TMR on 13 23 80 or by email at [vehiclestandards@tmr.qld.gov.au](mailto:vehiclestandards@tmr.qld.gov.au).

## 3.2 Interstate modifications

Modification approvals issued by other State and Territory Registration Authorities are not recognised in Queensland for registration purposes. For a vehicle that has been modified and certified in another State or Territory, the owner of the vehicle must either apply to TMR for reciprocal recognition of the interstate approval or present the vehicle to an Approved Person to have the modification re-certified.

## 3.3 Design requirements

Motor vehicles built from 1969 for the Australian market are designed to meet specific design requirements, most of which provide safety standards for the vehicle occupants and other vulnerable road users. These requirements are set out in ADRs and are not easily checked without extensive test facilities.

The second edition ADRs apply to vehicles manufactured from 1969 to 1989 while those manufactured from 1989 must comply with the third edition ADRs. Motor vehicles built prior to 1969 are not required to comply with the ADRs however, they must meet the requirements set out in the *VSS Regulation*.

A vehicle that is subject to the ADRs has a Compliance/Identification plate or label. This plate/label gives the make and type of vehicle and the year of manufacture and, for some categories of vehicle, the number of seating positions.

From 1 July 2021, new vehicles will be required to be entered into the Register of Approved Vehicles (RAV). The RAV entry will replace compliance plates and provide information about a vehicle when it was first supplied to market. Vehicles can be searched on the [RAV](#) using the VIN. There is a grace period to transition into the RAV that applies until 30 June 2022 so new vehicles provided during this period may not be entered in the new system. Further information is

available on the Commonwealth Department of Infrastructure, Transport, Regional Development and Communications website: <https://www.infrastructure.gov.au/infrastructure-transport-vehicles/vehicles/rvs/rav>

### 3.4 Role of Approved Inspection Stations

Approved Examiners are not expected to conduct highly complex or destructive tests. However, they are required to check in-service aspects of ADR requirements. For instance, Approved Examiners should make sure that the required ADR systems are present, are not obviously modified and that they are sound and functional.

## 4. Safety Certification Inspections

AIS proprietors/nominees and Approved Examiners should remember that the vehicle owner is relying on them to ensure their vehicle meets legal requirements and is safe to drive on the road. The Inspection Certificate shows the various vehicle systems that are to be checked.

### 4.1 Inspection of a motor vehicle

The vehicle should be presented in a clean condition free of excess dirt and grease. If a vehicle is not presented in a reasonably clean condition, advise the customer to return the vehicle in a clean condition so a thorough inspection can be conducted. When conducting an inspection of a motor vehicle, the Approved Examiner should carry out no less than the following checks:

1. Verify the registration plate number (if registered) and chassis number/VIN on the vehicle and record all the necessary vehicle details (i.e. make and model, chassis/VIN, and the odometer reading).

**Note:** A trailer VIN/chassis number must be clearly stamped, embossed or otherwise permanently marked on a substantial part of its frame or chassis. The trailer plate is not considered a permanent marking. If the engine number is not in a conspicuous position, the number on the vehicle manufacturer's supplementary label may be used. It is not mandatory to record the engine number for vehicles manufactured after 1989 that have a VIN. It is mandatory to record the engine number and chassis number for a vehicle manufactured before 1989.

2. Check that modifications requiring approval have the correct codes listed on the modification (blue) plate, or an approval letter from TMR. Check that minor or basic modifications not requiring approval comply with vehicle standards. Refer to Section 3 for details.
3. Examine the vehicle's exterior.
4. Check all doors, windows and bodywork.
5. Sit in the driver's seat and test all the driving controls.
6. Check seats, seat belts, mirrors, sun visors, glazing, and forward vision through the windscreen.
7. Check the operation of steering linkages and all lights, including the aim of the headlights. (Another person may be required to assist with the inspection of steering and some lights.)
8. Open the bonnet and check the engine, battery, and any other items listed in the inspection guide.
9. Check the operation of all steering linkages, all road wheels and their fastenings, and check the tyres.
10. Raise the vehicle and check the suspension, wheel bearings, and steering components.
11. Check the underbody, chassis, subframes, engine and drive train, suspension systems, exhaust, and braking system components. If it is necessary to remove wheels and drums to effectively examine braking components, this task should be carried out.
12. Road test the vehicle.

13. Test the service brake and parking/hand brake. Record the results, attach a copy in ICO (if used) and retain the original digital test records for audit and investigation purposes.
14. Ensure the odometer and speedometer are operating, check the vehicle for poor handling, pulling to either side or undue vibrations, and the operation of the transmission.
15. Prepare the inspection report carefully, making sure that all necessary information is given.

**Note:** From time to time, AIS proprietors/nominees and Approved Examiners will encounter situations that may not appear to be covered in the QLVIM. In such cases, advice should be obtained from your local Transport Inspector or the Vehicle Standards Unit.

## 4.2 Road test

A road test is to be conducted by the Approved Examiner who conducted the inspection of the motor vehicle (trailers are not required to be road tested) to confirm the safe operation of the motor vehicle. A substitute driver is not permitted to conduct the test. If a defect has been detected during the initial visual checks which, in the opinion of the Approved Examiner, would make the vehicle unsafe to operate on the road, a road test is not to be performed. The standards to be applied during the road test are contained in the relevant component sections of the QLVIM.

The operation of the following must be validated during the road test:

- Foot brake (including hand operated brake on motorbikes)
- Park brake
- Steering
- Clutch
- Suspension
- Gear change mechanism
- Accelerator/throttle control
- Drive line condition (including chain/belt drives on motorbikes)
- Windscreen wiper/washers
- Driving position/visibility
- Exhaust system
- Speedometer and odometer operation
- Engine does not stall at idle, unless fitted with a manufacturers stop/start system
- Faults are not present with on-board control units (i.e. airbag fault light, stability control fault light, etc).

**Note:** If a defect is detected during a road test, the examiner must record "fail" under both the road test section of the Inspection Report and the applicable section relating to the defect (i.e. brakes, steering, etc).

## Part 2 – Reason for Rejection

The Reason for Rejection section sets out the criteria for when a vehicle is considered defective and must fail an inspection. The Reason for Rejection are applicable to the vehicle classifications of Light Vehicle (LV), L-Group Vehicle (LG), and Trailers (T) stated with each reason.

### 1. Seats and Restraints

The following reasons for rejection for seats and restraints are to ensure that all seating and restraints fitted to a vehicle provide a comfortable and secure position for vehicle occupants.

#### 1.1 Seats and seating

a) "Seating components" are not fitted, not secure, are structurally damaged, or have sharp/jagged edges or protrusions.	LV	LG	
b) A "seating component" used for adjustment of a seating position is not operational or does not hold a selected position allowed for in the mechanism's design.	LV	LG	
c) "Seating components" are cracked, broken, distorted, missing, or corroded to the point where the seat is weakened and/or failure is likely to occur.	LV	LG	
d) Any seats are not securely mounted to the seat anchorage point.	LV	LG	
e) Any change to seating capacity is not certified by an Approved Person with the fitment of the prescribed modification plate with the LK1 modification code.	LV		
f) Where seats and seat belts have been removed from a vehicle (e.g., rear seats in a van), mounting holes in the floor panels have not been sealed off to prevent the entry of fumes/gases into the vehicle's interior.	LV		

#### 1.2 Seatbelts

a) The original vehicle manufacturer's seatbelts are missing, or the replacement belts do not meet the vehicle manufacturer's specifications.	LV		
b) Seatbelt assemblies are not securely attached to the respective anchorage point or show signs of distortion, cracks, fractures, or other damage likely to cause failure.	LV		
c) A seatbelt stalk is missing or damaged.	LV		
d) Seatbelt webbing is not correctly and firmly secured at each end or is damaged, frayed, split, torn, altered, or modified.  <b>Note 1:</b> <a href="#">Information Sheet No. 2 of Part 3 Information Sheets for Approved Examiners</a> contains details of the ADR seatbelt requirements.  <b>Note 2:</b> Discoloration alone of the seatbelt webbing is not a cause of rejection.	LV		



e) When extended, the seatbelt sash does not retract.  <b>Note 3:</b> The speed of retraction should not be a cause for rejection unless it affects the overall operation of the seat belt assembly in any way.	LV		
f) Seatbelt attachments are not operational.  <b>Note 4:</b> Seatbelt attachments include buckles, tongues, adjustment devices, and emergency locking retractors.	LV		
g) Non-retractable seatbelts do not have sufficient adjustment to allow effective use of the belts or do not maintain the adjusted positions.	LV		

### 1.3 Seatbelt Anchorages

a) Anchorages provided by the vehicle manufacturer are not used wherever seatbelts are fitted.	LV	LG	
b) Seatbelt anchorages are not securely anchored to the structure of the vehicle or show signs of corrosion, distortion, cracks, fractures, or other damage likely to cause failure.	LV	LG	
c) Additional anchorages, which are those not provided by the vehicle manufacturer, are not certified by an Approved Person with the fitment of a prescribed modification plate marked with the LK1 modification code.	LV		

### 1.4 Child Restraints

a) Child restraint anchorages, where fitted, are not securely anchored to the structure of the vehicle and/or show signs of corrosion, distortion, cracks, fractures, or other damage likely to cause failure.	LV		
b) Child restraint anchorage points are weakened or obstructed by the fitting of accessories (e.g., radio speakers, storage boxes, etc).	LV		
c) Additional child restraint anchorages, which are those not provided by the vehicle's manufacturer, are not certified by an Approved Person with the fitment of a modification plate marked with the LK6 modification code.	LV		

### 1.5 Additional notes for Approved Examiners

- A modification plate is required to confirm the change in seating capacity and must be issued by a suitably endorsed Approved Person.
- Seatbelts that have been removed or added as part of an approved modification are permitted.
- If additional seats and seatbelts or replacement seatbelts are fitted, second-hand seatbelts are not to be used.
- Additional information can also be found in the following Vehicle Standards Instructions:

- [Permanent and temporary removal of seats from light motor vehicles](#)
- [Seat Belt Assessment](#)

## 2. Lamps (lights) and electrical components

The following reasons for rejection for lamps and electrical components are to ensure that all lamps, reflectors, and other electrical "*lighting components*" are operational and to ensure the vehicle's electrical system is secured and operating correctly.

### 2.1 Lighting equipment

<p><b>a)</b> "Lighting components" fitted to a vehicle are not operational, are damaged, or not located in positions as required by prescribed standards.</p> <p><b>Note 1:</b> For vehicles which are fitted with Light Emitting Diode (LED) lamp assemblies and of which some individual LEDs are not operating on a particular unit, it will be permissible to accept individual LED lamp assemblies if up to and including 20% of the LEDs in an individual assembly are not operating.</p> <p>That is, if an LED lamp assembly has:</p> <ul style="list-style-type: none"> <li>• 9 individual LEDs, it will be acceptable to have 1 LED not working.</li> <li>• 10 individual LEDs, it will be acceptable to have 2 LEDs not working.</li> <li>• 22 individual LEDs, it will be acceptable to have 4 LEDs not working.</li> </ul>	LV	LG	T
<p><b>b)</b> Any "lighting component" has a tinted or opaque cover or tinting applied to it.</p> <p><b>Note 2:</b> Headlamps may be fitted with opaque covers provided they can be readily removed without the use of tools. Clear headlamp covers are acceptable provided the intensity of high or low beam is not affected.</p>	LV	LG	T
<p><b>c)</b> "Lighting components", including additional lighting, are not clearly visible under all normal conditions and of a consistent intensity or are affected by dirty/discooured lenses or poor electrical contact.</p>	LV	LG	T
<p><b>d)</b> "Lighting components" are not securely mounted, are faded, discoloured or are not free from cracks, holes, or other damage which would allow the entry of moisture or dirt to impair the efficiency of the component.</p> <p><b>Note 3:</b> Lens repairs are acceptable but must not reduce the effectiveness of the lamp when the lamp is lit.</p>	LV	LG	T
<p><b>e)</b> The number plate lamp(s) directs light onto surfaces other than the rear number plate.</p>	LV	LG	T
<p><b>f)</b> Any rear facing lamp, other than a reversing lamp, shows white light to the rear of the vehicle.</p>	LV	LG	T
<p><b>g)</b> Any optional/additional "lighting component" interferes with the effective operation of any compulsory "lighting component".</p>	LV	LG	T

<p><b>h)</b> A "lighting component" is fitted which is not required or permitted by Vehicle Standards or another law.</p> <p><b>Note 4:</b> Further information on lamps/lights is contained in <a href="#">Information Sheets No. 8 and 9 in Part 3 Information Sheets for Approved Examiners</a>.</p>	LV	LG	T
<p><b>i)</b> The vehicle is fitted with a flashing light apart from indicators and hazard lamps.</p> <p><b>Note 5:</b> Flashing lights are permitted on special use vehicles, i.e. emergency vehicles and vehicles fitted or built for use in hazardous situations on a road and vehicles operating under the guideline for <a href="#">Fitment of flashing warning lamps on light vehicles in Queensland</a></p>	LV	LG	T

## 2.2 Headlamps

<p><b>a)</b> Headlamps are not correctly focused or aimed.</p> <p><b>Note 1:</b> Headlight aim is to be tested on a graduated screen placed 9 metres in front of the vehicle or by using an approved headlight testing machine. An example of an approved headlight testing screen is shown in <a href="#">Information Sheet No. 4 in Part 3 Information Sheets for Approved Examiners</a>.</p> <p><b>Note 2:</b> For ADR complying vehicles, the maximum low beam headlamp height is 1200mm.</p> <p><b>Note 3:</b> For pre-ADR vehicles, the maximum low beam headlamp height is 1400mm.</p>	LV	LG	
<p><b>b)</b> Reflector surfaces are tarnished or have other damage that reduces the intensity of low or high beam.</p>	LV	LG	
<p><b>c)</b> Headlamps are not of a consistent intensity.</p>	LV	LG	
<p><b>d)</b> The light from the headlamp is obstructed by the fitting of other components (e.g., "bull bars", nudge bars, or fishing rod holders).</p>	LV	LG	
<p><b>e)</b> A dipping device to change the headlamps from the high beam position to the low beam position and operated by the driver from the normal driving position is not fitted or operational.</p> <p><b>Note 4:</b> A motor vehicle built after 1934 that can travel at over 60 km/h must be fitted with a dual beam (dipping high/low) headlamp system.</p>	LV	LG	
<p><b>f)</b> A device to indicate to the driver that the headlamps are in the high beam position is not fitted or operational.</p> <p><b>Note 5:</b> A motor vehicle built after 1953 must be fitted with a device to indicate to the operator that the headlamps are in the high beam position.</p>	LV	LG	
<p><b>g)</b> High Intensity Gas-Discharge (HID) assemblies are not self-levelling, do not have a wash/wipe function (for light vehicles only) and/or do not disperse the light correctly.</p>	LV	LG	

<p><b>h)</b> The following lamps, where applicable, do not operate correctly or do not emit the colour light as indicated:</p> <ul style="list-style-type: none"> <li>• front park or side lamps (white);</li> <li>• brake lamps (red);</li> <li>• tail lamps (red);</li> <li>• turn signal indicator lamps (amber, or white if prior to 1973);</li> <li>• rear facing signal indicator lamps (yellow/amber/red prior to 1973);</li> <li>• hazard warning lamps (yellow/amber);</li> <li>• clearance/side marker lamps, (if fitted, front – yellow/white, side – yellow/amber, rear – yellow/amber and red);</li> </ul> <p><b>Note 6:</b> For pre-ADR vehicles, clearance lamps must be fitted to all vehicles which exceed 2.2 metres in width and be mounted not more than 400mm in from the side of the vehicle, at least 750mm higher than the centre of any low beam headlamp or not lower than the top of the windscreen.</p> <p><b>Note 7:</b> Clearance lamps must be fitted to ADR complying vehicles which exceed 2.1 metres in width, be mounted not more than 400mm in from the side of the vehicle and not lower than the top of the windscreen.</p> <ul style="list-style-type: none"> <li>• number plate lamp/s (white);</li> <li>• reversing lamps/s (yellow/amber, if pre-1989 vehicles only, or white);</li> <li>• daytime running lamp/s (white);</li> <li>• additional lamps, if fitted.</li> </ul> <p><b>Note 8:</b> Further information on lamps/lights is contained in <a href="#">Information Sheets No. 8 and 9 in Part 3 Information Sheets for Approved Examiners</a>.</p>	LV	LG	T
<p><b>i)</b> If fitted, daytime running lamps on vehicles do not automatically switch on when the engine is running.</p> <p><b>Note 9:</b> For Light Vehicles, the daytime running light may remain off if the parking brake is in the applied position or, for an automatic transmission, the vehicle is in the park position.</p>	LV	LG	
<p><b>j)</b> If fitted, daytime running lamps do not switch off when the headlamps are switched on, other than when the headlamps are used as a flashing signal.</p>	LV	LG	

## 2.3 Other lamps, reflectors, or additional lighting

<b>a)</b> The reverse lamp, if applicable, operates other than when reverse gear is selected.	LV	LG	T
<b>b)</b> Any yellow/amber clearance lamp, if fitted, or front turn signal lamp (on vehicles manufactured from January 1973) shows white light.	LV	LG	
<b>c)</b> The turn signal switch is not readily operable by the driver from the driving position.	LV	LG	
<b>d)</b> The turn signal operation is not indicated by means of a visible and/or audible tell-tale.	LV	LG	

e) Additional headlamps (driving lamps) do not operate in conjunction with the high beam circuit only and are not fitted with an independent on/off switch.	LV	LG	
f) More than four (4) additional headlamps (driving lamps) are fitted to the vehicle.  <b>Note 1:</b> Driving lamps may be fitted in odd numbers only if they comply with <a href="#">Vehicle Standards Instruction - Driving lamps, including Light Emitting Diode (LED) light bars on light vehicles</a> .	LV		

## 2.4 Rear marking plates

a) Do not overtake turning vehicle marker plates are fitted to a vehicle with a length less than 7.5m.	LV		T
b) Retro/reflective rear marker plates are fitted and are damaged, faded, discoloured, or insecure.	LV		T
c) Retro/reflective rear marker plates do not comply with the relevant Australian Standard and are not fitted in locations specified by the prescribed standards.  <b>Note 1:</b> Further information on rear marker plates is contained in <a href="#">Vehicle Standards Bulletin (VSB) 12 – Rear Marking Plates</a> available from <a href="http://www.nhvr.gov.au">www.nhvr.gov.au</a> .	LV		T

## 2.5 Wiring harness

a) Electrical wiring is not securely mounted or is located in such a way that would make the vehicle unsafe.	LV	LG	T
b) Electrical wiring is not correctly insulated or is exposed to excessive heat or chafing.	LV	LG	T
c) Electrical wiring or connectors hinder driver or passenger movement or are hanging loose.	LV	LG	T

## 2.6 Battery

a) A battery is not secured in a cradle or carrier using hold-down clamps.	LV	LG	T
b) A battery is cracked, leaking, or has missing caps.	LV	LG	T
c) Batteries fitted in enclosed areas (i.e., boot, cabin, etc) are not fitted in a sealed container which is adequately vented to the outside of the vehicle.	LV	LG	T

## 2.7 Warning device (horn)

a) A warning device is not fitted or operational and the tone is not of a single pitch. Dual air or electrical horns are acceptable provided they are of a single pitch.	LV	LG	
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b) A warning device is not clearly audible, or the actuating mechanism is not located within the reach of the driver in the normal driving position.	LV	LG	
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### 3. Windscreen and glazing

The following reasons for rejections for windscreens and glazing are to ensure that the windscreen, windows, and associated components are in such a condition that the driver has a clear field of vision and provide sufficient ventilation for occupants.

#### 3.1 General windscreen and glazing

a) Vehicles built after 1 July 1953 are not equipped with "safety glass" or non-shatterable transparent material, wherever transparent material is used (windscreens, side windows, or interior partitions).  <b>Note 1:</b> Non-shatterable means not able to break or be broken into many small pieces.	LV	LG	
b) Tinting is applied to the front windscreen, apart from a strip of material fitted to the upper edge of a windscreen which extends no lower than the lesser of either: <ul style="list-style-type: none"> <li>the horizontal line contacting the upper most point of the "primary vision area"; or</li> <li>the upper 10 percent of the windscreen.</li> </ul> <b>Note 2:</b> A vehicle fitted with safety features which include a camera or sensor at the top of the windscreen must not be fitted with tinting that adversely affects the usage of those safety features.	LV		
c) Window tinting, other than the front windscreen, have a light transmittance factor less than 35% (T35), or less than 20% (T20) behind the driver's seating position, unless specifically approved.  <b>Note 3:</b> A measuring inaccuracy allowance of 5% for equipment may be acceptable for the specified light transmittance factor. For example, it is acceptable to measure a light transmittance factor as low as 30% for the driver side window.	LV		
d) Tinting material, of any shade, with a reflectance of more than 10% is fitted to a window.	LV		
e) Tint films are not free of bubbles, scratches, or other defects that significantly affect the driver's field of view.	LV		
f) The "primary vision area" is cracked, scored, chipped, badly sandblasted, or otherwise damaged so as to impair the driver's vision or damage the wiper blades.	LV	LG	
g) The driver's half of the "primary vision area" (right half for right-hand drive vehicles) has bull's-eyes or star fractures more than 16mm in diameter or cracks more than 150mm long which either penetrate more than one (1) layer of the glass in a laminated windscreen or interfere with the driver's vision.	LV		
h) The interior surface of a laminated glass windscreen is cracked.	LV		
i) Windscreens are removed and not replaced.	LV		

j) Anything is fitted to the windscreen or vehicle that obstructs the driver's vision through the " <i>primary vision area</i> ".	LV	LG	
k) Posters, stickers, or other non-transparent materials that would interfere with the driver's vision are affixed to the windscreen.	LV	LG	
l) Windows are cracked or broken.	LV		
m) At least half of the number of windows which are designed to be opened, one of which must include the driver's window, are not capable of being opened.	LV		

## 3.2 Windscreen and glazing repairs

a) Windscreens are not repaired in accordance with the relevant Australian Standards.	LV		
b) Any windscreen repair exhibits significant optical defects which would distort or distract the vision of the driver when inspected from the inside of the vehicle.	LV	LG	
c) Windscreen repair is not performed in accordance with the manufacturer's instructions.	LV	LG	
d) Repairs in the " <i>primary vision area</i> " reduce the effectiveness of the wiper blades.	LV		
e) Replacement windscreens, window glass, or any glazing is not of an approved type of " <i>safety glass</i> " and does not bear an identification mark indicating the standard to which the glass has been manufactured (e.g., AS 2080, BS AU178, UNECE R43).	LV		
f) Replacement windscreen and window glass is not etched or indelibly printed with the glass manufacturer's information. Decals and adhesive labels are not acceptable.	LV		

## 3.3 Wipers, washers and demisters

a) Windscreen wipers are not operational at all speeds, do not return to their correct parked position, or are not operable by the driver from the normal driving position.	LV		
b) Wiper components are not in good condition (i.e., rubbers are split, frayed, hardened, or perished and/or wiper arms/blades are missing, bent, or twisted preventing the wiper blade rubbers from clearing the windscreen effectively). <b>Note 1:</b> Wiper components include blade rubbers and wiper arms.	LV		
c) Where applicable, the vehicle is not fitted with a windscreen washer system that is operational, is incorrectly aimed, or is not operable from the normal driving position.	LV		
d) Vehicles as listed in <a href="#">Information Sheet 14 in Part 3 Information Sheets for Approved Examiners</a> are not fitted with a working windscreen demister or washer.	LV		
e) A demister, where required, does not have the ability to effectively demist the screen (hot or cold air is acceptable). <b>Note 2:</b> Rear demisters and rear window wipers are not required in ADRs and, as such, they are not required to be operable.	LV		

## 4. Body, chassis and frame

The following reasons for rejection for body, chassis, and frame are to ensure the vehicle body is structurally sound and free from any defects, protrusions, or additional fittings that are likely to increase the risk of bodily injury to any occupant and other road users.

### 4.1 Doors, hatches, hinges and catches

a) "Door components" are not securely fitted and mounted or do not operate in the manner for which they were designed.	LV		T
b) "Door components" are cracked, broken, distorted, or corroded to the point where a component is weakened, or failure of a component is likely to occur.	LV		T
c) "Door components", as applicable, are not fitted, secure, or operating correctly.	LV		T

### 4.2 Body, chassis and frame (floor pan and sub-frame)

a) A "frame component" is cracked, sagged, broken, distorted, missing, or corroded to the point where a component is weakened, or failure of a component is likely to occur. <b>Note 1:</b> Minor rust/corrosion in body panels is not considered dangerous to structural integrity. Further information on rust is contained in <a href="#">Information Sheet No. 11 in Part 3 Information Sheets for Approved Examiners</a> .	LV	LG	T
b) Any fastenings between "frame component" members, including welds, are not secured, or are cracked or distorted.	LV	LG	T
c) The body or any attachment/fitting is not securely mounted to the frame or chassis. <b>Note 2:</b> For vehicles fitted with extendable stabilisers or outriggers to support the use of a loading crane or to maintain the level of the vehicle when parked, refer to <a href="#">Information Sheet 17 in Part 3 Information Sheets for Approved Examiners</a> .	LV	LG	T
d) Any repairs carried out do not retain the original strength of the component/section.	LV	LG	T
e) Body blocks are fitted which lift the vehicle more than 50mm.	LV		T
f) Any panels, fittings, and structural components (internal and external) have sharp edges and protrusions which would increase the risk of injury to any person who comes into contact with the vehicle.	LV	LG	T
g) Cargo anchorage points are structurally damaged or repaired in a manner that does not retain the original strength of the component.	LV	LG	T

### 4.3 Bull bars

a) The fitting of the "bull bar" is such that it adversely affects the safety of the vehicle or obscures the driver's view or any mandatory lamps.	LV		
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<b>b)</b> The design and attachment of the "bull bar" is such that it interferes with the occupant protection systems (e.g., airbags, crumple zones) built into the vehicle.	LV		
<b>c)</b> A "bull bar" is mounted in a manner that does not meet the vehicle manufacturer's standards.	LV		
<b>d)</b> A "bull bar" is designed or fitted in a manner that adversely affects the safety of the vehicle.	LV		
<b>e)</b> A "bull bar" is not firmly and securely mounted and supported.	LV		
<b>f)</b> A "bull bar" is designed in a manner that does not minimise the potential to injure pedestrians, cyclists, and other vulnerable road users.  <b>Note 1:</b> For guidance on recommended "bull bar" profiles refer to AS 4876.1-2002.	LV		
<b>g)</b> Vehicles fitted with one or more airbags or manufactured to comply with ADR 69 - Full Frontal Impact Occupant Protection or both ADR 69 and ADR 73 – Offset Frontal Impact Protection, are not fitted with a "bull bar" which: <ul style="list-style-type: none"> <li>• has been certified by the vehicle manufacturer as suitable for that vehicle; or</li> <li>• has been demonstrated by the "bull bar" manufacturer to not adversely affect compliance with the ADRs or interfere with the critical airbag timing mechanism, as the case may be. This must be indicated by the fitting of a plate or sticker by the "bull bar" manufacturer detailing compliance to ADRs.</li> </ul>	LV		

## 4.4 Body fittings

<b>a)</b> A part of the vehicle/trailer or component fitted to it obscures any compulsory lighting or the number plate.	LV	LG	T
<b>b)</b> The rear surface of a specified vehicle is not painted silver or white.  <b>Note 1:</b> Any trailer which is more than 2.2 metres in width and fitted with a body which is less than 300mm in height at the rear, measured from the lowest point of the body above the ground to the highest point, does not have the rear face of any rear "mudguards" painted silver or white.  <b>Note 2:</b> The rear coaming of any trailer described above is not painted silver or white in colour for a depth of 75mm or more. The above does not apply when a vehicle is correctly fitted with rear marker plates.			T
<b>c)</b> Fairings or any attachments are not free of sharp edges or protrusions, corrosion, fractured panels, or fittings likely to cause injury to any person with whom the motorbike may come into contact.		LG	
<b>d)</b> Motorbikes are not fitted with adequate protection, for rider and passenger, from any moving parts or any area which would constitute a safety hazard.  <b>Note 3:</b> Moving parts, for an L-group vehicle, refers to components including chains, belts, road wheels, tyres and exhaust.		LG	

e) A sidecar, if fitted, is not securely attached and mounted to the left-hand side of the motorbike.  <b>Note 4:</b> Motorbike sidecars with bolt on attachment points are acceptable. Motorbike sidecars with welded on attachment brackets require approval from the Department of Transport and Main Roads.		LG	
f) Any part of a motorbike, without a sidecar, projects more than 150mm ahead of the front wheel or 300mm behind the rear wheel.		LG	
g) Any reflective/chrome effect vehicle wraps have been applied to any external body panels.	LV	LG	T

## 4.5 Motorbike riding controls

a) Riding controls are not securely fastened or not in the correct location as per the relevant ADR for date of manufacture.		LG	
b) The incorrect number of footrests are fitted, as per the seating capacity of the motorbike.		LG	
c) Footrests are bent, damaged, or not secure.		LG	

## 4.6 Mudguards and wheel arches

a) The "mudguards" are not secure.	LV	LG	T
b) "Mudguards" are not capable of deflecting downwards any mud, water, stones, or any other substance thrown upward by the rotation of the wheels.  <b>Note 1:</b> Further information on Light Vehicle "mudguards" is contained in <a href="#">Information Sheet No. 3 in Part 3 Information Sheets for Approved Examiners</a> .  <b>Note 2:</b> Further information on L-Group vehicle "mudguards" is contained on the <a href="#">Motorcycle Standards webpage on the TMR website</a> .  <b>Note 3:</b> Further information on Trailer "mudguards" is contained in <a href="#">Vehicle Standards Bulletin (VSB) 1 – Building Small Trailers</a> available on <a href="http://www.infrastructure.gov.au">www.infrastructure.gov.au</a> .	LV	LG	T
c) "Mudguards" are not properly fitted to provide protection over the full width of the wheels and tyres, and any "mudguard" does not extend inboard over the full width of the tyre(s), except where part of the body of the vehicle acts as a "mudguard".	LV	LG	T
d) The front "mudguard" does not shield the portion of the wheel extending rearward from a point vertically above and horizontally behind the centre of the front wheel.		LG	



## 4.7 Rear vision mirrors

<p><b>a)</b> Rear vision mirrors are not fitted in accordance with prescribed standards.</p> <p><b>Note 1:</b> At least one rear vision mirror must be fitted to a car (after 1 January 1972, an external rear vision mirror must be fitted to the right side of a car – refer to details of <i>ADR 14</i> for other vehicle ADR applicability dates).</p> <p>At least one rear vision mirror must be fitted to each side of a motorbike with one front wheel built after June 1975.</p> <p><i>ADR 14/02</i> now permits the use of a driver's side and internal convex rear-view mirrors. Left side convex rear-view mirrors are also acceptable. Older vehicles are permitted to be fitted with convex mirrors provided they comply with the ADRs.</p> <p>Rear vision and reversing cameras are considered accessories (cannot replace the mandatory rear vision mirrors) and therefore are not required to operate.</p>	LV	LG	
<p><b>b)</b> Rear vision mirrors fitted to any vehicle do not provide a clear view of the road to the rear of the vehicle when the operator is in a natural driving/riding position.</p>	LV	LG	
<p><b>c)</b> Mirrors are not securely mounted or free from damage, blemishes, or tarnishing which would reduce the view to the rear of the vehicle.</p>	LV	LG	
<p><b>d)</b> Where there is no effective rear vision provided by the internal rear vision mirror, the vehicle does not have an external rear vision mirror fitted to each side of the vehicle.</p>	LV	LG	

## 4.8 Fairings and scoops

<p><b>a)</b> Bonnet scoops are not fitted in accordance with prescribed standards.</p> <p><b>Note 1:</b> Further information on bonnet scoops can be found in the <a href="#">LH section of NCOP</a>.</p>	LV		
<p><b>b)</b> Body kit components, if fitted, adversely affect ground clearance and air flow for brake cooling.</p> <p><b>Note 2:</b> Body kit components also includes side skirts, front and rear spoilers, and dress-up kits.</p> <p><b>Note 3:</b> Further information on ground clearance is contained in <a href="#">Information Sheet No. 13 in Part 3 Information Sheets for Approved Examiners</a>.</p>	LV		
<p><b>c)</b> Surfaces that could reflect light towards the driver are not non-reflective.</p>	LV	LG	

## 4.9 Number plates

<p><b>a)</b> Number plate covers are tinted, reflective, have a convex or concave surface, or in some way may affect visual or photographic recognition of the registration number.</p>	LV	LG	T
<p><b>b)</b> A number plate is deteriorated, faded, or damaged to an extent that the registration number is not legible from a distance of 20 metres.</p>	LV	LG	T

c) A number plate is modified or trimmed in any way (e.g., cutting or bending to aid fitting to the vehicle).	LV	LG	T
d) Number plate characters are not visible from any point within an arc of 45 degrees at a distance of 20 metres above and on both sides of the number plate.	LV	LG	T
e) A number plate is mounted more than 1300mm from the ground.	LV	LG	T
f) A number plate is mounted in a position other than an upright position parallel to the vehicle's axles when the vehicle is on level ground.	LV	LG	T
g) The registration number and/or plate is not issued or approved by a State or Territory Road Transport Authority.	LV	LG	T

## 5. Tow couplings

The following reasons for rejection for tow couplings are to ensure that all tow couplings and associated components are in serviceable condition and that they provide the necessary load carrying capacity.

### 5.1 Tow couplings, wiring harness and safety chain attachment points

a) Where ADR 62 applies, the tow coupling does not display the name or trademark of the manufacturer, the make and model of the vehicle for which the tow coupling is designed, and the tow coupling maximum rated capacity.	LV	LG	T
b) Any locking mechanism associated with the coupling assembly or its attachment to the vehicle is missing, not fitted, inoperative, damaged, or worn to an extent that the coupling is not secured and held in place within manufacturer's tolerances.	LV	LG	
c) Any part of the tow bar is cracked, excessively worn, or repaired by heating or welding.	LV	LG	
d) The tow bar is not mounted directly to the frame or through rigid connections to the frame.	LV	LG	
e) Tow coupling tongue assemblies are not securely mounted to the tow bar/frame assembly.	LV	LG	
f) A 50mm tow ball assembly, if fitted, is not legibly and indelibly marked with the mark "50" in characters not less than 5mm high.	LV	LG	
g) The bolts, studs, nuts, etc that are used to fasten any removable parts of the coupling or tow bar does not have a locking device such as an R-clip, split pin, spring washer, or nylon lock nut.	LV	LG	
h) "Safety chain" or cable attachment points are damaged or worn which may allow accidental disconnection of the chain or cable.	LV	LG	
i) "Coupling devices" are not operational, missing, not secure, cracked, corroded, excessively worn, deformed, or damaged in a way likely to cause failure.	LV	LG	

j) Pin couplings or pintle hooks are worn beyond manufacturer's limits or, if the manufacturer's limits are not known, any dimension on a wear surface of the horn of a pintle hook or pin coupling is worn by more than 5% of the original diameter.	LV	LG	
k) All " <i>coupling devices</i> " and coupling connectors associated with a device for coupling a trailer to a motor vehicle are not operational, not secure, cracked, corroded, excessively worn, leaking, deformed, or damaged in a way likely to cause failure. <b>Note 1:</b> Coupling connectors also include any associated electrical wiring and flexible pipes.	LV	LG	T
l) An adaptor is used to fit a kingpin to a fifth wheel coupling. <b>Note 2:</b> An example of this is where an adaptor is used to convert a 50mm kingpin into a 75mm kingpin.			T
m) Tow couplings are repaired by heating or welding.			T
n) Tow couplings are not securely mounted to the trailer drawbar.			T
o) The coupling is not of a positive locking type and not fitted with an efficient and secure latching/fastening device.			T
p) The drawbar of a trailer is not securely fixed to the trailer frame/chassis.			T
q) Any sliding drawbar stops, or latching mechanism is faulty or inoperative.			T
r) All drawbar components and " <i>coupling devices</i> " are not free of cracks, corrosion, distortion, misalignment, or other damage.			T
s) Drawbar eye is elongated by wear, cracked, or worn by more than 5% of the original diameter or manufacturer's specifications.			T
t) Drawbar eye bush is worn through or beyond manufacturer's specifications, is insecure, or is attached by welding (unless the manufacturer specifies welding).			T
u) Where any part of the coupling, drawbar, or tow bar is removable, the bolts, studs, nuts, etc. fastening those parts do not have a locking device such as a U-clip, split pin, spring washer, or nylon lock nut.			T
v) " <i>Safety chains</i> ", as required, are not securely attached to the trailer drawbar. <b>Note 3:</b> The " <i>VSS Regulation</i> " requires that a trailer, which is in a combination and is not fitted with breakaway brakes, must be connected to the towing vehicle by at least one (1) chain, cable, or other flexible device (the "connection") as well as the coupling.  The fitting of " <i>safety chains</i> " on other types of trailers fitted with an emergency brake system (breakaway) is optional.  In addition to that stated above, departmental policy requires " <i>safety chains</i> " on all fixed or rigid drawbar pig trailers with a GTM greater than 2.5 tonnes and fitted with an automatic pin type coupling, irrespective of whether the trailer is fitted with a breakaway brake system or not.			T

<p><b>w)</b> On rigid drawbar pig trailers, in excess of 2.5 tonnes GTM or other trailers in excess of 3.5 tonnes ATM, there are less than 2 chains of adequate diameter.</p> <p><b>Note 4:</b> The "VSS Regulation" requires that a trailer, which is in a combination and is not fitted with breakaway brakes, must be connected to the towing vehicle by at least one (1) chain, cable, or other flexible device (the "connection") as well as the coupling.</p> <p>The fitting of "safety chains" on other types of trailers fitted with an emergency brake system (breakaway) is optional.</p> <p>In addition to that stated above, departmental policy requires "safety chains" on all fixed or rigid drawbar pig trailers with a GTM greater than 2.5 tonnes and fitted with an automatic pin type coupling, irrespective of whether the trailer is fitted with a breakaway brake system or not.</p> <p><b>Note 5:</b> Information about minimum chain and shackle sizes is available in <a href="#">Information Sheet No. 12 in Part 3 Information Sheets for Approved Examiners</a> or the <a href="#">Safe Towing Guide</a> available at <a href="http://www.tmr.qld.gov.au">www.tmr.qld.gov.au</a>.</p>			T
<p><b>x)</b> Breakaway brakes on any rigid drawbar pig trailer with an ATM of 2.5 tonnes or more are not capable of activating before the "safety chains" have broken or the drawbar touches the ground.</p>			T
<p><b>y)</b> "Safety chains", if required, are stretched, nicked, frayed, excessively corroded, or cracked.</p>			T
<p><b>z)</b> Any trailer without breakaway brakes is not fitted with at least one "safety chain" of the nominated size and the specified rated capacity.</p> <p><b>Note 6:</b> Information about minimum chain and shackle sizes is available in <a href="#">Information Sheet No. 12 in Part 3 Information Sheets for Approved Examiners</a> or the <a href="#">Safe Towing Guide</a> available at <a href="http://www.tmr.qld.gov.au">www.tmr.qld.gov.au</a>.</p>			T
<p><b>aa)</b> Trailers with an ATM:</p> <ul style="list-style-type: none"> <li>• of 2.5 tonnes or less, do not have at least one "safety chain" capable of being attached to the towing vehicle; or</li> <li>• greater than 2.5 tonnes, do not have two "safety chains" capable of being attached to the towing vehicle.</li> </ul> <p><b>Note 7:</b> The "VSS Regulation" requires that a trailer, which is in a combination and is not fitted with breakaway brakes, must be connected to the towing vehicle by at least one (1) chain, cable, or other flexible device (the "connection") as well as the coupling.</p> <p>The fitting of "safety chains" on other types of trailers fitted with an emergency brake system (breakaway) is optional.</p> <p>In addition to that stated above, departmental policy requires "safety chains" on all fixed or rigid drawbar pig trailers with a GTM greater than 2.5 tonnes and fitted with an automatic pin type coupling, irrespective of whether the trailer is fitted with a breakaway brake system or not.</p> <p><b>Note 8:</b> Information about minimum chain and shackle sizes is available in <a href="#">Information Sheet No. 12 in Part 3 Information Sheets for Approved Examiners</a> or the <a href="#">Safe Towing Guide</a> available at <a href="http://www.tmr.qld.gov.au">www.tmr.qld.gov.au</a>.</p>			T

<b>bb)</b> The length of the "safety chains" does not prevent the trailer's drawbar hitting the ground if the trailer is detached from the towing vehicle and there is at least one "safety chain" which is not positioned such that it prevents the drawbar from touching the ground when the drawbar is detached.			<b>T</b>
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## 5.2 Towing capacity

<b>a)</b> In the case of trailers manufactured after 1 July 1988, the tow coupling manufacturer's name or trademark, and maximum operating capacity is not displayed on the coupling in a conspicuous position.			<b>T</b>
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## 6. Steering and suspension

The following reasons for rejection for steering and suspension are to ensure that the steering and suspension is in good working order and allows the driver effective control of the vehicle.

### 6.1 Steering components

<b>a)</b> Any steering components are not in good condition, are missing, cracked or broken, or are not securely mounted, and free from damage or distortion, or have free play beyond manufacturer's limits.  <b>Note 1:</b> This must be inspected through the full range of steering movement. Steering stops must prevent wheels or tyres from fouling the vehicle chassis or suspension components on full lock.	<b>LV</b>	<b>LG</b>	<b>T</b>
<b>b)</b> Steering stops do not prevent wheels or tyres from fouling any component on full steering lock.	<b>LV</b>	<b>LG</b>	<b>T</b>
<b>c)</b> Any fastener is missing or insecure.	<b>LV</b>	<b>LG</b>	<b>T</b>
<b>d)</b> Steering components are removed, heated, welded (modified), or bent without approval.	<b>LV</b>	<b>LG</b>	<b>T</b>
<b>e)</b> The steering wheel is not located to the right-hand side of the vehicle unless the vehicle is 30 years or older.  <b>Note 2:</b> Vehicles of 25 years of age or older with an import approval after the 10 <sup>th</sup> of December 2019 may have the steering wheel located on the left-hand side. More information can be found at:  <a href="https://www.qld.gov.au/transport/registration/register/left">https://www.qld.gov.au/transport/registration/register/left</a>	<b>LV</b>		<b>T</b>
<b>f)</b> Any power steering component (electric or hydraulic) is leaking, not secure, damaged, or inoperative.	<b>LV</b>	<b>LG</b>	<b>T</b>
<b>g)</b> Any power steering belts are loose, broken, frayed, missing, or cracked through to reinforcing plies.	<b>LV</b>	<b>LG</b>	<b>T</b>



h) The steering system is not designed to transmit energy by mechanical means only. Power assisted steering systems are acceptable.	LV	LG	T
i) Free play in any component exceeds the manufacturer's specifications. Where the manufacturer does not provide specifications or they are no longer appropriate, the free movement exceeds 3mm.	LV	LG	T

## 6.2 Steering free play

a) With the road wheels in the straight-ahead position and the engine running (if the vehicle has power steering), free play in the steering wheel rim outer edge exceeds 75mm in steering wheels up to and including 450mm diameter or 100mm for steering wheels over 450mm diameter.	LV		
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## 6.3 Steering wheel

a) The steering wheel is not securely fixed to the steering column mast shaft or is not free from structural damage (e.g., loose, or damaged padding).	LV		
b) The steering wheel and accessories (padded hubs, covers, steering wheel grip, etc.) are loose or have deteriorated to an extent that they are likely to cause injury to the occupant.	LV		
<p>c) The steering wheel does not meet the minimum diameter requirements.</p> <p><b>Note 1:</b> The minimum diameter of any replacement steering wheel must not be less than 330mm. The replacement wheel must be designed in a similar manner to the original (e.g., padded centre hub and dished spokes).</p> <p>A replacement steering wheel fitted to a vehicle complying with ADRs 69/.. or 73/.. must remain compliant.</p> <p>A replacement steering wheel fitted to a pre-ADR 69/.. vehicle equipped with a driver's side airbag as original equipment must remain fitted with an airbag operating to manufacture's specifications.</p>	LV		
<p>d) Steering wheels fitted to light passenger vehicles manufactured on or after 1 January 1971 are not replaced by a steering wheel which complies with ADR 10A or, where ADR 69 applies, the steering wheel is not of the same specification as the one provided by the vehicle manufacturer.</p> <p><b>Note 2:</b> The minimum diameter of any replacement steering wheel must not be less than 330mm. The replacement wheel must be designed in a similar manner to the original (e.g., padded centre hub and dished spokes).</p> <p>A replacement steering wheel fitted to a vehicle complying with ADRs 69/.. or 73/... must remain compliant.</p> <p>A replacement steering wheel fitted to a pre-ADR 69/.. vehicle equipped with a driver's side airbag as original equipment must remain fitted with an airbag operating to manufacture's specifications.</p>	LV		
e) Where a Supplemental Restraint System (SRS) is fitted, there is evidence that the system or SRS airbag(s) is inoperative.	LV	LG	

## 6.4 Steering shaft

a) The steering shaft is not secured to the steering box worm shaft, pinion, or coupling or is incorrectly aligned or adjusted.	LV		
b) Where a coupling is fitted, it is loose, frayed, or otherwise damaged.	LV		

## 6.5 Outer column and ignition key

a) The outer column is not securely mounted or free from cracks and damage. <b>Note 1:</b> Special attention should be made to the collapsible section, if applicable, of the outer housing.	LV	LG	
b) Wear in the bushes/bearings supporting the shaft exceeds manufacturer's tolerances.	LV	LG	
c) Where ADR 25 applies, the ignition key can be removed in any position except in the locked position.	LV	LG	
d) When engaged, the anti-theft lock does not prevent at least one of the following actions: <ul style="list-style-type: none"> <li>Steering of the vehicle;</li> <li>Engaging the forward drive gears; or</li> <li>Release of the brakes.</li> </ul>	LV	LG	

## 6.6 Steering box/rack

a) Any manual or power steering component is not securely mounted or free from excessive side or end play, displays roughness when operated, is binding, or leaks oil when operated through its normal range of travel.	LV		
b) Steering rack seals are damaged, deteriorated, or missing.	LV		

## 6.7 Steering linkage mechanism

a) With the wheels off the ground, the steered road wheels do not turn freely to the left and right through their normal full range of travel.	LV	LG	T
b) Steering linkages are damaged, worn, misaligned, or are not correctly located or fitted.	LV	LG	T
c) Tie rod and drag link ends are not secured in both the rod and taper with fasteners that are suitably locked (e.g., split pins, lockwire, tabs, or self-locking nuts).	LV		T
d) Free play due to wear in any component exceeds the manufacturer's specifications. Where the manufacturer does not provide specifications or they are no longer appropriate, the free movement exceeds 3mm.	LV	LG	T

e) Steering idler or bushing is loose on mountings or is worn in excess of manufacturer's specifications. Where the manufacturer does not provide specifications or they are no longer appropriate, the free movement at the end of the idler arm or idler pivot axis exceeds 8mm.	LV		T
f) Through the full range of steering movement, steering stops do not prevent wheels or tyres from fouling the vehicle chassis or suspension components on full lock.	LV		T

## 6.8 Arms and linkages

a) There is any movement in the spline between the pitman arm and the steering box or between any thread or tapered joint.	LV		
b) The free movement measured at the front or rear of the tyre when attempting to turn the assembly from the right to left with the vehicle supported on the lower control arm exceeds the manufacturer's specifications. Where the manufacturer does not provide specifications or they are no longer appropriate, the free movement exceeds the following measurements: <ul style="list-style-type: none"> <li>• Wheel rims 405mm or less — 7mm;</li> <li>• Wheel rims over 405mm up to 455mm — 10mm;</li> <li>• Wheel rims over 455mm — 13mm.</li> </ul>	LV		T
c) The looseness at any one point is responsible for half or more of the movement specified in the above paragraph.	LV		T

## 6.9 Steering mechanism and design

a) The handlebar of a motorbike is not secure or free play in the steering head exceeds manufacturer's specifications.		LG	
b) Where steering linkages are fitted, any rotational free play exceeds 10mm at the end of the handlebar.		LG	
c) The steering gear is not designed in a manner that eliminates accidental detachment or over-locking.		LG	
d) Steering components are misaligned with the frame or are damaged, fatigued, corroded, or distorted.		LG	
e) Operation of the handlebar is not smooth (without jamming, fouling, or roughness in its operation) from "lock to lock".		LG	
f) Any equipment fitted to the motorbike, including a motor tricycle and side car, prevents free movement (e.g. the handlebar must not come into contact with the fuel tank).		LG	
g) The handlebar assembly is not constructed of suitable material, adequately mounted, or free of sharp edges and protrusions.		LG	

<b>h)</b> The handlebar is not symmetrical on either side of the front wheel and steering head assembly.		LG	
<b>i)</b> The handlebar is not of the same shape and length on both sides of the front wheel and steering head assembly.		LG	
<b>j)</b> If the forks are raked (i.e., modified wheelbase), the horizontal distance between the mid-point of the steering yoke bearings and a point vertically above the centre of the front wheel exceeds 550mm.		LG	
<b>k)</b> Motorbikes fitted with offset triple clamps have a trail measurement of less than 75mm. <b>Note 1:</b> If offset triple clamps are fitted to the front fork assembly (i.e., the clamps are machined such that the angle of the fork stanchions is at an angle to the steering head axis), then the trail measurement should be checked to ensure that the centre of the front axle is at least 75mm behind the point where the steering head axis line intersects the ground.		LG	
<b>l)</b> Handlebar grips and control devices have deteriorated to an extent that they are not secure or are excessively damaged or unduly worn. <b>Note 2:</b> Control devices for an L-group vehicle also include knob levers.		LG	

## 6.10 Handlebar dimensions

<b>a)</b> The distance between the extreme ends of a handlebar assembly is greater than 900mm or less than 500mm for a motor tricycle or moped, or greater than 1100mm or less than 500mm for a motorbike.		LG	
<b>b)</b> For motorbikes manufactured prior to July 1988, the lowest part of the handgrip on the handlebars is higher than 380mm above the steering yoke. Handlebars modified in accordance with the <a href="#">Section LL of NCOP</a> should meet these requirements.  For motorbikes manufactured from 1 July 1988, the height of the lowest part of the handgrip is more than 380mm above the lowest part of the upper surface of the rider's seat.		LG	

## 6.11 Suspension components

<b>a)</b> Components are distorted, cracked, corroded, fractured, or are worn beyond manufacturer's specifications.	LV	LG	T
<b>b)</b> Free play in any component exceeds the manufacturer's specifications. Where the manufacturer does not provide specifications or they are no longer appropriate, the free movement exceeds 3mm.	LV	LG	T
<b>c)</b> Link ends are not secured with suitably locked fasteners (e.g. split pins, lockwire, tabs, or self-locking nuts).	LV	LG	T
<b>d)</b> Any fastener is missing or not secure.	LV	LG	T
<b>e)</b> Suspension components are worn beyond manufacturer's specifications.	LV	LG	T

<p><b>f)</b> Suspension components are not securely mounted and aligned or are missing bent or are repaired or modified by heating or welding without departmental approval.</p> <p><b>Note 1:</b> It is common industry practice to repair or re-manufacture spring hangers (rocker boxes). This will necessitate the welding of the original castings (in the case of repairing) to rebuild the component to its original configuration. This means of repair is acceptable, provided the method of repair and welding technique is to an acceptable standard.</p> <p><b><u>This method of repair is acceptable for trailers only.</u></b></p>	LV	LG	T
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## 6.12 Spring media (springs, spring hangers, torsion bars etc)

<p><b>a)</b> Components including the axle, “U” bolts, spring hangers, centre bolts, etc. are not correctly aligned, adjusted, securely mounted, or are missing, unduly worn, rusted, cracked, or damaged.</p>	LV	LG	T
<p><b>b)</b> Nuts do not fully engage “U” bolts.</p>	LV	LG	T
<p><b>c)</b> Suspension heights are lowered or raised by more than one-third of the manufacturer’s bump stop clearance.</p> <p><b>Note 1:</b> Ground clearance requirements for motor vehicles are detailed in <a href="#">Information Sheet No. 13 in Part 3 Information Sheets for Approved Examiners</a>.</p>	LV	LG	T
<p><b>d)</b> Any spring is cracked, broken, missing, or displaced by more than 10% of its width or makes contact with wheels, brakes, or the frame.</p>	LV	LG	T
<p><b>e)</b> Non-standard or manufacturer’s non-optional air or hydraulic suspension is fitted without specific departmental approval or approval under an approved modification code.</p> <p><b>Note 2:</b> Airbag or air pressurised shock absorber helper springs may be fitted in addition to the original suspension without specific departmental approval.</p>	LV	LG	T
<p><b>f)</b> Airbag or hydraulic suspension components, if fitted, are not in working condition or are leaking or perished.</p>	LV	LG	T
<p><b>g)</b> Coil springs do not remain in locating seats on full suspension droop.</p>	LV	LG	T
<p><b>h)</b> If a vehicle body (front or rear) is lowered or raised, the following Reasons for Rejection are based on the manufacturer's dimensions for the standard unmodified vehicle while unladen:</p> <ul style="list-style-type: none"> <li>• The ride height measured between the rubber bump stop and the corresponding metal stop is reduced by more than one third.</li> <li>• The rebound travel measured between the rubber rebound stop and the corresponding metal stop (or the extension of the shock absorber for vehicles without a rebound stop) is reduced by more than one third.</li> <li>• Mandatory lighting/lamp heights no longer comply.</li> </ul>	LV	LG	T
<p><b>i)</b> The normal relationship between the front and rear suspension heights is unduly affected.</p>	LV	LG	T

j) Suspension coil springs are lowered by cutting or heating.	LV	LG	T
k) Leaf spring suspension is altered by the use of adjustable metal plates or by placing the leaf springs to the opposite side of the axle (repositioning over axle spring location to under axle spring location or vice versa).	LV		T
l) Lowering blocks are made of material other than either steel or aluminium.	LV		T

### 6.13 Axle locating arms and devices (shackles and bushes)

a) Axle locating devices are not in good working order, are excessively worn, cracked or damaged, or are not securely mounted or correctly adjusted. <b>Note 1:</b> Axle loading devices also includes any locating arms and associated componentry.	LV	LG	T
b) Extended or non-approved shackle plates are fitted except if approved by the vehicle manufacturer as an option.	LV		T
c) Any free movement in pivot pins, kingpins, ball joints, bushes or trunnions, when measured at the outer extremities of the tyres, exceeds manufacturer's tolerances, or where manufacturer's tolerances are not available, exceed the following: <ul style="list-style-type: none"> <li>• Wheel rims 405mm or less — 7mm;</li> <li>• Wheel rims over 405mm up to 455mm — 10mm;</li> <li>• Wheel rims over 455mm — 13mm.</li> </ul>	LV		T

### 6.14 Sway bars, linkages and bushes

a) Sway bar components are broken, loose, unduly worn, disconnected, or have been removed. <b>Note 1:</b> Sway bar components include sway bars, linkages, and bushes.	LV		T
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### 6.15 Wheel bearings

a) Any wheel bearing is incorrectly adjusted, rough, noisy, loose on stub axle, does not rotate freely, or is leaking.	LV	LG	T
b) Movement between disc brake rotor/brake drum and backing plate exceeds manufacturer's specifications.	LV	LG	T

### 6.16 Suspension dampening system

a) "Suspension dampening components" are not fitted, are inoperative, not securely mounted, or brackets or rubbers are missing, worn, or damaged.	LV	LG	T
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<b>b)</b> "Suspension dampening components" do not effectively dampen movement or show signs of leakage.  <b>Note 1:</b> Shock absorbers or suspension struts are permitted to show signs of oil weeping provided the units still function as required. Check with component manufacturer for full details.	LV	LG	T
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## 6.17 Ground clearance

<b>a)</b> The road clearance of a fully laden vehicle is less than 100mm measured at any part of the vehicle other than the wheel rim or brake backing plates. If a lesser clearance has been specified by the manufacturer, the clearance must not be less than that specified clearance.  <b>Note 1:</b> Ground clearance requirements for motor vehicles are detailed in <a href="#">Information Sheet No. 13 in Part 3 Information Sheets for Approved Examiners</a> .	LV		
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## 7. Wheels and tyres

The following reasons for rejection for wheels and tyres are to ensure that road wheels and tyres are of a suitable type and condition and they provide the necessary load carrying capacity, speed rating, and control of the vehicle.

### 7.1 Wheels/rims

<b>a)</b> Wheels/rims are not of an approved type and construction or are not compatible with hubs.  <b>Note 1:</b> This relates only to those wheels in contact with the road. The spare wheel is not included in a safety check.  Please also refer to the <a href="#">LS Section of NCOP</a> .	LV	LG	T
<b>b)</b> Wheels/rims fitted to an axle or axle group are not of the same size unless otherwise specified by the vehicle/trailer manufacturer.  <b>Note 2:</b> This relates only to those wheels in contact with the road. The spare wheel is not included in a safety check.  Please also refer to the <a href="#">LS Section of NCOP</a> .	LV	LG	T
<b>c)</b> Stud or bolt holes are expanded or elongated, or wheel and retainer tapers do not match.	LV	LG	T
<b>d)</b> Any hub has missing or broken wheel mounting nuts, studs, or bolts.	LV	LG	T
<b>e)</b> Wheels rub or foul on any part of the vehicle/trailer over its full range of travel.	LV	LG	T
<b>f)</b> Wheels/rims are not secure or show signs of movement, are cracked, corroded, bent, buckled, have pieces of casting missing, show signs of welding (as a repair), or are otherwise damaged.	LV	LG	T



<b>g)</b> A spoked wheel does not have all spokes fitted or spokes are loose, corroded, bent, broken, or cracked.	<b>LV</b>	<b>LG</b>	<b>T</b>
<b>h)</b> Tyre retaining rings are not in good condition or are incorrectly seated, sprung, mismatched, bent, broken, cracked, or the ends meet when fitted to the rim.	<b>LV</b>	<b>LG</b>	<b>T</b>

## 7.2 Wheel studs, nuts, lockrings and hubs

<b>a)</b> Rims are not fitted with the correct number and type of nuts or studs.	<b>LV</b>	<b>LG</b>	<b>T</b>
<b>b)</b> Fasteners are not securely fitted, are damaged, or not engaged for at least the same thread length as provided originally by the vehicle manufacturer.	<b>LV</b>	<b>LG</b>	<b>T</b>
<b>c)</b> Any hub has missing, cracked, stripped, or broken wheel mounting nuts, studs, or bolts.	<b>LV</b>	<b>LG</b>	<b>T</b>
<b>d)</b> Spacer plates are used between hub and wheels, except if fitted by the vehicle manufacturer.	<b>LV</b>		<b>T</b>

## 7.3 Tyres

<b>a)</b> Tyres are not compatible with the rim to which they are fitted.	<b>LV</b>	<b>LG</b>	<b>T</b>
<b>b)</b> Tyres are not of a type suitable for normal road use.	<b>LV</b>	<b>LG</b>	<b>T</b>
<b>c)</b> All tyres fitted to rims on the same axle are not of the same case construction (steel radials, textile radials, or conventional cross ply).	<b>LV</b>	<b>LG</b>	<b>T</b>
<b>d)</b> Tyres fitted to rims on an axle or axle group are not the same size.  <b>Note 1:</b> This relates only to those wheels in contact with the road. The spare wheel is not included in a safety check.  Please also refer to the <a href="#">LS Section of NCOP</a> .	<b>LV</b>	<b>LG</b>	<b>T</b>
<b>e)</b> Tyre load ratings are less than the minimum ratings specified originally by the vehicle/trailer manufacturer.	<b>LV</b>	<b>LG</b>	<b>T</b>

<p><b>f)</b> The speed rating of any tyre is insufficient.</p> <p><b>Note 2:</b> A tyre fitted to a motor vehicle must, when first manufactured, have been rated by the tyre manufacturer as suitable for road use at the lower of:</p> <p>a. a speed of at least:</p> <p>i. for an off-road passenger vehicle – 140 km/h; or</p> <p>ii. for a car or car derivative – 180 km/h; or</p> <p>iii. for another motor vehicle – 120 km/h; and</p> <p>b. the vehicle's top speed.</p> <p>Schedule 1 Section 42 of the "VSS Regulation" permits the use of re-treaded tyres re-treaded in accordance with <i>Australian Standard 1973</i>. Refer to <a href="#">Information Sheet No. 15 in Part 3 Information Sheets for Approved Examiners</a>.</p>	LV	LG	T
<p><b>g)</b> Where a vehicle has been fitted with re-treaded tyres, the tyres are not marked with the name or identification of the re-treader of the tyre and/or speed and load rating of the tyre.</p>	LV	LG	T
<p><b>h)</b> Tyres do not have a tread pattern at least 1.5mm deep, other than at tread wear indicators, in a band that runs continuously across the tyre width that normally comes into contact with the road and around the whole circumference of the tyre.</p> <p><b>Note 3:</b> The <b>principal grooves</b> of the tyre are the wide circumferential grooves positioned in the central zone of the tyre tread that have tyre wear indicators. If the tyre has tyre wear indicators, the tyre wear depth should be measured in the <b>principal grooves</b>. A tyre, however, must not have any excessively uneven, localised, and patchy wear of the tread that may increase the safety risk.</p>	LV	LG	T
<p><b>i)</b> Tyre tread, shoulder, or sidewall is damaged.</p>	LV	LG	T
<p><b>j)</b> Tyres have cuts, bulges, tread separation, exposed or damaged cords, or other evidence of case failure.</p>	LV	LG	T
<p><b>k)</b> Any tyre on a vehicle contacts the body, inner guard, chassis, frame, braking, steering, or suspension components at any point through its full range of travel.</p>	LV	LG	T
<p><b>l)</b> Valve stems are cracked, damaged, perished, or loose.</p>	LV	LG	T
<p><b>m)</b> Regrooved or recut tyres fitted to a motor vehicle are not clearly marked "suitable for regrooving".</p>	LV	LG	T
<p><b>n)</b> Any tyre clearly marked "suitable for regrooving" is regrooved or recut beyond the maximum permissible groove depth or is regrooved or recut in such a way that the ply or cord is exposed or damaged.</p>	LV	LG	T
<p><b>o)</b> The sidewalls of a dual tyre configuration contact each other.</p>	LV		T

## 7.4 Tyre/wheel width

<p><b>a)</b> For a car or car derivative, the maximum tyre width is more than 1.3 times larger than the vehicle manufacturer's widest optional tyre width.</p> <p><b>Note 1:</b> Maximum regulation dimensional limits must not be exceeded.</p> <p>The requirements for fitting of alternative size rims and/or tyres are covered by the <a href="#">LS Section of NCOP</a>.</p>	LV		
<p><b>b)</b> For an off-road passenger vehicle (four-wheel drive) fitted with front and rear beam axles, the maximum tyre width is more than 1.5 times larger than the vehicle manufacturer's widest optional tyre width.</p> <p><b>Note 2:</b> Maximum regulation dimensional limits must not be exceeded.</p> <p>The requirements for fitting of alternative size rims and/or tyres are covered by the <a href="#">LS Section of NCOP</a>.</p>	LV		
<p><b>c)</b> The tyre width of the narrowest tyre fitted to a vehicle is less than 70 percent of the width of the largest tyre fitted or less than the manufacturer's narrowest optional tyre and rim as indicated on the manufacturer's tyre placard.</p>	LV		
<p><b>d)</b> The original vehicle manufacturer's front or rear wheel track for a four-wheel drive/off-road passenger vehicle is increased by more than 50mm.</p> <p><b>Note 3:</b> Where the manufacturer offers the option of a wider track measurement (e.g. where wider wheels are optional), the maximum allowable track will be the maximum wheel track offered by the manufacturer plus 50mm for a four-wheel drive/off-road passenger vehicle.</p>	LV		
<p><b>e)</b> The original vehicle manufacturer's front or rear wheel track measurements for a car or car derivative is increased by more than 25mm.</p> <p><b>Note 4:</b> Where the manufacturer offers the option of a wider track measurement (e.g. where wider wheels are optional), the maximum allowable track will be the maximum wheel track offered by the manufacturer plus 25mm for a car or car derivative.</p>	LV		

## 8. Brakes

The following reasons for rejection for brakes are to ensure that the brakes operate effectively and are correctly adjusted. **CAUTION:** Extreme caution should be taken when inspecting uncoupled trailers, particularly if they do not have a parking brake. Wheel chocks should be utilised, where necessary.

### 8.1 Brake system

<b>a)</b> Where visible, any " <i>brake component</i> " is leaking or is not securely mounted.	LV	LG	T
<b>b)</b> Any braking cables are broken, frayed, damaged, or not secured.	LV	LG	T
<b>c)</b> Any " <i>brake component</i> " is seized, severely corroded or inoperative or, where worn, is worn beyond manufacturer's limits.	LV	LG	T

<b>d)</b> Brake chambers (including chamber clamps) or camshaft support brackets are missing, loose, damaged, or broken.	<b>LV</b>	<b>LG</b>	<b>T</b>
<b>e)</b> Brake shoes, springs, anchor pins, cam rollers or bushes, pull or push rods, clevis pins, retainers, or brake chamber mounting bolts are missing, loose, damaged, or broken.	<b>LV</b>	<b>LG</b>	<b>T</b>
<b>f)</b> Motorbikes do not have two independent braking systems or a single brake that acts directly on all wheels of the vehicle and is arranged so that effective braking remains on at least one wheel if any part of the system fails.		<b>LG</b>	
<b>g)</b> Any wiring for electric brakes is disconnected, frayed, or insecure.			<b>T</b>
<b>h)</b> A trailer interconnecting flexible hose and/or coupling is not properly secured or damaged.			<b>T</b>

## 8.2 Brake system operation

<b>a)</b> The brake controls, when operated, do not cause the corresponding brake to operate (with the engine running, if necessary).	<b>LV</b>	<b>LG</b>	
<b>b)</b> Any warning device or pressure/vacuum gauge does not operate correctly. <b>Note 1:</b> A warning device includes any failure indicators.	<b>LV</b>	<b>LG</b>	

**c) The motor vehicle's brake test results do not meet the specified stopping distance requirements.**

**LV**

**LG**

**Note 2:** As part of the inspection, it is a requirement that both the peak and average deceleration values of the service brakes are tested. If the decelerometer being used does not allow for the average value to be tested, then the distance method specified in each of the relevant sections below must be conducted in conjunction with the peak deceleration test.

Once these tests (peak and average deceleration or peak and distance) have been conducted, the values must be recorded on the certificate in the appropriate location.

**Minimum Light Vehicle (LV) service brake deceleration values from 35km/h\***

Light Vehicle GVM	Minimum Average Deceleration Value	Minimum Peak Deceleration Value
Under 2.5 tonnes	3.8m/s <sup>2</sup> (39%g)	5.9m/s <sup>2</sup> (60%g)
2.5 tonnes and over	2.8m/s <sup>2</sup> (29%g)	4.4m/s <sup>2</sup> (45%g)

Additionally, the service braking system must stop the Light Vehicle from a speed of 35 km/h\*:

- a) within 12.5 metres for a vehicle or combination with a gross mass up to 2.5 tonnes;
- b) within 16.5 metres for a vehicle or combination with a gross mass of 2.5 tonnes or over.
- c) In a straight line

**Minimum L-Group Vehicle (LG) service brake deceleration values from 35km/h\***

	Minimum Average Deceleration Value	Minimum Peak Deceleration Value
Motorcycle	3.8m/s <sup>2</sup> (39%g)	5.9m/s <sup>2</sup> (60%g)

Additionally, the service braking system must stop the L-Group Vehicle from a speed of 35 km/h\*:

- a) within 12.5 metres for a vehicle or combination with a gross mass up to 2.5 tonnes;
  - b) within 16.5 metres for a vehicle or combination with a gross mass of 2.5 tonnes or over.
  - c) In a straight line
- \*A brake test performed using load cell plate-type brake test equipment is not required to meet the 35km/h minimum speed provided:
    - The test is performed according to the manufacture's specifications, and
    - The plate brake tester has a current calibration certificate.

Note: Brake testing as above is not required on vehicles built prior to 1930

d) Any "brake component" is broken, excessively worn, leaking, contaminated, or is not securely mounted.	LV	LG	
e) Linkages are not complete, and/or components are unduly worn.	LV	LG	
f) Rods and cables are repaired by welding or joining.	LV	LG	
g) The brake controls of the towing unit, when operated, do not cause the corresponding trailer brake to operate (with the engine of the towing unit running, if necessary).			T
<p>h) Trailers with a GTM in excess of 0.75 tonne but not exceeding 2.0 tonnes are not equipped with a braking system which operates on at least half the number of axles (Override or electric are acceptable).</p> <p><b>Note 3: Brake testing of trailers fitted with override brakes</b></p> <p>Where possible, testing of any override brake system should be undertaken by compressing the brake actuating device and attempting to move the trailer. This can only be undertaken where a parking brake is fitted to the trailer. In accordance with the ADRs, most trailers with override brakes are not required to be fitted with a parking brake. However, a suitable device can usually be easily incorporated into the actuating mechanism and is highly recommended for improving safety when the trailer is uncoupled from the towing vehicle.</p> <p><b>Note 4: Brake testing of trailers fitted with brakes other than override brakes</b></p> <p>With the trailer attached to the towing vehicle, apply the trailer service brake only and attempt to move the trailer forward.</p> <p><b>Note 5: Testing of the park brake, where fitted</b></p> <p>Apply the parking brake and attempt to move the trailer. The trailer may be coupled to the towing vehicle for the test, but it should be ensured that the transmission is in neutral and the brakes are off.</p>			T
<p>i) Trailers exceeding 2.0 tonnes GTM are not equipped with brakes which operate on all wheels.</p> <p><b>Note 6: Brake testing of trailers fitted with override brakes</b></p> <p>Where possible, testing of any override brake system should be undertaken by compressing the brake actuating device and attempting to move the trailer. This can only be undertaken where a parking brake is fitted to the trailer. In accordance with the ADRs, most trailers with override brakes are not required to be fitted with a parking brake. However, a suitable device can usually be easily incorporated into the actuating mechanism and is highly recommended for improving safety when the trailer is uncoupled from the towing vehicle.</p> <p><b>Note 7: Brake testing of trailers fitted with brakes other than override brakes</b></p> <p>With the trailer attached to the towing vehicle, apply the trailer service brake and attempt to move the trailer forward.</p> <p><b>Note 8: Testing of the park brake, where fitted</b></p> <p>Apply the parking brake and attempt to move the trailer. The trailer may be coupled to the towing vehicle for the test, but it should be ensured that the transmission is in neutral and the brakes are off.</p>			T
j) Brakes fitted to trailers exceeding 2.0 tonnes GTM are not equipped with an effective breakaway system.			T

<b>k)</b> Trailers fitted with double line braking systems do not automatically apply and remain applied for at least 15 minutes after the control and supply lines are disconnected from the towing vehicle.			<b>T</b>
<b>l)</b> Operation of the service brake of the tow vehicle does not result in operation of the trailer brake.			<b>T</b>
<b>m)</b> Any trailer having brakes which are air or vacuum assisted is not fitted with a reservoir that is protected by a check valve.			<b>T</b>
<b>n)</b> With any brake fully applied, any stroke indicator runs out of travel or indicates that adjustment is necessary.			<b>T</b>
<b>o)</b> Brake chamber push rods move more than 50% of their maximum stroke or travel over centre with the brakes fully applied.			<b>T</b>
<b>p)</b> Brake adjusters are not properly adjusted, are bent, damaged, or excessively worn.			<b>T</b>

### 8.3 Testing of trailer brakes

<b>a)</b> The brake(s) do not retard the movement of the trailer.			<b>T</b>
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### 8.4 Brake pedal/lever condition

<b>a)</b> A " <i>brake pedal</i> " does not have an effective anti-slip surface.	<b>LV</b>	<b>LG</b>	
<b>b)</b> On rubber faced " <i>brake pedals</i> ", any metal is showing.	<b>LV</b>	<b>LG</b>	
<b>c)</b> The " <i>brake pedal</i> " is bent, damaged, broken, or misaligned (outside the scope of the manufacturer's original design).	<b>LV</b>	<b>LG</b>	
<b>d)</b> The " <i>brake pedal</i> " is not secure, not correctly adjusted, binds, or is worn so as to affect efficient operation.	<b>LV</b>	<b>LG</b>	

### 8.5 Pedal travel

<b>a)</b> Maximum brake pressure is not achieved with one application of the " <i>brake pedal</i> " or brake lever and is not at least 50% of the maximum travel or in accordance with the individual vehicle manufacturer's specifications.	<b>LV</b>	<b>LG</b>	
<b>b)</b> The " <i>brake pedal</i> " does not remain firm in accordance with the vehicle manufacturer's specifications when light foot pressure is maintained in the applied direction.	<b>LV</b>	<b>LG</b>	
<b>c)</b> There is an indication of air in the hydraulic system.	<b>LV</b>	<b>LG</b>	
<b>d)</b> A " <i>brake pedal</i> " or brake lever does not have free travel in accordance with the vehicle manufacturer's specifications.	<b>LV</b>	<b>LG</b>	



e) When not in use, the " <i>brake pedal</i> " or brake lever does not return to the fully released position.	LV	LG	
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## 8.6 Handbrake, park brake and control levers

a) Linkages are not complete, and/or parts are unduly worn.	LV	LG	T
b) Cables are frayed, damaged, or restricted.	LV	LG	T
c) Rods and cables are repaired by welding or joining.	LV	LG	T
d) The brake does not fully release when the release control is operated.	LV	LG	T
e) Any " <i>hand brake component</i> " is not fitted with a locking device capable of holding in any position.	LV	LG	T
f) Any " <i>hand brake component</i> " is damaged, bent, broken, restricted, missing, not secure, or does not allow sufficient application of the hand/park brake.	LV	LG	T
g) A handle or pedal of a hand/park brake fitted to a vehicle does not have a reserve of travel of at least one-fifth of the maximum range of application.	LV	LG	T
h) The control lever does not have a mechanical locking system to enable sustained operation.	LV	LG	T

<ul style="list-style-type: none"><li>• The hand/park brake is not able to hold the vehicle stationary.</li><li>• The preferred method for testing the park brake is the stationary test with the park brake as the only means used to hold the vehicle stationary on a gradient of at least 12%. If a gradient of 12% is not accessible, other methods are acceptable. All methods may be recorded as either pass or fail however, if the peak, average, or distance method is used, it is recommended to keep a record of the results for audit purposes.</li></ul> <p><b>CAUTION</b> It is important to note that some types of park brakes are not suited to the peak, average, or distance method due to the potential for component damage.</p> <p><b>Minimum Light Vehicle (LV) park brake deceleration values from 35km/h*</b></p> <table><tr><th>Light Vehicle GVM</th><th>Minimum Average Deceleration Value</th><th>Minimum Peak Deceleration Value</th></tr><tr><td>Under 2.5 tonnes</td><td>1.6m/s<sup>2</sup> (16%g)</td><td>1.9m/s<sup>2</sup> (19%g)</td></tr><tr><td>2.5 tonnes and over</td><td>1.1m/s<sup>2</sup> (11%g)</td><td>1.5m/s<sup>2</sup> (15%g)</td></tr></table> <p>The parking brake system must stop the motor vehicle from a speed of 35 km/h*:</p> <ul style="list-style-type: none"><li>• within 30 metres for a vehicle or combination with a gross mass up to 2.5 tonnes;</li><li>• within 40.5 metres for a vehicle or combination with a gross mass of 2.5 tonnes or over.</li><li>• In a straight line</li><li>• a brake test performed using plate type brake test equipment is not required to meet the 35km/h minimum speed provided:<ul style="list-style-type: none"><li>• the test is performed according to the manufacturers specifications, and</li><li>• The plate brake tester has a current calibration certificate.</li></ul></li></ul>	Light Vehicle GVM	Minimum Average Deceleration Value	Minimum Peak Deceleration Value	Under 2.5 tonnes	1.6m/s <sup>2</sup> (16%g)	1.9m/s <sup>2</sup> (19%g)	2.5 tonnes and over	1.1m/s <sup>2</sup> (11%g)	1.5m/s <sup>2</sup> (15%g)	LV		
Light Vehicle GVM	Minimum Average Deceleration Value	Minimum Peak Deceleration Value										
Under 2.5 tonnes	1.6m/s <sup>2</sup> (16%g)	1.9m/s <sup>2</sup> (19%g)										
2.5 tonnes and over	1.1m/s <sup>2</sup> (11%g)	1.5m/s <sup>2</sup> (15%g)										
i) The hand/park brake, as applicable to side cars and motor trikes, fails to stop the motorbike being moved and is not able to hold the motorbike for a period of 5 minutes, facing each way, on a gradient of not less than 30%, as per ADR 33/00.		LG										
j) Motorcycles, fitted with a sidecar, or motor trikes do not have a hand/park brake fitted.		LG										

## 8.7 Hydraulic lines/hoses

<p><b>a)</b> Hydraulic lines/hoses are not securely mounted, not free from damage or corrosion, show evidence of leakage, or are not constructed of approved material.</p> <p><b>Note 1:</b> ADR 7/00 – Hydraulic Brake Hoses was repealed as of 18 December 2003 and the requirements for hydraulic brake hoses are now included in ADR 42/04 Section 15 (Brake Tubing and Brake Hose) which states:</p> <p><i>Flexible hydraulic brake hoses, air or vacuum brake tubing and air and vacuum hose, flexible and hydraulic power hose between the 'Brake Power Unit 31/00' or 'Brake Power Unit 35/00' and the master cylinder or its equivalent must conform to SAA, SAE, BS, JIS, DIN, ISO or ECE Standards specified for flexible brake hoses, air brake tubing or hose or vacuum brake tubing or hose or hydraulic power tubing or hose and be fitted to the vehicle so as to prevent chafing, kinking or other mechanical damage under normal motion of the parts to which they are attached.</i></p> <p>The repealing of the ADR now permits hydraulic brake hoses to comply with the requirements of ADR 42/04. As such, older vehicles can comply with the revised standard.</p> <p>Made-up hoses are not acceptable. Where brake hoses are replaced with aftermarket products, relevant standards approval marking is required.</p> <p>Braided hoses are acceptable provided they meet relevant ADRs and are correctly marked.</p> <p><b>Note 2:</b> Normal commercial copper tubing has been prohibited from use in brake systems because it is considered prone to cracking due to work hardening. However, there is a Society of Automotive Engineers (SAE) Recommended Practice called <i>Tubing – Motor Vehicle Brake Tubing Hydraulic – SAE J1047</i> which is the accepted industry standard.</p> <p>Persons wishing to use copper tube for vehicle hydraulic brake lines must first provide proof of compliance with <i>SAE J1047</i> or equivalent standard.</p>	LV	LG	T
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## 8.8 Cylinders and callipers

<p><b>a)</b> Hydraulic components are not secured in a manner as recommended by the manufacturer or are seized, restricted, or show evidence of leakage.</p> <p><b>Note 1:</b> Hydraulic components also include all parts of a hydraulic system such as the master cylinders and wheel cylinders/callipers.</p>	LV	LG	T
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## 8.9 Reservoirs

<p><b>a)</b> Any reservoir is not filled to the manufacturer's recommended minimum level or shows evidence of leakage.</p>	LV	LG	T
<p><b>b)</b> Any reservoir lid does not seal correctly.</p>	LV	LG	T

## 8.10 Vacuum and air components

a) "Brake components" are not secure or operational.	LV	LG	T
b) Any components are frayed, perished, corroded or misaligned, or show evidence of leakage.	LV	LG	T
c) Filter units for air compressors or vacuum pumps are missing, loose, blocked, or damaged.	LV	LG	T
d) Vacuum is not available immediately after the engine has started.	LV	LG	T
e) After engine shut down, there is not sufficient vacuum reserve to allow for at least one assisted brake application.	LV	LG	T
f) Componentry is not correctly adjusted or free from binding.	LV	LG	T

## 8.11 Discs, pads, drums and linings

<p>a) Brake linings are worn below wear indicators. If no indicators are provided, the thinnest part of the lining is worn below manufacturer's specifications.</p> <p><b>Note 1:</b> Brake linings also include any disc brake pads, shoe linings, and separate park brake linings.</p> <p><b>Note 2:</b> Where manufacturer's specifications are not provided, the minimum thickness for bonded linings is 0.8mm or 0.8mm above the head of a rivet.</p> <p><b>Note 3:</b> When an approved examiner is inspecting a braking system and components such as pads, linings, discs, and drums are not visible, the wheels and drums must be removed to ensure all parts are in a serviceable condition.</p> <p>An approved examiner may require the removal of one (1) or more wheels and brake drums or rotors if the examiner has reasonable grounds to believe that a defect exists.</p> <p>Where wheels and brake componentry are removed for the purpose of inspection, the proprietor must notify the owner of this requirement and negotiate appropriate labour costs and charges for non-reusable parts such as lock nuts, lock tabs, split pins, lubricants, etc. before proceeding. These additional charges are not part of the examination fee.</p>	LV	LG	T
<p>b) Drums or disc rotors are worn or machined below manufacturer's specifications.</p> <p><b>Note 4:</b> Where manufacturer's specifications are not provided for drums, scoring must not be more than 1.5mm for light vehicles. Refer to <a href="#">Information Sheet No. 16 in Part 3 Information Sheets for Approved Examiners</a>.</p>	LV	LG	T
c) There are substantial cracks on friction surfaces, external cracks, or mechanical damage.	LV	LG	T
d) Lining material is contaminated with oil, grease, or brake fluid.	LV	LG	T

## 9. Engine, driveline and emissions

The following reasons for rejection for the engine, driveline and emissions are to ensure that the engine, driveline, and associated components provide a controlled transmission of power to the driving wheels.

### 9.1 Clutch operation

a) Clutch components are non-operational, are incorrectly adjusted, or are cracked, bent, or broken.	LV	LG	
b) There is leakage of hydraulic fluid from the system.	LV	LG	
c) There is an indication of air in the hydraulic system.	LV	LG	
d) When not in use, the clutch pedal does not return to its original position.	LV	LG	

### 9.2 Transmission operation (manual and automatic)

a) Any gear selected disengages whilst the vehicle is in motion.	LV	LG	
b) The gear lever location has been moved from the vehicle manufacturer's original position without specific approval.	LV	LG	
c) The gear selector linkage is worn so as to affect the safe use of the motor vehicle on a road.	LV	LG	
d) The "transmission" is worn to a point that can affect the safe use of the motor vehicle on a road. This may include being unable to select a gear/position easily, the incorrect gear/position is selected, or there is excessive transmission/clutch slippage.	LV	LG	
e) Where an automatic "transmission" is fitted, the vehicle is able to be moved when park is selected.	LV	LG	
f) Where an automatic "transmission" is fitted, the engine is capable of being started in other than the park or neutral positions.	LV	LG	
g) Where an automatic "transmission" is fitted, the vehicle does not have, in the driver's compartment, an indicator showing the "transmission" control position.	LV	LG	
h) For a vehicle other than L-Group Vehicles with an unladen mass of less than 450kg, the reverse gear is not fitted or cannot be selected.	LV	LG	
i) The gear selector indicator, where applicable, is not operational or is not illuminated when the park/head lights are turned on.	LV	LG	

### 9.3 Engine and transmission mountings

a) The "powertrain" is not securely mounted to the chassis/frame of the vehicle.	LV	LG	
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b) "Powertrain" mountings and bolts are not securely fastened or free of cracks or distortion.	LV	LG	
c) Rubber components are oil soaked, perished, broken, or deteriorated.	LV	LG	

## 9.4 Leaks

a) Any component leaks oil on to the roadway or onto any exhaust system or brake component. <b>Note 1:</b> Motorbikes manufactured with total loss lubricating systems which have been designed to "leak" are excluded from this condition.	LV	LG	
b) Seals and covers between the engine and passenger compartment are missing, distorted, or damaged in a way that allows fumes to enter the passenger compartment.	LV	LG	

## 9.5 Engine

a) An emission related component originally fitted to the vehicle is altered, modified, or removed so that it no longer operates as intended.	LV	LG	
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## 9.6 Replacement engine

a) A replacement engine, other than one offered as an option by the vehicle manufacturer for that make and model, is not certified by an Approved Person or an endorsed departmental approval letter.	LV	LG	
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## 9.7 Engine controls

a) Engine controls (including cruise control) as fitted by the manufacturer do not operate in a smooth and efficient manner.	LV	LG	
b) Engine speed does not return to normal idle position upon release of the accelerator pedal or throttle control. <b>Note 1:</b> For Vintage and Veteran motorbikes manufactured without a self-releasing throttle, the throttle does not operate in the manner prescribed by the manufacturer.	LV	LG	
c) Vehicles fitted with a compression ignition engine (diesel) are not fitted with a locking device that prevents the engine from being started by accidental and inadvertent means.	LV	LG	
d) Any component is adjusted so that it increases exhaust emissions including smoke.	LV	LG	

## 9.8 Differential

a) The differential is worn or modified so as to affect the safe use of the motor vehicle on a road.	LV		
b) Drive line components are not secure or free of excessive wear, back lash, or seizure which could cause component failure.  <b>Note 1:</b> Drive line components also include constant velocity joints, universal joints, support bearings, splines, or any other components that make up the drive line.	LV	LG	

## 9.9 Drive shafts, axles and flexible couplings

a) Constant velocity joint boots are not in good condition or are perished or deteriorated in such a way that lubricants can escape.	LV		
b) Constant velocity joint boot retaining clamp/clips are missing, damaged, or not performing their intended function.	LV		
c) Any "transmission" drive shaft is bent, damaged, loose, or noticeably misaligned.	LV	LG	
d) A "chain" is worn outside of manufacturer's specifications.	LV	LG	
e) Drive sprockets are not free from excessive wear or are incorrectly adjusted.	LV	LG	
f) A "chain" or drive shaft guard is not fitted, securely mounted, in good condition, or it does not provide adequate cover.  <b>Note 1:</b> The guard must provide protection for at least the upper free run of the drive "chain" and must extend at least 300mm rearward of the rearmost footrest or to the vertical centre of the drive sprocket.	LV	LG	

## 9.10 Fuel systems

a) Replacement fuel delivery systems do not continue to comply with the emission requirements applicable at the time of the vehicle's manufacture.  <b>Note 1:</b> The fuel delivery system also includes any carburettors, engine management, and injection systems.	LV	LG	
b) Air cleaners are not fitted.  <b>Note 2:</b> If applicable, owner to supply documented confirmation that air cleaners were not fitted as original equipment.	LV	LG	



<p><b>c)</b> An aftermarket turbocharger assembly, other than one offered as an option by the vehicle manufacturer for that make and model, is fitted and is not certified by an Approved Person in accordance with NCOP or an endorsed departmental approval letter.</p> <p><b>Note 3:</b> Engines/turbochargers/superchargers fitted as optional equipment by the vehicle manufacturer are acceptable. This may require upgrading of vehicle componentry to ensure it is identical to a vehicle originally produced by the manufacturer in this configuration.</p>	LV	LG	
<b>d)</b> Nitrous oxide injection equipment is fitted, irrespective of its operational ability.	LV	LG	
<b>e)</b> The fuel filler pipe inlet and cap are not located on the outside of the vehicle unless originally fitted inside by the manufacturer.	LV	LG	
<b>f)</b> Fuel system components are leaking.	LV	LG	
<b>g)</b> Fuel lines are in contact with moving parts, or a heat source, or are kinked, cracked, or not secure.	LV	LG	
<b>h)</b> The fuel tank(s) or fuel lines are affected by rust or corrosion.	LV	LG	
<b>i)</b> A fuel tank cap that complies with manufacturer's specifications is not fitted, is damaged, or is not secure.	LV	LG	
<b>j)</b> Fuel hoses have incorrect fuel pressure ratings for their application or are not suitable for the fuel type.	LV	LG	
<b>k)</b> The fuel tank(s) is/are not securely mounted or straps, supports, mounting brackets, or fasteners are missing, cracked broken, or loose.	LV	LG	

## 9.11 Exhaust construction

<p><b>a)</b> Any original emission related component is not properly located, connected, damaged, deteriorated, or altered in any way to reduce effectiveness (e.g., a catalytic converter is not fitted where one was originally provided or has been bypassed).</p>	LV	LG	
<b>b)</b> Any pipe or muffler incorporated in the exhaust system to ensure the vehicle maintains compliance with ADRs for vehicle noise emission is not fitted.	LV	LG	
<p><b>c)</b> Any alteration or modification to the exhaust system is not to a standard provided by the motor vehicle's original vehicle manufacturer or NCOP.</p> <p><b>Note 1:</b> Proof of testing to an acceptable standard may be required.</p>	LV	LG	
<b>d)</b> An exhaust system component fitted external to the motor vehicle body is not protected by suitable guarding.	LV	LG	

<p><b>e)</b> An exhaust system does not discharge in accordance with prescribed standards.</p> <p><b>Note 2:</b> The exhaust outlet must:</p> <ul style="list-style-type: none"> <li>a) extend at least 40mm beyond the furthestmost outboard or rearmost joint of the floor pan (which is not continuously welded or permanently sealed) which could permit direct access of exhaust gases to the passenger compartment, but not beyond the perimeter of the vehicle when viewed in plan; and</li> <li>b) if to the side of the vehicle, 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; or</li> <li>c) if to the rear of the vehicle, discharge at not more than 10 degrees above or 45 degrees below the horizontal.</li> </ul>	LV		
<p><b>f)</b> Exhaust components are not securely mounted with adequate clearance between other parts of the vehicle and the road.</p> <p><b>Note 3:</b> Exhaust components also include any part that makes up the exhaust system of a vehicle and includes the manifold, pipes, muffler, resonator, and catalytic converter.</p>	LV	LG	
<p><b>g)</b> The exhaust system is fitted with a device designed to bypass noise and/or gaseous emission control devices which would render the system non-complying to the ADRs.</p>	LV	LG	
<p><b>h)</b> A motorbike manufactured from 1 July 1988 does not have all components of the silencing system marked with the name or trade name of the manufacturer.</p>		LG	

## 9.12 Emissions

<p><b>a)</b> There are leaks or excessive noise from the exhaust system and joints during operation, excluding manufacturer's drain holes in mufflers.</p>	LV	LG	
<p><b>b)</b> The engine emits sparks, flames, excessive gases, oil, or fuel residue.</p>	LV	LG	
<p><b>c)</b> An engine of a motor vehicle manufactured after 1930 emits visible emissions for a period of 10 seconds or more when operating.</p> <p><b>Note 1:</b> This does not apply to emissions that are visible only because of heat or the condensation of water vapour.</p>	LV	LG	
<p><b>d)</b> Any noise reducing or absorbing equipment is missing.</p>	LV	LG	
<p><b>e)</b> Crankcase gases escape into the atmosphere (applies to petrol engines fitted with positive crankcase ventilation only).</p>	LV	LG	

## 9.13 Dual fuel systems

<p><b>a)</b> A vehicle operating on LPG or CNG and petrol does not have the emission control equipment fitted to enable compliance with emission levels when operating on petrol.</p>	LV	LG	
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## 9.14 Hybrid electric and battery electric vehicles

**CAUTION:** Hybrid/electric vehicles pose a risk of electric shock and should not be worked on unless the individual holds the correct certification and an understanding of the system. It is important to remember that, even with the vehicle's high voltage system disconnected, a voltage/current can still be produced if the vehicle's wheels rotate. Additionally, when inspecting a hybrid vehicle please be aware that, unless the vehicle is completely shut down, the combustion engine may start without warning to charge the vehicle's battery.

a) High voltage cabling insulation is deteriorated, damaged, or missing.	LV	LG	
b) High voltage cabling is not adequately secured.	LV	LG	
c) Battery pack is leaking.	LV	LG	
d) Battery pack is not secured.	LV	LG	
e) Battery ventilation system blocked or not operating.	LV	LG	
f) A motor, generator (including regenerative braking), combustion engine, or combination of any units is damaged or does not operate as intended which affects the safe operation of the vehicle (i.e., limited acceleration, failure to achieve normal road speeds, decreased braking performance).	LV	LG	

## 10. Vehicle safety features

For over 40 years, motor vehicles have been fitted with traditional safety features such as seatbelts, collapsible steering columns and lighting systems. However, with advancements in technology and the desire for safer motor vehicles, more complex safety systems have been designed and fitted to the modern motor vehicle. These systems provide a host of safety features to protect vehicle occupants and other vulnerable road users in the event of a crash. They also provide safety features that assist in preventing or reducing the severity of a crash. These safety features are divided into two categories, namely, active safety features and passive safety features.

Active safety features are designed to help avoid accidents and include such systems as Electronic Stability Control, Anti-lock Braking, and Electronic Brake Force Distribution. Passive safety features are designed to help reduce the injuries to vehicle occupants and include such systems as airbags, seatbelt pretensioners and "*brake pedal*" detachment.

These safety features are generally complex and rely on a number of other vehicle systems to perform their intended function correctly. The manner in which these safety features operate can also vary between manufacturers and, as such, it is important to have access to manufacturer's specifications.

The following Reasons for Rejection for vehicle safety features are to ensure that the safety functions of the vehicle perform as intended by the manufacturer.

**Note:** Due to the complexity of the any safety system's components and their operation, it will be acceptable to rely on the vehicle's fault code logging system as a means of indicating that the system is operable (unless other aspects of the inspection indicate that the system is damaged or not operable).

Please be aware, there is no requirement to check the performance/operation of any safety system during a road test. Under no circumstances is it permissible to operate the vehicle in a dangerous manner or in a way which contravenes Queensland law.

## 10.1 Active safety features

<b>a)</b> Where provided by the vehicle manufacturer, the active safety system is damaged, has components missing, or the system does not operate within the manufacturer's specifications.  <b>Note 1:</b> The active safety system includes electronic stability control (ESC), traction control, anti-lock brake system (ABS), electronic brake-force distribution, and automated emergency braking systems.	<b>LV</b>	<b>LG</b>	<b>T</b>
<b>b)</b> A detachable pedal (i.e., brake pedal) has been triggered, is damaged, or has not been repaired as per the manufacturer's specifications.	<b>LV</b>		<b>T</b>
<b>c)</b> Where fitted, any advanced braking system warning lamp is inoperative, indicates a system fault, or is missing.  <b>Note 2:</b> Advanced braking systems are programmed by the Original Equipment Manufacturer and includes, but is not limited to, systems such as anti-lock braking systems (ABS), electronic braking systems (EBS), electronic stability control (ESC), etc.	<b>LV</b>	<b>LG</b>	<b>T</b>

## 10.2 Passive safety system

<b>a)</b> An airbag installed by the vehicle manufacturer is not fitted or operating within the manufacturer's specifications.	<b>LV</b>	<b>LG</b>	
<b>b)</b> A seatbelt pre-tensioner has been deployed, is missing, inoperable or damaged.	<b>LV</b>		
<b>c)</b> A seatbelt load limiter (webbing clamp) has been activated, is damaged or has not been repaired as per the manufacturer's specifications.	<b>LV</b>		

# 11. Vehicle identifier issues

## 11.1 Vehicle identifier

<b>a)</b> VIN/chassis/engine number is missing, illegible or incomplete	<b>LV</b>	<b>LG</b>	<b>T</b>
<b>b)</b> VIN/chassis/engine number has been altered or tampered with	<b>LV</b>	<b>LG</b>	<b>T</b>
<b>c)</b> VIN on identification plate differs from number stamped into body or chassis	<b>LV</b>	<b>LG</b>	<b>T</b>

# 12. Modifications

The following reasons for rejection apply to vehicles that have been modified from their original vehicle manufacture specifications. Refer to Section 3 for details on the types of modifications.

## 12.1 General modifications

a) A complex modification has been performed and a Queensland modification plate is not fitted.	LV	LG	T
b) A complex modification does not match the codes specified on the modification plate.	LV	LG	T
c) A specific modification has been performed and a Department of Transport and Main Roads approval has not been sighted.	LV	LG	T
d) A basic modification does not comply with a Code of Practice for Vehicle Modification.	LV	LG	T
e) Any other modification exists that does not comply with vehicle standards. <b>Note 1:</b> Light vehicles with modifications, including minor modifications, that are not covered in a Code of Practice must continue to comply with the vehicle standards in the "VSS Regulation".	LV	LG	T
f) A vehicle with an LPG, NG, Hydrogen or Electric fuel system does not have an acceptable, durable, and reflective number plate label showing the fuel type. <b>Note 2:</b> Further details and specifications for number plate labels can be found on <a href="#">Information Sheet No.18 in Part 3 Information Sheets for Approved Examiners</a> .	LV	LG	

## 13. Road test criteria

The following are reasons for rejection when conducting the vehicle road test.

a) Service brake does not operate correctly, without vibration or pulling to one side when applied.	LV	LG	
b) Park brake lever or operating control does not hold when applied by the driver.	LV		
c) Steering does not return to centre, binds or does not travel in its full intended range.	LV	LG	
d) Clutch slips, shudders or does not disengage.	LV	LG	
e) Suspension is unsafe.	LV	LG	
f) Gear change mechanism does not select gears correctly or select all gears.	LV	LG	
g) Accelerator/throttle control does not operate smoothly, binds or does not return to idle.	LV	LG	
h) Drive line condition. Any obvious vibration or excessive backlash is evident.	LV	LG	
i) Windscreen wiper/washers are inoperative or ineffective.	LV	LG	
j) Driving position/visibility. The driver's seating position is unsafe or their visibility is obscured.	LV	LG	

<b>k)</b> Exhaust noise is excessive or exhaust leaks are evident.	<b>LV</b>	<b>LG</b>	
<b>L)</b> The speedometer or odometer is inoperative or inaccurate.	<b>LV</b>	<b>LG</b>	
<b>m)</b> Engine stalls at idle (unless fitted with an automatic stop-start system)	<b>LV</b>	<b>LG</b>	
<b>m)</b> Faults are present with on board control units that involve safety features. (e.g. fault indicator lights for Supplementary Restraint Systems (SRS), Anti-lock Braking System (ABS), Autonomous Emergency Braking (AEB), Electronic Stability Control (ESC), Lane Departure Warning (LDW), etc)	<b>LV</b>	<b>LG</b>	

## 14. Passenger transport

The following reasons for rejection for passenger transport relate only to vehicles being examined for a Certificate of Inspection as a public passenger transport vehicle.

### 14.1 Lights

<b>a)</b> A distress light, if fitted, is not operational, is damaged, obscured, or not green in colour. <b>Note 1:</b> Distress light refers to a green light as required by taxis under the <i>Transport Operations (Passenger Transport) Regulation 2018</i> .	<b>LV</b>		
<b>b)</b> A hail light, if fitted, is not operational or is damaged. <b>Note 2:</b> A hail light refers to a light as required by taxis under the <i>Transport Operations (Passenger Transport) Regulation 2018</i> .	<b>LV</b>		

### 14.2 Security cameras

<b>a)</b> A security camera, if fitted, does not function correctly. <b>Note 1:</b> Security camera refers to an approved camera as specified under the <i>Transport Operations (Passenger Transport) Regulation 2018</i> . <b>Note 2:</b> The camera system must have a visual indicator showing when the system is operational and when there is a functional fault. The visual indicator must be visible to the driver when seated in the driver position. For further information regarding the operational requirements for security cameras please visit the Personalised Transport section of the Transport and Main Roads website at: <a href="https://www.tmr.qld.gov.au/business-industry/Taxi-and-limousine/Industry-information/Taxi/Personalised-transport-vehicle-security-cameras">https://www.tmr.qld.gov.au/business-industry/Taxi-and-limousine/Industry-information/Taxi/Personalised-transport-vehicle-security-cameras</a>	<b>LV</b>		
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## 14.3 Fire extinguisher

<p><b>a)</b> A fire extinguisher, where fitted and/or necessary, is expired, damaged, not charged or is not securely mounted in a readily accessible location as prescribed in AS 2444 <i>Portable Fire Extinguishers – Selection and Location</i>.</p> <p><b>Note 1:</b> Fire extinguishers may be ineffective even though they appear to be properly charged. Australian Standard <i>AS 1851 Routine service of fire protection systems and equipment</i> contain suitable procedures for inspecting and testing fire extinguishers.</p>	LV		
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## Part 3 – Information sheets for Approved Examiners

### Information Sheet No. 1(a) Light Vehicle Modifications Codes

#### Vehicle Standards Bulletin 14

#### National Code of Practice for Light Vehicle Construction and Modification

The National modification codes approved in Queensland for light vehicles are available in the Queensland Road Vehicle Modification Handbook at: <https://www.tmr.qld.gov.au/Safety/Vehicle-standards-and-safety/Vehicle-modifications>



## **Information Sheet No. 1(b)**

### **Heavy Vehicle Modification Codes**

#### **Vehicle Standards Bulletin 6**

#### **National Code of Practice – Heavy Vehicle Modifications**

The modification codes for heavy vehicles are available at <https://www.nhvr.gov.au/safety-accreditation-compliance/vehicle-standards-and-modifications/vehicle-standards-bulletin-6>

## **Information Sheet No. 1(c)**

### **Queensland Standalone Modification Codes**

#### **Queensland Code of Practice – Vehicle Modifications and Queensland Standalone Modification Codes for Heavy Vehicles**

The Queensland standalone modification codes for light and heavy vehicles are available in the Queensland Road Vehicle Modification Handbook at: <https://www.tmr.qld.gov.au/Safety/Vehicle-standards-and-safety/Vehicle-modifications>

## Information Sheet No. 2

# Seat Belts Requirements for Passenger Cars, Passengers Car Derivatives, Forward Control Passenger Vehicles and Multi-Purpose Passenger Vehicles

**MA - Passenger car**

**MB - Forward control passenger vehicle**

**MC - Off road passenger vehicle (Multi-purpose passenger vehicle)**

### 2ND EDITION AUSTRALIAN DESIGN RULE REQUIREMENTS

(FOR PASSENGER CARS AND PASSENGER CAR DERIVATIVES MANUFACTURED FROM JANUARY 1969 – JUNE 1988)

<b>1<sup>st</sup> Row Seats</b>	<b>ADR 4,5A (1/1/69)</b>	<b>ADR 4,5A (1/1/71)</b>	<b>ADR 4A,5A (1/1/74)</b>
Driver	L/S	L/S	L/S
Outboard Passenger	L/S	L/S	L/S
Centre	L*	L*	L*

<b>2<sup>nd</sup> Row Seats</b>			
Outboard (1)	-	L/S	L/S
Centre	-	L*	L*

<b>3<sup>rd</sup> Row Seats</b>			
Outboard (2)	-	-	-
Centre	-	-	-

<b>1<sup>st</sup> Row Seats</b>	<b>ADR 4B,5B (1/1/75)</b>	<b>ADR 4C,5B (1/1/76)</b>	<b>ADR 4D,5B (1/1/84)</b>
Driver	R	R	R
Outboard Passenger	R	R	R
Centre	L*	L*	L*

<b>2<sup>nd</sup> Row Seats</b>			
Outboard (1)	L/S	L/S	R
Centre	L*	L*	L*

<b>3<sup>rd</sup> Row Seats</b>			
Outboard (2)	-	-	-
Centre	-	-	-

### 3RD EDITION AUSTRALIAN DESIGN RULE REQUIREMENTS

(FOR VEHICLES MANUFACTURED ON OR AFTER 1 JULY 1988)

1 <sup>st</sup> Row Seats	MA		
Driver	R		
Outboard Passenger	R		
Centre	L		

2 <sup>nd</sup> Row Seats			
Outboard (1)	R		
Centre	L		

3 <sup>rd</sup> Row Seats			
Outboard (2)	L/S		
Centre	L		

### 2ND EDITION AUSTRALIAN DESIGN RULE REQUIREMENTS

(FOR FORWARD CONTROL PASSENGER VEHICLES MANUFACTURED FROM JANUARY 1985 - JUNE 1988)

#### UP TO 8 SEATS

1 <sup>st</sup> Row Seats	ADR 4C,5B (1/1/85)	ADR 4D,5B (1/1/86)	
Driver	R (1)	R	
Outboard Passenger	R (1)	R	
Centre	L*	L*	

2 <sup>nd</sup> Row Seats			
Outboard (1)	L/S	R (1)	
Centre	L*	L*	

3 <sup>rd</sup> Row Seats			
Outboard (2)	L/S	L/S	
Centre	L*	L*	

#### 9 SEATS

1 <sup>st</sup> Row Seats	ADR 4C,5B (1/7/85)	ADR 4D,5B (1/1/86)	
Driver	R (1)	R	
Outboard Passenger	R (1)	R	
Centre	L*	L*	

2 <sup>nd</sup> Row Seats			
Outboard (1)	-	R (1)	
Centre	-	L*	

<b>3<sup>rd</sup> Row Seats</b>			
Outboard (2)	-	L/S (2)	
Centre	-	L*	

### 3RD EDITION AUSTRALIAN DESIGN RULE REQUIREMENTS

(FOR VEHICLES MANUFACTURED ON OR AFTER 1 JULY 1988)

#### UP TO 9 SEATS

<b>1<sup>st</sup> Row Seats</b>	<b>MB</b>		
Driver	R		
Outboard Passenger	R		
Centre	L		

<b>2<sup>nd</sup> Row Seats</b>			
Outboard (1)	R		
Centre	L		

<b>3<sup>rd</sup> Row Seats</b>			
Outboard (2)	R		
Centre	L		

### 2ND EDITION AUSTRALIAN DESIGN RULE REQUIREMENTS

(FOR MULTI PURPOSE PASSENGER CARS MANUFACTURED FROM JANUARY 1970 - JUNE 1988)

<b>1<sup>st</sup> Row Seats</b>	<b>ADR 4,5A (1/1/69)</b>	<b>ADR 4,5A (1/1/71)</b>	<b>ADR 4,5A (1/1/74)</b>
Driver	L/S	L/S	L/S
Outboard Passenger	L/S	L/S	L/S
Centre	L*	L*	L*

<b>2<sup>nd</sup> Row Seats</b>			
Outboard (1)	-	L/S	L/S
Centre	-	L*	L*

<b>3<sup>rd</sup> Row Seats</b>			
Outboard (2)	-	-	-
Centre	-	-	-

<b>1<sup>st</sup> Row Seats</b>	<b>ADR 4B,5B (1/1/75)</b>	<b>ADR 4C,5B (1/1/76)</b>	<b>ADR 4D,5B (1/1/84)</b>
Driver	R	R	R
Outboard Passenger	R	R	R
Centre	L*	L*	L*

<b>2<sup>nd</sup> Row Seats</b>			
Outboard (1)	L/S	L/S	R

Centre	L*	L*	L*
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<b>3<sup>rd</sup> Row Seats</b>			
Outboard (2)	-	-	-
Centre	-	-	-

### 3RD EDITION AUSTRALIAN DESIGN RULE REQUIREMENTS

(FOR VEHICLES MANUFACTURED ON OR AFTER 1 JULY 1988)

<b>1<sup>st</sup> Row Seats</b>	<b>MC CATEGORY (1/7/88)</b>	<b>MC CATEGORY (1/7/96)</b>	
Driver	R	R	
Outboard Passenger	R	R	
Centre	L	L	

<b>2<sup>nd</sup> Row Seats</b>			
Outboard (1)	L/S	R	
Centre	L	L	

<b>3<sup>rd</sup> Row Seats</b>			
Outboard (2)	L/S	L/S	
Centre	L	L	

### REQUIREMENT CODES:

Where:

L	=	"Lap anchorage"
L/S	=	Lap/Sash (Pelvic Restraint + Upper Torso Restraint)
L/R	=	At least "Lap anchorage" with Retractor
R	=	Lap/Sash with Retractor
-	=	No requirement

### NOTES:

- \* Lap belts only required if centre passenger seating position fitted.
- (1) If no "Permanent structure", then "Lap anchorages" are acceptable.
- (2) If "Seat" is adjustable for conversion of occupant space to luggage or goods space, "Lap anchorages" are acceptable.

**SEAT BELT REQUIREMENTS FOR OMNIBUS  
CATEGORIES (MD, ME)**

**MD - Light omnibus**

**MD1 - Light omnibus up to 3.5 tonnes GVM up to 12 seats**

**MD2 - Light omnibus up to 3.5 tonnes GVM over 12 seats**

**MD3 - Light omnibus over 3.5 tonnes up to 4.5 tonnes GVM**

**MD4 - Light omnibus over 4.5 tonnes up to 5.0 tonnes GVM**

**ME - Heavy omnibus**

**2ND EDITION AUSTRALIAN DESIGN RULE REQUIREMENTS**

(FOR VEHICLES MANUFACTURED AFTER 1 JULY 1983 UP TO 30 JUNE 1988)

**Omnibus up to 3.5 tonnes GVM up to 12 seats 1/7/83 - 30/6/88**

<b>1<sup>st</sup> Row Seats</b>	<b>ADR 4C,5B (1/7/83)</b>	<b>ADR 4D,5B (1/1/87)</b>	<b>ADR 4D,5B (1/1/88)</b>
Driver	R	R	R
Outboard Passenger	R	R	R
Centre	L*	L*	L*

<b>2<sup>nd</sup> Row Seats</b>			
Outboard (1)	-	R	R
Centre	-	L*	L*

<b>3<sup>rd</sup> Row Seats</b>			
Outboard (2)	-	R	R
Centre	-	L*	L*

**Omnibus up to 3.5 tonnes GVM over 12 seats 1/7/83 - 30/6/88**

<b>1<sup>st</sup> Row Seats</b>	<b>ADR 4C,5B (1/7/83)</b>	<b>ADR 4D,5B (1983-1988)</b>	
Driver	R	R	
Outboard Passenger	R	R	
Centre	L*	L*	

<b>2<sup>nd</sup> Row Seats</b>			
Outboard (1)	-	-	
Centre	-	-	

<b>3<sup>rd</sup> Row Seats</b>			
Outboard (2)	-	-	
Centre	-	-	

**Omnibus up to 4.5 tonnes Gross Vehicle Mass 1/7/87 - 30/6/88**

**Omnibus over 4.5 tonnes Gross Vehicle Mass 1/7/87 - 30/6/88**

<b>1<sup>st</sup> Row Seats</b>	<b>ADR 32A (1/7/87)</b>		
Driver	L		
Outboard Passenger	L		
Centre	-		

<b>2<sup>nd</sup> Row Seats</b>			
Outboard (1)	-		
Centre	-		

<b>3<sup>rd</sup> Row Seats</b>			
Outboard (2)	-		
Centre	-		

**3RD EDITION AUSTRALIAN DESIGN RULE REQUIREMENTS (ADR 5/00)**

(FOR VEHICLES MANUFACTURED ON OR AFTER 1 JULY 1988 TO 30 JUNE 1990)

<b>1<sup>st</sup> Row Seats</b>	<b>MD1</b>	<b>MD2</b>	<b>MD3</b>	<b>MD4</b>	<b>ME</b>
Driver	R	R	L (1)	L (1)	L (1)
Outboard Passenger	R	R	-	-	-
Centre	L	L	-	-	-

<b>2<sup>nd</sup> Row Seats</b>					
Outboard (1)	R	-	-	-	-
Centre	L	-	-	-	-

<b>3<sup>rd</sup> Row Seats</b>					
Outboard (2)	R	-	-	-	-
Centre	L	-	-	-	-

**3RD EDITION AUSTRALIAN DESIGN RULE REQUIREMENTS (ADR 5/01)**

(FOR VEHICLES MANUFACTURED ON OR AFTER 1 JULY 1990 TO 30 JUNE 1992)

<b>1<sup>st</sup> Row Seats</b>	<b>MD1</b>	<b>MD2</b>	<b>MD3</b>	<b>MD4</b>	<b>ME</b>
Driver	R	R	L (1)	L (1)	L (1)
Outboard Passenger	R	R	-	-	-
Centre	L	L	-	-	-

<b>2<sup>nd</sup> Row Seats</b>					
Outboard (1)	R	-	-	-	-
Centre	L	-	-	-	-

<b>3<sup>rd</sup> Row Seats</b>					
Outboard (2)	R	-	-	-	-
Centre	L	-	-	-	-

### 3RD EDITION AUSTRALIAN DESIGN RULE REQUIREMENTS (ADR 5/02)

(FOR VEHICLES MANUFACTURED ON OR AFTER 1 JULY 1992 TO 30 JUNE 1996)

1 <sup>st</sup> Row Seats	MD1**	MD2	MD3(6)	MD4(6)	ME(6)
Driver	R	R	R	R	L/R
Outboard Passenger	R	R	R (5)	R (5)	L (4)
Centre	L	L	L (4)	L (4)	L (4)

2 <sup>nd</sup> Row Seats					
Outboard (1)	R	L/S (4)	L (4)	L (4)	L (4)
Centre	L	L (4)	L (4)	L (4)	L (4)

3 <sup>rd</sup> Row Seats					
Outboard (2)	R	L/S (4)	L (4)	L (4)	L (4)
Centre	L	L (4)	L (4)	L (4)	L (4)

### 3RD EDITION AUSTRALIAN DESIGN RULE REQUIREMENTS (ADR 5/03)

(FOR VEHICLES MANUFACTURED ON OR AFTER 1 JULY 1996 TO 31 DECEMBER 1999)

1 <sup>st</sup> Row Seats	MD1	MD2	MD3(6)	MD4(6)	ME(6)
Driver	R	R	R	R	L/R
Outboard Passenger	R	R	R (5)	R (5)	L (4)
Centre	L	L	L (4)	L (4)	L (4)

2 <sup>nd</sup> Row Seats					
Outboard (1)	R	L/S (4)	L (4)	L (4)	L (4)
Centre	L	L (4)	L (4)	L (4)	L (4)

3 <sup>rd</sup> Row Seats					
Outboard (2)	R	L/S (4)	L (4)	L (4)	L (4)
Centre	L	L (4)	L (4)	L (4)	L (4)

### 3RD EDITION AUSTRALIAN DESIGN RULE REQUIREMENTS (ADR 5/04)

(FOR VEHICLES MANUFACTURED ON OR AFTER 1 JANUARY 2000)

1 <sup>st</sup> Row Seats	MD1	MD2	MD3(6)	MD4(6)	ME(6)
Driver	R	R	R	R	L/R
Outboard Passenger	R	R	R (5)	R (5)	L (4)
Centre	L	L	L (4)	L (4)	L (4)

2 <sup>nd</sup> Row Seats					
Outboard (1)	R	R	L (4)	L (4)	L (4)
Centre	L	L	L (4)	L (4)	L (4)



<b>3<sup>rd</sup> Row Seats</b>					
Outboard (2)	R	R	L (4)	L (4)	L (4)
Centre	L	L	L (4)	L (4)	L (4)

#### REQUIREMENT CODES:

Where:

L	=	"Lap Anchorage"
L/S	=	Lap/Sash (Pelvic Restraint + Upper Torso Restraint)
L/R	=	At least "Lap Anchorage" with Retractor
R	=	Lap/Sash with Retractor
-	=	No requirement

#### NOTES:

- \* Lap belts only required if centre passenger seating position fitted.
- \*\* Introduced 1 July 1991 for MD1 vehicles (ADR 5/02)
- (1) If no "Permanent structure", then "Lap anchorages" are acceptable.
- (2) If "Seat" is adjustable for conversion of occupant space to luggage or goods space, then "Lap Anchorages" are acceptable.
- (3) Upper torso restraint "Anchorages" shall not be provided for side-facing "Seats".
- (4) Except for "Route Service Omnibus", anchorages are to be provided for non-Protected Seats.
- (5) If Protected seat, then "Lap anchorages" are acceptable.
- (6) For Omnibuses complying with ADR 68/00, this table only applies to the driver's seating position.

**SEAT BELT REQUIREMENTS FOR COMMERCIAL  
VEHICLE CATEGORIES (NA, NB AND NC)**

**NA - Light goods vehicle**

**NB1 - Medium goods vehicle 3.5 tonnes up to 4.5 tonnes GVM**

**NB2 - Medium goods vehicle 4.5 tonnes up to 12.0 tonnes GVM**

**NC - Heavy goods vehicle**

**2ND EDITION AUSTRALIAN DESIGN RULE REQUIREMENTS**

(FOR VEHICLES MANUFACTURED AFTER 1 JANUARY 1970)

**VEHICLES UP TO 4.5 TONNES GROSS VEHICLE MASS 1970 - 1988**

<b>1<sup>st</sup> Row Seats</b>	<b>ADR 4,5A (1/1/70)</b>	<b>ADR 4,5A (1/1/71)</b>	<b>ADR 4A,5A (1/7/74)</b>
Driver	L/S	L/S	L/S
Outboard Passenger	L	L/S	L/S
Centre	L*	L*	L*

<b>2<sup>nd</sup> Row Seats</b>			
Outboard (1)	-	L/S	L/S
Centre	-	L*	L*

<b>3<sup>rd</sup> Row Seats</b>			
Outboard (2)	-	-	-
Centre	-	-	-

<b>1<sup>st</sup> Row Seats</b>	<b>ADR 4B,5B (1/7/75)</b>	<b>ADR 4C,5B (1/7/76)</b>	
Driver	R	R	
Outboard Passenger	R	R	
Centre	L*	L*	

<b>2<sup>nd</sup> Row Seats</b>			
Outboard (1)	L/S	L/S	
Centre	L*	L*	

<b>3<sup>rd</sup> Row Seats</b>			
Outboard (2)	-	-	
Centre	-	-	

### 3RD EDITION AUSTRALIAN DESIGN RULE REQUIREMENTS

(FOR VEHICLES MANUFACTURED ON OR AFTER: 1 JULY 1988 TO 30 JUNE 1991 FOR NA AND NB1 CATEGORY; 1 JULY 1988 TO 30 JUNE 1992 FOR NB2 AND NC CATEGORY)

1 <sup>st</sup> Row Seats	NA	NB1	NB2	NC	
Driver	R	R	L1	L1	
Outboard Passenger	R	R	L1	L1	
Centre	L	L	-	-	

2 <sup>nd</sup> Row Seats					
Outboard (1)	L/S	L/S	-	-	
Centre	L	-	-	-	

3 <sup>rd</sup> Row Seats					
Outboard (2)	L/S	L/S	-	-	
Centre	L	L	-	-	

### 3RD EDITION AUSTRALIAN DESIGN RULE REQUIREMENTS

(FOR VEHICLES MANUFACTURED ON OR AFTER: 1 JULY 1988 TO 30 JUNE 1991 FOR NA AND NB1 CATEGORY; 1 JULY 1988 TO 30 JUNE 1992 FOR NB2 AND NC CATEGORY)

1 <sup>st</sup> Row Seats	NA	NB1	NB2	NC	
Driver	R	R	R	L/R	
Outboard Passenger	R	R	R	L/R	
Centre	L	L	L	L	

2 <sup>nd</sup> Row Seats					
Outboard (1)	L/S (R)+	L/S	L	L	
Centre	L	L	L	L	

3 <sup>rd</sup> Row Seats					
Outboard (2)	L/S	L/S	L	L	
Centre	L	L	L	L	

+ = manufactured after 1 July 1996 for NA category vehicles.

#### REQUIREMENT CODES:

Where:

L	=	"Lap Anchorage"
L1	=	At least "Lap Anchorage"
L/S	=	Lap/Sash = Pelvic Restraint + Upper Torso Restraint
L/R	=	At least "Lap Anchorage" with Retractor
R	=	Lap/Sash with Retractor
-	=	No requirement

**NOTES:** Lap belts only required if centre passenger seating position fitted.

- (1) If no "Permanent structure", then "Lap anchorages" are acceptable.
- (2) If "seat" is adjustable for conversion of occupant space to luggage or goods, then "lap anchorages" are acceptable.

## Information Sheet No. 3

### Mudguards and Mudflap Requirements

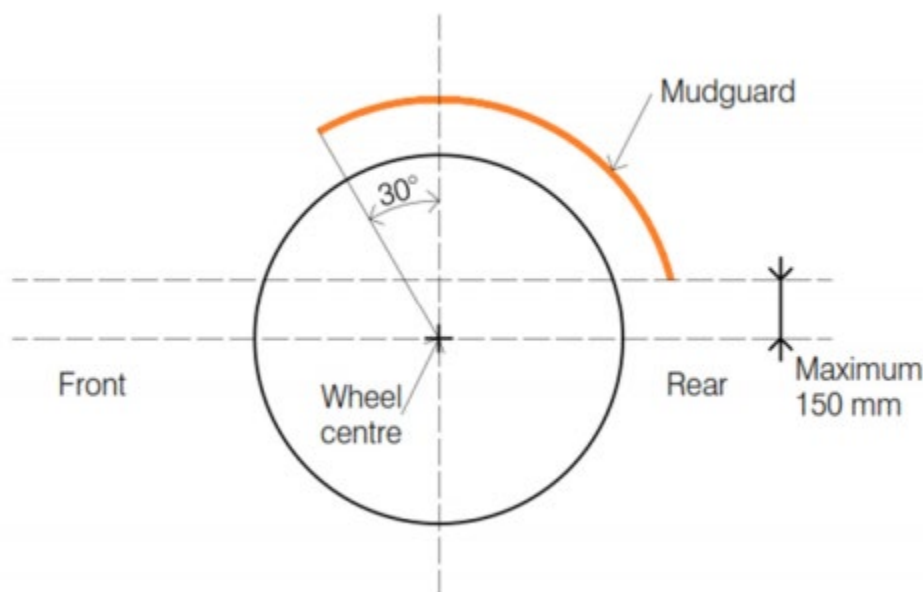
Effective mudguards must be fitted for all wheels on all vehicles. However, this does not apply to a vehicle if the construction or use of the vehicle makes the fitting of mudguards unnecessary or impractical. Examples are:

- Pole type trailers used to carry timber
- Most road making plant
- Some agricultural equipment

Mudguards may include parts of bodywork, etc. and, in the straight-ahead position, must cover the full width of the wheels and tyres.

Mudguards and mudflaps must be capable of deflecting downwards any mud, water, stones or any other substance thrown upward by the rotation of the wheels. Mudguards must be fitted to the vehicle in such a manner that, when the vehicle is unladen, the height of the lowest edge of the mudguard, when measured from the ground, does not exceed:

- 150mm above the centre line of the wheel, shown at point A, and
- cover the area of the wheel as shown below.



Mudflaps are not normally required on passenger car type vehicles. However, mudflaps must be in place on vehicles where they form part of the wheel guard system such as vehicles with a tray type body.

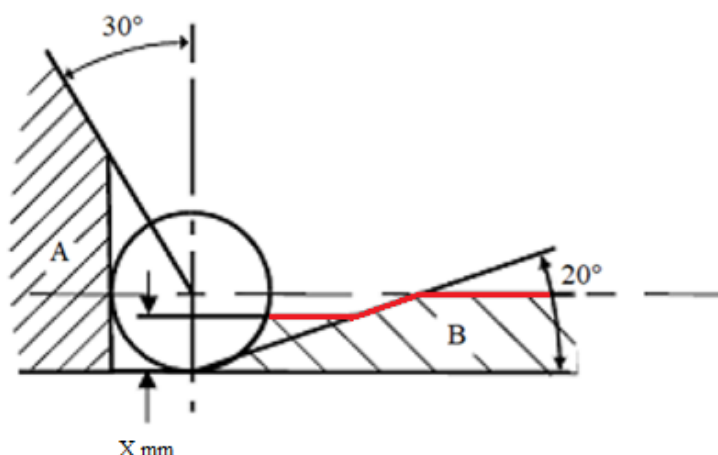
Where two or more axles are fitted, separate guards for each wheel or a single guard which provides the required protection over all the wheels may be fitted.

Mudflaps must be manufactured from a malleable material which is able to maintain its shape under duress.

In the case of trailers built with an ATM of 3.5t to 4.5t, the mudguard requirements are as follows:

- The mudguard of the rearmost wheels must cover the overall tyre width in the area between any point from the shaded area A to the shaded area B, and

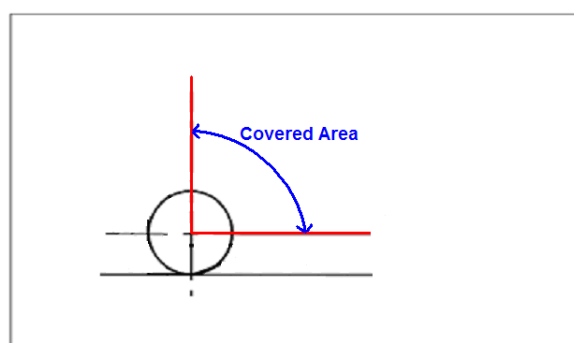
- The height of the lowest edge of the mudguard measured from the ground must not exceed the red line where X is:
  - 300mm for vehicles designed for off-road operation, and
  - 230mm for other vehicles.



### Special requirements for L-group vehicle (motorbikes, sidecars and motor trikes)

The wheels of a motorbike and motor trike and the wheel of a sidecar must be fitted with wheel guards of width not less than the section width of the tyre and must cover the tyre section width at all times. The wheel guards must be so designed as to protect other road users, as far as practicable, against thrown-up stones, mud, ice, snow and water and to reduce for those users the dangers due to contact with the moving wheels.

The front wheel guard must extend not less than from a point vertically above the centre of the wheel rearward to a point not higher than the centre of the wheel or to the point where suitable protection is afforded by the frame or other construction of the vehicle when a mass of 45 kg is distributed in the saddle of the vehicle at its unladen mass.



**L-Group Front Wheel**

The Federal Department of Infrastructure, Transport, Regional Development and Communications made changes to the rear mudguard standards for new motorcycles, removing the requirement that normally led to manufacturers fitting a 'mudguard extension'. The Department of Transport and Main Roads allows all motorcycles to meet the new standard.

For more information on motorcycle mudguard requirements, refer to the [TMR website for motorcycle standards](#).

## Information Sheet No. 4

### Headlight Testing Screens

1275							
1200							
1125							
1050							
975							
900							
825							
750							
675							
600							
525							
450							
375							
300							
225							
150							
75							

#### FRONT ELEVATION OF SCREEN

Level with the surface upon which the vehicle is standing during the test.

**NOTE:** Surface of screen to be "flat" white, glossy finish must not be used. Horizontal lines are to be black and 75 millimetres apart measured from centre to centre of lines. Vertical lines are to be 300 millimetres apart measured from centre to centre of lines and all lines are to be black except the centre vertical line which is to be red.

The thicknesses of all lines are to be as thin as possible while still providing good visibility for an observer at a distance of 9 metres from the screen during the test. The heights of the horizontal lines above the level of surface upon which vehicle is standing during test are to be clearly marked with black figures, as shown, and are to be of a size which provides good visibility for an observer at a distance of 9 metres from the screen during test.

## Information Sheet No. 5

### Missing Compliance Plates

For the purposes of registration, all motor vehicles originally manufactured to comply with the ADRs on or after 1 January 1972 and motorcycles constructed after 1 July 1975 up until 1 July 2021 would have been fitted with a compliance plate. Vehicles built prior to this date must comply with the "VSS Regulation". Vehicles manufactured for the Australian Market or used imported vehicles entering Australia from 1 July 2022 will not have a Compliance Plate. Additionally, during the transition period between 1 July 2021 to 30 June 2022 a vehicle supplied to the Australian Market may not have a Compliance plate. These vehicles will be recorded on the [Register of Approved Vehicles](#) (RAV). Any vehicle recorded on RAV is not required to have a compliance plate.

If inspecting a motor vehicle or motorcycle that is required to have a compliance plate (not including other individually imported vehicles) does not have a compliance plate fitted, the proprietor/nominee should:

- check if the Vehicle Identification Number (VIN) is recorded on the [RAV](#)

**OR**

- ask for proof that the vehicle was previously registered in Queensland, i.e. current registration certificate or copy of previous registration certificate;

**OR**

- if an interstate registration, proof that the vehicle was previously registered in another state or territory. (Note: if the vehicle has been modified, follow procedures outlined in the Modification Section of the Vehicle Inspection Guidelines);

**OR**

- advise the owner that it **may** be possible to obtain a letter of compliance from the vehicle manufacturer confirming the vehicle was manufactured for the Australian market and met all applicable ADRs at the time of manufacture.

Where the owner of the vehicle is unable to provide any documentation, he/she should be advised to obtain a modification plate and certificate of modification issued by an Approved Person. Where applicable, the Department of Transport and Main Roads will consider issuing a permit exempting the vehicle from the need to fit a compliance plate.

In most instances, vehicles (except motorcycles) built prior to 1 January 1972 will be fitted with a manufacturer's identification plate.

#### **Other Imported vehicles**

Vehicles imported into Australia between 1 August 1989 and 1 July 2021 are eligible for the issue of a Safety Certificate or Certificate of Inspection where:

- a personal import (yellow) compliance plate and a Department of Transport and Main Roads modification plate with Code LO3; or
- a low volume (green) compliance plate is fitted.

Personal imports and low volume vehicles imported from 1 July 2021 will be on the RAV.

#### **Vehicles imported prior to 1 August 1989**

Vehicles which were imported into Australia prior to 1 August 1989 will be eligible for a safety Certificate or Certificate of Inspection on the condition that the owner can provide:

- proof of previous registration in Queensland prior to 1 August 1989; or
- proof of previous registration in another state/territory prior to 1 August 1989; or
- a permit from Queensland Transport, exempting the vehicle from the need to fit a compliance plate as was required in the previous Queensland *Traffic Regulations* and superseded by the "*VSS Regulation*", is provided.

**NOTE:** Vehicles imported into Australia between 1 August 1989 and 1 July 2021 which are more than 15 years old are exempt from the provisions of the Federal *Motor Vehicles Standards Act* and do not require a Compliance Plate to satisfy Department of Transport and Main Roads registration requirements.

Vehicles imported from 1 July 2021 are required to have a RAV entry.

These vehicles, if built on or after 1 January 1972, must be fitted with either of the following:

- A modification plate endorsed with either LO1 or LO3; and
- In the case of LO3 endorsement, a permit issued by Department of Transport and Main Roads.

Imported vehicles built on or before 31 December 1971 must comply with the "*VSS Regulation*". An Approved Person may issue a modification plate confirming this under Code LO2.



## Information Sheet No. 6

### Bull Bars and Bull Bar Attachments

The purpose of this information sheet is to set the terms for the acceptability of bull bar design and bull bar accessories acceptable for use of the road network in Queensland.

When a poorly designed bull bar is fitted to a vehicle it has the ability to considerably increase the risk of injury to other road users, pedestrians and occupants of the vehicle in the event of a collision. Bull bars can also affect a vehicle's ability to comply with Australian Design Rules relating to frontal impact. As such, a great deal of research is currently being conducted into the possible effects of bull bars and ways of optimising their design.

Accident statistics, confirmed by scientific studies, have shown that a badly designed bull bar may greatly increase the risk of injury to a pedestrian hit by a car, even at relatively low speeds. Below Figure 1 and Figure 2 show the reason for this.

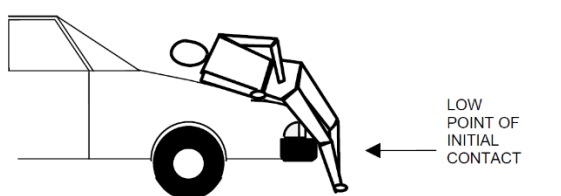


Figure 1.  
Pedestrian collision - pedestrian rolls onto bonnet

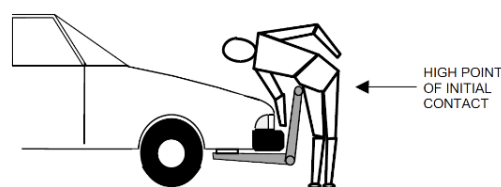


Figure 2. Pedestrian collision with a poorly designed bull bar  
Pedestrian pivots about the high contact point, with increased risk of spinal, pelvic and head injuries

**Figure 1** shows a pedestrian collision where the pedestrian rolls onto the bonnet of the car. Generally, this is the best scenario for the pedestrian and the risk of injury is minimised. The chances of this happening are better if the point of initial contact between car and pedestrian is as low to the ground as possible.

**Figure 2** shows what is likely to happen if the pedestrian is struck by a car with a badly designed bull bar fitted. Because the bull bar presents a higher point of initial contact, the pedestrian is pushed forward and bent around the top of the bull bar, rather than being swept onto the bonnet of the car. As a result, there is a much higher risk of spinal, pelvic and head injuries to the pedestrian, even at relatively low collision speeds.

#### Bull bar Design

Existing regulations prohibits dangerous projections, sharp corners and obstructions to lighting. As such, a bull bar needs to generally conform to the shape, in plain view, front view and side view, of the front of the vehicle to which it is fitted.

To provide guidance to industry, Standards Australia has published Australian Standard (AS) 4876.1-2002 'Motor vehicle frontal protection systems'. This document helps to ensure bull bars are designed in a way which minimises the risk of injury to vulnerable road users and the vehicle continues to meet the Australian Design Rules. As such, bull bars must comply with AS 4876.1-2002, sections 1, 2 and 3.1 and the Department of Transport and Main Roads strongly recommends compliance with section 3.2.

### **Fitment of bull bars to ADR 69/00 vehicles**

Australian Design Rule ADR 69/00 sets minimum levels of occupant protection, as determined by crash testing. Depending on the design and application, a bull bar may positively or negatively affect occupant safety in a crash situation.

ADR 69/00 affects the following vehicles:

- From 1 July 1995, all new model MA vehicles (passenger cars)
- From 1 January 1996, all MA vehicles (passenger cars)
- From 1 January 1998, all new model MB vehicles (forward control passenger vehicles)
- From 1 January 1998, all new model MC vehicles (off-road passenger vehicles)
- From 1 July 1998 for new model NA1 vehicles (light goods vehicles)
- From 1 January 2000 all MB vehicles (forward control passenger vehicles)
- From 1 January 2000 all MC vehicles (off-road passenger vehicles)
- From 1 July 2000 all NA1 vehicles (light goods vehicles).

On these vehicles, bull bar manufacturers will need to be in a position to show that the fitment of their product does not interfere with the intent of the occupant protection provisions specified in ADR 69/00. Various techniques are being researched, by the industry, for determining the effect of the bull bar on ADR 69/00 (e.g. pendulum tests and computer simulations).

Research to date indicates that the strength of the mounting points is one of the most significant parameters of the bull bar's potential to interfere with the vehicle's crashworthiness. The research has shown that carefully designed mounting points result in little or no effect on the vehicles ability to satisfy ADR 69/00.

Bull bar manufacturers should acquaint themselves with this information and ensure that their bull bar designs comply with these requirements. Manufacturers should utilise the services of a professional engineer to assist them in interpreting this data and applying it to their designs.

### **Fitment of bull bars to vehicles with airbags**

Airbags may be fitted by vehicle manufacturers in order to comply with ADR 69/00 or as an additional safety feature at the manufacturer's discretion. The triggering methods used to deploy the airbags vary greatly in complexity between manufacturers.

The fitting of a bull bar to the front of a vehicle may have an unknown effect on the deployment characteristics of an airbag. Research to date indicates that the strength of the mounting points is one of the most significant parameters of the bull bar's potential to interfere with the vehicle's airbag deployment. The research has shown that carefully designed mounting points can result in little or no effect on the vehicles ability to trigger the airbags.

Bull bar manufacturers should acquaint themselves with this information and ensure that their bull bar designs comply with these requirements.

Manufacturers should consider utilising the services of a professional engineer to assist them in interpreting this data and applying it to their designs. Bull bar manufacturers will need to be in a position to show that the fitment of their product does not adversely interfere with the triggering of the airbag system.

Exposed edges need to be chamfered and free of burrs or sharp edges.

Forward facing edges must have radii not less than 5mm.

Open ended frame members are not permitted.

## Labelling

Conforming bull bars shall have a durable plastic or metal plaque permanently attached by bonding, riveting, welding, drive screws, or a durable integral label, on a surface of the bar such that the label can be read when the bar is attached to a vehicle and located where it will not sustain environmental damage.

It shall display the following information in permanent and legible letters not less than 4 mm high:

- A description indicating the vehicle make and year model(s) for which the bar is suited
- The bull bar manufacturer's business name
- An identification code that permits the manufacturer (or importer) to identify a specific production batch
- The statement "this product and the associated fixings must not be modified".

## Vehicle lighting

The installation of a bull bar may result in the existing lighting such as headlights, parking lights, turning indicators being obscured and consequently prevent the vehicle from complying with the relevant ADR for Forward Facing Lamps. Where ADR lighting requirements are not satisfied, additional lamps shall be fitted so that the vehicle complies.

### Attachments and attachment points on bull bars

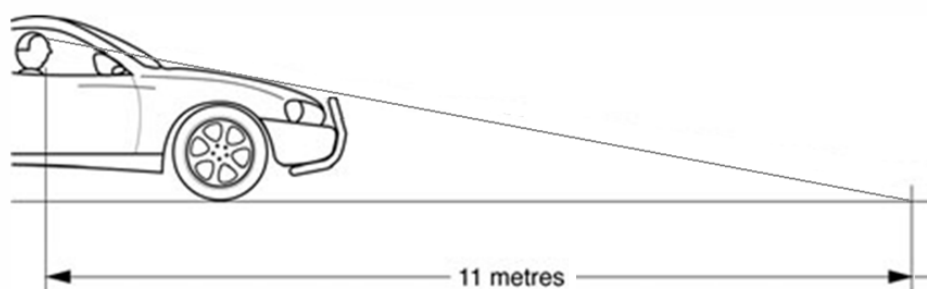
Of particular concern are the ways in which items protruding forward of the bumper or bull bar are fitted e.g. accessory fittings attached to the front of a vehicle such as brackets and attachment points supporting aerials, fishing rod holders and driving lights.

It is acceptable to have attachment points fixed to bull bars for these items provided they are fixed to the rear surface of the bull bar in a manner that prevents them from becoming dangerous projections. Similarly, fishing rod holders may only be fitted if they do not protrude forward of the front face of the bull bar, or in cases where they protrude forward of the front face must be removed when not carrying fishing rods.

### Field of vision

The bull bar, together with any attachments, must not reduce a driver's ability to safely drive the vehicle to which it is attached.

When sitting in the driver's seat, in the rearmost position, the driver must be able to see, either the surface of the road 11 metres in front of the vehicle, or the front edge of the vehicle, when looking across the top of the bull bar.



### **Front Axle Mass**

When selecting a bull bar, it is important to ascertain the vehicle's front axle mass rating and the mass of the bull bar to ensure the front axle mass is not exceeded. In some cases, the bull bar design, bull bar material, attachments (winch, driving lights, etc.), or even the ability to fit a bull bar could be affected.

#### **Please Note:**

Modifying a vehicle that adversely affects its safety or driving or parking an unsafe vehicle on a road, are breaches of *the "VSS Regulation"*.

## **Information Sheet No. 7**

### **Braided Brake Hoses**

**This information sheet has been rescinded.**

## Information Sheet No. 8

### Motor Vehicle Lighting

#### Introduction

Motor vehicle lighting plays an important part in vehicle and road safety. Lighting is particularly important in poor visibility circumstances (such as rain or fog) and at night.

Motor vehicle lighting impacts on road safety in two ways:

- it assists the driver's vision by lighting the road surface and surrounding objects;
- it allows other road users to see a vehicle on the road (taillights, head lights, park lights, stop lights and indicators).

This attachment is about those aspects of motor vehicle lighting that can be checked, and, in many instances, rectified.

#### What can be checked?

Motor vehicle lighting defects can occur at any time and unless regular safety checks are made, owners may not be aware of a problem.

Lighting can be easily checked when washing or cleaning a motor vehicle, particularly if assistance is available. These types of checks should be conducted regularly to ensure the vehicle's lights comply with the minimum safety standards at all times.

Lights that can be checked include:

#### HEADLIGHTS

- for effective high or low beam operation;
- for discolouration or imbalance in light when switched on;
- for peeling, tarnishing or deterioration of the reflecting surface;
- for cracks or other damage to lenses.

#### TURN SIGNAL INDICATORS

- for effective operation (including self-cancelling where it applies);
- for an audible/visible indicator to indicate the signals are operating effectively;
- for excessive discolouration, fading, cracks or other damage to the lenses.

#### BRAKE LIGHTS (including eye level brake lamps)

- for effective operation when the foot brake is applied;
- for appropriate difference in light intensity when compared with the taillights in the "on" position;
- for excessive discolouration or fading of the red lenses;
- for cracks or other damage to the lenses.

## **REVERSING LIGHTS**

- For effective lighting when reverse gear is engaged (ensure either the ignition "on" or the engine running);
- For switching off when reverse gear is disengaged;
- For discolouration, cracks or damage to the lenses.

## **NUMBER PLATE LIGHT(S)**

- For effective operation when headlights or tail/park lights are switched on.

A total failure of one or more lighting components (e.g. headlights or brake lights) may signify a blown fuse. Many motorists carry a spare fuse kit in their motor vehicle to avoid inconvenience in such circumstances.

## **Repair of Lighting Defects**

Most lighting defects can be corrected by replacing the damaged bulb, filament, fuse or lens. Care should be taken to ensure that any replacement is of equivalent luminance to that specified by the motor vehicle manufacturer. When a lens is to be replaced, the replacement lens must conform to the original vehicle manufacturer's colour specifications. If the defect occurs after repair, the circuit should be checked by an appropriately qualified tradesperson.

## **REMEMBER**

- Lighting defects may seriously impair a driver's ability to see clearly and the ability of other road users to see a motor vehicle with defective lighting.
- A motor vehicle owner is legally responsible for ensuring the vehicle complies with the minimum safety standard at all times.
- Drivers also are responsible for the condition of the motor vehicle they drive.

## Information Sheet No. 9

### Lighting Standards

This Information Sheet summarises the major changes to vehicle lighting standards resulting from the introduction of the *"VSS Regulation"* and changes to ADRs.

The *"VSS Regulation"* requires all vehicles to comply with the ADRs applicable to them and, for pre-ADR vehicles, with the standards listed in the Schedule. Pre-ADR vehicle lighting is therefore detailed in the Schedule while ADR lighting is not. Special lighting requirements such as flashing lights are also detailed in the Schedule. The following lists the major changes:

#### Alternative lights

The *"VSS Regulation"* stipulates that a vehicle may only be fitted with an alternative light or reflector if the light or reflector is required or permitted to be fitted to a vehicle under an Act.

Therefore, an alternative light cannot be fitted to a vehicle unless specifically mentioned in an Act. For example, under body lighting (neon lights) would not be acceptable as they are not mentioned in an Act. However, additional light such as side marker lamps, brake lights, driving lamps, etc. are mentioned in the *"VSS Regulation"* and ADRs and consequently would be considered acceptable if fitted to a vehicle.

**NOTE:** The use of blue lights is reserved for police and ambulance vehicles only.

#### Side marker lamps

The ADRs have been changed to align with European standards and allow side marker lights to show yellow to the rear. Some new vehicles already have these lights fitted. The *"VSS Regulation"* allows either red or yellow side marker lights to the rear on any age vehicle.

#### Optional forward-facing lights and reflectors

The *"VSS Regulation"* requirements for external cabin lights are as follows:

- A motor vehicle fitted with front end outline marker lights (**previously referred to as front clearance lights**) may also have additional forward-facing lights on or above the roof of its cabin.
- The additional forward-facing lights must be spaced evenly between the front end-outline marker lights, with their centres at least 120mm apart.
- When on, an additional forward-facing light must show a yellow or white light and not use over 7 watts of power.

**NOTE:** Front end-outline marker lights may only be fitted to a vehicle that is at least 1.8 metres wide. A pair of front end-outline marker lights must be fitted to a motor vehicle that is more than 2.1 metres wide, however, end-outline marker lights are not required when the vehicle's structure prevents them from being at least 200mm above the front position (side) lights.

#### Headlights

Some headlights may appear to have a blue or yellow tinge when viewed on an angle from the perpendicular. These bulbs are actually "whiter" than the existing bulbs as they contain less of the red/yellow frequencies and more of the blue end of the spectrum.



Additionally, some vehicles are now being fitted with High Intensity Gas-Discharge (HID) or Light Emitting Diode (LED) headlight assemblies. When fitted to comply with the ADRs these lights provide superior illumination compared with traditional halogen bulbs. However, HID and LED headlights are not easily retrofitted to vehicles not originally offered with the technology and generally fail to comply with the ADRs in the following areas:

- No headlight self-levelling device fitted
- No self-cleaning function fitted
- Design of headlamps reflector not compatible with bulb (light not focused correctly)

**NOTE:** Additional main (high) beam headlights under the ADRs and *the "VSS Regulation"* may be fitted at any height above the ground. Motorcycles, including motor tricycles, with twin headlights side by side may have one light as low beam and the other as high beam. That is, the high and low beam do not need to be symmetrical about the longitudinal centre line of the motorcycle, including motor tricycle(s).

### **Driving Lamps**

Information relating to driving lamps can be found in [Vehicle Standards Instruction – Driving lamps, including Light Emitting Diode \(LED\) light bars on light vehicles](https://www.publications.qld.gov.au/dataset/vehicle-standards-instructions) available at:  
<https://www.publications.qld.gov.au/dataset/vehicle-standards-instructions>

### **Approved Examiners Action**

If, during the course of an inspection, Approved examiners have cause to inspect vehicles modified by changing the original lighting componentry assemblies, they are to ensure that individual vehicles comply with the previously mentioned details. Modifications of this type which do not comply with the above requirements are to be rejected immediately.

## Information Sheet No. 10

### Replacing or Repairing Windscreens

#### Introduction

Windscreen damage or defects may impair a driver's forward vision, create a potential safety hazard and affect road safety. However, windscreens will be subject to some damage such as sandblasting, cracks, and stone chips during normal operation, therefore some deterioration from new condition is allowable.

A windscreen should be clean and free of damage that might impair the driver's view to the front of the vehicle.

Things which might impair a driver's vision are:

- The location of the damage;
- The size of the damage;
- Effect on the mechanical strength of the windscreen.

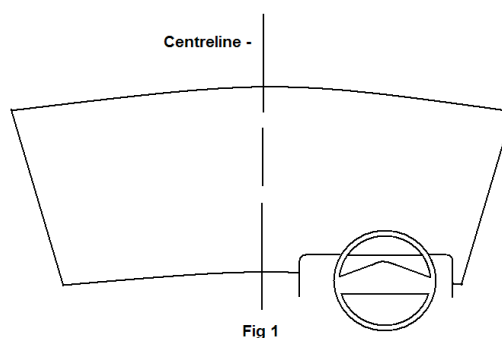
#### Is a damaged windscreen safe?

When a damaged windscreen is examined the following factors should be considered:

- The location of the damage;
- The size of the damage;
- Effect on the mechanical strength of the windscreen.

To determine if a windscreen should be replaced or repaired, the area of windscreen swept by the wipers to the right of the centre of the vehicle may have bull's-eyes and star fractures up to 16 mm in diameter and cracks up to 150 mm long which do not penetrate more than one (1) layer of the glass in a laminated windscreen, provided they do not interfere with the driver's vision.

In addition, the "*primary vision area*" (the area of the windscreen which is swept by the windscreen wipers) must not be cracked, scored, chipped, sandblasted or otherwise damaged to the extent that it impairs the driver's vision or damages the wiper blades.



It is recommended that all defects be repaired as soon as possible.

## Repairing windscreen damage

Repairing a damaged windscreen, if undertaken correctly, is an acceptable means of reinstating a windscreen to a safe condition.

Repaired windscreens must comply with the following requirements:

- When inspected from the inside of the vehicle, the repair should not exhibit any significant optical defects which would distort or distract the vision of the driver and should restore clarity to the damaged area. (Acceptable limits of repairs are outlined in Note 1);
- Any repair to the windscreen should not reduce the effectiveness of the windscreen wipers;
- Windscreen repair material must be used in accordance with the manufacturer's instructions.

If a repair has been unsuccessful or is unlikely to be effective, the vehicle owner is responsible for replacing the windscreen in order to meet the necessary safety requirements.

**NOTE 1:** In a repaired windscreen, a faint outline of the repair, or in some cases, a slight dull spot may be visible where the repair has been performed. A repaired crack may also be detectable by a fine hairline surface mark. These are acceptable and should not cause a vehicle to fail a safety inspection provided the damaged windscreen has been repaired to a standard which complies with the requirements outlined in this document. To date, the extent of windscreen damage considered to be repairable has not been defined. Improved technology has increased the scope of repairable damage and acceptability can only be determined (in accord with the above standards) after the repair has been completed.

It is recommended that repairs of cracks longer than 350 mm be avoided.

**NOTE 2:** The Australian Standard AS/NZ 2366.1-1999 'Windscreen repairs – Repair procedures' and AS/NZ 2366.1-1990 'Windscreen repairs – Repair systems' are voluntary standards for the repair of automotive windscreens. They provide recommended practices regarding the repair of laminated windscreens. The use of these Australian Standards is not mandatory.

## Replacement windscreens

To ensure the safety of all motor vehicle occupants, replacement windscreens must be of an approved safety glass.



OR



The glass must always bear an identification mark indicating the standard to which the glass has been manufactured (e.g. AS 2080, BS AU178, J ISR 3211, ECE R-43/00, ANSI-Z26.1) and have a standards mark etched or indelibly printed on the glass.

Windscreens which do not comply with these recognised standards may shatter easily and unexpectedly, creating areas of distorted vision.

### **Windscreens that do not have a standards mark are illegal**

Windscreens fitted to motor vehicles manufactured on or after 1 July 1971, are required by law to be made from glass which has a light transmittance of no less 75 percent. Aftermarket tint film may be applied to the upper portion of the windscreen. The tinting must not extend lower than a horizontal line contacting the uppermost point of the arcs swept by the vehicle manufacturer's original wiper blades. The tinting may be of any shade but must not have a reflectance of more than 10 percent.

### **Types of windscreens available**

There are two types of replacement windscreens available for motor vehicles, laminated or tempered.

Laminated glass windscreens are manufactured like a "sandwich" with glass on the outside and inside surfaces and a clear plastic film between. A laminated screen is more resistant to breakage than tempered glass and even when fractured it remains almost transparent.

Tempered glass is specially treated so that, when broken, it shatters into tiny fragments instead of jagged splinters. Unfortunately, when the windscreen shatters, it is difficult to see through.

Vehicles manufactured on or after 1 January 1994 must be fitted with laminated glass windscreens. Whilst vehicles built before 1 January 1994 do not have to meet this requirement, it is strongly recommended that when a replacement windscreen is needed, laminated glass be used.

### **Remember:**

- Windscreen damage or defects could seriously impair a driver's ability to see clearly, thereby presenting a safety hazard.
- The owner of a motor vehicle is legally responsible for ensuring that his/her vehicle complies with relevant safety standards.
- Drivers are responsible for the condition of the motor vehicle they drive.

## Information Sheet No. 11

### Rust and Corrosion

#### Introduction

This attachment provides simple guidelines for determining if a rust affected motor vehicle is road safe. The average safe operational life of a motor vehicle can be extended by carefully and regularly checking for rust and by repairing rust as soon as possible as it becomes apparent.

To determine the safety of a rust affected motor vehicle, this attachment proposes a system of classifying the extent and severity of the rust in relation to the motor vehicle's structural components. The attachment also provides some information concerning recommended rust repair techniques.

Even small deposits of rust can be signs of much more extensive corrosion in a motor vehicle. If rust is repaired when it is minor, it will normally be a simple and economic task. However, rust allowed to spread unchecked (or only partially repaired) can damage a motor vehicle beyond economic repair. Severe rust can be an extreme safety hazard to driver, passenger and other road users.

#### Rust and Motor Vehicle Safety

Motor vehicles are carefully designed as rigid structures for normal road use. However, in an accident they are intended to collapse progressively and absorb energy. If the structure of the motor vehicle is weakened by rust, it could lose some of its structural strength and so become unpleasant to drive. More importantly, however, it can lose its energy absorbing capacity, and this means that passengers are at greater risk in a collision or accident.

Typically, rust develops in enclosed body sections or in areas which can accumulate road deposits, e.g. between body panels, inside door panels, around mudguards or inside the sills just below door level. However, rust can occur on any metallic component of the motor vehicle (including suspension and steering components and the exhaust system).

#### Classification of Rust

The extent of corrosion in a motor vehicle can range from light surface rust to the total breakdown of parent metal of a motor vehicle component. The degree to which a component structure is attacked and degraded can vary widely. In general, the formation of rust and resultant loss of metal occurs in areas which retain moisture, because of a build-up of road dirt and mud etc.

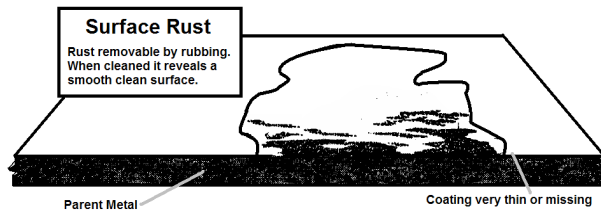
To simplify identification and classification of rust, this attachment classifies the extent of corrosion in three stages.

#### Stage 1 – Surface Rust

Light, powdery corrosion on the surface of a section of metal is termed surface rust and is sometimes the first indication of corrosion that can be observed; it should warn the owner of a motor vehicle to take steps to prevent the rust from spreading.

Surface rust can occur on or behind any body panel of a motor vehicle particularly if the protective coating is scratched or damaged.

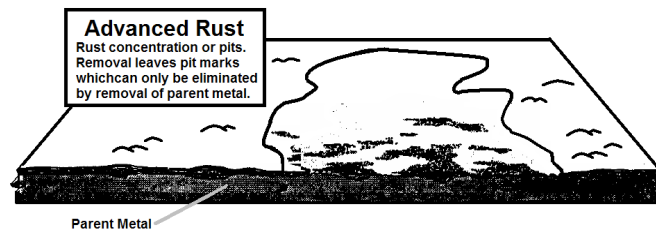
A typical case of surface rust is shown below:



## Stage 2 – Advanced Rust

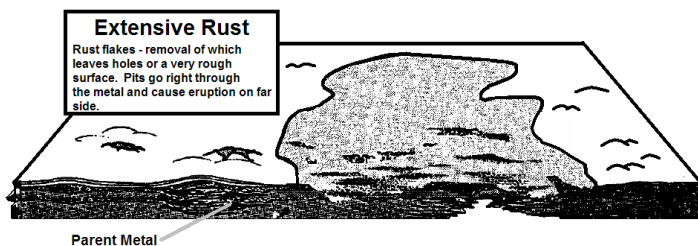
Surface rust, if left unattended, will develop into an advanced form of corrosion which can usually be seen as an eruption of oxidised metal, either on bare metal or under paint. This eruption occurs because the rust reaction involves an increase in volume so that pitting or bubbling of paint is the usual indication of penetration of the rust.

An example of a section affected by advanced rust is illustrated below.



## Stage 3 – Extensive Rust

The final stage of the corrosion process is the formation of a heavy encrustation of oxidised metal which completely replaces the parent metal. This results in a hole or series of holes in the body panel or structural member of the motor vehicle when the rust is removed. This category of rust can usually only be rectified by replacement of the affected body panels and parts. The illustration below shows a section affected by extensive rust.



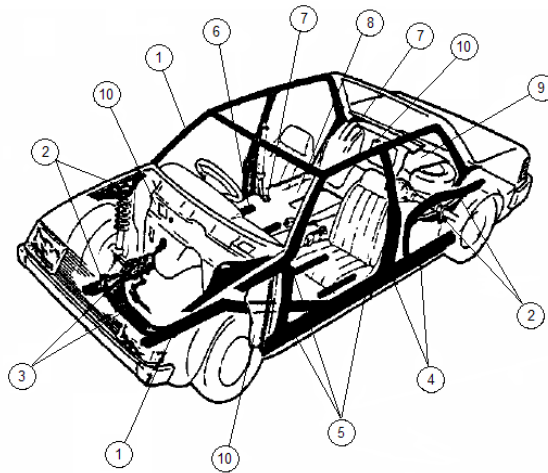
## Motor Vehicle Structures and the Effects of Rust

Motor vehicle structural components can be categorised according to their importance to safety. For instance, sub frames and other basic structural sections must be absolutely free of rust because their failure could make a motor vehicle difficult to control and might cause it to crash.

### Primary Structure

The primary structure includes any structure or component which, if it collapsed, would render the vehicle uncontrollable or would considerably reduce occupant safety in a crash/collision situation. Examples of components in this category are illustrated below.

## Typical Primary Structure Components



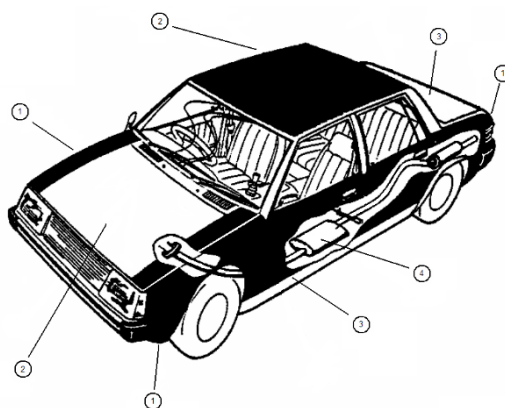
The weakening of any of these components may lead to a crash or greatly reduce the vehicle's structural integrity in a crash.

1. Main structural members such as sub frames and chassis rails.
2. Suspension mountings and parts.
3. Steering component mounting points.
4. Door sills and pillars.
5. Door hinges and latch mounting points.
6. Seat anchorage points.
7. Seat belt anchorage points.
8. All floor panels.
9. Boot floor.
10. Bulkheads.

## Secondary Structure

The second category includes any structure or component which, if it collapsed, would not immediately affect a motor vehicle's controllability or the protection provided by its built-in safety system. Normally, surface rust or advanced rust in these structures or components would not make the motor vehicle unsafe. Extensive rust in these components is usually either hazardous to people in or near the motor vehicle because of its sharp edges or because exhaust fumes may escape into the motor vehicle. In such cases, this type of rust would make the motor vehicle unsafe.

The illustration below shows examples covered by this category.



### Typical Secondary Components

Extensive rust in these components can be hazardous to vehicle occupants and other road users.

1. Mudguards or fenders.
2. Roof.
3. Boot lid, bonnet and doors (areas within 100 mm of mounting and locking points are primary structures and must be free of advanced or extensive rust).
4. Exhaust system (motor vehicle may fail to meet noise emission standards if exhaust system is deteriorated due to rust).

### How to determine if a vehicle is safe

TYPE OF CORROSION (RUST)	CATEGORY OF MOTOR VEHICLE STRUCTURE	
	PRIMARY	SECONDARY
Surface Rust	Acceptable	Acceptable
Advanced Rust	Not Acceptable	Acceptable*
Extensive Rust	Not Acceptable	Not Acceptable**

\* Areas within 100 mm of hinges and locks (e.g. boot lid, bonnet and doors), are considered primary structures and must be free of advanced and extensive rust.

\*\* Extensive rust is not acceptable in secondary components, if it renders the component hazardous to persons in or near the vehicle (e.g. sharp edges, loose panels, or in the case of exhaust fumes, leakage of exhaust gases into the passenger compartment).

### Detecting Rust in Motor Vehicles

Since advanced rust is almost always associated with an eruption of oxidized metal and pitting or bubbling of paint, a visual inspection is usually adequate to determine its presence. However, this method may not be adequate in all cases. In underbody areas prone to rust, such as steering and suspension mounting points and major structural components which include chassis, floor, structural sills and sub frames, the presence of rust should be checked by probing with a rod or similar implement (e.g. screwdriver). This method also should be used to check for presence of rust in other areas where cosmetic damage is not a problem, such as inside wheel arches.



In using this technique, care should be taken to avoid damage to panels or paint work not rust affected in any way. The purpose of such checks is to find out whether rust is present, not to determine its extent.

When checking for advanced rust, particular attention should be paid to seam welds and spot welds. These frequently corrode through from the interior and can result in the eventual detachment of panels. Any panel which is made insecure by such corrosion must be repaired even if it is an area of the component where rust holes are not an immediate danger.

### **Recommended Rust Repair Methods**

The best way to fight rust is to stop it in the first place. Motor vehicles that are kept free of dirt build up in wheel arches and under the body have a much better chance of surviving the rust scourge. Thus, if a motor vehicle is found to have body drain holes or tooling holes blocked up with dirt, they should be cleaned out immediately and rechecked from time to time.

Repair of surface rust is simply a matter of completely removing the deposit and applying a rustproofing coating or oil as is appropriate (body panels should be repainted using a good quality refinishing system).

**NOTE:** Repairs made to primary structure components solely by using body filling compounds are **not acceptable**. Repairs should be made by completely welding in new metal of the same gauge as that of the manufactured component. However, plastic filler or fibreglass can be used to cosmetically smooth a non-structural component.

Extensive rust in structural members can only be repaired by replacing the affected member or by completely removing all rusted material and reinforcing it so that the original strength of the affected structural member is re-established.

### **REMEMBER**

- Rust can seriously affect the safety of a motor vehicle by degrading the structural integrity of the motor vehicle.
- A motor vehicle owner is legally responsible for ensuring a motor vehicle complies with minimum safety standards at all times.
- Drivers also are responsible for the condition of the motor vehicles they drive.

## Information Sheet No. 12(a)

### Safety Chains for Trailers up to and Including 4.5 Tonnes ATM

Trailers up to 2.5 tonnes ATM must have at least one safety chain complying with AS 4177.4-1994 'Caravan and light trailer towing components – Safety chains up to 3500 kg capacity', or as amended from time to time. This standard allows for steel safety chains in accordance with the following:

- up to 1.0 tonne, a chain size of 6.3 mm;
- up to 1.6 tonnes, a chain size of 8 mm;
- up to 2.5 tonnes, a chain size of 10 mm.

Trailers over 2.5 and up to 3.5 tonnes ATM must have two safety chains complying with AS 4177.4-1994 or as amended from time to time. This standard allows for steel safety chains in accordance with the following:

- up to 3.5 tonnes, a chain size of 13 mm.

The fitting of safety chains to trailers with a Gross Trailer Mass (GTM) greater than 2.0 tonnes is optional if the trailer is fitted with a brake system which automatically applies if the trailer becomes detached from the towing vehicle.

However, trailers with a 3.5 tonnes ATM or greater, all medium and heavy category pig trailers with rigid drawbars, any other trailers without breakaway brakes and all fixed and rigid pig trailers with a GTM greater than 2.5 tonnes and fitted with automatic pin type couplings, must be fitted with safety chains in accordance with the information contained in Information Sheet 12(b) – Safety Chain Requirements.

#### **Draw Bar Safety Chain Attachments**

The chain must be permanently attached to the trailer, shackles are not permitted. For trailers up to 3.5 tonnes ATM, the safety chain attachment can be by welding. The weld must extend around 50% of the circumference of the link and the adjoining link must have free movement.

For trailers of and in excess of 3.5 tonnes ATM, safety chain attachment must not involve welding or deformation of the chain. Suitable pin lock couplings should be used.

The safety chain attachment must be located as near as practicable to the coupling and where 2 points of attachment are required, they must be mounted one on either side of the centreline of the draw bar.

## Information Sheet No. 12(b)

### Safety Chain Requirements

All pig trailers with rigid drawbars (with or without breakaway brakes but excluding converter dollies) and, any other trailer without breakaway brakes, must be fitted with safety chains that are marked in accordance with the relevant Australian Standard complying with the following:

- trailers that do not exceed 2.5 tonnes ATM must have at least one safety chain complying with Australian Standard AS 4177.4-1994 or Australian Standard AS 4177.4-2004 'Caravan and light trailer towing components - Safety chains up to 3500kg capacity', or be a safety cable with a certified load capacity of the same
- trailers over 2.5 tonnes and not exceeding 3.5 tonnes ATM must have two safety chains of designation of 3500 kg complying with Australian Standard AS 4177.4-1994 or Australian Standard AS 4177.4-2004
- trailers over 3.5 tonnes ATM must have two safety chains made from steel of a minimum 800 MPa breaking stress that conforms to the mechanical properties of Grade T chain as specified in Australian Standard AS 2321-1979 'Short Link Chain for Lifting Purposes (non-calibrated)' or Australian Standard AS 2321-2006 'Short Link Chain for Lifting Purposes.' Each chain must be sized such that the minimum breaking load exceeds the ATM.

The length of the safety chain/s must prevent the trailer's drawbar hitting the ground if the trailer is detached from the towing vehicle. The safety chains must be properly connected to the tow bar with attachments capable of withstanding the specified breaking load of each chain. Do not use padlocks.

For further information regarding couplings, brake requirements and safety chains please refer to the Vehicle Standard Bulletin - Building Small Trailers (VSB1) available on the Department of Infrastructure and Regional Development and Cities website at <https://www.infrastructure.gov.au/infrastructure-transport-vehicles/vehicles/vehicle-design-regulation/rvs/bulletins/vsb1>

## Information Sheet No. 13

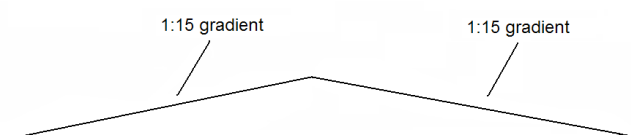
### Ground Clearance Requirements

**Ground Clearance or Running clearance**, of a vehicle, means the distance from the surface on which an unladen vehicle is standing to the lowest point on the vehicle excluding unsprung mass.

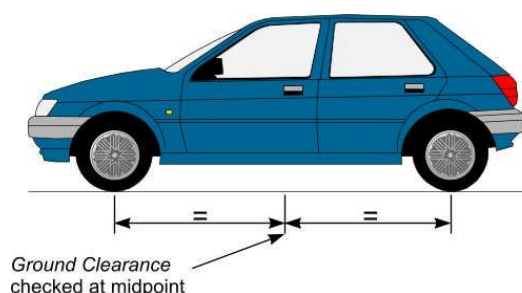
Vehicles built to comply with the Third Edition ADRs must comply with the ground clearance requirements of ADR 43/... Vehicles built to comply with ADR 43/04 must also comply with the *running clearance* requirements.

All other motor vehicles with more than 3 wheels must have a ground clearance of:

- At least 100mm at any point within 1 metre of an axle; and
- At least one-thirtieth of the distance between the centres of adjacent axles at the midpoint between them (refer Figure LS1); and
- At any other point — at least the distance that allows the vehicle to pass over a peak in the road with a gradient on either side of 1:15, if the wheels of 1 axle of the vehicle are on the slope on one side of the peak and the wheels of the next axle are on the slope on the other side.



**Gradient 1:15**



**Measuring Ground Clearance**

## Information Sheet No. 14

### Approved Inspection Station Safety Check ADR applicability Tables, Vehicles Categories and Definitions

The Australian Design Rules (ADRs) are available from the Department of Infrastructure, Regional Development and Cities website at <https://www.infrastructure.gov.au/infrastructure-transport-vehicles/vehicles/vehicle-design-regulation/australian-design-rules>.

- [Second edition ADRs](#)
- [Third edition ADRs](#)

The following summaries are guides to the applicability of the ADRs in force for the vehicle categories used in the ADRs.

- L—Category Vehicles—Two and Three Wheeled Vehicles [PDF: 177 KB](#)
- M—Category Vehicles—Passenger Vehicles [PDF: 202 KB](#)
- N—Category Vehicles—Goods Vehicles [PDF: 210 KB](#)
- T—Category Vehicles—Trailer [PDF: 149 KB](#)

#### ***ADR—Definitions and Vehicle Categories***

The function of the Australian Design Rules is to set out definitions for many terms used in the ADRs and to define the categories used in the ADR applicability tables.

[Definitions and Vehicle Categories](#)

## Information Sheet No. 15

### General Information for Tyres, Tubes and Liners

The purpose of this information sheet is to provide some simple information when fitting new or re-treaded tyres, tubes and liners and repairing tyres and tubes.

When fitting a tyre to a rim it is important to ensure that the rim, tube and liner (if fitted) and tyre are in good condition. If any defect or damage is found with the rim, tube and liner (if fitted) or tyre the defective/damaged component must be replaced. Items to consider include but are not limited to the following:

- Rust or corrosion on rims (including locking rings on split rims)
- Cracks in tyres, tubes, liners or rims
- Condition/suitability of repairs performed
- Age of tyres, tubes and liners \*
- Cut/bulging/ separating/damaged tyres (including sidewalls)
- Tyre compatibility with rim

\* A number of manufacturers recommend tyres, tubes and liners are replaced five to six years after their manufacture date due to degradation of the rubber. However, this degradation is affected by a number of variables (exposure to ultraviolet light, heat and water, sitting for long periods, etc.) and as such there is no mandatory requirement to replace tyre/tubes or linings at this time. The Department of Transport and Main Roads does however recommend tyres, tubes and liners be checked regularly for degradation by an industry expert five years after their date of manufacture.

The date of manufacture can be determined by a code stamped onto the tyre or tube. It is recommended that you contact your local tyre retailer to determine the age of your vehicle's tyres and tubes (if fitted).

If a tyre or tube requires repair the repairs should be performed in accordance with Australian Standard AS 1973-1993 'Pneumatic tyres – Passenger car, light truck, and truck/bus - Retreading and repair processes'. This standard provides detailed information to ensure the tyre and/or tube is repaired to a safe standard for road use.

*The "VSS Regulation" permits the use of re-treaded tyres provided they meet AS 1973-1993. The information below details the requirements listed in AS 1973-1993.*

#### Marking of Re-treaded Tyres

**Marking on one side:** Each re-treaded tyre shall bear on at least one side wall or shoulder the following marking:

- A. The nominal size of the tyre.
- B. The word 'RADIAL' or 'R' in the size designation, for a radial ply tyre.
- C. The word 'TUBELESS' if applicable.
- D. The maximum load rating, ply rating, or service description of the tyre.

**NOTE:** In the case of a remould, the service description is to be clearly identified as the original service description applicable to the tyre when new.

## Information Sheet No. 16

### Brake Drums and Discs

The purpose of this information sheet is to set the terms for the acceptability of brake drums and disc dimensions and the criteria for the replacement of worn or damaged brake drums or discs used in the automotive industry.

This procedure is in accordance with Australian Standard AS 3617 'Parameters for the machining and reconditioning of brake drums and discs'. When the braking system of a motor vehicle is inspected, serviced, overhauled, repaired, reconditioned or rebuilt, the condition of each brake drum or brake disc fitted to the vehicle shall be inspected in accordance with the following standards:

#### Brake drums

After removal of the brake drum from the vehicle, the brake drum should be inspected for:

- **Cracking:** If the drum is cracked, replace the brake drum. No repair shall be made to the component.
- **Glazing and excessive scoring:** If the brake drum is glazed or excessively scored, place it on a suitable fixture and measure it in accordance with the section titled 'Measurement Parameters'.
- **Heated or hardened hotspots:** If the brake drum has heated or hardened hotspots, place it on a suitable fixture and measure it in accordance with the section titled 'Measurement Parameters'.

After inspection and assessment, the following should be taken into account:

- I) if the drum is cracked, replace the brake drum. No repair shall be made to the component.
- II) If it is considered that there is insufficient material available to successfully machine the brake drum in accordance with the vehicle manufacturer's requirements, replace the brake drum.
- III) Where a vehicle manufacturer specifies that a brake drum must not be machined, replace the brake drum.
- IV) If, after machining, the brake drum measures on or above the maximum diameter specified by the vehicle manufacturer, replace the brake drum.
- V) Where after machining the brake drum, and remeasuring in accordance with the section titled 'Measurement Parameters', any of the parameters are outside the vehicle manufacturer's recommendations, replace the brake drum.
- VI) After machining, inspect the drum for any flaws or defects, including excessive scoring or undercutting. If any flaws are present, replace the brake drum.
- VII) If after machining the brake drum, heated or hardened hotspots are still present, replace the brake drum.

#### Brake discs

- I) if any cracking is evident, replace the brake disc. No repair shall be made to the component.
- II) If it is considered that there is insufficient material available to successfully machine the brake disc in accordance with the vehicle manufacturer's requirements, replace the brake disc.
- III) Where the manufacturer specifies that a disc rotor must not be machined, replace the brake disc.

- IV) If, after machining, the brake disc measures on or below the minimum thickness specified by the vehicle manufacturer, replace the brake disc.
- V) Where after machining the brake disc, and remeasuring in accordance with the section titled 'Measurement Parameters', any of the parameters are outside the vehicle manufacturer's recommendations, replace the brake disc.
- VI) After machining, inspect for any flaws or defects, including excessive scoring or undercutting. If any flaws are present, replace the brake disc.
- VII) After machining the brake disc, heated or hardened hotspots are still present, replace the brake disc.

### Measurement Parameters

The following dimensions shall be measured and recorded to ascertain the suitability for reuse or machining:

- a. For brake drums, the following shall be observed:
  - i) *Diameter* - The diameter of the brake drum shall be measured in at least 6 equispaced positions along and across the lining contact area (i.e. ovality and taper). The largest measured diameter shall be deemed to be the diameter.
  - ii) *Radial runout* - When rotating the drum on a suitable fixture, a dial gauge shall be used to record the runout of the drum.
- b. For brake discs, the following shall be observed:
  - i) *Thickness* - Using suitable measuring equipment, the disc thickness shall be measured in at least 6 equispaced positions around and across the pad contact area. The smallest dimension measured shall be deemed to be the thickness of the disc.
  - ii) *Lateral runout* - A dial gauge should be used to measure the brake disc lateral runout.

### Definitions

**Brake drum:** A hollow, machined, round drum that rotates with the wheel axle/hub and against which brake linings are forced into contact when the brakes are applied.

**Brake disc:** A flat, machined, round disc that rotates with the wheel axle/hub and against which the brake pads clamp when the brakes are applied.

**Lateral (axial) runout:** A measurement of the lateral or sideways change in the position of the disc rotor wearing surface during one revolution.

**Radial runout:** A measurement of the radial change in the position of the brake drum wearing surface during one revolution excluding any bearing movement or other clearances.

**Machining:** The process of turning or grinding a brake drum or disc to remove surface imperfections such as scoring and glazing, and to eliminate lateral disc runout and other dimensional problems.

**Maximum diameter:** The largest diameter specified by the vehicle manufacturer at which a brake drum can remain in service.

**Minimum thickness:** The smallest thickness specified by the vehicle manufacturer at which a brake disc can remain in service.

**Shall:** Indicates that a statement is mandatory.

**Should:** Indicates that a statement is advisory.



**NOTE:** Linings or disc pads must **not** be worn below wear indicators. If no indicators are provided, the thinnest part of the lining or disc pad must *not* be worn below manufacturer's specifications.

Brake drums or disc rotors must **not** be worn or machined below manufacturer's specifications.

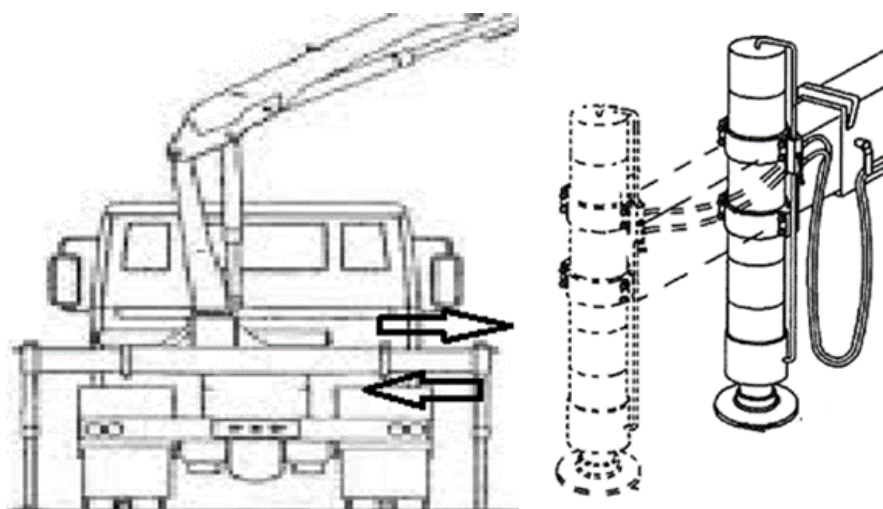
Cracking of brake drums and disc rotors, other than minor surface heat cracks, must result in the drum or rotor being replaced.

## Information Sheet No. 17

### Stabilisers and Outriggers

The purpose of this information sheet is to provide the requirements for stabilisers/outriggers mounted on light vehicles and trailers, such as vehicle loading cranes.

The objective is to ensure all stabilisers/outriggers are retracted and securely locked to prevent travel while the vehicle is in motion.



#### Fail reasons

For manually operated stabilisers/outriggers:

- The stabiliser/outrigger's locking device/s are damaged, excessively worn, insecure or inoperative.

For manually operated extendable stabilisers/outriggers:

- The stabiliser/outrigger do not have primary and secondary locking devices in accordance with the version of Australian Standard AS 1418.11 '*Cranes, hoists and winches Part 11: Vehicle – loading cranes*' that applied at the time the equipment was fitted to the vehicle. If the date of fitting is unknown, then the latter of the date of manufacture of the vehicle or the equipment.
- Since 2004, AS 1418.11 has required manually operated stabiliser/outrigger extensions to be locked in the transport position by two separate locking devices for each stabiliser/outrigger, with at least one of these to be automatically operated, e.g. a spring-operated cam and an automatic spring latch'.
- The stabiliser/outrigger arm/s are damaged in such a way to prevent them being fully retracted to the position for travel, or preventing all locking devices engaging.

For all outriggers/stabilisers:

- The stabiliser/outrigger is not safely secured.
- The stabiliser/outrigger footplate/s are excessively damaged, excessively worn, and insecure in a way that would cause it to separate from the stabiliser leg (falling off) during travel.
- Audible or visual warning devices, if fitted, are damaged or not working.

## Information Sheet No. 18

### Number Plate Labels

#### **Electric vehicles**

An electric-powered vehicle is a vehicle powered by one (1) or more electric motors or traction motors that are the only propulsion system for the vehicle (fully electric) or are used in conjunction with another propulsion system for the vehicle (hybrid).

An electric-powered vehicle that is built after 1 January 2019, or a vehicle modified to be an electric-powered vehicle after 1 January 2019, will be required to have an Electric Vehicle Label fixed conspicuously to its front and rear number plates.

Electric Vehicle labels must meet the following requirements:

- the label must be affixed to a plate made of metal that is at least 1mm thick
- the label, and the plate it is attached to, must be an equilateral triangular shape where each side has length of 30mm in length and each interior angle of which is 60°
- the label must have a blue surface that complies with class 2 of *Australian Standard 1906.1 Retroreflective Materials and Devices for Road Traffic Control Purposes—Retroreflective Sheeting*
- the label must be marked 'EV' in white capital letters that are at least 8mm high and have the orientation shown in the example
- the label and plate must be fixed to the number plates so that the letters on the label are in an upright position
- the label and plate must not wholly or partly obscure any characters on the number plates

**Note:** An example of the electric powered vehicle label is shown below. The example of the label is for illustrative purposes only and does not represent the labels actual size, dimensions or colour.



Please note that there is a grace period in order to facilitate fitment and provide education on the requirements of the label for affected vehicles, up until 1 January 2022.

#### **Hydrogen fuel cell vehicles**

A hydrogen-powered vehicle is a vehicle that is powered by a hydrogen fuel system and has one (1) or more hydrogen fuel containers fitted to the vehicle for the system.

A hydrogen powered vehicle that is built after 1 January 2019, or a vehicle modified to be a hydrogen powered vehicle after 1 January 2019. They will be required to have a hydrogen vehicle label affixed conspicuously to its front and rear number plates.

Hydrogen vehicle labels must meet the following requirements:

- the label must be affixed to a plate made of metal that is at least 1mm thick

- the label, and the plate it is attached to, must be a regular pentagonal shape where each side is 20mm in length and each interior angle of which is 108°
- the label must have a yellow surface that complies with class 2 of *Australian Standard 1906.1 Retroreflective Materials and Devices for Road Traffic Control Purposes—Retroreflective Sheeting*
- the label must be marked 'H' in a black capital letter that is at least 10mm high and have the orientation shown in the example
- the label and plate must be fixed to the number plates so that the letter on the label is in an upright position
- the label and plate must not wholly or partly obscure any characters on the number plates

**Note:** An example of the hydrogen powered vehicle label is shown below. The example of the label is for illustrative purposes only and does not represent the labels actual size, dimensions or colour.



Please note that there is a grace period in order to facilitate fitment and provide education on the requirements of the label for affected vehicles, up until 1 January 2022.

### **Liquid Petroleum Gas vehicles**

A vehicle with a LPG fuel system must have a LPG vehicle label fixed conspicuously to its front and rear number plates that meet the requirements as stated by the AS 1425 applicable to the vehicle at the time the vehicle was fitted with the system.

If the vehicle was fitted with the LPG system prior to the start of AS 1425-1989, LPG vehicle labels must meet the following requirements:

- the label must be made of durable material
- the label must be at least 25mm wide and 25mm high
- the label must have a reflective red surface that complies with *Australian Standard AS 1743:1992 Road Signs - Specification*, Appendix C, Class 2 or *Australian Standard AS 1906.1 Retroreflective materials and devices for road traffic control purposes – Retroreflective sheeting*, Class 2
- the label must be marked 'LPGAS' or 'LPG', or with words or acronyms to similar effect, in capital letters at least 6mm high

**Note:** An example of the LPG vehicle label is shown below. The example of the label is for illustrative purposes only and does not represent the labels actual size, dimensions, or colour.

