

VEHICLE STANDARDS INFORMATION

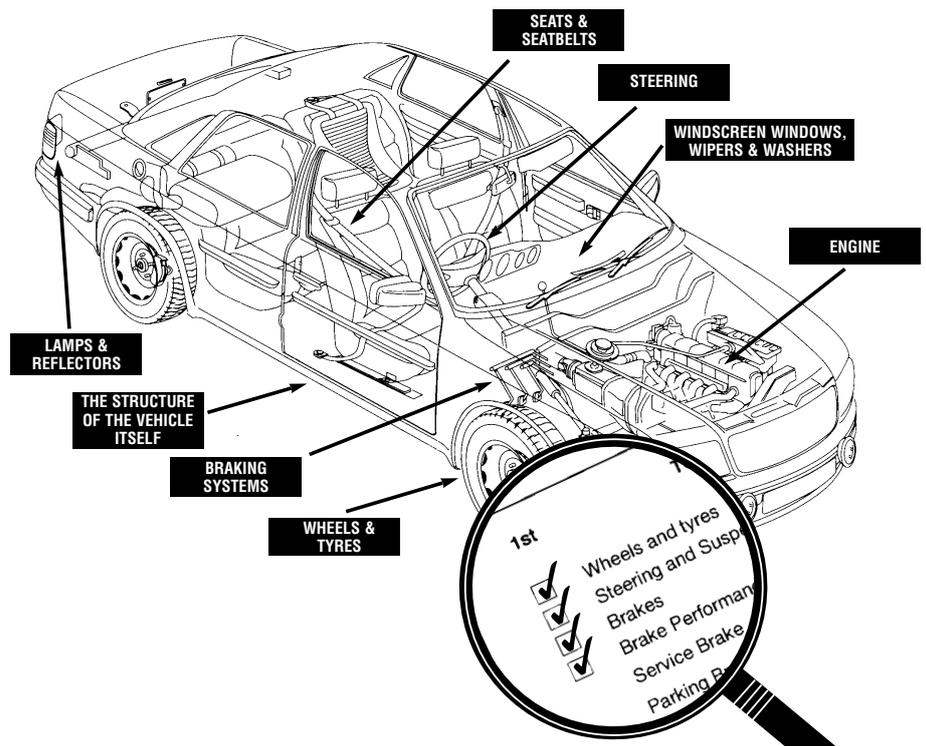
Roadworthiness Requirements

26

For further information please write to the Manager – Vehicle Safety & Policy
60 Denmark Street, Kew, 3101 or contact your local Customer Service Centre.

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Part 1: Roadworthiness Requirements

In Victoria a Certificate of Roadworthiness is generally required when a vehicle is sold or if it is to be reregistered or as part of a mandatory periodic inspection requirement for a bus or taxi.

In some cases a Certificate of Roadworthiness is also required to clear a Vehicle Defect Notice.

A Certificate of Roadworthiness can only be issued by a Licensed Vehicle Tester operating from a nominated facility such as a garage or service station.

Before a certificate of roadworthiness can be issued for a vehicle, the vehicle must be inspected and found to be free of wear or deterioration or alterations that would make it unsafe for normal use on the road.

A roadworthy inspection is not a check of the mechanical reliability or general condition of the vehicle. If a comprehensive check of the overall condition of the vehicle is required, you should arrange for a separate independent report.

A roadworthiness inspection is also not a complete assessment of a vehicle's compliance with the Standards for Registration which, in most cases, are the Australian Design Rules (ADRs). The ADRs are a set of minimum standards for the construction of motor vehicles and trailers. In most cases compliance with these standards cannot be assessed by inspection alone.

The cost of obtaining a Certificate of Roadworthiness will depend on a variety of items such as the age, type and condition of the vehicle being examined. Accordingly the fee can vary significantly and it is wise to seek a quote for the cost of the inspection before you authorise the inspection to take place.

A Certificate of Roadworthiness is current, for the purposes of a transaction, for 30 days from the date of issue.

Part 2: Preface

Regulation 220 of the Road Safety (Vehicles) Regulations 2009 provides that the Roads Corporation (VicRoads) may issue written directions to Licensed Vehicle Testers as to the standards vehicles must meet to obtain a Certificate of Roadworthiness.

This document, constitutes the written directions given by the Corporation under Regulation 220 and Licensed Vehicle Testers must ensure that the vehicle meets these standards before a Certificate of Roadworthiness is issued. It supersedes all previous versions of VicRoads' Vehicle Standards Information sheet (VSI) 26. The information provided in other Vehicle Standards Information sheets (VSIs) prepared by VicRoads may be of assistance when interpreting the requirements in this document.

A Licensed Vehicle Tester must assess vehicles for compliance with the requirements and standards specified in this document.

Part 3: Introduction

New vehicles are manufactured to comply with a number of standards, notably the ADRs and various industry and consumer requirements, which ensure that the vehicles achieve a certain level of safety, environmental harmony and serviceability. During their use, vehicles can deteriorate or be altered from their original form and in some cases this can become a hazard to road users and others.

Although the owner of a vehicle is responsible for keeping the vehicle in a safe and roadworthy condition at all times, roadworthiness testing is undertaken to help minimise the possible hazard to road users including buyers of used vehicles where the vehicle may be in a potentially harmful condition, often without the owner being aware of it.

The roadworthiness standards set out in this document relate to the inspections carried out by licensed testers for the purpose of issuing Certificates of Roadworthiness. The standards are aimed at detecting any wear, deterioration or alterations that could adversely effect the safety of the vehicle, its compliance with the Standards for Registration, and the ADRs where the items can be assessed by inspection.

It is not feasible to determine complete compliance with many of the Standards for Registration, including ADRs, in a roadworthiness test as they generally require highly specialised knowledge and equipment and in some cases even destructive testing.

It is also important to note that the roadworthiness requirements cannot be used to impose more stringent requirements on a vehicle than it would be required to comply with in a new and unaltered condition as per the standards for registration applicable at the date of manufacture of the vehicle. The requirements have been limited to items which relate to safety and compliance and which lend themselves to detection by inspection.

A Certificate of Roadworthiness issued by a licensed tester is certification that a vehicle meets the requirements in this document and is fit for use on the roads.

A Licensed Vehicle Tester must ensure that vehicles are examined in respect of the appropriate standards in this document applying normal industry standards and test procedures. The tester must also take into consideration any relevant information including manufacturer's specifications, approval certificate issued by a member of the Vehicle Assessment Signatory Scheme (VASS) or testing authorities, and various guidelines, such as VicRoads' VSI sheets, and other information provided by VicRoads in assessing whether or not the vehicle meets the criteria provided. The standards in this document may be overridden by this information in some circumstances.

This document, in Part 4, contains sections dealing with various aspects of vehicle safety and environmental requirements. Some of these will only apply to certain vehicles and should be disregarded where they do not apply. There will also be a number of vehicles, that are exempt from some requirements under conditional registration or permit procedures. These standards need not be checked for.

Part 4: General Inspection Standards For Roadworthiness Test

Section A

Wheels and Tyres

Wheels

There is no requirement for a spare wheel to be carried on a vehicle and the Standards for Registration exclude wheels not normally used in service from any requirements. However, where a spare wheel is carried it must be securely retained in or on the vehicle.

All road wheels and rims must be free of cracks or any other type of damage likely to cause failure of the wheel, rim or tyre. The wheel/rim must not be bent or buckled or excessively out of balance. In the case of a passenger car, any replacement wheel/rim must comply with the applicable requirements in VSI 8 unless a VASS approval certificate is supplied for that modification.

A Certificate of Roadworthiness must not be issued for a vehicle which has a temporary use spare tyre fitted to one or more road wheels.

Alloy wheels must bear the appropriate standards mark as specified in VSI 8.

On wire-spoked wheels, all spokes must be intact, straight, fitted and laced correctly and properly tensioned.

Welds on steel wheels must be of good quality and free of defects. Widened wheels must have no more than one peripheral weld. Welds or any other type of repair on wholly cast wheels or cast structural components of wheels are unacceptable. Chromed wheels other than those chromed during the manufacturing process are not acceptable.

When in the straight ahead position, the wheels and tyres must not project beyond the extreme width of the mudguards and must not contact any part of the vehicle under any combination of steering and/or suspension movement.

Wheel Studs and Nuts

The wheels must be securely attached with the correct number and type of nuts, studs or both. Stud or bolt holes, and any locating washers, must not be expanded or elongated and all wheel and retainer tapers must match. All studs must be securely fitted and engage for at least the same thread length as provided originally by the vehicle manufacturer.

Any tyre retaining rings on heavy vehicles must be in good condition and correctly located. On truck spider wheels, appropriate nuts and clamps must be used and there must not be any slippage or excessive runout.

Track Width

In the case of passenger cars and light goods vehicles, the track measured to the centre of the tyre treads must not exceed the original specification by more than that

specified for that type of suspension in VSI 8. However, for vehicles fitted with diagonally split braking systems, there must be no change in front or rear track from the original specification. Hub/rim spacers are unacceptable unless specified by the vehicle manufacturer.

Tyres

All tyres fitted to the road wheels of a vehicle, must be of a type constructed for normal road use and must have a minimum tread depth of 1.5mm at any point on the tread normally in contact with the road surface other than at tread wear indicators. Where tread wear indicators are provided the tread must not be worn to the extent that any tread wear indicator contacts the road surface. The tyres must not be regrooved unless they are of a type marked by the manufacturer as being suitable for regrooving.

Tyre sizes must be compatible with rim sizes as set out by the Tyre and Rim Association.

All tyres must be free of deep cuts, cracks, bulges, exposed cords, evidence of carcass failure or separated or perished rubber.

For vehicles up to 4.5 tonne GVM fitted with passenger car tyres and manufactured after 1 January 1973, all tyres fitted to the road wheels must be of the same carcass construction (i.e. radial ply, cross ply, bias belted, etc) but may have a different tread pattern.

Repairs to the sidewall or shoulder areas on radial ply passenger car tyres are not acceptable.

The load rating of tyres on vehicles subject to ADRs must be at least equivalent to the minimum ratings shown on the tyre placard.

The original speed rating of the tyre casing must be at least:

- for vehicles with a GVM over 4.5 tonne, the lesser of:
 - 100km/h; and
 - the vehicle's top speed.
- for vehicles with a GVM of 4.5 tonnes or less with four or more wheels, the lesser of:
 - 140km/h for a passenger car with special features for off-road use such as 4WD;
 - 180km/h for any other passenger car;
 - 120km/h for any other motor vehicle not described above; and
 - the vehicle's top speed.

All pneumatic tyres not marked "Tubeless" must be fitted with a tube and all retreaded tyres must be marked with the identification of the retreader and the word "Retreaded" and any other markings required by the relevant Australian Standard.

See VSI 8 and 16 for more information on wheels and tyres.

Section B

Steering and Suspension

General

The vehicle steering and suspension system must be free from wear or play exceeding the manufacturer's limits and the vehicle must track satisfactorily without undue wander.

All steering components, including dust and grease seals, must be in good condition, securely and correctly mounted and free from damage and excessive wear.

All nuts, bolts and other fasteners used on steering components must be secure and fitted with appropriate retaining or locking devices where necessary. There must be no binding in the steering system from lock to lock.

Power Steering

Any power steering pump or associated components must work and be securely mounted. Hoses, pipes and drive belts, etc. must not foul any other components in a manner likely to cause failure. All fittings must be free of oil leaks, however, dampness or staining around seals is acceptable. The reservoir must be correctly filled.

Suspension

All suspension components must be properly mounted and aligned with no distortion, cracks, fractures or other damage likely to cause failure or instability. There must be adequate clearance between components and the vehicle body, and all joints, bushes, pivots, dust and grease seals, wheel bearings and mountings must be in good condition.

Shock absorbers and struts must be securely mounted, function effectively and be free of leaks. Dampness or staining around seals is acceptable.

Modified suspensions must comply with the relevant sections of VSI 8.

Section C

Brakes

All brake components must function correctly, be securely mounted, appropriately located and free from visible wear, distortion or damage likely to cause failure, malfunction or uneven application.

Brake piping must be of an appropriate material and adequately supported.

Hydraulic systems must be filled to the appropriate level and all pipes, hoses, cylinders and reservoirs must be free from leaks and apparent contamination. However, brake fluid dampness behind cylinder boots is acceptable and alone should not be a cause for rejection.

Air systems, including trailer brake connections, where fitted, must be free from leaks. Compressors must be properly mounted and aligned with drive belts in good condition and correctly tensioned.

Air compressors must be capable of rapid build up, recovery and working pressure maintenance. Air tanks and other valves and components must be free of contamination, including excessive oil build up, which may adversely affect their operation.

All components and fittings on the anti-lock brake system fitted to a B-Double prime mover or B-Double trailers designed to carry dangerous goods must be in good condition and properly connected.

The anti-lock check lamp system on the prime mover must operate correctly.

Brake Linings

Lining material must not be worn down to the wear indicators where they are provided. Where no wear indicators are provided, the minimum remaining useable thickness of lining material measured at any point on the lining must be no less than the vehicle manufacturer's minimum recommended thickness and in any case must be no less than 1.0mm. Brake lining materials must not be contaminated.

Brake Discs and Drums

The thickness of the friction section of a brake disc or the internal diameter of a brake drum must be within the manufacturer's specifications. Light circumferential scoring is acceptable on friction surfaces providing it does not affect the operation or durability of the brake system.

Stopping Performance

Vehicle service brakes must function correctly and be capable of either:

- stopping the vehicle with one sustained application of the service brakes, under normal operation and application conditions, on a dry smooth surface free from loose material, within the distances specified in Table 1, or
- achieving the deceleration rate specified in Table 1.

Table 1

Vehicle type by GVM	Maximum stopping distance from 35km/h	Minimum average deceleration	Minimum peak deceleration
Vehicles less 2.5 tonnes GVM	11.0 metres	0.45 g	0.6 g
Vehicles 2.5 tonnes or more	16.5 metres	0.3 g	0.4 g

The application of the brakes must not cause the vehicle, when travelling in the centre of a 3.7m wide lane, to project outside that lane.

Vehicle parking and emergency brakes must function correctly. Parking brakes must be capable of holding the vehicle stationary on any up or down grade found on highways.

Emergency brakes, including parking brakes intended to provide emergency braking such as those on vehicles, which do not have split system service brakes or are not subject to ADR 31/.. or 35/.. must be capable of either:

- stopping the vehicle on a dry smooth surface free from loose material, within the distances specified in Table 2, or
- achieving the deceleration rate specified in Table 2.

Table 2

Vehicle type by GVM	Maximum stopping distance from 35km/h	Minimum average deceleration
Vehicles less than 2.5 tonnes GVM	27.0 metres	0.18 g
Vehicles 2.5 tonnes or more	40.5 metres	0.11 g

Warning Devices

Any audible or visible warning devices fitted must be properly mounted and function correctly.

Other Brakes and Equipment

Where required, trailer breakaway brakes must be fitted and operational.

Where a motor vehicle is fitted with vacuum assisted or air operated brakes and that vehicle is equipped to tow a trailer or a semi trailer, the motor vehicle must be equipped with a means for providing that, if the trailer or semi trailer breaks away, the brakes of the motor vehicle are capable of stopping the motor vehicle within the appropriate distance specified in Table 2.

Section D

Seats and Seat Belts

Seats

All seats and backrests must be secure, structurally sound and free of jagged edges or protrusions, which could be hazardous. Any padding originally provided on bus seat backs must be present and in good condition. The driver's seat and backrest must also be free from any defects which might impair the driver's ability to control the vehicle.

Seat slides and other control mechanisms used for adjustment of the seat must be functional, have no abnormal looseness and be effective in the release and locking actions. Optional mechanisms such as lumbar adjustments need not function providing they do not interfere with seat security or the driver's control of a vehicle. Where provided, head restraints must be secure and in a sound condition.

Seat Belts

Seat belts must be present as specified in VSI 21.

All seat belts must comply with the appropriate seat belt standard and where initially fitted by the manufacturer for ADR compliance, the seat belts must be original equipment or appropriate replacement parts.

Seat belts must be appropriately and securely fitted, and be accessible, and all components, including retractors where fitted, must function correctly. Seat belt webbing must be firmly secured to its end fittings and must not be damaged, cut, knotted or frayed. Repairs or modifications to webbing, buckles, retractors or other seat belt components are not permitted.

See VSI 21 for more information on seat belts.

Section E

Lamps, Signals, Reflectors etc.

General

Lighting requirements (lamps, reflectors and marking plates) vary substantially with the type of vehicle and its date of manufacture.

For newer vehicles and optionally for older vehicles, details of the requirements together with the type, number, location, colour, operation and adjustment of lamps and reflectors are set out in the Third Edition Australian Design Rules (ADRs). Alternatively, for vehicles not required to meet the Third Edition ADRs, the requirements specified in the Standards for Registration for that particular type of vehicle should be applied.

Generally, all motor vehicles must be fitted with headlamps, stop lamps, front and rear position lamps, a number plate lamp and turn signal lamps. All other vehicles (trailers etc.) require rear position lamps, stop lamps, a number plate lamp and turn signal lamps.

In addition to these lamps, a number of other lamps such as work lamps, auxiliary driving lamps, front and rear fog lamps, reversing lamps, external cabin lamps, clearance lamps, marker lamps, daytime running lamps and front lamps on sidecars are either required or permitted. Hazard warning lamps are required on certain buses and late model vehicles.

Vehicles must not be fitted with lights or reflectors not required or permitted by the Standards for Registration or the ADRs.

Lamps

All mandatory internal warning lamps, including the airbag check lamp where fitted, must function correctly. In buses, lamps used for stairwell lighting are mandatory lamps.

All lamps fitted to a vehicle, including any optional lamps but excluding undipped headlamps, ancillary driving lamps and work lamps, must be fitted with lenses or otherwise shielded so that the light emitted does not cause glare. All lenses must be of the correct colour, not substantially faded and must be clean on the inside and free of any damage, which would permit dust or water to enter the lamp. Headlamp reflectors must be in good condition. The presence of minor condensation on semi sealed lamps is acceptable.

All lamps must be securely mounted and correctly orientated.

Reflectors

Reflectors must be functional, of the correct colour and securely mounted.

Portable warning devices on tow trucks must be of an approved type and not deteriorated to an extent which reduces their effectiveness.

Rear marking plates must not be faded or deteriorated and must be of the correct type and correctly located.

Additional Lighting

Some vehicles, due to the nature of their use, require additional or special lighting or lighting located in non complying positions. These vehicles will usually belong to Police, Emergency, Road Maintenance or other similar organisations.

Other vehicles owned by private organisations requiring special lighting may be allowed to fit the lighting under conditional registration provisions.

Section F

Exhaust and Emission Control

The exhaust system of a vehicle must not pass through the cabin or any passenger area and must be free of leaks. Condensation drain holes are not leaks.

The exhaust system must be fitted with an effective silencing device and all exhaust gases must pass through the device.

All mountings must be secure and the exhaust system must have adequate clearance between all other parts of the vehicle and the road.

Unshielded parts of an exhaust system, other than the outlet, must not protrude beyond the profile of the vehicle other than on the underside. The outlet must be located so as to avoid direct entry of gases into the passenger compartment and must not extend beyond the plan of the vehicle. See VSI 8 for more information on exhausts.

Vehicles manufactured to comply with emission control ADRs must have all pipes, hoses, valves, sensors, fuel and air control devices and any other emission control equipment originally fitted by the vehicle manufacturer properly located and connected and not apparently damaged, deteriorated or altered in any way so as to appear ineffective.

Dual fuelled vehicles must retain any emission control equipment fitted to enable them to meet emission requirements while operating on petrol.

However, allowances are made for minor air cleaner and carburettor modifications required to fit the conversion. The heated air intake system can be removed and the air cleaner replaced with one to suit the LPG conversion.

For vehicles fitted with a four-stroke engine, exhaust emissions (except for water vapour) must not be visible to the naked eye for more than 10 seconds under normal operating conditions. When running, the engine must not discharge excessive crankcase fumes and where crankcase ventilation equipment is fitted it must be secure and leak free.

The exhaust outlet on a diesel engine vehicle with a GVM over 4.5 tonne and manufactured after 1976, other than a bus, must be at least 3m above the ground. The outlet must discharge upwards either:

- vertically; or
- within 30° of the vertical and to the rear within 45° either side.

If a vertical exhaust outlet is fitted with a rain cap it must be hinged at approximately 90° to the centerline of the vehicle.

Note: This vertical exhaust requirement does not apply to some special purpose vehicles; or

Vehicles certified to meet the vehicle emission standards specified in ADR 80/01 published by the Australian Government Department of Infrastructure, Transport, Regional Development and Local Government and have a horizontal exhaust that discharges on the driver's side of the vehicle towards the centre of the road.

Crankcase ventilation recirculation equipment is required on petrol engine vehicles (other than motor cycles) built after 1971.

Nitrous oxide systems are not acceptable on motor vehicles used on the public roads.

Section G

Windscreen and Windows

All glazing used in a motor vehicle built after June 1953 is to be safety glass or other approved material. The glazing that is necessary to allow the driver to see the road and other road users is not to be damaged or altered to the extent that it prevents the vehicle being used safely.

Wear or Damage

During the service life of a vehicle, the windscreen and windows may incur various types of damage. Testers are advised that deterioration from the as new condition is allowable and a windscreen or window with minor damage should not be rejected.

A windscreen should only be rejected if;

- it is discoloured, badly scratched, fractured or chipped within the area wiped by the windscreen wiper(s) to the extent that the driver's vision is so impaired that the vehicle cannot be driven safely; or,
- in the case of a laminated windscreen, it has any crack that penetrates more than one layer of glass, or
- in the case of a laminated windscreen, it has one or more bulls eyes or star fractures over 16mm in diameter or one or more cracks over 150mm in length in a single layer of glass within the area wiped by the windscreen wiper(s). One or more bulls eyes or star fractures up to 16mm in diameter and cracks up to 150mm in length in a single layer of glass within the area wiped by the windscreen wiper(s), are allowable provided that they do not impair the driver's vision to the extent that the vehicle cannot be driven safely.

Side windows that are scratched or otherwise damaged to the extent that the driver's vision is so impaired that the vehicle cannot be driven safely should also be rejected.

Where signaling devices are not provided, the driver's side window must be capable of being opened or some other means provided to give hand signals.

Repairs and Obstructions to View

In a repaired windscreen a faint outline of the repaired damage or in some cases a slightly 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 be rejected during a roadworthy test providing the rest of the windscreen complies with the requirements as set out in this section.

Apart from any pillar or other part of the vehicle's structure or fittings, there must be no internal obstructions to a driver's view through the swept area of the windscreen, to the right of the driver's position or 60° to the left of the driver's position, except for the area outside the primary vision area.

Tinting Requirements

The primary vision area of the windscreen of a vehicle may be lightly tinted to achieve a light transmittance of no less than 75% if the vehicle was made after 1971, or 70% if made earlier. Tinting in the primary vision area must have been incorporated during the manufacture of the windscreen and not by coating or tint films added afterwards.

Any tinting applied to the windows of a vehicle after it has been manufactured must comply with the requirements specified in VSI 2 (Window Tinting).

Primary Vision Area

For cars and other light vehicles, the primary vision area can be approximated by excluding the area above the wiper arc or the top 10% of the windscreen, whichever is the greater. For heavy vehicles with large windscreens, exclude the area above the wiper arc or above a horizontal line 200mm above the height of the driver's eye when seated in the normal seating position, whichever is the greater, and the area below the top of the steering wheel when looking from the driver's seat in a normal seated position.

Section H

Windscreen Wipers, Washers etc.

All motor vehicles (except motorcycles) fitted with a windscreen must be fitted with an effective windscreen wiper system. If manufactured before 1960 then the wiper need only be fitted to the driver's side. On vehicles where the windscreen is such that a driver, in the normal driving position, can obtain adequate vision of the roadway ahead by looking over the top, below or to a side of the windscreen, a windscreen wiper system is not required.

If the vehicle is one required by the standards or the ADRs to have a windscreen washer system then the system must be fitted and work effectively.

All motor vehicles manufactured on or after 1 September 1966 and required to be fitted with a windscreen wiper system must be fitted with an effective windscreen washer system.

Both the windscreen wiper system and the windscreen washer system must be capable of being operated by the driver from the normal driving position.

All components of both systems must be secure, functional and not excessively worn. Windscreen wiper blades must only sweep over the windscreen glass and not contact any other component to an extent which could affect their performance while in operation.

Windscreen washer jets must be correctly aimed.

Windscreen Demisters

Vehicles required to comply with demisting provisions (e.g. ADR 42 and certain buses) must have the necessary equipment present and operational.

Section I

Body and Chassis

General

The structural components of all vehicles must be sound and free from cracks, damage, faulty repairs or modifications, rust, deterioration, distortion or any other condition which could lead to structural failure of the vehicle or adversely affect the performance of safety related features.

In some buses, extensive corrosion may be hidden by inner and outer body panels necessitating panel removal or other means to determine the extent of structural deterioration.

The body and fittings of all vehicles must be free from any damage, which might increase the risk or severity of injury to any occupant, pedestrian or other road user. The body must also be free of any damage likely to allow the entry of exhaust gases into the passenger area. All seals at body openings necessary to prevent the entry of exhaust gases into any passenger area must seal effectively.

Floors including floors in load areas must be in a sound condition. Floors in passenger areas must be free of loose material or objects or tears, or incorrectly fitted matting, or covering likely to interfere with the driver's ability to safely operate the vehicle. In buses, floors and steps must have a suitable non-slip surface.

Body Structure

Where a bus is more than 25 years old, proof of a current acceptable structural assessment must be provided and sighted by the tester.

Luggage Racks

Where a bus is fitted with a luggage rack or racks, there must be no projections that could cause injury to passengers and the rack or racks are to be adequately secured and prevent movement of luggage during normal braking and cornering manoeuvres.

Door Latches

All doors, boot lid, bonnet, hatch, tailgates and any other hinged or removable covers, and all other attachments to the body both inside the passenger area and outside the vehicle must be securely mounted and located. All latches and latch mechanisms, hinges and other securing devices including tilt cab latches must be in good condition and effective.

Driver controlled doors on buses must open and shut correctly when operated from the driver's position.

All latches and secondary latches on all doors giving access to the passenger areas must function correctly and secure the doors and allow them to be readily opened in an emergency.

Emergency Exits

Emergency exits on buses must be clear of obstruction and must be clearly identified, with the method of opening clearly indicated unless obvious from the design. The exits must appear capable of being readily operated.

Emergency Exit Warning Devices

The warning devices provided on all emergency exits other than service doors and breakable glass emergency exits must be present and serviceable.

The warning must be given when the engine is started and/or vehicle is in motion, if:

- the primary opening or ejection device is moved;
- an emergency exit is locked from the outside; or
- an emergency door or window is not securely closed.

The warning device must provide a visible and audible warning to the driver and must activate with movement of the catch or other device securing the emergency exit, not only by movement of the emergency exit itself.

Wheelguards (Mudguards)

Effective wheel guards must be fitted for all wheels on all vehicles except front wheels on mopeds and motorcycles manufactured before 1 July 1988. Wheel guards may include parts of bodywork, etc. Wheel guards must cover the full width of the wheels and tyres in the case of rear wheels on trucks, buses and trailers.

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 on some motorbikes, heavy vehicles and vehicles with a tray type body.

Prime movers must also comply with the wheel guard requirements. However, the guards over the rear wheels may be of a flexible material provided they are adequately supported.

Flexible wheel guards or mud flaps must retain their functional position when the vehicle is in motion.

For passenger cars the tyre section width at the top of the tyre must be covered when the wheels are in the straight-ahead position. For motorcycles, sidecars and trikes, guards must cover the tyre section width.

Relaxed wheel guard provisions may apply to some special purpose vehicles, such as timber jinkers.

Bumper Bars/Bull Bars

Bumper bars and bull bars, where fitted, must be secure and designed to eliminate sharp corners or protrusions, which might cause injury to other road users. They must not obscure any lamps, unless additional lamps are fitted, and must not substantially exceed the normal width of the vehicle body. ADRs and VicRoads information sheets cover visibility angles of lamps. Ends of bumper bars must turn towards the body to a sufficient extent to avoid any risk of hooking or grazing.

See VSI 1 for more information on Bull Bars.

Towing Couplings

Any towbars, eyes, hooks, turntables or automatic couplings fitted to a vehicle must be in good condition, secure and not cracked, excessively deformed or

damaged in a way likely to cause failure. All electrical wiring, connectors, couplings, flexible pipes, etc associated with a device for coupling a trailer to a motor vehicle must be in good condition.

Bonnet Scoops

Bonnet scoops of a type not provided by the original vehicle manufacturer must not have any single openings larger than 4000mm² (equivalent to a 65mm circle) towards the front of the vehicle and all edges and protrusions must be suitably smoothed and rounded. The scoop must permit the driver to have a clear uninterrupted view through the full width of the windscreen of all parts of the road surface 11 metres forward of the steering wheel viewed from any driving position permitted by the range of adjustment of the driver's seat. The shape of the scoop must comply with the requirements of VSI 8.

Wheelchair Accommodation, Hoist and Ramps

Every wheelchair position, hoist and ramp provided, must be in good condition and not present a danger to passengers and equipment operators. All roll stops for hoists and edge barriers for hoists and ramps must be present and in a serviceable condition. The surface of any hoist or ramp, and standing area for a wheelchair must be skid resistant and in sound condition and effective.

Section J

Engine and Driveline

All mountings, brackets and fastenings necessary for the safe operation of the vehicle must be secure and free from damage, deterioration or abnormal distortion. All shafts, splines, universal joints, support bearings, tail shaft guards and other drive line components must be in good condition and free of excessive wear and vibration.

The power unit, clutch system, transmission system, differentials, axle housings and all associated pipelines must be properly sealed and free of dripping or flowing oil leaks onto the roadway, exhaust system or brake friction surfaces. Dampness, weeping or staining are acceptable but oil leaking from the underside of the vehicle to such an extent that it is likely to drop oil on the road surface (if the vehicle is parked or idling stationary for any length of time) is unacceptable.

Any insulating material in an engine enclosure must be in good condition and free from contamination by fuels or lubricants and there must not be any accumulation of fuel or lubricant in engine compartments.

LPG Equipment

The Standards for Registration detail requirements for LPG vehicles.

A LPG system fitted to a vehicle must comply with the requirements of the Australian Standard AS 1425 applicable at the date of the installation. If the date of installation is not known, the age of the vehicle and LPG tank date stamp may be used in determining the date of installation.

The LPG system must be free of leaks and all components secure and free from damage and deterioration.

The periodic inspection requirements of Australian Standard 1425 should be used when carrying out a roadworthy inspection on a vehicle fitted with LPG.

Section K

Other Items

Drivers Guard Rail

In buses, any guard rail provided for the driver must be secure and in a sound condition.

Driving Controls

All driving control pedal faces must have an effective non slip surface or be covered with a non slip material. All essential driving controls must function properly. Steering wheel rims, knobs and other devices, which have deteriorated to an extent that they are hazardous, are unacceptable. Steering wheel covers, if fitted, must be secure.

Padding

Padding on dashboards, sun visors, and bars in buses, where originally provided must be secure and must not have deteriorated to the extent that its effectiveness is substantially reduced.

Speedometer

Vehicles manufactured from 1 July 1988 must be fitted with a functioning speedometer calibrated in km/h.

Rear Vision Mirror

All motor vehicles must be fitted with a rear vision mirror capable of providing a clear view to the rear of the vehicle from the normal driving position. Any vehicle designed primarily for the carriage of goods or any vehicle subject to internal rear vision obstruction must be fitted with external rear vision mirrors on both sides of the vehicle.

All rear vision mirrors must be securely and firmly mounted and capable of appropriate adjustment. The reflective surface must not be cracked or broken nor peeled, tarnished, discoloured or deteriorated to such an extent that its effectiveness is reduced.

On all vehicles subject to ADR 14, except motorcycles, any internal vision mirror must be flat. However, additional curved mirrors may also be fitted, either independently or on standard mirrors. If fitted on a standard mirror they must not occupy a substantial part of the reflective surface of the standard mirror.

Horn

All motor vehicles must be fitted with one or more effective horns or other audible warning device, which produces a steady sound of constant pitch.

Fuel System

Fuel tanks must be securely mounted and the fuel system including fuel lines and filler pipes must not project beyond the widest part of the vehicle.

Additional or replacement fuel tanks must be at least of an equivalent standard to the original tanks and not affect the vehicle's compliance with evaporative emission or other provisions.

All fuel lines, vent lines, pumps, valves and fittings must be secure, free of leaks, adequately protected from damage and must not chafe or rub against each other or other parts of the vehicle.

Fuel filler caps must be secure and seal properly. Plastic emergency fuel filler caps are not acceptable.

Hand Grips

Handgrips, rails, straps or stanchions on buses must be in a serviceable condition and effective.

Electrical Wiring

Electrical wiring must be properly supported at least every 600mm, insulated, protected from chafing and located to minimise hazards to vehicle occupants or others.

Battery

The battery must be adequately supported and secure. In addition, if fitted in a luggage or occupant compartment, the battery must either be of a type that is fully sealed or be located within a sub-compartment which is vented to atmosphere outside the vehicle.

Vehicles with batteries located in the same way as that used by the vehicle manufacturer as original equipment are deemed to comply with this requirement provided the battery is of the same type as the original and its installation and related components are as per the vehicle manufacturer's specification.

Fire Extinguishers

Tow trucks, buses, motor homes and caravans subject to ADR 44 or ADR 58 must have the correct number and type of extinguishers fitted in an accessible location and the extinguishers must be in a serviceable condition.

Visual Display Units (VDU)

Any Visual Display Unit that is visible to the driver from the normal driving position should be rejected if it does not:

- Switch off the visual display while the vehicle is in motion;
- Function as a driver's aid while the vehicle is in motion; or
- Meet the field of view requirements as specified in VSI 29.

Examples of driver's aids:

- Closed-circuit television security cameras.
- Dispatch systems.
- Navigational or intelligent highway and vehicle system equipment.

- Rear view screens.
- Ticket-issuing machines.
- Vehicle monitoring devices.

Accessories

Additional equipment fitted to the interior or exterior of a vehicle must not present an undue risk to occupants or others.

Optional and Non Essential Equipment

Where optional and non essential equipment is fitted such as air conditioning, rear window demisters, etc, it is not necessary for it to work providing it does not adversely affect the safety of the vehicle or its compliance with mandatory Standards for Registration.

Motor Homes

All gas and electrical installations must be certified to the relevant Australian Standards as specified in VicRoads' VSI 5 Conversion of Vehicles to Motor Homes.

Modified Vehicles

Modifications to vehicles fall into two broad categories:

- Those covered by guidelines published in VicRoads Vehicle Standards Information sheets; and
- Those which require individual approval and thus an approval certificate from a VASS.

This makes it difficult to determine whether the modification has been approved in the context of a roadworthiness inspection.

In these circumstances an examination should be confined to checking that the modification appears to be properly executed and not in a condition which presents a hazard.

See VSI 8 for more information on modified vehicles.

Identification (Compliance) Plates/ VASS Approval Certificates

Identification plates were required on vehicles manufactured after June 1988 as evidence that, at the time of first registration, the vehicle complied with the applicable ADRs. However, identification plates are often damaged, lost or stolen during the life of the vehicle. Therefore, the presence of an identification (compliance) plate is not a mandatory requirement for the issue of a Certificate of Roadworthiness.

Similarly VASS approval certificates are generally supplied as evidence at the time of registration or change of description that the vehicle complies with the applicable standards for registration.

A VASS approval certificate should only be requested by a Licensed Vehicle Tester, when a vehicle modification, which affects handling, structural integrity or compliance with the standards for registration, does not appear to comply with good industry practices.

Part 5: Additional inspection standards for Buses.

The inspection standards in this section apply to Buses subject to the Bus Safety Regulations 2010 as in force from time to time.

Door Interlocks

Where a bus is fitted with door interlocks, the interlocks must be serviceable.

Internal Mirrors or CCTV

Internal mirrors or CCTV used to provide the driver with a view of passengers in or on the bus must be serviceable and functioning.

Maximum Safe Carrying Capacity Signs/Notices

Maximum Safe Carrying Capacity signs/notices on buses with seating positions for 13 or more adults, including the driver, which display the maximum number of passengers that may be safely carried on that bus, must be in good condition and legible.

(Requirements regarding the number, size and location of the signs/notices are detailed on Transport Safety Victoria's website: transportsafety.vic.gov.au/bus-safety/bus-operators/maximum-number-of-passengers)

Roller Brake Test for Buses over five tonnes Gross Vehicle Mass (GVM)

Buses with a Gross Vehicle Mass of more than five tonnes that are being inspected for the purposes of the bus annual safety inspection requirements in the Bus Safety Regulations 2010, Part 5, Regulation 23 must be subjected to a Roller Brake Test in accordance with the standard below.

The Roller Brake Tester used to conduct the test must comply with Australian/New Zealand Standard AS /NZ 4613: 1999 Automotive Brake Testing equipment – Roller Brake Tester or a similar ISO standard such as ISO 21995. Roller brake testing must be conducted in accordance with section 1.13 of the National Heavy Vehicle Inspection Manual - December 2004 published by the National Transport Commission (www.ntc.gov.au) and the roller brake tester manufacturers instructions.

The vehicle must achieve a:

- Minimum brake force of 3kN/tonne (0.3 g) determined by adding the measured brake force for each axle and dividing it by the mass of the vehicle as tested; and
- Maximum brake drag of 1.0 kN for each drive axle and 0.5 kN for each other axle; and
- Maximum difference in brake force between the wheels of the same axle of 30%, for each axle of the vehicle.

A Roller Brake Tester may be used to determine the deceleration rate of the vehicle provided:

- the brakes are warm when tested; and
- each axle of the vehicle has been loaded to at least 50% of the legal load limit or 50% of the manufacturer's rated load limit if below the legal limit or provided that at least one third of the guaranteed air pressure can be obtained at the brake actuator.

The results of the Roller Brake Test are to be printed and attached to the RWC or to the RWC test report provided to the operator or the operators representative if a RWC is not able to be issued.

The Roller Brake Test must be conducted no more than seven days prior to the date of the roadworthiness inspection.

This test applies in addition to all the other roadworthiness standards set out in VSI 26 , with the exception of determining the deceleration rate of the vehicle, if a roller brake tester is used to determine the deceleration rate.

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