

South Australia

Road Traffic (Light Vehicle Standards) Rules 2013

under the *Road Traffic Act 1961*

Contents

Part 1—Preliminary

- 1 Citation etc
- 2 Commencement
- 3 Definitions—the dictionary etc
- 4 Meaning of road
- 5 Meaning of road-related area
- 6 Diagrams
- 7 Notes
- 8 Examples

Part 2—Application of the Light Vehicle Standards

- 9 Application to vehicles and combinations on roads and road-related areas
- 10 Vehicles to which the Light Vehicle Standards do not apply
- 11 Non-application of Light Vehicle Standards—exemption under other laws
- 12 Non-application of Light Vehicle Standards to ADR-compliant matters
- 13 Non-application of Light Vehicle Standards—Motor Vehicle Standards Act approvals

Part 3—Australian Design Rules

Division 1—Interpretation

- 14 ADRs
- 15 National standards
- 16 References to national standards
- 17 Second edition ADRs
- 18 Third edition ADRs

Division 2—Compliance with ADRs

- 19 Compliance with second edition ADRs
- 20 Compliance with third edition ADRs
- 21 Exception to compliance with ADRs—vehicles that are not road vehicles
- 22 Exception to compliance with ADRs—Motor Vehicle Standards Act
- 23 Partial exception to compliance with ADRs—personally imported vehicles

Part 4—Adopted standards

- 24 Adopted standards
- 25 Reference to adopted standards
- 26 Exception to compliance with adopted standards

Part 5—General safety requirements

Division 1—All vehicles

- 27 Steering
- 28 Turning ability
- 29 Ability to travel backwards and forwards
- 30 Protrusions
- 31 Frontal protection systems
- 32 Driver's view and vehicle controls
- 33 Seating
- 34 Mudguards and spray suppression
- 35 Horns, alarms etc
- 36 Rear vision mirrors
- 37 Rear vision mirrors—surfaces
- 38 Additional rear vision mirrors
- 39 Automatic transmission
- 40 Diesel engines
- 41 Bonnet securing devices
- 42 Electrical wiring, components, connections and installations
- 43 Television receivers and visual display units
- 44 Requirement for windscreen to be fitted
- 45 Windscreens and windows
- 46 Window tinting
- 47 Windscreen wipers
- 48 Wheels and tyres—size and capacity
- 49 Pneumatic tyres generally
- 50 Pneumatic tyres—carcass construction
- 51 Pneumatic tyres—size and capacity
- 52 Tyres—defects
- 53 Tyres—manufacturer's rating
- 54 Retreads
- 55 Tyre tread

Division 2—Additional requirements for motor bikes

- 56 Steering gear and handlebars
- 57 Foot rests
- 58 Chain guards
- 59 Sidecars

Part 6—Vehicle marking

- 60 Vehicle and engine identification numbers
- 61 White or silver band on certain vehicles

Part 7—Vehicle configuration and dimensions

Division 1—Axles

- 62 Axle configuration

Division 2—Dimensions

- 63 Width
- 64 Length of single motor vehicles

- 65 Length of single trailers
- 66 Length of combinations
- 67 Rear overhang
- 68 Trailer drawbar length
- 69 Height
- 70 Ground clearance

Part 8—Lights and reflectors

Division 1—General requirements for lights

- 71 Certain requirements apply only at night
- 72 Prevention of glare
- 73 Pairs of lights

Division 2—Headlights

- 74 Headlights to be fitted to vehicles
- 75 How headlights are to be fitted
- 76 How single headlights are to be fitted
- 77 How additional headlights are to be fitted
- 78 Performance of headlights
- 79 Effective range of headlights
- 80 Changing headlights from high-beam to low-beam position

Division 3—Parking lights

- 81 Parking lights

Division 4—Daytime running lights

- 82 Daytime running lights

Division 5—Tail lights

- 83 Tail lights generally
- 84 Pattern of fitting tail lights
- 85 Performance of tail lights
- 86 Wiring of tail lights

Division 6—Number plate lights

- 87 Number plate lights

Division 7—Clearance lights

- 88 Front clearance lights
- 89 External cabin lights
- 90 Rear clearance lights

Division 8—Side marker lights

- 91 Vehicles needing side marker lights
- 92 Location of side marker lights
- 93 Performance of side marker lights
- 94 Side marker lights and rear clearance lights

Division 9—Brake lights

- 95 Fitting brake lights

96 Performance and operation of brake lights

Division 10—Reversing lights

97 Reversing lights

Division 11—Direction indicator lights

98 Direction indicator lights on motor vehicles

99 Direction indicator lights on trailers

100 Location of direction indicator lights

101 Operation and visibility of direction indicator lights

Division 12—Fog lights

102 Front fog lights

103 Rear fog lights

Division 13—Interior lights

104 Interior lights

Division 14—Reflectors generally

105 General requirements for reflectors

Division 15—Rear reflectors

106 Rear reflectors

Division 16—Side reflectors

107 Compulsory side reflectors on pole-type trailers

108 Optional side reflectors

Division 17—Front reflectors

109 Compulsory front reflectors on trailers

110 Optional front reflectors

Division 18—Warning lights and signs on buses carrying children

111 Application of division

112 Fitting of warning lights and signs

113 Operation and performance of warning lights

114 Specifications for warning signs

Division 19—Other lights, reflectors, rear marking plates or signals

115 Other lights and reflectors

116 Rear marking plates

117 Signalling devices

118 Mechanical signalling devices

119 Turn signals

Division 20—Vehicles not required to have lights or reflectors

120 Certain vehicles used in daylight

121 Certain vehicles used for exhibition purposes

Part 9—Braking systems

Division 1—Brake requirements for all vehicles

- 122 Parts of a braking system
- 123 Provision for wear
- 124 Supply of air or vacuum to brakes
- 125 Performance of braking systems

Division 2—Motor vehicle braking systems

- 126 Motor vehicle braking system requirements
- 127 Operation of brakes on motor vehicles
- 128 Air or vacuum brakes on motor vehicles

Division 3—Trailer braking systems

- 129 Trailer braking requirements
- 130 Operation of brakes on trailers
- 131 Air or vacuum brakes on trailers

Part 10—Control of emissions

Division 1—Crank case gases and visible emissions

- 132 Crank case gases
- 133 Visible emissions
- 134 Exhaust emissions—diesel-powered vehicles
- 135 DT80 test procedure
- 136 Requirements of DT80 test cycle

Division 2—Exhaust systems

- 137 Exhaust systems

Division 3—Noise emissions

- 138 Measurement of stationary noise levels
- 139 Silencing device for exhaust systems
- 140 Stationary noise levels—car-type vehicles and motor bikes and motor trikes
- 141 Stationary noise levels—other vehicles with spark ignition engines
- 142 Stationary noise levels—other vehicles with diesel engines

Part 11—Alternative fuel systems for vehicle engines

- 143 LPG-powered vehicles
- 144 Vehicles powered by natural gas

Part 12—Mechanical connections between vehicles

- 145 General coupling requirements
- 146 Drawbar couplings

Part 13—Other matters

- 147 Vehicle equipment
- 148 Restored vehicles
- 149 Retractable axles
- 150 Measurement of distance between parallel lines

- 151 Interpretation of certain second edition ADRs
- 152 References to Australian Standards and Australian/New Zealand Standards

Dictionary

Legislative history

Part 1—Preliminary

1—Citation etc

- (1) These rules may be cited as the *Road Traffic (Light Vehicle Standards) Rules 1999*.
- (2) These rules are made under section 111 of the *Road Traffic Act 1961*.
- (3) In these rules, these rules are referred to as the ***Light Vehicle Standards***.

Note—

- 1 Under the *Road Traffic Act 1961*, a person commits an offence if there is a breach of a light vehicle standards requirement and the person is the driver or operator of the light vehicle concerned (see sections 117 and 118).
- 2 Under section 161A of the Act, certain classes of light vehicles can only be driven on roads with the approval of the Minister.

2—Commencement

These rules will come into operation on the day on which Part 3 of the *Statutes Amendment (Heavy Vehicle National Law) Act 2013* comes into operation.

3—Definitions—the dictionary etc

- (1) The dictionary at the end of the Light Vehicle Standards defines certain words and expressions, and includes signpost definitions to words and expressions defined elsewhere in the Light Vehicle Standards.

Note—

A signpost definition (eg road-related area see rule 5) is included in the dictionary if the definition applies outside the rule defining the word or expression.

- (2) The dictionary is part of the Light Vehicle Standards.
- (3) A definition in the Light Vehicle Standards applies to each use of the word or expression in the Light Vehicle Standards, unless the contrary intention appears.

4—Meaning of road

A road is an area that is open to or used by the public and is developed for, or has as 1 of its main uses, the driving or riding of motor vehicles.

5—Meaning of road-related area

A road-related area is any of the following:

- (a) an area that divides a road; or
- (b) a footpath or nature strip adjacent to a road; or

- (c) an area that is open to the public and is designated for use by cyclists or animals; or
- (d) any public place that is not a road and on which a motor vehicle may be driven, whether or not it is lawful to drive a motor vehicle there.

6—Diagrams

- (1) A diagram in the Light Vehicle Standards is part of the Light Vehicle Standards.
- (2) A diagram of something is an illustrative example of the thing in black and white, but does not represent its dimensions or the dimensions of any part of it.

7—Notes

A note in the Light Vehicle Standards is explanatory and is not part of the Light Vehicle Standards.

8—Examples

- (1) An example (whether or not in the form of a diagram) in the Light Vehicle Standards is part of the Light Vehicle Standards.
- (2) If the Light Vehicle Standards include an example of the operation of a provision of the Light Vehicle Standards—
 - (a) the example is not exhaustive; and
 - (b) the example does not limit, and may extend, the meaning of the provision; and
 - (c) the example and the provision are to be read in the context of each other and of the other provisions of the Light Vehicle Standards, but, if the example and the provision as so read are inconsistent, the provision prevails.

Part 2—Application of the Light Vehicle Standards

9—Application to vehicles and combinations on roads and road-related areas

The Light Vehicle Standards apply to light vehicles that are motor vehicles, trailers or combinations on roads and road-related areas.

Notes—

- 1 A light vehicle is a vehicle that is not a heavy vehicle—see section 5 of the *Road Traffic Act 1961*.
- 2 Section 6 of the *Heavy Vehicle National Law (South Australia)* defines a heavy vehicle as a vehicle that has a gross vehicle mass (GVM) or aggregate trailer mass (ATM) of more than 4.5 tonnes.

The same section defines a heavy combination as either a combination consisting of 2 or more heavy vehicles or a combination of a light vehicle and a heavy vehicle. An example of a light vehicle in a heavy combination is a light commercial 4WD vehicle towing an empty field bin with an ATM greater than 4.5 tonnes.

10—Vehicles to which the Light Vehicle Standards do not apply

The Light Vehicle Standards do not apply to—

- (a) a vehicle used only on a railway or tramway; or

- (b) a vehicle designed to be controlled by a person walking next to it; or
- (c) a vehicle propelled by a motor with a maximum power output of not over 200 watts; or
- (d) a motorised wheelchair that cannot travel at over 10 kilometres an hour; or
- (e) a vehicle or combination—
 - (i) that is being repaired, or is being tested in the course of being repaired, so it will comply with the Light Vehicle Standards; or
 - (ii) that is being driven or towed directly to a place where it is to be repaired so it will comply with the Light Vehicle Standards,provided that the vehicle or combination is safe and will not endanger other road users if driven or towed on a road or road-related area.

11—Non-application of Light Vehicle Standards—exemption under other laws

- (1) A provision of the Light Vehicle Standards does not apply to a vehicle or combination if the vehicle or combination is exempt from—
 - (a) the provision under another law of this jurisdiction; or
 - (b) the corresponding provision of the law of another jurisdiction.
- (2) However, the vehicle or combination is exempt only if all conditions of the exemption (if any) are being complied with.

12—Non-application of Light Vehicle Standards to ADR-compliant matters

A requirement of Part 5 to Part 13 of the Light Vehicle Standards does not apply to a vehicle or combination if—

- (a) the provision is inconsistent with a requirement of a second or third edition ADR applying to the vehicle or combination; and
- (b) the vehicle or combination complies with the requirement referred to in paragraph (a).

13—Non-application of Light Vehicle Standards—Motor Vehicle Standards Act approvals

A provision of Part 5 to Part 13 of the Light Vehicle Standards does not apply to a vehicle if—

- (a) the vehicle does not comply with a requirement of an ADR applying to the vehicle; and
- (b) the provision of the Light Vehicle Standards corresponds to the requirement of the ADR; and
- (c) despite the non-compliance, approval has been given, under section 10A(2) or (3) of the *Motor Vehicle Standards Act 1989* of the Commonwealth to place identification plates on vehicles of that type; and
- (d) the vehicle complies with the approval conditions (if any).

Notes—

- 1 Section 10A(2) of the *Motor Vehicle Standards Act 1989* (Cwlth) deals with vehicles that do not comply with an ADR, but the non-compliance is only in minor and inconsequential respects.
- 2 Section 10A(3) of that Act deals with vehicles that do not comply with an ADR, and the non-compliance is not minor and inconsequential, but the vehicle will be safe to use if conditions are complied with.

Part 3—Australian Design Rules

Notes—

- 1 The Australian Design Rules (**ADRs**) are rules for designing and building vehicles. Imported vehicles must also comply with the ADRs. Certain ADRs are applied by the Light Vehicle Standards.

The Light Vehicle Standards also apply certain other standards (adopted standards) that are intended to complement the ADRs.

The ADRs do not cover the following:
 - (a) vehicles built before 1969;
 - (b) combination of vehicles of any age;
 - (c) every safety feature for vehicles built between 1969 and 1988.
However, these matters are covered by provisions of the Light Vehicle Standards.
- 2 This Part applies the second and third edition ADRs to various vehicles.

Under the Part, a vehicle that is subject to ADRs when it is built or imported generally remains subject to the ADRs throughout its life. However, a vehicle need not comply with a standard if the standard is replaced by, or inconsistent with, a later standard and the vehicle complies with the later standard. Older vehicles may, therefore, be fitted with any equipment allowed on newer vehicles.

Vehicles that are modified must continue to comply with the Light Vehicle Standards.

Rule 42(4) (electrical wiring, components, connections and installations) extends the application of particular second or third edition ADRs to vehicles to which the ADRs are not expressed to apply.

The following provisions of the Light Vehicle Standards apply to a vehicle instead of the corresponding ADR requirement:
 - rule 46(5) and (6) (window tinting)
 - rule 53 (tyre speed category requirements)
 - rule 112 (warning lights and signs on buses carrying children)
 - rule 115(4) (display of certain lights and reflectors)
Rule 35(6) (horns, alarms etc) of the Light Vehicle Standards modifies the effect of the corresponding ADR requirement.

Division 1—Interpretation

14—ADRs

An Australian Design Rule (**ADR**) is a national standard.

15—National standards

A national standard is a national standard under the *Motor Vehicle Standards Act 1989* of the Commonwealth.

16—References to national standards

Unless the contrary intention appears, a reference in the Light Vehicle Standards to a national standard is a reference to the national standard.

17—Second edition ADRs

A second edition ADR is a national standard incorporated in the document described as the Australian Design Rules for Motor Vehicle Safety, Second Edition published by the Commonwealth Government.

18—Third edition ADRs

A third edition ADR is a national standard incorporated in the document described as the Australian Design Rules for Motor Vehicles and Trailers, Third Edition published by the Commonwealth Government.

Division 2—Compliance with ADRs

19—Compliance with second edition ADRs

- (1) If a second edition ADR recommends that the ADR should apply to the design and construction of a vehicle, the vehicle must comply with the ADR.
- (2) If a second edition ADR contains a requirement for a type of equipment fitted to a vehicle built on or after a stated time any equipment of the same type fitted to the vehicle after it is built must comply with—
 - (a) the requirement as in force when the vehicle was built; or
 - (b) if the requirement is amended after the vehicle is built and before the equipment is fitted, the requirement as in force—
 - (i) when the vehicle was built; or
 - (ii) when the equipment was fitted; or
 - (iii) at any time between when the vehicle was built and the equipment was fitted.
- (3) However, a vehicle, or equipment fitted to a vehicle, need not comply with a recommendation or requirement of a second edition ADR if—
 - (a) the recommendation or requirement is replaced by, or is inconsistent with, a requirement of a third edition ADR applying to the vehicle or equipment; and
 - (b) the vehicle or equipment complies with the requirement of the third edition ADR.
- (4) If a second edition ADR allows a vehicle built on or after a stated time to be fitted with equipment, a vehicle built before the time may also be fitted with the equipment.

20—Compliance with third edition ADRs

- (1) If a third edition ADR applies to the design and construction of a vehicle, the vehicle must comply with the ADR.
- (2) If a third edition ADR contains a requirement for a type of equipment fitted to a vehicle built on or after a stated time, any equipment of the same type fitted to the vehicle after it is built must comply with—
 - (a) the requirement as in force when the vehicle was built; or
 - (b) if the requirement is amended after the vehicle is built and before the equipment is fitted, the requirement as in force—
 - (i) when the vehicle was built; or
 - (ii) when the equipment was fitted; or
 - (iii) at any time between when the vehicle was built and the equipment was fitted.
- (3) However, a vehicle, or equipment fitted to a vehicle, need not comply with a requirement of a third edition ADR if—
 - (a) the requirement is replaced by, or is inconsistent with, a requirement of a later version of the ADR applying to the vehicle or equipment; and
 - (b) the vehicle or equipment complies with the requirement of the later version.
- (4) If a third edition ADR allows a vehicle built on or after a stated time to be fitted with equipment, a vehicle built before the time may also be fitted with the equipment.

21—Exception to compliance with ADRs—vehicles that are not road vehicles

A vehicle need not comply with an ADR applied by rule 19(1) or 20(1) if a determination or declaration under section 5B of the *Motor Vehicle Standards Act 1989* of the Commonwealth provides that the vehicle is not a road vehicle for that Act.

22—Exception to compliance with ADRs—Motor Vehicle Standards Act

- (1) A vehicle need not comply with an ADR applied by rule 19(1) or 20(1) if—
 - (a) despite non-compliance with the ADR, approval has been given, under section 10A(2) or (3) of the *Motor Vehicle Standards Act 1989* of the Commonwealth to place identification plates on vehicles of that type; and
 - (b) the vehicle complies with the approval conditions (if any).

Note—

See notes to rule 13.

- (2) A vehicle need not comply with an ADR applied by rule 19(1) or 20(1) if—
 - (a) the vehicle may be supplied to the market under section 14A(1) of the *Motor Vehicle Standards Act 1989* of the Commonwealth; and
 - (b) for a vehicle for which an approval has been given under that subsection—the vehicle complies with the approval conditions (if any).

- (3) A vehicle need not comply with an ADR applied by rule 19(1) or 20(1) if—
 - (a) the vehicle may be used in transport in Australia under section 15(2) of the *Motor Vehicle Standards Act 1989* of the Commonwealth; and
 - (b) for a vehicle for which an approval has been given under that subsection—the vehicle complies with the approval conditions (if any).

23—Partial exception to compliance with ADRs—personally imported vehicles

- (1) In this rule—

personally imported vehicle means a vehicle built after 1968 that has been imported into Australia by a person who—

- (a) before the vehicle was imported into Australia, owned and used it for a continuous period of at least—
 - (i) if the vehicle owned by the person before 9 May 2000—3 months; or
 - (ii) in any other case—1 year; and
 - (b) when the vehicle was imported into Australia—
 - (i) was an Australian citizen or permanent resident or an applicant for Australian citizenship or permanent residency; and
 - (ii) was old enough to hold a driver's licence or learner's permit to drive the vehicle; and
 - (c) has undertaken to comply with any requirements relating to road safety imposed in relation to the vehicle under the *Motor Vehicle Standards Regulations 1989* of the Commonwealth; and
 - (d) has not, within the previous year, imported into Australia another vehicle owned by the person.
- (2) A personally imported vehicle must be fitted with—
 - (a) seat belts that are as effective as seat belts that meet an Australian Standard or British Standard for seat belts as in force when this rule commenced; and
 - (b) seat belt anchorages that meet the number and location requirements of second or third edition ADR 5; and
 - (c) child restraint anchorages that meet the number, location, accessibility, thread size and form requirements of second edition ADR 34 or third edition ADR 5 or 34; and
 - (d) head restraints that meet the number, location and size requirements of second or third edition ADR 22.
 - (3) However, a personally imported vehicle need only meet the requirements of an ADR mentioned in subrule (2) if the ADR recommends that it should apply, or applies, to a vehicle of the same type.
 - (4) A personally imported vehicle need not otherwise comply with an ADR applied by rule 19(1) or 20(1).

Part 4—Adopted standards

24—Adopted standards

An adopted standard is a standard, except a national standard, that is applied, adopted or incorporated by the Light Vehicle Standards.

25—Reference to adopted standards

Unless the contrary intention appears, a reference in a rule or subrule to an adopted standard is a reference to the standard as in force at the commencement of the Light Vehicle Standards, or, if the provision in which reference appears commenced after the commencement of the Light Vehicle Standards, as in force at the commencement of that provision.

26—Exception to compliance with adopted standards

A vehicle need not comply with an adopted standard if—

- (a) the standard is replaced by, or is inconsistent with, a later version of the standard; and
- (b) the vehicle complies with the later version of the standard.

Part 5—General safety requirements

Note—

For a vehicle to be operated safely, the vehicle needs to be properly designed to minimise the potential for accidents and harm to other road users.

This Part sets out various requirements covering the driver's view from a vehicle, the driver's control of a vehicle, protection of vehicle occupants and other road users, and other general safety features.

Division 1—All vehicles

27—Steering

- (1) A motor vehicle must have a right-hand drive.
- (2) A motor vehicle has a right-hand drive if the centre of at least 1 steering control of the vehicle is to the right of, or in line with, the centre of the vehicle.
- (3) A component of the steering system of a motor vehicle that is essential for effective steering of the vehicle must be built to transmit energy by mechanical means only.
- (4) Failure of a non-mechanical component of the steering system must not prevent effective steering of the vehicle.

28—Turning ability

- (1) A motor vehicle must be able to turn in a circle not over 25 metres in diameter, measured by the outer edge of the tyre track at ground level.
- (2) The vehicle must be able to comply with subrule (1) whether it turns to the left or to the right.

29—Ability to travel backwards and forwards

A motor vehicle with an unloaded mass over 450 kilograms must be able to be driven both backwards and forwards when the driver is in the normal driving position.

30—Protrusions

- (1) An object fitted to a vehicle must be designed, built and fitted to the vehicle in a way that minimises the likelihood of injury to a person making contact with the vehicle.
- (2) However, subrule (1) does not apply to an object fitted to a vehicle if—
 - (a) the vehicle was designed before 1965 and the object was part of the design of the vehicle; or
 - (b) the object was fitted to the vehicle before 1965 in accordance with the law of the place where the object was fitted.

31—Frontal protection systems

- (1) This rule applies to a motor vehicle built on or after 1 July 2013 that has a GVM not over 3.5 tonnes.
- (2) In addition to complying with rule 30, a frontal protection system fitted to a motor vehicle to which this rule applies must comply with Australian Standard AS 4876.1—2002 Motor Vehicle Frontal Protection Systems—Road User Protection (other than clause 3.2).
- (3) In this rule—

frontal protection system means a structure (other than a bumper bar) fitted to the front of a motor vehicle to reduce damage to the vehicle structure and systems if the front of the vehicle comes into contact with an animal, vehicle or other object, and includes such a structure that replaces or supplements a bumper bar.

Examples of frontal protection systems—

Bull bars, nudge bars and roo bars.

32—Driver's view and vehicle controls

A motor vehicle must be built—

- (a) to allow the driver a view of the road and of traffic to the front and sides of the vehicle so the driver can drive the vehicle safely; and
- (b) with its controls located so the driver can drive the vehicle safely.

33—Seating

A seat for a driver or passenger in a vehicle must be securely attached to the vehicle.

34—Mudguards and spray suppression

- (1) A vehicle must have firmly fitted a mudguard for each wheel or for adjacent wheels.
- (2) However, subrule (1) does not apply to a vehicle if—
 - (a) the construction or use of the vehicle makes the fitting of mudguards unnecessary or impracticable and the vehicle is not driven or towed at a speed greater than 40 kilometres an hour; or

- (b) the body or part of the body of the vehicle acts as a mudguard.

Examples of vehicles to which subrule (2)(a) applies—

- (a) Most road-making plant.
 - (b) Some agricultural equipment.
- (3) A mudguard may be up to—
 - (a) 230 millimetres above ground level; or
 - (b) on a vehicle built to be used off road—300 millimetres above ground level.
- (4) The outside of a rear mudguard, except a mudflap, of a vehicle that can be seen from the rear of the vehicle must be coloured white or silver if the vehicle—
 - (a) is at least 2.2 metres wide; and
 - (b) has a body the vertical measurement of which is under 300 millimetres at the rear, measured from the lowest point of the body above ground level to the highest point; and
 - (c) is not fitted with rear marking plates.
- (5) For subrule (4)(a), the width of a vehicle is measured disregarding any anti-skid device mounted on wheels, central tyre inflation systems, lights, mirrors, reflectors, signalling devices and tyre pressure gauges.

35—Horns, alarms etc

- (1) A motor vehicle must be fitted with at least 1 horn or other device that can give sufficient audible warning to other road users of the approach or position of the vehicle.
- (2) A motor vehicle must not be fitted with a device that can make a sound like the sound of a siren, exhaust whistle, compression whistle or repeater horn.
- (3) However, subrule (2) does not apply to—
 - (a) a police vehicle; or
 - (b) an emergency vehicle; or
 - (c) a vehicle at least 25 years old that is fitted as a police or emergency vehicle if—
 - (i) the vehicle is only used for exhibition purposes; or
 - (ii) it is part of a collection of former police or emergency vehicles; or
 - (d) an anti-theft alarm if the alarm cannot be operated while the vehicle's ignition is on.
- (4) Also, a motor vehicle may be fitted with a device that emits a regular, intermittent sound while the vehicle is reversing or in reverse gear.
- (5) The device must not be louder than is necessary so the driver, and a person near the vehicle, can hear the device when it is operating.
- (6) The provision of the relevant ADR that corresponds to subrule (2) applies to a vehicle as if that provision did not contain a reference to a bell.

36—Rear vision mirrors

- (1) A rear vision mirror or mirrors must be fitted to a motor vehicle as required by this rule so that a driver of the vehicle can clearly see by reflection the road behind the vehicle and any following or overtaking vehicle.
- (2) At least 1 rear vision mirror must be fitted to—
 - (a) a car; and
 - (b) a motor trike with 2 front wheels; and
 - (c) a motor bike, or motor trike with 1 front wheel, built before July 1975.
- (3) At least 1 rear vision mirror must be fitted to each side of—
 - (a) a motor vehicle with a GVM over 3.5 tonnes; and
 - (b) a motor bike, or motor trike with 1 front wheel, built after June 1975.
- (4) A motor vehicle with a GVM not over 3.5 tonnes (except a motor vehicle mentioned in subrule (2) or (3)) must be fitted with—
 - (a) at least 1 rear vision mirror on the right side of the vehicle; and
 - (b) at least 1 rear vision mirror on the left side of the vehicle or inside the vehicle.
- (5) A rear vision mirror fitted to a motor vehicle with a GVM over 3.5 tonnes must not project over 150 millimetres beyond the widest part (excluding lights, signalling devices and reflectors) of the vehicle or combination.
- (6) However, the rear vision mirror may project not over 230 millimetres beyond the widest part of the vehicle or combination if it can fold to project not over 150 millimetres beyond the widest part.

37—Rear vision mirrors—surfaces

- (1) A rear vision mirror required to be fitted to the side of a motor vehicle with a GVM over 3.5 tonnes must have a reflecting surface of at least 150 square centimetres.
- (2) The reflecting surface of the rear vision mirrors that are required to be fitted to a motor bike or moped must—
 - (a) each be of the same curvature; and
 - (b) if convex, be part of a notional sphere with a radius of at least 1.2 metres.

38—Additional rear vision mirrors

A motor vehicle may be fitted with additional rear vision mirrors or mirror surfaces that are flat or convex or a combination of flat and convex surfaces.

39—Automatic transmission

- (1) A motor vehicle fitted with an automatic transmission must have an engine starter mechanism that cannot operate when the transmission control is in a position to drive the vehicle.
- (2) A vehicle built after 1975 that is fitted with an automatic transmission must have an indicator in the driver's compartment showing the transmission control position.
- (3) Subrules (1) and (2) do not apply to a motor vehicle with less than 4 wheels.

40—Diesel engines

A motor vehicle propelled by a diesel engine must be fitted with a device preventing the engine from being started accidentally or inadvertently.

41—Bonnet securing devices

- (1) A motor vehicle with a moveable body panel forward of the windscreen that covers an engine or luggage storage or battery compartment, must have a device to secure the panel.
- (2) However, if the panel opens from the front in a way that partly or completely obstructs the driver's forward view through the windscreen, the panel must have primary and secondary devices to secure the panel.

42—Electrical wiring, components, connections and installations

- (1) The wiring of electrical equipment of a vehicle, except the high tension ignition wiring, must—
 - (a) be supported at intervals of not over 600 millimetres, unless the vehicle is a pole-type trailer with a pole with an adjustable length, or an extendible trailer; and
 - (b) be insulated at each of its joints; and
 - (c) be located where it cannot—
 - (i) become overheated; or
 - (ii) contact moving parts; or
 - (iii) come near enough to the fuel system to be a fire hazard; and
 - (d) be protected from chafing.
- (2) The electrical components of a vehicle must be securely mounted.
- (3) The electrical connectors between motor vehicles and trailers, for the operation of the vehicle lights required by the Light Vehicle Standards, must comply with at least 1 of the following standards:
 - Australian Standard AS 4177.5-2004 *Caravan and Light Trailer Towing Components—Electrical Wiring*
 - International Standards Organisation ISO 1185-1997
 - Society of Automotive Engineers SAE J 560-1998
 - Australian Standard AS 4735-2003 *Heavy road vehicles—Electrical connectors for articulated vehicles*.
- (4) A trailer must be equipped with an electrical conductor, independent of the trailer coupling, that provides a return path between the electrical circuits of the trailer and towing vehicle.

43—Television receivers and visual display units

- (1) A television receiver or visual display unit must not be installed in a vehicle so any part of the image on the screen is visible to the driver from the normal driving position.

- (2) However, subrule (1) does not apply to—
- (a) a television receiver or visual display unit that cannot be operated when the vehicle is moving; or
 - (b) a driver's aid in any vehicle or a destination sign in a bus.

Examples of driver's aids—

- (a) Closed-circuit television security cameras.
 - (b) Dispatch systems.
 - (c) Navigational or intelligent highway and vehicle system equipment.
 - (d) Rearview screens.
 - (e) Ticket-issuing machines.
 - (f) Vehicle monitoring devices.
- (3) A television receiver, or visual display unit, and its associated equipment in a vehicle must be securely mounted in a position that—
- (a) does not obscure the driver's view of the road; and
 - (b) does not impede the movement of a person in the vehicle.

44—Requirement for windscreen to be fitted

A motor vehicle (but not including a motor bike, a motor trike or a moped) must be fitted with a windscreen if it is manufactured or designed to have a windscreen.

45—Windscreens and windows

- (1) Transparent material used in a windscreen, window, or an interior partition, of a motor vehicle must be of approved material if—
- (a) the vehicle was built after June 1953; or
 - (b) the material was first fitted to the vehicle after June 1953.
- (2) In this rule—

approved material means material with the same characteristics as material mentioned in any of the following standards:

- (a) Australian Standard AS R1–1965 Safety Glass for Land Transport
- (b) Australian Standard AS R1–1968 Safety Glass for Land Transport
- (c) Australian Standard AS 2080–1977 Safety Glass for Vehicles
- (d) British Standard BS 857:1967 Specification for Safety Glass for Land Transport
- (e) British Standard BS 5282:1975 Specification for Road Vehicle Safety Glass
- (f) British Standard BS AU178:1980 Specification for Road Vehicle Safety Glass
- (g) Japanese Industrial Standard JIS R 3211–1979 Safety Glasses for Road Vehicles
- (h) American National Standard ANSI Z26.1–1980 Safety Code for Safety Glazing Materials for Glazing Motor Vehicles Operating on Land Highway;

transparent material does not include any coating added to the windscreen, window or partition after its manufacture.

46—Window tinting

- (1) Glazing used in a windscreen of a motor vehicle must have a luminous transmittance of at least—
 - (a) for a motor vehicle built after 1971—75%; or
 - (b) for another motor vehicle—70%.
- (2) Windscreen glazing of a motor vehicle must not be coated in a way that reduces its luminous transmittance.
- (3) However, subrules (1) and (2) do not apply to the greater of the following areas of a windscreen:
 - (a) the area above the highest point of the windscreen that is swept by a windscreen wiper;
 - (b) the upper 10% of the windscreen.
- (4) Glazing used in a window or interior partition of a motor vehicle must have a luminous transmittance of at least 70%.
- (5) Glazing behind the rear of the driver's seat may be coated to achieve a luminous transmittance of not less than 35%.
- (6) Glazing in a side window forward of the rear of the driver's seat may be coated to achieve a luminous transmittance of not less than 35%.
- (7) Glazing that has been coated to reduce its luminous transmittance must not have a reflectance of over 10%.
- (8) The luminous transmittance requirements in subrules (5) and (6) apply to a vehicle instead of the corresponding requirements in the relevant ADR.
- (9) In this rule—

glazing means material fitted to the front, sides, rear or interior of a vehicle, through which the driver can see the road, but does not include a coating added after manufacture of the material;

luminous transmittance, for glazing, means the amount of light that can pass through the glazing as a percentage of the amount of light that would be transmitted if the glazing were absent.

47—Windscreen wipers

- (1) A motor vehicle with 3 or more wheels that is fitted with a windscreen must be fitted with at least 1 windscreen wiper unless a driver in a normal driving position can obtain an adequate view of the road ahead of the motor vehicle without looking through the windscreen.
- (2) At least 1 windscreen wiper fitted to the motor vehicle must—
 - (a) be able to remove moisture from the part of the windscreen in front of the driver to allow the driver an adequate view of the road ahead of the motor vehicle when the windscreen is wet; and

- (b) be able to be operated from a normal driving position; and
- (c) for a motor vehicle built after 1934—continue to operate until the wiper is switched off; and
- (d) for a motor vehicle built after 1959 the driving position of which is nearer one side of the vehicle than the other—
 - (i) be able to remove moisture from the part of the windscreen in front of the driver, and a corresponding part of the windscreen on the other side of the centre of the motor vehicle, to allow the driver an adequate view of the road ahead of the motor vehicle when the windscreen is wet; and
 - (ii) if the windscreen wipers are operated by engine manifold vacuum—be provided with a vacuum reservoir or pump to maintain the efficient operation of the wiper or wipers while the vehicle is in motion.

48—Wheels and tyres—size and capacity

The wheels and tyres fitted to an axle of a vehicle must be of sufficient size and capacity to carry the part of the vehicle's gross mass transmitted to the ground through the axle.

49—Pneumatic tyres generally

A vehicle built after 1932 must be fitted with pneumatic tyres.

50—Pneumatic tyres—carcass construction

- (1) A vehicle must not have pneumatic tyres of different carcass construction fitted to the same axle, but the tyres may have different cord materials and a different number of plies.
- (2) However, subrule (1) does not apply to a tyre being used in an emergency as a temporary replacement for a tyre complying with the subrule.

51—Pneumatic tyres—size and capacity

The size and capacity of a pneumatic tyre to be fitted to a vehicle must be decided using a cold inflation pressure that is not more than the lesser of—

- (a) the pressure recommended by the tyre manufacturer; and
- (b) a pressure of—
 - (i) for a radial ply tyre—825 kilopascals; or
 - (ii) for another tyre—700 kilopascals.

52—Tyres—defects

A tyre fitted to a vehicle must be free of any apparent defect that could make the vehicle unsafe.

53—Tyres—manufacturer's rating

- (1) This rule applies to a motor vehicle if the vehicle—
 - (a) has 4 or more wheels; and

- (b) was built after 1972.
- (2) However, this rule does not apply to a tyre if the tyre—
 - (a) is recommended by the vehicle builder as suitable for limited use on the vehicle in special circumstances at a speed less than the speed applying to the vehicle under subrule (3); or
 - (b) is being used in an emergency as a temporary replacement for a tyre complying with this rule.
- (3) 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 lesser of—
 - (a) a speed of at least—
 - (i) for a car with special features for off-road use—140 kilometres an hour; or
 - (ii) for another car—180 kilometres an hour; or
 - (iii) for another motor vehicle—120 kilometres an hour; and
 - (b) the vehicle's top speed.

Example—

Example for paragraph (a)(i):

A four-wheel drive vehicle.

- (4) This rule applies to a vehicle instead of the tyre speed category requirements in the relevant ADR.

54—Retreads

- (1) A tyre that is retreaded before the commencement of this rule must not be used on a vehicle if—
 - (a) Australian Standard AS 1973–1976 Retreaded Pneumatic Passenger Car and Light Truck Tyre or Australian Standard AS 1973–1985 Retreaded Pneumatic Passenger Car and Light Truck Tyres applies to the tyre; and
 - (b) the tyre was retreaded after publication of the Australian Standard; and
 - (c) the tyre was not retreaded in accordance with Australian Standard AS 1973–1976 Retreaded Pneumatic Passenger Car and Light Truck Tyre, Australian Standard AS 1973–1985 Retreaded Pneumatic Passenger Car and Light Truck Tyres or Australian Standard AS 1973–1993 Pneumatic Tyres—Passenger Car, Light Truck and Truck/Bus—Retreading and Repair Processes.
- (2) A tyre that is retreaded after the commencement of this rule must not be used on a vehicle if—
 - (a) Australian Standard AS 1973–1993 Pneumatic Tyres—Passenger Car, Light Truck and Truck/Bus—Retreading and Repair Processes applies to the tyre; and
 - (b) the tyre was not retreaded in accordance with the Australian Standard.

Note—

The Australian Standards mentioned in this rule require various markings on retreaded tyres. These may include a speed rating less than the rating originally marked on the tyre.

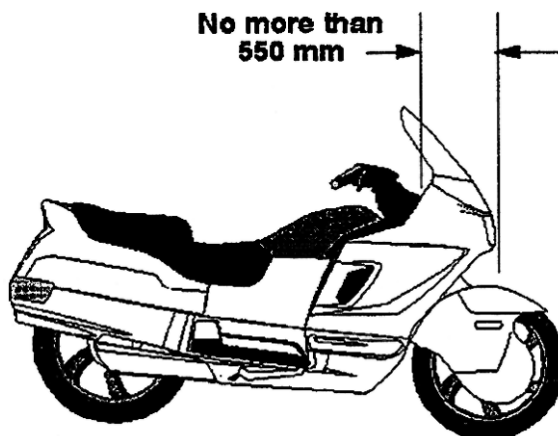
55—Tyre tread

- (1) A tyre on a motor vehicle must not have cleats or other gripping devices that could damage road surfaces.
- (2) Except at tread wear indicators, a tyre fitted to the vehicle must have a tread pattern at least 1.5 millimetres deep in a band that runs continuously—
 - (a) across the tyre width that normally comes into contact with the road; and
 - (b) around the whole circumference of the tyre.
- (3) A vehicle must not be fitted with a tyre that has been treated by recutting or regrooving the tread rubber, unless the tyre was—
 - (a) constructed with an extra thickness of rubber designed for recutting or regrooving; and
 - (b) labelled to indicate the construction.

Division 2—Additional requirements for motor bikes

56—Steering gear and handlebars

- (1) The handlebars on a motor bike must extend at least 250 millimetres, but not over 450 millimetres, on each side of the centre line of the vehicle.
- (2) In taking a measurement for subrule (1), mirrors and lights mounted on the handlebars of the motor bike are disregarded.
- (3) The lowest part of the hand grip on the handle bars must not be higher than 380 millimetres above the attachment point of the handlebars to the motor bike.
- (4) Hand grips on the handle bars must be fitted symmetrically.
- (5) If a motor bike has the head stem as the steering pivot point, the horizontal distance from the midpoint between the head stem bearings to the centre of the front wheel must not be over 550 millimetres.



Maximum horizontal distance from midpoint between head stem bearings of motor bike to
centre of front wheel

57—Foot rests

A motor bike must be fitted with foot rests for the driver, and for any passenger for whom a seating position is provided.

58—Chain guards

- (1) If the engine power of a motor bike is transmitted to the rear wheel by a chain, the driver and any passenger must be protected from the front sprocket and at least the upper part of the chain by—
 - (a) the frame or equipment of the motor bike; or
 - (b) a chain guard.
- (2) A chain guard must cover the chain to a point—
 - (a) at least 300 millimetres to the rear of the rearmost foot rest; or
 - (b) above the centre of the rear drive sprocket.

59—Sidecars

A sidecar on a motor bike must be positioned on the left hand side of the motor bike.

Part 6—Vehicle marking

Note—

This Part contains requirements for a vehicle that help to identify the vehicle and, if the vehicle is unusually long, to warn other motorists.

60—Vehicle and engine identification numbers

- (1) In this rule—
number includes letter.
- (2) A motor vehicle must have an individual engine identification number clearly stamped, embossed or otherwise permanently marked on it.
- (3) A motor vehicle built after 1930 must have the engine identification number on its engine block or the main component of its engine.
- (4) A vehicle must have an individual vehicle identification number clearly stamped, embossed or otherwise permanently marked on a substantial part of its frame or chassis.
- (5) A vehicle or engine identification number must be located where a person can read it easily without having to use tools to remove a part of the vehicle that would otherwise obstruct the person's view.

61—White or silver band on certain vehicles

- (1) This rule applies to a vehicle that—
 - (a) is at least 2.2 metres wide; and
 - (b) has a body with a vertical measurement under 300 millimetres at the rear, measured from the lowest point of the body above ground level to the highest point; and

- (c) is not fitted with rear marking plates.
- (2) For subrule (1)(a), the width of a vehicle is measured disregarding any anti-skid device mounted on wheels, central tyre inflation systems, lights, mirrors, reflectors, signalling devices and tyre pressure gauges.
- (3) The vehicle must have a white or silver band at least 75 millimetres high across the full width of the rearmost part of the body of the vehicle.

Part 7—Vehicle configuration and dimensions

Note—

This Part sets out various requirements covering the suspension on vehicles and size limits for single vehicles and combinations of vehicles, so that they can be operated safely with other traffic, without taking up too much road space or damaging the road and structures on the road.

Generally, the limits in this Part apply to a vehicle and any load it may be carrying.

Specific requirements for loaded vehicles are covered by other laws.

Division 1—Axles

62—Axle configuration

- (1) A motor vehicle must have only—
 - (a) 1 axle group, or single axle, towards the front of the vehicle; and
 - (b) 1 axle group, or single axle, towards the rear of the vehicle.
- (2) A trailer must have only—
 - (a) 1 axle group or single axle; or
 - (b) 2 axle groups, 2 single axles, or 1 axle group and single axle, in the following configuration:
 - (i) 1 axle group, or single axle, towards the front of the vehicle, with all the wheels on the axle group or single axle connected to the steering mechanism for that part of the trailer;
 - (ii) 1 axle group, or single axle, towards the rear of the vehicle.
- (3) A semi-trailer that is extendible, or is fitted with sliding axles, must—
 - (a) have a securing device that—
 - (i) can securely fix the extendible part or sliding axles to the rest of the vehicle in any position of adjustment provided; and
 - (ii) is located in a position that can prevent accidental or inadvertent release, if the device is mounted on the chassis of the vehicle; and
 - (iii) is fitted with a visible or audible warning system to indicate to a person standing beside the vehicle that the device is not engaged; and
 - (iv) is fitted with a way of preventing loss of air from the air brake supply, if the device uses air from the brake system and fails in a way allowing air to escape; and

- (v) is held in the applied position by direct mechanical action without the intervention of an electric, hydraulic or pneumatic device; and
- (b) be built so the adjustable parts of the vehicle remain connected if the securing device fails.

Division 2—Dimensions

63—Width

- (1) A vehicle must not be over 2.5 metres wide.
- (2) For subrule (1), the width of a vehicle is measured without taking into account any anti-skid device mounted on wheels, central tyre inflation systems, lights, mirrors, reflectors, signalling devices and tyre pressure gauges.

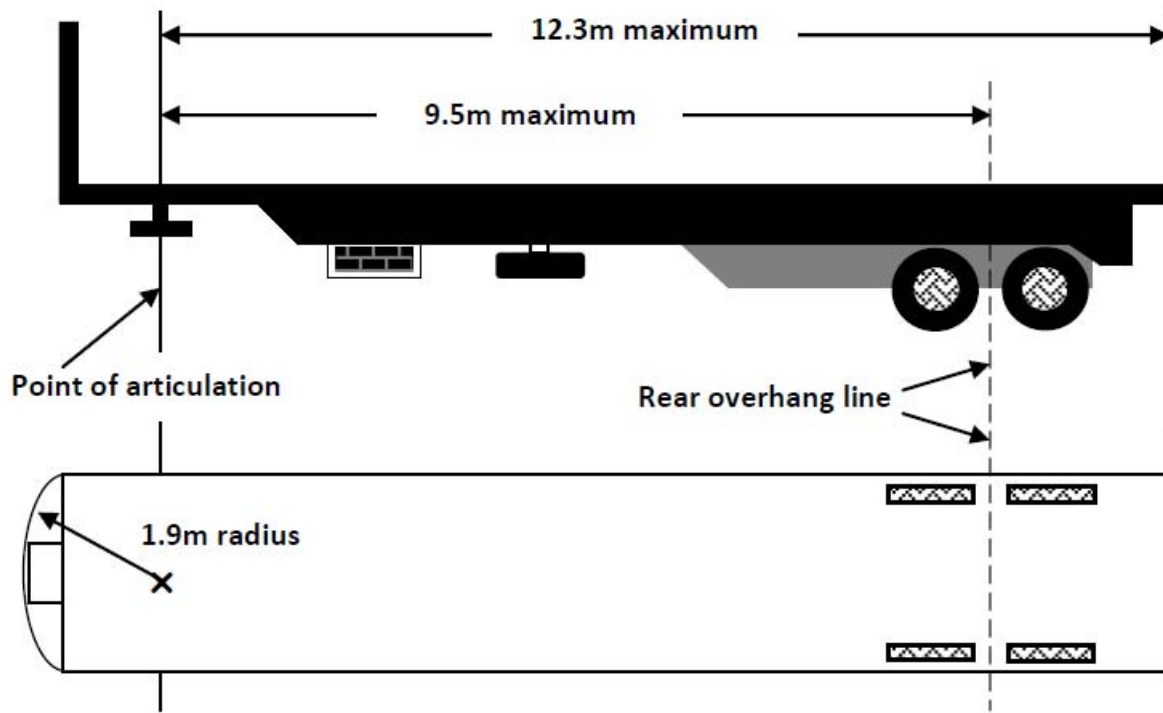
64—Length of single motor vehicles

A motor vehicle must not be over 12.5 metres long.

65—Length of single trailers

- (1) On a semi-trailer or a dog trailer—
 - (a) the distance between the point of articulation at the front of the trailer and the rear overhang line must not be over 9.5 metres; and
 - (b) the distance between the point of articulation at the front of the trailer and the rear of the trailer must not be over 12.3 metres.

- (2) A projection forward of the point of articulation at the front of a semi-trailer must be contained within a radius of 1.9 metres from the point of articulation.



Maximum dimensions of a semi-trailer

66—Length of combinations

A combination must not be over 19 metres long.

67—Rear overhang

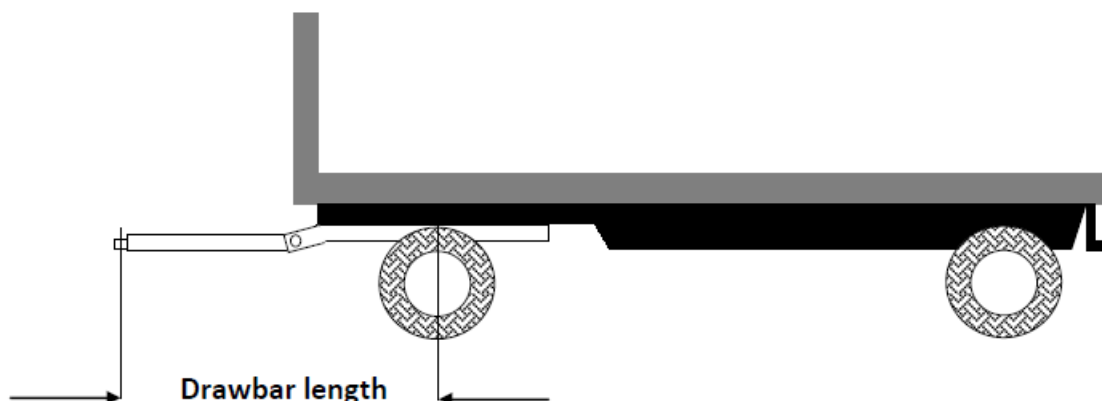
- (1) The rear overhang of a semi-trailer, or dog trailer consisting of a semi-trailer and converter dolly, must not exceed the lesser of—
- (a) 60% of the distance between the point of articulation at the front and the rear overhang line; and
 - (b) 3.7 metres.
- (2) The rear overhang of a trailer with only 1 axle group or single axle (except a semi-trailer) must not exceed the lesser of—
- (a) the length of the load carrying area ahead of the rear overhang line; and
 - (b) 3.7 metres.
- (3) The rear overhang of a vehicle not mentioned in subrule (1) or (2) must not exceed the lesser of—
- (a) 60% of the distance between the centre of the front axle and the rear overhang line; and
 - (b) 3.7 metres.

- (4) In this rule—

load carrying area, in relation to a trailer, means the part of the trailer on which a load may safely be carried, and may include the drawbar of the trailer.

68—Trailer drawbar length

- (1) The distance between the coupling pivot point on the drawbar of a dog trailer, and the centre line of the front axle group or of the front single axle of the trailer, must not be over 5 metres long.



Length of a drawbar on a dog trailer

- (2) The distance between the coupling pivot point on a drawbar, and the centre line of the axle group or single axle on a trailer with only 1 axle group or single axle (except a semi-trailer) must not be over 8.5 metres.

69—Height

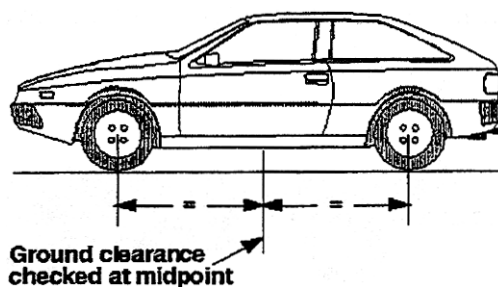
A vehicle must not be over 4.3 metres high.

70—Ground clearance

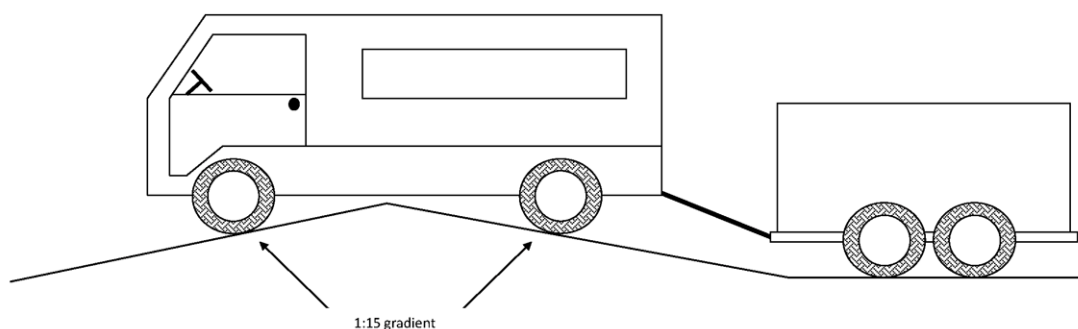
- (1) In this rule—

ground clearance, of a vehicle, means the minimum distance to the ground from a point on the underside of the vehicle, except a point on a tyre, wheel, wheel hub, brake backing plate or flexible mudguard or mudflap of the vehicle.

- (2) A motor vehicle or combination must have a ground clearance of—
- at least 100 millimetres 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; and
 - at any other point—at least the distance that allows the vehicle or combination 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 or combination are on the slope on 1 side of the peak and the wheels of the next axle are on the slope on the other side.



Ground clearance at the mid-point between 2 axles



Ground clearance over a peak in the road

- (3) However, subrule (2) does not apply to—
- (a) a motor vehicle with less than 4 wheels; or
 - (b) a combination that includes a motor vehicle with less than 4 wheels.

Part 8—Lights and reflectors

Note—

This Part deals with how the lights on a vehicle must be fitted and work so that the driver can see the road, pedestrians and other vehicles at night, and can signal to others.

Other laws provide for when certain lights must be switched on.

In this Part, the description "yellow" is used as a more modern term, instead of the description "amber" which is used in earlier legislation and some ADRs.

Division 1—General requirements for lights

71—Certain requirements apply only at night

The requirements of this Part for a light, except a brake or direction indicator light, to be visible over a stated distance apply only at night.

72—Prevention of glare

A light, except a high-beam headlight, fitted to a vehicle must be built and adjusted to provide the necessary amount of light, without dazzling the driver of another vehicle approaching, or being approached by, the vehicle.

73—Pairs of lights

- (1) If lights are required under the Light Vehicle Standards to be fitted to a vehicle in pairs—
 - (a) a light must be fitted on each side of the longitudinal axis of the vehicle; and
 - (b) the centre of each light in a pair must be the same distance from the longitudinal axis of the vehicle; and
 - (c) the centre of each light in a pair must be at the same height above ground level; and
 - (d) each light in a pair must project approximately the same amount of light of the same colour.
- (2) Subrule (1) applies to a motor bike with an attached sidecar as if the sidecar were not attached.

Division 2—Headlights

74—Headlights to be fitted to vehicles

- (1) A motor vehicle must be fitted with—
 - (a) 1 low-beam headlight if it is a moped, motor bike, or motor trike with 1 front wheel; or
 - (b) a pair of low-beam headlights if it has 4 or more wheels or is a motor trike, except a moped, with 2 front wheels.
- (2) If a motor vehicle built after 1934 can travel at over 60 kilometres an hour—
 - (a) each low-beam headlight mentioned in subrule (1) must be able to work in the high-beam position; or
 - (b) the vehicle must be fitted with—
 - (i) 1 headlight that can work in the high-beam position if the vehicle is required to have 1 low-beam headlight; or
 - (ii) a pair of headlights that can work in the high-beam position.
- (3) A motor bike may be equipped with a headlight modulation system that—
 - (a) varies the brightness of its high-beam headlight or low-beam headlight, but not both, at a rate of at least 200 and at most 280 flashes a minute; and
 - (b) is designed to operate only in the daylight.
- (4) Additional headlights may be fitted to a motor bike or motor trike, or a motor vehicle with 4 or more wheels that was built before 1970.
- (5) Additional pairs of headlights may be fitted to a motor vehicle with 4 or more wheels that was built after 1969.

75—How headlights are to be fitted

- (1) The centres of low-beam headlights fitted as a pair on a motor vehicle with 4 or more wheels must be at least 600 millimetres apart.

- (2) However, subrule (1) does not apply to a motor vehicle built before 1970 if the centres of its low-beam headlights—
 - (a) were under 600 millimetres apart when the vehicle was built; and
 - (b) are not nearer than they were when the vehicle was built.
- (3) Each low-beam headlight of a pair on a motor trike (except a moped) with 2 front wheels must not be over 400 millimetres from the nearer side of the vehicle.
- (4) The centre of a low-beam headlight fitted to a motor vehicle built after June 1953 must be—
 - (a) at least 500 millimetres above ground level; and
 - (b) not over 1.4 metres above ground level.

76—How single headlights are to be fitted

- (1) A motor bike or trike with a single headlight fitted must have the light fitted in the centre.
- (2) Subrule (1) applies to a motor bike with an attached sidecar as if the sidecar were not attached.

77—How additional headlights are to be fitted

If 2 or more additional headlights are fitted to a motor vehicle with 4 or more wheels, the additional headlights must as far as possible be fitted in pairs.

78—Performance of headlights

- (1) When on, a headlight, or additional headlight, fitted to a vehicle must—
 - (a) show only white light; and
 - (b) project its main beam of light ahead of the vehicle.
- (2) Headlights must be fitted to a vehicle so their light does not reflect off the vehicle into the driver's eyes.

79—Effective range of headlights

- (1) This rule applies to a headlight that is on at night.
- (2) A low-beam headlight must illuminate the road ahead of the vehicle for at least 25 metres.
- (3) A high-beam headlight must illuminate the road ahead of the vehicle for at least 50 metres.
- (4) However, a low-beam headlight fitted to a motor vehicle built before 1931, or a moped, need only illuminate the road ahead of the vehicle for 12 metres.

80—Changing headlights from high-beam to low-beam position

- (1) A motor vehicle built after 1934 that can travel at over 60 kilometres an hour must be fitted with—
 - (a) a dipping device enabling the driver in the normal driving position—
 - (i) to change the headlights from the high-beam position to the low-beam position; or

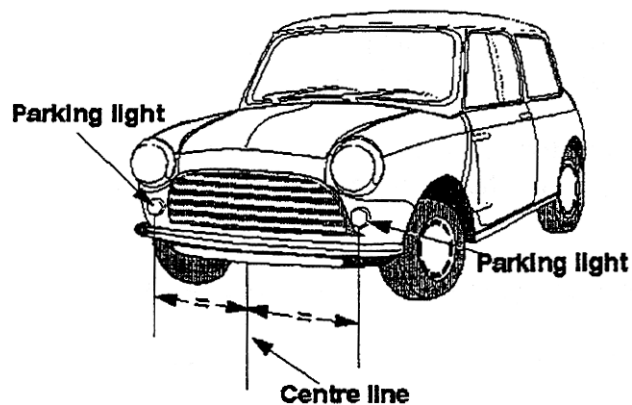
- (ii) simultaneously to switch off a high-beam headlight and switch on a low-beam headlight; and
 - (b) for a vehicle built after June 1953—a device to indicate to the driver that the headlights are in the high-beam position.
- (2) A headlight fitted to a vehicle not fitted with a dipping device mentioned in subrule (1)(a) must operate in the low-beam position.
- (3) When a headlight fitted to a vehicle is switched to the low-beam position, any other headlight on the vehicle must operate only in the low-beam position or be off.

Division 3—Parking lights

81—Parking lights

- (1) A motor vehicle built after June 1953 must be fitted with—
 - (a) a pair of parking lights if it is a motor trike with 2 front wheels (except a moped) or a motor vehicle with 4 or more wheels; or
 - (b) at least 1 parking light if it is a motor bike with an attached sidecar, or a motor trike with 1 front wheel, (except a moped).
- (2) A pair of parking lights fitted to a motor vehicle with 4 or more wheels must be fitted with the centre of each light—
 - (a) at least 600 millimetres from the centre of the other light; and
 - (b) not over 510 millimetres from the nearer side of the vehicle.
- (3) However, a pair of parking lights fitted to a motor vehicle under 1300 millimetres wide may be fitted with the centre of each light not under 400 millimetres from the centre of the other light.
- (4) A parking light fitted to a motor trike with 2 front wheels must not be over 400 millimetres from the nearer side of the vehicle.
- (5) A parking light fitted to a motor bike with a sidecar must be fitted not over 150 millimetres from the side of the sidecar furthest from the motor bike.
- (6) When on, a parking light must—
 - (a) show a white or yellow light visible 200 metres from the front of the vehicle; and
 - (b) not use over 7 watts power.
- (7) A parking light fitted to a motor vehicle built after 1969 must be wired so the parking light is on when a headlight on the vehicle is on.
- (8) A parking light fitted to a sidecar attached to a motor bike must be wired to operate when a headlight, tail light or parking light on the motor bike is on.

- (9) For subrule (3), the width of a vehicle is measured disregarding any anti-skid device mounted on wheels, central tyre inflation systems, lights, mirrors, reflectors, signalling devices and tyre pressure gauges.



Location of parking lights on a vehicle

Division 4—Daytime running lights

82—Daytime running lights

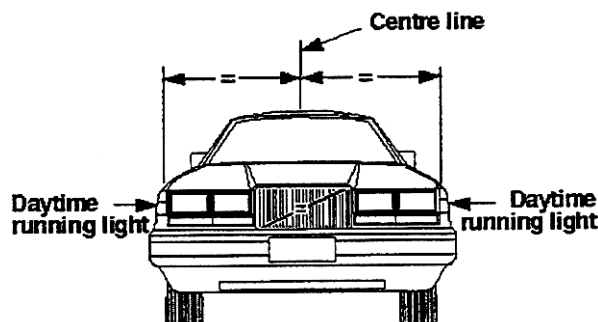
- (1) A pair of daytime running lights may be fitted to a motor vehicle.
- (2) A pair of daytime running lights fitted to a vehicle with 4 or more wheels must be fitted with the centre of each light—
- (a) at least 600 millimetres from the centre of the other light; and
 - (b) not over 510 millimetres from the nearer side of the vehicle.
- (3) However, a pair of daytime running lights fitted to a motor vehicle under 1300 millimetres wide may be fitted with the centre of each light not under 400 millimetres from the centre of the other light.
- (4) When on, a daytime running light must—
- (a) show a white or yellow light visible from the front of the vehicle; and
 - (b) not use over 25 watts power.

Note—

The third edition ADRs only allow white daytime running lights.

- (5) Daytime running lights must be wired so they are off when a headlight, except a headlight being used as a flashing signal, is on.

- (6) For subrule (3), the width of a vehicle is measured disregarding any anti-skid device mounted on wheels, central tyre inflation systems, lights, mirrors, reflectors, signalling devices and tyre pressure gauges.



Location of daytime running lights on a vehicle

Division 5—Tail lights

83—Tail lights generally

- (1) A vehicle must have at least 1 tail light fitted on or towards the rear of the vehicle.
- (2) A motor trike with 2 rear wheels, or a motor vehicle with 4 or more wheels, built after 1959 must have at least 1 tail light fitted on or towards each side of the rear of the vehicle.
- (3) A trailer built after June 1973 must have at least 1 tail light fitted on or towards each side of the rear of the vehicle.
- (4) The centre of a tail light mentioned in subrule (1), (2) or (3) must not be over—
 - (a) 1.5 metres above ground level; or
 - (b) if it is not practicable to fit the light lower—2.1 metres above ground level.
- (5) A vehicle may have 1 or more additional tail lights at any height above ground level.

84—Pattern of fitting tail lights

- (1) If only 1 tail light is fitted to a vehicle, it must be fitted in the centre or to the right of the centre of the vehicle's rear.
- (2) Subrule (1) applies to a motor bike with an attached sidecar as if the sidecar were not attached.
- (3) If 2 or more tail lights are fitted to a vehicle, at least 2 must be fitted as a pair.
- (4) Tail lights fitted in accordance with this Division may also serve as rear clearance lights if they are fitted to a vehicle in accordance with rule 90(3).

85—Performance of tail lights

- (1) When on, a tail light of a vehicle must—
 - (a) show a red light visible 200 metres from the rear of the vehicle; and
 - (b) not use over 7 watts power.
- (2) A tail light fitted to a street rod vehicle may incorporate a blue lens not over 20 millimetres in diameter.

86—Wiring of tail lights

A tail light of a motor vehicle must be wired to come on, and stay on, when a parking light or headlight on the vehicle is on, unless an external switch is fitted to operate the tail light.

Division 6—Number plate lights

87—Number plate lights

- (1) At least 1 number plate light must be fitted to the rear of a vehicle.
- (2) When on, the number plate light or lights must illuminate a number plate on the rear of the vehicle with white light, so the characters on the number plate can be read at night 20 metres from the rear of the vehicle.
- (3) A number plate light—
 - (a) may be combined with another light; and
 - (b) must not project white light to the rear of the vehicle except by reflection; and
 - (c) must not obscure the characters on the number plate; and
 - (d) must be wired to come on, and stay on, when a parking light, headlight or tail light on the vehicle is on.

Division 7—Clearance lights

88—Front clearance lights

- (1) Front clearance lights may only be fitted to a vehicle that is at least 1.8 metres wide.
- (2) A pair of front clearance lights must be fitted to a motor vehicle that is at least 2.2 metres wide, or a prime mover.
- (3) The centre of a front clearance light must be—
 - (a) not over 400 millimetres from the nearer side of the vehicle; and
 - (b) if the vehicle was built after June 1953—
 - (i) at least 750 millimetres higher than the centre of any low-beam headlight fitted to the vehicle; or
 - (ii) not lower than the top of the windscreen.
- (4) However, a front clearance light may be mounted on an external rear vision mirror or a mirror support if, when the mirror is correctly adjusted, no part of the lens of the clearance light is visible to a person in the normal driving position.
- (5) When on, a front clearance light must—
 - (a) show a yellow or white light visible 200 metres from the front of the vehicle; and
 - (b) not use over 7 watts power.

89—External cabin lights

- (1) A motor vehicle fitted with front clearance lights may also have additional forward-facing lights on or above the roof of its cabin.
- (2) The additional forward-facing lights must be spaced evenly between the front clearance lights, with their centres at least 120 millimetres apart.
- (3) When on, an additional forward-facing light must—
 - (a) show a yellow or white light; and
 - (b) not use over 7 watts power.

90—Rear clearance lights

- (1) Rear clearance lights may only be fitted to a vehicle that is at least 1.8 metres wide.
- (2) A pair of rear clearance lights must be fitted to the rear of a vehicle that is at least 2.2 metres wide.
- (3) The centre of a rear clearance light must be—
 - (a) not over 400 millimetres from the nearer side of the vehicle; and
 - (b) if practicable, at least 600 millimetres above ground level.
- (4) When on, a rear clearance light must—
 - (a) show a red light visible 200 metres from the rear of the vehicle; and
 - (b) not use over 7 watts power.

Division 8—Side marker lights

91—Vehicles needing side marker lights

- (1) A pair of side marker lights must be fitted towards the rear of the sides of a motor vehicle that is over 7.5 metres long and at least 2.2 metres wide.
- (2) A pole-type trailer, and a motor vehicle built to tow a pole-type trailer, with at least 1 cross-bar or bolster must have a side marker light fitted to each side of the back or only cross-bar or bolster.
- (3) A pole-type trailer with 2 or more cross-bars or bolsters may also have a side marker light fitted to each side of the front cross-bar or bolster.
- (4) At least 2 side marker lights must be fitted to each side of—
 - (a) a trailer, except a pole-type trailer, that is at least 2.2 metres wide and not over 7.5 metres long; and
 - (b) a semi-trailer that is not over 7.5 metres long.
- (5) At least 3 side marker lights must be fitted to each side of—
 - (a) a trailer, except a pole-type trailer, that is at least 2.2 metres wide and over 7.5 metres long; and
 - (b) a semi-trailer that is over 7.5 metres long.

- (6) For subrules (1), (4) and (5), the width of a vehicle is measured disregarding any anti-skid device mounted on wheels, central tyre inflation systems, lights, mirrors, reflectors, signalling devices and tyre pressure gauges.

92—Location of side marker lights

- (1) The centre of a side marker light must not be over 150 millimetres from the nearer side of the vehicle.
- (2) A front side marker light fitted to a motor vehicle must be towards the front of the side of the vehicle with no part of the lens visible to the driver.
- (3) The centre of a front side marker light fitted to a trailer must be—
- (a) within 300 millimetres of the front of the side of the trailer; or
 - (b) if the construction of the trailer makes it impracticable to comply with paragraph (a)—as near as practicable to the front of the trailer.
- (4) The centre of a rear side marker light fitted to a vehicle must be—
- (a) within 300 millimetres of the rear of the side of the vehicle; or
 - (b) if the construction of the vehicle makes it impracticable to comply with paragraph (a)—as near as practicable to the rear of the vehicle.
- (5) Side marker lights fitted to a vehicle must, as far as practicable, be evenly spaced along the side of the vehicle.
- (6) Subrules (2) to (5) do not apply to side marker lights fitted to a cross-bar or bolster of a pole-type trailer.
- (7) Only the side marker lights nearest to the rear need be fitted if complying with subrules (3) and (4) would result in the front and rear side marker lights being under 2.5 metres apart.
- (8) A side marker light fitted to a vehicle must be fitted so—
- (a) its centre is not over—
 - (i) 1.5 metres above ground level; or
 - (ii) if it is not practicable to fit it lower—2.1 metres above ground level; and
 - (b) its centre is at least 600 millimetres above ground level; and
 - (c) it is, as far as practicable, in a row of side marker lights along the side of the vehicle.
- (9) Subrule (8)(a) does not apply to a side marker light that is not required to be fitted to the vehicle by rule 91.

93—Performance of side marker lights

- (1) When on, a side marker light fitted to a vehicle must—
- (a) show a light visible 200 metres from the vehicle; and
 - (b) not use over 7 watts power.

- (2) When on, a side marker light fitted to a vehicle must show—
 - (a) to the front of the vehicle—a yellow light; and
 - (b) to the rear of the vehicle—
 - (i) if the light also operates as a rear light or reflector—a red light; and
 - (ii) in any other case—a red or yellow light.
- (3) However, if a pole-type trailer with 2 or more cross-bars or bolsters has the side marker lights permitted by rule 91(3)—
 - (a) the side marker lights fitted to the front cross-bar or bolster may comply with subrule (2)(a) only; and
 - (b) the side marker lights fitted to the back cross-bar or bolster may comply with subrule (2)(b) only.

94—Side marker lights and rear clearance lights

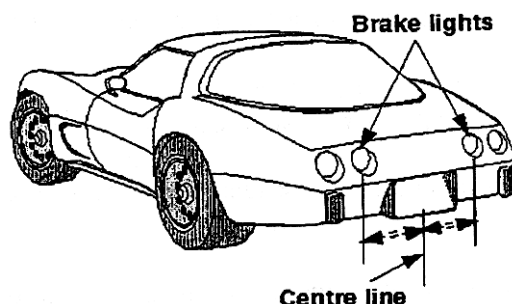
The side marker light nearest to the rear of a vehicle may also be a rear clearance light for rule 90.

Division 9—Brake lights

95—Fitting brake lights

- (1) A brake light must be fitted to the rear of a vehicle built after 1934.
- (2) A pair of brake lights must be fitted to the rear of—
 - (a) a motor vehicle built after 1959 that has 4 or more wheels; and
 - (b) a motor trike built after 1959 that has 2 rear wheels; and
 - (c) a trailer built after June 1973.
- (3) The centre of a brake light must be—
 - (a) at least 350 millimetres above ground level; and
 - (b) not over—
 - (i) 1.5 metres above ground level; or
 - (ii) if it is not practicable to fit the light lower—2.1 metres above ground level.
- (4) A vehicle may be fitted with 1 or more additional brake lights.
- (5) The centre of an additional brake light must be at least 350 millimetres above ground level.
- (6) If only 1 brake light is fitted to a vehicle, it must be fitted in the centre or to the right of the centre of the vehicle's rear.

- (7) Subrule (6) applies to a motor bike with an attached sidecar as if the sidecar were not attached.



Location of brake lights on a vehicle

96—Performance and operation of brake lights

- (1) When on, a brake light must show a red light visible 30 metres from the rear of the vehicle.
- (2) A brake light fitted to a street rod vehicle may incorporate a blue lens not over 20 millimetres in diameter.
- (3) A brake light fitted to a motor vehicle must come on, if it is not already on, when—
 - (a) for a vehicle with 4 or more wheels or built after 1974—a service brake is applied; or
 - (b) for another vehicle—the rear wheel brake is applied.
- (4) Subrule (3) does not apply if the controls in the vehicle that start the engine are in a position that makes it impossible for the engine to operate.
- (5) A brake light on a trailer must come on when—
 - (a) the brake light of the towing vehicle comes on; or
 - (b) a brake control on the towing vehicle, which independently activates the service brake on the trailer, is operated.
- (6) A brake light may be operated by an engine brake, retarder, or similar device if the device does not interfere with the proper operation of the brake light.

Division 10—Reversing lights

97—Reversing lights

- (1) One or more reversing lights may be fitted to the rear of a vehicle and on each side towards the rear of the vehicle.
- (2) A reversing light must have its centre not over 1.2 metres above ground level.
- (3) When on, a reversing light must show a white or yellow light to the rear or to the side and rear of the vehicle.

Note—

Third edition ADRs only allow white reversing lights.

- (4) A reversing light fitted to a motor vehicle must be wired so it operates only when the vehicle is reversing or in reverse gear.

- (5) A reversing light fitted to a trailer must be wired so it operates only when a motor vehicle towing the trailer is reversing or in reverse gear.
- (6) A yellow reversing light may also operate as a direction indicator light.

Division 11—Direction indicator lights

98—Direction indicator lights on motor vehicles

- (1) A motor vehicle with 4 or more wheels that was built after August 1966 must have—
 - (a) a pair of direction indicator lights fitted on, or towards, its front that face forwards; and
 - (b) a pair of direction indicator lights fitted on, or towards, its rear that face backwards.
- (2) A motor vehicle with less than 4 wheels that was built after June 1975 must have—
 - (a) a pair of direction indicator lights fitted on, or towards, its front that face forwards; and
 - (b) a pair of direction indicator lights fitted on, or towards, its rear that face backwards.
- (3) A motor vehicle that is not required to have direction indicator lights may have—
 - (a) 1 or more pairs of direction indicator lights that are visible from both the front and rear of the vehicle; or
 - (b) both—
 - (i) a pair of direction indicator lights fitted on, or towards, its front that face forwards; and
 - (ii) a pair of direction indicator lights fitted on, or towards, its rear that face backwards.

99—Direction indicator lights on trailers

- (1) A trailer built after June 1973 must have a pair of direction indicator lights fitted on, or towards, its rear that face backwards.
- (2) A trailer that is not required to have direction indicator lights may have 1 or more pairs of direction indicator lights fitted on, or towards, its rear that face backwards.

100—Location of direction indicator lights

- (1) A pair of direction indicator lights fitted to a vehicle must have the centre of each light at least—
 - (a) for a motor bike or the single wheel end of a motor trike—300 millimetres from the centre of the other light; and
 - (b) for lights fitted at the 2 wheel end of a motor trike—600 millimetres from the centre of the other light, unless the centre of each direction indicator light is not over 400 millimetres from the nearer side of the vehicle; and
 - (c) for another vehicle with a width of not over 1300 millimetres—400 millimetres from the centre of the other light; and

- (d) for another vehicle with a width of over 1300 millimetres—600 millimetres from the centre of the other light.
- (2) The centre of each direction indicator light must be at least 350 millimetres above ground level.
- (3) The centre of each light in a pair of direction indicator lights required to be fitted to a vehicle must not be over—
 - (a) 1.5 metres above ground level; or
 - (b) if it is not practicable for the light to be fitted lower—2.1 metres above ground level.
- (4) For subrule (1), the width of a vehicle is measured disregarding any anti-skid device mounted on wheels, central tyre inflation systems, lights, mirrors, reflectors, signalling devices and tyre pressure gauges.

101—Operation and visibility of direction indicator lights

- (1) A direction indicator light fitted to a motor vehicle must—
 - (a) when operating, display regular flashes of light at a rate of not over 120, and—
 - (i) for a motor vehicle with 4 or more wheels—at least 60, flashes a minute; and
 - (ii) for another motor vehicle—at least 45, flashes a minute; and
 - (b) be able to be operated by a person in the normal driving position; and
 - (c) be wired to an audible or visible device in the vehicle that tells the driver that the direction indicator light is operating; and
 - (d) flash at the same time and rate as any other direction indicator lights fitted on the same side of the vehicle.
- (2) A direction indicator light fitted to a side of a trailer must, when operating, flash at the same time and rate as the direction indicator light or lights fitted to the same side of the motor vehicle towing the trailer.
- (3) The flashes of light displayed by a direction indicator light must be—
 - (a) if the light faces forwards—white or yellow; and
 - (b) if the light faces backwards—
 - (i) yellow; or
 - (ii) for a vehicle built before July 1973—yellow or red; and
 - (c) if the light faces out from the side of the vehicle—
 - (i) white or yellow towards the front and side; and
 - (ii) for a vehicle built before July 1973—yellow or red towards the rear and side; and
 - (iii) for a vehicle built after June 1973—yellow towards the rear and side.

Note—

The ADRs only allow yellow direction indicator lights.

- (4) If a motor vehicle's direction indicator lights display only yellow light, the vehicle may be equipped to allow the lights to operate simultaneously on both sides of the vehicle, if a visible or audible signal tells the driver when the lights are operating simultaneously.
- (5) When on, a direction indicator light must be visible 30 metres from—
 - (a) if the light faces forwards—the front of the vehicle; or
 - (b) if the light faces backwards—the rear of the vehicle; or
 - (c) if the light faces out from the side of the vehicle—that side of the vehicle.
- (6) When on, each direction indicator light in at least 1 pair of lights fitted on or towards the front of a prime mover, or a motor vehicle over 7.5 metres long, must be visible at a point—
 - (a) 1.5 metres at right angles from the side of the vehicle where the light is fitted; and
 - (b) in line with the rear of the vehicle.

Division 12—Fog lights

102—Front fog lights

- (1) A pair of front fog lights may be fitted to a motor vehicle with 4 or more wheels.
- (2) A pair of front fog lights, or a single front fog light, may be fitted to a motor bike or trike.
- (3) A pair of front fog lights fitted to a motor vehicle with 4 or more wheels must have the centre of each light not over 400 millimetres from the nearer side of the vehicle unless the centres of the lights are at least 600 millimetres apart.
- (4) If the top of the front fog light is higher than the top of any low-beam headlight on the vehicle, the centre of the fog light must not be higher than the centre of the low-beam headlight.
- (5) A front fog light must—
 - (a) when on—
 - (i) project white or yellow light in front of the vehicle; and
 - (ii) be a low-beam light; and
 - (b) be able to be operated independently of any headlight; and
 - (c) be fitted so the light from it does not reflect off the vehicle into the driver's eyes.

103—Rear fog lights

- (1) A vehicle may have fitted to its rear—
 - (a) a pair of rear fog lights; or
 - (b) 1 rear fog light fitted on, or to the right, of the centre of the vehicle.
- (2) Subrule (1)(b) applies to a motor bike with an attached sidecar as if the sidecar were not attached.

- (3) A rear fog light must—
- (a) have its centre—
 - (i) not over 1.5 metres above ground level; and
 - (ii) at least 100 millimetres from the centre of a brake light; and
 - (b) when on, project red light behind the vehicle; and
 - (c) not use over 27 watts power; and
 - (d) be wired to a visible device in the vehicle that tells the driver that the rear fog light is operating.

Division 13—Interior lights

104—Interior lights

A vehicle may be fitted with interior lights that illuminate any interior part of the vehicle.

Division 14—Reflectors generally

105—General requirements for reflectors

- (1) A reflector fitted to a vehicle must show a red, yellow or white reflection of light when light is projected directly onto the reflector at night by a low-beam headlight that—
- (a) is 45 metres from the reflector; and
 - (b) complies with the Light Vehicle Standards.
- (2) The reflection must be clearly visible from the position of the headlight.

Division 15—Rear reflectors

106—Rear reflectors

- (1) A motor vehicle with 4 or more wheels, and a trailer, must have a rear-facing red reflector towards each side of its rear.
- (2) A motor bike, a sidecar attached to a motor bike, and a motor trike, must have a rear-facing red reflector.
- (3) The centre of each reflector must be—
- (a) at the same height above ground level; and
 - (b) not over 1.5 metres above ground level.
- (4) However, subrule (3) does not apply to a reflector fitted to a sidecar attached to a motor bike.
- (5) A reflector fitted to a motor vehicle with 4 or more wheels, or a trailer, must not be over 400 millimetres from the nearer side of the vehicle.
- (6) A vehicle fitted with rear-facing red reflectors in accordance with subrule (1) or (2) may be fitted with additional red reflectors at any height above ground level or at any distance from the side of the vehicle.

Division 16—Side reflectors

107—Compulsory side reflectors on pole-type trailers

- (1) Yellow or red side-facing reflectors must be fitted to the pole of a pole-type trailer so—
 - (a) 1 reflector is fitted to the middle third of the left and right faces of the pole; and
 - (b) the front reflector is not over 3 metres from the front of the trailer; and
 - (c) the other reflectors are not over 3 metres apart.
- (2) Additional side-facing reflectors may be fitted to a pole-type trailer in accordance with rule 108.

108—Optional side reflectors

- (1) A vehicle may be fitted with side-facing reflectors.
- (2) A side-facing reflector—
 - (a) towards the front of the vehicle must be yellow or white; and
 - (b) towards the rear of the vehicle must be yellow or red; and
 - (c) on the central part of the vehicle must be yellow.

Division 17—Front reflectors

109—Compulsory front reflectors on trailers

- (1) A front-facing white or yellow reflector must be fitted towards each side of the front of—
 - (a) a semi-trailer, except a pole-type trailer; and
 - (b) the front cross-bar or bolster of a pole-type trailer; and
 - (c) a trailer that is at least 2.2 metres wide.
- (2) Each reflector must have its centre—
 - (a) at the same height above ground level; and
 - (b) not over 1.5 metres above ground level; and
 - (c) not over 400 millimetres from the nearer side of the vehicle.
- (3) Additional front-facing reflectors may be fitted to a trailer mentioned in subrule (1) in accordance with rule 110.

110—Optional front reflectors

- (1) A motor vehicle with 4 or more wheels, or a trailer, may have 1 or more front-facing white or yellow reflectors fitted towards each side of its front.
- (2) A motor vehicle with less than 4 wheels may have 1 or more front-facing white or yellow reflectors.

- (3) The centre of at least 1 reflector on each side of the front of the vehicle must be—
 - (a) at the same height above ground level as the centre of the other reflector; and
 - (b) the same distance from the longitudinal axis of the vehicle as the centre of the other reflector; and
 - (c) at least—
 - (i) for a vehicle with a width under 1300 millimetres—400 millimetres from the centre of the other reflector; and
 - (ii) for another vehicle—600 millimetres from the centre of the other reflector.
- (4) For subrule (3)(c), the width of a vehicle is measured disregarding any anti-skid device mounted on wheels, central tyre inflation systems, lights, mirrors, reflectors, signalling devices and tyre pressure gauges.

Division 18—Warning lights and signs on buses carrying children

111—Application of division

This division applies to a bus that is used mainly for carrying children if the bus is fitted with warning lights after June 1999.

Note—

For warning signs and lights fitted before July 1999—see rule 115.

112—Fitting of warning lights and signs

- (1) Two warning lights and a warning sign must be fitted to the front and rear of the bus.
- (2) The warning lights must be fitted—
 - (a) on each side of, and the same distance from, the centre of the warning sign; and
 - (b) with the edge of the warning sign not over 100 millimetres from the nearest point on the lens of the warning lights; and
 - (c) with the distance between the warning lights at least 300 millimetres at the nearest point; and
 - (d) so no part of the bus obstructs the light displayed—
 - (i) 30° to the left and right of the centre of each light; and
 - (ii) 10° above and below the centre of each light.
- (3) The warning lights may be on the warning sign if the words or image on the sign are not obscured.
- (4) The warning lights at the same end of the bus must be fitted—
 - (a) at the same height; and
 - (b) as high as practicable; and
 - (c) with the lowest point on the lens of each light not lower than midway between the highest and lowest points on the bus body.

- (5) If the centres of the warning lights are under 1.8 metres above ground level, no part of the warning lights or warning sign may be on the left of the bus.
- (6) This rule applies to a bus despite any requirement of a third edition ADR.

113—Operation and performance of warning lights

- (1) When operating, a warning light must display regular flashes of yellow light at a rate of at least 90, and not over 180, flashes a minute.
- (2) The warning lights at the same end of the bus must flash alternately.
- (3) Unless the driver has turned the warning lights off, they must operate automatically when a door on the bus opens and for at least 10, and not over 20, seconds after all the doors on the bus have closed.
- (4) The bus must have a visible or audible signal that tells the driver when the warning lights are operating.
- (5) The bus must be fitted with a switch that allows the driver to turn the warning lights off.
- (6) A warning light must have—
 - (a) an effective lit lens area of at least 60 square centimetres; and
 - (b) a luminous intensity (in candela) of at least the values mentioned in the following table when measured at the angles mentioned in the table.

Vertical angle from centre of light	Horizontal angle from centre of light								
	-30°	-20°	-10°	-5°	0°	5°	10°	20°	30°
10°				50	80	50			
5°		180	320	350	450	350	320	180	
0°	75	450	1000	1250	1500	1250	1000	450	75
-5°	40	270	450	570	600	570	450	270	40
-10°				75	75	75			

- (7) For subrule (6)(b), the luminous intensity of a light is to be measured in accordance with the test method mentioned in third edition ADR 6.

114—Specifications for warning signs

- (1) A warning sign at the front of the bus must—
 - (a) display the words "school bus" in capital letters at least 100 millimetres high; or
 - (b) display an image of 2 children in the same proportions as the children in AS 1743 Road Signs—Specifications (image W6-3), with the image of the taller child at least 230 millimetres high.
- (2) A warning sign at the rear of the bus must display an image of 2 children in the same proportions as the children in AS 1743 Road Signs—Specifications (image W6-3), with the image of the taller child at least 230 millimetres high.

- (3) The warning sign mentioned in subrules (1)(b) and (2) must—
- (a) be a rectangular shape at least—
 - (i) if warning lights are on the warning sign—550 millimetres wide and 400 millimetres high; and
 - (ii) in any other case—400 millimetres wide and 250 millimetres high; and
 - (b) have a black border; and
 - (c) have black graphics and be coated with yellow retro-reflective material of class 1 or 2 that meets Australian/New Zealand Standard AS/NZS 1906.1:1993 Retroreflective Materials and Devices for Road Traffic Control Purposes.

Division 19—Other lights, reflectors, rear marking plates or signals

115—Other lights and reflectors

- (1) In this rule—

exempt vehicle means—

- (a) a police vehicle; or
- (b) an emergency vehicle;

special use vehicle means—

- (a) a vehicle built, fitted or acquired for a special use that when so used may result in a hazardous situation on a road; or
- (b) a vehicle, or combination, that because of its dimensions is permitted to be driven on a road only in accordance with an exemption under section 163AA of the Act; or
- (c) a vehicle built or fitted to accompany a vehicle, or combination, mentioned in paragraph (b); or
- (d) a bus fitted, before July 1999, with a sign telling road users that the bus carries children.

Examples of special use vehicles to which paragraph (a) applies—

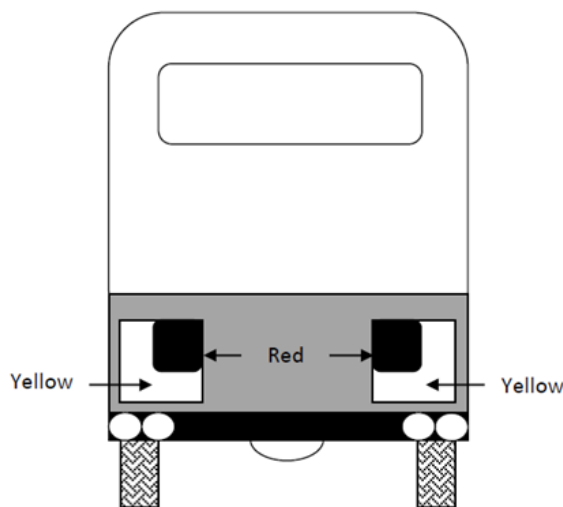
- 1 Tow trucks.
- 2 Vehicle breakdown service vehicles.
- 3 Weed spraying vehicles.
- 4 Power driven lawn mowers.
- 5 Animal rescue vehicles.
- 6 Vehicles used by primary producers droving stock between paddocks.

- (2) A vehicle may be fitted with a light or reflector not mentioned in the Light Vehicle Standards only if another law of this jurisdiction allows that light or reflector to be fitted.

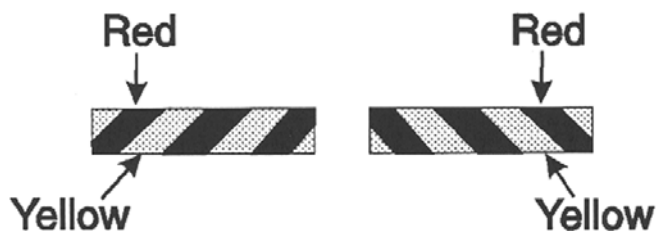
- (3) However, unless subrule (4) applies, a vehicle must not be fitted with—
- (a) a light that flashes; or
 - (b) a light or reflector that—
 - (i) shows a red light to the front; or
 - (ii) shows a white light to the rear; or
 - (iii) is shaped or located in a way that reduces the effectiveness of a light or reflector that is required to be fitted to the vehicle under the Light Vehicle Standards.
- (4) Despite any requirement of a third edition ADR—
- (a) an exempt vehicle may be fitted with any light or reflector;
 - (b) a special use vehicle may be fitted with 1 or more flashing yellow lights;
 - (c) a State Government enforcement vehicle may be fitted with 1 or more flashing magenta lights.

116—Rear marking plates

Rear marking plates may be fitted to a vehicle.



An example of rear marking plates



An alternative pattern for rear marking plates

117—Signalling devices

- (1) This rule applies to a motor vehicle if—
 - (a) the vehicle is not fitted with a brake light or direction indicator light mentioned in Division 9 or Division 11; and
 - (b) the construction of the vehicle would otherwise prevent the driver from hand signalling an intention—
 - (i) to turn or move the vehicle to the right; or
 - (ii) to stop or suddenly reduce the speed of the vehicle.
- (2) The vehicle must be fitted with a mechanical signalling device or a pair of turn signals.

118—Mechanical signalling devices

- (1) A mechanical signalling device must—
 - (a) be fitted to the right side of the vehicle; and
 - (b) be able to be operated by the driver from a normal driving position; and
 - (c) consist of a white or yellow representation of an open human hand at least 15 centimetres long; and
 - (d) be constructed so that the driver of the vehicle can keep the device—
 - (i) in a neutral position so it is unlikely that the driver of another vehicle or anyone else would regard it as a signal; and
 - (ii) in a horizontal position with the palm of the hand facing forwards and the fingers pointing out at a right angle to the vehicle to signal an intention to turn or move right; and
 - (iii) with the palm of the hand facing forwards and the fingers pointing upwards to signal an intention to stop or reduce speed suddenly.
- (2) When the mechanical signalling device is in a position mentioned in subrule (1)(d)(ii) or (iii), the complete hand must be clearly visible from both the front and the rear of the vehicle, at a distance of 30 metres.

119—Turn signals

A turn signal must—

- (a) consist of a steady or flashing illuminated yellow sign at least 15 centimetres long and 25 millimetres wide that—
 - (i) when in operation—is kept horizontal; and
 - (ii) when not in operation—is kept in a position so it is unlikely that the driver of another vehicle or anyone else would regard it as a signal; and
- (b) be fitted to the side of the motor vehicle at least 50 centimetres and not over 2.1 metres above ground level, in a position so the driver of the vehicle, from the normal driving position, can see whether the signal is in operation; and
- (c) be able to be operated by the driver from the normal driving position; and

- (d) when in operation, be visible from both the front and rear of the vehicle at a distance of 30 metres.

Division 20—Vehicles not required to have lights or reflectors

120—Certain vehicles used in daylight

This Part does not apply to a vehicle built before 1931 that is used only in the daylight.

121—Certain vehicles used for exhibition purposes

This Part does not apply to a vehicle built before 1946 that is used mainly for exhibition purposes.

Part 9—Braking systems

Note—

This Part sets out the braking system requirements for vehicles to ensure that they can be reliably slowed or stopped even if a part of a braking system fails, and to ensure that a vehicle can be prevented from rolling away when parked.

Division 1—Brake requirements for all vehicles

122—Parts of a braking system

A brake tube or hose fitted to a vehicle must—

- (a) be manufactured from a material appropriate to its intended use in the vehicle; and
- (b) be long enough to allow for the full range of steering and suspension movements of the vehicle; and
- (c) be fitted to prevent it being damaged during the operation of the vehicle by—
 - (i) a source of heat; or
 - (ii) any movement of the parts to which it is attached or near.

123—Provision for wear

The braking system of a vehicle must allow for adjustment to take account of normal wear.

124—Supply of air or vacuum to brakes

- (1) If air brakes are fitted to a vehicle—
 - (a) the compressor supplying air to the brakes must be able to build up air pressure to at least 80% of the governor cut-out pressure in not over 5 minutes after the compressed air reserve is fully used up; and
 - (b) there must be an automatic or manual condensate drain valve at the lowest point of each air brake reservoir in the system; and
 - (c) any spring brake fitted to the vehicle must not operate before the warning mentioned in rule 125(4)(a) or rule 131(3)(a) has been given.

- (2) If vacuum brakes are fitted to a vehicle, the vacuum supply must be able to build up vacuum—
 - (a) to the level when the warning signal mentioned in rule 125(4)(a) or rule 131(3)(a) no longer operates within 30 seconds after the vacuum reserve is fully used up; and
 - (b) to the normal working level within 60 seconds after the vacuum reserve is fully used up.

125—Performance of braking systems

- (1) One sustained application of the brake of a motor vehicle built after 1930, or a combination that includes a motor vehicle built after 1930, must be able to produce the performance mentioned in subrule (2) to (7)—
 - (a) when the vehicle or combination is on a dry, smooth, level road surface, free from loose material; and
 - (b) whether or not the vehicle or combination is loaded; and
 - (c) without part of the vehicle or combination moving outside a straight path—
 - (i) centred on the longitudinal axis of the vehicle or combination before the brake was applied; and
 - (ii) 3.7 metres wide.
- (2) The braking system of a motor vehicle or combination with a gross mass under 2.5 tonnes must bring the vehicle or combination from a speed of 35 kilometres an hour to a stop within—
 - (a) 12.5 metres when the service brake is applied; and
 - (b) 30 metres when the emergency brake is applied.
- (3) The braking system of a motor vehicle or combination with a gross mass of at least 2.5 tonnes must bring the vehicle or combination from a speed of 35 kilometres an hour to a stop within—
 - (a) 16.5 metres when the service brake is applied; and
 - (b) 40.5 metres when the emergency brake is applied.
- (4) The braking system of a motor vehicle or combination with a gross mass under 2.5 tonnes must decelerate the vehicle or combination, from any speed at which the vehicle or combination can travel, by an average of at least—
 - (a) 3.8 metres a second a second when the service brake is applied; and
 - (b) 1.6 metres a second a second when the emergency brake is applied.
- (5) The braking system of a motor vehicle or combination with a gross mass of at least 2.5 tonnes must decelerate the vehicle or combination, from any speed at which the vehicle or combination can travel, by an average of at least—
 - (a) 2.8 metres a second a second when the service brake is applied; and
 - (b) 1.1 metres a second a second when the emergency brake is applied.

- (6) The braking system of a motor vehicle or combination with a gross mass under 2.5 tonnes must achieve a peak deceleration of the vehicle or combination, from any speed at which the vehicle or combination can travel, of at least—
 - (a) 5.8 metres a second a second when the service brake is applied; and
 - (b) 1.9 metres a second a second when the emergency brake is applied.
- (7) The braking system of a motor vehicle or combination with a gross mass of at least 2.5 tonnes must achieve a peak deceleration of the vehicle or combination, from any speed at which the vehicle or combination can travel, of at least—
 - (a) 4.4 metres a second a second when the service brake is applied; and
 - (b) 1.5 metres a second a second when the emergency brake is applied.
- (8) The parking brake of a vehicle or combination must be able to hold the vehicle or combination stationary on a 12% gradient—
 - (a) when the vehicle or combination is on a dry, smooth road surface, free from loose material; and
 - (b) whether or not the vehicle or combination is loaded.

Division 2—Motor vehicle braking systems

126—Motor vehicle braking system requirements

- (1) In this rule—

independent brake, for a vehicle, means a brake that is operated entirely separately from any other brake on the vehicle, except for any drum, disc or part, on which a shoe, band or friction pad makes contact, that is common to 2 or more brakes.
- (2) A motor vehicle with 4 or more wheels built, or used, mainly for transporting goods or people by road must be fitted with—
 - (a) a braking system that—
 - (i) consists of brakes fitted to all wheels of the vehicle; and
 - (ii) has at least 2 separate methods of activation, arranged so effective braking remains on at least 2 wheels if a method fails; or
 - (b) 2 independent brakes, each of which, when in operation, acts directly on at least half the number of wheels of the vehicle.
- (3) The braking system of a motor vehicle mentioned in subrule (2) that was built after 1945 must have a service brake operating on all wheels that, when applied—
 - (a) acts directly on the wheels and not through the vehicle's transmission; or
 - (b) acts on a shaft between a differential of the vehicle and a wheel.
- (4) The braking system of a motor vehicle with 4 or more wheels must have a parking brake that—
 - (a) is held in the applied position by direct mechanical action without the intervention of an electrical, hydraulic or pneumatic device; and
 - (b) is fitted with a locking device that can hold the brake in the applied position; and

- (c) has its own separate control.
- (5) The parking brake may also be the emergency brake.
- (6) If 2 or more independent brakes are fitted to a motor vehicle with 4 or more wheels, the brakes must be arranged so brakes are applied to all the wheels on at least 1 axle of the vehicle when any brake is operated.
- (7) A motor bike or motor trike must be fitted with—
 - (a) 2 independent brakes; or
 - (b) a single brake that acts directly on all wheels of the vehicle and is arranged so effective braking remains on at least 1 wheel if a part of the system fails.
- (8) Subrule (7) applies to a motor bike with a sidecar attached as if the sidecar were not attached.
- (9) A motor trike must have a parking brake that is held in the applied position by mechanical means.

127—Operation of brakes on motor vehicles

The braking system on a motor vehicle must be arranged to allow the driver of the motor vehicle to apply the brakes from a normal driving position.

128—Air or vacuum brakes on motor vehicles

- (1) If a motor vehicle has air brakes, the braking system of the vehicle must include at least 1 air storage tank.
- (2) If a motor vehicle has vacuum brakes, the braking system of the vehicle must include at least 1 vacuum storage tank.
- (3) An air or vacuum storage tank must be built so the service brake can be applied to meet the performance standards of rule 125 at least twice if the engine of the vehicle stops or the source of air or vacuum fails.
- (4) If air or vacuum brakes are fitted to a motor vehicle equipped to tow a trailer, the brakes of the motor vehicle must be able to stop the motor vehicle, at the performance standards for emergency brakes under rule 125 if the trailer breaks away.

Division 3—Trailer braking systems

129—Trailer braking requirements

- (1) A trailer with a GTM over 750 kilograms must have brakes that operate on at least 1 wheel at each end of 1 or more axles of the trailer.
- (2) A semi-trailer or converter dolly with a GTM over 2 tonnes must have brakes that operate on all its wheels.

130—Operation of brakes on trailers

- (1) The braking system of a trailer with a GTM over 2 tonnes must allow the driver of a motor vehicle towing the trailer to operate the brakes from a normal driving position.

- (2) The brakes on a trailer with a GTM over 2 tonnes must—
 - (a) operate automatically and quickly if the trailer breaks away from the towing vehicle; and
 - (b) remain in operation for at least 15 minutes after a break-away; and
 - (c) be able to hold the trailer on a 12% grade while in operation after a break-away.

131—Air or vacuum brakes on trailers

- (1) If a trailer has air brakes, its braking system must include at least 1 air storage tank.
- (2) If a trailer has vacuum brakes, its braking system must include at least 1 vacuum storage tank.
- (3) An air or vacuum storage system must—
 - (a) be built to give a visible or audible warning to the driver of the towing vehicle, while in a normal driving position, of a lack of air or vacuum that would prevent the brakes from meeting the performance standards of rule 125; and
 - (b) be safeguarded by a check valve or other device against loss of air or vacuum if the supply fails or leaks.
- (4) Subrules (1), (2) and (3) do not apply to a trailer with a GTM of 2 tonnes or less.

Part 10—Control of emissions

Note—

This Part sets out requirements to ensure that motor vehicles do not emit too much smoke or noise and that exhaust gases cannot enter the passenger compartment of a vehicle.

Division 1—Crank case gases and visible emissions

132—Crank case gases

- (1) This rule applies to a motor vehicle with 4 or more wheels that is powered by a petrol engine and was built after 1971.
- (2) The vehicle must be built to prevent, or fitted with equipment that prevents, crank case gases from escaping to the atmosphere.

133—Visible emissions

- (1) This rule applies to a motor vehicle that is propelled by an internal combustion engine and was built after 1930.
- (2) The vehicle must not emit visible emissions for a continuous period of at least 10 seconds.
- (3) However, this rule does not apply to emissions that are visible only because of heat or the condensation of water vapour.

134—Exhaust emissions—diesel-powered vehicles

- (1) When a registered motor vehicle (other than a motor bike or motor trike) powered by a diesel engine is subjected to a DT80 test—

- (a) the vehicle must not emit oxides of nitrogen (NO_x) at a rate (measured in grams of NO_x emitted per kilometre travelled per tonne of the vehicle's test mass) greater than that specified for the vehicle according to its GVM and age in the following table:

Vehicle's GVM (t)	Rate of NO _x emissions (g/km/t)	
	<i>Vehicle manufactured in December 1995 or earlier</i>	<i>Vehicle manufactured in January 1996 or later</i>
not greater than 3.5	1.5	1.5
more than 3.5	2.0	2.0

and

- (b) the vehicle must not emit particulate matter (PM) at a rate (measured in grams of PM emitted per kilometre travelled per tonne of the vehicle's test mass) greater than that specified for the vehicle according to its GVM and age in the following table:

Vehicle's GVM (t)	Rate of PM emissions (g/km/t)	
	<i>Vehicle manufactured in December 1995 or earlier</i>	<i>Vehicle manufactured in January 1996 or later</i>
not greater than 3.5	0.23	0.23
more than 3.5	0.23	0.15

and

- (c) the opacity of the exhaust gas emitted by the vehicle must not be greater than 25%, averaged over a DT80 test cycle in the way described or mentioned in the test procedure set out in rule 135 that complies with the requirements in rule 136.

- (2) For the purposes of this rule—

- (a) the **test mass** of a vehicle is—
- if the vehicle is a prime mover—half the sum of the unladen mass of the vehicle and its GCM; or
 - in any other case—half the sum of the unladen mass of the vehicle and its GVM; and
- (b) the **unladen mass** of a vehicle is the mass of the vehicle without any load other than the fuel, oil, tools or prescribed equipment carried (either habitually or intermittently) on the vehicle; and
- (c) if the mass of a vehicle has been specified by an Australian Authority, that mass may be used as the unladen mass of the vehicle for the purposes of determining the test mass unless there is reason to believe that it is not an accurate record of the unladen mass of the vehicle at the time of the test.

(3) In this rule—

DT80 test means a test that—

- (a) is carried out in accordance with rule 135; and
- (b) complies with the requirements of rule 136;

registered means registered on the register of motor vehicles under the *Motor Vehicles Act 1959*.

135—DT80 test procedure

For the purposes of rule 134, the procedure for testing is as follows:

- Step 1** Secure the vehicle on the dynamometer.
- Step 2** Set the dynamometer to simulate the correct load and inertia for the vehicle.
- Step 3** Start sampling.
- Step 4** Idle for 60 seconds.
- Step 5** Accelerate rapidly to 80 km/h under simulated inertia, using wide open throttle, making gear changes as required for smooth acceleration.
- Step 6** Decelerate by removing all pressure from the accelerator pedal, disengaging the gears and gently applying brakes to bring the vehicle to a standstill.
- Step 7** Idle for 10 seconds.
- Step 8** Accelerate rapidly to 80 km/h under simulated inertia, using wide open throttle, making gear changes as required for smooth acceleration.
- Step 9** Decelerate by removing all pressure from the accelerator pedal, disengaging the gears and gently applying brakes to bring the vehicle to a standstill.
- Step 10** Idle for 10 seconds.
- Step 11** Accelerate rapidly to 80 km/h under simulated inertia, using wide open throttle, making gear changes as required for smooth acceleration.
- Step 12** Maintain speed at 80 km/h for 60 seconds, then stop sampling and bring the vehicle to rest.

Note—Explanation of the test procedure—

This test has been designed to evaluate vehicle emissions during typical 'real-world' operating modes and conditions. There are 3 simple modes:

- 3 idle periods
- acceleration to 80 km/h 3 times
- maintain speed at 80 km/h.

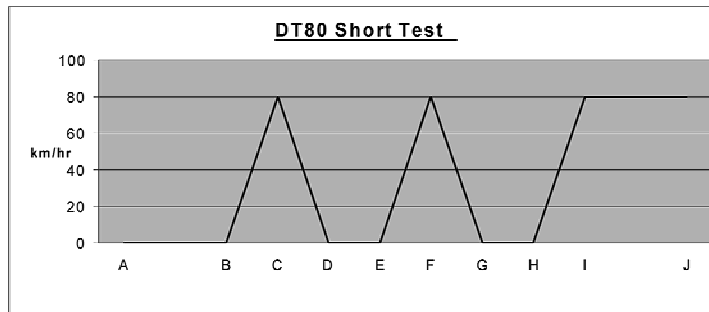
The graph below indicates the modes of operation. The actual test will result in a graph that has more variation than the indicative graph below, because of the need to change gears when accelerating. Modes B – D and E – G and H – I have no specific time interval. All the specified time periods have an error margin of ± 1 second.

The vehicle is accelerated rapidly to 80 km/h 3 times by applying wide-open throttle.

The driver selects the most appropriate gear change points for the vehicle being tested to achieve the correct speed.

The vehicle's rolling resistance (based on tyre and bearing losses, frontal area and drag coefficient) must also be calculated and continuously factored into the dynamometer tractive effort calculations to ensure correct loading.

Empirical algorithms, based on the vehicle's test mass, GVM or other known parameters, may be used to automatically calculate realistic coefficients for these variables.



136—Requirements of DT80 test cycle

- (1) The requirements stated in the following subrules are the minimum standards for the dynamometer, emissions measurement and data management systems necessary to enable the proper conduct of the DT80 test cycle referred to in rule 134(1)(c).
- (2) The DT80 test cycle must be conducted on a chassis dynamometer system that—
 - (a) can undertake a full throttle transient DT80 test cycle, as described in rule 135, for the vehicle being tested; and
 - (b) provides for vehicle speed measurement and display, to an accuracy of $\pm 1\%$ of actual speed; and
 - (c) provides internal steady state accuracy of $\pm 1\%$ of calculated required tractive load over ambient temperatures of 20° – 400° C; and
 - (d) provides a T95 response time of 3 seconds or less; and
 - (e) provides inertial loading as required by the DT80 protocol at speeds >15 km/h; and
 - (f) compensates for aerodynamic drag, rolling resistance and other parasitic losses; and
 - (g) corrects for ambient temperature, humidity and air density; and
 - (h) provides torque measurement accuracy of better than 1% full scale; and
 - (i) maintains roller speed within ± 10 km/h through gear changes; and
 - (j) restricts overshoot upon initial acceleration of rollers from rest; and
 - (k) incorporates a driver control panel for remote operation of critical functions from driver's seat, including controls for start test and stop test; and
 - (l) incorporates an emergency system override function; and
 - (m) is able to communicate speed, load and status signals to enable the driver to undertake the test in accordance with the DT80 procedure; and
 - (n) is integrated with the gas and particulate analysis system to initiate the start and finish of sampling and measurement, and generates emission results without the need for post-test processing.

- (3) The emissions measurement system used for the DT80 test cycle must—
- (a) be integrated with the dynamometer system stated in subrule (2); and
 - (b) have a data averaging interval of 1 second for all equipment; and
 - (c) provide emissions data sampling output $< 5\text{Hz}$; and
 - (d) measure oxides of nitrogen (from a diluted and conditioned sample) with an accuracy of $\pm 30\text{ppm}$ over the range 0-1000ppm and $\pm 5\%$ over the range 1001-5000ppm; and
 - (e) measure particulate matter (from diluted sample) as TSP or PM 10 with an accuracy of $\pm 10\%$ on a real time continuous basis over a range of 0-1000 mg/m³ actual exhaust concentration at a sample temperature of $< 51.70\text{C}$; and
 - (f) measure opacity (from raw exhaust gas sample) with an accuracy of $\pm 1\%$ over a range of 0-100% opacity; and
 - (g) measure flow rate with an accuracy of $\pm 5\%$; and
 - (h) measure ambient temperature with an accuracy of $\pm 10\text{C}$ over a range of 0-500C; and
 - (i) measure ambient humidity with an accuracy of $\pm 5\%$ over a range of 0-100%; and
 - (j) compensate/correct for ambient humidity and temperature; and
 - (k) compensate for exhaust gas transport times and delays; and
 - (l) provide on-line calibration of the analytical system; and
 - (m) provide an exhaust sample collection and conditioning system—
 - (i) that is optimised to accommodate the exhaust temperature and flow rate, and emission concentration, for the vehicle being tested; and
 - (ii) that provides adequate conditioning of the exhaust gas to eliminate water in the sample stream and reduce temperatures to enable PM to be sampled at $< 51.70\text{C}$; and
 - (iii) utilise materials and equipment compatible with the exhaust from diesel fuelled vehicles.
- (4) The data management system used for the DT80 test cycle must—
- (a) be integrated with the dynamometer and emissions measurement systems stated in subrules (2) and (3); and
 - (b) record the following items for each test:
 - (i) date, time, location and operator;
 - (ii) emissions analyser calibration data;
 - (iii) vehicle input data, including test mass tractive load corrections and identifying information;
 - (iv) dynamometer data on a second by second basis (load, speed, distance);

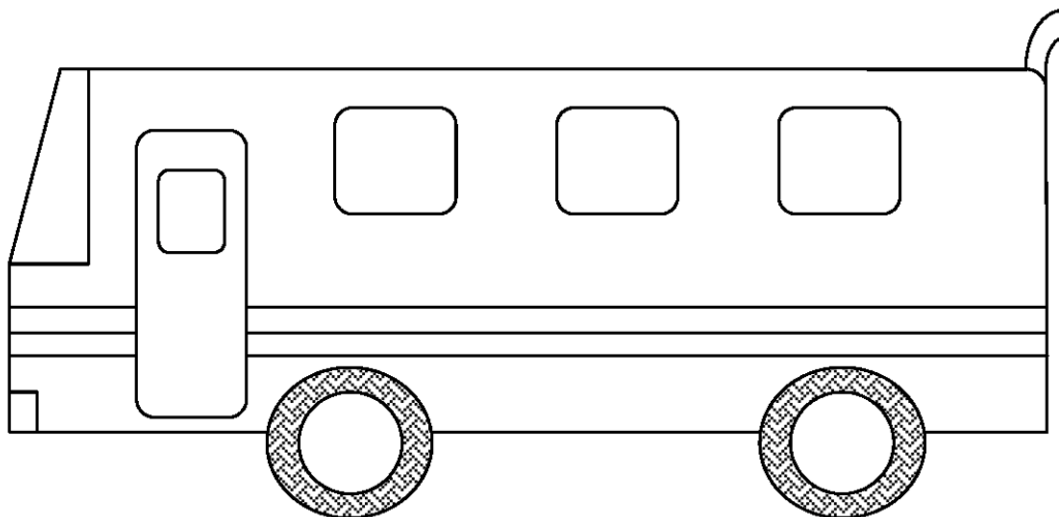
- (v) test data on a second by second basis from which a mass emission test result in g/km/t can be generated; and
- (c) display, store and report all data in SI units; and
- (d) provide a system for electronic backup of test data to local and remote media; and
- (e) incorporate a quality control system that—
 - (i) ensures calibrations are carried out in accordance with manufacturers' specifications; and
 - (ii) provides records consistent with normal audit requirements; and
- (f) print a test report containing at least the following items:
 - (i) registered business name, ABN and address of the test facility;
 - (ii) registration number, make, model, GVM rating and date of manufacture of the tested vehicle;
 - (iii) date and location of test;
 - (iv) the final calculated NO_x and PM results in g/km/t;
 - (v) the final calculated opacity results in %;
 - (vi) a statement of pass or fail for each emission compared to the emission limits stated in rule 134;
 - (vii) the signature of the test facility operator confirming that the test was conducted in accordance with the test procedures set out in rule 135 and the requirements of this rule.

Division 2—Exhaust systems

137—Exhaust systems

- (1) The outlet of the exhaust system fitted to a motor vehicle must extend—
 - (a) behind the back seat; and
 - (b) at least 40 millimetres beyond the outermost joint of the floorpan that is not continuously welded or permanently sealed; and
 - (c) to the edge of the vehicle, if—
 - (i) the body of the vehicle is permanently enclosed; and
 - (ii) the vehicle is not fitted with a vertical exhaust system; and
 - (d) no further than the edge of the vehicle at its widest point.
- (2) The outlet must discharge the main exhaust flow to the air—
 - (a) if the vehicle is fitted, or required under a law of this jurisdiction to be fitted, with an exhaust system with a vertical outlet pipe—
 - (i) at an angle above the horizontal; and
 - (ii) at least 150 millimetres above the cab of the vehicle; and
 - (iii) rearwards or to the right of the vehicle; and

- (b) in any other case—
- (i) horizontally or at an angle of not over 45° downwards; and
 - (ii) under 750 millimetres above ground level; and
 - (iii) rearwards or to the right of the vehicle.



Bus exhaust outlet pipe

Division 3—Noise emissions

138—Measurement of stationary noise levels

- (1) For this Division, the stationary noise level of a motor vehicle is to be measured in accordance with the procedure set out for the kind of vehicle in the National Stationary Exhaust Noise Test Procedures for In-Service Motor Vehicles—September 2006 (ISBN: 1 921168 50 1) published by the Commission.
- (2) In this rule—

Commission means the National Transport Commission established by the *National Transport Commission Act 2003* of the Commonwealth.

Note—

The National Stationary Exhaust Noise Test Procedures for In-Service Motor Vehicles—September 2006 is available on the Commission's website at <http://www.ntc.gov.au>.

139—Silencing device for exhaust systems

A motor vehicle propelled by an internal combustion engine must be fitted with a silencing device through which all the exhaust from the engine passes.

140—Stationary noise levels—car-type vehicles and motor bikes and motor trikes

- (1) In this rule—
- car-type vehicle** means—
- (a) a car; or

- (b) a utility truck, panel van, or another motor vehicle derived from a car design; or
 - (c) another motor vehicle with 4 or more wheels that is built mainly to carry not over 9 people including the driver.
- (2) The stationary noise level of a car-type vehicle, or motor bike or trike, must not exceed—
- (a) for a car-type vehicle built after 1982—90 dB(A); or
 - (b) for another car-type vehicle—96 dB(A); or
 - (c) for a motor bike or trike built after February 1985—94 dB(A); or
 - (d) for another motor bike or trike—100 dB(A).

141—Stationary noise levels—other vehicles with spark ignition engines

- (1) This rule applies to a motor vehicle (except a motor vehicle to which rule 140 applies) with a spark ignition engine.
- (2) The stationary noise level of the motor vehicle must not exceed the noise level applying to the vehicle under the table.

Column 1 Item	Column 2 GVM(t)	Column 3 Exhaust height (mm)	Column 4 When vehicle built	Column 5 Noise level (dB(A))
1	≤3.5	<1500	before July 1983	92
			after June 1983	89
2	>3.5	<1500	before July 1983	98
			after June 1983	95
3	≤3.5	≥1500	before July 1983	88
			after June 1983	85
4	>3.5	≥1500	before July 1983	94
			after June 1983	91

142—Stationary noise levels—other vehicles with diesel engines

- (1) This rule applies to a motor vehicle (except a motor vehicle to which rule 140 applies) with a diesel engine.
- (2) The stationary noise level of the motor vehicle must not exceed the noise level applying to the vehicle under the table.

Column 1 Item	Column 2 GVM (t)	Column 3 Exhaust height (mm)	Column 4 When vehicle built	Column 5 Noise level (dB(A))
1	≤3.5	<1500	before July 1980	105
			after June 1980 but before July 1983	102
			after June 1983	99

Column 1 Item	Column 2 GVM (t)	Column 3 Exhaust height (mm)	Column 4 When vehicle built	Column 5 Noise level (dB(A))
2	>3.5	<1500	before July 1980	107
			after June 1980 but before July 1983	104
			after June 1983	101
3	≤3.5	≥1500	before July 1980	101
			after June 1980 but before July 1983	98
			after June 1983	95
4	>3.5	≥1500	before July 1980	103
			after June 1980 but before July 1983	100
			after June 1983	97

Part 11—Alternative fuel systems for vehicle engines

Note—

This Part sets out requirements to ensure that LPG (Liquid Petroleum Gas) and NG (Natural Gas) fuel systems are safely installed in motor vehicles. In the case of vehicles with an LPG system installed, there is an additional requirement to ensure that they can be identified as LPG-powered vehicles.

143—LPG-powered vehicles

- (1) An LPG system installed in a motor vehicle, and the vehicle, must comply with all relevant requirements set out in the version of Australian/New Zealand Standard AS/NZS 1425 current at the time of installation of the system in the vehicle.
- (2) A motor vehicle that has an LPG system installed must have fixed conspicuously to its front and rear number plates the labels required by the version of Australian/New Zealand Standard AS/NZS 1425 current at the time of installation of the system in the vehicle.
- (3) If a motor vehicle had an LPG system installed before Australian Standard AS 1425–1973 was published, the vehicle must have fixed conspicuously to its front and rear number plates a label—
 - (a) that is made of durable material; and
 - (b) that is at least 25 millimetres wide and 25 millimetres high; and
 - (c) that is of a reflective red that conforms with either Australian Standard AS 1743–1975 or Australian Standard AS 1906.1–1976; and
 - (d) that states "LPGAS" or "LPG", or similar words or acronyms that have the same meaning, in capital letters at least 6 millimetres high.

144—Vehicles powered by natural gas

A natural gas system installed in a motor vehicle, and the vehicle, must comply with all relevant requirements set out in the version of Australian/New Zealand Standard AS/NZS 2739 current at the time of installation of the system in the vehicle.

Examples—

Forms of natural gas include CNG (Compressed Natural Gas) and LNG (Liquid Natural Gas).

Part 12—Mechanical connections between vehicles

Note—

This Part sets out various requirements to ensure that the couplings used when operating motor vehicles and trailers in combinations are strong enough to hold them together.

145—General coupling requirements

- (1) A fifth wheel coupling, the mating parts of a coupling, a kingpin or a towbar must not be used for a load more than the manufacturer's load rating.
- (2) A kingpin must be used only with a fifth wheel coupling that has a corresponding jaw size.

Example—

An adaptor must not be used to fit a kingpin to a fifth wheel coupling.

- (3) The mating parts of a coupling used to connect a semi-trailer to a towing vehicle must not allow the semi-trailer to roll to an extent that makes the towing vehicle unstable.

146—Drawbar couplings

- (1) A coupling for attaching a trailer, except a semi-trailer or pole-type trailer, to a towing vehicle must be built and fitted so—
 - (a) the coupling is equipped with a positive locking mechanism; and
 - (b) the positive locking mechanism can be released regardless of the angle of the trailer to the towing vehicle.
- (2) If the trailer is in a combination and is not fitted with breakaway brakes in accordance with rule 130(2), it must be connected to the towing vehicle by at least 1 chain, cable or other flexible device, as well as the coupling required by subrule (1).
- (3) The connection must be built and fitted so—
 - (a) the trailer is kept in tow if the coupling breaks or accidentally detaches; and
 - (b) normal angular movement of the coupling is permitted without unnecessary slack.
- (4) If practicable, the connection must be built and fitted so the drawbar of the trailer is prevented from hitting the ground if the coupling accidentally detaches.
- (5) For the purposes of subrules (3) and (4), a connection between a trailer and a towing vehicle includes anything which connects the trailer and the towing vehicle.

Examples of what is included in a connection—

- 1 Chains.
- 2 Cables.
- 3 A thing fixed to a trailer or a towing vehicle to which a chain is attached.
- 4 Shackles.

Part 13—Other matters

147—Vehicle equipment

A vehicle is taken to have equipment mentioned in the Light Vehicle Standards only if the equipment is in working order.

148—Restored vehicles

- (1) For the Light Vehicle Standards, a restored vehicle is taken to have been built when it was originally built and not when it was restored.

- (2) In this rule—

restored vehicle means a vehicle that is being, or has been, restored to its manufacturer's specifications, so far as it is practicable to meet the specifications.

149—Retractable axles

- (1) For the Light Vehicle Standards, a retractable axle is taken to be an axle only when it is in the lowered position.

- (2) In this rule—

retractable axle means an axle with a means of adjustment enabling it to be raised or lowered relative to the other axles in the axle group.

150—Measurement of distance between parallel lines

For the Light Vehicle Standards, a distance between 2 parallel lines is measured at right angles between the lines.

151—Interpretation of certain second edition ADRs

The words "left" and "right" in the following second edition ADRs have the opposite meaning in the application of the ADRs, in accordance with the Light Vehicle Standards, to a motor vehicle with a left-hand drive:

- (a) ADR 8 Safety Glass
- (b) ADR 12 Glare Reduction in Field of View
- (c) ADR 14 Rear Vision Mirrors
- (d) ADR 16 Windscreen Wipers and Washers
- (e) ADR18 and ADR 18A Location and Visibility of Instruments
- (f) ADR 35 and ADR 35A Commercial Vehicle Braking Systems.

Note—

The following table contains a list of some terms used in the third edition ADRs and the corresponding term used in the Light Vehicle Standards.

Third edition ADRs	Light Vehicle Standards
dipped-beam headlamp	low-beam (for a headlight)
front fog lamp	front fog light
rear fog lamp	rear fog light
wheelguard	mudguard
main-beam headlamp	high-beam (for a headlight)
reversing lamp	reversing light
direction indicator lamp	direction indicator light
stop lamp	brake light
rear registration plate lamp	number plate light
front position (side) lamp	parking light
rear position (side) lamp	tail light
end-outline marker lamp	front or rear clearance light
external cabin lamp	external cabin light
internal lamp	interior light
side marker lamp	side marker light
daytime running lamp	daytime running light
rear reflex reflector, non-triangular	rear reflector
front reflex reflector, non-triangular	front reflector
side reflex reflector, non-triangular	side reflector

152—References to Australian Standards and Australian/New Zealand Standards

For the Light Vehicle Standards, each version of—

- (a) an Australian Standard (or AS) of a specified number; and
 - (b) an Australian/New Zealand Standard (or AS/NZS) of the same number,
- will be taken to be a version of the same standard.

Dictionary

adopted standard—see rule 24;

ADR—see rule 14;

air brake means an air-operated or air-assisted brake;

another jurisdiction means another State or a Territory of the Commonwealth;

AS or ***Australian Standard*** or ***AS/NZS*** or ***Australian/New Zealand Standard*** means a standard approved for publication by Standards Australia;

axle means 1 or more shafts, positioned in a line across a vehicle, on which 1 or more wheels intended to support the vehicle turn;

axle group means a single, tandem or tri-axle group;

braking system, of a vehicle, means all the brakes of the vehicle and all the components of the mechanisms by which they are operated;

British Standard means a standard approved for publication on behalf of the British Standards Institution;

British Standards Institution means the institution of that name established under royal charter in the United Kingdom;

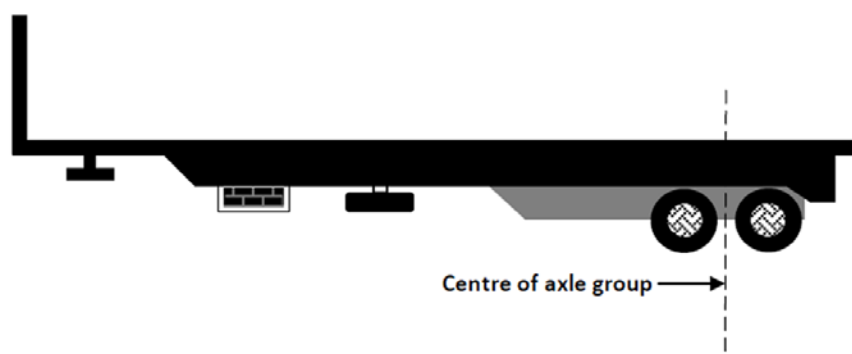
bus means a motor vehicle built mainly to carry people that seats over 9 adults (including the driver);

car means a motor vehicle built mainly to carry people that—

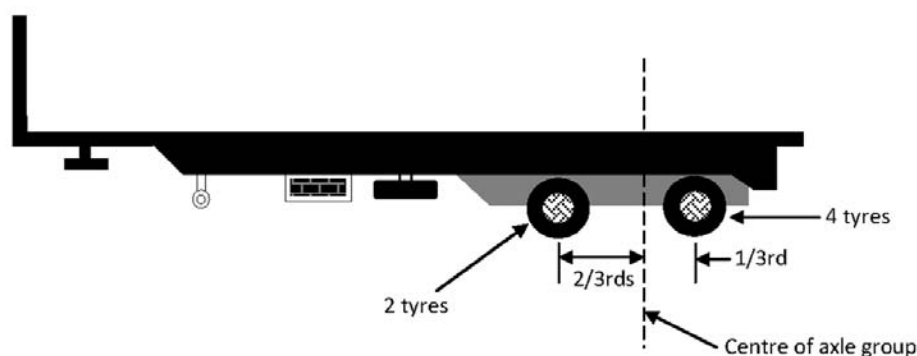
- (a) seats not over 9 adults (including the driver); and
- (b) has a body commonly known as a sedan, station wagon, coupe, convertible, or roadster; and
- (c) has 4 or more wheels;

centre line, of an axle group, means—

- (a) a line located midway between the centre lines of the outermost axles of the group;
- (b) if the group consists of 2 axles, 1 of which is fitted with twice the number of tyres as the other axle—a line located one-third of the way from the centre line of the axle with more tyres towards the centre line of the axle with fewer tyres;



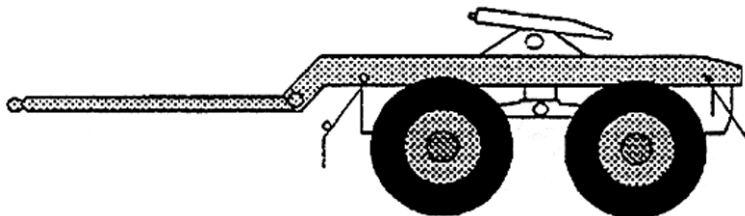
Centre line of a tandem axle group fitted with an equal number of tyres on each axle



Centre line of a tandem axle group fitted with a different number of tyres on each axle

combination means a group of vehicles consisting of a motor vehicle connected to 1 or more vehicles;

converter dolly means a trailer with 1 tandem axle group or single axle and a fifth wheel coupling, designed to convert a semi-trailer into a dog trailer;



Converter dolly

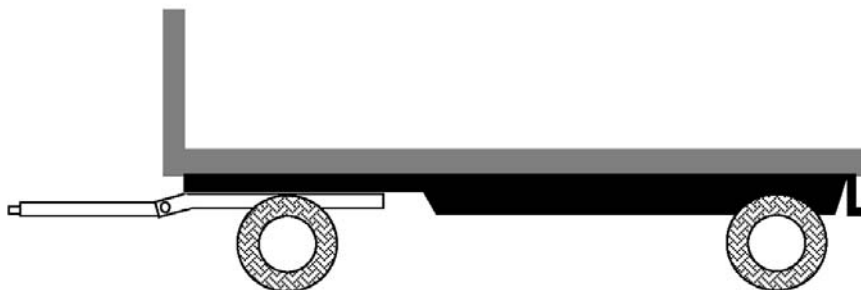
dangerous goods has the same meaning as in the *Dangerous Substances (Dangerous Goods Transport) Regulations 2008*;

daytime means the period beginning at sunrise and ending at sunset;

diesel engine means a compression ignition engine commonly known as a diesel engine;

dog trailer means a trailer (including a trailer consisting of a semi-trailer and converter dolly) with—

- (a) 1 axle group or single axle at the front that is steered by connection to the towing vehicle by a drawbar; and
- (b) 1 axle group or single axle at the rear;



Dog trailer

drawbar means a part of a trailer (except a semi-trailer) connecting the trailer body to a coupling for towing purposes;

drive includes be in control of;

driver, of a vehicle, means the person driving the vehicle;

emergency brake means a brake designed to be used if a service brake fails;

emergency vehicle means a vehicle driven by any of the following in the course of his or her duty:

- (a) a member of an emergency services organisation within the meaning of the *Fire and Emergency Services Act 2005*;
- (b) an authorised officer under the *Emergency Management Act 2004*;
- (c) a person engaged in the provision of emergency ambulance services under section 57(1) of the *Health Care Act 2008* on behalf of—

- (i) SA Ambulance Service Inc; or
- (ii) St Johns Ambulance Australia South Australia Incorporated;
- (d) any other person engaged in the provision of emergency ambulance services under section 57(1) of the *Health Care Act 2008*;
- (e) a member of the Australian Customs Service;
- (f) a member of the armed forces of the Commonwealth engaged in police, fire fighting or ambulance duties or duties in connection with the urgent disposal of explosives or any emergency;
- (g) an employee of Airservices Australia engaged in fire fighting duties or duties in connection with any emergency;

fifth wheel coupling means a device (other than an upper rotating element and a kingpin) used with a prime mover, semi-trailer or converter dolly to—

- (a) permit quick coupling and uncoupling; and
- (b) provide for articulation;

front fog light means a light used to improve the illumination of the road in case of fog, snowfall, heavy rain or a dust storm;

GCM of a vehicle means the greatest possible sum of the maximum loaded mass of the vehicle and of any vehicles that may lawfully be towed by it at any 1 time—

- (a) as specified by the vehicle's manufacturer; or
- (b) as specified by an Australian Authority if—
 - (i) the manufacturer has not specified the sum of the maximum loaded mass; or
 - (ii) the manufacturer cannot be identified; or
 - (iii) the vehicle has been modified to the extent that the manufacturer's specification is no longer appropriate;

GTM (gross trailer mass) means the maximum loaded mass transmitted to the ground by the axles of a trailer when it is connected to a towing vehicle—

- (a) as specified by the manufacturer; or
- (b) as specified by an Australian Authority if—
 - (i) the manufacturer has not specified a maximum loaded mass transmitted to the ground by the axles of the trailer when connected to a towing vehicle; or
 - (ii) the manufacturer cannot be identified; or
 - (iii) the trailer has been modified to the extent that the manufacturer's specification is no longer appropriate;

GVM, of a vehicle, means the maximum loaded mass of the vehicle—

- (a) as specified by the vehicle's manufacturer; or
- (b) as specified by an Australian Authority if—
 - (i) the manufacturer has not specified a maximum loaded mass; or
 - (ii) the manufacturer cannot be identified; or

- (iii) the vehicle has been modified to the extent that the manufacturer's specification is no longer appropriate;

high-beam, for a headlight or front fog light fitted to a vehicle, means that the light is built or adjusted so, when the vehicle is standing on level ground, the top of the main beam of light projected is above the low-beam position;

left, for a vehicle, means to the left of the centre of the vehicle when viewed by a person in the vehicle who is facing to the front of the vehicle;

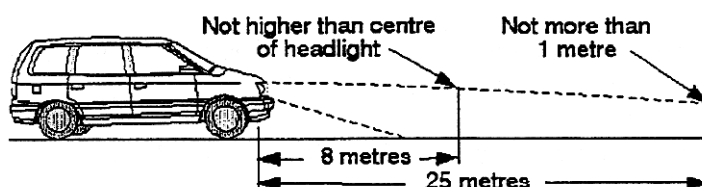
load of a vehicle, or in or on a vehicle, means—

- (a) all the goods, passengers and drivers in or on the vehicle; and
- (b) all fuel, water, lubricants and readily removable equipment carried in or on the vehicle and required for its normal operation; and
- (c) personal items used by a driver of the vehicle; and
- (d) anything that is normally removed from the vehicle when not in use,

and includes a part of a load as so defined;

low-beam, for a headlight or front fog light fitted to a vehicle, means that the light is built or adjusted so, when the vehicle is standing on level ground, the top of the main beam of light projected is—

- (a) not higher than the centre of the headlight or fog light, when measured 8 metres in front of the vehicle; and
- (b) not over 1 metre higher than the level where the motor vehicle is standing, when measured 25 metres in front of the vehicle;



A headlight in the low-beam position

manufactured—a vehicle will be taken to have been manufactured in the month shown on its vehicle identification plate (within the meaning of Part 3A of the Act) as its month of manufacture;

moped means a motor bike or trike with an engine cylinder capacity of not over 50 millilitres and a maximum speed of not over 50 kilometres an hour;

motor bike means a motor vehicle with 2 wheels, and includes a 2 wheeled motor vehicle with a sidecar attached to it that is supported by a third wheel;

motor trike means a motor vehicle with 3 wheels, but does not include a 2 wheeled motor vehicle with a sidecar attached to it that is supported by a third wheel;

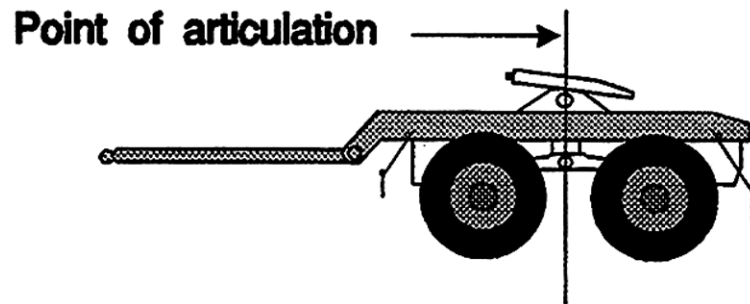
motor vehicle means a vehicle built to be propelled by a motor that forms part of the vehicle;

mudguard means a fitting or device, with or without a mudflap, that is built and fitted to a vehicle in a way that will, as far as practicable, catch or deflect downwards any stone, mud, water, or other substance, thrown up by the rotation of the wheel to which the fitting or device is fitted;

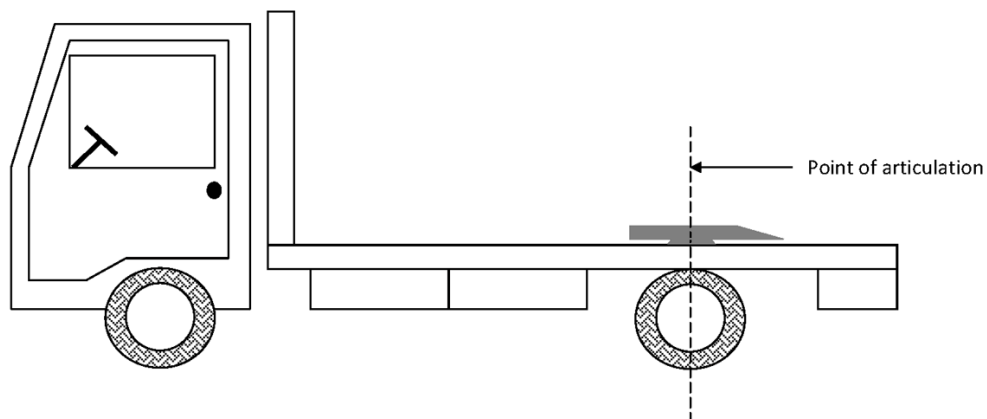
national standard—see rule 15;

point of articulation means—

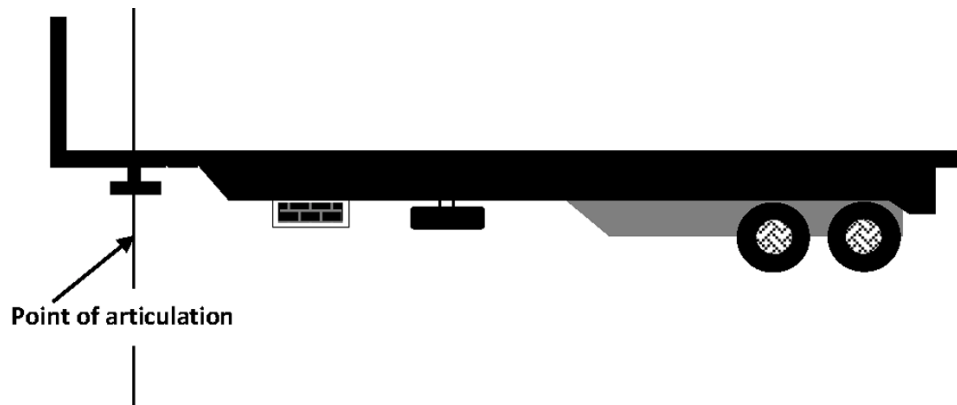
- (a) the axis of a kingpin for a fifth wheel; or
- (b) the vertical axis of rotation of a fifth wheel coupling; or
- (c) the vertical axis of rotation of a turntable assembly; or
- (d) the vertical axis of rotation of the front axle group, or single axle, of a dog trailer; or
- (e) the coupling pivot point of a semi trailer;



Point of articulation—fifth wheel coupling on a converter dolly (forming the front axle group of a dog trailer)



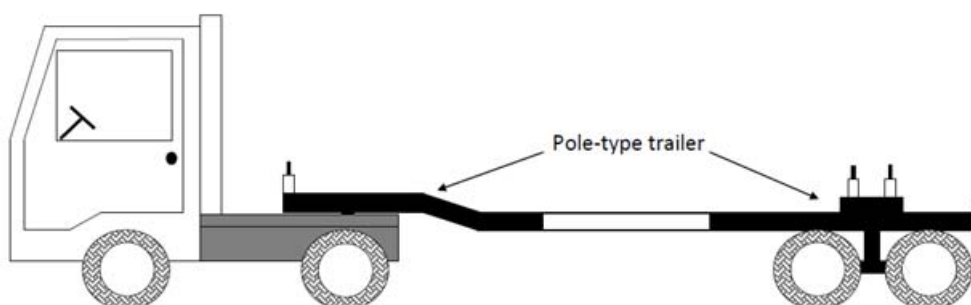
Point of articulation—fifth wheel on a prime mover



Point of articulation—kingpin for fifth wheel

pole-type trailer means a trailer that—

- (a) is attached to a towing vehicle by a pole, or an attachment fitted to the pole; and
- (b) is ordinarily used for transporting loads, such as logs, pipes, structural members or other long objects, that are generally capable of supporting themselves like beams between supports;



Pole-type trailer

police officer means a member of South Australia Police, a member of the Australian Federal Police or a service police officer within the meaning of the *Defence Force Discipline Act 1982* of the Commonwealth;

police vehicle means a vehicle driven by a police officer in the course of his or her duty;

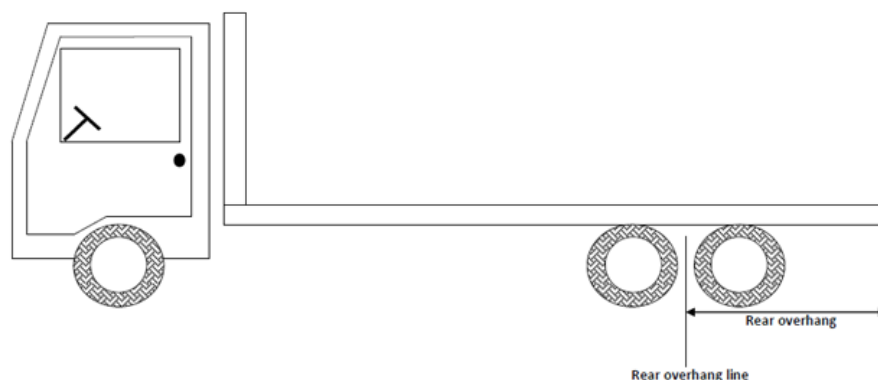
prime mover means a motor vehicle built to tow a semi-trailer;

rear fog light means a light used on a vehicle to make it more easily visible from the rear in dense fog;

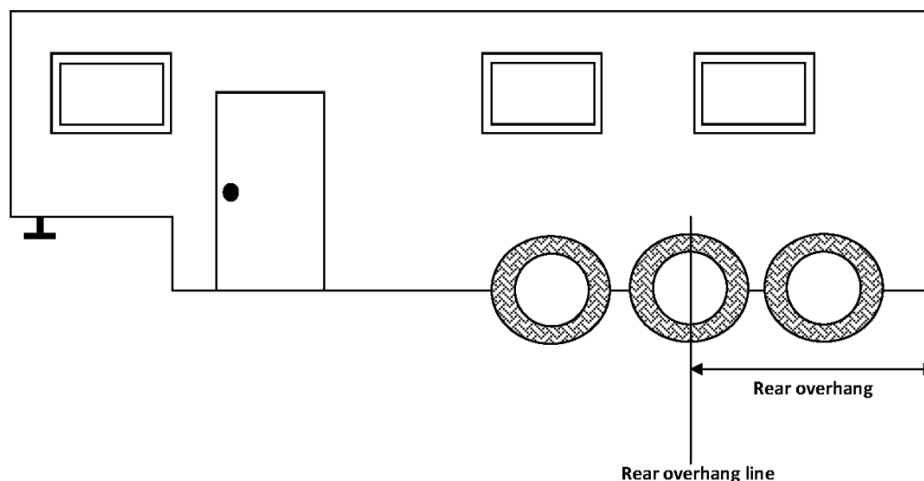
rear overhang, of a vehicle, means the distance between the rear overhang line and the rear of the vehicle;

rear overhang line means—

- (a) if there is a single axle at the rear of the vehicle—the centre line of the axle; or
- (b) if there is an axle group at the rear of the vehicle—the centre line of the axle group, determined without regard to the presence of any steerable axle or retractable axle in the group unless all axles in the group are steerable or retractable;



Rear overhang and rear overhang line—motor vehicle



Rear overhang and rear overhang line—semi-trailer

rear marking plate means a rear marking plate complying with *Vehicle Standards Bulletin VSB 12*;

repeater horn means a device that makes a sound alternating between different tones or frequencies on a regular time cycle;

right, for a vehicle, means to the right of the centre of the vehicle when viewed by a person in the vehicle who is facing to the front of the vehicle;

road—see rule 4;

road-related area—see rule 5;

second edition ADR—see rule 17;

semi-trailer means a trailer that has—

- (a) 1 axle group or a single axle towards the rear; and
- (b) a means of attachment to a prime mover that results in some of the mass of the trailer's load being imposed on the prime mover;

service brake, for a vehicle, means the brake normally used to decelerate the vehicle;

single axle means an axle not forming part of an axle group;

single axle group means a group of 2 or more axles, in which the horizontal distance between the centre lines of the outermost axles is less than 1 metre;

spring brake means a brake using 1 or more springs to store the energy needed to operate the brake;

Standards Australia means Standards Australia Limited, or any body to which Standards Australia Limited is a successor in law or that is a successor in law to Standards Australia Limited;

State Government enforcement vehicle means a vehicle driven by any of the following in the course of his or her duty:

- (a) an authorised officer under the *Agricultural and Veterinary Products (Control of Use) Act 2002*;
- (b) an authorised officer under the *Dangerous Substances Act 1979*;
- (c) a fisheries officer under the *Fisheries Management Act 2007*;
- (d) an inspector under the *Livestock Act 1997*;
- (e) an inspector under the *Plant Health Act 2009*;
- (f) an authorised person under the *Primary Produce (Food Safety Schemes) Act 2004*;
- (g) an authorised officer under the *Road Traffic Act 1961*;

street rod vehicle means a vehicle that has been modified for safe road use and that—

- (a) has a body and frame that were built before 1949; or
- (b) is a replica of a vehicle the body and frame of which were built before 1949;

tandem axle group means a group of at least 2 axles in which the horizontal distance between the centre lines of the outermost axles is at least 1 metre, but not over 2 metres;

third edition ADR—see rule 18;

trailer means a vehicle that is built to be towed, or is towed, by a motor vehicle, but does not include a motor vehicle that is being towed;

tri-axle group means a group of at least 3 axles in which the horizontal distance between the centre lines of the outermost axles is over 2 metres, but not over 3.2 metres;

turntable means a bearing built to carry vertical and horizontal loads, but does not allow quick separation of its upper and lower rotating elements, and that is used to connect and allow articulation between—

- (a) a prime mover and semi-trailer; or
- (b) the steering axle or axle group of a dog trailer and the body of the trailer; or
- (c) a fifth wheel coupling and the vehicle to which it is mounted;

vacuum brakes means vacuum-operated or vacuum-assisted brakes;

vehicle includes the equipment fitted to, or forming part of, the vehicle;

Vehicle Standards Bulletin (VSB) means a standards bulletin on the design, manufacture, sale, modification, maintenance, import or repair of motor vehicles or trailers made available by the Commonwealth Department of Transport and Regional Services;

Note—

These bulletins are published on the Department's web site—see
<http://www.dotars.gov.au/roads/safety/bulletin/index.aspx>.

yellow includes amber.

Legislative history

Notes

- For further information relating to the Act and subordinate legislation made under the Act see the Index of South Australian Statutes or www.legislation.sa.gov.au.

Principal rules

Year	No	Reference	Commencement
2013	300	<i>Gazette 19.12.2013 p5040</i>	10.2.2014: r 2