



Vehicle Standard (Australian Design Rule 43/02 – Vehicle Configuration and Dimensions) 2006

Compilation: 1 (up to and including Amendment 1)

Compilation Date: 2 April 2007

Compiled by: Vehicle Safety Standards, Department of Transport and Regional Services.

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0. LEGISLATIVE PROVISIONS**0.1. NAME OF STANDARD**

0.1.1. This Standard is the Vehicle Standard (Australian Design Rule 43/02 – Vehicle Configuration and Dimensions) 2006.

0.1.2. This Standard may also be cited as Australian Design Rule 43/02 — Vehicle Configuration and Dimensions.

0.2. COMMENCEMENT

0.2.1. This Standard commences on the day after it is registered.

0.3. REPEAL

0.3.1. This Standard repeals each vehicle standard with the name Australian Design Rule 43/02 — Vehicle Configuration and Dimensions that is:

(a) made under section 7 of the Motor Vehicle Standards Act 1989; and

(b) in force at the commencement of this Standard.

0.3.2. This Standard also repeals each instrument made under section 7 of the Motor Vehicle Standards Act 1989 that creates a vehicle standard with the name Australian Design Rule 43/02 — Vehicle Configuration and Dimensions, if there are no other vehicle standards created by that instrument, or amendments to vehicle standards made by that instrument, that are still in force at the commencement of this Standard.

PURPOSE AND SCOPE

This Australian Design Rule (ADR) is part of the Australian motor vehicle standards system and is a national standard for the purposes of the Motor Vehicle Standards Act 1989.

The function of this Australian Design Rule is to specify requirements for vehicle configuration and dimensions.

APPLICABILITY

This ADR applies to the design and construction of vehicles as set out in the table hereunder.

The /02 Rule differs from the /01 Rule in that:

- (1) the marking requirements have been transferred to a new ADR, 61/00 "Vehicle Marking";
- (2) requirements for a 'Semi-trailer' with a sliding 'Axle Group' have been added.; and
- (3) a Clause 43.4.0 has been added which permits 'Approved' variations to dimensions.

The Package 13 issue of /02 relaxes the 'Load Sharing Suspension' requirements (Section 43.7) and alters the maximum dimensions of 'Semi-trailers' (Section 43.4.1.2)

Vehicles certified to any of the "Acceptable Prior Rules" as shown below in the Applicability Table for a particular vehicle category shall be deemed to comply with this Rule ** provided that "T-group" vehicles meet Clause 43.6.2.1 .

Prior to the relevant date of effect, vehicles certified to ADR 43/02 must also be certified to ADR 61/00 "Vehicle Marking".

| Vehicle Category | ADR Category Code * | UNECE Category Code * | Manufactured on or After | Acceptable Prior Rules |
|---|----------------------------|------------------------------|---------------------------------|-------------------------------|
| Moped 2 wheels | LA | L1 | 1 March 1992 | /01 |
| Moped 3 wheels | LB | L2 | 1 March 1992 | /01 |
| Motor cycle | LC | L3 | 1 March 1992 | /01 |
| Motor cycle and sidecar | LD | L4 | 1 March 1992 | /01 |
| Motor tricycle | LE | L5 | 1 March 1992 | /01 |
| Passenger car | MA | M1 | 1 Jan 1992 | /01 |
| Forward-control passenger vehicle | MB | M1 | 1 Jan 1992 | /01 |
| Off-road passenger vehicle | MC | M1 | 1 Jan 1992 | /01 |
| Light omnibus | MD | M2 | | |
| up to 3.5 tonnes 'GVM' and up to 12 seats | MD1 | | 1 July 1992 | /01 |
| up to 3.5 tonnes 'GVM' and more than 12 seats | MD2 | | 1 July 1992 | /01 |
| over 3.5 tonnes and up to 4.5 tonnes 'GVM' | MD3 | | 1 July 1992 | /01 |
| over 4.5 tonnes and up to 5 tonnes 'GVM' | MD4 | | 1 July 1992 | /01 |
| Heavy omnibus | ME | M3 | | /01 |
| Light goods vehicle | NA | N1 | 1 July 1992 | /01 |
| Medium goods vehicle | NB | N2 | | |
| over 3.5 tonnes up to 4.5 tonnes 'GVM' | NB1 | | 1 July 1992 | /01 |
| over 4.5 tonnes up to 12 tonnes 'GVM' | NB2 | | 1 July 1992 | /01 |
| Heavy goods vehicle | NC | N3 | 1 July 1992 | /01 |
| Very light trailer | TA | O1 | 1 July 1992 | /01** |
| Light trailer | TB | O2 | 1 July 1992 | /01** |
| Medium trailer | TC | O3 | 1 July 1992 | /01** |
| Heavy trailer | TD | O4 | 1 July 1992 | /01** |

* The category code may also be in the format L₁, L_A etc.

43.1. DEFINITIONS

- 43.1.1. Refer to Vehicle Standard (Australian Design Rule Definitions and Vehicle Categories) 2005.

43.2. TURNING CIRCLE

Every vehicle except a '*B-Double*' '*Prime Mover*' shall have a turning circle in either direction, as determined by reference to the extreme outer edge of the tyre track at ground level, not exceeding 25 metres in diameter.

43.3. NOT USED**43.4. DIMENSIONS OF VEHICLES**

- 43.4.0. The dimensions set out in this Section apply, unless otherwise '*Approved*'.
- 43.4.1. '*Total Length*' (including any '*Equipment*')
- 43.4.1.1. Rigid vehicles
- 43.4.1.1.1. The '*Total Length*' of the rigid portion of any vehicle, other than an omnibus, or a '*Semi-trailer*' shall not exceed 11 metres and the distance from the '*Front End*' to the line from which the '*Rear Overhang*' is measured shall not exceed 8.3 m.
- 43.4.1.1.2. The '*Total Length*' of a rigid omnibus shall not exceed 12.2 metres and the distance from the '*Front End*' to the line from which the '*Rear Overhang*' is measured shall not exceed a figure equal to 8.3 metres plus the amount if any, by which the '*Total Length*' exceeds 11 metres.
- 43.4.1.2. '*Semi-trailers*'
- 43.4.1.2.1. The '*Total Length*' of a '*Semi-trailer*' over which the maximum width of the vehicle may be attainable shall not exceed 12.5 metres. Not used
- 43.4.1.2.2. The distance from the '*Point of Articulation*' to the line from which the '*Rear Overhang*' is measured shall not exceed 9.0 9.5 metres.
- 43.4.1.2.3. The forward projection from the '*Point of Articulation*' of the '*Semi-trailer*' portion of an '*Articulated Vehicle*' shall be contained within a radius of 1.9 metres.
- 43.4.1.2.4. ~~Every '*Semi-trailer*' shall, when viewed in plan, be contained wholly within the envelope shown in Figure 1. Not used.~~
- 43.4.1.2.5. The distance from the '*Point of Articulation*' to the '*Rear End*' shall not exceed 12.3 metres.
- 43.4.1.3. Non-rigid Vehicles (other than '*Road Trains*', '*B-Doubles*' and '*Articulated Omnibuses*').
- 43.4.1.3.1. The '*Total Length*' shall not exceed 17.5 metres.
- 43.4.1.3.2. The '*Drawbar Length*' forming part of the vehicle shall not exceed:
- 43.4.1.3.2.1. 5 metres; or
- 43.4.1.3.2.2. 8.5 m in the case of trailers having a single '*Axle Group*'.

- 43.4.1.4. *'Articulated Omnibuses'*
- 43.4.1.4.1. The *'Total Length'* of an *'Articulated Omnibus'* shall not exceed 18 metres.
- 43.4.1.4.2. All parts of an *'Articulated Omnibus'* except mirrors and signalling devices shall be capable of moving within a circular track having an inner radius of 5.3 metres and an outer radius of 12 metres.
- 43.4.2. *'Rear Overhang'* (including any *'Equipment'*)
- 43.4.2.1. Except as provided in Clause 43.4.2.4, for a rigid motor vehicle having a *'Total Length'* up to 9.5 metres, the *'Rear Overhang'* shall not exceed 60 percent of the distance from the centreline of the front *'Axle'* (or the front *'Axle'* of a *'Twin Steer Axle Group'*) to the line from which *'Rear Overhang'* is measured, or 3.2 metres whichever is the lesser.
- 43.4.2.2. For a trailer (other than a *'Semi-trailer'*) having a single *'Axle Group'* the *'Rear Overhang'* shall not exceed the length of the load space forward of the line at the rear of the vehicle from which *'Rear Overhang'* is measured, or 3.7 metres whichever is the lesser.
- 43.4.2.3. For a *'Semi-trailer'* the *'Rear Overhang'* shall not exceed 50 percent of the distance between the centreline of the *'Fifth Wheel'* king pin and the line from which *'Rear Overhang'* of the *'Semi-trailer'* is measured, or 3.2 metres whichever is the lesser.
- 43.4.2.4. The *'Rear Overhang'* of a rigid omnibus shall be the least of : 60 percent of the *'Wheelbase'*; or for an omnibus with a *'Single Axle'* towards the rear 3.2 metres; or for any other rigid omnibus 3.7 metres.
- 43.4.2.5. For all other motor vehicles and trailers (other than *'Semi-trailers'*) the *'Rear Overhang'* shall not exceed 60 percent of the distance from the centreline of the front *'Axle'* (or the front *'Axle'* of a *'Twin Steer Axle Group'*) to the line from which *'Rear Overhang'* is measured, or 3.7 metres whichever is the lesser.
- 43.4.2.6. In the case of a vehicle fitted with *'Twin Steer Axle Group'*, the front *'Axle'* of that group shall be the *'Axle'* used to determine the permitted *'Rear Overhang'*.
- 43.4.3. Height (including any *'Equipment'*)
- 43.4.3.1. The height of any vehicle shall not exceed 4.3 metres.
- 43.4.4. *'Ground Clearance'* The *'Ground Clearance'* of a vehicle, other than an L-Group vehicle, measured from a horizontal road surface to any point on the underside of the vehicle except the tyres, wheels and wheel hubs shall, under the conditions of *'Maximum Loaded Test Mass'* loading as specified in the relevant braking Rule, be not less than:
- 43.4.4.1. for any point in the width of the vehicle which is within one metre fore and aft of any *'Axle'*, 100 mm;
- 43.4.4.2. for the mid-point between any 2 consecutive *'Axles'*, the dimension in millimetres obtained by multiplying the distance between those 2 *'Axles'* in metres by 33.33; and

- 43.4.4.3. for any other point, '*Ground Clearance*' such that if the wheels of one '*Axle*' are on one plane and the wheels on the next consecutive '*Axle*' are on another plane which intersects the first so that the angle between them is 7 degrees 38 minutes the point will pass over the apex transverse to the vehicle formed by that intersection, as shown in Figure 2.
- 43.4.5. '*Overall Width*' (including any '*Equipment*')
- 43.4.5.1. The '*Overall Width*' of any motor vehicle (other than an L-Group vehicle) or trailer shall not exceed 2,500 mm.
- 43.4.5.2. The '*Overall Width*' of an L-Group vehicle shall be as follows :
- 43.4.5.2.1. In the case of a two wheel vehicle (LA or LC), the maximum width shall not exceed 1,000 mm.
- 43.4.5.2.2. In the case of a three wheel vehicle (LB or LE) or a motor cycle with a side car (LD), the maximum width shall not exceed 1,850 mm.
- 43.5. NOT USED.**
- 43.6. 'AXLE' CONFIGURATION**
- 43.6.0. Vehicles shall satisfy the following requirements:
- 43.6.1. A rigid motor vehicle shall be supported by 2 '*Axle Groups*' disposed as follows:
- 43.6.1.1. one towards the front of the vehicle, with all wheels connected to the steering system for that part of the vehicle, either a '*Single Axle*' or a '*Twin Steer Axle Group*'; and
- 43.6.1.2. one towards the rear of the vehicle.
- 43.6.2. A '*Semi-Trailer*' shall be supported towards the rear by an '*Axle Group*'.
- 43.6.2.1. Every '*Semi-trailer*' which is extendible or fitted with a sliding '*Axle Group*' shall be so constructed that:
- 43.6.2.1.1. positive locking devices are utilised;
- 43.6.2.1.2. all locking device controls shall be in a lockable enclosure when mounted on the chassis;
- 43.6.2.1.3. failure of the engagement of the locking device shall activate a visible and/or audible warning device;
- 43.6.2.1.4. where the locking device is air-operated the supply shall be fitted with a protection valve to prevent loss of air to the air brake supply in the event of line fracture or failure; and
- 43.6.2.1.5. the movable assembly shall be fitted with substantial stops to prevent disconnection from the vehicle in the event of failure of the locking device.
- 43.6.3. A trailer other than a '*Semi-trailer*' shall be supported by either:
- 43.6.3.1. one '*Axle Group*'; or

43.6.3.2. an 'Axle Group' towards both the front and rear of the trailer provided that all wheels in the front 'Axle Group' are connected to the steering mechanism for that part of the vehicle.

43.7. 'LOAD SHARING SUSPENSION'

All the 'Axles' in an 'Axle Group' other than a 'Twin Steer Axle Group' shall be related to each other through a 'Load Sharing Suspension' except:

43.7.1.1. this requirement shall not apply to a 'Close Coupled Axle Group' on any motor vehicle or trailer (including a 'Semi-trailer') with a 'GVM' or 'ATM' less than 4.5 tonne provided that the load carrying capacity of each of the 'Axles' and the wheel and tyres fitted to each 'Axle' is at least 120% of the nominal load imposed on that 'Axle' with the vehicle or trailer at its 'GVM' or 'ATM'; and

43.7.1.2. this requirement shall not apply to a 'Close Coupled Axle Group' fitted with a 'Retractable Axle' on any motor vehicle or trailer (including a 'Semi-trailer') with a 'GVM' or 'ATM' less than 4.5 tonne provided that the load carrying capacity of each other 'Axle' and the wheels and tyres fitted to it is at least equal to the load imposed on that 'Axle' with the motor vehicle or trailer at its 'GVM' or 'ATM' and with the 'Retractable Axle' retracted.

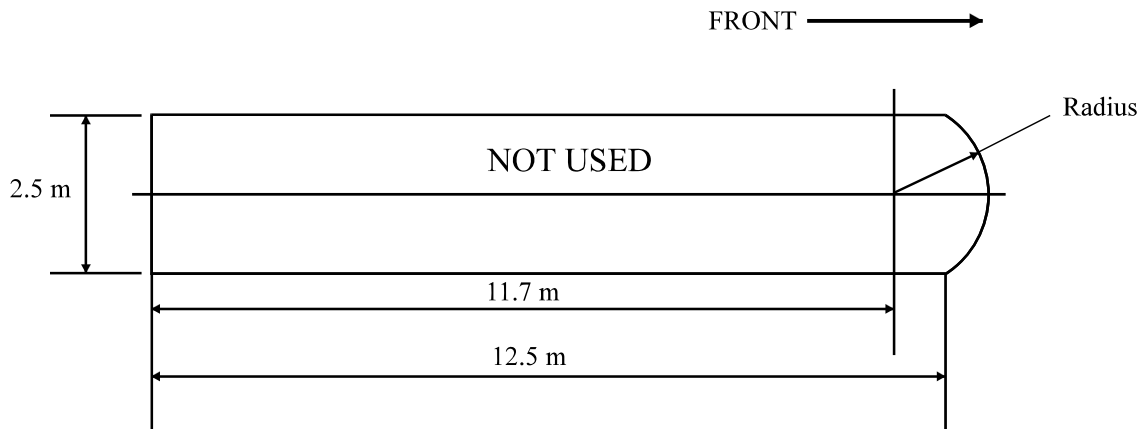
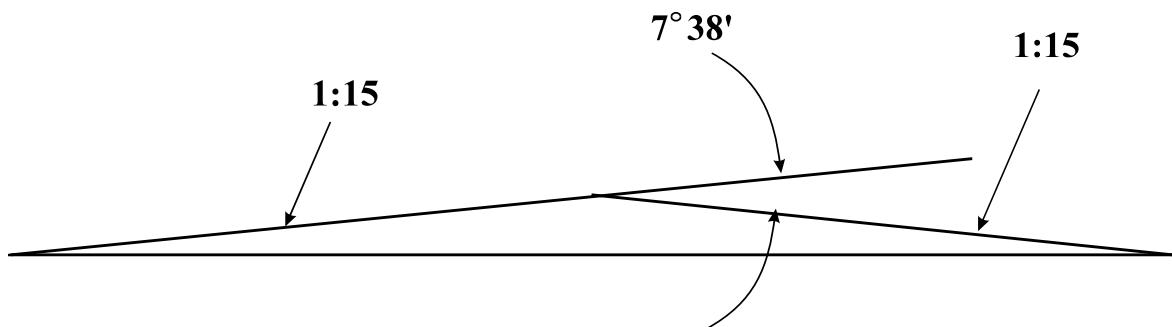


Figure 1 (Not Used)



1:15 gradient

Figure 2

NOTES

This compilation of Vehicle Standard (Australian Design Rule 43/02 - Vehicle Configuration and Dimensions) 2006 includes all the instruments set out in the Table of Instruments. The Table of Amendments provides a history of clauses that have been amended, inserted or deleted.

Table of Instruments

| Name of Instrument | Registration Date | Commencement Date |
|---|-------------------|-------------------|
| Vehicle Standard (Australian Design Rule 43/02 - Vehicle Configuration and Dimensions) 2006 | 17/08/06 | 18/08/06 |
| Vehicle Standard (Australian Design Rule 43/02 - Vehicle Configuration and Dimensions) 2006 Amendment 1 | 29/03/2007 | 30/03/2007 |

Table of Amendments

| Clause affected | How affected | Amending instrument |
|-----------------|--------------|---|
| 43.4.1.2.1 | am | Vehicle Standard (Australian Design Rule 43/02 - Vehicle Configuration and Dimensions) 2006 Amendment 1 |
| 43.4.1.2.4 | am | Vehicle Standard (Australian Design Rule 43/02 - Vehicle Configuration and Dimensions) 2006 Amendment 1 |

ad = added or inserted

am = amended

del = deleted or removed

rr = removed and replaced

→ = clause renumbered. This takes the format of old no. → new no.