



Vehicle Standard (Australian Design Rule – Definitions and Vehicle Categories) 2005 Amendment 8

I, PAUL FLETCHER, Minister for Territories, Local Government and Major Projects, determine this vehicle standard under section 7 of the *Motor Vehicle Standards Act 1989*.

Dated 1 February 2016

[SIGNED]

Paul Fletcher

Minister for Territories, Local Government and Major Projects

CONTENTS

1.	LEGISLATIVE PROVISIONS.....	3
2.	AMENDMENT OF VEHICLE STANDARD.....	3
	SCHEDULE 1	3

1. LEGISLATIVE PROVISIONS

- 1.1. Name of Legislative Instrument
- 1.1.1. This instrument is the Vehicle Standard (Australian Design Rule – Definitions and Vehicle Categories) 2005 Amendment 8.
- 1.2. Commencement
- 1.2.1. This instrument commences on the day after it is registered.

2. AMENDMENT OF VEHICLE STANDARD

- 2.1. The changes specified in Schedule 1 amend Vehicle Standard (Australian Design Rule – Definitions and Vehicle Categories) 2005.

SCHEDULE 1

- [1] Add the following, in alphabetical order, to clause 3. DEFINITIONS:

“DIFFERENTIAL – a mechanism which transmits engine power to the drive axle(s), allowing the drive wheels to rotate at different speeds, imposing a negligible restriction on the speed difference (unless of a ‘*Limited-slip Differential*’ type).”

- [2] Add the following, in alphabetical order, to clause 3. DEFINITIONS:

“LIMITED-SLIP DIFFERENTIAL - a ‘*Differential*’ which restricts the speed difference between the drive wheels, in effect transferring engine power to the wheel with the most traction.”

- [3] Clause 3. DEFINITIONS amend to read:

“ ...

95th PERCENTILE EYE ELLIPSES - defined and positioned as in SAE documents J941 (November 1965); J941a (August 1967); J941b (February 1969); J941c (June 1972); J941d (February 1975); J941e (March 1977) – “Motor Vehicle Drivers’ Eye Locations”; or in ISO 4513 - 1978(E) - “Road Vehicles - Visibility - Method for establishment of eye ellipses for driver’s eye location”, suitably handed for right-hand steering.

...”

- [4] Clause 3. DEFINITIONS amend to read:

“ ...

AISLE - the space providing access for passengers from any ‘*Seat*’ or row of ‘*Seats*’ or to any access passage from or to any ‘*Service Door*’, it does not include; the space extending 300 mm in front of any ‘*Seat*’, the space above the surface of any step or stair case or any space which affords access solely to one ‘*Seat*’ or one row of ‘*Seats*’

...”

- [5] Clause 3. DEFINITIONS amend to read:

“ ...

ANTILOCK SYSTEM - a portion of a ‘*Service Brake System*’ that automatically controls the degree of rotational wheel slip relative to the road at one or more road wheels of the vehicle during braking.

...”

- [6] Clause 3. DEFINITIONS amend to read:

“ ...

AUTOMATIC LENGTH ADJUSTING AND LOCKING RETRACTOR - a retractor incorporating a self-actuating mechanism which automatically locks the retractor at the webbing extension selected by the user.

...”

- [7] Clause 3. DEFINITIONS amend to read:

“ ...

AVERAGE RETARDATION COEFFICIENT - the average braking deceleration, from initial movement of the brake ‘*Control*’ to the trailer becoming stationary, expressed as a proportion of the acceleration due to gravity.

...”

- [8] Clause 3. DEFINITIONS amend to read:

“ ...

BRAKE POWER ASSIST UNIT - a device installed in a ‘*Hydraulic Brake System*’ that reduces the operator effort required to actuate the system and that if inoperative does not prevent the operator from braking the vehicle by a continued application of muscular force on the service brake ‘*Control*’.

BRAKE POWER UNIT 31/00 - a device installed in a '*Brake System*' that provides the energy required to actuate the '*Brakes*', either directly or indirectly through an auxiliary device, with the operator action consisting only of modulating the energy application level.

BRAKE POWER UNIT 35/... - a device installed in a '*Brake System*' that stores the energy required to actuate the '*Brakes*' and provides the energy either directly or indirectly through an auxiliary device, with the operator action consisting only of modulating the energy application level.

...”

[9] Clause 3. DEFINITIONS amend to read:

“ ...

CONTACTABLE – For the purposes of ADR 11 Clauses 11.2 and 11.3.2 to 11.3.4 a portion of a '*Sun Visor*' is '*Contactable*' if it can be contacted by a 165 mm diameter head form for a position to which the '*Sun Visor*' can be adjusted when installed in the vehicle. For the purpose of Clause 11.4 the '*Sun Visor*' shall be tested if there is any "point of contact" as defined in ECE Regulation 21/01, "Interior Fittings" including when the length of the arm of the measuring apparatus is increased to 1000 mm as provided for in paragraph 1.4.1.1 of Annex 4 to that Regulation, on its surface in any position to which it may be adjusted.

For the purposes of ADR 3/02 those surfaces situated in the areas defined in clause 6.5 of ADR 3/02 which can be contacted by a 165 mm diameter sphere when the '*Seat*' is mounted in the vehicle.

...”

[10] Clause 3. DEFINITIONS amend to read:

“ ...

CONTROL LINE - the device that transmits the '*Control Signal*' from the towing vehicle to the first other device, or between other devices on the trailer as a boosted or relayed signal not involving significant amounts of '*Stored Energy*' transfer. (Often called the service line in the case of compressed air '*Brake Systems*').

CONTROL LINE 35/...- the device that transmits the '*Control Signal*' to the '*Coupling Head*'. (Often called the service line in the case of compressed air '*Brake Systems*').

...”

[11] Clause 3. DEFINITIONS amend to read:

“ ...

CONVEX MIRROR - means a mirror having a curved reflective surface whose shape is the same as that of the external surface of a section of a sphere.

...”

[12] Clause 3. DEFINITIONS amend to read:

“...

CORRECTIVE ACTION - action, other than ‘*Scheduled Maintenance*’, taken to correct malfunctioning of the engine, ‘*Fuel System*’, or emissions control system(s) during an emissions test, including ‘*Stabilisation Distance*’ accumulation (refer Appendix 7 of ADR 37/...).

...”

[13] Clause 3. DEFINITIONS amend to read:

“...

COUPLING HEAD - the brake line couplings to which a trailer’s ‘*Brake System*’ would normally be attached. For the purpose of testing the ‘*Coupling Head*’ must be positioned as near as practical to the position in which it is most likely to be mounted -in service. Vehicles intended to tow ‘*Semi-trailers*’ must be equipped with flexible pipes for making the connection to ‘*Semi-trailers*’. The coupling heads will therefore be at the extremity of those flexible pipes.

...”

[14] Clause 3. DEFINITIONS amend to read:

“...

CRITICAL AREA A - In the case of LEP, MA and MC vehicles, it is the area of the windscreen bounded by a plane tangential to the bottom of the ‘*95th Percentile Eye Ellipses*’ which includes a line at ground level transverse to the longitudinal axis of the vehicle 11 m forward of the rearmost ‘*95th Percentile Eye Ellipses*’ point, and 2 diverging vertical planes tangential to and inclined 18° to the outboard and 56° to the inboard ‘*95th Percentile Eye Ellipses*’ and a plane tangential to the top of the ‘*95th Percentile Eye Ellipses*’ inclined upwards at 10° to the horizontal.

In the case of other vehicles, it is the area of the windscreen bounded by a plane tangential to the bottom of the ‘*95th Percentile Eye Ellipses*’ which includes a line at ground level transverse to the longitudinal axis of the vehicle 11 m forward of the rearmost ‘*95th Percentile Eye Ellipses*’ point, and 2 diverging vertical planes tangential to and inclined 18° to the outboard and 56° to the inboard ‘*95th Percentile Eye Ellipses*’, and a plane tangential to the top of the ‘*95th Percentile Eye Ellipses*’ inclined upwards at 5° or $\arctan(3-H)/11$ (where H is the height in metres of the top of the ‘*95th*

Percentile Eye Ellipses' above ground level) whichever is the greater (ADR 15).

...”

[15] Clause 3. DEFINITIONS amend to read:

“...

E - a nominal unit of *'Control Signal'* strength which, for compressed air *'Brake Systems'*, is shown in the table below:

Table: 'E' VALUES OF CONTROL SIGNAL STRENGTH

Nominal Conversions

0.0E	Zero Compressed Air Energy Level
0.15E	15psi = 100kPa
0.20E	19psi = 130kPa
0.24E	22psi = 155kPa
0.31E	29psi = 200kPa
0.65E	61psi = 420kPa
1.00E	94psi = 650kPa
1.06E	100psi = 690kPa

For the purpose of ADR 35/.. and ADR 38/.. 1.0 'E' has been equated to the *'Nominal Minimum Energy Level'* of compressed air brakes which for vehicles, has been nominated as 650 kPa. Values appearing in brackets after 'E' values in ADR 35/.. and ADR 38/... are the equivalent kPa values for compressed air *'Brake Systems'*. The relationship between 'E' and the other brake control mediums has not been set in ADR 35/.. and ADR 38/...

...”

[16] Clause 3. DEFINITIONS amend to read:

“...

EMERGENCY BRAKE SYSTEM: that part of the *'Brake System'* which automatically applies in the event of trailer break-away.

...”

[17] Clause 3. DEFINITIONS amend to read:

“...

ESTABLISHED RETARDATION COEFFICIENT (ERC) - the average braking deceleration calculated from when the energy level in the least favoured *'Brakes'* actuator reaches 65% of *'Average Operating Pressure'* to when the vehicle becomes stationary, expressed as a proportion of the acceleration due to gravity.

...”

- [18] Clause 3. DEFINITIONS amend to read:

“ ...

FIFTH WHEEL COUPLING - a device, other than the ‘*Skid Plate*’ and the kingpin (which are parts of a ‘*Semi-trailer*’), used with a ‘*Prime Mover*’, ‘*Semi-trailer*’ or a ‘*Converter Dolly*’ to permit quick coupling and uncoupling and to provide for articulation.

...”

- [19] Clause 3. DEFINITIONS amend to read:

“ ...

LADEN MOTOR CYCLE MASS (LMCM) - the mass of the unladen motor cycle or other L-group vehicle with a full capacity of lubricating oil, coolant and fuel, plus 90 kg (including driver and instrumentation) distributed in the saddle or carrier if so equipped.

For LEM and LEP vehicles the ‘*Laden Motor Cycle Mass*’ is to be taken to mean the value specified by the vehicle manufacturer as the loaded mass of the vehicle, provided such mass is not less than the mass of the unladen vehicle together with the heaviest factory installed options if such individual options have a mass of 2.3 kg or more, with a full capacity of lubricating oil and coolant and at least 75 per cent capacity of fuel plus additional mass equivalent to 68 kg located in each unoccupied seating position.

For LEG vehicles the ‘*Laden Motor Cycle Mass*’ is to be taken to mean the mass of the laden vehicle loaded to ‘*GVM*’ rating with a load so distributed over the load bearing area of the vehicle as not to exceed the ‘*Manufacturers*’ nominated individual ‘*Axle Loads*’.

...”

- [20] Clause 3. DEFINITIONS amend to read:

“ ...

LIGHTLY LADEN TEST MASS (LLTM) - the mass of the trailer in its normal unladen condition.

...”

- [21] Clause 3. DEFINITIONS amend to read:

“ ...

LOADED TEST MASS (LTM) - the mass of the laden trailer when loaded such that each of its ‘*Axle Groups*’ is loaded to the specified ‘*GGALRS*’.

...”

- [22] Clause 3. DEFINITIONS amend to read:

“ ...

MAXIMUM LOADED TEST MASS

- for LEP vehicles, the value specified by the vehicle manufacturer as the loaded mass of the vehicle, provided such mass is not less than the mass of unladen vehicle together with the heaviest factory installed options if such individual options have a mass of 2.3 kg or more, with a full capacity of lubricating oil and coolant and at least 75 percent capacity of fuel plus additional mass equivalent to 68 kg located in each unoccupied seating position.

- for LEM and LEG vehicles, the ‘*Gross Vehicle Mass*’.

MAXIMUM LOADED TEST MASS (MLTM) - for the purposes of ADR 38/..., the mass of the trailer loaded to ‘*Gross Trailer Mass*’ such that the trailer ‘*Axle Loads*’ do not exceed the trailer ‘*Manufacturer’s*’ nominated individual ‘*Axle Loads*’ (‘*GALR*’).

...”

- [23] Clause 3. DEFINITIONS amend to read:

“ ...

NOMINAL MINIMUM ENERGY LEVEL - the nominal operating minimum level of the energy storage devices which in the case of a compressed air ‘*Brake System*’ must be taken as 1.0 ‘E’ (650 kPa).

...”

- [24] Clause 3. DEFINITIONS amend to read:

“ ...

NORMAL LOADED VEHICLE MASS (of a passenger vehicle) - the sum of:
the ‘*Unladen Mass*’ together with:
the heaviest regular production options, if such individual options have a mass of 2.3 kg or more; plus
68 kg for each of 2 front ‘*Seat*’ occupants; plus
if the designated ‘*Seating Capacity*’ is 5 or more, 68 kg for a rear ‘*Seat*’ passenger.

...”

- [25] Clause 3. DEFINITIONS amend to read:

“ ...

NORMAL MINIMUM ENERGY LEVEL - the normal operating minimum level of the energy storage devices as defined by the normal cut-in level of

the storage charging system and in the case of a compressed air ‘*Brake System*’, is to be taken as 650 kPa.

...”

[26] Clause 3. DEFINITIONS amend to read:

“...

OPENING - is the maximum unobstructed aperture between the top edge of a power window and any part of the structure which forms the boundary of the window when viewed from the interior of the vehicle. To measure an opening, cylindrical test rods must be placed (without exerting force) from the interior of the vehicle as shown in figure 6 in ADR 42/03.

...”

[27] Clause 3. DEFINITIONS amend to read:

“...

OVER-RUN BRAKING SYSTEM - means a ‘*Brake System*’ actuated by the forces generated when the towing vehicle commences to decelerate and the trailer applies a longitudinal force to the towing vehicle through the ‘*Coupling*’.

...”

[28] Clause 3. DEFINITIONS amend to read:

“...

PARKING MECHANISM 31/00 - a component or sub-system of the ‘*Drive Train*’ that locks the ‘*Drive Train*’ when the transmission control is placed in the “park” position or other gear position and the ignition key is removed.

PARKING MECHANISM 35/... - a component or sub-system of the ‘*Drive Train*’ that locks the ‘*Drive Train*’ of the vehicle when the transmission control is placed in the “park” position.

...”

[29] Clause 3. DEFINITIONS amend to read:

“...

REAR MARKING PLATE - a plate faced with retro reflective materials as prescribed in ADR 45.

...”

[30] Clause 3. DEFINITIONS amend to read:

“ ...

S-CAM - means a ‘*Foundation Brake*’ unit which utilises the rotation of an S shaped cam to actuate the ‘*Brakes*’.

...”

[31] Clause 3. DEFINITIONS amend to read:

“ ...

SEALED HOUSING FOR EVAPORATIVE DETERMINATION (SHED) - a sealed structure used to enclose a vehicle so that ‘*Fuel Evaporative Emissions*’ can be measured.

...”

[32] Clause 3. DEFINITIONS amend to read:

“ ...

SEAT TYPE - means a category of ‘*Seats*’ which do not differ essentially with respect to the following characteristics likely to affect their strength or occupant protection performance:

- structure, shape, dimensions and materials of the load-bearing or energy-absorbing parts;
- types and dimensions of the ‘*Seat*’ back adjustment and locking system;
- dimensions, structure and materials of the attachments and supports (e.g. legs);
- ‘*Seatbelt Assembly*’ installed on the ‘*Seat*’; or
- orientation in vehicle (i.e. front facing or rear facing).

...”

[33] Clause 3. DEFINITIONS amend to read:

“ ...

SECONDARY BRAKE SYSTEM - either

- a system which , in the event of failure of any fluid connected component of the ‘*Service Brake System*’ remains operative and capable of imparting a retarding force to the vehicle; or
- one circuit of a ‘*Split Brake System*’, except if the vehicle is fitted with only one ‘*Brake Power Unit 35/...*’ .

...”

[34] Clause 3. DEFINITIONS amend to read:

“ ...

SELF-ILLUMINATING - is a luminescent material which can retain its luminescence for at least 15 minutes after the source of illumination is removed and which takes no more than 20 minutes to charge.

...”

[35] Clause 3. DEFINITIONS amend to read:

“ ...

SERVICE DOOR - an access door used for normal access to the vehicle by passengers.

...”

[36] Clause 3. DEFINITIONS amend to read:

“ ...

SHOULDER REFERENCE POINT - the point on the 2-dimensional ‘*Manikin*’ where the ‘Torso Line’ meets the shoulder.

...”

[37] Clause 3. DEFINITIONS amend to read:

“ ...

SIZE FACTOR - the sum of the ‘Section Width’ and the outer diameter of a tyre determined on the ‘Measuring Rim’.

...”

[38] Clause 3. DEFINITIONS amend to read:

“ ...

SKID PLATE - the plate structure on the ‘*Semi-trailer*’ which houses the kingpin and which mounts on to the ‘*Fifth Wheel Coupling*’ coupler plate to form the connection between the towing vehicle and the ‘*Semi-trailer*’.

...”

[39] Clause 3. DEFINITIONS amend to remove:

“ ...

SPAN GAS - a gas of known concentration which is used routinely to set the output level of an analyser.

...”

[40] Clause 3. DEFINITIONS amend to read:

“ ...

SPARE UNIT - a ‘*Unit*’ which is intended to be exchanged for a ‘*Second Unit*’ in case of malfunction of the latter.

...”

[41] Clause 3. DEFINITIONS amend to read:

“ ...

STANDARD SPARE UNIT - a ‘*Unit*’ that conforms to the ‘*Standard Unit*’ of the vehicle.

...”

[42] Clause 3. DEFINITIONS amend to read:

“ ...

STANDARD UNIT - a ‘*Unit*’ which is capable of being fitted to the vehicle for normal operation.

...”

[43] Clause 3. DEFINITIONS amend to read:

“ ...

STEERING YOKE - a component that transmits steering torque from the handle-bar to the front wheel.

...”

[44] Clause 3. DEFINITIONS amend to read:

“ ...

STOPPING DISTANCE - the distance travelled by a vehicle from its position at the instant the brake ‘*Control*’ leaves the initial brake ‘*Control*’ location to the position at which the vehicle is brought to rest.

...”

[45] Clause 3. DEFINITIONS amend to read:

“ ...

TANK FUEL VOLUME - the volume of fuel in the fuel tank(s), which is determined by multiplying the vehicle's '*Nominal Fuel Tank(s) Capacity*' by 0.40, the result being '*Rounded Off*' to the nearest 0.5 litre.

...”

[46] Clause 3. DEFINITIONS amend to read:

“ ...

TEMPORARY-USE SPARE UNIT - is a '*Unit*' that differs from the '*Standard Unit*' of the vehicle with regard to its principal characteristics (e.g. size designations, '*Functional Dimensions*', conditions for use or construction). It is intended for use under restricted conditions specified in clause 5.1 of ADR 71/00. A '*Temporary-Use Spare Unit*' may be either of a type intended to be carried on the vehicle with the tyre inflated to the pressure specified for temporary use or may be of a type where the tyre is folded and not inflated.

...”

[47] Clause 3. DEFINITIONS amend to read:

“ ...

TNO 10 DUMMY - a test dummy manufactured by TNO (Research Institute for Road Vehicles) - Netherlands, Schoemaker Straat, 97; 2628 VK Delft, Netherlands.

...”

[48] Clause 3. DEFINITIONS amend to remove:

“ ...

TOTAL COMBINATION MASS (TCM) - the combined mass of the laden or unladen trailer and the towing vehicle as tested.

...”

[49] Clause 3. DEFINITIONS amend to read:

“ ...

TOTAL TRAILER AXLE LOAD (TTAL) - the total force exerted by the individual axles attached to the trailer when resting on a horizontal supporting plane.

...”

[50] Clause 3. DEFINITIONS amend to read:

“ ...

TWINNED WHEELS - means two '*Wheels*' mounted on the same axle, the distance between centres of their areas of contact with the ground being less than 460 mm. '*Twinned Wheels*' shall be considered as one '*Wheel*'.

...”

[51] Clause 3. DEFINITIONS amend to read:

“ ...

TYRE CARCASS CONSTRUCTION SYMBOL - relates to the type of '*Carcass*' construction used in the manufacture of the tyre, viz:

D - Diagonal Ply

B - Bias-Belted

R - Radial Ply.

...”

[52] Clause 3. DEFINITIONS amend to read:

“ ...

UNIT - means an assembly of a '*Wheel*' and a tyre.

...”

[53] Clause 3. DEFINITIONS amend to read:

“ ...

VARIANT (of a model) - a vehicle with its own marketing designation but included in the '*Compliance Plate*' approval for the “make and model”.

...”