Vehicle Standard (Australian Design Rule 18/01 – Instrumentation) 2006

I, JAMES ERIC LLOYD, Minister for Local Government, Territories and Roads, determine this vehicle standard under subsection 7 (1) of the *Motor Vehicle Standards Act 1989*.

Dated 10 August 2006

[SIGNED]

James Eric Lloyd

Minister for Local Government, Territories and Roads

Replaced Authorised Version registered 16/12/2025 F2006L02737

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18.0. LEGISLATIVE PROVISIONS

18.0.1. NAME OF STANDARD

18.0.1.1. This Standard is the Vehicle Standard (Australian Design Rule 18/01 – Instrumentation) 2006.

18.0.1.2. This Standard may also be cited as Australian Design Rule 18/01 — Instrumentation.

18.0.2. COMMENCEMENT

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

18.0.3. REPEAL

18.0.3.1. This Standard repeals each vehicle standard with the name Australian Design Rule 18/01 — Instrumentation that is:

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

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

18.0.3.2. 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 18/01 — Instrumentation, 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 the provision and location of certain '*Visual Indicators'.*

It also specifies requirements for speedometers and odometers.

APPLICABILITY

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

The /01 Rule differs from the /00 Rule in that it changes the requirements for LEP and LEG vehicles.

Vehicle Category	ADR Category Code *	UNECE Category Code *	Manufactured on or After	Acceptable Prior Rules
Moped 2 wheels	LA	L1	Not Applicable	
Moped 3 wheels	LB	L2	Not Applicable	
Motor cycle	LC	L3	1 March 1993	Nil
Motor cycle and sidecar	LD	L4	1 March 1993	Nil
Motor tricycle	LE	L5		
	LEM		1 March 1993	Nil
	LEP		1 July 1992	Nil
	LEG		1 July 1992	Nil
Passenger car	MA	M1	1 Jan 1993	Nil
Forward-control passenger vehicle	MB	M1	1 Jan 1993	Nil
Off-road passenger vehicle	MC	M1	1 Jan 1993	Nil
Light omnibus	MD	M2		
up to 3.5 tonnes '*GVM'* and up to 12 seats	MD1		1 July 1992	Nil
up to 3.5 tonnes *'GVM'* and more than 12 seats	MD2		1 July 1992	Nil
over 3.5 tonnes and up to 4.5 tonnes *'GVM'*	MD3		1 July 1992	Nil
over 4.5 tonnes and up to 5 tonnes *'GVM'*	MD4		1 July 1992	Nil
Heavy omnibus	ME	M3	1 July 1992	Nil
Light goods vehicle	NA	N1	1 July 1992	Nil
Medium goods vehicle	NB	N2		
over 3.5 tonnes up to 4.5 tonnes *'GVM'*	NB1		1 July 1992	Nil
over 4.5 tonnes up to 12 tonnes *'GVM'*	NB2		1 July 1992	Nil
Heavy goods vehicle	NC	N3	1 July 1992	Nil
Very light trailer	TA	O1	Not Applicable	
Light trailer	TB	O2	Not Applicable	
Medium trailer	TC	O3	Not Applicable	
Heavy trailer	TD	O4	Not Applicable	

18.1. DEFINITIONS

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

18.1.2. '*Visual Indicator*' - that part of an instrument or device intended to display information for the driver and includes any specified label.

* The category code may also be in the format L_1, L_A etc.

18.1.3. '*Totally Visible*' - means that the sum of the view from each of the 2 eyes includes all the '*Visual Indicators*'.

18.2. *'VISUAL INDICATORS'* FOR MA AND LEP VEHICLES ONLY

18.2.1. The display of information presented by the following '*Visual Indicators*', if fitted, shall be subject to control under this Rule:

Group I

(a) Speedometer

(b) Direction indicator "tell-tale" lamp or lamps

(c) High beam indicator

Group II

(d) Tachometer

(e) Odometer

(f) Service brake failure indicator lamp

(g) Parking brake indicator lamp

(h) Stop lamp failure indicator

(i) Oil temperature indicator

(j) Pressure indicator

(k) Water temperature indicator

(l) Battery charge failure indicator

(m) Fuel level indicator.

18.2.2. In cases where more than one '*Visual Indicator*' are provided for any one of the functions covered by (h) to (m) above, and are not located as specified in clause 18.3.2 a common indicator which could be either visual or an audible signal may be used to draw attention to the need to refer to a group of indicators located elsewhere.

18.2.2.1. In such cases the common indicator, if visual, shall be totally located within the area specified in clause 18.3.2.

18.3. LOCATION OF '*VISUAL INDICATORS*' FOR MA AND LEP VEHICLES ONLY

18.3.1. All '*Visual Indicators*' specified as Group I in clause 18.2 shall be totally located between 2 vertical planes inclined at 20° left and 20° right of the longitudinal axis of the vehicle and passing through the foremost points of the left and right '*95th Percentile Eye Ellipses*' respectively. Such indicators shall be totally located above a plane inclined downwards at 35° from the horizontal and including a horizontal transverse line through the foremost points of each of the '*95th Percentile Eye Ellipses*' and below 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 eye ellipse point.

18.3.2. All '*Visual Indicators*' specified as Group II in clause 18.2 shall be totally located between 2 vertical planes inclined at 40° left and 25° right of the longitudinal axis of the vehicle and passing through the foremost points of the left and right '*95th Percentile Eye Ellipses*' respectively. Such indicators shall be totally located above a plane inclined downwards at 35° from the horizontal and including a horizontal transverse line through the foremost points of each of the '*95th Percentile Eye Ellipses*' and below 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 eye ellipse point.

18.4. VISIBILITY OF '*VISUAL INDICATORS*' FOR MA AND LEP VEHICLES ONLY

18.4.1. The requirements of clauses 18.4.1.1 and 18.4.1.2 shall be met when:

(a) the steering wheel is in the straight ahead position;

(b) the direction indicator lever is in the "Neutral" position;

(c) in the case of column change automatic transmission vehicles the gear selector is in the "Drive" position;

(d) in the case of column change manual transmission vehicles with 2 or 3 forward gear ratios, the gear selector is in "Top" gear position;

(e) in the case of column change manual transmission vehicles with more than 3 forward gear ratios, the gear selector is in "Top" gear position or the next lower gear position whichever is the more critical in terms of obscuration of '*Visual Indicators*'.

18.4.1.1. All '*Visual Indicators*' other than indicator lamps shall be '*Totally Visible*' when viewed from each pair of eye positions located by the '*95th Percentile Eye Ellipses*' except that:

18.4.1.1.1. in the case of Group I '*Visual Indicators*', the portion of the steering wheel rim including its supporting arms that is below a plane tangential to the top of the '*95th Percentile Eye Ellipses*' and the underside of the highest rim cross-section cut normal to the rim, shall not constitute an obstruction;

18.4.1.1.2. in the case of Group II '*Visual Indicators*' the steering wheel rim and its supporting arms and attachments thereto shall not constitute obstructions.

18.4.1.2. Any object which represents an obstruction to any single eye position within the terms of clause 18.4.1.1 shall have no surfaces, in the line of sight to the '*Visual Indicator*', which present a metal finish with a '*Specular Gloss*' exceeding 40 units when measured by the 20 degree geometry method of ASTM Standard D523-62T-"Specular Gloss" June 1962 or ASTM Standard D523-85T-"Specular Gloss", September 1985.

18.4.1.3. All indicator lamp '*Visual Indicators*' shall either be '*Totally Visible*', or an area of not less than 18 square millimetres with dimensions such that a 2 mm diameter circle is totally enclosed within the area, shall be '*Totally Visible*' when viewed from each single eye position located by the '*95th Percentile Eye Ellipses*'. The obstruction exemptions provided for in clause 18.4.1.1 shall also be applicable to this clause.

18.4.1.4. In the case of a motor vehicle provided with a steering wheel capable of axial and vertical adjustments, it shall be demonstrated that for any eye position located by the '*95th Percentile Eye Ellipses*', there is at least one steering wheel position where the requirements of clauses 18.4.1.1 to 18.4.1.3 are complied with.

18.4.2. The vehicle speed indicating element shall be of such colour or contrast as to differentiate it from the viewed background.

18.4.3. All '*Visual Indicators*' other than indicator lamps shall be provided with variable intensity when illuminated.

Note: A switch which provides a means of varying the illumination to '*Visual Indicators*', but is not integral with the on/off control for the illumination of '*Visual Indicators*' is acceptable as a means of providing variable intensity illumination to '*Visual Indicators*'. It shall be acceptable for the intensity control to have not less than 2 levels of adjustment other than an "off" position provided that each position results in a substantially different level of illumination to '*Visual Indicators*'.

18.5. SPEEDOMETERS AND ODOMETERS (ALL VEHICLES)

18.5.1. Speedometers

18.5.1.1. Unless otherwise *'Approved'*, every vehicle shall be fitted with a speedometer which shall:

18.5.1.1.1. indicate vehicle speed only in kilometres per hour; and

18.5.1.1.2. indicate the actual vehicle speed, for all speeds above 40 km/h, to an accuracy of + 10 per cent.

18.5.1.2. The speedometer shall be installed so that its indication is readily visible to the driver when seated in the normal driving position.

18.5.2. Odometers

18.5.2.1. Every vehicle other than LA; LB and LEM group vehicles shall be fitted with an odometer which shall:

18.5.2.1.1. indicate distance travelled in one kilometre units (or less) from 1 to 999,999 kilometres; and

18.5.2.1.2. indicate the actual distance travelled by the vehicle to an accuracy of + 4 per cent.

18.5.2.2. Every vehicle of category LC, LD and LEM shall be fitted with an odometer which shall:

18.5.2.2.1. indicate distance travelled in one kilometre units from 1 to 99,999 kilometres; and

18.5.2.2.2. indicate the actual distance travelled by the vehicle to an accuracy of + 4 per cent