



Vehicle Standard (Australian Design Rule 2/00 – Side Door Latches and Hinges) 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 26 April 2006

[SIGNED]

James Eric Lloyd
Minister for Local Government, Territories and Roads

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2.0. LEGISLATIVE PROVISIONS

2.0.1. NAME OF STANDARD

- 2.0.1.1. This Standard is the Vehicle Standard (Australian Design Rule 2/00 – Side Door Latches and Hinges) 2006.
- 2.0.1.2. This Standard may also be cited as Australian Design Rule 2/00 — Side Door Latches and Hinges.

2.0.2. COMMENCEMENT

- 2.0.2.1. This Standard commences on the day after it is registered.

2.0.3. REPEAL

- 2.0.3.1. This Standard repeals each vehicle standard with the name Australian Design Rule 2/00 — Side Door Latches and Hinges that is:
- (a) made under section 7 of the Motor Vehicles Standard Act 1989; and
 - (b) in force at the commencement of this Standard.
- 2.0.3.2. This Standard also repeals each instrument made under section 7 of the Motor Vehicles Standard Act 1989 that creates a vehicle standard with the name Australian Design Rule 2/00 — Side Door Latches and Hinges, 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 vehicle standard for the purposes of the Motor Vehicle Standards Act 1989.

The function of this Australian Design Rule is to specify requirements for side door retention components including latches, hinges, and other supporting means to minimise the likelihood of occupants being thrown from a vehicle as a result of impact.

APPLICABILITY

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

The Package 17 issue of /00 deletes the applicability of the Rule to LEM vehicles and removes reference to ‘only applies if fitted with side door(s)’ from front page

Vehicle Category	ADR Category Code	UNECE Category Code	Manufactured on or After	Acceptable Prior Rules
Moped 2 wheels	LA	L1	N/A	
Moped 3 wheels	LB	L2	N/A	
Motor cycle	LC	L3	N/A	
Motor cycle and sidecar	LD	L4	N/A	
Motor tricycle	LE	L5		
	LEM		N/A	
	LEP		1 Mar 1991	Nil
	LEG		1 Mar 1991	Nil
Passenger car	MA	M1	1 July 1988	Nil
Forward-control passenger vehicle	MB	M1	1 July 1988	Nil
Off-road passenger vehicle	MC	M1	1 July 1988	Nil
Light omnibus	MD	M2		
up to 3.5 tonnes 'GVM' and up to 12 seats	MD1		1 July 1988	Nil
up to 3.5 tonnes 'GVM' and more than 12 seats	MD2		1 July 1988	Nil
over 3.5 tonnes and up to 4.5 tonnes 'GVM'	MD3		N/A	
over 4.5 tonnes and up to 5 tonnes 'GVM'	MD4		N/A	
Heavy omnibus	ME	M3	N/A	
Light goods vehicle	NA	N1	1 July 1988	Nil
Medium goods vehicle	NB	N2		
over 3.5 tonnes up to 4.5 tonnes 'GVM'	NB1		1 July 1988	Nil
over 4.5 tonnes up to 12 tonnes 'GVM'	NB2		1 July 1988	Nil
Heavy goods vehicle	NC	N3	1 July 1988	Nil
Very light trailer	TA	O1	N/A	
Light trailer	TB	O2	N/A	
Medium trailer	TC	O3	N/A	
Heavy trailer	TD	O4	N/A	

2.1. DEFINITIONS

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

2.2. REQUIREMENTS

- 2.1.0. Side door components referred to herein shall comply with this Rule if any portion of a 90-percentile 2-dimensional manikin as described in the SAE document J826, "Manikins For Use In Defining Vehicle Seating Accommodation", November 1962, or 95 percentile as per SAE document J826a, August 1970, at the discretion of the 'Manufacturer' when positioned at any 'Seating Reference Point', projects into the door opening area on the side elevation or profile view. Components on folding doors, roll-up doors and on doors that are designed to be easily attached to or removed, without the aid of tools, from motor vehicles manufactured for operation without doors need not comply with this Rule.
- 2.2.1. Hinged Doors, Except '*Goods-type Doors*'
- 2.2.1.1. Door latches - Each door latch and striker assembly shall be provided with 2 positions, consisting of a fully latched position and a secondary latched position.
- 2.2.1.1.1. Longitudinal load - The door latch and striker assembly, when in the fully latched position, shall not separate when a longitudinal load of 11.11 kN is applied. When in the secondary latched position, the door latch and striker assembly shall not separate when a longitudinal load of 4.44 kN is applied.
- 2.2.1.1.2. Transverse load - The door latch and striker assembly, when in the fully latched position, shall not separate when a transverse load of 8.89 kN is applied. When in the secondary latched position, the door latch and striker assembly shall not separate when a transverse load of 4.44 kN is applied.
- 2.2.1.1.3. Inertia load - The door latch shall not disengage from the fully latched position when a longitudinal or transverse inertia load of 30 times the acceleration due to gravity is applied to the door latch system (including the latch and its actuating mechanism with the locking mechanism disengaged).
- 2.2.1.2. Door hinges - Each door hinge system shall support the door and shall not separate when a longitudinal load of 11.11 kN is applied. Similarly, each door hinge system shall not separate when a transverse load of 8.89 kN is applied.
- 2.2.1.3. Door locks - Each door shall be equipped with a locking mechanism with an operating means in the interior of the vehicle.
- 2.2.1.3.1. Front door locks - When the locking mechanism is engaged, the outside door handles or other outside latch release control shall be inoperative.

- 2.2.1.3.2. Rear door locks - In passenger cars (MA), when the locking mechanism is engaged, both the outside and inside door handles or other latch release controls shall be inoperative; or
- the outside door handles shall be designed to remain inoperative in the event of vehicle impact or rollover, and the inside door handles shall be inoperative by engagement of the '*Child Safety Locks*'.
- 2.2.2. Hinged '*Goods-Type Doors*'
- 2.2.2.1. Door latches
- 2.2.2.1.1. Longitudinal load - Each latch system, when in the latched position, shall not separate when a longitudinal load of 11.11 kN is applied.
- 2.2.2.1.2. Transverse load - Each latch system, when in the latched position, shall not separate when a transverse load of 8.89 kN is applied. When more than one latch system is used on a single door, the load requirement may be divided among the total number of latch systems.
- 2.2.2.2. Door Hinges - Each door hinge system shall support the door and shall not separate when a longitudinal load of 11.11 kN is applied, and when a transverse load of 8.89 kN is applied.
- 2.2.3. Sliding Doors
- The track and slide combination or other supporting means for each sliding door shall not separate when a total transverse load of 17.8 kN is applied, with the door in the closed position.

2.3. TEST PROCEDURES

- 2.3.1. Hinged Doors, Except '*Goods-Type Doors*'
- 2.3.1.1. Door latches
- 2.3.1.1.1. Longitudinal and transverse loads - Compliance with Clauses 2.2.1.1.1 and 2.2.1.1.2. shall be demonstrated in accordance with paragraph 4 of SAE document J839b, "Passenger Car Side Door Latch Systems", May 1965 or January 1972 (Editorial changes only).
- 2.3.1.1.2. Inertia load - Compliance with Clause 2.2.1.1.3 shall be demonstrated by '*Approved*' tests or in accordance with paragraph 5 of the SAE document referred to in Clause 2.3.1.1.1.
- 2.3.1.2. Door hinges - Compliance with Clause 2.2.1.2 shall be demonstrated in accordance with paragraph 4 of SAE document J934 "Vehicle Passenger Door Hinge Systems", July 1965, or paragraph 5 of either J934a - September 1969 or J934 JUL82. For piano-type hinges, the hinge spacing requirements of these 3 SAE documents shall not be applicable, and arrangement of the test fixture shall be altered as required so that the test load will be applied to the complete hinge.
- 2.3.2. Hinged '*Goods-Type Doors*'
- 2.3.2.1.1. Door latches - Compliance with Clause 2.3.2.1 shall be demonstrated in accordance with paragraphs 4.1 and 4.3 of the SAE document referred to in Clause 2.3.1.1.1. An equivalent static test fixture may be substituted for that shown in Figure 2 of that SAE document if required.

2.3.2.2. Door hinges - Compliance with Clause 2.2.2.2 shall be demonstrated in accordance with paragraph 4 of the 3 SAE documents referred to in Clause 2.3.1.2. For piano type hinges, the hinge spacing requirement of the above SAE documents shall not be applicable and arrangement of the test fixture shall be altered as required so that the test load will be applied to the complete hinge. Where more than 2 hinge assemblies comprise a hinge system, individual hinge assemblies may be tested in accordance with paragraph 5 of SAE document J934a - September 1969 or J934 JUL82 provided it is demonstrated that the hinge system will support the load specified in Clause 2.2.2.2.

2.3.3. Sliding Doors

Compliance with Clause 2.2.3 shall be demonstrated by applying an outward transverse load of 8.89 kN to the load bearing members at the opposite edges of the door (17.8 kN total). The demonstration may be performed either in the vehicle or with the door retention components in a bench test fixture.

2.4. ALTERNATIVE STANDARDS

The technical requirements of ECE R 11/00 to 11/02 "Door Latches and Hinges" shall be deemed to be equivalent to the technical requirements of Clauses 2.2.1.1, 2.2.1.1.1, 2.2.1.1.2, 2.2.1.1.3, 2.2.1.2 (for hinged doors, except '*Goods-type Doors*') and 2.2.3 (for sliding doors) of this Rule.