COMMONWEALTH OF AUSTRALIA

AUSTRALIAN DESIGN RULE 14
FOR
REAR VISION MIRRORS

As Endorsed by the
Australian Transport Advisory Council

The intention of this Australian Design Rule is to specify requirements for rear vision mirrors to provide the driver with a clear and reasonably unobstructed view to the rear.

The Australian Transport Advisory Council has recommended to Commonwealth, State and Territory Governments that all motor vehicles specified below shall be equipped with a right hand external and an internal rear vision mirror complying with Australian Design Rule 14 - Rear Vision Mirrors.

VEHICLE CATEGORY	RULE	AMENDMENT	
	MANUFACTURED ON OR AFTER		
	14		
Passenger Cars			
Forward Control Passenger Vehicles up to 8 seats	1 Jan 1985		
9 seats	1 Jan 1986		
Other Passenger Cars	1 Jan 1972		
Passenger Car Derivatives	1 Jan 1972		
Multi-Purpose Passenger Cars	1 Jan 1973		
Omnibuses up to 3.5 tonnes GVM			
up to 12 seats	1 Jan 1987		
over 12 seats	N/A		
up to 4.5 tonnes GVM	N/A		
over 4.5 tonnes GVM	N/A		
Motorcycles	N/A		
Mopeds	N/A		
Specially Constructed Vehicles	N/A		
Other Vehicles not listed above			
up to 4.5 tonnes GVM	N/A		
over 4.5 tonnes GVM	N/A		

N/A - Not Applicable
GROSS VEHICLE MASS - Abbreviated to 'GVM'

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AUSTRALIAN DESIGN RULE NO. 14 - REAR VISION MIRRORS

14.1 Definitions

14.1.1 Head Impact Area - All non-glazed surfaces of the interior of a vehicle that are statically contactable by a 156mm diameter spherical head from of a measuring device having a pivot point to 'top of head' dimension infinitely adjustable from 740 to 835mm in accordance with the following procedure, or its graphic equivalent.

14.1.1.1 At each designated seating position, place the pivot point of the measuring device:

(a) For seats that are adjustable fore and aft, at the seating reference point and a point 127mm horizontally forward of the seating reference point and vertically above the seating reference point an amount equal to the rise which results from either a 127mm forward adjustment of the seat or 19mm and

(b) For seats that are not adjustable fore and aft, at the seating reference point.

14.1.1.2 With the pivot point to 'top of head' dimensions at each value allowed by the device and the interior dimensions of the vehicle determine all contact points above the lower windscreen glass line and forward of the seating reference point.

14.1.1.3 With the head form at each contact point, and with the device in a vertical position if no contact point exists for a particular adjusted length, pivot the measuring device forward and downward through all arcs in the vertical planes to 90 degrees each side of the vertical longitudinal plane through the seating reference point, until the head form contacts an interior surface or until it is tangent to a horizontal plane 26mm above the seating reference point whichever occurs first.

14.1.2 Seating Reference Point - As defined in Australian Design Rule No. 3 - Seat Anchorages for Motor Vehicles.

14.2 Requirements

14.2.1 An external mirror complying with the requirement of Clause 14.2.3 shall be fitted on the driver's side of the vehicle. An internal rear vision mirror shall also be provided except where the design of the motor vehicle does not provide for internal rear vision. In any case where the requirements of Clause 14.2.2 are not met the vehicle shall be equipped with a passenger's side external rear vision mirror complying with Clause 14.2.3.2.

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14.2.2 Internal Rear Vision Mirrors

14.2.2.1 Field of View - A mirror shall be installed that provide the driver a view to the rear, of substantially unit magnification, with an included horizontal angle of at least 20 degrees and sufficient vertical angle to provide a view of a level road surface extending to the horizon beginning at a point not greater than 61m to the rear of the vehicle when the vehicle is occupied by the driver and four passengers or the designed occupant capacity, if less, based on 68 kg average occupant weight. The line of sight may be partially obscured by seated occupants or by head restraints.

14.2.2.2 Mounting

14.2.2.2.1 The mirror mounting shall provide a stable support for the mirror, and shall provide for adjustment by tilting in both horizontal and vertical directions.

14.2.2.2.2 If the mirror is in the head impact area, the mounting shall deflect,collapse or break away without leaving sharp edges when the reflective surface of the mirror is subjected to a force of not more than 400N in any forward direction that is not more than 45 degrees from the forward longitudinal direction.

14.2.3 External Mirrors

14.2.3.1 Driver's Side

14.2.3.1.1 Field of View - An external mirror shall be installed that provides the driver a view, of substantially unit magnification, of a level road surface extending to the horizon from a line perpendicular to a plane tangential to the driver's side of the vehicle at the widest point and parallel to the longitudinal axis of the vehicle, extending 2.4m out from the tangential plane 11m behind the driver's eyes, with the seat in the rearmost position. The line of sight may be partially obscured by rear body or mudguard contours.

14.2.3.1.2 Mounting - The mounting shall provide a stable support for the mirro and neither the mirror nor the mounting shall protrude further than the widest part of the vehicle body, except to the extent necessary to produce a field of view meeting or exeeding the requirements of 14.2.3.1.1. The mirror shall not be obscured by the unwiped portion of the windscreen, and shall be adjustable from the driver's seated position. The mirror and mounting shall be free of sharp points or edges that could contribute to pedestrian injury.

14.2.3.2 Passenger's Side - Where a left hand external mirror is provided in compliance with Clause 14.2.1 it shall be of substantially unit magnification and its mounting shall provide a stable support for the mirror. The mirror and mounting shall be free of sharp points or edges that could contribute to pedestrian injury. The mirror need to not adjustable from the driver's seat.

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14.2.4 Mirror Construction - The reflectance value of the reflective film employed shall be at least 35 per cent. If a mirror is of the slective position prismatic type, the reflectance value in the night driving position shall be at least 4 per cent.

14.3 Test Procedures - Reflectance shall be determined in accordance with Society of Automotive Engineers Recommended Practice J964 'Test Procedure for Determining Reflectivity of Rearview Mirror', June 1966.

14.3.1 The location of the driver's eye reference point may be that established as the 95th percentile eye ellipse defined and positioned as in Recommended Practices SAE J941 (November 1965); SAE J941a (August 1967) Passenger Car Driver's Eye Range; SAE J941b (February 1969); SAE J941c (June 1972); SAE J941d (February 1975); SAE J941e (March 1977); SAE J941 (March 1981) - Motor Vehicle Driver's Eye Range 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. *

14.3.2 The horizontal angle is measured from the projected eye point rather than the plane of the mirror.

* Amended February 1984

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