

COMMONWEALTH OF AUSTRALIA

AUSTRALIAN DESIGN RULE 3 FOR SEAT ANCHORAGES FOR MOTOR VEHICLES

*As Endorsed by the Australian Transport Advisory Council

The intention of this Australian Design Rule is to establish requirements for seats, their attachment assemblies, and their installation to minimise the possibility of failure by forces acting on the seat as a result of vehicle impact.

The Australian Transport Advisory Council has recommended to Commonwealth, State and Territory Governments that all motor vehicles specified below shall be equipped with seat anchorages complying with Australian Design Rule 3 - Seat Anchorages for Motor Vehicles

	RULE	AME	NDMENT	
VEHICLE CATEGORY	- MANUFA	ACTURED ON OR	AFTER	:
	3			
Passenger Cars Forward Control Passenger Vehicles up to 8 seats 9 seats Other Passenger Cars Passenger Car Derivatives Multi-Purpose Passenger Cars Omnibuses up to 3.5 tonnes GVM up to 12 seats over 12 seats up to 4.5 tonnes GVM over 4.5 tonnes GVM Motorcycles Mopeds Specially Constructed Vehicles Other Vehicles not listed above up to 4.5 tonnes GVM over 4.5 tonnes GVM	1 Jan 1985 1 Jan 1985# 1 Jan 1971 1 Jan 1972 1 Jan 1973 1 July 1983# 1 July 1983# N/A N/A N/A N/A N/A			

Front seats only (including the driver's seating position)
N/A - Not Applicable
GROSS VEHICLE MASS - Abbreviated to 'GVM'

The Australian Transport Advisory Council has also recommended to the Commonwealth, State and Territory Governments that motor vehicles which comply with the requirements of ADR 3A - Seat Anchorages for Motor Vehicles, need not comply with requirements of ADR 3.

Issued By:

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3.1 <u>Definitions</u>.

- 3.1.1 Seating Reference Point The manufacturer's design reference point which -
 - (a) Establishes the rearmost normal design driving or riding position for each designated seating position in a vehicle;
 - (b) Has co-ordinates established relative to the designed vehicle structure;
 - (c) Simulates the position of the pivot centre of human torso and thigh; and
 - (d) Is the reference point employed to position the two dimensional templates described in Society of Automative Engineers Standard J826, 'Manikins for Use in Defining Vehicle Seating Accommodation'. November 1962.

3.2 Requirements.

- 3.2.1 General Except for omnibuses exceeding 3.5 tonnes gross vehicle mass, side-facing seats and seats rearward of the front row of seats in omnibuses up to 3.5 tonnes gross vehicle mass, each occupant seat installation shall withstand the loads specified in 3.2.1.1, 3.2.1.2 and 3.2.1.3.
- 3.2.1.1 The following loads shall be applied simultaneously -
 - (a) Twenty times the mass of the entire seat in a forward longitudinal direction; and
 - (b) If the seat belt assembly is directly attached to the seat the total load imposed on the seat by simultaneous application of loads required for seat belt anchorages as appropriate at the date of manufacture of the vehicle for all attached seat belt assemblies.
- 3.2.1.2 A load equal to 20 times the mass of the entire seat shall be applied in a rearward longitudinal direction.
- 3.2.1.3 A load equal to a 370 Nm moment about the seating reference point for each occupant position for which the seat is designed shall be applied to the upper cross member in a rearward longitudinal direction.
- 3.2.2 The seat adjusters need not be operable after the application of the loads specified in 3.2.1.1, 3.2.1.2, and 3.2.1.3.
 - * Amended July 1981

- 3.2.3 Folding and Hinged Seats Except for seats with backs which are adjustable for occupant comfort only, a hinged or folding seat or seat back shall be equipped with a self locking, restraining device and a control for releasing the restraining device.
- 3.2.3.1 Where the seat must hinge or fold to permit ingress to or egress from another seating position, the release control shall be readily accessible to the occupant of that seat and to the occupant of any seat immediately behind that seat.
- 3.2.3.2 The release control shall be constructed to preclude inertial release when loaded longitudinally to 20 times the acceleration due to gravity.
- 3.2.3.3 The restraining device shall not release or fail when a forward longitudinal load equal to 20 times the mass of the entire seat back is applied at the centre of gravity of the seat back.

3.3 <u>Test Procedures</u>

- 3.3.1 Dynamic or static testing techniques may be used.
- 3.3.2 Static testing of seats shall be conducted in accordance with Society of Automotive Engineers Recommended Practice J879, 'Passenger Car Front Seat and Seat Adjuster', November 1963, using the values specified in and the procedures applicable to this Rule.
- 3.3.3 Distributed loads may be replaced by concentrated loads at the loading centroid.