



COMMONWEALTH OF AUSTRALIA

AUSTRALIAN DESIGN RULE 10B
FOR
STEERING COLUMNS

As Endorsed by the
 Australian Transport Advisory Council

The intention of this Australian Design Rule is to minimise crushing or penetrating injuries to drivers due to the steering column as a result of frontal impact.

The Australian Transport Advisory Council has recommended to Commonwealth, State and Territory Governments that all motor vehicles specified below shall be designed to comply with Australian Design Rule 10B - Steering Columns.

VEHICLE CATEGORY	RULE AMENDMENT		
	MANUFACTURED ON OR AFTER		
	10B		
Passenger Cars			
Forward Control Passenger Vehicles up to 8 seats	N/A		
9 seats	N/A		
Other Passenger Cars	1 Jan 1973		
Passenger Car Derivatives	1 Jan 1973		
Multi-Purpose Passenger Cars	N/A		
Omnibuses up to 3.5 tonnes GVM			
up to 12 seats	N/A		
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. 10B - STEERING COLUMNS

10B.1 Definitions

10B.1.1 'Steering column' means a structural housing that surrounds a steering shaft.

10B.1.2 'Steering Shaft' means a component that transmits steering torque from the steering wheel to the steering gear.

10B.2 Requirements

10B.2.1 The steering column assembly shall be so constructed that when it is impacted by a body block in accordance with Society of Automotive Engineers Recommended Practice J944 - Steering Wheel Assembly Laboratory Test Procedure, December 1965 or other approved procedure, the body block, moving at a speed of not less than 6.7 m/s in a direction equivalent to a horizontal longitudinal direction relative to the top of the steering column in the vehicle, shall be brought to rest in such a manner that at no time shall the load exerted on the body block by the steering column assembly exceed 11.1 kN.

10B.2.2 The upper end of the steering column and shaft shall not be displaced horizontally rearward parallel to the longitudinal axis of the vehicle relative to an undisturbed point on the vehicle more than 127 mm, determined by dynamic measurement, in a barrier collision test at 48 km/h minimum conducted in accordance with Society of Automotive Engineers Recommended Practice J850, 'Barrier Collision Tests', February 1963, or other approved practice.

10B.2.3 When conducting the barrier collision test, a dummy may be used providing the dummy does not contact the steering column assembly or steering wheel during the test.

10B.2.4 The speed at the time of impact shall be at least 48 km/h. If the speed measured is greater than the nominal speed of 48 km/h the measured displacement of the upper end of the steering column and shaft may be reduced to a value appropriate to the nominal speed by multiplying it by the square of the ratio between the nominal speed and either the measured speed or 53.1 km/h, whichever is the lesser.

10B.3 Exemption from Test Requirements

10B.3.1 In cases where passenger cars meet the requirements of Clause 10B.2.2, appropriate derivatives need not be tested as specified in Clause 10B.2.2 unless they incorporate structural or mechanical variations likely to affect compliance.

*Amended July 1977