



Portable ramps for vehicles



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- Australian Automobile Association
 - Australian Automotive Aftermarket Association
 - Australian Chamber of Commerce and Industry
 - Australian Competition and Consumer Commission
 - Consumers Federation of Australia
 - Defence Work Health and Safety Branch
 - Federal Chamber of Automotive Industries
 - Institute of Automotive Mechanical Engineers
 - National Association of Testing Authorities Australia
 - National Retail Association
 - Society of Automotive Engineers—Australasia
 - Victorian Workcover Authority
-

This Standard was issued in draft form for comment as DR AS 2640:2015.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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Australian Standard[®]

Portable ramps for vehicles

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PREFACE

This Standard was prepared by the Standards Australia Committee CS-115, Vehicle Stands and Vehicle Ramps, to supersede AS/NZS 2640:1994.

The Standard was originally prepared in response to a request from the Ministry of Consumer Affairs, Victoria, which was concerned about the poor quality of some car ramps following the collapse of a ramp after a car had been driven onto it.

This edition of the Standard incorporates updates to the instructions for use in Section 7 and the addition of a test for overtravel in Appendix A.

The objective of this Standard is to specify requirements for the design, construction, performance and marking of portable vehicle ramps consisting of an incline, platform and barrier stop. This Standard aims to ensure, through minimum performance requirements, that portable vehicle ramps are sufficiently robust, constructed and designed so that they will be stable and will not damage the vehicle or cause injury to any person when used in their intended manner.

Other relevant Standards in related areas are as follows:

AS

2538 Vehicle support stands

2615 Trolley jacks

AS/NZS

2693 Vehicle jacks

The terms 'normative' and 'informative' have been used in this Standard to define the application of the appendices to which they apply. A 'normative' appendix is an integral part of a Standard, whereas an 'informative' appendix is only for information and guidance.

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STANDARDS AUSTRALIA

Australian Standard

Portable ramps for vehicles

1 SCOPE

This Standard specifies requirements for the design, construction, performance and marking of portable vehicle ramps consisting of an incline, platform and barrier stop.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

1192 Electroplated coatings—Nickel and chromium

1789 Electroplated zinc (electrogalvanised) coatings on ferrous articles (batch process)

4833 Pressure-sensitive labels for stock-paper, stock-plastic and general purpose use

HB 295 Product Safety Framework

295.3.5 Part 3.5: Product safety warning labels and markings

AS/NZS

3750 Paints for steel structures

3750.15 Part 15: Inorganic zinc silicate paint

ISO

4526 Metallic coatings—Electroplated coatings of nickel for engineering purposes

3 DEFINITIONS

For the purpose of this Standard, the definitions below apply.

3.1 Angle of incline portion

The angle between the incline and the base plane.

3.2 Base plane

The plane which includes the points of contact between the base of the vehicle ramp and the surface upon which it rests.

3.3 Base width

The minimum width measured across the base of a vehicle ramp.

NOTE: See Figure 1.

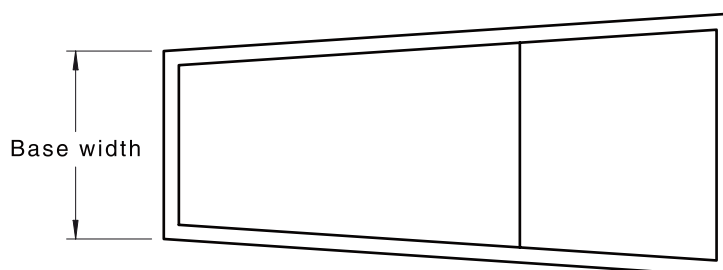


FIGURE 1 BASE WIDTH OF A TYPICAL VEHICLE RAMP

3.4 Longitudinal movement

Sliding movement of the ramp in either the forward or rearward direction when the vehicle is driven on or off the ramp.

3.5 Nominated capacity

The capacity nominated by the manufacturer as the maximum mass that is to be supported by the vehicle ramp.

NOTE: The nominated capacity is to be marked on the ramp (see Clause 9).

3.6 Nominated tyre size

The nominal maximum overall tyre diameter, and nominal maximum width, in millimetres, nominated by the ramp manufacturer for which the ramp is designed.

NOTE: The nominated tyre size is to be marked on the ramp (see Clause 9).

3.7 Overtravel

The action of a vehicle travelling forward off the platform of a vehicle ramp in a direction opposite to the incline.

3.8 Platform

The part of the ramp which supports a tyre of a raised vehicle.

3.9 Projected plan area of the base

The maximum area in the base plane described by joining up the points of contact of the vehicle ramp with the base plane.

3.10 Projected plan area of the incline

The area obtained by projecting the perimeter of incline vertically downwards onto the base plane.

3.11 Projected plan area of the platform

The area obtained by projecting the perimeter of the platform vertically downwards onto the base plane.

NOTE: For the purpose of this definition, the contact surface of the barrier stop, where fitted, forms part of the perimeter of the platform.

3.12 Ramp height

The maximum vertical distance between the platform and the base plane.

NOTE: See Figure 2.

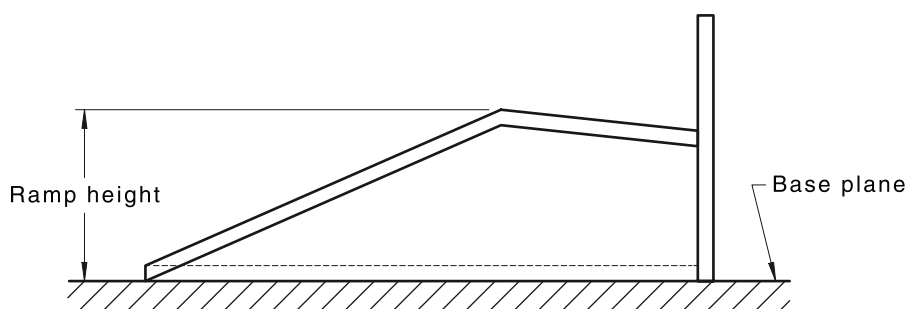


FIGURE 2 HEIGHT OF A TYPICAL VEHICLE RAMP

3.13 Roll-off

The action of a vehicle descending from a vehicle platform in such a way that its tyre travels down the incline of the ramp.

3.14 Vehicle

Any wheeled vehicle including any towed unit such as a caravan, trailer or agricultural vehicle, except any vehicle used on a railway or tramway.

3.15 Vehicle ramp

A device consisting of an incline and a platform onto which a vehicle is driven for the purpose of maintenance or display.

NOTE: See Figure 3.

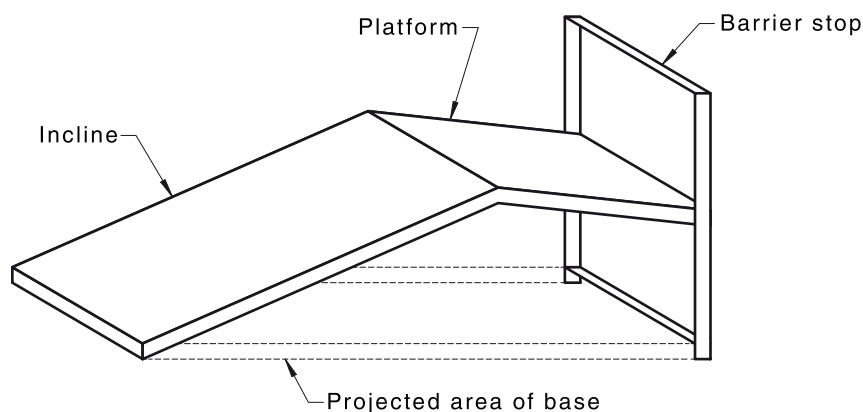


FIGURE 3 TYPICAL VEHICLE RAMP

4 CONSTRUCTION AND DESIGN

4.1 Materials

Materials used in the manufacture of vehicle ramps shall not have been subjected to stresses or strains which would result in failure and shall be free from blow holes, hard spots, shrinkage defects, cracks or other defects which would adversely affect the strength of that material.

NOTE: The purpose of this requirement is to ensure that the materials used in the construction of the vehicle ramp are new or have not previously been used in an application where the material has been stressed to a point which would result in fatigue failure with subsequent use.

4.2 Minimum nominated capacity

The nominated capacity of a vehicle ramp shall be 750 kg or more.

4.3 Design

4.3.1 Base width/ramp height value

The ratio of the base width to the ramp height shall be not less than 1.2:1.

4.3.2 Overhang

The projected plan areas of the platform and the incline shall both lie within the projected plan area of the base.

4.4 Platform—Prevention of roll-off

Each ramp shall have an inherent means of resisting roll-off of a vehicle from the platform and this means shall prove effective when tested in accordance with Appendix A.

NOTE: The slope of the platform may prove to be an effective means of resisting roll-off.