

Australian Standard<sup>®</sup>

**Caravan and light trailer towing  
components**

**Part 1: Towbars and towing brackets**



This Australian Standard® was prepared by Committee ME-052, Caravan and Light Trailer Components. It was approved on behalf of the Council of Standards Australia on 4 May 2004.

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The following are represented on Committee ME-052:

- Australian Automobile Association
  - Australian Automotive Aftermarket Association
  - Australian Chamber of Commerce and Industry
  - Australian Industry Group
  - Caravan Industry Australia
  - Commonwealth Department of Transport and Regional Services
  - Consumers' Federation of Australia
  - Federal Chamber of Automotive Industries
  - Federation of Automotive Products Manufacturers
  - Institution of Engineers Australia
  - Recreational Vehicle Manufacturers Association of Australia
  - Roads and Traffic Authority of New South Wales
  - Society of Automotive Engineers Australasia
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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 public comment period.

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## **Caravan and light trailer towing components**

### **Part 1: Towbars and towing brackets**

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## PREFACE

This Standard was prepared by Standards Australia Committee ME-052, Caravan and Light Trailer Components, to supersede AS 4177.1—1994, *Caravan and light trailer towing components*, Part 1: *Towbars and towing brackets*.

*This Standard incorporates Amendments No. 1 (April 2006) and 2 (November 2006). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.*

This Standard is Part 1 of AS 4177, *Caravan and light trailer towing components*, which is published in Parts as follows:

- Part 1: Towbars and towing brackets (this Standard)
- Part 2: 50 mm towballs
- Part 3: Coupling body for ball couplings
- Part 4: Safety chains up to 3500 kg capacity
- Part 5: Electrical connectors

The objective of this Standard is to provide manufacturers and users with design and installation dimensions for a 50 mm towball on a towbar, intended for trailers and caravans of up to 3.5 t aggregate trailer mass, for use on public roads.

A static test based on 1.5 times the rated capacity of the towbar has been prepared for Australian conditions, and a dynamic test in accordance with ISO 3853:1994, *Road vehicles—Towing vehicle coupling device to tow caravans or light trailers—Mechanical strength test*, has been added as an alternative for compliance with European requirements.

In this revision, Amendments No. 1 and No. 2 to the 1994 edition have been incorporated, and the towball upper limit height above the ground has been increased from 420 mm to 460 mm.

The term ‘normative’ has been used in this Standard to define the application of the appendix to which it applies. A ‘normative’ appendix is an integral part of a Standard.

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## STANDARDS AUSTRALIA

### Australian Standard Caravan and light trailer towing components

#### Part 1 Towbars and towing brackets

### 1 SCOPE

This Standard specifies requirements for towbars and towing brackets suitable for use with 50 mm towballs complying with AS 4177.2. The towbars are intended for trailers and caravans of up to 3.5 t aggregate trailer mass, for use on public roads.

A method for determining the static strength of a towbar and its attachment to the vehicle structure is given in Appendix A and for safety chain connections is given in Appendix B.

A method of determining the dynamic strength of a towbar and its attachment to the vehicle structure is given in Appendix C.

#### NOTES:

- 1 Towballs are specified in AS 4177.2, and their corresponding coupling bodies in AS 4177.3.
- 2 Requirements for off-road applications are beyond the scope of this Standard.
- 3 Requirements for load-distributing hitches are not included in this Standard.
- 4 Towbars should not be used for other than their intended purpose of towing caravans and light trailers.

### 2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

#### AS

- 4177 Caravan and light trailer towing components
- 4177.2 Part 2: 50 mm towballs
- 4177.3 Part 3: Coupling body for ball couplings
- 4177.4 Part 4: Safety chains up to 3500 kg capacity

#### ISO

- 3853 Road vehicles—Towing vehicle coupling device to tow caravans or light trailers—Mechanical strength test

- ADR\* Australian Design Rules for Motor Vehicles and Trailers

### 3 DEFINITIONS

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

#### 3.1 Aggregate trailer mass

The total mass of the laden trailer when carrying the maximum load recommended by the manufacturer. This includes any mass imposed on the towing vehicle when the combination vehicle is resting on a horizontal supporting plane.

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\* Australian Design Rules for Motor Vehicles and Trailers. This reference refers to the latest edition of the Design Rules.