

Australian Standard™

**Caravan and light trailer towing  
components**

**Part 2: 50 mm towballs**

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 and published on 17 June 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  
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**Part 2: 50 mm towballs**

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## PREFACE

This Standard was prepared by Standards Australia Committee ME-052, Caravan and Light Trailer Components, to supersede AS 4177.2—1994, *Caravan and light trailer towing components, Part 2: 50 mm towballs*.

This Standard is Part 2 of AS 4177, *Caravan and light trailer towing components*, which is published in Parts as follows:

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

This Standard is for towballs, including those complying with ISO 1103:1996, *Road vehicles—Coupling balls for caravans and light trailers—Dimensions*, and ISO 3853:1994, *Road vehicles—Towing vehicle coupling device to tow caravans or light trailers—Mechanical strength test*.

The objective of this Standard is to provide manufacturers with design dimensions of 50 mm towballs for towing vehicles of up to 5 t towing vehicle mass, intended for towing trailers and caravans up to 3.5 t aggregate trailer mass, for use on public roads.

In this revision, the material specification which allowed compliance with a performance criteria without having to conduct static or dynamic test, has been deleted.

Also in this revision, this Standard limits the use of the towball to vehicles with a towing vehicle mass up to 5 t.

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 2 50 mm towballs****1 SCOPE**

This Standard specifies requirements for towballs for towing vehicles of up to 5 t towing vehicle mass. The towballs are intended for towing trailers and caravans of up to 3.5 t aggregate trailer mass, for use on public roads.

The method of determining the static strength of a shank-type towball is given in Appendix A and the dynamic strength of a towball is given in Appendix B.

## NOTES:

- 1 Towbars and coupling bodies are specified in AS 4177.1 and AS 4177.3 respectively.
- 2 Requirements for off-road applications are beyond the scope of this Standard.
- 3 Requirements for shank-type 50 mm towballs only are specified.
- 4 Towing bracket and towballs complying with ISO 1103 and ISO 3853 are also acceptable.

**2 REFERENCED DOCUMENTS**

The following documents are referred to in this Standard:

## AS

- 4177 Caravan and light trailer towing components  
4177.1 Part 1: Towbars and towing brackets  
4177.3 Part 3: Coupling body for ball couplings

## AS/NZS

- 2465 Unified hexagon bolts, screws and nuts (UNC and UNF threads)

## ISO

- 1103 Road vehicles—Coupling balls for caravans and light trailers—Dimensions  
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.

**3.2 Ball coupling**

A coupling comprising a towball and a complementary coupling body.

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