Australian Standard™

Heavy duty towing components

Part 2: Heavy duty coupling bodies for 70 mm and 110 mm towballs

This Australian Standard was prepared by Committee ME/53, Semitrailer and Heavy Trailer Couplings. It was approved on behalf of the Council of Standards Australia on 13 February 1998 and published on 5 May 1998.

The following interests are represented on Committee ME/53:

Australian Road Research Board

Australian Road Transport Suppliers

AUSTROADS

Commercial Vehicle Industry Association of Australia

Department of Defence

Department of Transport (Australia)

Federal Chamber of Automotive Industries

Institute of Metals and Materials

Institute of Road Transport Engineers

National road Transport Commission

Society of Automotive Engineers, Australasia

Telstra Corporation

Victorian Road Transport Association

Additional interests participating in preparation of Standard:

Mechanical coupling manufacturers

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee ME/53, Semitrailer and Heavy Trailer Couplings.

This Standard is the result of a consensus among Australian and New Zealand representatives on the Joint Committee to produce it as an Australian Standard.

The Standard applies to heavy duty coupling bodies for 70 mm and 110 mm towballs. These coupling body sizes are designed to suit trailers above 3.5 t aggregate trailer mass (ATM).

This Standard is Part 2 of a series dealing with heavy duty towing components. The other Part in the series is—

Part 1: 70 mm and 110 mm diameter towballs for heavy duty couplings

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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1 SCOPE This Standard specifies requirements for coupling bodies for ball couplings that are suitable for use in vehicles towing medium and heavy trailers used in normal conditions on sealed and unsealed roads. It covers two sizes of couplings, i.e.—

(a) 70 mm for up to 6 t ATM and 10 t ATM single trailer only; and

(b) 110 mm for trailers intended for use above 10 t ATM.

NOTE: Towball requirements are specified in AS 3819.1.

2 OBJECTIVE The objective of this Standard is to ensure full interchangeability of couplings on trailers throughout the medium and heavy transport industry.

3 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS
2536 Surface texture

3819 Heavy duty towing components
3819.1 Part 1: 70 mm and 110 mm diameter towballs for heavy duty couplings

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

4.1 Aggregate trailer mass (ATM)—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.

4.2 Ball coupling—a coupling comprising a towball and complementary body, which clamps on only the outer surface of the towball.

4.3 Coupling—a mechanical assembly that provides a connection between a towing vehicle and a trailer.

4.4 Coupling body—the portion of a ball coupling intended for mounting on a drawbar, together with the necessary facilities for mounting.

4.5 Drawbar—the portion of a trailer that connects the trailer body to the coupling for towing purposes.

4.6 *D*-value—the theoretical horizontal reference force between towing vehicle and trailer.

4.7 Gross trailer mass (GTM)—the mass transmitted to the ground by the axle or axles of the trailer when coupled to a towing vehicle and carrying its maximum load approximately uniformly distributed over the load-bearing area, and at which compliance with the appropriate Australian Design Rule has been or can be established.

4.8 Heavy trailers (ADR category TD)—a trailer with a gross trailer mass exceeding 10 tonnes.