

Australian Standard[®]

**Articulated vehicles—Mechanical
coupling between prime movers
and semitrailers—
Interchangeability requirements**

**Part 2: Dedicated vehicle
combinations**

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 15 December 1993 and published on 18 April 1994.

The following interests are represented on Committee ME/53:

Australian Road Research Board
AUSTROADS
Commercial Vehicle Industry Association of Australia
Department of Defence
Department of Transport and Communications
Federal Chamber of Automotive Industries
Institute of Metals and Materials, Australasia
Institute of Road Transport Engineers
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PREFACE

This Standard was prepared by the Standards Australia Committee on Semitrailer and Heavy Trailer Couplings to supersede in part AS 2174—1978, *Recommendations for positions and heights of fifth wheels for articulated vehicles*. In revising AS 2174—1978, the Committee recognized the need to specify requirements for combinations but was hesitant about being restrictive to vehicle combinations developed as dedicated units. It was therefore decided that a revised AS 2174 would be in two parts, one of which would specify requirements in general, including non-dedicated combinations and the other would be devoted to dedicated vehicle combinations.

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STANDARDS AUSTRALIA

Australian Standard

Articulated vehicles—Mechanical coupling between prime movers and semitrailers—Interchangeability requirements

Part 2: Dedicated vehicle combinations

1 SCOPE This Standard specifies requirements for the location of fifth wheels and kingpins on vehicles used in dedicated combinations operating normally on both sealed and unsealed roads. These requirements are applicable to prime movers, semitrailers, and in the case of a B-double, the leading semitrailer and the second semitrailer.

The individual vehicles which make up a dedicated combination are only intended to be used within that dedicated combination or within a family of identical dedicated combinations. Therefore, many of the interchangeability requirements are expressed in relative terms, rather than absolute terms.

For example, the height of the fifth wheel on the prime mover would be required to be within a certain tolerance of the height of fifth wheels on other prime movers within the same family. If leading and second semitrailers in a B-double are to be interchanged the heights of the fifth wheels on the prime mover and on the leading semitrailer would also be required to be within a certain tolerance of each other. What the actual height is does not matter, it is the relative heights which determine interchangeability.

By contrast, the absolute requirements for non-dedicated combinations require the height of all fifth wheels to lie within a certain dimensional range.

This Standard gives guidelines on interchangeability for coupling of the prime mover and semitrailers to provide compatibility and adequate clearance. However, this will not guarantee that any particular vehicle combination will satisfy legal requirements such as load distribution or overall length. Other aspects such as dynamic stability are not addressed either.

NOTES:

- 1 Specific dimensional recommendations are given where applicable in this Standard to minimize interchangeability problems between conventional prime movers and semitrailers of a dedicated combination. Such wider interchangeability is recommended wherever possible and may be of vital importance in an emergency.
- 2 This Standard makes provision for coupling of the second semitrailer to the B-double prime mover.

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

AS 1771	Installation of fifth wheel and turntable assemblies
AS 1773	Articulated vehicles—fifth wheel assemblies
AS 2174	Articulated vehicles—Mechanical coupling between prime movers and semitrailers—Interchangeability requirements
AS 2174.1	Part 1: Non-dedicated vehicle combinations