

Australian Standard[®]

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

Part 2: Dedicated vehicle combinations



This Australian Standard® was prepared by Committee ME-053, Heavy Road Vehicles. It was approved on behalf of the Council of Standards Australia on 13 July 2006. This Standard was published on 31 July 2006.

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 - Australian Road Transport Suppliers Association
 - Australian Trucking Association
 - Commonwealth Department of Transport and Regional Services
 - Department of Defence (Australia)
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 - Road Transport Forum New Zealand
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 - The Commercial Vehicle Industry Association of Australia
 - The Institute of Road Transport Engineers of New Zealand
 - Truck Industry Council
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PREFACE

This Standard was prepared by the Standards Australia Committee ME-053, Heavy Road Vehicles, to supersede AS 2174.2—1994, *Articulated vehicles—Mechanical coupling between prime movers and semitrailers—Interchangeability requirements, Part 2: Dedicated vehicle combinations*.

The objective of this Standard is to specify the requirements for the location of fifth wheels and kingpins on vehicles used in dedicated combinations operating normally on both sealed and unsealed roads.

In this revision, Figures 1 to 4 have been included to show the point of articulation of fifth wheel and kingpins.

This Standard is Part 2 of AS 2174, *Heavy road vehicles—Mechanical coupling between prime movers and semitrailers—Interchangeability requirements*, which is published in Parts as follows:

- Part 1: Non-dedicated vehicle combinations
- Part 2: Dedicated vehicle combinations

CONTENTS

	<i>Page</i>
1 SCOPE.....	4
2 REFERENCED DOCUMENTS.....	4
3 DEFINITIONS.....	5
4 COMPATIBILITY OF FIFTH WHEEL ASSEMBLIES AND SKID PLATES	5
5 SLIDING FIFTH WHEELS.....	6
6 POINT OF ARTICULATION OF FIFTH WHEEL AND KINGPIN	6
7 HEIGHT OF FIFTH WHEEL COUPLER FACE AND SKID PLATE	8
8 INTERCHANGEABILITY CLEARANCES AROUND A FIFTH WHEEL.....	8

STANDARDS AUSTRALIA**Australian Standard****Heavy road 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 multi-trailer combinations.

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 semitrailers in a multi-trailer combination 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 dimensioned 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.

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 combinations. Such wider interchangeability is recommended wherever possible and may be of vital importance in an emergency.
- 2 This Standard makes provision for coupling of any semitrailer of a multi-trailer combination to the prime mover.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS/NZS

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|--------|--|
| 4968 | Heavy road vehicles—Mechanical coupling between articulated vehicle combinations |
| 4968.1 | Part 1: Design criteria and selection requirements for fifth wheel, kingpin and associated equipment |
| 4968.2 | Part 2: Testing and installation of fifth wheel and associated equipment |
| 4968.3 | Part 3: Kingpins and associated equipment |