

Australian/New Zealand Standard™

**Heavy road vehicles—Mechanical  
coupling between articulated vehicle  
combinations**

**Part 2: Testing and installation of fifth  
wheel and associated equipment**

## **AS/NZS 4968.2:2003**

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee ME-053, Heavy Road Vehicles. It was approved on behalf of the Council of Standards Australia on 21 May 2003 and on behalf of the Council of Standards New Zealand on 24 June 2003. It was published on 11 July 2003.

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The following are represented on Committee ME-053:

Australian Automotive Aftermarket Association  
Australian Road Transport Suppliers Association  
Australian Trucking Association  
AUSTROADS  
Commercial Vehicle Industry Association of Australia  
Commonwealth department of Transport and Regional Services (Australia)  
Department of Defence, Australia  
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New Zealand Heavy Transport Wheel Aligners Association  
New Zealand Truck and Trailer Manufacturers Federation  
Road Transport Forum, New Zealand  
Society of Automotive Engineers, Australasia  
Truck Industry Council  
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Additional interests participating in the preparation of this Standard:

Fifth wheel manufacturers and suppliers  
Kingpin manufacturers and suppliers  
Vehicle suppliers & trailer manufacturers

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# Australian/New Zealand Standard™

## **Heavy road vehicles—Mechanical coupling between articulated vehicle combinations**

### **Part 2: Testing and installation of fifth wheel and associated equipment**

Originated as part of AS D14—1968, AS D15—1968, AS 1771—1975, AS 1772—1975, AS 1773—1975, and AS 4235—1994.  
Previous editions AS 1771—1996, AS 1773—1996, AS 2175—1995, and AS 4235—1994.  
AS 1771—1996, AS 1773—1996, AS 2175—1995, and AS 4235—1994 jointly revised, amalgamated and redesignated in part as AS/NZS 4968.2:2003.

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Jointly published by Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 5358 2

## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee ME-053, Heavy Road Vehicles, to supersede (in part) AS 1771—1996, *Installation of fifth wheel assemblies*, AS 1773—1996, *Articulated vehicles—Fifth wheel assemblies*, AS 2175—1995, *Articulated vehicles—Kingpins* and AS 4235—1994, *Articulated vehicles—Design criteria for fifth wheel skid plates*.

The objective of this Standard is to provide performance requirements and recommendations for the installation of fifth wheel assemblies and to assist in the development of standard practice in this field.

This Standard is Part 2 of AS/NZS 4968, *Heavy Road Vehicles—Mechanical coupling between articulated vehicle combinations*, which is published in three parts as follows:

Part 1: Design criteria and selection requirements for fifth wheel, kingpin and associated equipment

Part 2: Testing and installation of fifth wheel and associated equipment (this Standard)

Part 3: Kingpins and associated equipment

The method of rating and selecting couplings in this Standard is based on the ‘D-value’ method used in ISO 8717:2000, *Commercial road vehicles—Fifth wheel couplings—Strength tests* and DIN 74081:1992, *Coupling devices for articulated road trains; 50 fifth wheel; dimensions, requirements*.

In this Standard, 75 mm kingpins have been included due to widespread use in certain parts in Australia and recent developments in standardizing their dimensions. These kingpins are not contained in the ISO or ECE Standard.

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/STANDARDS NEW ZEALAND

**Australian/New Zealand Standard****Heavy road vehicles—Mechanical coupling between articulated vehicle combinations****Part 2: Testing and installation of fifth wheel and associated equipment****1 SCOPE**

This Standard sets out performance requirements and recommendations for the installation of fifth wheel assemblies. Alternative designs and methods of assembly which do not comply with a specific requirement of this Standard or are not mentioned in it, but which give at least equivalent results are not prohibited. This Standard applies to fifth wheel assemblies used with 50 mm, 75 mm and 90 mm kingpins (referred to in AS/NZS 4968.3) for articulated vehicle combinations used in heavy road vehicles, B-doubles and road trains, in normal use on both sealed and unsealed roads.

The requirements cover dimensional standards for interchangeability, strength testing and rating.

## NOTES:

- 1 Additional components not specified or supplied by the fifth wheel manufacturer for a typical installation but necessary for a specific installation (e.g. attachment brackets) are not covered by this Standard.
- 2 Methods for determining D-value for fifth wheel assemblies are specified in AS/NZS 4968.1.
- 3 Criteria for 50 mm, 75 mm and 90 mm kingpins are specified in AS/NZS 4968.3.
- 4 Design criteria for trailer skid plates are specified in AS/NZS 4968.3.

**2 REFERENCED DOCUMENTS**

The following documents are referred to in this Standard:

## AS

- |        |   |
|--------|---|
| 1110   | ISO metric hexagon bolts and screws—Product grades A and B  |
| 1110.1 | Part 1: Bolts   |
| 2174   | Articulated vehicles—Mechanical coupling between prime movers and semi-trailers—Interchangeability requirements |
| 2174.1 | Part 1: Non-dedicated vehicle combinations  |
| 2174.2 | Part 2: Dedicated vehicle combinations  |

## AS/NZS

- |        |  |
|--------|--|
| 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 |
| 4968.3 | Part 3: Kingpins and associated equipment  |

## ISO

- |      |  |
|------|--|
| 8717 | Commercial road vehicles—Fifth wheel coupling—Strength tests |
|------|--|

**3 DEFINITIONS**

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