

Correct as at 26th April 2026. It may be superseded at any time.

Extract taken from: In-service certification (WoF and CoF) > Heavy trailers > Towing connections > Heavy vehicle kingpin or socket coupling (for towing a semi-trailer)

8-7 Heavy vehicle kingpin or socket coupling (for towing a semi-trailer)

Reasons for rejection

Mandatory equipment

1. A semi-trailer is not fitted with:

- a) a 50mm or 90mm diameter kingpin and a skid plate, or
- b) a socket-type coupling.

2. A kingpin or socket-type coupling fitted to a heavy semi-trailer does not have evidence of certification (unless excepted in Table 8-7-1), ie:

- a) the coupling was fitted before the last CoF inspection, and after 1 January 1997, and no LANDATA record has been entered (**Note** Before 1 January 1997 certification was required but for inspection purposes the LANDATA record need not be checked), or
- b) the coupling was fitted after the last CoF inspection and
 - i. a valid LT400 form has not been presented, or
 - ii. the HVS certifier was not of category HVET or HMTD.

3. A 50mm diameter kingpin and associated skid plate has not been certified to:

- a) NZS 5451, or
- b) All of the following:
 - i. Australian/New Zealand Standard 4968.1-2003, and
 - ii. Australian/New Zealand Standard 4968.2-2003, and
 - iii. Australian Standard 2174-2006, or
- c) UN/ECE Regulation 55 (if fitted to an imported, powered vehicle).

4. A 90mm diameter kingpin and skid plate installed on or after 1 April 2005 has not been certified to both of the following standards:

- a) AS/NZS 4968 (supersedes AS 2175 and AS4235), and
- b) AS 2174.

5. A trailer that is fitted with a 90mm diameter kingpin does not have '90mm kingpin', where '90' is at least 100mm high, clearly displayed in a position readily visible at the lower right-hand side of the front end of the trailer.

6. A vehicle is fitted with a socket-type coupling to tow a semi-trailer and:

- a) is not certified to NZS 5446, or
- b) does not have a valid certification label or plate attached to the vehicle as required in Table 8-7-2, or
- c) is not part of a dedicated combination (Note 1).

7. A required certification label or plate (ball-type couplings only):

- a) is not indelible, or
- b) is illegible, or
- c) is not complete, or
- d) is not attached to the vehicle in an easily visible position, or
- e) does not match the vehicle, or
- f) has obvious signs of tampering, or
- g) has expired.

8. A hook- or pin-type coupling does not have a locking device or a separate means of retaining this device in the locked position.

9. A kingpin or socket-type coupling has been installed to the rear of a towing vehicle (Note 2).

10. An [NZTA 4085B Operator statement of skidplate maintenance](#) form is:

- a) not presented, or
- b) not complete (Note 3), or
- c) not current (ie more than 30 days have lapsed or 15,000km has been travelled, whichever occurred sooner, since the most recent inspection recorded on the form).

See also the [Heavy vehicle servicing: skid plate inspection guide](#).

Condition and performance (Note 5)

11. A skid plate or skid-plate mounting:

- a) is not securely attached, or
- b) is cracked, distorted or has significantly deteriorated, or
- c) has corrosion damage within 150mm of the mounting points.

12. A coupling or its mounting:

- a) is not securely attached, or
- b) bolt or nut is missing, significantly corroded or not suitable, or
- c) is cracked, distorted or significantly deteriorated, or
- d) has corrosion damage within 150mm of its mounting points, or
- e) has been repaired, or
- f) is excessively worn, ie there is excessive play.

13. Locking of the coupling is not readily verifiable by visual inspection.

14. A coupling locking device is in such condition that it is not effective.

Modification and repair (Note 2)

15. A modification or repair affects the kingpin or skid plate, or socket-type coupling and:

- a) is not excluded from the requirements for HVS certification (Table 8-7-1), or
- b) the modification is not for the purpose of law enforcement or the provision of emergency services, or
- c) is missing proof of HVS certification, ie the vehicle has been modified or repaired, and:
 - i. no LANDATA record has been entered, or
 - ii. no valid LT400 form from an HVS certifier of category HVET or HMTD has been presented.

Note 1

Kingpin means a pin attached to the skid plate of a semi-trailer and used for connecting the semi-trailer to the fifth wheel of a towing vehicle.

Skid plate means the plate structure forming part of the semi-trailer that houses the kingpin and that mounts on the coupler plate to form the connection between the towing vehicle and the semi-trailer.

Semi-trailer means a trailer with only one axle set that is partially superimposed on the towing vehicle so that a substantial part of the trailer and its load is borne by the towing vehicle.

Towing connection means the combination of components that enables one vehicle to tow or be towed by another vehicle; it includes a towbar, drawbar, drawbeam and coupling.

Fifth wheel means a device fitted to a vehicle to enable a semi-trailer to be connected to it by means of a kingpin so that the semi-trailer may be towed.

Coupling means that part of a vehicle that is specifically designed to enable it to be connected to another vehicle; it does not include a structural member of the towing or towed vehicle (eg fifth wheel, hook, pin, ball or socket type).

Dedicated combination means a combination of vehicles certified for use in combination where both vehicles are affixed with a plate clearly and indelibly marked with the VIN or chassis number of the other vehicle (the plate is affixed by the HVS certifying engineer).

Note 2

A towing connection that was certified to New Zealand Standard 5446: 1987 (superceded) before November 2007 may continue to comply with and be certified to that standard until the towing connection is modified.

Note 3

Where the service history is incomplete (except for pass/fail checks and signature), the CoF inspector must note this on the CoF checksheet, but the vehicle is not required to be failed for this reason alone. The CoF inspector can accept a form signed either by a technician or operator.

Note 4

Some car transporters are fitted with an inverted and front-to-back fifth wheel and kingpin combination. This is permitted. Please refer to the appropriate towing connection sections for the relevant inspection requirements.

Note 5

Where a vehicle is presented in combination, the vehicles do not have to be separated, but a thorough visual inspection as far as practicable must be carried out.

Note 6

While not included as an inspection item, a vehicle may not be towed using a fifth wheel coupled to another fifth wheel.

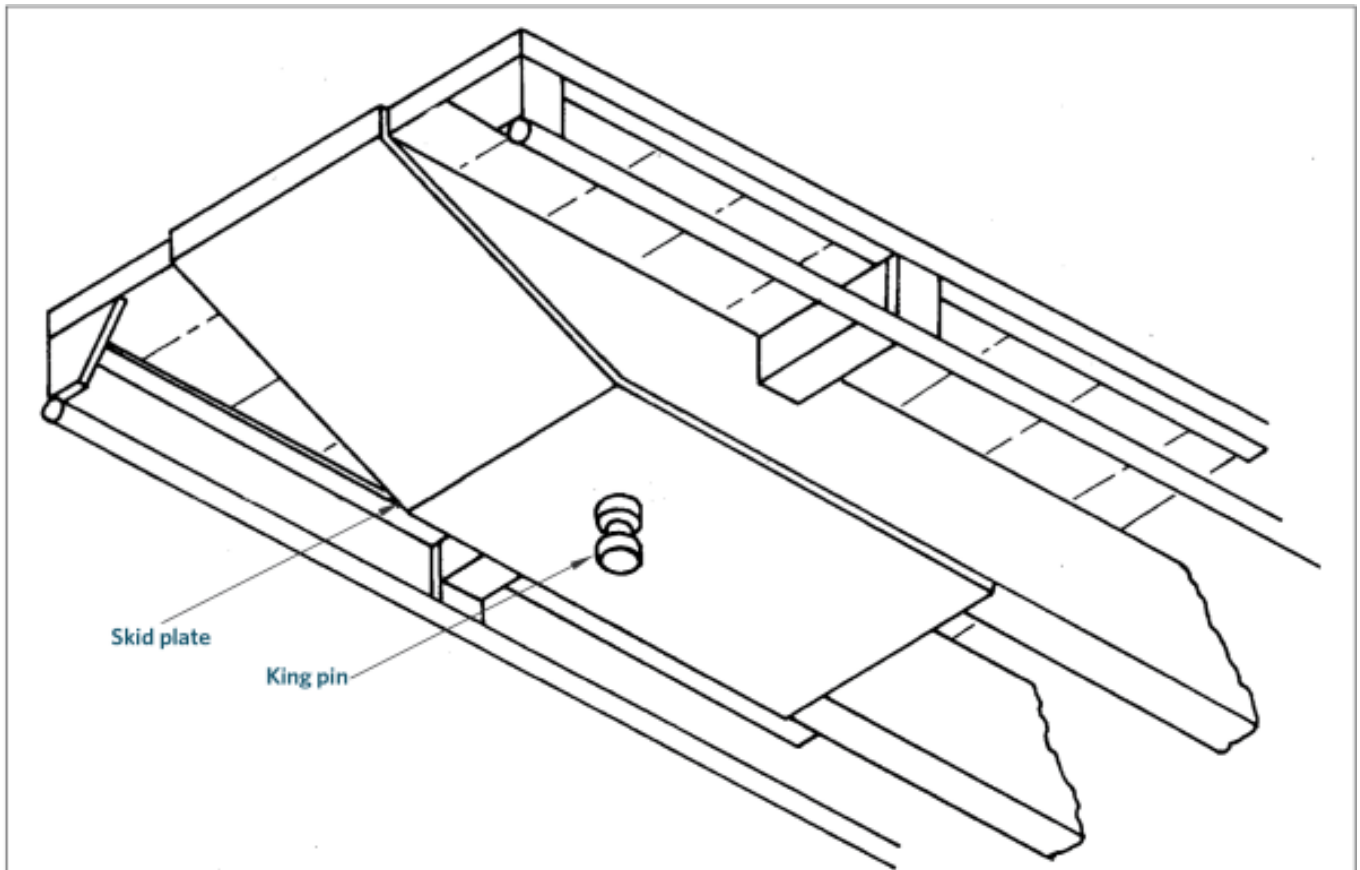
Table 8-7-1. Requirements for HVS certification

HVS certification is required	HVS certification is not required
1. Fitting of a coupling, other than a direct bolt-on replacement. 2. Modification or repair of a coupling.	1. Kingpin or socket type coupling that is a direct bolt on replacement. 2. Any modification or repair likely to have been carried out before 1 January 1997 (modifications and repairs before this date generally required certification but for inspection purposes the LANDATA record need not be checked). 3. Any repair or modification not listed in the left-hand column unless the vehicle inspection considers that certification is required because the modification or repair has affected the vehicle's safety performance (a second opinion from an expert may be needed, eg the manufacturer's representative, or a reputable workshop).

Table 8-7-2. Minimum information on certification label/plate

NZS 5446: 1987	NZS 5446: 2007 / NZS 5446: 2024
Company or agency name Certifying engineer VIN/Chassis number Maximum towed mass (kg) Expiry date (if certified on or after 1 August 1991)	Person, company or agency name Certifier ID Compliance certificate number (LT400) VIN/Chassis number Maximum towed mass Maximum static vertical load Coupling D value (minimum) Expiry date NZS 5446

Figure 8-7-1. Kingpin and skid plate



Summary of legislation

Applicable legislation

- [Land Transport Rule: Heavy Vehicles 2004](#)
- New Zealand Standard 5451: 1989, Coupling Devices for Articulated Vehicles – Fifth Wheel Kingpins
- Australian Standard 2175: 1995, Articulated Vehicles – Kingpins
- Australian/New Zealand Standard 4968: 2003, Heavy Road Vehicles – Mechanical Coupling between Articulated Vehicle Combinations., Parts 1–3 (supersedes AS 2175).
- Australian Standard 2174:1994, Articulated Vehicles – Mechanical Coupling between Prime Movers and Semi-Trailers – Interchangeability Requirements
- Australian Standard 4235: 1994, Articulated Vehicles – Design Criteria for Fifth Wheel Skid Plates
- New Zealand Standard 5446: 1987, Code of Practice for Heavy Motor Vehicle Towing Connections: Drawbar Trailers
- New Zealand Standard 5446: 2007, Heavy Vehicle Towing Connections – Drawbeams and Drawbars
- [New Zealand Standard 5446:2024, On-road heavy vehicle towing connections – Drawbeams and Drawbars.](#)

Mandatory equipment

1. A semi-trailer must be fitted with:

- a) a 50mm or 90mm diameter kingpin, and a skid plate, or
- b) a socket type coupling certified to NZS 5446 and operated as part of a dedicated combination.

2. A 50mm diameter kingpin and associated skid plate fitted to a vehicle must comply with:

a) NZS 5451, or

b) all of the following:

i. Australian/New Zealand Standard 4968.1-2003: Heavy-road vehicles – Mechanical coupling between articulated vehicle combinations – Design criteria and selection requirements for fifth wheel, kingpin and associated equipment, and

ii. Australian/New Zealand Standard 4968.2-2003: Heavy-road vehicles – Mechanical coupling between articulated vehicle combinations – Testing and installation of fifth wheel and associated equipment, and

iii. Australian Standard 2174-2006: Articulated Vehicles – Mechanical coupling between prime movers and semitrailers – Interchangeability requirements, or

c) Despite the requirements in 2b) above, an imported, powered vehicle that is constructed to tow a semi-trailer may be fitted with a 50mm diameter fifth wheel that complies with UN/ECE Regulation 55: Uniform Provisions Concerning the Approval of Mechanical Coupling Components of Combinations of Vehicles E/ECE/32 4 Rev.1/Add.54/Rev.1 E/ECE/TRANS/505A.

3. A 90mm diameter kingpin fitted to a vehicle before 1 April 2005 must be certified by an HVS certifier.

4. A 90mm diameter kingpin fitted to a vehicle on or after 1 April 2005 must comply with both:

a) AS/NZS 4968 (supersedes AS 2175), and

b) AS 2174.

5. A skid plate fitted to a vehicle on or after 1 April 2005 and before 29 December 2007 in connection with a 90mm diameter kingpin must comply with AS 4235.

6. A skid plate fitted to a vehicle on or after 29 December 2007 in connection with a 90mm diameter kingpin must comply with AS/NZS 4968.

7. A vehicle that is fitted with a 90mm diameter kingpin must have clearly displayed in a position readily visible at the lower right-hand side of the front end of the vehicle '90mm kingpin' where '90' must not be less than 100mm high.

8. A socket-type coupling must have an effective locking device and a separate means of retaining this device in the locked position.

Condition and performance

9. Towing connection components fitted to a vehicle must ensure that a secure connection can be maintained between the towing and towed vehicles under all conditions of loading and operations for which the vehicle was constructed.

10. A coupling fitted to a vehicle must not have any cracks that can be detected by means of visual inspection.

11. Locking of the coupling must be readily verifiable by visual inspection.

12. A skidplate and kingpin must remain in safe tolerance of the state of manufacture or last modification.

Modification and repair

13. A modification or repair that affects the coupling must be inspected and certified by an HVS certifier of category HVET or HMTD unless the vehicle:

a) is excluded from the requirement for HVS certification (Table 8-7-1), and

b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

Page amended **10 March 2025** (see [amendment details](#))