Correct as at 27th June 2026. It may be superseded at any time.

Extract taken from: Heavy vehicle specialist certification > Towing connections > Vehicle recovery

9-5 Vehicle recovery

Certifier categories: **HVET** | **HMTD**

Reasons for rejection

1. The towing connection of a heavy vehicle recovery vehicle fitted on or after 1 October 2005 does not comply with NZS 5446.

2. A rigid tow-pole that is used for vehicle recovery purposes does not comply with NZS 5446.

3. The lifting gear of the following class NB vehicles cannot complete a test lift of 1.25 times the manufacturer's lifting capacity:

a) a hook truck

b) a stinger lift truck

c) transporter.

4. The lifting gear of the following class NC vehicles has not been tested in accordance with AS 1418.5:

a) a hook truck

b) a stinger lift truck

c) transporter.

5. A component used in the construction of the lifting gear fitted to a recovery vehicle is not suitable for its intended use.

6. The lifting gear fitted to a recovery vehicle on or after 1 October 2005 has not been constructed in accordance with any of the following applicable standards:

a) AS 1418.1

b) AS 1418.5

c) AS/NZS 1554

d) AS 3990.

7. The manufacturer's stated lifting capacity of a hook truck or stinger lift truck is not clearly displayed, in kilograms, rounded to the nearest 50kg, at the rear of the vehicle in letters and figures not less than 30mm high.

8. A component used in the construction of lifting gear fitted to a vehicle recovery service vehicle is not suitable for its intended use.

9.Towing connection components fitted to a vehicle do not ensure that a secure connection is maintained between the towing and towed vehicles under all conditions of loading and operation for which the vehicle is constructed.

10. The towing coupling components are worn beyond the manufacturer's specifications.

11. New coupling fasteners have not been used if the coupling installed has been used in service.

12. The fasteners used do not meet the coupling manufacturer’s specifications.

13. A coupling does not have:

    a) an effective locking device, or

    b) a separate means of retaining the locking device in the locked position.

14. The locking of the coupling is not readily verifiable by visual inspection.

15. A vehicle has been modified in such a way that the braking or braking system may have been affected and it has not been referred to a certifier with the Brakes category unless the modification is covered in the vehicle’s body builders manual and the manufacturer has supplied written evidence that the vehicle remains within its original brake certification (refer to Technical Bulletin 13-7).

Table 9-5-1. Dimension requirements for vehicles and vehicle combinations (abridged)

Dimension	Distance (metres except where indicated otherwise)
Overall length (excluding collapsible mirrors):	
Towing vehicle, full trailer, simple trailer, pole trailer (excludinvg load)	11.5
Any other combination of vehicles	20.0
Forward distance (excluding collapsible mirrors):	
Rigid vehicle	8.5 if fitted with tow coupling, 9.5 otherwise
Full Trailer, simple trailer, pole trailer with drawbar at full extension, articulated bus (both front and rear sections), semi-trailer	8.5
Rear overhang:	
Heavy rigid vehicle	4.0 or 70% of wheelbase (whichever is less) for a vehicle whose rearmost axle is a non-steering axle
4.25 or 70% of wheelbase (whichever is less) for a vehicle whose rearmost axle is a steering axle	
Articulated bus, heavy semi-trailer, heavy simple trailer, heavy pole trailer with one axle set	4.0 or 50% of forward distance (whichever is less)
Heavy full trailer, heavy pole trailer with two axle sets	4.0 or 50% of wheelbase (whichever is less)
All other vehicles	4.0
Rear trailing unit distance:	
A-Train, B-Train, towing vehicle and two trailers	14.5

Articulated point of attachment (excluding articulated buses)	No further rearward than the rearmost axle of the towing vehicle or rearmost axle of the leading trailer, and if the towing vehicle is a rigid vehicle and has more than one axle in its rear set, not more than 300 mm rearward of the rear axis of the towing vehicle
Tow coupling position (for towing heavy trailer):	
Full trailer	40% of wheelbase of towing vehicle

Summary of Legislation

Applicable references

- NZS 5446: Heavy vehicle towing connections – Drawbeams and drawbars
- AS/NZS 1554 parts 1 to 6
- Welding in the transport industry (NZTA publication) - **Technical bulletin 10**
- AS/NZS 2980:2018: Qualification of welders for fusion welding of steels – Additional requirements for Australia and New Zealand
- AS/NZS ISO9606.1: 2017 Qualification testing of welders – Fusion Welding.

Applicable legislation

- **Land Transport Rule: Vehicle Dimensions and Mass 2002**
- **Land Transport Rule: Heavy Vehicles 2004**

General requirements for dimension and mass limits

1. Except as otherwise provided in this section and in 1.2(3) [of **Land Transport Rule: Vehicle Dimensions and Mass 2002**], a vehicle must comply with the applicable requirements in Table 4.1 [of **Land Transport Rule: Vehicle Dimensions and Mass 2002** (abridged in Table 9-5-1), and with other applicable requirements in this section.

2. In carrying out a 360-degree turn at the 25m diameter, no part of a vehicle in a combination, other than its articulation mechanism, may come into contact with the other vehicle in the combination.

Heavy Vehicle Rule

Vehicle recovery service vehicles

1. Lifting gear fitted to a vehicle recovery service vehicle on or after 1 October 2005 must be constructed in accordance with:

a) *Australian Standard 1418.1-1994: Cranes (including hoists and winches) – General requirements*; and

b) *Australian Standard 1418.5-1995: Cranes (including hoists and winches) – Mobile and vehicle-loading cranes*; and

c) *Australian/New Zealand Standard: 1554, Structural steel welding Parts 1 to 6*; and

d) *Australian Standard 3990-1993: Mechanical equipment – Steelwork*.

2. A towing connection fitted to the rear of a vehicle recovery service vehicle for recovery purposes on or after 1 October 2005 must be designed and constructed in accordance with *NZS 5446*.

3. A rigid tow-pole that is used for vehicle recovery purposes must be designed and constructed in accordance with NZS 5446.

4. Lifting gear of a class NB hook truck, stinger lift truck or transporter must be able to satisfactorily complete a test lift of 1.25 times the lifting capacity stated by the manufacturer.

5. Lifting gear of a class NC hook truck, stinger lift truck or transporter must be tested in accordance with *Australian Standard 1418.5-1995: Cranes (including hoists and winches) — Mobile and vehicle-loading cranes*.

6. The manufacturer's stated lifting capacity of a hook truck or stinger lift truck must, on or after 1 October 2005, be clearly displayed, in kilograms, at the rear of the vehicle in letters and figures not less than 30mm high.

7. The manufacturer's stated lifting capacity in *requirement6* must be rounded to the nearest 50kg.

8. A component used in the construction of lifting gear fitted to a vehicle recovery service vehicle must be suitable for its intended use.

Towing connection requirements

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 operation for which the vehicle was constructed.

Couplings (section 4.6)

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

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

12. Unless requirement 13 or 14 applies, a hook, pin or ball-and-socket type coupling for towing a vehicle must comply with NZS 5446: 1987.

13. A 50-mm-diameter tow ball fitted to a vehicle for towing a light trailer must comply with NZS 5232: 1993, Specification for Ball-and-Socket Type Trailer Couplings

14. A 1?-inch-diameter tow ball fitted to a vehicle for towing a light trailer must comply with the performance and marking requirements of NZS 5232: 1993 Specification for Ball-and-Socket Type Trailer Couplings, except that the ball size marking must be 1?”.

15 . A device fitted to the front of a vehicle to enable it to be recovered, together with its connection to the chassis, must be suitable for this purpose.