Correct as at 7th June 2026. It may be superseded at any time.

Extract taken from: Heavy vehicle specialist certification > Equipment fitting > Cranes, hoists etc

8-1 Cranes, hoists etc

(includes cherry pickers, logging loaders, swing lifts, side lifts, stabiliser legs, etc)

Certifier categories: **HVEC** | **HMCD**

Reasons for rejection

1. The certifier has not established that the following was acceptable:

a) the design, or

b) the standard of workmanship.

2. The installation of the equipment has resulted in a significant reduction of the performance of the original equipment fitted to the vehicle.

3. The design of the fitment of the equipment has been undertaken without due regard for appropriate load conditions and appropriate stress limits that should apply to satisfy both legal requirements and safe operating conditions.

4. The welding has not been completed by an operator qualified to AS/NZS ISO9606.1: 2017, AS/NZS 2980-2018 or approved equivalent, where required.

5. The chassis and body of a vehicle is not of adequate strength for all conditions of loading and operation for which the equipment was added.

6. An outrigger fitted to a vehicle, does not have an effective locking device so that other road users are not endangered by the inadvertent extension or separation of that equipment.

7. Locking of the equipment is not readily verifiable by visual inspection.

8. The outriggers of a vehicle of class NB or class NC fitted with a swivelling or knuckle boom crane can be operated from a position from which the locking device is not readily visible and the vehicle has not been equipped with an audible or a visual alarm that can be heard or seen from the driver’s seating position.

9. The alarm signal for an outrigger does not operate when the outrigger is not fully retracted and locked.

10. The locking device for an outrigger incorporates a system that provides energy for its operation, and, if the energising system fails, the device,

a) does not remain fully engaged in the locked position, or

b) the locking action does not initiate immediately.

11. Lifting gear fitted to a newly manufactured vehicle recovery service vehicle has not been constructed in accordance with:

a) AS 1418.1-1994: Cranes (Including Hoists and Winches) – General Requirements, and

b) AS 1418.5-1995: Cranes (Including Hoists and Winches) – Mobile and Vehicle-Loading Cranes, and

c) AS/NZS: 1554, Structural Steel Welding, and

d) AS 3990–1993: Mechanical Equipment – Steelwork.

12. The lifting gear of a class NB hook truck, stinger lift truck or transporter cannot satisfactorily complete a test lift of 1.25 times the lifting capacity stated by the manufacturer.

13. Lifting gear of a class NC hook truck, stinger lift truck or transporter has not been tested in accordance with AS 1418.5-1995: Cranes (Including Hoists and Winches) – Mobile and Vehicle-Loading Cranes.

14. The manufacturer's stated lifting capacity of a hook truck or stinger lift truck has not been clearly displayed, in kilograms, at the rear of the vehicle in letters and figures not less than 3cm high.

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

16. Towing equipment used on a hook truck is not designed or certified to the appropriate standard.

17. A vehicle has been modified by fitting a hoist, crane, logging bolster, tipping body or other special equipment, that has increased stress to a localised area of the chassis or significantly affected the distribution of the load over the chassis and:

a) a new chassis rating has not been issued and a new certificate of loading obtained, or

b) the current chassis rating has not been confirmed as being valid.

18. A modification to the chassis of a vehicle has not been undertaken with due regard for:

a) the stress levels as specified by the vehicle manufacturer, or

b) appropriate load conditions and appropriate stress limits that should apply to satisfy both legal requirements and safe operating conditions.

19. Welding has been completed as part of the modification/installation and:

a) the vehicle manufacturer prohibits the welding of the component, or

b) the welding has not been completed as specified by the vehicle manufacturer, or

c) the welding procedure has not been specified by an HVEC Certifier, or

d) the welding has not been completed in accordance with AS/NZS: 1554, Structural Steel Welding.

e) the welder is not qualified to AS/HZS2980-2018 or AS/NZS 1554 to the weld procedure(s) required to complete the modification/installation

20. The manufacturer's body building manual has not been followed when this is practicable.

21. The standard manufacturer's mountings and methods have not been used wherever this was practicable.

22. Attachment brackets do not have sufficient clearance on moving components.

23. A fastener grade is not appropriate for the loads and conditions of use.

24. Components of dissimilar metal have been bolted together without some means of preventing electrolysis.

25. A spacer has not been used when bolting through a box type chassis rail or over a flange, where crushing can occur.

26. The stability of the unit has not been considered at all loading angles.

27. The vehicle or crane manufacturer's mounting specifications have not been followed and alternate mounting not justified.

28. Where only one set of stabiliser legs has been fitted, an axle on the vehicle is overloaded or becomes unstable.

29. Subframes fitted in high chassis stress and flexure zones do not have ends that allow a gradual transition in section stiffness.

Note 1

The **Land Transport Rule Heavy Vehicles 2004** requires that any major modification of the standard vehicle (beyond the original manufacture) to be certified where the addition of heavy duty equipment for special purpose operations, for example hydraulic hoists, may place extra stress on localised areas of chassis and/or other equipment.

This means that any heavy duty equipment, including cranes, hinge and actuator mounting points of tipper bodies, should be certified unless the equipment was fitted by directly by the OE vehicle manufacturer in the same facility as the original build. For instance, stabilising legs on New Zealand manufactured container trailers do not require certification unless fitted by a third party.

The Rule also clarifies that a modification of a heavy vehicle involving the fitting of equipment such as tipping bodies places concentrated loads on the chassis requiring certification.

Note 2

Where a crane has been fitted to a heavy vehicle the correct operation of the crane to the manufacturer's instructions does not require certification by a a NZTA appointed certifier but is inspected and certified by an inspector appoint by the Ministry for Business, Innovation and Employment.

Summary of legislation

Applicable references

- AS 1418.1–1994: Cranes (Including Hoists and Winches) – General Requirements, and
- AS 1418.5–1995: Cranes (Including Hoists and Winches) – Mobile and Vehicle-Loading Cranes, and
- AS/NZS 1554, Structural Steel Welding, and
- AS 3990–1993: Mechanical Equipment – Steelwork.
- 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
- Welding in the transport industry (see **Technical bulletin 10**).

Applicable legislation

- **Land Transport Rule: Heavy Vehicles 2004**

Heavy Vehicle Rule (General safety requirements) (Note 2)

Chassis and body strength

1. The chassis and body of a vehicle must be of adequate strength for all conditions of loading and operation for which the vehicle was constructed.

2. The body of a vehicle of monocoque construction must be of adequate strength for all conditions of loading and operation for which the vehicle was constructed.

3. A load-bearing structure, other than a chassis, a body fitted to the chassis or a monocoque body, must be of adequate strength for all conditions of loading and operation for which the vehicle was constructed.

Vehicle body attachment

4. Excluding the attachment of logging bolsters, the means by which a body is attached to the chassis of a vehicle must be designed and constructed so that the stresses on the attachment, when calculated in accordance with requirement 5, do not exceed 60% of the yield stress of the material from which the attachment is made.

5. The stresses in requirement 4 must be calculated under each of the following loading conditions, when the forces are applied at the approximate centre of gravity of the load:

a) a longitudinally-acting force, equivalent to twice the combined weight of the payload capacity and the body mass,

b) a downward-acting force, equivalent to twice the combined weight of the payload capacity and the body mass,

c) a transversely-acting force, equivalent to the combined weight of the payload capacity and the body mass,

d) an upward-acting force, equivalent to the combined weight of the payload capacity and the body mass.

Equipment locking devices

6. A sliding axle set or sliding chassis, or an outrigger fitted to a vehicle, must have an effective locking device so that other road users are not endangered by the inadvertent extension or separation of that equipment.

7. Locking of the equipment in requirement 6 must be readily verifiable by visual inspection or be equipped with a visual or audible alarm to warn the driver if the equipment is not locked in one of the locking positions.

8. If the outriggers of a vehicle of class NB or class NC fitted with a swivelling (or knuckle boom) crane must be fitted with locking devices that can be readily seen in the locked position with the outrigger retracted or the vehicle must be equipped with an audible or visual alarm to warn the driver if an outrigger is not in the fully retracted position.

9 An alarm in requirement 7 or 8 must be audible and visible from the driver's seating position and the alarm must operate when the vehicle's engine is running, except when the park brake is is fully applied or the gear selector of an automatic is in 'park'.

10. If the locking device in requirement 6 incorporates a system that provides energy for its operation, the device must remain fully engaged in the locked position, or the locking action must be initiated immediately, if the energising system fails.

11. A sliding axle set or a sliding chassis must have endstops at the end of the slideway to prevent the separation of the sliding parts if the primary locking device fails.

Vehicle recovery service vehicles

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

a) AS 1418.1-1994: Cranes (Including Hoists and Winches) – General Requirements, and

b) AS 1418.5-1995: Cranes (Including Hoists and Winches) – Mobile and Vehicle-Loading Cranes, and

c) AS/NZS: 1554, Parts 1 to 6, Structural Steel Welding, and

d) AS 3990-1993: Mechanical Equipment – Steelwork.

13. 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.

14. Lifting gear of a class NC hook truck, stinger lift truck or transporter must be tested in accordance with AS 1418.5-1995: Cranes (including Hoists and Winches) – Mobile and Vehicle-Loading Cranes.

15. 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 3cm high.

16. The manufacturer's stated lifting capacity in requirement 15 must be rounded to the nearest 50kg.

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

Modification affecting chassis

18. If a vehicle is modified by fitting a hoist, crane, logging bolster, tipping body or other special equipment, which may result in increased stress to a localised area of the chassis or significant redistribution of the load over the chassis:

a) a new chassis rating must be issued and a new certificate of loading obtained, or

b) the current chassis rating must be confirmed as being valid.

18. A modification to the chassis of a vehicle must be designed to stress levels:

a) as specified by the vehicle manufacturer, or

b) in accordance with AS 3990: 1993, Mechanical Equipment – Steelwork, or

c) in accordance with BS 7608: 1993, Code of Practice for Fatigue Design and Assessment of Steel Structures, or

d) that are not higher, when the vehicle is loaded to its proposed new gross vehicle mass, than those of the chassis of the unmodified vehicle loaded to its current gross vehicle mass.

19. If the vehicle manufacturer does not prohibit the welding of the chassis members, a welding that is part of the modification of a chassis must be carried out:

a) as specified by the vehicle manufacturer, or

b) in accordance with AS/NZS: 1554, Structural Steel Welding.