

VIRM: HEAVY VEHICLE SPECIALIST CERTIFICATION AMENDMENT

April 2021 amendment

MARCH 2021

LIST OF CHANGES

Section	Change description
Introduction 3-1 Duties and responsibilities	Update to delegations regarding initial assessment and repairs, and how different aspects are dealt with between engineers.
6-1 Seatbelts and seatbelt anchorages	Summary of legislation updated to more closely reflect the rule. Reasons for rejection are unchanged.
Technical bulletin 4: Heavy vehicle modifications that may affect brakes	Rewritten to remove conflicting material and to align with Heavy Vehicle Brakes Rule.
Technical bulletin 16: Engineers' responsibilities for modifications that may affect a heavy vehicle's brakes	Rescinded and merged into technical bulletin 4.

PREVIEW PAGES

3-1 Duties and responsibilities

Table 2. Delegations

Category	Duties (Note 1)	Delegation	To
Engineer	Initial assessment (excluding repairs)	Yes	A person reasonably considered by the HVSC to be competent and trustworthy. That person should consult with the HVSC before beginning any work and may use photographs for assistance. The HVSC remains responsible for all delegated work.
	Initial assessment (repairs)	Yes, but not for complex repairs or repairs of fatigue critical components (Note 3).	As above. Additionally, all parties involved must undertake best endeavours to determine the root cause of the issue to be repaired before starting work.
	Design	Yes, but must personally approve the design to be complete before manufacture	A person reasonably considered to be competent.
	Monitoring of manufacture or installation	Yes	A person reasonably considered to be competent
	Final inspection	No	
	Sign off (PDS/LT400 etc)	No	

Note 1

An engineering certifier may transfer responsibility for any of the duties listed in Table 2 to another engineering certifier using a SoDC. Both engineering certifiers must hold the appropriate certification category. Where an SoDC is used in this way this is not a delegation as the issuer of the SoDC takes responsibility only for the aspects covered by the SoDC, with the issuer of the LT400 taking responsibility for all other aspects. This differs from a delegation, where the delegating engineer keeps full responsibility for the work carried out by the person they delegate to.

Note 2

No other delegations may be made without the express written consent of Waka Kotahi.

Note 3

Inspection of damage to the following components may not be delegated and must be assessed in the as-damaged state by the engineer:

- towing connections (except for replacement of bent or worn tow eyes)
- log bolster attachments
- chassis flanges
- subsequent failure of a previous repair.

6-1 Seatbelts and seatbelt anchorages

Reasons for rejection

Tables and images

Summary of legislation

Retrofitted anchorages

40. Retrofitted seatbelt anchorages must be certified as meeting the general safety requirements for seatbelt anchorages. In determining if the general safety requirements have been met, the HVSC must take into account the technical requirements regarding geometry and load carrying capacity from any one of the approved vehicle standards for seatbelt anchorages.

41. If using calculations to determine that the general safety requirements have been met, the HVSC must take into account the technical requirements regarding geometry and load carrying capacity from any one of the standards in [Table 6-1-2](#).

42. Alternatively, seatbelt anchorages that comply with the design requirements of the Low Volume Vehicle Standard 175-00(01) can be certified as meeting the general safety requirements for seatbelt anchorages.

43. For the fitment of aftermarket UN/ECE R14 stressed seats in motorhomes, the HVSC must consider the seatbelt load requirements based on the M1 classification that applies to all motorhomes under the UN/ECE system regardless of GVM. However, an HVSC is permitted to determine whether or not these requirements are appropriate for a particular vehicle, and may design to a lower (M2 or M3) classification if it can be demonstrated that the M1 classification is not appropriate.

44. Retrofitted anchorages should be designed to accept webbing grabber seatbelts when designed for front outer seating locations.

Technical bulletin 4: Heavy vehicle modifications that may affect the brakes

This technical bulletin replaces TB4 and TB16.

The engineers' responsibilities

All modifications to a heavy vehicle where the brake system or any components of the brake system may be affected must meet the requirements of the Land Transport Rule: Heavy Vehicle Brakes 2006 (HVBR).

Brake certification can only be carried out by a specialist certifier with HVEK category.

No other category of heavy vehicle specialist certifier (HVSC) may certify heavy vehicle brakes. All heavy vehicle brake changes or modifications, except those specifically exempted from the requirements by 8.2(1) of HVBR, must be certified by an HVSC with the HVEK category, whether the certification requires HVBR Schedule 5 or not.

The lead HVSC for the project must ensure that brake certification is carried out prior to issuing (LT400) certification for the project. The responsibility for obtaining brake certification cannot be delegated to the vehicle owner or the testing station or any other entity. Consideration of the braking system and brake performance is an integral factor to be assessed in all modifications.

HVEK Brake certification category

Brake certification for any heavy vehicle manufactured or modified in New Zealand and any heavy vehicle imported into New Zealand that has been modified after its original equipment (OE) manufacture (Note 1) can only be performed by an engineer with the HVEK category.

Modifications that always require an LT400 by an HVEK

- A heavy vehicle that has had its braking system modified or the vehicle has been modified in any way which effects braking performance after the final stage of OE manufacturer (Note 1), after entry certification or after the previous in-service inspection, must be certified by a HVSC with the HVEK category and issued an LT400.
- A wheelbase alteration to a standards compliant heavy vehicle (Note 2) that is not confirmed with a *Letter of Acceptance/Approval* (LOA) (Note 3) by the OE manufacturer, and:
 - a. where adding an axle of any type, changing an axle to a different configuration or specification, changing a brake component or setting, or
 - b. where the vehicles original manufacturer's GVM is changed - This change of chassis rating must be confirmed by a chassis HVSC with the HVEC category, or
 - c. where the vehicles configuration is changed, eg has been changed from 6x2 or 6x4 to 8x4 or 10x4 or 10x6 or any other configuration.The HVEK may take into account written advice in the form of a LOA from the OE manufacturer for that particular vehicle **and** that confirmation has been obtained that the vehicles brake control software has been altered by the dealer or New Zealand representative for the manufacturer.
- A heavy vehicle that has been brake-coded to the Heavy Vehicle Brake Code, Second Edition (Schedule 4) and it cannot be established what friction material was used (or the friction material originally used is no longer available).

The vehicle may be re-coded to its original brake code mass using an alternative friction material as long as no other alterations are made. This certification requires that the original brake coding is re-confirmed as compliant with the new friction material by an HVEK with relevant brake coding experience and using **the latest (second edition) NZTA Brake Coding Software** and is issued with an LT400 confirming compliance with the code. If the appropriate data can be obtained the NZTA brake calculator may be able to be used.

Note: vehicles that were brake-coded to any of the earlier iterations of the Brake Code (including the Interim Performance Specification for Heavy Vehicle Braking and the Heavy Vehicle Braking Specification of 6 December 1988) that are modified, must meet the requirements of the HVBR.

- A brake-coded heavy vehicle that has had a change of use, e.g. tractor to rigid (with or without tow connection) where there are no brake, wheelbase or centre of gravity modifications.

If the HVEK certifier can demonstrate (using the **NZTA Brake Calculator**) continued compliance with the **second edition Brake Code** as required by Section 8.1(4) of the Rule, then that original brake coding remains valid and is to be confirmed with an LT400.

- A brake-coded heavy vehicle that has had its braking system modified, even if its compliance curves remain within the 'tramlines' of the Brake Code. The resultant vehicle is outside its original Brake Code certification and must be re-certified to Schedule 5 and issued an LT400.

Note: when an HVSC considers a modification 'minor,' they can apply for an exemption from the requirements of clause 8.1(4) HVBR.

- An air-operated spring parking brake that has been retrofitted to a vehicle to replace a wind-on parking brake must be certified by an HVSC with the HVEK category.

Note: provided the replacement spring brake chamber has the same service brake performance as the original and no other modification is made to the service brake, compliance to Schedule 5 is not required.

Modifications that do not require an LT400 by an HVEK

Only those modification exempted from clause 8.2(1) of HVBR do not require certification from an HVEK:

1. where the vehicle has an had an adjustment to the brake system threshold pressure to comply with 7.1(8) or 7.2(5) of the HVBR.
2. where an air brake coupling device on a powered vehicle has been fitted in accordance with the manufacturers recommendations or has been replaced for the purposes of complying with 7.3 of the HVBR.
3. where a park brake valve has been fitted to a powered vehicle to allow any towed trailer/s park brake to operate.

Any modifications outside these exceptions must be referred to a HVSC with the HVEK category. It is the HVEK engineer's responsibility to confirm that the braking system has not been affected by the modification and issue an LT400 to that effect. If the braking system has been affected, it is the HVEC engineer's responsibility to ensure that the HVEK engineer certifies the required modifications.

Examples of other certification categories that may affect braking

HVET

Where a vehicle has a towing connection added or is modified in any other way and the modification MAY affect the braking system, the vehicle must be referred to a HVSC with the HVEK category.

The only exception to above is where the modification is covered by a LOA (Note 3) from the OE manufacturer. In this case the HVET takes responsibility by confirming on the LT400 that HVEK is not required, quoting all supporting information. Supporting information and all correspondence with the OE manufacturer must be retained in the certification file.

Where any brake component(s) have been altered or modified (unless specifically allowed by section 8 of the HVBR), these alterations or modifications must be referred to a HVEK category engineer

It is the HVEK engineer's responsibility to confirm that the braking system has not been affected by the HVET modification. If the braking system has been affected, it is the HVEK engineer's responsibility to check the brake system remains compliant, if the brake system is no longer compliant it is the HVEK engineer's responsibility to bring it back into a compliant state and certify as required.

The HVET certifier must not issue their towing connection certification, (LT400) until brake system compliance has been confirmed by a HVEK certifier.

HVEC

Where an HVEC category engineer performs a modification or certification that may affect the brakes on a heavy vehicle, that engineer must consult with an HVEK category engineer to ensure any need for re-certification or adjustment of the braking system is identified and completed prior to an LT400 being issued.

The only exception to above is where the modification is covered by a LOA (Note 3) from the manufacturer. In this case the HVEC takes responsibility by confirming on the LT400 that HVEK is not required, quoting all supporting information. Supporting information and all correspondence with the OE manufacturer must be retained in the certification file.

Where any brake component(s) have been altered or modified (unless specifically allowed by section 8 of the HVBR), these alterations or modifications must be referred to a HVEK category engineer

Where an air supply is provided by the vehicle manufacturer for an auxiliary purpose, the HVEC can add an air powered auxiliary without requiring additional certification. The added air supply must not be able to degrade the function or performance of the braking system through use or a fault.

The HVEC certifier must not issue their chassis certification, (LT400) until brake system compliance has been confirmed by a HVEK certifier.

Note 1

OE manufacturer means the original manufacturer of the vehicle. It does not mean;

- a second or third stage manufacturer, modifier or body builder
- an OE manufacturers local representative
- a VIN issuer, if the VIN was issued by a regulator (eg Waka Kotahi), in this case the regulator may nominate the manufacturer.

Note 2

Standards compliant means a vehicle which, when it went through entry certification on or after 1 July 2008, was manufactured and is in compliance with one of the international standards approved in clause 2.5(2) of the HVBR, or, being a vehicle manufactured or modified in New Zealand after 1 March 2007, was certified as compliant with Schedule 5 of the HVBR.

Note 3

Letter of Acceptance/Approval (LOA) The OE manufacturer has supplied written acceptance or approval for the modification to be carried out. For an LOA to be considered and accepted for certification purposes it must:

- be issued by the OE manufacturer's department responsible for compliance and approvals (statements from local distributors, or departments not responsible for confirming compliance, eg sales and marketing or help desks, are not acceptable), and
- be specifically for the purposes of certification that clearly identifies the manufacturer, position, contact details and signature of the person issuing the LOA, and
- be make, model and variant specific, and
- state that the vehicle remains compliant with the brake standard, or a later version of the standard, the vehicle originally complied with when manufactured (wording must explicitly state

the vehicle complies with standard 'XYZ'. Statements of 'no objection' or similar which do not confirm compliance must not be accepted), and

- describe the modification and any limitations and or requirements that must be met by the modifier.