

Helping New Zealanders Build & Modify Safe Vehicles



Updates to NZCCM Chapter 19 - Vehicle Operation

► Introduction

LVVTA has updated the *New Zealand Car Construction Manual (NZCCM) Chapter 19 (Vehicle Operation)*. As detailed within *LVVTA Information Sheet # 02-2021 (Explanation of 'Next-generation' LVVTA Technical Documents)*, the main reason for the LVVTA technical document system overhaul is to create a clear distinction between the purpose of the LVV standards and the corresponding NZCCM chapters. While the LVV standards and NZCCM chapters will still be related, this distinction will reduce duplication, minimise the frequency of LVV standards amendments, and enable either the LVV standards or the NZCCM chapters to be amended independently of each other.

From the end user's perspective, the structure of the 'Next-generation' LVVTA technical documents reduces the function of the LVV standards to laying out the legal framework for vehicle modification and construction requirements, and uses the NZCCM chapters to show modifiers and builders how compliance with the LVV standards can be met in a practical and achievable manner. In the case of Chapter 19, this outlines the requirements for road testing, brake testing, and ergonomics. Unlike the rest of the Next-generation document system, though, there isn't a corresponding LVV Standard to go with the new Chapter 19.

LVV Standards provide an alternate method of compliance with the applicable Land Transport Rule, and as there isn't a Land Transport Rule that directly relates to vehicle operation, consequently there isn't an LVV Standard for this. Assessment of how a vehicle drives, however, is needed to demonstrate compliance with several other LVV Standards – particularly those relating to Braking, Steering, and Suspension.

► Chapter Updates

All changes to *Chapter 19 (Vehicle Operation)* are indicated throughout the Chapter by grey-shaded text. The Chapter has incorporated parts of the existing LVV Braking Systems Standard, specifically those related to brake testing. As such, the *FS009 Brake Performance Testing Form-set* has been retired, and the *Chapter 19 (Vehicle Operation)* form-set should instead be used.

Road Testing Requirements

Chapter 19 is unique within the CCM, as while most other Chapters outline things that a particular system within a vehicle has to have (or the 'recipe' that must be followed in order to achieve a certain modification), Chapter 19 outlines how that system needs to work and perform. A big driver of the Chapter updates was the decreasing speed limits in metropolitan areas, which have made it increasingly difficult and time consuming for an LVV Certifier to properly road and brake test a vehicle.

In tandem with the redevelopment of the LVV Operating Requirements Schedule, requirements for vehicle road testing have been relaxed, so there are now fewer vehicles which require a full road test by the LVV Certifier. Vehicles which haven't had modifications that could affect the driver's vision, or the safe control of the vehicle, or the vehicle's performance, require nothing more than a quick WoF-type road test by the LVV Certifier. Consequently, on the front of the form-set, there is a section to note whether the vehicle requires a full road test, and if it doesn't, the LVV Certifier doesn't need to fill out the rest of the formset – they simply print the first page, tick the appropriate box, and put this in with the rest of the certification form-sets for the vehicle. *LVV ORS Chapter 8 (LVV Certification Inspection Process)* further details the level of road and brake testing required for a vehicle undergoing LVV certification.

If the vehicle requires a road test, Chapter 19 contains some basic parameters around how the vehicle must perform. This shouldn't change what the LVV Certifier is already doing, it's just that up until now the outcome of that road test wasn't recorded on its own formset, unless the car was scratch-built. Like all LVV requirements, these only apply where that aspect of the vehicle is affected by modifications. Where modifications don't affect that particular aspect of a vehicle, it's not expected to meet LVV requirements.

Brake Testing Requirements

Brake testing requirements have also been further refined, with fewer vehicles requiring cyclic fade-resistance testing. This will reduce the time required for LVV Certifiers to travel to find a road suitable for brake testing, which has become harder and harder for those in metropolitan areas. This should in turn reduce the cost of LVV certification for some vehicles.

This easing of compliance cost has to be balanced with retaining the level of rigour and high standards for safety set by the LVVTA brake testing regime. Where a vehicle has undergone modifications that increase its performance beyond a certain level, or has undergone significant brake modifications, or had a tyre diameter increase greater than 10% over OE, it still requires cyclic fade-resistance testing.

► Finally

The updated *NZCCM Chapter 19 (Vehicle Operation)* can be downloaded free of charge from <https://www.lvvta.org.nz/>.

If you have any queries or require any further clarification relating to this information sheet, please contact your LVV Certifier, or a member of the LVVTA technical staff by emailing info@lvvta.org.nz.



FOR FURTHER INFORMATION PLEASE CONTACT YOUR LVV CERTIFIER, OR LVVTA.