Low Volume Vehicle Technical Association (inc)

Helping New Zealanders Build & Modify Safe Vehicles

LVV Operating Requirements Schedule

Chapter 14
LVVTA Services & Support

Version 12 | Effective from 1 October 2025

Low Volume Vehicle Technical Association (inc)

Approval Record

Signed in accordance with clause *1.3(5)* of the *Low Volume Vehicle Code* of LVVTA, on …… by:			
New Zealand Transport Agency		Low Volume Vehicle Technical Association	
Name	Signature	Name	Signature
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Amendment Record

Amendments details	Version #	Issue date	Effect date
• LVV ORS - Original Issue	Version 1	2001	2001
• LVV ORS – Amendment # 1	Version 2	1 August 2003	1 October 2003
• LVV ORS – Amendment # 2	Version 3	1 March 2005	1 April 2005
• LVV ORS – Amendment # 3	Version 4	1 February 2006	1 April 2006
• LVV ORS – Amendment # 4	Version 5	1 May 2007	1 July 2007
• LVV ORS – Amendment # 5	Version 6	1 March 2008	1 April 2008
• LVV ORS – Amendment # 6	Version 7	1 January 2010	1 February 2010
• LVV ORS – Amendment # 7	Version 8	1 March 2011	1 April 2011
• LVV ORS – Amendment # 8	Version 9	1 July 2016	1 July 2016
• LVV ORS – Amendment # 9	Version 10	1 October 2016	1 October 2016
• LVV ORS – Amendment # 10	Version 11	1 June 2017	1 June 2017
• LVV ORS Chapter 14 - Amendment # 11	Version 12	10 September 2025	1 October 2025

Note 1	The first ten amendment processes to the LVV ORS (Amendment #s 1-10), carried out between August 2003 and June 2017, were made to the complete ORS document. From Amendment # 11 (which is Version 12, issued 10 September 2025), amendments are carried out to individual chapters.
Note 2	Text highlighted in grey shows amendments that have been made subsequent to the previous version of this chapter, and a grey vertical stroke to the left of the text denotes important new or changed information (which may include information which has been removed).

About the LVV Operating Requirements Schedule

The LVV Operating Requirements Schedule (LVV ORS), and its sub-set of LVV ORS chapters (the chapters) set out the operational systems and processes which enables the LVV certification system to function effectively. Whereas the *Low Volume Vehicle Code* provides the legal platform upon which the LVV certification system operates, the LVV ORS provides robust operational systems and processes to ensure that LVV certification outcomes are consistent, fair, transparent, and of a high quality.

Author, Publisher, & Owner

This chapter is authored, published, and owned by the Low Volume Vehicle Technical Association Incorporated (LVVTA). LVVTA is an incorporated society established in 1992, that represents a group of specialist automotive organisations (in turn representing approximately 150,000 members) who are dedicated to ensuring that vehicles, when scratch-built or modified, meet the highest practicable safety standards.

The information in this chapter has stemmed from work undertaken by LVVTA founding member organisations that commenced in 1989 and has been progressively developed as an integral part of the New Zealand Government's land transport regulatory system, by agreement and in consultation with the New Zealand Transport Agency (NZTA).

As a result, the considerable experience in specialist certification management built up by LVVTA and the specialist automotive member groups over the past several decades can be of benefit to members of the New Zealand public who also wish to build or modify motor vehicles.

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Availability & Current Version

This chapter is printed and distributed by LVVTA, and is available to the public free of charge from the LVVTA website; www.lvvta.org.nz.

Note that printed copies of this chapter, like any other printed LVVTA documents, may have been superseded by a later version and become out of date.

Therefore, this and all other LVVTA documents should not be relied upon without first ensuring that the version number (on the right-hand side of the header above) is the current version – please visit the LVV ORS area of www.lvvta.org.nz to check that this chapter is in fact the latest version.

User's Feedback

This chapter is constantly undergoing an evolutionary development process in order to keep pace with changing trends and technology. To assist in this, LVVTA invites users of the chapter to engage in an ongoing consultation process with us by making submissions for any changes, additions, or clarifications which might improve the chapter, at any time.

Any submissions made via this rolling consultation process will be thoroughly considered, and incorporated, where appropriate, at the next available amendment opportunity.

Submissions should be made to submission@lvvta.org.nz, with the name of this chapter in the Subject line.

Legal Status & Copyright

This chapter is incorporated by reference, as an integral part of the *Low Volume Vehicle Code*, within *Land Transport Rule: Vehicle Standards Compliance 2002*.

Disclaimer

LVVTA has made all reasonable efforts to provide sound and correct advice, based on the historical knowledge and best practice experiences of all parties involved in the development and production of this chapter.

However, no responsibility or liability is accepted by LVVTA for any error or omission, or any loss suffered by any person relying directly or indirectly on this chapter. Any person who builds or modifies a motor vehicle accepts that there may be some associated risks, and does so in the full knowledge of this, and accepts full responsibility for their own actions.

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LVVTA Services & Support

Purpose of this Chapter

The purpose of this LVV Operating Requirements Schedule chapter (the chapter) is to explain the primary areas of service and support that LVVTA provides to the LVV Certifiers, members of the public, the industry, and Government agencies involved in the motor vehicle regulatory sector.

LVVTA's principal area of responsibility relating to LVV Certifiers includes providing helpdesk-based technical support, regional and national training, on-site support, mentoring, technical and operational information, and engineering analysis.

Italics are used throughout this chapter when referencing '*external documents*' that are not part of this chapter.

Section 1 Helpdesk Support for LVV Certifiers

1.1 Introduction

LVV certification is a complex and diverse environment, and most LVV Certifiers work in isolation. It is critical, therefore, that they have direct and immediate access to a very high-level of technical support at all times, to help them in situations when, for example, they are presented with a vehicle or a modification that is unusual, or when the applicable requirements don't apply well to the situation, or when they need help with interpretation of the requirements.

LVVTA provides a Helpdesk Support service to LVV Certifiers, to enable them to access high-level technical and operational support whenever they need it, and in particular to prevent them from having to make complex technical decisions in isolation.

1.2 Availability of Helpdesk

1.2(1) LVVTA provides to all LVV Certifiers, a Helpdesk, which:

(a) is operated by LVVTA staff-members who have a high level of vehicle modification and construction knowledge and experience; and

(b) makes best endeavors to provide immediate, or same-day responses; and

(c) is available on every working day, except for statutory public holidays and the days between the Christmas and New Year statutory holidays, and any organisational development days which will not exceed one day in any calendar week.

1.3 Purpose of Helpdesk

1.3(1) The purpose of LVVTA's Helpdesk includes to provide LVV Certifiers with interpretation of, and guidance relating to:

(a) technical requirements contained in *LVV Standards*, *NZ Car Construction Manual chapters, NZ Motorcycle Construction Manual chapters, Information Sheets,* and *Safety Alerts*; and

(b) operational requirements contained in the *Low Volume Vehicle Code (LVV Code)* and the *LVV Operating Requirements Schedule (LVV ORS)*; and

(c) the modification thresholds contained in the *LVV Modification Threshold Schedule*, and in the *Modification Tables* contained in the *NZTA Vehicle Inspection Requirements Manual (VIRM)*.

1.3(2) The LVVTA Helpdesk provides LVV Certifiers with ready access to technical support, for the purpose of (see Note 1 below):

(a) answering any technical questions that an LVV Certifier may have; and

(b) offering a 'sounding board' to discuss any complex or unusual technical challenges an LVV Certifier has been presented with.

Note 1	'Helpdesk support' is generally defined as when an LVV Certifier approaches LVVTA for information (via the Helpdesk), rather than when the contact is initiated by LVVTA, which is generally defined as 'coaching'. The details of coaching are contained in *LVV ORS Chapter 10: LVV File Review System*, which is available to the public electronically, free of charge, from the LVVTA website www.lvvta.org.nz

1.3(3) There is no cost to LVV Certifiers for the Helpdesk support provided by LVVTA.

Section 2 On-site Visits for LVV Certifiers

2.1 Introduction

Over time, LVVTA has determined that a friendly low-key one-on-one 'how-can-we-help?'-style of visit from an LVVTA technical staff member is welcomed by LVV Certifiers. This has led to the introduction of a formalised annual 'On-site Visit' for every LVV Certifier.

The On-site Visit focusses on offering each LVV Certifier the opportunity for any one-on-one technical or operational help and support that they might want, and an opportunity to ask questions they might prefer not to ask in front of their peers at training sessions. The On-site Visit also provides an opportunity for LVVTA to solicit feedback that might help LVVTA to improve the LVV certification system.

The only formal part of the On-site Visit is to ensure that the required equipment is available, and where a hard-copy *LVV Certification Manual* is being used, it is being kept up to date.

2.2 Provision of On-site Visits

2.2(1) LVVTA provides an On-site Visit, by the LVVTA Certifier Support Officer, to each LVV Certifier, which (see Note 1 below):

(a) is a one-on-one face-to-face visit; and

(b) occurs once each year; and

(c) is held:

(i) at the premises of the LVV Certifier; and

(ii) at a time that is mutually suitable for the LVVTA Certifier Support Officer and the LVV Certifier.

2.3 Purpose of On-site Visits

2.3(1) The purpose of the On-site Visit is to provide each LVV Certifier with an opportunity to:

(a) have an informal, friendly, and low-key discussion; and

(b) ask any LVV certification-related questions the LVV Certifier might have; and

(c) discuss any concerns or problems the LVV Certifier might have; and

(d) arrange for any specific training the LVV Certifier might require.

2.3(2) The On-site Visit provides the LVVTA Certifier Support Officer with an opportunity to:

(a) ensure that the LVV Certifier's *LVV Certification Manual* is up to date; and

(b) obtain feedback from the LVV Certifier about how LVVTA could improve its services and support.

2.4 Other Details of On-site Visits

2.4(1) An On-site Visit provided by LVVTA to an LVV Certifier does not:

(a) incorporate any tests, scores, or pass-fail outcomes for the LVV Certifier; or

(b) impose any charge to the LVV Certifier.

Section 3 Mentoring for LVV Certifiers

3.1 Introduction

LVVTA has dedicated staff members, including an LVV Certifier Support Officer, who make themselves available to assist LVV Certifiers by providing individual mentoring when they require help in areas where they lack specific knowledge, or where there is a need for an LVV Certifier to be upskilled.

Mentoring is provided in an effort to continuously improve overall certification quality, and consistency in inspections between LVV Certifiers.

3.2 Provision of Mentoring

3.2(1) The LVVTA Certifier Support Officer, or other staff members appointed for the purpose, provide, to all LVV Certifiers, as is reasonably possible, targeted individual learning opportunities through face-to-face (wherever possible) Mentoring support in order to assist in achieving the best possible level of LVV certification performance from all LVV Certifiers, particularly in circumstances where an LVV Certifier (see Note 1 below):

(a) is working in a new or unfamiliar technical area; or

(b) requires support with emerging technical trends and challenges; or

(c) has had difficulty in consistently achieving good LVV certification outcomes.

Note 1	Wherever practical, Mentoring support will occur on a face-to-face basis, however there will be circumstances where - usually due to time, cost, or urgency constraints, Mentoring support may be provided by other means than face-to-face.

3.2(2) The Mentoring support provided by the LVVTA Certifier Support Officer, or other staff members appointed for the purpose, may specifically relate to:

(a) specific technical subjects; or

(b) a specific LVV certification category.

3.2(3) There is no charge to LVV Certifiers for the Mentoring support provided by LVVTA.

Section 4 Training for LVV Certifiers

4.1 Introduction

The LVV Certifier's *Notice of Appointment* requires all LVV Certifiers to attend LVV Certifier training provided by LVVTA. LVVTA provides training to LVV Certifiers via a number of different ways, which can include on a regional basis throughout New Zealand for all LVV Certifiers, nationally by bringing all LVV Certifiers together in one venue, and also online training.

Regional training has the advantage of creating smaller groups where input and participation from the LVV Certifiers can occur more easily in a small group of 5 to 15 people, than it would in a group of 50 or more people.

National training has the advantage of bringing all LVV Certifiers together, where they can share ideas, learn from each other, and get to know each other.

In addition to the regional, national, and online training sessions involving all LVV Certifiers, LVVTA also provides category-based training that is applicable to those LVV Certifiers who hold a particular LVV Certifier category.

4.2 Purpose of Training for LVV Certifiers

4.2(1) LVVTA provides training to all LVV Certifiers, up to three times per year, in order to communicate the operational and technical requirements of the LVV certification system, including:

(a) understanding and responding to new or emerging technical trends; and

(b) the correct application of new or amended *LVV Standards, NZ Car Construction Manual chapters, NZ Motorcycle Construction Manual chapters,* and other technical documents; and

(c) understanding and applying new or amended operational or procedural requirements; and

(d) understanding new technical challenges and risks that have been identified, together with their agreed solutions; and

(e) maximising the quality and consistency of LVV certification inspections.

4.3 Regional Training for LVV Certifiers

4.3(1) LVVTA provides, in some cases, training to all LVV Certifiers by region, known as Regional Training, where the training is better suited to a series of smaller groups (see Notes 1 and 2 below).

Note 1	Regional Training is generally held in Auckland, Rotorua, Whanganui, Wellington, Christchurch, and Dunedin, but can be varied from time to time.
Note 2	Regional Training may also be provided online, where considered appropriate by LVVTA.

4.4 National Training for LVV Certifiers

4.4(1) LVVTA provides, in some cases, training to all LVV Certifiers nationally, known as National Training, where there are advantages in having all LVV Certifiers together in a single conference-style venue (see Note 1 below).

Note 1	National Training sessions are generally held at LVVTA's offices, but can be varied as necessary from time to time.

4.5 Category-based Training for LVV Certifiers

4.5(1) LVVTA provides, in some cases, Category-based Training to all LVV Certifiers who hold a particular LVV certification category, as and when required, in order to communicate technical requirements relating to a specific LVV certification category (see Notes 1 to 3 below).

Note 1	Category-based Training sessions are generally held at LVVTA's offices, but can be varied as necessary from time to time.
Note 2	Information about LVV certification categories is provided in *LVV ORS Chapter 3: LVV Certification Categories*, which is available to the public electronically, free of charge, from the LVVTA website www.lvvta.org.nz
Note 3	Category-based Training may also be provided online, where considered appropriate by LVVTA.

4.6 Costs for Training

4.6(1) There is no charge to LVV Certifiers for the scheduled Regional, National, or Category-based Training provided by LVVTA.

4.7 Training Attendance Requirements

4.7(1) Unless prevented by exceptional circumstances such as ill health, an LVV Certifier must attend any training provided for LVV Certifiers by LVVTA.

4.7(2) If an LVV Certifier is unable to attend a scheduled training session, the LVV Certifier must arrange with LVVTA for an additional unscheduled training session to be provided at a time that is mutually convenient for LVVTA and the LVV Certifier (see Note 1 below).

Note 1	Any LVV Certifiers who are unable to attend the Regional Training provided in their region, may attend any of the 'out of area' Regional Training sessions.

4.7(3) In the event that an additional unscheduled training session as specified in 4.7(2) is required to be provided by LVVTA for one or more LVV Certifiers:

(a) LVVTA will arrange for all LVV Certifiers who require an additional unscheduled training session to attend the same session (see Note 1 below); and

(b) the LVV Certifiers who attend the additional unscheduled training session will be required to meet a charge for the provision of the training session (see Notes 2 and 3 below); and

(c) LVVTA will divide the charge incurred in presenting the additional unscheduled training session between all attending LVV Certifiers (see Notes 2 and 3 below).

Note 1	The additional unscheduled training session may also be provided online, where considered appropriate by LVVTA.
Note 2	The charges involved in LVVTA providing an additional unscheduled training session will be made on a cost-recovery basis.
Note 3	An LVV Certifier who attends an additional unscheduled training session will, where applicable, be required to meet any associated costs such as travel and accommodation.

Section 5 Buddy-up Certification Between LVV Certifiers

5.1 Introduction

Because of the unique and diverse range of knowledge that an LVV Certifier is required to have, it can be easy for an LVV Certifier to feel isolated during their technical decision-making processes.

The intention of the 'Buddy-up' Certification system is to reduce those feelings of isolation, improve consistency in the application of the LVV standards, and encourage communication between LVV Certifiers by requiring each LVV Certifier to regularly 'buddy-up' with another LVV Certifier to share their experience and knowledge while carrying out an LVV certification inspection together.

5.2 Requirements for Buddy-up Certification

5.2(1) LVVTA provides support as necessary to LVV Certifiers in carrying out their required Buddy-up Certifications.

5.2(2) For each calendar year, each LVV Certifier must, on not less than one occasion, Buddy-up with another LVV Certifier, and carry out a complete LVV certification inspection together.

5.2(3) During a Buddy-up Certification of a low volume vehicle (see Notes 1 and 2 below):

(a) one LVV Certifier must take the role of the 'primary' LVV Certifier, and take responsibility for the correct LVV certification of the vehicle; and

(b) the other LVV Certifier must take the role of the 'secondary' LVV Certifier, and provide support, advice, and guidance to the primary LVV Certifier; and

(c) the full names of both the primary LVV Certifier and the secondary LVV Certifier must be recorded on:

(i) the *LVV F000 Certification Plate Order Form*; and

(ii) the *LVV F001 Statement of Compliance Certificate*;

and

(d) the inspection may take place at either the primary or secondary LVV Certifier's usual place of work; and

(e) a record of each Buddy-up Certification must be kept by both the primary and secondary LVV Certifiers, with the details of each Buddy-up Certification recorded in the training section of the LVV Certifier's *Performance Review System* (*PRS*) *Manual*.

Note 1	The Buddy-up Certification process is for training and consistency purposes only and should not be considered a test, but rather an opportunity to develop and improve each LVV Certifier's knowledge and inspection procedures. Therefore, both the primary and secondary LVV Certifiers are encouraged to ask questions and give suggestions during the inspection process, to make the most of the opportunity.
Note 2	In order to maximise learning opportunities to share knowledge and improve consistency, an LVV Certifier should, wherever practical, buddy-up with a different LVV Certifier each year.

Section 6 Provision of Information

6.1 Introduction

LVVTA provides regular written communications to LVV Certifiers, to help keep them abreast of changes and issues to be aware of, and to provide guidance to help them carry out their LVV certification work.

The information provided often comes as a result of a practical learning about something new or previously unseen by an LVV Certifier during an LVV certification inspection, which is passed to LVVTA, and then becomes shared with all LVV Certifiers.

6.2 Technical & Operational Information

6.2(1) LVVTA develops, maintains, and continuously improves the LVVTA website to make available technical and operational information for LVV Certifiers, members of the public, members of the vehicle modification and construction industry, and Government agencies.

6.2(2) Included within the technical and operational information provided on the LVVTA website is:

(a) *LVVTA Newsletters*; and

(b) an FAQ database; and

(c) a discussion forum; and

(d) the various *LVVTA Certification Management Documents* contained within the *LVV Certification Manual* (see Note 1 below).

Note 1	Details of the *LVVTA Certification Management Documents* and the *LVV Certification Manual* are provided in *LVV ORS Chapter 6: LVV Documents, Equipment, & Premises*, which is available to the public electronically, free of charge, from the LVVTA website www.lvvta.org.nz

6.2(3) LVVTA prepares and distributes information, via press releases, to the specialist automotive media which may be of interest to members of the public, and vehicle modification and construction industry, in particular relating to:

(a) new or revised *LVV standards*, *New Zealand Car Construction Manual chapters*, and *New Zealand Motorcycle Construction Manual chapters,* which have been released; and

(b) aftermarket components which have been identified as presenting, or potentially presenting, a safety risk to the public (see Note 1 below); and

(c) general technical information.

Note 1	Aftermarket components which have been identified as a safety risk (or a potential safety risk) are explained in detail within *LVVTA Safety Alerts*, which are referred to in *LVV ORS Chapter 6: LVV Documents, Equipment, & Premises*, which is available to the public electronically, free of charge, from the LVVTA website www.lvvta.org.nz

6.3 Technical Information for LVV Certifiers

6.3(1) LVVTA provides technical information to LVV Certifiers, through a regular electronically distributed update, which makes LVV Certifiers aware of (see Note 1 below):

(a) examples of unsafe components or systems; and

(b) acceptable methods of resolving common safety problems; and

(c) any LVVTA technical requirements which are found to be ambiguous or unclear, with correct interpretations.

Note 1	An electronic *LVV Certifier Technical Update* is produced and distributed to LVV Certifiers by LVVTA on a regular basis.

6.4 Increasing Awareness of LVV Certification System

6.4(1) LVVTA will continuously increase awareness of the LVV certification system to the motoring public, and vehicle modification and construction industry, by promoting the system, as reasonably able, via:

(a) written contributions to motoring and motor industry publications; and

(b) building and maintaining a relevant social media presence; and

(c) exhibiting at relevant high-profile automotive trade shows.

6.4(2) LVVTA will support the vehicle modification and construction industry by making available, and encouraging uptake, of the *LVV Certification Manuals*, either:

(a) electronically, free of charge, from the LVVTA website www.lvvta.org.nz; or

(b) in hard copy form, for a fee (see Note 1 below).

Note 1	Availability of the *LVV Certification Manuals* to the vehicle modification and construction industry is subscription-based and will be provided by LVVTA on a cost-recovery basis.

Section 7 Support to Members of the Public

7.1 Introduction

Members of the public, and vehicle modification and construction industry, who are building and modifying motor vehicles require technical support and guidance. While this should come from an LVV Certifier, sometimes, for various reasons, this doesn't happen.

In such cases, LVVTA can provide the required support to the public and industry through the same Helpdesk primarily established for the LVV Certifiers.

Members of the public, and vehicle modification and construction industry, can also sometimes find themselves in a position of conflict with an LVV Certifier, and need a third party to engage with.

7.2 Availability of Helpdesk

7.2(1) LVVTA's Helpdesk assists members of the public in:

(a) the interpretation of, and guidance relating to, LVV-related technical and operational matters; and

(b) arbitrating or adjudicating on complaints or disputes regarding the application of technical requirements by an LVV Certifier; and

(c) resolving problems experienced in relation to inadequate service provision from an LVV Certifier.

7.3 Engineering Support

7.3(1) LVVTA assists members of the public in assessing aftermarket automotive components, and advising of safety risks, as detailed in section 9.

Section 8 Support to Industry & Government Agencies

8.1 Introduction

LVVTA works with a number of Government agencies, providing advice and technical support in relation to modified vehicles, primarily to NZTA, the NZ Police (including the NZ Police Serious Crash Unit), the Ministry of Education, the Ministry of Health, and ACC.

All of these agencies are involved, in one way or another, with modified vehicles, and they all benefit from LVVTA's experience and knowledge in this area. LVVTA has had a good working relationship with all of these agencies over many decades.

8.2 Industry Support

8.2(1) LVVTA provides specialised technical advice and support to Authorised Vehicle Inspectors (AVIs) about LVV certification.

8.3 Training & Support to NZTA

8.3(1) LVVTA provides specialised technical and operational training and support to NZTA staff about the LVV certification system, including:

(a) tailored induction training for new NZTA staff members preparing to become involved in LVV certification activities; and

(b) subject matter which is at the centre of LVVTA's technical document development, in which NZTA is involved.

8.3(2) LVVTA provides specialised technical and operational training and support to NZTA field staff about LVV Certifier performance, in order to assist them in their application of the NZTA Performance Review System (see Note 1 below).

Note 1	Information about the NZTA *Performance Review System* is provided in *LVV ORS Chapter 16: LVVTA-NZTA Co-regulatory Relationship*, which is available to the public electronically, free of charge, from the LVVTA website www.lvvta.org.nz

8.4 Training & Support to NZ Police

8.4(1) LVVTA provides specialised technical training and support to the front-line staff of the NZ Police, particularly in relation to understanding:

(a) Warrant of Fitness requirements; and

(b) which modifications must be referred for LVV certification; and

(c) those modifications which present a high potential for safety risk.

8.4(2) LVVTA provides specialised technical support and advice to the front-line staff of the NZ Police Serious Crash Unit, particularly in relation to:

(a) the inspection and assessment of modified and scratch-built low volume vehicles involved in serious-injury or fatal crashes (see Note 1 below); and

(b) modified and scratch-built low volume vehicles involved in coronial inquiries or criminal investigations; and

(c) those modifications which present a high potential for safety risk.

Note 1	LVVTA benefits from assisting the SCU with inspections of modified and scratch-built vehicles involved in serious-injury and fatal crashes, through learning, first-hand, the effects of impact-loadings on safety systems which fall under LVVTA's responsibility. Sometimes, LVVTA is able to improve its technical requirements as a result of these learnings.

8.5 Training & Support to Other Government Agencies

8.5(1) LVVTA provides specialised technical support to the staff of the ACC, particularly in relation to:

(a) assessing modifications made to vehicles which are to be supplied to, or funded for, disabled clients; and

(b) developing engineering solutions for vehicles supplied to, or funded for, disabled clients, which require complex modification-related repairs or re-design work.

8.5(2) LVVTA provides training about required modification-related repairs or re-design work for ACC-provided or funded vehicles to repairers and LVV Certifiers involved in the repair and recertification process.

8.5(3) LVVTA provides specialised technical support to the staff of the Ministry of Education for vehicles which are modified to suit the specific needs of the Ministry of Education (see Note 1 below).

Note 1	The Ministry of Education sometimes need very specific seating plans developed for school buses which fall under their responsibility, and rely on LVVTA to assist in ensuring the solutions provide a safe and compliant outcome.

Section 9 Engineering Analysis

9.1 Introduction

LVVTA undertakes a lot of engineering analysis work on aftermarket automotive components which are, or maybe, unsafe, as a result of poor design or manufacturing processes. Almost every week, another unsafe aftermarket automotive part is brought to the attention of LVVTA, because of concerns about its design, strength, or suitability.

This area of work is ever-increasing with a seemingly endless flow of poorly designed and made parts – sometimes critical components intended for steering and braking systems – that present a serious risk to road safety without the monitoring and notification to the public which LVVTA provides via its website, and through the specialist automotive media.

LVVTA receives no income for this work other than a contribution towards it from NZTA; most of the work is done in an effort to help vehicle modifiers and builders, and for the wider public good.

Some testing and approval, including nodularity testing on aftermarket automotive components manufactured through a casting process, is carried out in-house at LVVTA, while other work is outsourced to metallurgy specialists.

LVVTA has designed and built a cyclic test-rig specifically for fatigue-testing aftermarket automotive components. LVVTA's test-rig is the only such facility in New Zealand developed and used specifically for this purpose. The test-rig is regularly in use, assessing whether a component is able to withstand the cyclic loadings which would be applied to the component throughout a vehicle's life-cycle.

Engineering analysis is also carried out on components which are innovative or unusual, and don't meet the normal LVV certification requirements, however the components have been determined to be fit for their intended purpose.

9.2 Unsafe Component Assessment

9.2(1) LVVTA provides an engineering analysis and assessment process for potentially unsafe aftermarket automotive components, which includes:

(a) liaising with foundries, metallurgists, non-destructive testing companies, and other industry experts; and

(b) designing and building bespoke fixtures to enable the testing of the individual components; and

(c) carrying out or overseeing the testing process; and

(d) preparing position statements explaining the level of safety risk, reasons for the safety risk, and the proposed course of action (see Note 1 below); and

(e) liaising with manufacturers, importers, sellers (primarily based overseas) to make them aware of LVVTA's findings; and

(f) providing an early warning to LVV Certifiers; and

(g) producing *LVVTA Safety Alerts* and distributing them to the specialist automotive media to enable the motoring public to become aware of the safety risk.

Note 1	The 'proposed course of action' is generally cautioning the public (by publicity via the specialist automotive media) against buying the component due to the inherent safety risk that vehicle modifiers and builders would be imposing on themselves and other road users, and also cautioning the public that the components will not meet the requirements for LVV certification.

9.3 Metallurgical Assessment

9.3(1) LVVTA provides a cast iron nodularity testing service for certain aftermarket automotive critical safety components to ensure compliance with international nodularity standards, and therefore determine whether the components are able to meet LVV certification requirements.

Section 10 LVV Certifiers' Insurance Requirements

10.1 Introduction

The *Notice of Appointment* which NZTA provides to its appointed LVV Certifiers requires all LVV Certifiers to hold a professional indemnity insurance policy.

Because the cost of purchasing such a policy on an individual basis would preclude many highly valued LVV Certifiers from remaining in the system, LVVTA has traditionally negotiated and operated a professional indemnity insurance 'group scheme' since the beginning of LVV operations, known as the 'LVV Certifiers' Insurance Club'.

The LVV Certifiers' Insurance Club scheme is based upon LVVTA negotiating a group policy, and dividing the cost of the premium amongst the Insurance Club members. This achieves a substantial cost-saving and makes the difference for many LVV Certifiers between remaining in the LVV certification system and not.

The existence of the LVV Certifiers' Insurance Club is, therefore, a very important part of the LVV certification system.

10.2 Insurance Requirements

10.2(1) An LVV Certifier must obtain public liability insurance and professional indemnity insurance in the name of the LVV Certifier, and maintain and keep in force such insurance for (see Note 1 below):

(a) the period of appointment; and

(b) a period of not less than six years after the cessation of appointment.

Note 1	The requirement in 10.2(1) is copied, for convenience, from the *Notice of Appointment* which NZTA issues to each appointed LVV Certifier.

10.2(2) The minimum level of cover which an LVV Certifier must hold is one million dollars in respect of each insurance policy held (see Note 1 below).

Note 1	The requirement in 10.2(2) is copied, for convenience, from the *Notice of Appointment* which NZTA issues to each appointed LVV Certifier.

10.2(3) An LVV Certifier must, at all times, be able to provide documented evidence of meeting the requirements of 10.2(1) and 10.2(2) (see Note 1 below).

Note 1	NZTA will need to see evidence of the required insurance cover held by each LVV Certifier as part of NZTA's periodic Performance Review.

10.3 Options for Meeting Insurance Requirements

10.3(1) An LVV Certifier may meet the requirements specified in 10.2(1) and 10.2(2) by either:

(a) directly obtaining an individual public liability and professional indemnity insurance policy from an insurance company or via an insurance broker; or

(b) becoming part of the LVVTA LVV Certifiers' Insurance Club group public liability and professional indemnity insurance scheme.

10.4 Acceptance to LVV Certifiers' Insurance Club

10.4(1) An LVV Certifier who wishes to become a member of the LVV Certifiers' Insurance Club must make an application to LVVTA immediately after completion of the LVV Certifier's appointment.

10.4(2) The LVVTA Council may, at its discretion, approve an LVV Certifier for membership to the LVV Certifiers' Insurance Club, provided that LVVTA has established a high level of confidence in the background, skills, and ethics of the LVV Certifier.

10.5 Removal from LVV Certifier's Insurance Club

10.5(1) The LVVTA Council may, at its discretion, revoke an LVV Certifier's membership to the LVV Certifiers' Insurance Club if it has reason to believe, based on evidence of the LVV Certifier's poor performance or unethical behaviour, that the actions, decisions, judgments, or ethics of the LVV Certifier may expose the LVV Certifiers' Insurance Club to an unsustainable level of risk.

10.5(2) Factors which the LVVTA Council may consider to constitute poor performance or unethical behaviour will include circumstances where:

(a) an LVV Certifier has been the recipient of substantive disciplinary action by NZTA (see Note 1 below); or

(b) significant damage, injury, or loss of life has occurred as a direct result of an LVV Certifier's certification decisions; or

(c) any dispute has arisen directly as a result of an LVV Certifier's certification decisions; or

(d) an LVV Certifier has failed to consistently operate within the 'green zone' of the *Error Report Summaries* since the LVV Certifier's appointment (see Note 2 below).

Note 1	'Substantive disciplinary action' includes a suspension, or more than one written warning.
Note 2	The '*Error Report Summaries*' are explained in *LVV ORS Chapter 11: LVV Certifier Error Recording & Reporting*, which is available to the public electronically, free of charge, from the LVVTA website www.lvvta.org.nz

10.6 Membership Obligations Regarding LVV Certifiers' Insurance Club

10.6(1) An LVV Certifier who is a member of the LVV Certifiers' Insurance Club must, in the event of any adverse situation, or sign of any problem or situation that may result in a claim against the LVV Certifiers' Insurance Club, immediately notify LVVTA of the situation, providing all relevant details (see Note 1 below).

Note 1	It is essential that LVVTA ensures that membership to the LVV Certifiers' Insurance Club is a privilege and not a right, in order to protect the future of the club, by minimising the claims made against the policy. The most effective way of minimising claims against the LVV Certifiers' Insurance Club policy is to maintain some control over who attains membership to the club. The LVVTA Council therefore reserves the right to approve only those LVV Certifiers for membership to the LVV Certifiers' Insurance Club in whom LVVTA has utmost confidence, and to revoke membership to the club if that confidence is lost.

Section 11 Other LVVTA Services & Support

11.1 Objective Noise Testing Service

11.1(1) LVVTA manages, on behalf of NZTA, the national Objective Noise Testing (ONT) system, which involves:

(a) provision of appropriate ONT equipment to LVV Certifiers for their use in applying the ONT service; and

(b) periodic calibration and maintenance of the ONT equipment; and

(c) provision of the appropriate technical requirements and *LVV Inspection Form-sets*; and

(d) training in the correct use of the ONT equipment.

11.2 Miscellaneous Services

11.2(1) LVVTA provides LVV Certifiers with individually tailored LVV Certifier Identity Cards, to enable an LVV Certifier to be formally identified as such.

11.2(2) LVVTA processes applications for members of the public, via an LVV Certifier, for waiving the requirement for older vehicles to be retro-fitted with upper seatbelt anchorages where the vehicle structure does not allow it, as detailed in *LVVTA Information Sheet # 01-2006 - Upper Seatbelt Anchorage Request Form* (see Note 1 below).

Note 1	*LVVTA Information Sheet # 01-2006 - Upper Seatbelt Anchorage Request Form* is available to the public electronically, free of charge, from the LVVTA website www.lvvta.org.nz

Terms & Definitions for Chapter 14

Aftermarket	means a component or system made by a manufacturer, other than a high-volume motor vehicle manufacturer, who produces catalogued components or systems on a production-run basis for the mass-market.
Applicable requirements	means any technical or operational requirement referred to in the *LVV Code* which an LVV must comply with in order to be approved for LVV certification
AVI	(**Authorised Vehicle Inspector**) means a person who carries out WoF inspections on behalf of NZTA.

CCM	(**NZ Car Construction Manual**) means LVVTA's detailed technical standards, incorporated by reference under the *LVV Code*, which must be met to enable an LVV to comply with applicable requirements. The *CCM* is referred to by the corresponding *LVV Standard*.
Certify	is, as defined in the *Land Transport Rule: Vehicle Standards Compliance 2002*, to verify that a vehicle complies with safety-related legal requirements prescribed by New Zealand land transport legislation.
Compliant	(also known as compliance) means a condition where evidence exists that an LVV complies with the applicable requirements specified in the *LVV Code*.
Cyclic loading	means a load or force applied repeatedly to a component, causing fatigue.
Cyclic test-rig	means LVVTA's bespoke testing device, which applies a repeated load or motion to a component in order to measure its strength and durability.
Inspection	means the vehicle inspection process specified in *section 2.4*, *2.5*, and *2.6* of the *LVV Code*, carried out by an LVV Certifier during the LVV certification of a low volume vehicle.
LVV	(**Low Volume Vehicle**) means, in simple terms, vehicles which are modified or scratch-built in small numbers, and includes individually modified or scratch-built vehicles. The full definition of an LVV is contained in the *LVV Code*.
LVV Base Forms	(**Low Volume Vehicle Base Forms**) means the set of Forms used by an LVV Certifier as part of their inspection of an LVV which are common to all LVV certifications.
LVV Certification	(**Low Volume Vehicle Certification**) means the process specified by the *LVV Code*, by which the design of an LVV is determined to comply with any applicable requirements, and, in recognition of which, an LVV EDP is affixed.
LVV Certification File	(**Low Volume Vehicle Certification File**) means the set of documents, including the *LVV Base Forms, LVV Inspection Form-sets*, supporting information, and photographic record, which an LVV Certifier is required to collate during an LVV certification inspection process, and submit to LVVTA upon completion.
LVV Certification Management Documents	(**Low Volume Vehicle Certification Management Documents**) means the collective of all documents relevant to the LVV certification system, including those documents housed within the *LVV Certification Manuals*, and external documents which may be used or referred to by LVVTA or an LVV Certifier.
LVV Certification Manuals	(**Low Volume Vehicle Certification Manuals**) means LVVTA's set of manuals which house all of LVVTA's legal, operational, and technical certification documents which are incorporated by reference under the *LVV Code*. The *LVV Certification Manuals* contain the *LVV Code*, the *LVV ORS*, *LVV Standards*, *LVV Base Forms* and *LVV Inspection Form-sets*, *Safety Alerts*, *Information Sheets*, *Newsletters*, and Reference Material.
LVV Certifier	(**Low Volume Vehicle Certifier**) means a person appointed by NZTA under the provisions of *Land Transport Rule: Vehicle Standards Compliance 2002*, to carry out certification of modified and scratch-built LVVs, as specified by *Part 2* of the *LVV Code*.
LVV Certifier Mentoring	(**Low Volume Vehicle Certifier Mentoring** or **Certifier Mentoring**) means LVVTA-managed training for an individual LVV Certifier, by another experienced LVV Certifier, via a one-on-one mentoring process for a specified period, usually imposed where the normal LVVTA coaching process is not achieving positive results.

LVV Certify	(**Low Volume Vehicle Certify**) means the same as LVV certification.
LVV Code	(**Low Volume Vehicle Code** or **the Code**) means an LVVTA document which is incorporated by reference into the *Land Transport Rule: Vehicle Standards Compliance 2002*, and all applicable individual *Land Transport equipment rules*, that provides the legal framework to enable the LVV certification of modified and scratch-built LVVs in New Zealand.
LVV EDP	(**Low Volume Vehicle Electronic Data Plate**) is an RFID tag, in use from February 2021, fitted to an LVV upon completion of the LVV certification process, which when scanned by an NFC-capable device, displays details and photographs of the modifications and construction features on the LVV to which it is affixed.
LVV F001 Statement of Compliance Certificate	(**Low Volume Vehicle Statement of Compliance Certificate** or **F001**) is the principal compliance document filled out by an LVV Certifier during LVV certification, which lists the LVV's modifications and construction features, summarises the evidence of compliance, and confirms that it is safe to operate and complies with all applicable requirements.
LVV File Review System	(**Low Volume Vehicle File Review System**) means a comprehensive desk-top auditing process applied by LVVTA to a specified percentage of *LVV Certification Files* submitted by LVV Certifiers, upon completion of their LVV certifications, as an additional step in ensuring safety and compliance of LVVs.
LVV Information Sheets	(**Low Volume Vehicle Information Sheets**) means *Information Sheets* incorporated by reference under the *LVV Code*, which provide or support applicable requirements.
LVV Inspection Form-set	**(Low Volume Vehicle Inspection Form-set** or **LVV Form-set**) means the check-sheets used by an LVV Certifier to guide and record their inspection of an LVV, and confirm compliance with applicable requirements.
LVV ORS	(**Low Volume Vehicle Operating Requirements Schedule** or **ORS**) means the document, incorporated by reference under the *LVV Code*, which provides LVVTA's operational processes and systems necessary to meet applicable requirements. The *LVV ORS* sets out the obligations and responsibilities of LVVTA, and the LVV Certifiers.
LVV plate	(**Low Volume Vehicle engraved certification plate**) is an engraved aluminium plate (approximately 110 mm x 80 mm in size) in use from the commencement of LVV certification in April 1992 to February 2021, which displays a summary of information, via engraving, about the modifications and construction features on the LVV to which it is affixed.
LVV Safety Alerts	(**Low Volume Vehicle Safety Alerts** or **Safety Alerts**) means LVVTA's publication system, incorporated by reference under the *LVV Code*, which is designed to draw attention to unsafe aftermarket automotive components, and which must be met to enable an LVV to comply with applicable requirements.
LVV Standards	(**Low Volume Vehicle Standards**) means LVVTA's technical standards, incorporated by reference under the *LVV Code,* that set out the legal requirements which vehicles that are modified and scratch-built vehicles in New Zealand must meet. Each *LVV Standard* refers to a corresponding *CCM* or *MCM* for detailed technical requirements.
LVVTA	(**Low Volume Vehicle Technical Association**) is an incorporated society comprised of specialist vehicle associations. Established in 1992, its objectives are to represent the interests of vehicle modifiers and builders in New Zealand, and to ensure high safety standards for modified and scratch-built LVVs. The LVVTA owns and administers the *LVV Code*.

LVVTA Council	(**Low Volume Vehicle Technical Association Council**) means the collective of LVVTA member association representatives, appointed by each member association, who are responsible for LVVTA's direction and responsibilities as an incorporated society.
MCM	(**NZ Motorcycle Construction Manual**) means LVVTA's detailed technical standards, incorporated by reference under the *LVV Code*, which must be met to enable a low volume motorcycle to comply with applicable requirements. The *MCM* is referred to by the corresponding *LVV Standard*.
Metallurgist	is a person who studies the physical and chemical behaviour of metals, in particular the composition and mixture of their elements.
Modification	is defined in *Land Transport Rule: Vehicle Standards Compliance 2002*) to change a vehicle from its original state by altering, substituting, adding or removing any structure, system, component or equipment, but does not include repair. 'Modified' and 'modification' have corresponding meanings.
NDT	(**Non-destructive Testing**) means an engineering-based process of detecting cracks in materials, and determining the quality of welds, without damaging the components being tested.
NFC	(**Near Field Communication**) means a short-range wireless technology, typically requiring a distance of 40 mm or less to initiate a contact.
NoA	(**Notice of Appointment**), means the contract which exists between an LVV Certifier and NZTA, that provides an LVV Certifier with the authorisation to carry out LVV certification on behalf of NZTA, and which outlines the terms, conditions, and obligations of the appointment.
NZTA	(**New Zealand Transport Agency**) is a Crown entity responsible for managing New Zealand's land transport system
ONT	(**Non-destructive Testing**) means an engineering-based process of detecting cracks in materials, and determining the quality of welds, without damaging the components being tested.
PRS	(**Performance Review System**) is the quality management monitoring tool used by NZTA to measure the performance of all certifiers, including LVV Certifiers.
RFID	(**Radio Frequency Identification**) is a technology which uses electromagnetic fields to automatically identify and track tags attached to objects. These tags link to electronically stored information, which can be accessed using RFID readers.
Scratch-built (LVV)	means, in simple terms, an LVV which has been individually constructed from unrelated components, or a mass-produced vehicle which has been modified to such an extent that it can no longer be considered to be a modified mass-produced vehicle. The full legal definition of a scratch-built LVV is currently under review, and will be incorporated within the *LVV Code* once revised.
VIRM	(**Vehicle Inspection Requirements Manual**) means NZTA's inspection manuals, used by certifiers for every certification activity except for LVV certification
WoF	(**Warrant of Fitness**) means a safety inspection and approval process for in-service vehicle, issued by an NZTA-appointed AVI.