



CERTIFYING MANUFACTURERS ASSESSMENT COURSE
PRE-COURSE INFORMATION

Attached is some course information for the Manufacturers Certifier Assessment course for Heavy Vehicle Specialist Certifier (HVSC) – Delegate Vehicle Inspector (VI).

The venue, date and times are advised on the attached programme.

Payment must be made to **NZ Truck Trailer Manufacturers Federation** prior to course attendance.

Candidates are required to bring:

- Pens and note paper, etc.
- Copies of each Standard¹ for the respective TTMF Module (category) to be assessed.
- VIRM – Vehicle Inspection Requirement Manual (NZTA)
- It is very important that each person has their individual copies of all the required standards and Land Transport Rules (LTR). It is not permitted to share information during the delivery of the course modules or the exams.

Candidates optional to bring:

- Laptop computer – a recommended option to download the LTR

NZS, AS, and AS/NZS Standards **ARE ABSOLUTELY NECESSARY** to complete the course and are available from: STANDARDS NZ, P O Box 1473, WELLINGTON 6410, PHONE: 03 9434259

On-line

<https://www.standards.govt.nz/search/doSearch?filterby=standards>

OR from SAI Global; On-line

<https://www.saiglobal.com/online/>

A 'REFERENCE MATERIAL / READING LIST', refer to page 4 of this document for Standards, Rules, and other reading material. Please call me on 021 379 501 if assistance is required.

John Long – Course Provider for TTMF

BJ (John) Long

Engineer – Heavy Vehicles

John Long Consulting

M – 64 21 379501

E – benji@kinect.co.nz

¹ NZS - New Zealand Standard. AS – Australia Standard. AS/NZS – joint Australia/New Zealand Standard.

CERTIFYING MANUFACTURERS ASSESSMENT PROGRAMME MANUFACTURING CERTIFIERS / DELEGATES

BACKGROUND:

NZTA require (under the Notice of Appointment 'NOA') all LT400 signatories to be assessed to confirm competence as certifiers. Whilst these signatories may have to undergo formal training in the future, it is necessary to assess existing industry personnel who qualify by experience rather than formal qualifications now.

A course has been developed to undertake the assessment of those who wish to qualify by experience as an NZTA Delegated signatory for Manufacturing Certifiers in various ASPECTS.

The course will typically be of one day duration for each ASPECT. Refer Programme for Course.

APPLICATION SCOPE

This applies to HVSC Delegates in the following certification ASPECTS:

- HMAD - Load Anchorages
- HMCD – Chassis Modifications
- HMLD – Bolster Attachments
- HMTD – Towing Connections

The HMKD (Brake Certification) ASPECT is not covered by this assessment process as applicants are assessed and qualify through a separate HV Brake Rule (LTR 32015) process.

When a candidate has passed any of these modules, they may apply to the NZTA to be appointed as a HVSC VI to be able to carry out the certifications applicable to respective ASPECTS passed. Welding & General Fabrication is a core module that must be successfully completed to be appointed as a VI in any of the certification ASPECTS. If the company is not already appointed as an Inspecting Organisation (IO) then this is required as part of the VI appointment process.

The IO application may be accessed here.

https://vehicleinspection.nzta.govt.nz/_data/assets/pdf_file/0011/58385/HVSC-local-manufacturer-IO-application.pdf

and VI application here.

https://vehicleinspection.nzta.govt.nz/_data/assets/pdf_file/0003/58386/HVSC-local-manufacturer-VI-application.pdf

WHEN ACCEPTED

1. The company will be appointed by the NZTA as an Inspection Organisation (IO), and
2. The candidate will be appointed as a Vehicle Inspector (VI)

ASSESSMENT CRITERIA

The course has been structured to assess certifiers who have considerable practical road transport industry knowledge. It will assess knowledge of the NZTA Notice of Appointment (NOA) including the obligations and responsibilities therein.

The NZTA requires, through the NOA, that all certifiers are appointed by the Director. So, to satisfy this requirement all certifiers will be assessed as follows:

1. Welding & Bolting & General Fabrication
2. Materials and product knowledge
3. Drawing interpretation
4. Standards & Rules interpretation
5. Quality Management Systems – contents and operation
6. The Scope of Work that a manufacturer certifier (Delegate) may certify
7. Repairs & Modifications.

PERFORMANCE REVIEW SYSTEM (PRS)

Quality Systems are an important part of the NOA and in many areas of the industry formal Quality Systems have not been operated. The Quality System that the Transport Agency uses to measure a VI performance is the **Performance Review System (PRS)**

The **PRS** is accessible from the following link:

<https://vehicleinspection.nzta.govt.nz/prs-qms/heavy-vehicle-specialist-certification>

And the Vehicle Inspection Requirements Manual (**VIRM**) from:

<https://vehicleinspection.nzta.govt.nz/virms/hvsc>

Land Transport Rules

<https://www.nzta.govt.nz/resources/rules/>

It is important that candidates familiarise themselves as follows:

- Document traceability and control
- Responsibility for Quality Assurance
- Training

Given the importance the NOA places on documentation and lines of responsibility, it must be emphasised that candidates understand fully the implications of the PRS. Training for the PRS will be provided by the NZTA at a Site Assessment liaison visit prior to, and a condition of, appointment as a Vehicle Inspector.

REFERENCE MATERIAL / READING LIST

HVSC VI Delegates must be familiar with a range of Standards, Codes of Practice, and general documents as well as their trade related published material, if they are to carry out their duties accurately and knowledgeably as required by the NOA.

A VI should also have at their disposal access to other technical publications and information, and NZTA information to refer to as required to competently complete a certification ASPECT.

The certifier can only certify an item if it complies with all the “applicable requirements”, thus it is necessary to know what the applicable requirements are, and where to find them.

It is considered essential for Certifier/Delegates to have a working knowledge of the following documents: This list has been grouped as follows:

A – good working knowledge required

B - codes/standards specific vehicle type or component

C - basic understanding of the regulations

- A.** NZTA – VIRM – Heavy Vehicle Specialist Certifier including all Technical Bulletins, typically;
- Technical Bulletin #10 Welding in the Transport Industry
 - Technical Bulletin #13 Stock crate certification
- AS/NZS 1554: Structural Steel Welding
- Part 1:2014 – Welding Steel Structures
 - Part 4:2014 – Welding of High Strength Q&T Steels
 - Part 5:2014 – Welding of Steel Structures Subject to High Levels of Fatigue
- AS/NZS ISO 9606-1-2017 Qualification testing of Welders-Steels
- AS/NZS 2980-2018 Qualification of Welders – additional requirements for Australia and New Zealand
- LTR 31002: Schedule 4 Bolster Attachment Code Log Transport Safety Council (Revision 2 November 2010)
- B.** NZS 5446:2007 Code of Practice for Heavy Motor Vehicle Towing Connections: Drawbar Trailers
- NZS 5450:1989 Specification for Coupling Devices for Articulated Vehicles – 5th Wheel Assemblies
- NZS 5451:1989 Specification for Coupling Devices for Articulated Vehicles – 5th Wheel Kingpins
- NZS 5467:1993 – Code of Practice for Light Trailers
- NZS 5444:2005 – Load Anchor Points for Vehicles
- NZS 5413:1993 – The manufacture and use of stock crates on heavy vehicles
- NZS 5232:1993 – Specification for Ball-and-Socket Type Trailer Couplings
- AS 3990:1993 – Mechanical Equipment – Steelwork
- AS/NZS 1252.1-2016 High Strength Steel Fastener Assemblies for Structural Engineering - Bolts Nuts Washers
- AS/NZS 4868 Parts 1 -3; Standards for Mechanical coupling between articulated vehicle combinations **
- AS/NZS 4868.1-Part 1.2023: Heavy road vehicles – Mechanical coupling between articulated vehicle combinations, Part 1: Design criteria and selection requirements for fifth wheel, kingpin and associated equipment.
 - AS/NZS 4968.2-Part 2.2023: Heavy road vehicles – Mechanical coupling between articulated vehicle combinations, Part 2: Testing and installation of fifth wheel and associated equipment.
 - AS/NZS 4968.3-Part 3.2023: Heavy road vehicles – Mechanical coupling between articulated vehicle combinations, Part 3: Kingpins and associated equipment.
- ** AS/NZS 4968 1 – 2 – 3 all updated June 28, 2023**

C. LAND TRANSPORT RULES (LTR)

- LTR Vehicle Standards Compliance 2002 - Rule 35001
- LTR Heavy Vehicles 2004 - Rule 31002; includes *Schedule 2 Bolster Attachment Code Log Transport Safety Council (Revision 1 May 2001)*
- LTR Vehicle Repair 1998 - Rule 34001
- LTR Tyres and Wheels 2001 - Rule 32013

It is essential that each prospective delegate has the most recent version of these Standards, in **Hard Copy** available during the course and be familiar with the content. To arrive at the course and expect to learn the Standards and Rules is too much.

DOCUMENTATION AND INSTRUCTION

Work undertaken by a HVSC Manufacturer VI (Delegate) may have been “pre-engineered”, as detailed in the Heavy Vehicle Specialist Certification VIRM Section 11, “Local manufacture and repair code of practice”, or provided with a “Statement of Design Compliance” (SODC) and fabrication details from a HVSC Engineer, or the individual manufacturing IO may also commission their own Design Certified “pre-engineered” solution complete with fabrication details, from a HV engineering certifier (HVSC VIRM S11.3).

The following forms of documentation (*minimum file content*) will be typical for each job.

- (i) Procedure Documentation Sheet (PDS), a legally binding document
- (ii) Written instructions
- (iii) Drawings and sketches – general arrangement & component specific
- (iv) Manufacturers product installation instructions
- (v) Statement of Design Compliance (SODC)
- (vi) Technical Specifications
- (vii) Vehicle Site Data – information taken at the time of the initial job assessment and during fabrication, and
- (viii) Vehicle Site Data – confirmation prior to certification at “sign-off”

The specifications, product details, and instructions should be clear and appropriate for the task at hand.

It is not acceptable to install a coupling, fifth wheel, etc using any brand of installation instruction. The correct literature for the specific make/model must be used. This also applies to vehicle manufacturers information.

Welding a *Mitsubishi* chassis with a *Mercedes* weld specification is incorrect, so is adjusting a *Fontaine* fifth wheel using *Jost* fifth wheel instructions. In most situations a weld procedure will be required and in the case of a chassis sectioning to facilitate a wheel base alteration, this is required every time. Typical reference material may be provided from vehicle manufacturers Vehicle Body Builders Manuals i.e. Hino, Mercedes, DAF, most of which is available on-line. Or, for rated components data provided from a component supplier for such items as a body lock for a tipping body, and so on.

REPAIRS, REPAIR PROCEDURES AND MODIFICATIONS

Repairs to heavy vehicles, and heavy vehicle chassis in particular, can cause significant problems in the certification process. Typically, this arises because no specific repair procedure has been established the variety of fatigue cracks and failures.

The level of understanding of why a crack or failure necessitating a repair is very high and typical falls in the “design engineering” domain. Hence to teach a repair workshop all these skills is not practical, however, a broad understanding of the principles, along with examples of good practice can be achieved. This will build on the existing knowledge and expertise of the VI Delegate.

To assist repairers to identify an appropriate procedure for the vehicle concerned, the course will include a section on the topic and discuss certification boundaries.

THE COURSE

The course is set up in modules by category (ASPECT), so candidates can select the ASPECTS they wish to attend and be assessed on. The Fabrication/welding module is a prerequisite and mandatory for all categories, given its significance in this type of work.

Each day of the course is in two parts with a morning and afternoon session covering. Standard-VIRM – Technical content and followed by a written (open book) test. However most important, become familiar with the Standards, Rules,

The tutorial sessions cover areas the candidates are expected to know so is more of a refresher session, although there may well be details which might be new to some. i.e. Details of the NOA, Quality Systems and some of the Standards.

Most of the presentation will be on power point. Questions and interaction are encouraged to extend knowledge and clarify any issues. Practical examples of jobs completed at the candidates’ workplace, also stimulate a varied discussion.

ASSESSMENT – TEST

At the completion of each session (module) there is an open book test. Each candidate will sit a test paper for the ASPECT of the module, with ten to sixteen questions which will take about 1-1½ hours to complete.

POST COURSE LIAISON VISIT - SITE ASSESSEMT & PRS TRAINING

Upon successful completion of the course modules a liaison visit for a Site Assessment, PRS, LANDATA, 3 x VIRMS training will be arranged by the NZTA to ensure VI resourcing is acceptable, adequate welding and fabrication is in place, and facilities and filing systems are established. Details of this process will be discussed at the course.