

# Ivan Torstonson

Heavy Vehicle Certification

# Topics

- Vocational pathway
- Current training programme
- Training portal and signup process
- Coming up:
  - Advanced training HVSC-E
  - Code of Practice
  - Manufacturer certifier training

# Vocational pathway



# Current training programme

**Eight (8) Fundamental skillset modules:**    **Two advanced programmes:**

F1 Regulation  
F2 Inspection  
F3 Welding  
F4 Mechanical Fasteners  
F5 Fatigue  
F6 Materials  
F7 Introduction to Design (HV design essentials)  
F8 General Mechanical Analysis

*F1 must be completed first, then the modules can be taken in any order.*

## **HVEA**

Introduction to load restraint and anchorage  
Standard design  
Specialist designs  
Repairs and modifications


## **HVET**

Introduction to Towing Connections  
Towbars  
Drawbars  
Drawbeams  
Fifth Wheel Structures  
Kingpins

# Current training programme

- Fundamental Skillset: most are self-paced online modules/two are with a facilitator

Learning outcomes specified for each module



## Introduction

In this module we will be looking at the legal and regulatory environment that heavy vehicle specialist certifiers work within (both engineers and manufacturer certifiers), and the range of documentation that supports their work.

We will also look at the quality management systems that are used by Heavy Vehicle Specialist Inspecting Organisations to ensure they are applying the requirements set out in law accurately and consistently.

### Learning objectives

On the successful completion of this module, you will be able to:

#### Regulations

- 1 Describe the legal framework that heavy vehicle specialist certifiers (HVSC) and NZ Transport Agency Waka Kotahi work within, and the role of NZ Transport Agency and other New Zealand regulatory bodies.
- 2 Explain the relationship between Acts, Rules, Standards, Codes of Practice, and VIRMs, their legal standing, hierarchy and give examples.

- Introduction
- Joe a new trainee
- The regulatory environment
- Vehicle Inspection Requirements Manuals
- Certifiers
- Documentation
- Quality management
- Next steps

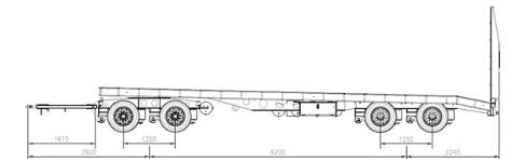
Interactive activities throughout



"Hi I'm Jim"

I have a customer who needs a drawbar for this trailer.

I'm going to keep the design simple and use readily available materials so that the job can be completed quickly and cost effectively.



This trailer needs a drawbar

# Current training programme

- Aspects: intro online modules/rest are with a facilitator with full scenarios

## Online module: getting basics correct

Topic / Akoranga 6 of 9

### Load anchorages: types and uses

#### Types of load anchorages

##### Load anchorages that need certifying

The load anchorages in this group must comply and be certified to NZS 5444, and an LT400 issued before using them.



Hooks, chain eyes, slots, keyhole plates, and chain slots are generally used with transport chain.



Rope rails give many options for tie-down.



For restraint of containers generally twist locks (various types) or twist lock pockets are used.

### Influence of New Zealand conditions on towing connection design

The towing connection design loadings for New Zealand conditions are influenced by the terrain and typical vehicle combinations.

#### TERRAIN

#### VEHICLE COMBINATIONS

#### ROAD SURFACE

#### OEM COMPONENTS

New Zealand is a relatively narrow country with a central spine of mountains and hills with significant rainfall which produces numerous streams and rivers running out to the coast. This gives rise to many windy undulating roads with relatively low traffic volumes. Road construction is restricted by cost in many instances resulting in windy narrow roads with high cambers to shed the rain.



# Training platform and signup process

- HVSC training portal – managed by Engineering New Zealand
- Easy registration and login process – choose the audience you belong to, eg experienced vs trainee



Welcome to the HVSC training portal.

NOTICE: The system was upgraded on 25 September. If you have not logged in since then, please reset your password.

[Click here to reset your password securely.](#)

LOGIN

CREATE NEW ACCOUNT



# WELCOME

## TRAINING CALENDAR

Use the training calendar to view course dates for the next 12 months.

Some workshops are still to be confirmed and cannot be booked yet. Please check back for updates.

Training delivery schedule 2025–2026



## WELCOME

Welcome to the Heavy Vehicle Specialist Certificate Transport Agency Waka Kotahi (NZTA).

Your current enrolled modules and progress app history, use **'My Dashboard'** in the top menu.

To browse and book new training, go to **'Learnit'**

You have been automatically registered for the first management systems. This module is fundamental of charge. Completing this will enable you to register

# Training portal:

- The training consistently receives excellent feedback from learners – both newbies and senior.
- But you still need a mentor and workshop / hands-on experience to pass the exams.
- Feedback and new information that comes to light is addressed, and changes made accordingly.
- Module calendar is on the training portal.



# Coming up

- Advanced HVSC-E training
- Chassis Code of Practice – why do we need one?
- End to end process improvements
  - From engineer to manufacturer, and back
  - Smoothing the pathway of working together

# Advanced training HVSC-E

- Chassis analysis
  - Timing = by mid-2026
  - Mode of delivery = likely to be in-person workshop due to complexity
  - Who: HVSC-E adding chassis appointment / experience chassis HVSC
- Chassis fatigue
  - Building on the fundamental skillset module
  - Timing = by mid-2026

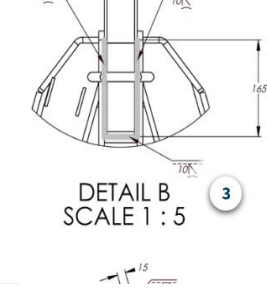
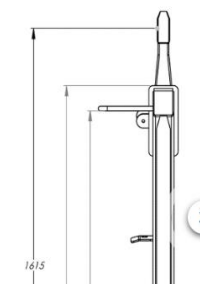
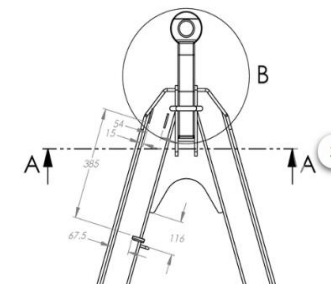
# Chassis Code of Practice

- 11 sections, with multiple sub-sections
  - Completed: Repairs, Tippers
  - Current: Vehicle recovery, chassis structure, suspension
  - Coming: Steering, axles and more
- Consistency, quality, safety, ethics, training, accountability
- Cross-section of HVSC-E involved – 20 to date
- Development prioritised through agreement between industry and NZTA

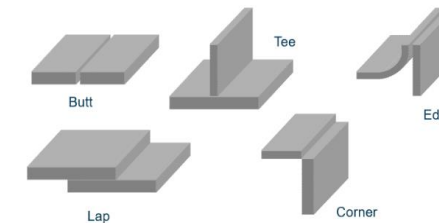


# Manufacturer certifier training

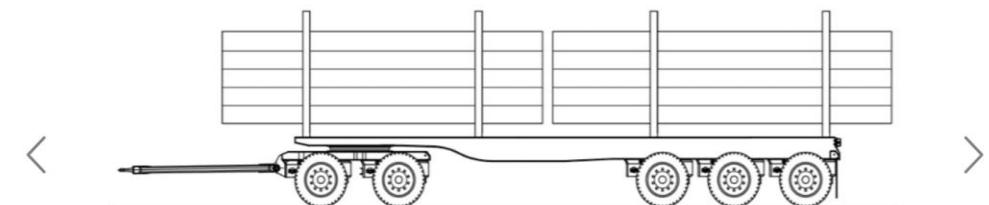
- Compulsory training programme
- Ten online modules: foundational/aspects
  1. The regulatory environment
  2. Quality management system
  3. Drawings
  4. Welding
  5. Mechanical fasteners
  6. Inspection
  7. Load restraints and anchorages
  8. Towing
  9. Chassis
  10. Bolster attachments (optional)



The cumulative effect of these repetitive or cyclic loads is to eventually initiate cracking, usually at a local stress raiser such as a notch.



The five most common weld joints are butt, lap, edge, tee (T), and corner joints.



## Billet trailers

Two or more 'billet' log packets (3m–6 m) per vehicle, each supported by two bolsters. Centre bolsters are often able to slide to alternate positions to support different length packets, including a shorts packet.

# Sneak peek

What you get out of it



## Learning outcomes

This module will give you the tools to be able to:

- 1 demonstrate an in-depth understanding of the coverage outlined in:
  - Heavy Vehicles 2004 – Rule 31002: Schedule 4 Bolster Attachment Code
  - Land Transport Rules, HVSC VIRM and In-service VIRM sections relevant to bolster attachment
- 2 give an overview of the coverage of the following standards regarding bolster attachment:

## Quiz

One final quiz to check your understanding. There are **10** questions and you need to get **80%** to pass.

Some questions require a **single answer** while others will have **several** correct responses – so if your answers are correct but miss one of the correct responses you will be marked as overall incorrect for the question.

You may retry the quiz as many times as you like!

[START QUIZ >](#)

## Activities and visuals

### Definitions

Select the markers on the image below to become familiar with the components used in log transport. We will look at each of these in more detail in the next topic.

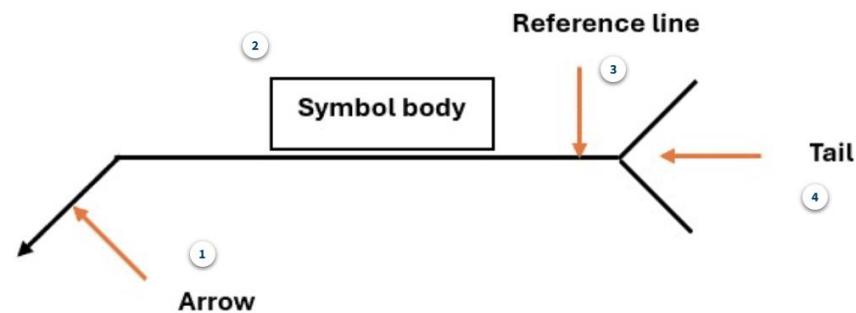


Test your knowledge

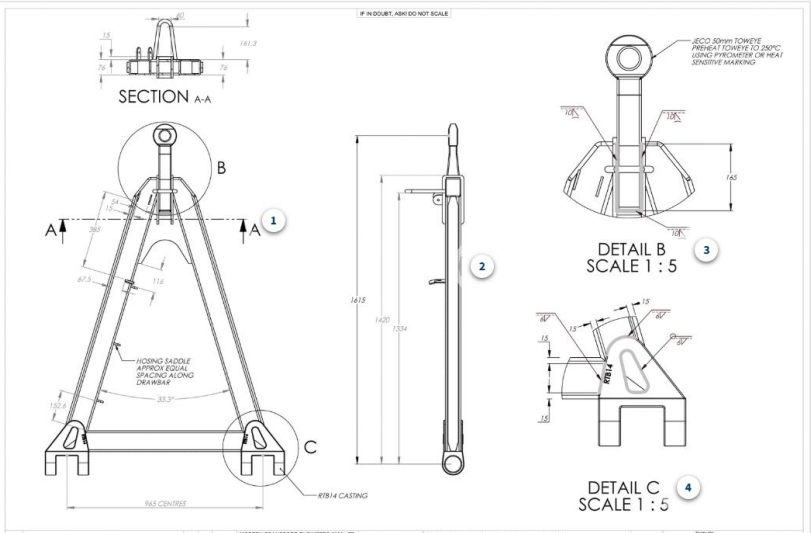


# Sneak peek

## Welding symbols



## Reading drawings



## Interactive learning

### Inspection

Explore the following to find out what an inspection prior to repair or modification involves.



Obtain the original SoDC	+
Assess wear and damage limits	+
Check locking systems	+
Inspection for cracks	+
Check all flexible elements	+
Repair or maintenance is required	+