Title	**Select and configure a specialist heavy haulage combination vehicle for transporting overweight and overdimension loads**		
Level	**4**	**Credits**	**8**

Purpose	People credited with this unit standard are able to: identify a specified load's characteristics; select a specialist heavy haulage combination vehicle for piloted road transport of a specified overweight and overdimension load; determine a specified load's position on a specialist heavy haulage trailer; determine legal requirements for the road transport of a specified overweight and overdimension load that is piloted; and configure a specialist heavy haulage trailer for a specified load.

Classification	Commercial Road Transport > Heavy Haulage

Available grade	Achieved

Guidance Information

1 Legislation, regulations, references and/or industry standards relevant to this unit standard include but are not limited to the:

- Health and Safety at Work Act 2015;
- Land Transport Act 1998;
- Heavy Motor Vehicle Regulations 1974;
- Land Transport (Driver Licensing) Rule 1999;
- Land Transport (Driver Licensing) Amendment Rule 2006;
- Land Transport Rule: Heavy Vehicles 2004;
- Land Transport (Road User) Rule 2004;
- Land Transport Rule: Vehicle Dimensions and Mass 2016 (*the Rule*);
- Waka Kotahi New Zealand Transport Agency (NZTA). (current edition). *The Official New Zealand Truck Loading Code – Code of Practice for the Safety of Loads on Heavy Vehicles.* Available from: https://www.nzta.govt.nz/assets/resources/roadcode/truck-loading-code/docs/tlc.pdf;
- Waka Kotahi New Zealand Transport Agency. *Vehicle dimension and mass permitting manual (VDAM), Volume 1.* Available from: https://nzta.govt.nz/resources/vehicle-dimension-and-mass-permitting-manual/vehicle-dimensions-and-mass-permitting-manual-volume-1/;
- Waka Kotahi New Zealand Transport Agency. (2004). *Overweight Permit Route Maps,* (OPRM). Available from: http://nzta1.cwp.govt.nz/resources/overweight-permit-route-maps/full-index-list.html;

- Waka Kotahi New Zealand Transport Agency. (2007). *Overdimension Vehicle Route Maps, (OVRM).* Available from: http://nzta1.cwp.govt.nz/resources/overdimen-veh-route-maps/full-index-list.html.

Any new, amended, or replacement Acts, regulations, Rules, standards, codes of practice, or authority requirements or conditions affecting the outcomes of this unit standard will take precedence for assessment purposes, pending review of this unit standard.

2 Definitions

A *bridge* refers to a structure designed to carry a road or path over an obstruction (such as a river, road, or rail line) by spanning it and includes culverts with a waterway area greater than 3.4m^2 and stock underpasses.
A *vehicle* refers to a combination vehicle.
Configuring refers to widen, lengthen, or attach load divider dollies, clip on or tag axles, independent axles, ramps, hydraulic steer and lift trailers, and hydraulic winches or other lifting ancillaries, in order to prepare a specialist heavy haulage trailer to carry a specific load.
Road furniture refers to pedestrian refuges, power poles, stop and give-way signs, street signs, telephone poles, threshold signs, traffic control signs such as traffic lights, and any other items that are positioned on or near a road and that need to be considered by an operator in relation to an overdimension load vehicle fitting the route.
Road geometrics include but are not limited to – width, camber, gradient, surface, horizontal and vertical curvature.
Swept path refers to the maximum road width required by a vehicle when it negotiates a turn.
Workplace procedures refer to organisation policies and procedures that are documented in memo, electronic, or manual format and available in the workplace. They may include but are not limited to – standard operating procedures, site specific procedures, site safety procedures, equipment operating procedures, quality assurance procedures, product quality specifications, manufacturer's requirements, references, approved codes of practice, housekeeping standards, environmental considerations, on-site briefings, supervisor's instructions, and procedures to comply with legislative and local body requirements relevant to the transportation of overdimension and overweight vehicles and/or loads.

3 Assessment information

Assessment against this unit standard must be conducted under practical workplace conditions.

Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable service information, workplace procedures and legislative requirements.

Outcomes and performance criteria

Outcome 1

Identify a specified load's characteristics.

Performance criteria

1.1 Load characteristics are measured or identified.

Range mass, dimensions, centre of gravity, load category.

1.2 Particular features of the load which may create difficulties for loading, unloading, or during transportation, are identified.

Range weight, dimensions, centre of gravity, stability, route.

Outcome 2

Select a specialist heavy haulage combination vehicle for piloted road transport of a specified overweight and overdimension load.

Performance criteria

2.1 Vehicle type and components are selected for the specified load, catering for features that may create difficulties during transportation.

Range weight, dimensions, stability, route.

2.2 Load accessories required for transporting the load safely are identified.

Range may include – clip-on axles, lifting and canting abilities, lifting axles, load sharing dollies, load support equipment, widening capabilities.

2.3 Vehicle equipment required for transporting the load safely is identified.

Range the Rule requirements include – signage, lighting, radio communication equipment;
company requirements may include – first aid equipment, fire extinguisher, load security equipment, overheight load skidding, measuring equipment.

2.4 Vehicle is selected for the specified load in accordance with stability and axle mass requirements of the Rule and/or an overweight permit, and the parameters of the proposed route.

Range parameters include – bridge structures, bridge dimensions and weight limits, railway level crossings, road geometrics, wires, cables.

Outcome 3

Determine a specified load’s position on a specialist heavy haulage trailer.

Performance criteria

3.1 The trailer is selected for the specified load.

3.2 Load distribution techniques that will maximise vehicle control for the proposed route are identified to determine the load's position.

3.3 The position, load placement balance, and centre of gravity location for the load, are selected in relation to the proposed route and the stability triangle of the vehicle and trailer.

3.4 Load is placed on the trailer in accordance with axle-loading requirements.

3.5 The situations where the position of the load may be varied according to the turning circle and/or swept path of the load on sections of the route are identified.

3.6 The load security requirements for the selected load position are identified.

Outcome 4

Determine legal requirements for the road transport of a specified overweight and overdimension load that is piloted.

Performance criteria

4.1 Legal requirements for the selected vehicle are determined in accordance with the Rule.

Range may include – tractor and trailer(s) configuration, permitting, signage, lighting, number and class of pilot(s), travel times, notifications to relevant authorities.

Outcome 5

Configure a specialist heavy haulage trailer for a specified load.

Performance criteria

5.1 The trailer's width and/or length configuring is adapted for the specified load's position as close as possible to the stability triangle.

Range may include – chassis extensions, clip-on axle/s, load dividers, outriggers, space frames, trailer widening, trombones, whiskers.

5.2 Load cradles, bracing and/or cushions are positioned.

5.3 Load security points are set up in accordance with the Truck Loading Code.

5.4 Axle steering systems are selected and hydraulic or manual elements are closed off or opened.

Planned review date	31 December 2028

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	21 September 2007	31 December 2017
Review	2	16 July 2015	31 December 2021
Review	3	26 September 2019	31 December 2025
Review	4	29 June 2023	N/A

Consent and Moderation Requirements (CMR) reference	0014

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.

Comments on this unit standard

Please contact Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council qualifications@hangaarorau.nz if you wish to suggest changes to the content of this unit standard.