

Title	Demonstrate knowledge of heavy goods motor vehicles, fleet characteristics, and load security		
Level	4	Credits	6

Purpose	People credited with this unit standard are able to: demonstrate knowledge of heavy goods motor vehicle characteristics; describe the characteristics of a fleet of heavy motor vehicles and/or vehicle combinations in terms of its ability to meet an organisation's needs; and demonstrate knowledge of load security.
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Classification	Commercial Road Transport > Road Transport Operations
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Available grade	Achieved
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Guidance Information

- 1 Legislation, regulations, references and/or industry standards relevant to this unit standard include but are not limited to the:
 - Land Transport Act 1998;
 - Land Transport Amendment Act 2009;
 - Road User Charges Act 2012;
 - Land Transport Rule: Heavy Vehicles 2004;
 - Land Transport (Road User) Rule 2004;
 - Land Transport Rule: Vehicle Dimensions and Mass 2016;
 - Land Transport Rule: Vehicle Equipment 2004;
 - Land Transport Rule: Vehicle Standards Compliance 2002;
 - MITO. (2021). *The Truck Book - Professional Skills for Driving Trucks*. Available from <https://www.mito.org.nz/> and public libraries.
 - New Zealand Transport Agency Waka Kotahi. (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>;
 - New Zealand Transport Agency Waka Kotahi. *Vehicle dimension and mass*. Available from: <https://www.nzta.govt.nz/vehicles/vehicle-types/vehicle-classes-and-standards/vehicle-dimensions-and-mass/>.

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

2 Definitions

HPMV refers to a high productivity motor vehicle. HPMVs are heavy combination vehicles that carry divisible loads, exceed maximum mass and/or length dimensions allowed for standard vehicles and operate on a route specific permit issued by a Road Controlling Authority.

Industry best practice refers to an industry accepted method of achieving a high standard outcome that meets industry needs and represents value for money.

Static roll threshold is the measure of the likelihood of the vehicle rolling over sideways. Vehicles with a low static roll threshold are more likely to roll over when going round sharp bends and in sudden emergency manoeuvres.

Vehicle combination refers to a towing vehicle in combination with one or more trailers.

Workplace procedures refers 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 commercial road transport sector.

3 Assessment information

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

Demonstrate knowledge of heavy goods motor vehicle characteristics.

Performance criteria

- 1.1 Dimensions of typical vehicles and combinations are identified in terms of legal requirements.

Range	length, width, height, forward distance, rear overhang, front overhang, articulated vehicle point of attachment, tow coupling position, inter-vehicle spacing, outside turning circle; includes – rigid vehicle, truck and trailer, tractor and semi-trailer; may include – B-train, HPMV.
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- 1.2 Gross vehicle and combination weights and axle weights are identified in terms of legal maximums.

Range	includes – rigid vehicle, truck and trailer, tractor and semi-trailer, B-train; may include – HPMV.
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- 1.3 Factors affecting vehicle loading capacity are described in terms of vehicle and road design limits.

Range manufacturers' gross weight and axle ratings, road grades and corners, bridge limitations, road user licences, static roll thresholds, legal gross weight and axle limitations, overweight and/or overdimension permits, HPMV permits, vehicle design.

- 1.4 Heavy motor vehicles are described in terms of legal requirements for on-road operation.

Range includes – Certificates of Fitness, Road User Licences, Certificates of Loading, Transport Service Licence labels, hub-odometers, motor vehicle registration, mounting and positioning of statutory road transport documents;
may include – vehicle certification for load anchor points, draw beams, 5th wheel couplings, special permits, headboard and body strength, curtainside load rating, static roll threshold.

Outcome 2

Describe the characteristics of a fleet of heavy motor vehicles and/or vehicle combinations in terms of its ability to meet an organisation's needs.

Performance criteria

- 2.1 The advantages and disadvantages of different types of heavy motor vehicles and/or combinations in an organisation's fleet are described in terms of their ability to meet road transport tasks.

Range route considerations, carrying capacities, manoeuvrability, legal limitations, task specific requirements;
may include – off road capability.

Outcome 3

Demonstrate knowledge of load security.

Performance criteria

- 3.1 Employer and employee obligations under the Land Transport Act 1998 are described in relation to load restraint on heavy motor vehicles.
- 3.2 The effect of load movement on vehicle stability and handling during transport and the consequences of a load falling off a vehicle while in transit are described.
- 3.3 The reasons for load restraint and the basic load restraint criteria are described in accordance with the Truck Loading Code.

- 3.4 The correct use of load restraint equipment required for securing the principal types of loads carried by the organisation's fleet is described in accordance with industry best practice.

Planned review date	31 December 2029
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	30 April 2001	31 December 2017
Review	2	27 July 2005	31 December 2017
Review	3	22 October 2010	31 December 2017
Review	4	16 April 2015	31 December 2022
Review	5	29 April 2021	N/A
Review	6	25 July 2024	N/A

Consent and Moderation Requirements (CMR) reference	0014
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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.