

Title	Drive a light motor vehicle in a fuel efficient manner		
Level	3	Credits	4

Purpose	People credited with this unit standard are able to: describe factors that affect the fuel efficiency of light motor vehicles; and drive a light motor vehicle to optimise fuel efficiency.
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Classification	Driving > Core Driving Knowledge and Skills
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Available grade	Achieved
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Guidance Information

- 1 Legislation relevant to this unit standard includes:
Land Transport Act 1998;
Land Transport (Driver Licensing) Rule 1999;
Land Transport (Road User) Rule 2004.
- 2 Any new, amended, or replacement Acts, regulations, Rules, standards, codes of practice, or Waka Kotahi NZ Transport Agency requirements or conditions affecting the outcome of this unit standard will take precedence for assessment purposes, pending review of this unit standard.
- 3 Definitions
Driving conditions are road, traffic, vehicle, driver, weather and light. A driver's reactions will be to the potential hazards arising from these six conditions.
Light motor vehicle means a motor vehicle (including a tractor but excluding a motorcycle) that has a gross laden weight of not more than 4500 kg or a combination vehicle that has a gross combined weight of not more than 4500 kg.
System of vehicle control means placing the vehicle in the correct place on the road, at the right speed and in the right gear in all driving situations but particularly when approaching and negotiating hazards.
- 4 Vehicles may be fitted with automatic, automated or manual transmissions.
- 5 Hybrid electric vehicles may be used for assessment against this unit standard.
Electric vehicles may not be used.

Outcomes and performance criteria

Outcome 1

Describe factors that affect the fuel efficiency of light motor vehicles.

Performance criteria

- 1.1 The effects of inertia and friction on fuel efficiency are described.
- Range different types of inertia and friction include – inertial resistance, rolling resistance, aerodynamic resistance, grade resistance.
- 1.2 The effects of vehicle speed and mass on fuel efficiency are described.
- 1.3 The effects of external load support fittings on fuel efficiency are described.
- Range may include – roof racks, bike racks, other equipment storage systems.
- 1.4 The effects of towing a trailer on fuel efficiency are described.
- 1.5 The benefits of regular vehicle checks on fuel efficiency are described.
- Range pre- and post-trip inspections, on-road spot checks, regular servicing, rectifying faults.
- 1.6 Vehicle selection for a specified task is described in terms of matching the selected vehicle's design and performance characteristics to task requirements.
- Range may include – vehicle type, engine performance, transmission, fuel type, manufacturer's fuel rating, wheel and tyre selection, air conditioning, aerodynamic fittings, body shape, accessories, towing capability.
- 1.7 The influence of the driver's driving behaviour on fuel efficiency is described.
- Range influences on driving behaviour include but are not limited to – attitude; experience, knowledge and skills; fatigue; drugs and alcohol; illness and injury.

Outcome 2

Drive a light motor vehicle to optimise fuel efficiency.

Range a continuous drive of 40 minutes which involves driving on urban roads and a motorway or highway.

Performance criteria

- 2.1 Driving conditions are continually monitored to enable the driver to implement optimum fuel efficient driving strategies.
- Range strategies include – avoidance of unnecessary stopping, use of high aim steering, use of momentum, throttle control, system of vehicle control, maintenance of correct following distances, avoidance of excessive speed, cornering techniques, grade techniques, economic use of air conditioning.

2.2 Engine speed and transmission use are managed to optimise fuel efficiency and safe vehicle operation.

Range may include – tachometer use, trip computer use, throttle use, avoidance of excessive idle times, avoidance of over-revving, correct use of clutch, use of shifting options, avoidance of unnecessary downshifting when slowing and stopping, achieving highest gear possible as soon as possible, maintaining the highest possible gear, avoiding unnecessary acceleration and braking.

2.3 Where fitted, and where driving conditions permit, cruise control is employed to achieve improvements in fuel efficiency.

Planned review date	31 December 2025
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	20 May 2011	31 December 2023
Review	2	28 April 2022	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.