

Title	Demonstrate knowledge of driving hazard detection and responses		
Level	3	Credits	3

Purpose	People credited with this unit standard are able to describe: hazard detection techniques in relation to driving; and effective driver responses in reaction to hazards.
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Classification	Driving > Driver Educator
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Available grade	Achieved
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Guidance Information

- 1 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the:
 The *Learning System for Driving Instructors* (LSFDI) (2015) available from Waka Kotahi NZ Transport Agency at <https://www.nzta.govt.nz/assets/resources/learning-systems-driving-instructors/docs/learning-systems-for-driving-instructors.pdf>.

Any existing, new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, authority requirements, Waka Kotahi NZ Transport Agency requirements or conditions affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.

2 Definitions

Advanced driver assistance system (ADAS) refers to the use of automated technology, such as sensors and cameras, to detect nearby obstacles or driver errors, and respond accordingly.

Blind zones refer to where vision is obscured or limited because of an obstruction or through being outside the driver's normal range of vision including mirrors.

A *hazard* is any situation which contains an element of actual or potential danger or risk which must be negotiated while driving a vehicle. All hazards arise from the six driving conditions (traffic, driver, vehicle, light, weather, road). Hazards pose a clear and direct threat to a driver who is carrying out one of the seven driving manoeuvres. Examples include other vehicles, pedestrians, children playing on the side of the road, cyclists.

The *Hazard Action Plan* is a systematic method (as detailed in the LSFDI) for analyzing and responding to a hazard.

Hazard detection refers to the ability of the driver to identify and prioritise hazards.

The *observation habits* required for situational awareness and hazard detection while driving are – aiming high (including 12 second search), getting the big picture, keeping the eyes moving, leaving an out, improving visibility.

Response refers to the action of a driver to a specific hazard, to avoid a crash, or to minimise the effect of a crash, or to reduce risk.

Risk homeostasis is a theory suggesting safety features are added to vehicles and roads, drivers tend to increase their exposure to collision risk because they feel better protected.

Situational awareness means employing observation habits so that the driver knows what is going on around the vehicle, ahead, behind, above, and on both sides.

System of vehicle control refers to a systematic driving response to a hazard that has been identified.

The *seven driving manoeuvres* are – moving into traffic, moving with traffic, moving out of traffic, moving through traffic, moving past traffic, moving back, moving on with no traffic.

The *six positions of the two-vehicle crash* are – vehicle in front, vehicle behind, oncoming, passing, being passed, from the side.

View blockers refer to the features outside the vehicle that obstruct (block) the driver's view, for example, other vehicles, trees, gardens, buildings.

Zones of vision refers to the view the driver can easily see from the normal seated position.

Outcomes and performance criteria

Outcome 1

Describe hazard detection techniques in relation to driving.

Performance criteria

- 1.1 The impact of the six driving conditions on driving is described.
- 1.2 Observation habits required for situational awareness and risk reduction while driving are described.
- 1.3 The effects of blind zones and view blockers on hazard detection are described.
- Range includes but is not limited to – vehicle, intersections, hills, corners.
- 1.4 Effects of speed and available light on hazard detection while driving are described.
- Range includes but is not limited to – zones of vision, night driving, perception/reaction times, colour detection.
- 1.5 Impact of internal and external distractions on driving and driving hazards are described.
- Range internal distractions may include – cell phone or other technology use, adjusting vehicle controls, eating or drinking, smoking, talking, animal inside the vehicle, risk homeostasis, ADAS; external distractions may include – scenery or people outside the vehicle; other traffic; trying to find intersection, house number, or destination; advertising or signs.

Outcome 2

Describe effective driver responses in reaction to hazards.

Performance criteria

- 2.1 Driver responses to achieve risk reduction in each of the seven driving manoeuvres are described.
Range two response for each driving manoeuvre.
- 2.2 Symptoms of trainee drivers failing to apply the observation habits for situational awareness are described.
- 2.3 The Hazard Action Plan and the roles of anticipation and perception in hazard detection when driving are described.
- 2.4 Methods to minimise the effects of blind zones and view blockers are described.
Range includes but is not limited to – vehicle, intersections, hills, corners.
- 2.5 A system of vehicle control that can be applied to hazards consistently is described.
Range includes but is not limited to – positioning, use of brakes and transmission, communicating, searching.
- 2.6 Driver responses to achieve avoidance of each of the six positions of the two vehicle crash are described.
Range two responses for each of the six positions.

Planned review date	31 December 2027
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	28 July 2003	31 December 2024
Review	2	16 April 2010	31 December 2024
Review	3	30 June 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.