Title	**Demonstrate knowledge of vehicle body construction, and the effect of impact on vehicles**		
Level	**3**	**Credits**	**4**

Purpose	People credited with this unit standard are able to demonstrate knowledge of: vehicle body construction; and the effect of impact on vehicles.

Classification	Motor Industry > Collision Repair

Available grade	Achieved

Guidance Information

1 Legislation and references
Performance of the outcomes of this unit standard must comply with the following: Health and Safety at Work Act 2015.

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

3 Definitions
Company requirements refer to instructions to staff on policy and procedures that are available in the workplace. These requirements may include – company policies and procedures, work instructions, product quality specifications and legislative requirements.
Service information may include – vehicle structural repairer code of practice, technical information for a vehicle, machine, or product detailing operation; installation and servicing procedures; manufacturer instructions; technical terms and descriptions; and detailed illustrations.

4 Assessment
Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable manufacturers specifications, service information, company requirements and legislative requirements.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of vehicle body construction.

Performance criteria

1.1 Vehicle body construction methods are described.

Range body-over-frame, unibody, space frame, hybrid.

1.2 Crush zones are described.

Range may include – convolutions, punched holes, dimples, passenger safety, collision energy absorption, collision energy transfer.

1.3 The purpose of metals used in vehicle body construction is described and their general locations identified.

Range mild steel, high strength steel, ultra-high strength steel, aluminium alloy, magnesium.

Outcome 2

Demonstrate knowledge of the effect of impact on vehicles.

Performance criteria

2.1 The angles of impact on vehicles are described.

Range side, full frontal, rear end, roof, roll-over, underbody.

2.2 Effects of impact on vehicles are identified.

Range body panels – visible, hidden, direct, indirect.
unibodies – frontal impact, rear end collision, side collision, roof impact, roll-over, underbody.
frames and truck chassis – vertical bending, side bending, crushing, twisting, diagonal twisting.
mechanical parts – steering and suspension, steering column, wheel alignment, power train, engine, exhaust system.
safety systems– seat belts, air bags, seats, door locks, bonnet and boot lid locks, roll bars.
other components – seat frames, glass, lamps, interior.

Planned review date	31 December 2027

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	29 January 1996	31 December 2018
Review	2	20 December 1998	31 December 2018
Revision	3	16 October 2003	31 December 2018
Review	4	26 November 2007	31 December 2018
Review	5	21 April 2016	31 December 2023
Review	6	10 December 2020	31 December 2027
Review	7	25 May 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.