

<b>Title</b>	<b>Remove, manufacture, and replace glass in automotive mirrors</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>5</b>

<b>Purpose</b>	<p>A person credited with this standard can, for an automotive mirror:</p> <ul style="list-style-type: none"> <li>• prepare to remove and replace glass;</li> <li>• manufacture and replace glass; and</li> <li>• complete cleaning, storage, and maintenance requirements.</li> </ul>
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<b>Classification</b>	Glass and Glazing > Automotive Reglazing
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<b>Available grade</b>	Achieved
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### Guidance Information

#### 1 Assessment

Evidence generated for assessment against this standard must be verified by a person who has current expertise in the automotive glazing trades and has had the opportunity to regularly observe the candidate in the workplace carry out the removal and installation of glass in automotive mirrors.

All repairs must be completed in a commercially acceptable timeframe and workplace requirements.

#### 2 Mirror replacement must be completed without injury to personnel or damage to products and equipment. Personal protective equipment must be used to meet regulatory and worksite requirements.

#### 3 Definitions

*Automotive mirrors* – include internal rear vision mirror, external rear vision mirror.

*Job specification* – refers to instructions to staff on policy and procedures which are documented in memo or manual format and are available in the workplace.

These requirements include company specifications and procedures, work instructions, manufacturer's specifications, product quality specifications, legislative requirements.

*Personal protective equipment* – refers to anything used or worn by a person (including clothing) to minimise risks to the person's health and safety; air-supplied respiratory equipment.

*Worksite requirements* – refer to procedures used by the organisation carrying out the work and applicable to the tasks being carried out. They may include but are not limited to – standard operating procedures, safety procedures and guidelines, equipment operating procedures, codes of practice, quality management practices and standards, procedures to comply with legislative and local body requirements.

- 4 Evidence generated for assessment against this standard must reflect workplace and industry requirements specified in:
- *Land Transport Rule: Vehicle Repair 1998* – Rule 34001/1998.
  - *Land Transport Rule: Glazing Windscreen Wipe and Wash, and Mirrors 1999* – Rule 32012/1999.
  - NZTA Vehicle Inspection Requirements Manual.
  - statutory and regulatory requirements applicable to the automotive glazing industry.
  - documented worksite specifications, procedures, and practices.
  - manufacturer recommendations, specifications, and technical data sheets.
  - applicable material safety data sheets.
- 5 Reference  
New Zealand transport Agency, *Land Transport Rules for Vehicle Inspection Requirements Manual (VIRM)*, available at <http://vehicleinspection.nzta.govt.nz/virms/in-service-wof-and-cof/general/vision/glazing>.

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## Outcomes and performance criteria

### Outcome 1

Prepare to remove and replace glass in an automotive mirror.

#### Performance criteria

- 1.1 Determine the glass removal method, and materials and equipment requirements from the glass manufacturer and job specifications.
- Range            job specifications include – window size, shape and position; materials; Vehicle Inspection Requirements Manual (VIRM); vehicle structural integrity.
- 1.2 Determine vehicle preparation requirements from the glass manufacturer and vehicle specifications and prepare the vehicle for removal of glass.
- 1.3 Select and prepare required personal protective equipment to meet health and safety requirements.
- 1.4 Identify the glass material specifications and confirm they meet the job specifications.
- 1.5 Identify procedures for minimising waste of materials.

### Outcome 2

Manufacture and replace glass in an automotive mirror.

**Performance criteria**

- 2.1 Cut replacement glass to manufacture a mirror according to workplace requirements to meet job specification.
- 2.2 Prepare the mirror fitting for the replacement glass.
- Range may include but is not limited to – removing old glass, remove old adhesive, remove high-spots, replacement area clean and free from debris.
- 2.3 Replace the mirror glass in the vehicle fitting.
- Range includes but is not limited to – adhesive, shape and conform to mirror shape.
- 2.4 Clean the mirror and prepare the vehicle for collection.
- 2.5 Provide warranty and safety information to the vehicle owner.
- 2.6 Complete any required documentation.

**Outcome 3**

Complete cleaning, storage, and maintenance requirements for replacing automotive mirror glass.

**Performance criteria**

- 3.1 Identify and store re-useable materials.
- 3.2 Remove and dispose of waste materials.
- 3.3 Inspect the work area for cleanliness and clear of tools and equipment.
- 3.4 Undertake equipment maintenance procedures.
- Range check cutting tool, mirror stock is adequate for next job.
- 3.5 Clean and store tools, plant, and equipment used to replace automotive mirror glass.
- Range plant includes – any machinery, vehicle, vessel, aircraft, equipment (including personal protective equipment), appliance, container, implement, or tool; any component of any of those things; anything fitted or connected to any of those things; personal protective equipment includes – anything used or worn by a person (including clothing) to minimise risks to the person's health and safety; air-supplied respiratory equipment.

<b>Planned review date</b>	31 December 2026
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#### Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	20 April 2006	31 December 2013
Review	2	20 November 2009	31 December 2017
Review	3	18 June 2015	31 December 2024
Review	4	24 February 2022	N/A
Revision	5	25 August 2022	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0073
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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](mailto:qualifications@hangaarorau.nz) if you wish to suggest changes to the content of this unit standard.