

<b>Title</b>	<b>Diagnose and rectify faults in a carburetted petrol fuel system</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>4</b>

<b>Purpose</b>	<p>This unit standard is intended for people in the automotive repair industry.</p> <p>People credited with this unit standard are able to: diagnose carburetted fuel system faults and their causes; rectify carburetted fuel system faults and their causes; and diagnose and rectify air intake system faults.</p>
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<b>Classification</b>	Motor Industry > Automotive Fuel Systems and Exhaust
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 It is recommended that people hold credit for Unit 8183, *Demonstrate knowledge of the operation, service checks, fault diagnosis, and repair of carburettors* before being assessed against this unit standard.
- 2 Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable service information, and company requirements and legislative requirements. This includes the knowledge and use of suitable tools and equipment.
- 3 Performance of the outcomes of this unit standard must comply with the following:  
Health and Safety at Work Act 2015;  
Land Transport Rule: Vehicle Equipment 2004;  
Land Transport Rule: Vehicle Exhaust Emissions 2007;  
Land Transport Rule: Vehicle Repair 1998.
- 4 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.
- 5 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* refers to technical information for a vehicle, machine, or product detailing operation; installation and servicing procedures; manufacturer instructions; technical terms and descriptions; and detailed illustrations.

*Suitable tools and equipment* refer to industry approved tools and equipment that are recognised within the industry as being the most suited to complete the task in a professional and competent manner with due regard to safe working practices.

- 6 For this unit standard, it is essential that the practical assessment evidence is obtained in the workplace under normal workplace conditions.

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## Outcomes and performance criteria

### Outcome 1

Diagnose carburetted fuel system faults and their causes.

Range may include but is not limited to – poor performance, poor starting, excessive fuel consumption.

### Performance criteria

- 1.1 The vehicle is operated to reproduce the symptoms of the fault, and all the relevant details concerning the symptoms and the conditions when they occur are identified and noted.
- 1.2 The fault symptoms, conditions when they occur, and any test results are analysed, and a likely cause is determined.

### Outcome 2

Rectify carburetted fuel system faults and their causes.

Range may include but is not limited to – poor performance, poor starting, excessive fuel consumption.

### Performance criteria

- 2.1 Precautions are taken to avoid fire and inhalation of petrol fumes, and to minimise contact of petrol with skin.
- 2.2 A dirty or contaminated fuel system is cleaned and restored to full serviceability.
- Range may include but is not limited to – fuel tank, pipelines, filters, pump, carburettor.
- 2.3 Any fuel leaks are rectified.
- Range may include but is not limited to – components tightened, sealed, replaced with new parts.
- 2.4 A carburettor is disassembled without damage to parts.
- 2.5 The carburettor parts are examined, and any damage, wear and deterioration identified.

- 2.6 Unserviceable carburettor parts are replaced. The carburettor is assembled and adjusted.
- 2.7 The inlet and outlet pressures of the fuel pump are tested and compared with specifications, and the serviceability of the pump is determined.
- 2.8 A replacement fuel pump that meets manufacturer specifications is fitted in a manner that restores full serviceability of the system.
- 2.9 Fuel blockages and restrictions are cleared to restore normal fuel flow.
- Range may include but is not limited to – cleared by compressed air, replacement of parts.

### Outcome 3

Diagnose and rectify air intake system faults.

#### Performance criteria

- 3.1 The air intake system is tested, and all functional defects identified.
- Range damaged or unserviceable parts, loose parts, leaks, blockages and restrictions.
- 3.2 Non-repairable unserviceable parts are replaced to meet manufacturer specifications.
- 3.3 Faults are rectified to restore full serviceability.
- 3.4 All joints are sealed to be airtight.

<b>Planned review date</b>	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	29 October 1993	31 December 2022
Review	2	4 October 1996	31 December 2022
Review	3	26 February 1999	31 December 2022
Review	4	25 January 2008	31 December 2022
Review	5	29 April 2021	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0014
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

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**Comments on this unit standard**

Please contact MITO New Zealand Incorporated [info@mito.org.nz](mailto:info@mito.org.nz) if you wish to suggest changes to the content of this unit standard.