

<b>Title</b>	<b>Demonstrate knowledge of testing and rectifying diesel engine shutdown system faults</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>2</b>

<b>Purpose</b>	<p>This theory-based unit standard is intended for people in the automotive repair industry.</p> <p>People credited with this unit standard are able to demonstrate knowledge of: diesel engine shutdown systems; testing and rectifying electrical and electronic diesel engine shutdown system faults; and testing and rectifying mechanical diesel engine shutdown system faults.</p>
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<b>Classification</b>	Motor Industry > Engines
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 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.
- 2 Performance of the outcomes of this unit standard must comply with the following:  
Health and Safety at Work Act 2015;  
Land Transport Rule: Vehicle Repair 1998.
- 3 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.
- 4 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.

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## Outcomes and performance criteria

### Outcome 1

Demonstrate knowledge of diesel engine shutdown systems.

Range mechanical, electrical, electronic.

#### Performance criteria

- 1.1 The purpose of diesel engine shutdown systems is described.
- 1.2 Types of diesel engine shutdown systems are described.
- 1.3 Engine shutdown operation is described for each system.

### Outcome 2

Demonstrate knowledge of testing and rectifying electrical and electronic diesel engine shutdown system faults.

#### Performance criteria

- 2.1 Suitable tools and equipment for testing and rectifying electrical and electronic diesel engine shutdown system faults are identified.
- 2.2 Procedures for testing and rectifying engine sensor faults are described.  
  
Range sensors include but are not limited to – oil pressure, coolant temperature, over-speed.
- 2.3 Procedures for testing and rectifying actuator faults relating to electrical and electronic diesel engine shutdown system operation are described.
- 2.4 Procedures for testing for electrical faults and repairing the wiring and connectors are described.

### Outcome 3

Demonstrate knowledge of testing and rectifying mechanical diesel engine shutdown system faults.

#### Performance criteria

- 3.1 Suitable tools and equipment for testing and rectifying mechanical diesel engine shutdown system faults are identified.
- 3.2 Procedures for testing and rectifying mechanical diesel engine shutdown system faults are described.
- 3.3 Adjusting the actuator trip speed is described.

3.4 Procedures for testing and rectifying faults in the actuator operation are described.

Range actuator operation includes but is not limited to – coolant temperature, oil pressure.

3.5 Procedures for testing the shutdown system for operation following repair procedure are described.

<b>Replacement information</b>	This unit standard and unit standard 24282 replaced unit standard 971.
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<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	25 January 2008	31 December 2022
Review	2	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>.

#### 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.