

<b>Title</b>	<b>Test and rectify faults in automotive alternator circuits, and overhaul an automotive alternator</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>4</b>

<b>Purpose</b>	People credited with this unit standard are able to: test an alternator unit and circuit; and rectify faults in an alternator circuit and overhaul an automotive alternator.
----------------	--

<b>Classification</b>	Motor Industry > Automotive Electrical and Electronics
-----------------------	--

<b>Available grade</b>	Achieved
------------------------	----------

---

### Guidance Information

- 1 It is recommended that people hold credit for Unit 24150, *Describe overhauling automotive alternators* 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.
- 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* means 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.

---

## Outcomes and performance criteria

### Outcome 1

Test an alternator unit and circuit.

#### Performance criteria

- 1.1 Methods of testing alternators are determined.
- Range may include – external regulator, internal regulator, fully integrated protected circuit, electronic control unit (ECU).
- 1.2 Methods of testing regulators off the alternator are determined.
- 1.3 Test procedures are completed, without damage to componentry and equipment.
- 1.4 Mechanical components are inspected for wear and damage, and the need for repair or replacement is determined.
- Range may include – case, shaft, pulley, bearings, brushes, slip rings, rotor, vacuum pump.
- 1.5 The causes of alternator faults are determined and located.
- 1.6 The viability of repairing an alternator is determined.
- Range cost of parts required, availability of replacement parts, cost of labour, warranty, cost and availability of replacement unit.

### Outcome 2

Rectify faults in an alternator circuit and overhaul an automotive alternator.

Range may include alternator components and alternator circuits from – light vehicles, heavy vehicles, plant and equipment, marine applications.

#### Performance criteria

- 2.1 The alternator unit is dismantled.
- 2.2 A condition report is completed and given to the supervisor.
- Range inspection and testing of components and circuitry, identifying and isolating faults, recommending repairs and replacement of components.
- 2.3 Components determined to be replaced are priced and obtained.
- Range consulting parts catalogues and parts lists, obtaining pricing and delivery details.

2.4 Alternator and circuit repairs are completed.

2.5 The alternator unit is reassembled and tested.

<b>Replacement information</b>	This unit standard replaced unit standard 889 and unit standard 5457.
--------------------------------	---

<b>Planned review date</b>	31 December 2025
----------------------------	------------------

#### 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	25 March 2021	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0014
--	------

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.