

<b>Title</b>	<b>Diagnose and rectify faults in a motorcycle contact breaker battery ignition 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 motorcycle repair industry.</p> <p>People credited with this unit standard are able to: diagnose faults in a contact breaker (CB) battery ignition system on a motorcycle engine; test CB battery ignition system components for faults; and rectify faults in a CB battery ignition system on a motorcycle engine.</p>
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<b>Classification</b>	Motor Industry > Automotive Electrical and Electronics
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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 30574, *Demonstrate knowledge of ignition systems* 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.

- 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 faults in a CB battery ignition system on a motorcycle engine.

#### Performance criteria

- 1.1 The battery is tested for cranking voltage, and the result noted.
- 1.2 A check is made to determine if the rotor shaft turns when the engine is cranked, and whether the ignition cables and leads are connected, and the results are noted.
- 1.3 A test is made to determine if high tension (HT) voltage is present, and the result noted.
- Range voltage available to be used, voltage required for ignition.
- 1.4 A test is made to determine if low tension voltage is present at the contacts and at the ignition coil with key on, engine off (KOEO) and when cranking, and the results noted.
- 1.5 The initial ignition timing is checked with a timing light, and the result noted.
- 1.6 The results of these tests are analysed, and any faults and their probable causes are identified.

### Outcome 2

Test CB battery ignition system components for faults.

#### Performance criteria

- 2.1 The HT components are tested for serviceability and any faults are identified and noted.
- 2.2 Points plate and rotor assembly are checked, and any faults identified and noted.
- Range cam, camshaft, and bush wear; operation of automatic advance mechanisms; condition of contacts and condenser.
- 2.3 Ballast resistor is tested, and faults identified and noted.
- 2.4 Voltage drop over the wiring circuit is checked.
- Range supply circuit, return circuit.

**Outcome 3**

Rectify faults in a CB battery ignition system on a motorcycle engine.

**Performance criteria**

- 3.1 All unserviceable components are replaced.
- 3.2 The dwell angle and spark plug electrode clearances are adjusted.
- 3.3 The advance mechanisms are checked and adjusted.
- 3.4 The initial ignition timing is adjusted.

<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	23 February 1999	31 December 2022
Revision	2	16 April 2003	31 December 2022
Review	3	25 January 2008	31 December 2022
Review	4	25 March 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.