

<b>Title</b>	<b>Test, locate and diagnose faults in electrical machine windings</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>2</b>

<b>Purpose</b>	<p>This unit standard is intended for people who have responsibility for preparing machines for rewinding.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> <li>– test electrical machine windings in accordance with industry practice; and</li> <li>– locate and diagnose faults in electrical machine windings in accordance with industry practice.</li> </ul>
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<b>Classification</b>	Electrical Engineering > Electrical Machines
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<b>Available grade</b>	Achieved
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**Guidance information**

- 1 This unit standard has been developed for learning and assessment on-job or off-job in a simulated environment.
- 2 Definitions
 

*Electrical machines* – are defined as electric motors, generators, alternators, and transformers.

*Industry practice* – those practices that competent practitioners within the industry recognise as current industry best practice.
- 3 Assessment
 

The number and type of machines chosen are left to the discretion of the assessor, but must be sufficient to assess competence in all outcomes of the unit standard.

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**Outcomes and performance criteria**

**Outcome 1**

Test electrical machine windings in accordance with industry practice.

**Performance criteria**

1.1 Carry out tests.

Range tests – continuity of supply conductors, insulation resistance between windings and earth, resistance of windings; growler test on machines containing armatures.

## 1.2 Record results of tests.

**Outcome 2**

Locate and diagnose faults in electrical machine windings in accordance with industry practice.

Range faults – open circuit, short circuit, leakage to earth, differences in readings between windings;  
at least one of each type of fault is required.

**Performance criteria**

2.1 Interpret test results and locate faults.

2.2 Diagnose the cause of fault from test results and visual inspection.

2.3 Tag machines and complete documentation.

<b>Planned review date</b>	31 December 2023
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	29 April 1994	31 December 2013
Review	2	23 April 1996	31 December 2013
Review	3	10 February 1999	31 December 2013
Revision	4	3 April 2001	31 December 2013
Review	5	26 May 2005	31 December 2013
Review	6	22 August 2008	31 December 2013
Revision	7	16 April 2010	31 December 2023
Rollover and Revision	8	15 March 2012	31 December 2023
Revision	9	15 January 2014	31 December 2023
Review	10	22 August 2019	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0003
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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 The Skills Organisation [reviewcomments@skills.org.nz](mailto:reviewcomments@skills.org.nz) if you wish to suggest changes to the content of this unit standard.