

<b>Title</b>	<b>Demonstrate and apply knowledge to assemble switchboards</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>13</b>

<b>Purpose</b>	<p>This unit standard is for people engaged in the manufacture of switchboards in the electrotechnology industry.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> <li>– prepare components for assembly of switchboards</li> <li>– assemble switchboard enclosures</li> <li>– fit switchgear components</li> <li>– communicate switchboard fabrication difficulties</li> <li>– verify the suitability of switchboard assembly.</li> </ul>
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<b>Classification</b>	Electrical Engineering > Electric Switchboards
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 This unit standard may be used for learning and assessment on-job.
- 2 References
  - Accident Compensation Act 2001
  - AS/NZS 3000 (version as cited in the Electricity (Safety) Regulations), *Electrical installations (known as the Australian/New Zealand Wiring Rules)*
  - AS/NZS 61439.4:2016, *Low-voltage switchgear and controlgear assemblies – Part 4: Particular requirements for assemblies for construction sites (ACS)* available at [Standards NZ](https://standards.nz)
  - Electricity Act 1992
  - Electricity (Safety) Regulations 2010
  - Health and Safety at Work Act 2015
  - The New Zealand Electrical Codes of Practice, available at WorkSafe New Zealand, [worksafe.govt.nz](https://worksafe.govt.nz)

and all subsequent amendments and replacements.
- 3 Definitions
 

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

*Safe and sound practice* – this relates to the installation of electrical equipment and is defined in AS/NZS 3000

#### 4 Range

- a Candidates may refer to current legislation and Standards during assessment.
- b Demonstration of safe working practices and installation in accordance with *safe and sound practice* are essential components of assessment of this unit standard.
- c All evidence presented for assessment against this unit standard must be in accordance with:
  - i legislation
  - ii policies and procedures
  - iii ethical codes
  - iv Standards – may include but are not limited to those listed in Schedule 2 of the Electricity (Safety) Regulations 2010
  - v applicable site, enterprise, and industry practice
  - vi where appropriate manufacturers' instructions, specifications, and data sheets.

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### Outcomes and performance criteria

#### Outcome 1

Prepare components for assembly of switchboards.

##### Performance criteria

- 1.1 Confirm quality, quantity, and type of supplied components against assembly specifications.
- 1.2 Carry out processes to return and replace damaged stock and/or order parts to cover shortfall.

#### Outcome 2

Assemble switchboard enclosures.

Range may include but is not limited to – cabinets, cubicles, frameworks.

##### Performance criteria

- 2.1 Safely assemble enclosures in accordance with specifications and industry practices.
- 2.2 Select and safely assemble components in a manner that optimises production efficiency and meets specification.

#### Outcome 3

Fit switchgear components.

**Performance criteria**

- 3.1 Fit components to the enclosure ensuring ease of access for current and subsequent access and termination.
- 3.2 Use fixings and techniques to optimise production efficiency in accordance with specifications.
- 3.3 Secure components in the positions defined by the drawings and/or within the tolerances specified in the manufacturers' instructions.

**Outcome 4**

Communicate switchboard fabrication difficulties.

**Performance criteria**

- 4.1 Explain in detail impractical fabrication requirements on drawings to the appropriate person.
- 4.2 Explain fabrication options to overcome a perceived fabrication difficulty.
- 4.3 Communicate fabrication difficulty affecting safety and/or function in a manner that permits investigation and remedy.
- 4.4 Obtain authority for variation to specifications.

**Outcome 5**

Verify the suitability of switchboard assembly.

**Performance criteria**

- 5.1 Confirm and install all components in accordance with drawings, specifications, and any authorised variations.
- 5.2 Confirm switchboard dimensions are in accordance with specifications.
- 5.3 Mark electrical connections on the assembly and provide connection and installation instructions.
- 5.4 Confirm and install shipping breaks in accordance with specifications.

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<b>Replacement information</b>	This unit standard replaced unit standard 14972.
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<b>Planned review date</b>	31 December 2026
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	17 November 2016	N/A
Rollover and Revision	2	25 July 2024	N/A

**Consent and Moderation Requirements (CMR) reference**

0003

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

**Comments on this unit standard**

Please contact the Waihangara Ara Rau Construction and Infrastructure Workforce Development Council [qualifications@WaihangaraAraRau.nz](mailto:qualifications@WaihangaraAraRau.nz) if you wish to suggest changes to the content of this unit standard.