

<b>Title</b>	<b>Use and maintain hand and power tools for electrical work</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>3</b>

<b>Purpose</b>	<p>This unit standard covers the use and maintenance of hand and power tools commonly used during installation and maintenance work in the electrical and related industries.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> <li>– use hand tools safely for electrical work</li> <li>– maintain hand tools</li> <li>– use power tools safely for electrical work</li> <li>– maintain power tools.</li> </ul>
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<b>Classification</b>	Electrical Engineering > Core Electrical
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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.
- 2 Definitions
 

*RCD* – residual current device

*Safe and sound practice* – as it relates to the installation of electrical equipment is defined in AS/NZS 3000 (version as cited in Electricity (Safety) Regulations), *Electrical Installations (known as the Australian/New Zealand Wiring Rules)*.
- 3 Range
  - a Hand tools may include but are not limited to – knife, cold chisel, wood chisel, hacksaw, wood saw, hole-saw, file, twist drill bits, auger drill bits, high-speed wood bits, rule, tape measure, adjustable and fixed spanners, socket sets, Allen keys, spline-driver, combination pliers, long-nose pliers, side cutters (diagonal cutters), vice-grips, poly-grips (multi-grips), screwdrivers (flat, Phillips, Square-drive and Posi-Drive), hammer, crimp tool; evidence of 15 required.
  - b Power tools may include but are not limited to – electric drill, portable electric saw, bench grinder, angle grinder, cordless screwdriver, cordless drill. Evidence of four required.
  - c Candidates may refer to current legislation and Standards during assessment.
  - d Demonstration of safe working practices and installation in accordance with *safe and sound practice* are essential components of assessment of this unit standard.

- e All activities and evidence presented for all outcomes and performance criteria in 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

Use hand tools safely for electrical work.

#### Performance criteria

- 1.1 Select hand tools according to work requirements.

Range may include but is not limited to – tool function, length, weight, opening width, blade width, tool type; work requirements – size and type of material, risk of damage to the work.

- 1.2 Use hand tools safely.

- 1.3 Take additional precautions when hand tools are used near live equipment and ensure that they are adequately insulated.

### Outcome 2

Maintain hand tools.

#### Performance criteria

- 2.1 Maintain hand tools in terms of cleaning, lubricating, sharpening, storage, and protection against damage.

- 2.2 Inspect hand tools regularly for signs of wear and repair or discard when damaged.

### Outcome 3

Use power tools safely for electrical work.

**Performance criteria**

- 3.1 Check power tools for safety and wear before use.
- Range checks may include but are not limited to – frayed or damaged flexible cords, integrity of appliance connector or plug tops, pins straight, screws tight, cord grips functioning, integrity of casings, missing parts, damaged components, lubrication.
- 3.2 Select power tools for cutting and drilling applications to match the size, nature, and environment of the task to be performed.
- 3.3 Use power tools in accordance with manufacturers' specifications, industry practice, and safety requirements without damage to the tool, the material on which they are used, or personnel.
- 3.4 Use isolating transformers or RCDs with tools operating at mains voltage.

**Outcome 4**

Maintain power tools.

**Performance criteria**

- 4.1 Keep power tools in a state of good repair and protected from damage.
- 4.2 Coil and store cords and, where appropriate, hoses in a manner that avoids strain, twists, and kinks.

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<b>Replacement information</b>	This unit standard replaced unit standard 1175 and unit standard 5919.
<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	28 June 1999	31 December 2013
Revision	2	3 April 2001	31 December 2013
Review	3	26 May 2005	31 December 2021
Rollover and Revision	4	15 March 2012	31 December 2021
Revision	5	15 January 2014	31 December 2021
Review	6	21 July 2016	N/A
Revision	7	16 March 2017	N/A
Rollover and Revision	8	25 May 2023	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 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.