

Title	Use and maintain hand and power tools for electrical work		
Level	3	Credits	3

Purpose	<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"> – use hand tools safely for electrical work; – maintain hand tools; – use power tools safely for electrical work; and – maintain power tools.
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Classification	Electrical Engineering > Core Electrical
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Available grade	Achieved
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Explanatory notes

- 1 This unit standard has been developed for learning and assessment on-job.
- 2 This unit standard and unit standard 29474 together meet the assessment requirements of ERAC EPC 34.
- 3 Definitions
 - EPC* – Essential Performance Capability.
 - ERAC* – Electrical Regulatory Authorities Council.
 - EWRB* – Electrical Workers Registration Board.
 - RCD* – residual current device
 - Safe and sound practice* – as it relates to the installation of electrical equipment is defined in AS/NZS 3000:2007, *Electrical Installations (known as the Australian/New Zealand Wiring Rules)*.
- 4 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 screw driver, 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 evidence requirements 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; and,
 - vi where appropriate, manufacturers' instructions, specifications, and data sheets.

Outcomes and evidence requirements

Outcome 1

Use hand tools safely for electrical work.

Evidence requirements

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.

Evidence requirements

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.

Evidence requirements

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.

Evidence requirements

- 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.

Replacement information	This unit standard replaced unit standard 1175 and unit standard 5919.
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Planned review date	31 December 2019
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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

Consent and Moderation Requirements (CMR) reference	0003
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact The Skills Organisation at reviewcomments@skills.org.nz if you wish to suggest changes to the content of this unit standard.