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| **Title** | **Demonstrate and apply knowledge of the selection, use, and care of engineering hand tools** | | |
| **Level** | **2** | **Credits** | **4** |

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| **Purpose** | This is an entry-level unit standard for people to demonstrate a basic understanding of selecting, using and caring for the correct type of engineering hand tools.<br><br>People credited with this unit standard are able to demonstrate knowledge of the selection of different types of hand tools; select and use engineering hand tools to meet task requirements; and care for engineering hand tools. |

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| **Classification** | Mechanical Engineering > Engineering Core Skills |

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| **Available grade** | Achieved |

**Explanatory notes**

1 References
Health and Safety at Work Act 2015 and supporting regulations.

2 Definitions
*Accepted industry practice* refers to approved codes of practice and standardised procedures accepted by the wider mechanical engineering industry sectors as examples of best practice.
*Workplace procedures* refer to procedures used by the organisation carrying out the work and applicable to the tasks being carried out. They may include but are not limited to – standard operating procedures, safety procedures, equipment operating procedures, codes of practice, quality management practices and standards, procedures to comply with legislative and local body requirements.
*Service* refers to the routine actions that ensure operational integrity. Examples include cleaning, lubricating, and minor adjustments.

3 Range
Engineering hand tools applicable to this unit standard fall within the following categories:
Cutting tools: examples – hacksaws, chisels, files, hole punches, tin snips.
Assembly tools: examples – hammers, punches, vices, clamps, spanners, wrenches (including impact and torque), pliers.

4 Assessment information
Examples/evidence given must be within the context of mechanical engineering or fabrication and must meet applicable worksite procedures and accepted industry

practice. Numerous reference texts and training manuals on engineering hand tools are available and may be used; however no one textbook or source of information is envisaged.

## Outcomes and evidence requirements

### Outcome 1

Demonstrate knowledge of the selection of different types of hand tools.

Range hand tools – hacksaw blade, file, punch, hammer, spanner, wrench.

### Evidence requirements

1.1 Different types of hand tools are described, and an example stated of a task suitable for the use of each.

Range example of different types of cutting tools – hacksaw blade types include fine, medium and coarse pitch; and all hard, bimetal and low-alloy;
example of different types of assembly tools – spanner types include open ended, ring spanner.

1.2 The selection of specific types of hand tools is stated for given tasks, and the reason for the selection described.

Range evidence is required of four given cutting tasks, and four given assembling tasks;
example – to cut a 100mm diameter, 1.6mm wall thickness mild steel tube the correct tool is a hacksaw with a fine pitch, bi-metal blade because there are more teeth in contact with the metal with a fine pitch blade and a bi-metal blade is a good all round blade for cutting mild steel that will bend and flex to some degree so is less prone to breaking.

### Outcome 2

Select and use engineering hand tools to meet task requirements.

Range evidence is required of a minimum of three hand tools from each category.

### Evidence requirements

2.1 Hazards associated with hand tool use are identified in accordance with hand tool type; and workplace procedures or accepted industry practice.

2.2 Hand tools are selected in accordance with workplace procedures or accepted industry practice.

2.3 Hand tools are used to meet task requirements in accordance with workplace procedures or accepted industry practice.

**Outcome 3**

Care for engineering hand tools.

Range evidence is required of a minimum of three hand tools from each category.

**Evidence requirements**

3.1 Hand tools are inspected for damage and any faults found are reported in accordance with workplace procedures.

3.2 Hand tools are serviced and stored in accordance with workplace procedures or accepted industry practice.

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| **Planned review date** | 31 December 2021 |

**Status information and last date for assessment for superseded versions**

| Process | Version | Date | Last Date for Assessment |
|---|---|---|---|
| Registration | 1 | 26 October 1994 | 31 December 2011 |
| Revision | 2 | 14 April 1997 | 31 December 2011 |
| Revision | 3 | 29 May 1997 | 31 December 2011 |
| Revision | 4 | 5 January 1999 | 31 December 2011 |
| Revision | 5 | 6 October 1999 | 31 December 2011 |
| Revision | 6 | 23 May 2001 | 31 December 2011 |
| Review | 7 | 19 August 2004 | 31 December 2016 |
| Review | 8 | 17 November 2011 | 31 December 2021 |
| Review | 9 | 15 September 2016 | N/A |

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| **Consent and Moderation Requirements (CMR) reference** | 0013 |

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 Competenz qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.