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| Title | Demonstrate knowledge of safety, health, risk assessment, and hazard ID and control on an engineering worksite | | |
| Level | 3 | Credits | 3 |

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| Purpose | People credited with this unit standard are able to demonstrate and apply knowledge of: the Health and Safety at Work Act 2015 to ensure safe work practices; risk assessment, and hazard identification and control on an engineering worksite; and the permit to work system. |
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| Classification | Mechanical Engineering > Engineering Core Skills |
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| Available grade | Achieved |
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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.

Engineering worksite refers to the place work, which could be a mechanical engineering or fabrication workshop building or a remote worksite.

Permit to work refers to a formal written system used to control certain types of work that are potentially hazardous.

Risk matrix refers to a matrix that is used during risk assessment to define the overall levels of risk as the product of the likelihood, severity and consequence of an event occurring.

Workplace procedures refers 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.

- 3 Assessment information
Examples/evidence given must be within the context of mechanical engineering or fabrication and must meet applicable workplace procedures and accepted industry practice.

Outcomes and evidence requirements

Outcome 1

Demonstrate knowledge of the Health and Safety at Work Act 2015 to ensure safe work practices on an engineering worksite.

Evidence requirements

- 1.1 The difference between immediate safety hazards and long term health hazards are described with reference to examples from an engineering worksite.
- 1.2 Terms are interpreted according to the Health and Safety at Work Act 2015.
- Range terms – worker, person conducting a business or undertaking (PCBU), hazard, reasonably practicable.
- 1.3 Rights of a worker are described in accordance with health and safety rules and regulations.
- Range rights – environment, facilities, training, information and support; contribution to health and safety, PPE, access to health and safety representation, stopping work.
- 1.4 Responsibilities of a worker are described in accordance with the Health and Safety at Work Act 2015 and supporting regulations.
- Range responsibilities – health and safety of self and others; compliance with instructions, policies and procedures.
- 1.5 Responsibilities of a PCBU are described in accordance with the Health and Safety at Work Act 2015 and supporting regulations.
- Range responsibilities – primary duty of care of workers, risk to health and safety of others.

Outcome 2

Demonstrate and apply knowledge of risk assessment, and hazard identification and control on an engineering worksite.

Evidence requirements

- 2.1 The elements of risk are described, and their interaction in overall risk assessment explained with reference to a risk matrix.
- Range elements of risk – likelihood, level, consequence.

2.2 Sources of harm to people on an engineering worksite are described in terms of physical and mental effects on the health and well-being of workers.

Range sources of harm include but are not limited to – powered machinery, hot metal from welding or heat treatment, manual handling, confined spaces, workplace noise, fumes, dust, temperature;
effects include but are not limited to – injury, acute and chronic health effects, quality of life, stress.

2.3 Methods to identify risk and hazards are described in terms of when they are used and how they contribute to health and safety on engineering worksites.

Range examples of methods – task analysis, fault tree analysis, accident and incident investigations;
evidence is required of three methods.

2.4 Task analysis is carried out for a given task to identify risks and hazards on an engineering worksite, and control measures are described.

Outcome 3

Demonstrate knowledge of the permit to work system.

Evidence requirements

3.1 The permit to work system is described with reference to what it is and how it contributes to health and safety in an engineering worksite.

3.2 Permits to work are completed for given tasks.

Range evidence is required of three different tasks.

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| Planned review date | 31 December 2021 |
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Status information and last date for assessment for superseded versions

| Process | Version | Date | Last Date for Assessment |
|--------------|---------|-------------------|--------------------------|
| Registration | 1 | 15 September 2016 | N/A |

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| Consent and Moderation Requirements (CMR) reference | 0013 |
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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 Competenz qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.