

Title	Demonstrate and apply knowledge of good work practices when servicing simple components under supervision		
Level	2	Credits	3

Purpose	People credited with this unit standard are able to: demonstrate knowledge of good dismantling, inspecting, and assembling practices for simple components; and dismantle, clean; inspect; assemble, and test simple components under supervision.
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Classification	Mechanical Engineering > Engineering Core Skills
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Available grade	Achieved
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Entry information	
Critical health and safety prerequisites	Unit 21911, <i>Demonstrate knowledge of safety on engineering worksites</i> ; Unit 21912, <i>Apply safe working practices on an engineering worksite</i> ; or demonstrate equivalent knowledge and skills.

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.
Good work practices – safe, efficient, and effective routine work practices that are generally accepted by an industry sector. These may include standard operating procedures such as: a series of specific steps to complete a job, health and safety practices, care and use of tools and equipment, use of personal protective equipment, communications, and reporting. They may also include compliance with quality standards, manufacturer's instructions, and workplace policies and procedures covering: housekeeping, personnel hygiene, drug and alcohol use, computer and internet use, and privacy.
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.

Under supervision refers to working under the direction of a suitably qualified tradesman or manager who oversees the learner and is responsible for ensuring that the quality of work meets the required standard.

3 Range

Examples of the tasks involving simple components may include – replacing a drive belt or chain, removing and refitting of guards to enable cleaning or servicing of workshop equipment, replacing bearings; evidence is required of four different tasks.

4 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. Numerous reference texts and training manuals on maintenance procedures and practices 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 good dismantling, inspecting, and assembling practices for simple components.

Evidence requirements

1.1 Factors that contribute to safety and quality of work are described.

Range factors include but are not limited to – a clean, tidy and organised workspace; using the correct tool for the job; a methodical approach; knowing personal limitations.

1.2 The effects of over and under tightening fasteners are described.

1.3 The process of tightening fasteners using a torque wrench is described.

Range process of tightening includes – obtaining torque loading figures, setting and using a torque wrench, sequence of tightening; types of torque wrench – break-back, dial.

1.4 Checks to be carried out prior to dismantling are described.

Range checks include but are not limited to – isolation, pressure, stored energy, heat.

Outcome 2

Dismantle and clean simple components under supervision.

Evidence requirements

- 2.1 Hazards associated with the task are identified and methods to eliminate or minimise those hazards are taken.
- 2.2 Components and supporting information are prepared.
- Range examples of supporting information – manufacturer's specifications, repair standards, parts catalogue, drawings.
- 2.3 Tools and procedures for dismantling are identified and verified with supervisor.
- 2.4 Components are dismantled in accordance with manufacturer's recommendations, workplace procedures and/or accepted industry practice.
- 2.5 Components are cleaned in accordance with manufacturer's recommendations, workplace procedures and/or accepted industry practice.
- Range examples of cleaning methods – use of rag or brush, use of approved cleaning agents.
- 2.6 Cleaning agents are disposed of in accordance with workplace procedures and legislative requirements.

Outcome 3

Inspect simple components under supervision.

Evidence requirements

- 3.1 Components are inspected for conformance to specification, and verified with supervisor.
- Range examples of inspection techniques – use of simple measuring devices such as rule; go/no go gauge; visual or dimensional comparison with approved sample; picture or diagram; evidence is required of a minimum of three different inspection techniques.
- 3.2 Any faults found are reported or repaired in accordance with manufacturer's recommendations, workplace procedures, and/or accepted industry practice.

Outcome 4

Assemble and test simple components under supervision.

Evidence requirements

- 4.1 Components are assembled in accordance with manufacturer's recommendation, workplace procedures and/or accepted industry practice, and verified with supervisor.
- 4.2 Components and fasteners are tightened to correct torque loading, and locking devices fitted if required according to workplace procedures and/or accepted industry practice, and verified with supervisor.
- 4.3 Assembled components are tested to ensure conformance with specification, and verified with supervisor.

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	8 December 2016	N/A

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 (CMRs). 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.