

Title	Demonstrate knowledge of fasteners used in mechanical engineering		
Level	2	Credits	1

Purpose	People credited with this unit standard are able to: identify fasteners commonly used in mechanical engineering and outline their uses; and demonstrate knowledge of threaded fasteners.
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Classification	Mechanical Engineering > Engineering Core Skills
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Available grade	Achieved
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Guidance Information

Definitions

Grade markings – markings on steel bolts used to indicate the tensile strength and other mechanical properties of the bolt. Commonly used markings are ISO Classes 8.8 and 10.9, and, for imperial bolts, SAE Grades 2, 5, and 8.

Industry practice – safe and sound trade practice generally accepted by competent persons within the mechanical engineering industry.

Outcomes and performance criteria

Outcome 1

Identify fasteners commonly used in mechanical engineering and outline their uses.

Range fasteners – screws and bolts including various types of heads and self-tapping screws; different types of nuts including locking nuts; plain, spring, and serrated washers; various types of pins including cotter pins; circlips; masonry anchors; adhesives.

Performance criteria

- 1.1 Fasteners are visually identified from given physical samples or pictorial representations.
- 1.2 Uses of fasteners are outlined with reference to mechanical engineering applications.

Outcome 2

Demonstrate knowledge of threaded fasteners.

Performance criteria

- 2.1 The principles of bolted joints are outlined with reference to forces and locking mechanisms.
- 2.2 Grade markings are identified by inspection.
- Range ISO – Classes 8.8 and 10.9;
Imperial – SAE Grades 2, 5, and 8.
- 2.3 The use of torque wrenches in the installation of threaded fasteners is explained in accordance with industry practice.
- 2.4 Methods for identifying securely locked threaded fasteners are outlined in accordance with industry practice.

Replacement information	This unit standard was replaced by unit standard 29674.
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This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	22 September 2005	31 December 2016
Review	2	17 November 2011	31 December 2021
Review	3	8 December 2016	31 December 2021
Rollover	4	16 December 2021	31 December 2022

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>.