Title	**Demonstrate and apply knowledge of keys and pins**		
Level	**3**	**Credits**	**5**

Purpose	This unit standard, intended for on job assessment, is for people training to work in engineering trade roles that require fitting of keys and pins. People credited with this unit standard are able to demonstrate knowledge of keys and pins, check key and keyway assembly dimensions, check pin and pin hole assembly dimensions, and fit keys and pins.

Classification	Mechanical Engineering > Engineering Machining and Toolmaking

Available grade	Achieved

Prerequisites	Unit 21912, *Apply safe working practices on an engineering worksite*, or demonstrate equivalent knowledge and skills.

Guidance Information

1 References
Health and Safety at Work Act 2015.
Culley, Ron, ed. *Fitting and Machining.* ISBN 0724138196 (Melbourne: RMIT Publishing, 2009).

2 Definitions
Accepted industry practice – approved codes of practice and standardised procedures accepted by the wider mechanical engineering industry as examples of best practice.
Specifications – detail that defines an object being made; commonly communicated by annotated and dimensioned drawings; by written description, or by other communication media. External references may also be used to specify objects such as tables or industry standards.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of keys and pins.

Performance criteria

1.1 Key types are identified and described with reference to features and uses.

Range plain tapered, gib head tapered, feather, sliding, Woodruff, saddle, scotch.

1.2 The use of tables to determine size of parallel keys and keyways is explained.

1.3 The method of hand fitting parallel and gib keys is described.

1.4 Pin types are identified and described with reference to features and uses.

Range taper, grooved, spring, shear, dowel.

1.5 The use of tables to determine size of spring and dowel pins is described.

1.6 The method of stepped drilling, and reaming of taper pin holes is described.

Outcome 2

Check key and keyway assembly dimensions.

Range for assemblies using two key types from performance criterion 1.1.

Performance criteria

2.1 Keyway and key dimensions are measured and confirmed with specifications.

Range depth of shaft keyway, height of hub keyway, overall height of keyway in relation to key, width of keyway, use of tables.

2.2 Key assembly dimensions are verified with supervisor before fitting.

Outcome 3

Check pin and pin hole assembly dimensions.

Range for assemblies using two pin types from performance criterion 1.4.

Performance criteria

3.1 Pin and pin hole dimensions are measured and confirmed with specifications.

Range diameter of pin hole, diameter of pin, depth of hole if blind holes, use of tables.

3.2 Pin assembly dimensions are verified with supervisor before fitting.

Outcome 4

Fit keys and pins.

Performance criteria

4.1 Keys are fitted to meet job requirements in accordance with accepted industry practice.

Range two key types from the range in performance criterion 1.1.

4.2 Pins are fitted to meet job requirements in accordance with accepted industry practice.

Range two pin types from the range in performance criterion 1.4.

4.3 Keys and pins are fitted without damage to components.

Planned review date	31 December 2022

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	14 December 2017	N/A

Consent and Moderation Requirements (CMR) reference	0013

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.

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.