

Title	Dismantle, inspect, and assemble component parts within assemblies		
Level	3	Credits	6

Purpose	<p>This unit standard is for people working in mechanical engineering trades in maintenance, assembly, and inspection related work.</p> <p>People credited with this unit standard are able to prepare to dismantle; dismantle assemblies and clean component parts; inspect and assemble component parts; and test assemblies.</p>
----------------	---

Classification	Mechanical Engineering > Mechanical Assembly
-----------------------	--

Available grade	Achieved
------------------------	----------

Prerequisites	Unit 29652, <i>Demonstrate knowledge of safety, health, risk assessment, and hazard ID and control on an engineering worksite</i> , or demonstrate equivalent knowledge and skills.
----------------------	---

Guidance Information

1 References

Health and Safety at Work Act 2015.

SAA/SNZ HB1:1994 *Technical drawing for students*, Standards New Zealand.
 Boundy, A; *Engineering Drawing, 8th edition*. McGraw-Hill Australia, 2011; ISBN 0071016767.

2 Definitions

Accepted industry practice – approved codes of practice and standardised procedures accepted by the wider mechanical engineering industry sectors as examples of best practice.

Assembly – a group of component parts that are fitted together to form a larger object.

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.

Workplace procedures – procedures used by the organisation carrying out the work and applicable to the tasks being carried out. Examples are – 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 Related unit standards

This unit standard is one of a servicing and fitting set that is intended to be assessed in the following order:

- Unit 29676, *Demonstrate and apply knowledge of good work practices when servicing simple components under supervision* (Level 2); a basic introductory standard assessed under supervision.
- Unit 30438, *Dismantle, inspect, and assemble component parts within assemblies* (Level 3); covers dismantling and assembly for all engineering trades, typically using measuring equipment such as feeler gauges, vernier callipers, and dial indicators.
- Unit 30439, *Assemble, fit and test precision components* (Level 4); covers the application of fits and tolerances using precision measuring equipment.

Outcomes and performance criteria

Outcome 1

Prepare to dismantle assemblies.

Range examples of assemblies are – valves (gate, ball, and diaphragm), slide ways, guillotine blades, actuators, simple gearboxes, mechanical linkage assemblies, clutches, brake systems.
evidence is required for two assemblies.

Performance criteria

1.1 Tools and equipment, assembly documentation, and materials are prepared in accordance with job requirements.

Range examples of documentation are – manufacturer's instructions, drawings and specifications, parts documentation.

1.2 Procedure for dismantling is determined in accordance with manufacturer's instructions or accepted industry practice.

Outcome 2

Dismantle assemblies and clean components.

Range two assemblies from outcome 1.

Performance criteria

2.1 Assemblies are dismantled and components are identified in accordance with manufacturer's instructions or accepted industry practice.

2.2 Components are cleaned in accordance with accepted industry practice.

Range examples of cleaning methods are – hand, spray, immersion, ultrasonic.

Outcome 3

Inspect and assemble components.

Range two assemblies from outcome 2.

Performance criteria

3.1 Components are inspected for conformance with specification.

Range examples are – visual, dimensional, non-destructive testing.

3.2 Replacement or repair of any out-of-specification components is actioned in accordance with workplace procedures.

3.3 Components are assembled in accordance with manufacturer's documentation or accepted industry practice.

3.4 Measuring equipment is used to check components in accordance with assembly requirements.

Range examples are – feeler gauge, vernier callipers, dial test indicator.

Outcome 4

Test assemblies.

Range two assemblies from outcome 3.

Performance criteria

4.1 Assemblies are tested and adjusted where necessary to confirm operational function in accordance with specification or accepted industry practice.

4.2 Assembly test records are documented in accordance with workplace procedures.

Replacement information	This unit standard replaced unit standard 2406.
--------------------------------	---

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	20 July 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.