

Title	Assemble and join light fabrication materials		
Level	4	Credits	20

Purpose	<p>This workplace unit standard is intended for people training to be engineering light fabricators.</p> <p>People credited with this unit standard are able to assemble and join light fabrication materials, and inspect the completed assemblies.</p>
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Classification	Mechanical Engineering > Engineering - Fabrication
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Available grade	Achieved
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Guidance Information

- 1 References

Health and Safety at Work Act 2015.
Accident Compensation Corporation and Department of Labour. *Metal Industry Guidelines for Safe Work*. Wellington: ACC, 2007. Available from <http://www.acc.co.nz>.
- 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.

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 Materials and joining methods

Examples of materials are – sheet, light structural sections, angles, channels, pipes, tubes.

Examples of joining methods are – self-secured joints, all types of fastenings, adhesives, tack welding, sealants, as used in the fabrication industry.
- 4 Related unit standards

This unit standard is one of a comprehensive set of fabrication unit standards. Other available related unit standards can be found by searching the Directory of

Assessment Standards (DAS) on the NZQA website <http://www.nzqa.govt.nz> in the Engineering - Fabrication domain.

5 Timeframe

All activities are expected to be completed within commercially acceptable timeframes.

Outcomes and performance criteria

Outcome 1

Assemble and join light fabrication materials.

Range material thickness – 0.4-3mm.
Six unique projects; three joining methods;
welding for assembly purposes is limited to tack welding.

Performance criteria

1.1 Work is planned in accordance with job requirements.

Range work requirements, materials, tools and equipment, work sequences, identification of potential problems.

1.2 Workplace safety procedures are followed.

Range examples are – use of personal protective equipment, checking of equipment for faults, use of fume extraction equipment, elimination of risk of fire or explosion, protection from arc radiation.

1.3 Materials are assembled and joined in accordance with specifications and workplace procedures.

Range may include jigs and fixtures.

1.4 Datum points and lines are used to aid assembly in accordance with specifications and workplace procedures.

1.5 Assembly tools and machinery are used in accordance with accepted industry practice.

1.6 Distortions are corrected by mechanical or thermal means to meet specifications.

1.7 Tools, machines and equipment are cleaned and waste materials disposed of in accordance with workplace procedures.

Outcome 2

Inspect the completed assemblies.

Range assemblies from outcome 1.

Performance criteria

2.1 Assemblies are inspected for compliance with specifications and any deviations are rectified.

Range visual examination, tolerance checks, dimensional checks.

2.2 Completion of work is reported in accordance with workplace procedures.

Replacement information	This unit standard and unit standard 25701 replaced unit standard 2420 and unit standard 2424.
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Planned review date	31 December 2022
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	17 July 2009	31 December 2022
Review	2	20 July 2017	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>.

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.