

<b>Title</b>	<b>Manually produce and interpret marine system engineering sketches</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>5</b>

<b>Purpose</b>	People credited with this unit standard are able to manually produce and interpret marine system engineering sketches.
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<b>Classification</b>	Boating Industries > Boatbuilding
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<b>Available grade</b>	Achieved
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## Guidance Information

### 1 Definitions

*Aided* refers to producing two-dimensional engineering sketches with the aid of instruments such as rulers, set-squares, and compasses, and requiring the precise calculations of angles and dimensions.

*Freehand* refers to producing two-dimensional engineering sketches without the aid of guiding instruments, and involving the estimation of angles and dimensions.

*Interpretation* refers to the explanation in practical terms of features shown graphically in the sketch. Typically, this would involve re-sketching the object in an alternative projection.

*Job specifications* refers to the standard requirements of the job being undertaken.

### 2 Assessment information

Items to be used for assessment of sketching and interpretation may include hydraulic cylinders, mounting brackets, guards, jigs, duct transitions, pipe joints, bolted flanged joints, turned components, and assemblies of typically no more than five major parts.

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## Outcomes and performance criteria

### Outcome 1

Manually produce marine system engineering sketches.

Range evidence of two freehand and two aided sketches is required.

### Performance criteria

1.1 Items to be sketched are measured.

1.2 Sketches are produced with dimensions and related notes in accordance with job specifications.

**Outcome 2**

Interpret marine system engineering sketches.

Range evidence of two interpreted sketches is required.

**Performance criteria**

2.1 Sketches, baseline, datum points, dimensions, and related notes are interpreted to meet job specifications.

<b>Planned review date</b>	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**Status information and last date for assessment for superseded versions**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	14 December 2017	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0136
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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 the NZ Marine and Composites Industry Training Organisation [training@nzmarine.com](mailto:training@nzmarine.com) if you wish to suggest changes to the content of this unit standard.