

<b>Title</b>	<b>Cut steel using the manual gas cutting process</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>2</b>

<b>Purpose</b>	<p>This unit is for people using manual gas cutting process with portable equipment.</p> <p>People credited with this unit standard are able to: prepare to cut steel using the manual gas cutting process; and cut steel using the manual gas cutting process.</p>
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<b>Classification</b>	Mechanical Engineering > Welding
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<b>Available grade</b>	Achieved
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<b>Prerequisites</b>	Unit 33135, <i>Demonstrate knowledge of safety and health while welding and thermal cutting</i> , or demonstrate equivalent knowledge and skills.
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## Guidance Information

### 1 Legislation and references

Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the:

Health and Safety at Work Act 2015.

WorkSafe Good Practice Guide “Health and Safety in Welding.” Available at:

<https://www.worksafe.govt.nz/assets/dmsassets/WKS-13-Welding-GPG.pdf>.

Weld Australia (formerly Welding Technology Institute of Australia (WTIA) Technical Note 7 – Health and Safety in Welding. Available at: [Product Details Weld Australia Member Portal](#).

Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.

### 2 Definitions

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

*Gas cutting* – oxygen cutting using a fuel gas such as acetylene or liquid petroleum gas (LPG).

*Industry standard* – Class 3 of WTIA (Weld Australia, Formally known as Welding Technology Institute of Australia) Technical Note 5, or worksite equivalent.

*Workplace procedures* – organisation policies and procedures that are documented in memo, electronic, or manual format and available in the workplace, and are consistent with manufacturer's requirements. They may include but are not limited to – standard operating procedures, site specific procedures, site safety procedures, equipment operating procedures, quality assurance procedures, product quality specifications, references, approved codes of practice, housekeeping standards, environmental considerations, on-site briefings, supervisor's instructions, and procedures to comply with legislative and local body requirements relevant to the industry sector.

### 3 Assessment information

Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with legislative requirements and workplace procedures, and meet accepted industry practice. This includes the knowledge, use and maintenance of relevant tools and equipment.

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## Outcomes and performance criteria

### Outcome 1

Prepare to cut steel using the manual gas cutting process.

#### Performance criteria

- 1.1 Equipment is assembled in accordance with manufacturer's instructions.
- 1.2 Consumables are selected in accordance with cutting requirements.  
Range gasses, tips.
- 1.3 Steel is positioned and supported for cutting in accordance with accepted industry practice.
- 1.4 Cutting sequence is planned to minimise steel distortion in accordance with accepted industry practice.
- 1.5 Cutting parameters are established in accordance with cut type, steel configuration, thickness, and equipment capability.  
Range parameters – tip size, gas pressures, flame type, travel speed.

### Outcome 2

Cut steel using the manual gas cutting process.

Range 5 cuts including sheet or plate, pipe, sections, hole piercing, bevelling.

**Performance criteria**

2.1 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.

2.2 Steel is cut to industry standard in accordance with workplace procedures.

2.3 Cuts are evaluated using acceptance levels in industry standard by visual examination. Unsatisfactory cuts are corrected in accordance with accepted industry practice.

Range examples of typical imperfections are – gouges, top edge melting, cut not square or straight, excessive adhering slag.

<b>Replacement information</b>	This unit standard and unit standard 30280 replaced unit standard 2683.
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<b>Planned review date</b>	31 December 2027
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	20 July 2017	31 December 2025
Review	2	26 January 2023	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	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 Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council [qualifications@hangaarorau.nz](mailto:qualifications@hangaarorau.nz) if you wish to suggest changes to the content of this unit standard.