



Australian Government

AURVTW007 Carry out oxyacetylene thermal heating and cutting on vehicle body sections

Release: 1

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Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes required to set up an oxyacetylene plant, follow safety requirements, adjust gauges to recommended working pressures, and conduct thermal heating and cutting. It involves preparing for the task, identifying and adjusting flame appropriate to thermal heating and cutting requirements, selecting and using suitable personal protective equipment (PPE), performing oxyacetylene thermal heating and cutting to given instructions, and completing workplace processes and documentation.

It applies to those working in the automotive service and repair industry.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Competency Field

Vehicle Body

Unit Sector

Technical - Welding, Grinding, Machining and Soldering

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold and italicised text is used, further information is detailed in the range of conditions section.
1. Prepare for the job	1.1 Job requirements are determined from workplace instructions 1.2 Equipment manufacturer operating procedures and workplace procedures are accessed and interpreted

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold and italicised text is used, further information is detailed in the range of conditions section.
	1.3 Materials for oxyacetylene thermal heating and cutting are selected and inspected for quality 1.4 Hazards associated with the work are identified and risks are managed 1.5 Tools and equipment and PPE are selected and checked for serviceability 1.6 Work is planned to minimise waste and use time efficiently
2. Conduct thermal heating and cutting activities	2.1 Work area is prepared according to workplace instructions and workplace procedures 2.2 Oxyacetylene equipment is set up, gauges and pressures are set, and flames are adjusted according to equipment manufacturer operating procedures and workplace procedures 2.3 Metal temperatures are monitored using a range of methods 2.4 Thermal heating and cutting are carried out according to safety and environmental requirements and without causing damage to vehicle or components
3. Complete work processes	3.1 Final inspection is made to ensure work meets workplace expectations and component is presented ready for use 3.2 Work area is cleaned, waste and non-recyclable materials are disposed of, and recyclable material is collected and stored 3.3 Tools and equipment are checked, maintained and reported if faulty, and stored according to workplace procedures 3.4 Workplace documentation is processed according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance and are not explicit in the performance criteria.

Skills	Description
Learning skills to:	locate appropriate sources of information efficiently.
Writing skills to:	legibly and accurately fill out workplace documentation.
Oral communication skills to:	- clarify instructions and procedures - clearly report quality issues and job outcomes.

Numeracy skills to:	identify and set oxyacetylene gas working pressure and gauges.
Planning and organising skills to:	plan own work requirements and prioritise actions to achieve required outcomes and ensure tasks are completed within workplace timeframes.
Technology skills to:	use specialist oxyacetylene equipment.

Range of Conditions

This section specifies work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Bold italicised wording, if used in the performance criteria, is detailed below.

<i>Tools and equipment</i> must include:	- oxyacetylene plant - thermal heating and cutting equipment.
<i>Methods</i> must include at least one of the following:	- colour - heat crayon - temperature gauge.
<i>Safety and environmental requirements</i> must include:	- work health and safety (WHS), and occupational health and safety (OHS) requirements, including procedures for: - selecting and using PPE when working with oxyacetylene equipment - using specialist thermal heating and cutting tools and equipment - manually handling vehicle components and heating and cutting equipment - identifying and controlling hazards - environmental requirements, including procedures for trapping, storing and disposing of waste materials.

Unit Mapping Information

Equivalent to AURVTW2007 Conduct oxy-acetylene, thermal heating and cutting

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b4278d82-d487-4070-a8c4-78045ec695b1>

Assessment Requirements for AURVTW007 Carry out oxyacetylene thermal heating and cutting on vehicle body sections

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Performance Evidence

Before competency can be determined, individuals must demonstrate they can perform the following according to the standard defined in this unit's elements, performance criteria, range of conditions and foundation skills:

- carry out oxyacetylene thermal heating and cutting on three different vehicle body sections.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS), and occupational health and safety (OHS) requirements relating to carrying out oxyacetylene thermal heating and cutting on vehicle body sections, including procedures for:
 - selecting and using personal protective equipment (PPE) when working with oxyacetylene equipment
 - using specialist thermal heating and cutting tools and equipment
 - manually handling vehicle components and heating and cutting equipment
 - identifying and controlling hazards
- environmental requirements, including procedures for trapping, storing and disposing of waste materials
- equipment manufacturer operating procedures
- use and operation of oxyacetylene plant, including procedures for setting and adjusting pressure and gauges
- oxyacetylene flame identification and applications, including:
 - natural
 - carburising
 - oxidising

- maintenance requirements of oxyacetylene equipment, including checking for oxyacetylene gas leaks from gauges, fittings and hoses
- methods, techniques and procedures for oxyacetylene thermal heating and cutting
- procedures for protecting vehicle and components during oxyacetylene thermal heating and cutting work
- procedures for final inspection of oxyacetylene thermal heating and cutting work.

Assessment Conditions

Assessors must satisfy NVR/AQTF assessor requirements.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessment must include direct observation of tasks.

Where assessment of competency includes third-party evidence, individuals must provide evidence that links them to having used oxyacetylene thermal heating and cutting on vehicle body sections, e.g. work orders.

Assessors must verify performance evidence through questioning on skills and knowledge to ensure correct interpretation and application.

The following resources must be made available:

- automotive repair workplace or simulated workplace
- workplace instructions
- PPE required to conduct oxyacetylene thermal heating and cutting
- oxyacetylene plant
- three different vehicle body sections requiring thermal heating and cutting
- oxyacetylene safety equipment and operating instructions
- tools, equipment and materials appropriate for carrying out oxyacetylene thermal heating and cutting.

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