



Australian Government

AURVTW002 Carry out oxyacetylene brazing of components

Release: 1

AURVTW002 Carry out oxyacetylene brazing of components

Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes required to carry out oxyacetylene brazing. It involves preparing for the task, selecting, setting up and operating an oxyacetylene welding plant, setting gas pressures, identifying and adjusting required flame appropriate to brazing requirements, selecting and using suitable personal protective equipment (PPE), performing oxyacetylene brazing to given specifications, 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 to braze components	1.1 Job requirements are determined from workplace instructions 1.2 Technical information is accessed and interpreted to enable brazing to be performed according to manufacturer specifications 1.3 Hazards associated with the work are identified and risks are

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.
	managed 1.4 Tools and equipment, including PPE, are selected and checked for serviceability 1.5 Work is planned to identify brazing methods, minimise waste, and use time efficiently
2. Complete brazing procedures	2.1 Oxyacetylene equipment is set up, gauges and working pressures are set, and flames are adjusted according to equipment manufacturer operating procedures and workplace procedures 2.2 Brazing operations are conducted according to job requirements, workplace procedures, and safety and environmental requirements 2.3 Brazing procedures are completed without causing damage to components or systems
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, 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 pressures.
Planning and organising	plan own work requirements and prioritise actions to achieve

Skills	Description
skills to:	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 - hand tools - approved welding glasses.
<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 - using specialist tools and equipment, including approved oxyacetylene brazing glasses - manually handling components and oxyacetylene equipment - identifying and controlling hazards - environmental requirements, including procedures for trapping, storing and disposing of waste materials.

Unit Mapping Information

Equivalent to AURVTW2002 Carry out brazing procedures

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 AURVTW002 Carry out oxyacetylene brazing of components

Modification History

Release	Comment
Release 1	New unit of competency.

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 brazing procedures on the following:
 - butt joint of 1.00 mm steel, 150 mm long
 - fillet joint of 1.00 mm steel, 150 mm long
 - lap joint of 1.6 mm steel, 150 mm long
 - pipe joint of 1.6 mm steel, 50 mm diameter.

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 brazing of components, including procedures for:
 - selecting and using personal protective equipment (PPE)
 - using specialist tools and equipment, including approved oxyacetylene brazing glasses
 - manually handling components and oxyacetylene equipment
 - identifying and controlling hazards
- environmental requirements, including procedures for trapping, storing and disposing of waste materials
- types and application of brazing materials, including fluxes and rods
- use and operation of oxyacetylene plant, including procedures for setting and adjusting pressure and gauges
- oxyacetylene flame identification and applications, including:
 - natural
 - carburising

- oxidising
- basic maintenance procedures for oxyacetylene equipment
- methods and techniques for oxyacetylene brazing
- procedures for reporting faults and material defects
- procedures for final inspection and testing of brazed components.

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 the oxyacetylene brazing activities that they have carried out, 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 use oxyacetylene brazing equipment
- components to be brazed as specified in the performance evidence
- brazing equipment, consumables and materials
- oxyacetylene plant
- tools, equipment and materials appropriate for carrying out oxyacetylene brazing.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b4278d82-d487-4070-a8c4-78045ec695b1>

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b4278d82-d487-4070-a8c4-78045ec695b1>