



**Australian Government**

# **Assessment Requirements for AURVTW001 Carry out manual metal arc welding on components**

**Release: 1**

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## 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 manual metal arc welding (MMAW), including:
  - three bead runs, 150 mm long
  - three pad welds, 150 mm long
  - three butt welds, 150 mm long
  - three lap welds, 150 mm long.

## 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 manual metal arc welding on components, including procedures for:
  - selecting and using personal protective equipment (PPE) when working with MMAW equipment, including approved welding helmet
  - using specialist welding tools and equipment
  - using protective screens and fume extraction system
  - manually handling components and MMAW equipment
  - identifying and controlling hazards
- environmental requirements, including procedures for trapping, storing and disposing of waste materials
- hazards associated with MMAW, including:
  - arc eye and exposure to ultraviolet light
  - metal vapours, welding electrodes and welded components

- molten metal spatter and fire danger
- distortion control techniques, including:
  - bracing
  - pre-setting
  - tacking
  - bolting
  - clamping
  - jigs and fixtures
- material preparation techniques, including characteristics of different metal types
- procedures for setting up and operating MMAW equipment
  - methods and techniques for MMAW, including:
    - weld specifications
    - basic welding symbols
    - types of welding electrodes and their application
    - protection of vehicle electronics
    - weld inspection
    - identification and rectification of weld defects
- procedures for final inspection and testing of welded 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 MMAW 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 for MMAW
- components to be welded as specified in the performance evidence
- welding materials and consumables
- MMAW equipment and operating instructions
- tools, equipment and materials appropriate for carrying out MMAW.

## Links

Companion Volume implementation guides are found in VETNet -

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

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