



Australian Government

**Assessment Requirements for
AURVTW101 Carry out manual metal arc
welding on components**

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with AUR Automotive Retail, Service and Repair Training Package Version 6.0

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- carry out manual metal arc welding (MMAW), including:
 - three bead runs, 200 mm long
 - three pad welds, 200 mm long
 - three butt welds, 200 mm long
 - three lap welds, 200 mm long
 - one T-fillet weld, 200 mm long.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- methods to locate and interpret information required to carry out manual metal arc welding on components, including:
 - manufacturer specifications and procedures or equivalent documentation
 - Australian Standard 1554
- workplace procedures required to carry out manual metal arc welding on components, including:
 - preparing and operating welding equipment
 - non-destructive testing of completed welds
 - establishing the serviceability of tools and equipment
 - documentation procedures
 - housekeeping procedures, including:
 - examination of tools and equipment
 - storage of equipment
 - identification, tagging and isolation of faulty equipment

- disposal of excess materials
- recycling procedures
- workplace health and safety (WHS) 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, including:
 - arc eye and exposure to ultraviolet light
 - metal vapours, welding electrodes and welded components
 - molten metal spatter and fire danger
- environmental requirements relating to carrying out manual metal arc welding on components, including:
 - • procedures for trapping, storing and disposing of waste materials
- 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
 - identification of electrode classifications
 - protection of vehicle electronics
 - weld inspection
 - identification and rectification of weld defects
- procedures for final inspection and testing of welded components.

Assessment Conditions

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.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -

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