



Australian Government

**Assessment Requirements for
AURVTW009 Carry out basic gas metal arc
welding**

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 standards defined in this unit's elements, performance criteria, range of conditions and foundation skills:

- carry out gas metal arc welding (GMAW) on the following steel sections:
 - three butt welds, 150 mm long
 - three fillet welds, 150 mm long
 - three steel exhaust pipe butt welds.

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 basic GMAW, including procedures for:
 - selecting and using personal protective equipment (PPE) when working with GMAW equipment, including approved welding helmet
 - using specialist welding tools and equipment
 - using protective screens and fume extraction system
 - manually handling components and GMAW equipment
 - identifying and controlling hazards
- environmental requirements, including procedures for trapping, storing and disposing of waste materials
- hazards associated with GMAW, including:
 - arc eye and exposure to ultraviolet light
 - molten metal spatter and fire danger
- GMAW principles, including:
 - process of using an electric arc to melt and join metal

- basic construction and operation of welding gun and wire feed unit
- types and application of welding wire and shielding gases
- properties and characteristics of metals to be welded
- types of welds, including:
 - butt welds
 - fillet welds
 - tee joints
 - corner joints
- procedures for protecting vehicle electronics during welding
- GMAW procedures, including:
 - component cleaning and preparation
 - welder current and voltage settings, gas flow rates, wire diameters and wire feed speed
 - wire stick out distance, gun angle between the work pieces and travel angle
- weld testing procedures, including non-destructive testing
- post-weld inspection procedures including, weld defects.

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 basic GMAW they have carried out on components, 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 GMAW, including approved welding helmet
- GMAW welder
- steel sections requiring GMAW as specified in the performance evidence
- tools, equipment and materials appropriate for carrying out basic GMAW.

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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