



Australian Government

AURVTW005 Carry out spot welding

Release: 1

AURVTW005 Carry out spot welding

Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes required to carry out spot welding to replace structural and non-structural vehicle body sections according to original equipment manufacturer (OEM) or authorised agency procedures. It involves preparing for the task, selecting and using spot welding equipment, adjusting spot welder, operating spot welder, selecting and using suitable personal protective equipment (PPE), inspecting and testing weld quality, 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 spot welding	1.1 Job requirements are determined from workplace instructions 1.2 <i>Welding information</i> is accessed and interpreted 1.3 Materials for repairs and replacements are selected and inspected for quality

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.
	1.4 Hazards associated with the work are identified and risks are managed 1.5 Tools and equipment, including personal protective equipment (PPE), are selected and checked for serviceability 1.6 Work area is prepared and work is planned to conduct and test spot welds, minimise waste, and use time efficiently
2. Carry out spot welding activities	2.1 Surfaces are prepared for spot welding and anti-corrosion coatings are applied prior to spot welding 2.2 Welding equipment is set up and adjusted for specific welding job requirement following OEM or authorised agency repair guidelines 2.3 Sample spot welds are performed and destructive tested 2.4 Welding is carried out using welding equipment according to workplace procedures and safety and environmental requirements 2.5 Spot welding is completed without causing damage to components or systems 2.6 Completed spot welds are inspected for quality, and identified faults are rectified as required according to workplace procedures
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.

Skills	Description
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 welder settings.
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 welding 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>Welding information</i> must include:	- OEM or authorised agency repair guidelines - workplace procedures.
<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 for spot welding, including safety glasses - using specialist welding tools and equipment - using protective screens - manually handling vehicle components and welding equipment - identifying and controlling hazards - environmental requirements, including procedures for trapping, storing and disposing of waste materials.

Unit Mapping Information

Equivalent to AURVTW2005 Carry out spot welding 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 AURVTW005 Carry out spot welding

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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 spot welding to three different structural and non-structural vehicle body sections that include 50 spot welds to each
- undertake above work according to original equipment manufacturer (OEM) or authorised agency procedures, and cover different spot weld locations and spot weld sizes.

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 spot welding, including procedures for:
 - selecting and using personal protective equipment (PPE) for spot welding, including safety glasses
 - using specialist welding tools and equipment
 - using protective screens
 - manually handling vehicle components and welding equipment
 - identifying and controlling hazards
- environmental requirements, including procedures for trapping, storing and disposing of waste materials
- OEM or authorised agency repair guidelines and quality requirements
- types of metals that can be spot welded
- types and operation of spot welding equipment covering:
 - set up
 - operation

- methods and techniques for spot welding, including spot welding principles:
 - squeeze time
 - weld time
 - hold time
- procedures for destructive testing of spot welds
- types of spot weld defects, including:
 - shunting
 - splashing
 - insufficient heat
- procedures for final inspection of welding 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 the vehicle spot welds 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
- OEM or authorised agency repair guidelines
- PPE required for spot welding
- spot welder that meets current industry standard
- spot welding consumables
- materials requiring spot welding
- vehicle body sections or components that require the spot welding specified in the performance evidence
- tools, equipment and materials appropriate for carrying out spot welding.

Links

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