



Australian Government

AURVTW105 Carry out spot welding

Release: 1

AURVTW105 Carry out spot welding

Modification History

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

Application

This unit describes the skills and knowledge 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.

This unit 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.

Unit Sector

Vehicle Body Technical - Welding, Grinding, Machining and Soldering

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for spot welding	1.1 Determine job requirements from workplace instructions 1.2 Access and interpret welding information 1.3 Select and inspect materials for repairs and replacements for quality 1.4 Identify hazards associated with the work and manage risks 1.5 Select and check tools and equipment for serviceability 1.6 Prepare work area and plan work to conduct and test spot welds, minimise waste, and use time efficiently
2. Carry out spot welding activities	2.1 Prepare surfaces for spot welding and apply anti-corrosion coatings prior to spot welding

ELEMENTS	PERFORMANCE CRITERIA
	2.2 Set up and adjust welding equipment for specific welding job requirement following OEM or authorised agency repair guidelines 2.3 Perform and destructive test sample spot welds 2.4 Carry out welding using welding equipment according to workplace procedures and safety and environmental requirements 2.5 Complete spot welding without causing damage to components or systems 2.6 Inspect completed spot welds for quality, and rectify identified faults as required according to workplace procedures
3. Complete work processes	3.1 Conduct final inspection according to workplace procedures and confirm vehicle is ready for use 3.2 Clear work area and dispose of or recycle materials according to workplace procedures 3.3 Complete documentation according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Learning	Locates required sources of information efficiently.
Numeracy	Identifies and sets welder settings.
Oral communication	- Clarifies instructions and procedures - Reports quality issues and job outcomes clearly.
Planning and organising	- Plans own work requirements - Prioritises actions to achieve required outcomes - Ensures tasks are completed within workplace timeframes.
Technology	Uses welding equipment.

Unit Mapping Information

Supersedes and is equivalent to AURVTW005 Carry out spot welding.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for AURVTW105 Carry out spot welding

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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 spot welding to at least 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

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 spot welding, including:
 - original equipment manufacturer or authorised agency repair specifications and procedures or equivalent documentation
- workplace procedures required to carry out spot welding, including:
 - establishing 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
- work health and safety (WHS) 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 key features 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

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.

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

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