



Australian Government

AUMATW001 Test vehicle welds ultrasonically

Release: 1

AUMATW001 Test vehicle welds ultrasonically

Modification History

Release	Comment
Release 1	Unit updated to reflect the new standards for Training Packages Replaces AUMATW3001 Test welds ultrasonically

Application

This unit describes the performance outcomes required to inspect, analyse and assess welds on vehicle bodies or components using ultrasonic testing equipment.

It applies to those in an automotive and related component manufacturing environment and involves the application of skills and knowledge at a specialist level.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Competency Field

Common

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 italicised text is used, further information is detailed in the range of conditions section
1. Plan and prepare	1.1 Work instructions, relevant inspection reports, and quality requirements are identified and confirmed with appropriate personnel and applied 1.2 Tools and equipment to carry out tasks are selected and checked for serviceability, and faults are rectified or reported 1.3 Weld test plan is prepared listing proposed weld methods and techniques 1.4 Ultrasonic test equipment is selected and work area is

Elements	Performance Criteria
	prepared for use
2. Analyse and test welds	2.1 Specified welds from various parts of the vehicle body and components are identified and selected 2.2 Welds are visually inspected and analysed, and findings are recorded 2.3 Welds are tested with ultrasonic equipment according to workplace procedures 2.4 Weld breaking points are established and tested with ultrasonic equipment 2.5 Testing sequence is repeated on multiple weld samples 2.6 Test results are recorded and reported according to workplace procedures
3. Complete work processes	3.1 Tools and equipment are cleaned, checked, maintained and stored, and work area is cleaned, according to workplace procedures 3.2 Faulty tools and equipment are identified, tagged and reported to supervisor 3.3 Scrap materials are disposed of or recycled according to workplace procedures and cost-reduction initiatives 3.4 Work sheets and results of ultrasonic weld tests are recorded according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Skills	Description
Reading skills to:	- identify work health and safety (WHS) requirements and workplace procedures relating to ultrasonic weld testing - interpret ultrasonic test equipment instructions and weld testing plan - interpret manufacturer's weld specifications and weld inspection reports.
Writing skills to:	- complete work sheets and ultrasonic test results - prepare weld test and inspection plan - complete faulty equipment tags.
Oral communication skills to:	- communicate identified weld faults - confirm testing requirements

	• speak clearly and directly when presenting ultrasonic test results and rectification options.
Numeracy skills to:	• identify ultrasonic test equipment settings • measure material from specifications • identify weld production quality.
Digital literacy skills to:	• set and use ultrasonic test equipment and instructions.
Initiative skills to:	• adapt to changing work conditions.
Planning and organising skills to:	• manage time when planning and preparing ultrasonic testing • prepare equipment and work area.
Self-management skills to:	• manage test and inspection outcomes.
Problem-solving skills to:	• solve problems particularly in teams in order to meet performance indicators • access, interpret and apply information on workplace procedures and instructions, particularly to ensure correct use of ultrasonic equipment during testing procedures.

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>Workplace procedures</i> must include:	• guidelines for recording and reporting test results • use and maintenance of ultrasonic test equipment • weld quality guidelines • WHS requirements to test vehicle welds ultrasonically.
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Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bd587669-08b3-4cd5-85f0-f9fa0c6304c1>

Assessment Requirements for AUMATW001 Test vehicle welds ultrasonically

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Performance Evidence

Before competency can be determined, individuals must have competently tested welds using ultrasonic equipment on a minimum of two occasions.

Individuals must demonstrate they can:

- locate, interpret and apply ultrasonic weld testing instructions
- follow manufacturer's weld standards and specifications
- comply with work health and safety (WHS) requirements and workplace procedures when conducting ultrasonic testing
- comply with workplace quality requirements
- use ultrasonic equipment safely to test welds
- communicate ultrasonic test requirements with co-workers
- interpret ultrasonic weld test results
- complete work sheets and test results relating to testing vehicle welds ultrasonically.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- WHS requirements when conducting ultrasonic testing
- workplace procedures when conducting ultrasonic testing, including ultrasonic testing procedures
- weld quality standards
- weld terminology
- vehicle welding techniques of metal components
- vehicle specifications.

Assessment Conditions

Assessors must satisfy SNR/AQTF assessor requirements.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Where assessment of competency includes third-party evidence, individuals must provide evidence that links them to vehicle welds they have tested ultrasonically, 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 manufacturing workplace or simulated workplace
- ultrasonic testing equipment and instructions
- welded vehicles or components for testing
- work sheets and test result documents relating to ultrasonic vehicle welds
- workplace procedures and WHS requirements to conduct ultrasonic testing.

Links

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