



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **AUMFTA4005 Analyse a test vehicle for research purposes**

**Release: 1**

## AUMFTA4005 Analyse a test vehicle for research purposes

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit describes the application of the required skills and knowledge to analyse a test vehicle or prototype vehicle for the purpose of testing or trialling the vehicle and/or vehicle component. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.
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### Application of the Unit

<b>Application of the unit</b>	The unit applies to the automotive and related component manufacturing environment and involves application of skills and knowledge to be used within the scope of the person's job and authority.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

<b>Employability skills</b>	This unit contains Employability Skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to analyse vehicle	1.1. Applicable <b><i>legislative, OHS, and organisational</i></b> requirements relevant to the <b><i>analysis of a vehicle for research purposes</i></b> are verified and complied with throughout the work activity 1.2. <b><i>Instructions</i></b> , plans and/or workplace check sheets are read and interpreted to identify processes and materials to complete work tasks 1.3. <b><i>Research objectives</i></b> are identified for test/trial 1.4. <b><i>Preparation of vehicle</i></b> is verified in accordance to test/trial plan 1.5. Required <b><i>analysis parameters</i></b> are identified 1.6. Hazards and risks are identified and assessed 1.7. <b><i>Personal preparation</i></b> is undertaken for test/trial
2. Operate vehicle and monitor environment	2.1. Performance profile is maintained as required for test/trial 2.2. Observations are noted using organisational procedures 2.3. Observations are categorised in accordance with organisational parameters and research objectives
3. Report observations	3.1. Running observations are reviewed and draft report prepared 3.2. Full report is submitted in accordance with organisational procedures 3.3. Vehicle records are maintained/updated and information is processed in accordance with workplace procedures 3.4. Debrief is undertaken by project/test/trial manager/engineer in accordance with organisational procedures

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

#### Required skills

- speak clearly and directly
- apply teamwork to a range of situations
- solve problems particularly in teams paying attention to performance indicators to reflect changed circumstances
- show initiative in adapting to changing work conditions or contexts particularly when working across a variety of work areas
- access, interpret and apply information on relevant organisation policies, procedures and instructions
- manage time when planning, preparing and organising work priorities
- take responsibility for organising own work priorities.

#### Required knowledge

- relevant Occupational Health and Safety and Environmental legislation, regulations, standards and codes of practice and organisation policies and procedures needed to carry out work in a manner which ensures the safety of people, equipment and the environment.
- organisational supply/replenishment systems and processes for materials, equipment and tools
- types of tools and equipment and procedures for their safe use, operation and maintenance
- established communication channels and protocols
- vehicle performance characteristics
- problem identification and resolution
- procedures for the recording, reporting and maintenance of organisation records and information
- industry or organisation licensing arrangements.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>• compliance with relevant legislation, regulations, standards, codes of practice and established safe practices and organisation policies and procedures for operating a test vehicle for research purposes</li> <li>• maintaining a working knowledge of current organisation inventory procedures</li> <li>• working and communicating effectively and positively with others involved in the work</li> <li>• applying, within authority, the requirements of the job or work role in relation to:               <ul style="list-style-type: none"> <li>• preparing for tests or trials</li> <li>• performing tests or trials</li> <li>• preparing reports of results</li> <li>• achieving work quality goals</li> <li>• completing work area housekeeping requirements including the documentation of project activity and process outcomes</li> </ul> </li> <li>• modify activities to cater for variations in organisation context and environment.</li> </ul>
<b>Context of and specific resources for assessment</b>	<ul style="list-style-type: none"> <li>• assessment of the competency should take place in a safe working environment in a passenger motor vehicle manufacturing plant or simulated environment using tools/equipment/machinery required for the production process without undue disruption to the production process</li> <li>• assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• assessment methods must confirm consistency and accuracy of performance (over time and in a range of organisation relevant contexts) together with application of underpinning knowledge</li> <li>• assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its</li> </ul>

**EVIDENCE GUIDE**

	<p>correct interpretation and application</p> <ul style="list-style-type: none"><li>• assessment may be applied under project related conditions (real or simulated) and require evidence of process</li><li>• assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.</li></ul>
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## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

<p><b><i>Legislative requirements</i></b> may include:</p>	<p>Applicable legislation, regulations and codes of practice, including those related to:</p> <ul style="list-style-type: none"> <li>• anti-discrimination</li> <li>• award and enterprise agreements</li> <li>• confidentiality and privacy</li> <li>• duty of care</li> <li>• employee relations</li> <li>• environment protection</li> <li>• equal opportunity</li> <li>• industrial relations</li> <li>• relevant industry codes of practice.</li> </ul>
<p><b><i>OHS requirements</i></b> may include:</p>	<p>Legislation and regulations, organisational safety policies and procedures and may include: the use of personal protective equipment and clothing, rescue services, fire fighting organisation and equipment, first aid equipment, hazard and risk control and elimination, systems covering the use of hazardous materials and substances and manual handling procedures including lifting and carrying.</p>
<p><b><i>Organisational requirements</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• access and equity principles and practices</li> <li>• environmental management (waste disposal, recycling and re-use guidelines)</li> <li>• emergency and evacuation procedures</li> <li>• equipment use procedures</li> <li>• ethical standards</li> <li>• legal obligations</li> <li>• maintenance and storage procedures</li> <li>• OHS requirements</li> <li>• organisational and site guidelines</li> <li>• policies and procedures relating to own role and responsibility</li> <li>• procedural manuals</li> <li>• quality assurance guidelines</li> <li>• quality and continuous improvement processes and standards</li> <li>• recording and reporting guidelines.</li> </ul>

<b>RANGE STATEMENT</b>	
<i>Analysis of a vehicle for research purposes</i> may include:	<ul style="list-style-type: none"> <li>draws on the operator's specific automotive mechanical knowledge, but not on the driving expertise</li> <li>specific outcomes from the operator of a vehicle being analysed within a performance envelope for research purposes</li> <li>difference to those that on board data acquisition equipment is designed to accumulate</li> </ul>
<i>Instructions</i> may include:	<ul style="list-style-type: none"> <li>organisation procedures relating to the use and operation of tools and equipment</li> <li>departmental requirements</li> <li>organisation instructions, including job sheets, plans, specifications, drawings and designs</li> <li>organisation procedures relating to reporting and communications</li> <li>manufacturers' instructions for the use of equipment and materials.</li> </ul>
<i>Research objectives</i> may include:	<ul style="list-style-type: none"> <li>performance outcome(s) of the test vehicle in relation to the component or system being tested/trialled.</li> </ul>
<i>Preparation of vehicle</i> may include:	<ul style="list-style-type: none"> <li>installing into the vehicle the necessary test equipment and monitors for the system or component being tested or trialled.</li> </ul>
<i>Analysis parameters</i> may include:	<ul style="list-style-type: none"> <li>the profile in terms of operational performance that the test/trial designers require for the test/trial to be a success.</li> </ul>
<i>Personal preparation</i> may include:	<ul style="list-style-type: none"> <li>the knowledge or skill implicit in the execution of a procedure required to produce the required test/trial environment. This may be the operation of a test instrument during the test/trial, confirming or renewing knowledge of a sound, operating criteria or road circuit.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Technical
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## Competency field

<b>Competency field</b>	Manufacturing - Passenger Motor Vehicle
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## **Co-requisite units**

Not applicable.