



**Australian Government**

# **AURTTK2001 Use and maintain measuring equipment in an automotive workplace**

**Release 1**

## AURTTK2001 Use and maintain measuring equipment in an automotive workplace

### Modification History

Release	Comment
Release 1	Replaces AURT225667A Use and maintain measuring equipment Performance Criteria, Range Statement and Critical Aspects of Evidence updated to reflect technologies

### Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes required to use and maintain measuring equipment of a non-specialist nature.</p> <p>The unit involves identifying and confirming work requirements, preparing for work, conducting measurements, analysing and documenting outcomes, maintaining equipment, and completing work finalisation processes, including clean-up and documentation.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>
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## Application of the Unit

<b>Application of the unit</b>	<p>Work applies to general automotive retail, service and repair environments of a non-specialist nature.</p> <p>Equipment is used to measure length, width, squareness, flatness, angles, roundness, depth, clearances, run out, pressure, temperature or any measurement that can be taken from analogue or digital devices using imperial and metric measurement.</p> <p>Work requires individuals to demonstrate judgement and problem-solving skills in managing own work activities and contributing to a productive team environment within the scope of this unit. This includes an understanding of the level of work to be performed.</p> <p>This unit should not be selected if the measuring equipment to be used is dedicated to electrical measurements, such as voltage, resistance or current flow.</p>
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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 performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and 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
<p>1. Prepare to undertake measurements</p>	<p>1.1. Nature and scope of work requirements are identified and confirmed</p> <p>1.2. <i>Workplace health and safety (WHS) requirements</i> and appropriate precautions are identified and applied</p> <p>1.3. Procedures and instructions, including workshop manuals and specifications, are sourced and used to determine job requirements</p> <p>1.4. Measuring methods appropriate to the circumstances are selected and prepared according to <i>workplace procedures</i></p> <p>1.5. <i>Measuring equipment</i> is sourced and prepared</p> <p>1.6. Warnings relating to working with precision tools and equipment are observed</p>
<p>2. Conduct measurements and analyse results</p>	<p>2.1. Measurement is conducted according to workplace procedures and equipment manufacturer specifications</p> <p>2.2. Measurement results are compared with manufacturer specifications to indicate compliance or non-compliance</p> <p>2.3. Measurements are documented and recommendations made</p> <p>2.4. Reports are processed according to workplace procedures</p>
<p>3. Maintain measuring equipment</p>	<p>3.1. Information required for equipment maintenance is accessed from manufacturer specifications and interpreted</p> <p>3.2. Measuring equipment is checked against manufacturer recommendations and recommended <i>maintenance methods</i> are confirmed to ensure safe and accurate operating condition</p> <p>3.3. Measuring equipment is maintained and stored according to manufacturer specifications</p> <p>3.4. Equipment checks are completed without causing damage to component or system</p> <p>3.5. <i>Workplace documents</i> are completed according to workplace procedures</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- analytical skills to identify and analyse technical information
- communication skills to:
  - follow verbal and written instructions
  - communicate information relating to the correct and safe use of equipment
- literacy skills to:
  - read and follow original equipment manufacturer (OEM) maintenance information and measuring equipment use
  - read and follow information on operating procedures and OEM repair guidelines
- numeracy skills to read and interpret metric and non-metric systems of measurement
- planning and organising skills to:
  - identify and minimise risk to operator and others
  - contribute to activities that implement and follow workplace procedures
- problem-solving skills to:
  - recognise a workplace problem or a potential problem
  - refer problems outside area of responsibility to appropriate person
- self-management skills to:
  - locate and identify appropriate measuring equipment
  - recognise limitations and seek timely advice
  - follow basic workplace documentation, such as operating procedures
- technical skills to:
  - select measuring equipment appropriate to the task
  - use measuring equipment safely
  - maintain measuring equipment using appropriate techniques
  - calibrate or adjust measuring equipment
  - identify defects in measuring equipment and mark for repair
  - store measuring equipment according to manufacturer and workplace procedures
- technology skills to:
  - use manual, electronic and digital measuring equipment
  - use workplace technology to assist with work practices

#### Required knowledge

- WHS regulations, requirements, equipment and material, including personal safety requirements
- common automotive measurement terminology

## **REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit.

- types of non-specialist measuring equipment and their applications
- measurement procedures
- measuring equipment maintenance procedures
- work organisation and planning processes relating to using measuring equipment

## 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, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy all of the requirements of the performance criteria and required skills and knowledge.</p> <p>A person who demonstrates competency in this unit must be able to:</p> <ul style="list-style-type: none"> <li>• observe safety procedures</li> <li>• communicate effectively with others involved in or affected by the work</li> <li>• select approved measurement methods and techniques</li> <li>• measure dimensions or variables using a range of measuring equipment</li> <li>• accurately interpret measurements</li> <li>• maintain measuring equipment.</li> </ul>
<b>Context of, and specific resources for assessment</b>	<p>Competency is to be assessed in the workplace or a simulated workplace environment that accurately reflects performance in a real workplace setting.</p> <p>Assessment is to occur:</p> <ul style="list-style-type: none"> <li>• using standard workplace practices and procedures</li> <li>• following safety requirements</li> <li>• applying environmental constraints.</li> </ul> <p>Assessment is to comply with relevant:</p> <ul style="list-style-type: none"> <li>• regulatory requirements</li> <li>• Australian standards</li> <li>• industry codes of practice.</li> </ul> <p>The following resources should be made available:</p> <ul style="list-style-type: none"> <li>• material relevant to the use and maintenance of measuring equipment</li> <li>• equipment and tools appropriate to the use and maintenance of measuring equipment</li> <li>• specifications and work instructions.</li> </ul>
<b>Method of assessment</b>	Assessment must satisfy the endorsed Assessment Guidelines of

<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, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
	<p>this Training Package.</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with the application of required skills and knowledge.</p> <p>Assessment methods must be by direct observation of tasks and include questioning on required skills and knowledge to ensure correct interpretation and application.</p> <p>Competence in this unit may be assessed in conjunction with other units which together form part of a holistic work role.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate the needs of diverse clients.</p> <p>Assessment processes and techniques must be culturally sensitive and appropriate to the language, literacy and numeracy capacity of the candidate and the work being performed.</p>



## 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, if used in the performance criteria, is detailed below. 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) may also be included.

***Workplace health and safety (WHS) requirements:***

- are those prescribed under legislation, regulations, codes of practice, and workplace policies and procedures
- may include:
  - protective clothing and equipment
  - use of tools and equipment
  - handling of material
  - use of fire-fighting equipment
  - first aid equipment
- hazard control, including control of hazardous materials and toxic substances.

***Workplace procedures*** may include:

- conducting operational risk assessments and treatments associated with vehicle movement
- site-specific instructions
- safe work procedures relating to the use and maintenance of measuring equipment
- workplace policies and practices
- instructions issued by authorised workplace or external persons
- written and graphical instructions
- signage
- work schedules, plans and specifications
- work bulletins or memos
- diagrams or sketches
- vehicle workshop manuals and information.

***Measuring equipment*** may include:

- internal and external micrometres
- Vernier calipers
- dial gauges
- depth gauges
- steel rulers
- tape measures
- squares
- straight edges
- dividers
- protractors

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	<ul style="list-style-type: none"> <li>• feeler gauges</li> <li>• thermometers</li> <li>• pressure gauges.</li> </ul>
<i>Maintenance methods</i> may include:	<ul style="list-style-type: none"> <li>• routine maintenance to tools and equipment as per schedules</li> <li>• calibrating or adjusting measuring equipment</li> <li>• minor repairs to tools and equipment</li> <li>• documenting or tagging equipment as faulty or out-of-service.</li> </ul>
<i>Workplace documents</i> may include:	<ul style="list-style-type: none"> <li>• fault or defect reporting documents</li> <li>• out-of-service reports</li> <li>• job or organisation work specifications and requirements.</li> </ul>

**Unit Sector(s)**

<b>Competency field</b>	Mechanical Miscellaneous
<b>Unit sector</b>	Technical – Tools and Equipment

**Custom Content Section**

Not applicable.