



**Australian Government**

# **AURVTN2009 Clean vehicle engine and engine compartment**

**Release 1**

## AURVTN2009 Clean vehicle engine and engine compartment

### Modification History

Release	Comment
Release 1	<p>Replaces AURV231786BA Wash/clean vehicle engine and engine compartment</p> <p>Unit code updated to meet policy requirements</p> <p>Minor changes to unit title</p> <p>Reference to OHS legislation replaced with new WHS legislation</p> <p>Licensing statement added to unit descriptor</p>

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit of competency covers the skills and knowledge required to wash/clean vehicle engine, engine compartment and components.</p> <p>Licensing, legislative, regulatory or certification requirements may apply to this unit in some jurisdictions. Users are advised to check with the relevant regulatory authority.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>The unit includes identification and confirmation of work requirements, preparation for work, washing/cleaning and drying of vehicle engine, engine compartment and components, and completion of work finalisation processes, including clean-up and documentation.</p> <p>Work requires individuals to demonstrate judgement and problem-solving skills in managing own work activities and contributing to a productive team environment.</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
1. Prepare for work	<p>1.1. Work instructions are used to determine work requirements, including method, material and equipment.</p> <p>1.2. Job specifications are read and interpreted.</p> <p>1.3. Workplace health and safety (WHS) requirements, including personal protection needs are observed throughout the work.</p> <p>1.4. Material for work is selected.</p> <p>1.5. Equipment and tooling are identified and checked for safe and effective operation.</p> <p>1.6. Procedures are determined to minimise waste material.</p> <p>1.7. Procedures are identified for maximising energy efficiency while completing the work.</p>
2. Wash/clean engine and components	<p>2.1. Tooling and equipment are selected and used according to workplace methods and customer requirements.</p> <p>2.2. Cleaning/protection agents are selected and used according to workplace methods, engine component/system material type and product manufacturer/component supplier recommended applications.</p> <p>2.3. Engine and components are washed and cleaned according to workplace/customer and product manufacturer/ component supplier prescribed methods and procedures.</p> <p>2.4. Washing/cleaning is completed without causing damage to component or system.</p> <p>2.5. Engine and components are washed and cleaned according to industry standards/regulations/guidelines, WHS requirements, legislation and enterprise procedures/ policies.</p> <p>2.6. Cleaning/protection agents are stored according to manufacturer/component supplier recommendations and regulatory requirement.</p>
3. Wash/clean engine compartment and components	<p>3.1. Tooling and equipment are selected and used according to workplace methods and customer requirements.</p> <p>3.2. Cleaning/protection agents are selected and used according to workplace methods, engine component/system material type and product</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>manufacturer/component supplier recommended applications.</p> <p>3.3.Engine compartment and components are washed and cleaned according to workplace/customer and product manufacturer/component supplier prescribed methods and procedures.</p> <p>3.4.Washing/cleaning is completed without causing damage to component or system.</p> <p>3.5.Engine compartment and components are washed and cleaned according to industry standards/regulations/ guidelines, WHS requirements, legislation and enterprise procedures/policies.</p> <p>3.6.Cleaning/protection agents are stored according to manufacturer/component supplier recommendations and regulatory requirements.</p>
4. Dry engine, compartment and components	<p>4.1.Drying processes and equipment are selected and used according to workplace methods and customer requirements.</p> <p>4.2.Engine, compartment and components are dried according to workplace/customer and product manufacturer/ component supplier/system prescribed methods and procedures.</p> <p>4.3.Engine, compartment and components are dried according to industry standards/regulations/guidelines, WHS requirements, legislation and enterprise procedures/ policies.</p> <p>4.4.Drying is completed without causing damage to component or system.</p> <p>4.5.Engine and components/systems are inspected and tested to ensure normal operation after the washing and drying process.</p>
5. Clean up work area and maintain equipment	<p>5.1.Material that can be reused is collected and stored.</p> <p>5.2.Waste material is removed following workplace and environmental procedure.</p> <p>5.3.Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.</p> <p>5.4.Unserviceable equipment is tagged and faults identified in accordance with workplace requirements.</p> <p>5.5.Operator maintenance is completed in accordance with manufacturer/component supplier specifications</p>

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	and worksite procedures. 5.6.Tooling is maintained in accordance with workplace procedures.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

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

#### Required skills

Required skills include:

- collect, organise and understand information related to work orders, plans and safety procedures for washing a vehicle engine, compartment and components
- identifying safety precautions
- identifying recommended washing and engine/compartment/ component protection agents, applications and procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with worksite supervisor, other workers and customers, and the reporting of work outcomes and problems
- reading and interpreting product labels/directions
- listening and following verbal instructions
- plan and organise activities, including preparation and layout of worksite and obtaining of equipment and material to avoid backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- establish safe and effective work processes which anticipate and/or resolve problems and downtime, to systematically develop solutions to avoid or minimise reworking and wastage
- use mathematical ideas and techniques to complete measurements and estimate material requirements required for the work, including measuring and mixing cleaning/protection fluids
- use workplace technology related to the washing/cleaning of engines and engine compartments, including the use of measuring equipment and communication devices and the reporting/documenting of results

#### Required knowledge

Required knowledge includes:

- WHS regulations/requirements, equipment, material and personal safety requirements
- environmental requirements for storage, handling and disposal of substances
- material safety data sheets
- electrical/electronic system/component protection methods
- air intake and fuel component protection methods
- cleaning/protection agents and their recommended applications
- washing/cleaning procedures for engine, compartment and components

**REQUIRED SKILLS AND KNOWLEDGE**

- drying procedures for engine, engine compartment and components
- engine and system/component inspection and test procedures prior to hand over
- work organisation and planning processes
- enterprise quality processes



## 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>It is essential that competence is fully observed and there is ability to transfer competence to changing circumstances and to respond to unusual situations in the critical aspects of:</p> <ul style="list-style-type: none"> <li>• observing safety procedures and requirements</li> <li>• communicating effectively with others involved in or affected by the work</li> <li>• selecting methods and techniques appropriate to the circumstances</li> <li>• completing preparatory activity in a systematic manner</li> <li>• observing environment protection requirements</li> <li>• a range of engine cleaning tasks</li> <li>• selecting and using materials and equipment</li> <li>• protecting electrical/electronic components</li> <li>• protecting air intake and fuel components</li> <li>• washing/cleaning engine, engine compartment and components.</li> </ul>
<b>Context of, and specific resources for assessment</b>	<ul style="list-style-type: none"> <li>• Application of competence is to be assessed in the workplace or simulated worksite.</li> <li>• Assessment is to occur using standard and authorised work practices, safety requirements and environmental constraints.</li> <li>• Assessment is to comply with regulatory requirements, including Australian standards.</li> <li>• The following resources should be made available: <ul style="list-style-type: none"> <li>• workplace location or simulated workplace</li> <li>• materials relevant to the washing/cleaning of engine and engine compartment</li> <li>• equipment, hand and power tooling appropriate to the washing/cleaning of engines and engine compartments</li> <li>• activities covering mandatory task requirements</li> <li>• specifications and work instructions.</li> </ul> </li> </ul>
<b>Method of assessment</b>	<ul style="list-style-type: none"> <li>• Assessment must satisfy the endorsed Assessment Guidelines of the Automotive Industry Retail, Service and Repair Training Package.</li> </ul>

**EVIDENCE GUIDE**

- Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge.
- Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of key competencies.
- Assessment may be applied under project-related conditions and require evidence of process.
- Assessment must confirm a reasonable inference that competence is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.
- It is preferable that assessment reflects a process rather than an event and occurs over a period of time to cover varying quality circumstances. Evidence of performance may be provided by customers, team leaders/members or other persons subject to agreed authentication arrangements.
- Competence in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role.

## Range Statement

<b>RANGE STATEMENT</b>	
<p>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.</p>	
<b>Methods</b>	<p>Methods are to include:</p> <ul style="list-style-type: none"> <li>• manual or machine assisted washing</li> <li>• engine and components washing</li> <li>• engine compartment and components washing</li> <li>• engine and component drying</li> </ul>
<b>Critical precautions</b>	<p>Critical precautions include:</p> <ul style="list-style-type: none"> <li>• adequate protection of electrical and electronic components, air induction inlets and fuel components during the washing and drying process</li> </ul>
<b>WHS</b>	<p>WHS requirements are to be in accordance with legislation/regulations/codes of practice and enterprise safety policies and procedures. This may include:</p> <ul style="list-style-type: none"> <li>• protective clothing and equipment</li> <li>• use of tooling and equipment</li> <li>• workplace environment and safety</li> <li>• handling of material</li> <li>• use of firefighting equipment</li> <li>• enterprise first aid</li> <li>• hazard control and hazardous material and substances</li> </ul>
<b>Personal protective equipment</b>	<p>Personal protective equipment is to include that prescribed under legislation/regulation/codes of practice and workplace policies and practices</p>
<b>Safe operating procedures</b>	<p>Safe operating procedures are to include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• operational risk assessment and treatments associated with vehicular movement, toxic substances, electrical safety, machinery movement and operation, manual and</li> </ul>

<b>RANGE STATEMENT</b>	
	mechanical lifting and shifting, working in proximity to others and worksite visitors
<b>Emergency procedures</b>	Emergency procedures related to this unit are to include, but are not limited to: <ul style="list-style-type: none"> <li>• emergency shutdown and stopping of equipment</li> <li>• extinguishing fires</li> <li>• enterprise first aid requirements</li> <li>• worksite evacuation</li> </ul>
<b>Environmental requirements</b>	Environmental requirements are to include, but are not limited to: <ul style="list-style-type: none"> <li>• waste management, noise, dust and clean-up management</li> </ul>
<b>Quality requirements</b>	Quality requirements are to include, but are not limited to: <ul style="list-style-type: none"> <li>• regulations, including Australian standards</li> <li>• internal company quality policies and standards</li> <li>• enterprise operations and procedures</li> </ul>
<b>Statutory/regulatory authorities</b>	Statutory/regulatory authorities may include: <ul style="list-style-type: none"> <li>• federal, state/territory and local authorities administering Acts, regulations and codes of practice</li> </ul>
<b>Tooling and equipment</b>	Tooling and equipment may include: <ul style="list-style-type: none"> <li>• pressure cleaning equipment</li> <li>• drying equipment</li> </ul>
<b>Materials</b>	Materials may include: <ul style="list-style-type: none"> <li>• cleaning and surface protection agents</li> </ul>
<b>Communications</b>	Communications are to include, but are not limited to: <ul style="list-style-type: none"> <li>• verbal and visual instructions and fault reporting and may include worksite specific instructions, written instructions, plans or instructions related to job/task, telephones and pagers</li> </ul>
<b>Information/documents</b>	Sources of information/documents may include: <ul style="list-style-type: none"> <li>• verbal or written and graphical instructions,</li> </ul>

**RANGE STATEMENT**

	<p>signage, work schedules/plans/specifications, work bulletins, memos, material safety data sheets (MSDS), diagrams or sketches</p> <ul style="list-style-type: none"> <li>• safe work procedures related to the washing/cleaning of engines and engine compartments</li> <li>• regulatory/legislative requirements pertaining to the cleaning of vehicles</li> <li>• engineer's design specifications and instructions</li> <li>• organisation work specifications and requirements</li> <li>• instructions issued by authorised enterprise or external persons</li> <li>• Australian standards</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Vehicle body
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**Co-requisite units**

Not applicable.

**Competency field**

<b>Competency field</b>	Technical - Body
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