



Australian Government

AURVTN2006 Remove and replace mechanical units and assemblies

Release 1

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Modification History

Release	Comment
Release 1	Replaces AURV227064A Remove and replace mechanical units/assemblies Unit code updated to meet policy requirements Minor changes to unit title Reference to OHS legislation replaced with new WHS legislation Licensing statement added to unit descriptor

Unit Descriptor

Unit descriptor	This unit of competency covers the skills and knowledge required to remove and replace units/assemblies to facilitate body repair activities. Licensing, legislative, regulatory or certification requirements may apply to this unit in some jurisdictions. Users are advised to check with the relevant regulatory authority.
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Application of the Unit

Application of the unit	Assistance from licensed persons must be sought in relation to air conditioning and LPG/NGV system/components and in the recommissioning of systems. The unit includes identification and confirmation of work requirements, preparation for work, removal, replacement of mechanical units/assemblies, and completion of work finalisation processes, including clean-up and documentation. Work requires individuals to demonstrate judgement and problem-solving skills in managing own work activities and contributing to a productive team environment.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability skills	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	1.1. Work instructions are used to determine job requirements, including methods, materials and equipment. 1.2. Job specifications are read and interpreted. 1.3. Workplace health and safety (WHS) requirements, including personal protection needs are observed throughout the work. 1.4. Materials for the work are selected. 1.5. Equipment and tooling are identified and checked for safe and effective operation. 1.6. Procedures are determined to minimise waste material. 1.7. Procedures are identified for maximising energy efficiency while completing the job.
2. Remove mechanical units/assemblies	2.1. Mechanical units/assemblies are removed using approved methods, tooling and equipment. 2.2. Assistance from licensed persons is sought in relation to air conditioning and LPG/NGV system/components removal. 2.3. Removal is completed without causing damage to component or system. 2.4. Removal activities are carried out according to industry regulations/guidelines, WHS requirements, legislation and enterprise procedures/policies.
3. Replace mechanical units/assemblies	3.1. Mechanical units/assemblies are replaced using approved methods, tooling and equipment. 3.2. Assistance from licensed persons must be sought in relation to the recommissioning of air conditioning and LPG/NGV system/components. 3.3. Replacement is completed without causing damage to component or system. 3.4. Replacement activities are carried out according to industry regulations/guidelines, WHS requirements, legislation and enterprise procedures/policies.
4. Clean up work area and maintain equipment	4.1. Material that can be reused is collected and stored. 4.2. Waste and scrap is removed following workplace and environmental procedures. 4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.

ELEMENT	PERFORMANCE CRITERIA
	4.4. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures. 4.5. Operator maintenance is completed in accordance with manufacturer/component supplier specifications and workplace procedures. 4.6. 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 removing and replacing mechanical units/assemblies
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with worksite supervisor, other workers and customers, and reporting of work outcomes and problems
- 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 calculate time, assess tolerances, apply accurate measurements, calculate material requirements and establish quality checks
- use workplace technology related to the removal and replacement of mechanical units/assemblies, including the use of specialist tooling, 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
- types, characteristics, functions and engineering specifications of mechanical units/assemblies
- types and layout of service/repair manuals (hard copy and electronic)
- removal and replacement procedures for mechanical units/assemblies
- use of tooling and equipment
- manual handling techniques
- work organisation and planning processes
- enterprise quality processes

Evidence Guide

EVIDENCE GUIDE	
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.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	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: • observing safety procedures and requirements • communicating effectively with others involved in or affected by the work • selecting methods and techniques appropriate to the circumstances • completing preparatory activity in a systematic manner • removing and replacing a minimum of two mechanical units/assemblies to workplace and manufacturer/component supplier requirements • completing workplace records.
Context of, and specific resources for assessment	• Application of competence is to be assessed in the workplace or simulated worksite. • Assessment is to occur using standard and authorised work practices, safety requirements and environmental constraints. • Assessment is to comply with regulatory requirements, including Australian standards. • The following resources should be made available: • workplace location or simulated workplace • material relevant to the removal and replacement of mechanical units/assemblies • equipment, hand and power tooling appropriate to the removal and replacement of mechanical units/assemblies • activities covering mandatory task requirements • specifications and work instructions.
Method of assessment	• Assessment must satisfy the endorsed Assessment Guidelines of the Automotive Industry Retail, Service and Repair Training Package. • Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge.

EVIDENCE GUIDE

- 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

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.

Units/assemblies

Units/assemblies may include:

- suspension, final drives, engines and others related to the vehicle types.

Methods

Methods are to include:

- non-technical inspection, pre-cleaning, isolation of assembly, removal/replacement and refitting of assemblies

WHS

WHS requirements are to be in accordance with legislation/regulations/codes of practice and enterprise safety policies and procedures. This may include:

- protective clothing and equipment
- use of tooling and equipment
- workplace environment and safety
- handling of material
- use of firefighting equipment
- enterprise first aid
- hazard control and hazardous material and substances

Personal protective equipment

Personal protective equipment is to include that prescribed under legislation/regulation/codes of practice and workplace policies and practices

Safe operating procedures

Safe operating procedures are to include, but are not limited to:

- operational risk assessment and treatments associated with vehicular movement, toxic substances, electrical safety, machinery movement and operation, manual and mechanical lifting and shifting, working in proximity to others and worksite visitors

Emergency procedures

Emergency procedures related to this unit are to

RANGE STATEMENT	
	include, but are not limited to: • emergency shutdown and stopping of equipment • extinguishing fires • enterprise first aid requirements • worksite evacuation
Environmental requirements	Environmental requirements are to include, but are not limited to: • waste management, noise, dust and clean-up management
Quality requirements	Quality requirements are to include, but are not limited to: • regulations, including Australian standards • internal company quality policies and standards • enterprise operations and procedures
Statutory/regulatory authorities	Statutory/regulatory authorities may include: • federal, state/territory and local authorities administering Acts, regulations and codes of practice
Tooling and equipment	Tooling and equipment may include: • hand tooling, jacking, support and lifting equipment and special equipment for removal and replacement
Materials	Materials may include: • spare parts, lubricants, fluids and cleaning materials
Communications	Communications are to include, but are not limited to: • 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
Information/documents	Sources of information/documents may include: • verbal or written and graphical instructions, signage, work schedules/plans/specifications,

RANGE STATEMENT

	- work bulletins, memos, material safety data sheets (MSDS), diagrams or sketches • safe work procedures related to the removal and replacement of mechanical units/assemblies • regulatory/legislative requirements pertaining to automotive industry, including Australian Design Rules • engineer's design specifications and instructions • organisation work specifications and requirements • instructions issued by authorised enterprise or external persons • Australian standards
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Unit Sector(s)

Unit sector	Vehicle body
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Co-requisite units

Not applicable.

Competency field

Competency field	Technical - Body
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