



Australian Government

AURLTA001 Identify automotive mechanical systems and components

Release: 1

AURLTA001 Identify automotive mechanical systems and components

Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes required to identify the function and basic operation of a range of vehicle mechanical systems and components. It involves preparing for the task, locating information on the systems and components, and demonstrating knowledge of mechanical systems.

It applies to those undertaking a Vocational Education and Training in Schools (VETiS) or pre-vocational qualification as preparation to entering the automotive service and repair or automotive manufacturing industry. The unit is designed for use in a highly supervised context and is not suitable for use in a vocational qualification.

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

Competency Field

Mechanical - Light Vehicle

Unit Sector

Technical

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 and italicised text is used, further information is detailed in the range of conditions section.
1. Locate and identify mechanical system and	1.1 Task instruction is interpreted and vehicle or machinery to be worked on is identified

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold and italicised text is used, further information is detailed in the range of conditions section.
its components	1.2 Technical information regarding mechanical system to be identified is located 1.3 Mechanical system major components are located and identified on a vehicle or machinery according to <i>safety requirements</i> and task instructions
2. Demonstrate knowledge of mechanical system	2.1 System function is determined from technical information and demonstrated during workplace activities 2.2 System major component function and basic operation are determined from technical information and demonstrated during workplace activities 2.3 System relationship to vehicle or machinery operation is determined from technical information and demonstrated during workplace activities

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance and are not explicit in the performance criteria.

Skills	Description
Learning skills to:	locate appropriate sources of technical information.
Writing skills to:	legibly and accurately fill out workplace documentation using correct industry terminology and conventions.
Oral communication skills to:	participate effectively in verbal exchanges using questioning and active listening to request, clarify and clearly convey information.
Numeracy skills to:	use and communicate basic numerical information that relates to automotive systems and components.

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>Safety requirements</i> must include:	• work health and safety (WHS) and occupational health and safety (OHS) requirements, including procedures for: • selecting and using personal protective equipment (PPE) • using tools and equipment • working safely.
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Unit Mapping Information

Equivalent to AURLTA1001 Apply automotive mechanical fundamentals

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b4278d82-d487-4070-a8c4-78045ec695b1>

Assessment Requirements for AURLTA001 Identify automotive mechanical systems and components

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Performance Evidence

Before competency can be determined, individuals must demonstrate they can perform the following according to the standards defined in this unit's elements, performance criteria, range of conditions and foundation skills:

- identify, locate and demonstrate knowledge of the operation of the following vehicle mechanical systems while carrying out workplace activities that involve all of the following systems:
 - engine systems
 - transmission and drivetrain
 - steering system
 - suspension system
 - fuel system
 - cooling system
 - braking system
 - exhaust system.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS) and occupational health and safety (OHS) requirements relating to identifying vehicle mechanical systems and components, including procedures for:
 - selecting and using personal protective equipment (PPE)
 - using tools and equipment
 - working safely
- basic theory and principles of automotive mechanical systems, including:
 - mechanical advantage

- gear ratio
- hydraulics
- pneumatics
- identification, function and basic operation of vehicle mechanical systems and components, including:
 - engine systems
 - transmission and drivetrain
 - steering system
 - suspension system
 - fuel system
 - cooling system
 - braking system
 - exhaust system
- automotive terminology relating to mechanical systems.

Assessment Conditions

Assessors must satisfy NVR/AQTF assessor requirements.

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

Assessment must include direct observation of tasks.

Where assessment of competency includes third-party evidence, individuals must provide evidence that links them to the vehicles or machinery that they have worked on, e.g. repair 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 workplace or simulated workplace
- workshop or task instructions
- information regarding basic mechanical principles and fundamentals
- information regarding vehicle mechanical systems and components
- workplace safety equipment, including PPE
- vehicle or a range of automotive mechanical systems and components
- automotive tools and equipment.

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