



**Australian Government**

# **Assessment Requirements for AURTTA021 Diagnose complex system faults**

**Release: 1**

# Assessment Requirements for AURTTA021 Diagnose complex system faults

## Modification History

Release	Comment
Release 1	New unit of competency.

## Performance Evidence

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

- diagnose complex system faults on three different vehicles, machinery or vessels
- the above diagnosis must involve two of the following types of complex faults:
  - one fault that is in a complex system that integrates two or more automotive systems
  - one fault that incorporates three or more mechanical, hydraulic, pneumatic, electrical or electronic sub-systems.

## Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS) and occupational health and safety (OHS) requirements relating to diagnosing complex system faults in vehicles, vessels or machinery, including working safely with the systems being tested, including procedures for:
  - selecting and using personal protective equipment (PPE)
  - using tools and equipment
- types, application and operation of complex systems, including:
  - systems that integrates two or more automotive systems
  - systems that incorporate three or more mechanical, hydraulic, pneumatic, electrical or electronic sub-systems
- diagnostic procedures for complex systems, including stages within the diagnostic procedure
- methods of gathering information on complex system faults, including customer questioning techniques
- types and applications of diagnostic flow charts

- types, applications, limitations and operation of diagnostic tools, including:
  - multimeters
  - scan tools, including:
    - diagnosis trouble codes (DTC) and the conditions that caused the code to be set
    - live data
    - snap shots
  - oscilloscopes
  - mechanical, hydraulic and pneumatic test equipment
- methods of differentiating between fault symptoms and fault cause.

## 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 vehicle or machinery complex system faults that they have diagnosed, 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 repair workplace or simulated workplace
- workplace instructions
- manufacturer system specifications
- three different vehicles, vessels or machinery that have the complex system faults specified in the performance evidence
- tools, equipment and materials appropriate for diagnosing complex system faults in vehicles, vessels or machinery.

## Links

Companion Volume implementation guides are found in VETNet -

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

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