Australian Government

Assessment Requirements for AURETB002 Analyse and evaluate electrical and electronic faults in dynamic control management systems

Release: 1

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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 standards defined in this unit's elements, performance criteria, range of conditions and foundation skills:

- analyse and evaluate an electrical or electronic fault in the dynamic control management systems of two different vehicles or machinery
- the above faults must involve two of the following:
  - anti-lock braking system (ABS)
  - ABS and integrated traction control system
  - traction and stability control system
  - electronic braking control module (EBCM).

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS) and occupational health and safety (OHS) requirements relating to analysing and evaluating faults in dynamic control management systems, including procedures for identifying hazards and controlling risks associated with wearing jewellery while working around high current wiring systems
- principles and processes involved in planning and implementing analysis and evaluation of electrical and electronic faults in dynamic control management systems
- design and planning of diagnostic procedures for faults in dynamic control management systems, including procedures for diagnosing:
  - electrical faults
  - electronic faults

- types, functions, operation and limitations of dynamic control management systems, including:
  - gateway network control module
  - bus network topography
  - body control module (BCM) functions
  - associated network dynamic control management system components
  - sensor and actuator control and monitoring systems
  - control signal circuits
  - ABS
  - stability control systems (SCS)
  - traction control systems (TCS)
- types, functions, operation and limitations of diagnostic testing equipment required to analyse and evaluate electrical and electronic faults in dynamic control management systems
- testing procedures for dynamic control management systems, including the use of:
  - digital multimeter
  - scan tool
  - oscilloscope
  - four-wheel dynamometer
- types, functions, operation and limitations of diagnostic testing equipment required to analyse and evaluate electrical and electronic faults in dynamic control management systems
- procedures for accessing and interpreting scan tool system data, including:
  - diagnostic trouble codes (DTCs), including:
    - conditions that set the DTCs
    - conditions for running DTCs
  - live data
  - freeze frame data
  - waveforms
- procedures for documenting and reporting the analysis and evaluation process
- requirements of Australian Design Rules (ADRs) relating to dynamic control management 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 dynamic control management systems 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 repair workplace or simulated workplace
- workplace instructions
- manufacturer dynamic control management system specifications
- two different vehicles or machinery with faults in the dynamic control management systems specified in the performance evidence
- diagnostic equipment for dynamic control management systems
- tools, equipment and materials appropriate for analysing and evaluating dynamic control management systems.

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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