



Australian Government

**Assessment Requirements for AURETX001
Analyse and evaluate electrical and
electronic faults in driveline management
systems**

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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 driveline management systems of two different vehicles or machinery
- the above faults must involve the following systems:
 - transmission
 - driveline.

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 driveline management systems, including procedures for:
 - identifying hazards and controlling risks associated with wearing jewellery while working around high current wiring systems
 - working with high pressure fluid
- principles and processes involved in planning and implementing analysis and evaluation of electrical and electronic faults in driveline management systems
- design and planning of diagnostic procedures for faults in driveline management systems, including procedures for diagnosing:
 - electrical faults
 - electronic faults
- types, functions, operation and limitations of driveline management systems, including:
 - driveline management systems, including:

- clutches
- torque converters
- manual transmissions
- automatic transmissions
- drive and power take-off shafts
- differentials
- drivelines
- gateway network control module:
 - bus network topography
 - associated network electronic vehicle or machinery systems
 - sensor and actuator control and monitoring systems
 - control signal circuits
- testing procedures for driveline 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 driveline 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 driveline 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 driveline 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 driveline management system specifications
- two different vehicles or machinery with driveline management system faults
- diagnostic equipment for driveline management systems
- tools, equipment and materials appropriate for analysing and evaluating driveline 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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