Australian Government

Assessment Requirements for AURETR022 Diagnose and repair vehicle dynamic control 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 standard defined in the unit's elements and performance criteria, range of conditions and foundation skills:

- diagnose and repair a fault in the dynamic control systems of:
  - one vehicle or machinery with an anti-lock braking system (ABS)
  - one vehicle or machinery with a traction control system (TCS).

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 and repairing vehicle dynamic control systems, including procedures for:
  - using specialised tools and equipment
  - using appropriate personal protective equipment (PPE)
  - identifying hazards and controlling risks associated with:
    - working on vehicle high voltage ignition systems
    - wearing jewellery while working around high current wiring systems
- operating principles of vehicle dynamic control systems and associated components, including:
  - active roll-over protection
  - anti-lock braking
  - brake assist
  - descent control
  - electronic brake force distribution

  - electronic park brake
  - hill start assist
  - stability control
  - traction control
- application, purpose and operation of vehicle dynamic control systems and components, including:
  - ABS, including system inputs, electronic control unit (ECU), ABS modulator, and system outputs
  - TCS, including system inputs, ECU, and system outputs, including associated throttle and braking system controls
  - electronic stability control (ESC), including system inputs, including yaw and steering angle sensors, and ECU and system outputs, including associated throttle and braking system controls
- diagnostic testing procedures for vehicle dynamic control systems, including:
  - accessing and interpreting scan tool system data, including:
    - diagnostic trouble codes (DTCs), including 'U' type communication codes
    - live data
    - freeze frame data
    - waveforms
  - using diagnostic flow charts
  - testing electrical systems, including procedures for:
    - accessing electrical terminals and using test probes without damaging connectors, fuse holders or wiring
    - determining damage to system wiring and connectors
- repair procedures for vehicle dynamic control systems, including:
  - connector removal and replacement procedures
  - removal and replacement procedures for vehicle dynamic control system components
- post-repair testing procedures for vehicle dynamic control systems, including:
  - DTC clearing procedures
  - checking for electrical connector mating.

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 dynamic control 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 vehicle dynamic control system specifications
- two different vehicles or machinery with dynamic control system faults
- diagnostic equipment for vehicle dynamic control systems, including:
  - multimeter
  - scan tool
- tools, equipment and materials appropriate for repairing vehicle dynamic control 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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