



**Australian Government**

# **Assessment Requirements for AURETR122 Diagnose and repair vehicle dynamic control systems**

**Release: 1**

# Assessment Requirements for AURETR122 Diagnose and repair vehicle dynamic control systems

## Modification History

| Release   | Comments                                                                                                |
|-----------|---------------------------------------------------------------------------------------------------------|
| Release 1 | This version first released with AUR Automotive Retail, Service and Repair Training Package Version 6.0 |

## Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- diagnose and repair a fault in each of two of the following 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)
  - one vehicle or machinery with an active safety system.
- carry out diagnostic tests in the course of the above for at least one of the following faults:
  - high resistance in an input system
  - worn or damaged wiring or connectors
  - shorted system components.

## Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- methods to locate and interpret information required to diagnose and repair vehicle dynamic control systems, including:
  - information provided by customers and supervisors
  - vehicle dynamic control systems manufacturer specifications
- workplace procedures required to diagnose and repair vehicle dynamic control systems, including:
  - establishing the serviceability of tools and equipment
  - documentation procedures
  - housekeeping procedures, including:
    - examination of tools and equipment
    - storage of equipment
    - identification, tagging and isolation of faulty equipment

- safe disposal of materials
  - recycling procedures
- workplace health and safety (WHS) 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 and low 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
  - active and passive collision avoidance
  - lane keeping assist
  - occupant detection systems
  - adaptive cruise control
  - roll-over protection
- 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)
    - live 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
  - calibration and re-setting procedures
- post-repair testing procedures for vehicle dynamic control systems, including:
  - DTC clearing procedures
  - checking for electrical connector mating.

## Assessment Conditions

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.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

## Links

Companion Volume Implementation Guide is found on VETNet -

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