



Australian Government

Assessment Requirements for AURETR028

Diagnose and repair instruments and warning 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 instruments and warning systems of two different vehicles, vessels or machinery, including faults in two of the following:
 - driver instrument warning gauge assembly
 - engine monitoring warning assembly
 - vehicle warning visual alert assembly
 - vehicle warning audible alert assembly
- remove, refit or replace an instrument panel in one vehicle, vessel or machinery.

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 instruments and warning systems, including procedures for working with high current wiring systems
- operating principles of instruments and warning systems and associated components, including types of instruments, gauges and warning systems
- application, purpose and operation of instruments and warning systems and components, including:
 - instrument panel construction
 - panel illumination
 - magnetic and thermal gauges
 - voltage regulators
 - mechanical gauges

- digital electronic gauges and systems
- warning lights and indicators
- diagnostic testing procedures for instruments and warning systems, including:
 - accessing and interpreting scan tool system data, including:
 - diagnostic trouble codes (DTCs)
 - 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
 - checking resistance, current flow and voltage instruments and warning systems
- repair procedures for instruments and warning systems, including:
 - tightening connections
 - replacing faulty or damaged cable connections
 - removing and replacing faulty or damaged components
- post-repair testing procedures for instruments and warning systems, including:
 - DTC clearing procedures
 - checking for electrical connector mating
 - undertaking static and dynamic performance tests of instruments and warning systems, including test-driving procedures.

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 instruments and warning 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 instrument and warning system specifications
- two different vehicles, vessels or machinery with instrument and warning system faults
- diagnostic equipment for instruments and warning systems, including multimeter

- tools, equipment and materials appropriate for repairing vehicle, vessel or machinery instruments and warning 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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