



**Australian Government**

# **Assessment Requirements for AURETR027**

## **Install ancillary electronic systems and components**

**Release: 1**

# Assessment Requirements for AURETR027 Install ancillary electronic systems and components

## 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:

- install two ancillary electronic systems and components that require communication with the vehicle or machinery controller area network data bus (CAN-bus) topography of different vehicles.

## Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS) and occupational health and safety (OHS) requirements relating to installing ancillary electronic systems and components, including procedures for:
  - using specialised tools and equipment
  - selecting and using appropriate personal protective equipment (PPE)
  - identifying hazards and controlling risks associated with:
    - working on high voltage ignition systems
    - wearing jewellery while working around high current wiring systems
- types and basic operation of common ancillary electronic systems and components, including:
  - driver interlocks, including alcohol interlock devices
  - remote keyless entry systems
  - security alarm systems
  - audio systems
  - mobile phones
  - speed alert systems

- navigation systems
- reverse parking aids, including sensors, audible alerts and cameras
- driver gauges and instruments
- trailer harness connectors
- types of vehicle and machinery communication networks, including:
  - controller area network (CAN)
  - local interconnect network (LIN)
  - media oriented systems transport (MOST)
- types of communication network wiring, including:
  - single wire
  - two wire twisted pair
  - shielded wire
- procedures for installing basic ancillary electronic systems and components, including:
  - techniques for reading and interpreting technical information, wiring diagrams and graphic symbols
  - methods of determining wiring and connection type and size for system
  - methods of determining placement of components on vehicle or machinery
  - methods of connecting system and components to existing electrical system without causing damage or problems, including:
    - selecting and soldering wires
    - selecting and crimping terminals
    - removing and replacing connectors
    - removing and replacing existing electrical components
  - procedures for sourcing and using programming code to allow communication between installed system and existing vehicle or machinery systems
- post-installation testing procedures of basic ancillary electronic systems and components, including procedures for checking:
  - full operation of installed system
  - operation of existing electrical and electronic 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 be by direct observation of tasks.

Where assessment of competency includes third-party evidence, individuals must provide evidence that links them to the ancillary electronic systems and components that they have installed in vehicles or machinery, e.g. work 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 service and repair workplace or simulated workplace
- workplace instructions
- vehicle and machinery wiring specifications relevant to systems and components being installed
- manufacturer ancillary electronic system specifications
- two different vehicles or machinery requiring installation of ancillary electronic systems and components
- tools, equipment and materials appropriate for installing ancillary electronic systems and components.

## 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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