

# Assessment Requirements for AURETR025 Test, charge and replace batteries and jump-start vehicles

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, performance criteria, range of conditions and foundation skills:

- test two different types of automotive batteries
- charge two batteries, in which the work must involve:
  - slow or trickle charging one battery
  - rapid charging the second battery
- remove and replace batteries from two different vehicles or machinery
- jump-start two different vehicles 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 testing, charging and replacing batteries and jump-start vehicles, including procedures for:
  - safely operating:
    - battery testing equipment
    - battery charging equipment
  - selecting and using personal protective equipment (PPE), including safety glasses
  - identifying hazards and controlling risks associated with:
    - battery, vehicle and machinery movement before carrying out work
    - wearing jewellery while working around high current wiring systems
- environmental requirements, including procedures for:
  - following safety data sheets (SDS) to trap, store and dispose of toxic and corrosive substances

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- disposing of or recycling batteries
- location and content of manufacturer specifications, workplace procedures, and SDS
- types, application and operation of batteries, including:
  - lead acid batteries, including deep cycle batteries
  - gel batteries
  - absorbed glass mat batteries
  - calcium batteries
  - lithium ion and lithium ion phosphate batteries
- battery connection methods for 6 volt, 12 volt, 24 volt and 48 volt, including:
  - series
  - parallel
  - series parallel
- battery classification methods, including:
  - cold cranking amps (CCA)
  - reserve capacity (RC)
  - amp hour rating
- battery testing procedures, including:
  - · testing safety requirements
  - visual inspection procedures
  - voltage drop testing
  - hydrometer testing
  - high rate discharge testing
- battery charging procedures, including:
  - charging safety requirements
  - slow, fast and trickle charging
  - battery memory retention
- battery replacement procedures, including:
  - replacement safety requirements
  - terminal disconnection
  - battery selection
  - battery installation and terminal connection
  - · securing battery in vehicle
  - system recalibration procedures
- battery jump-start procedures, including:
  - vehicle and personnel safety requirements
  - battery terminal disconnection
  - jumper lead connection and disconnection.

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#### **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 batteries that they have tested, charged, replaced and jump-started, 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 battery specifications
- PPE for testing, charging, removing and replacing batteries and jump-starting vehicles and machinery, including safety glasses
- two different types of serviceable batteries
- two different vehicles or machinery requiring jump-starting
- tools, equipment and materials appropriate for battery testing, charging and replacement, including:
  - load testing device
  - hydrometer
  - multimeter
  - jumper leads
  - battery charger
  - battery cleaning materials.

#### 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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