Australian Government

AURETR026 Remove, replace and program electrical and electronic units and assemblies

Release: 1

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Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes required to remove, replace and program electrical and electronic units and assemblies integral to vehicle and machinery controller area network databus (CAN-bus). Electrical and electronic units and assemblies include powertrain control modules, engine and body control modules, and other electronic control modules that may require manufacturer programming procedures.

It applies to those working in the automotive service and repair industry. The electrical and electronic units and assemblies include those fitted to agricultural machinery, heavy commercial vehicles, light vehicles, vessels, mobile plant machinery, motorcycles or outdoor power equipment.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Competency Field

Electrical

Unit Sector

Technical - Electrical and Electronic

Elements and Performance Criteria

Elements Elements describe the essential outcomes.	**Performance Criteria** Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold and italicised text is used, further information is detailed in the range of conditions section.
1. Prepare to remove,	1.1 Job requirements are determined from workplace instructions

Elements Elements describe the essential outcomes.	**Performance Criteria** Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold and italicised text is used, further information is detailed in the range of conditions section.
replace and program electrical and electronic units and assemblies	1.2 Workplace procedures and manufacturer specifications are accessed and interpreted 1.3 Removal information is accessed and interpreted from manufacturer and component supplier specifications 1.4 Hazards associated with the work are identified and risks are managed 1.5 Tools and equipment are selected and checked for serviceability
2. Remove unit and assembly	2.1 Unit and assembly are removed using approved methods, tools and equipment and according to manufacturer specifications, workplace procedures and ***safety requirements*** 2.2 Unit and assembly are handled and stored according to manufacturer and component supplier requirements
3. Replace unit and assembly	3.1 Replacement information is accessed and interpreted from manufacturer and component supplier specifications 3.2 Unit and assembly are replaced using approved methods, tools and equipment and according to manufacturer specifications and workplace procedures
4. Program unit and assembly	4.1 Reprogramming options are analysed and those most appropriate are selected 4.2 Component replacement and programming procedures are carried out according to manufacturer and component supplier specifications 4.3 Post-replacement testing is carried out to confirm that unit and assembly are operating to manufacturer specifications and that no other problems are present
5. Complete work processes	5.1 Final inspection is made to ensure work is to workplace expectations and vehicle or machinery is presented ready for use 5.2 Work area is cleaned, waste and non-recyclable materials are disposed of, and recyclable material is collected 5.3 Tools and equipment are checked and stored and any faulty electrical equipment is identified, tagged and isolated according to workplace procedures 5.4 Workplace documentation is processed according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance and are not explicit in the performance criteria.

Skills	Description
Learning skills to:	• locate appropriate sources of information efficiently.
Reading skills to:	• interpret text, symbols and diagrams in manufacturer specifications, safe operating procedures and workplace information.
Writing skills to:	• legibly and accurately fill out workplace documentation.
Oral communication skills to:	• clarify instructions.
Numeracy skills to:	• match component part numbers to workplace instructions and vehicle and component part lists • interpret measurements of voltage, current and resistance relating to electrical and electronic units and assemblies • measure components to determine compliance with specifications.
Planning and organising skills to:	• plan own work requirements and prioritise actions to achieve required outcomes and ensure tasks are completed within workplace timeframes.
Problem solving skills to:	• determine cause of faults and select most appropriate diagnostic and reprogramming method.
Technology skills to:	• use specialised workplace technology, tools and equipment relating to removing, replacing and programming electrical and electronic units and assemblies, including scan tools.

Range of Conditions

This section specifies work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Bold italicised wording, if used in the performance criteria, is detailed below.

Safety requirements must include:	• work health and safety (WHS) and occupational health and safety (OHS) requirements, including procedures for identifying hazards and controlling risks associated with wearing jewellery while working around high current wiring systems.

Unit Mapping Information

Equivalent to AURETR3026 Remove, replace and program electrical and electronic units and assemblies

Links

Companion Volume implementation guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b4278d82-d487-4070-a8c4-78045ec695b1