



Australian Government

AURETH102 Inspect and maintain battery electric vehicles

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with the Automotive Retail, Service and Repair Training Package Version 7.0. Supersedes and is equivalent to AURETH002 Service and maintain battery electric vehicles.

Application

This unit describes the skills and knowledge required to inspect and maintain battery electric vehicles (BEVs). It involves working with automotive electrical components, maintaining rechargeable energy storage systems (RESS), and performing basic tests on electric drive motors. Importance is placed in the unit on applying both high voltage (HV) rechargeable energy storage systems RESS and separated extra low voltage (SELV) electrical safety procedures.

It applies to individuals working in the automotive service and repair industry.

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

Pre-requisite Unit

AURETH101 Depower and reinitialise battery electric vehicles

Competency Field

Electrical

Unit Sector

Technical – Hybrid Vehicle and Battery Electric Vehicle

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1.Prepare to inspect and	1.1 Identify job requirements from workplace instructions

maintain BEV	<p>1.2 Access and interpret workplace procedures and manufacturer specifications</p> <p>1.3 Identify hazards associated with the work, assess potential risks and implement control measures in line with workplace policies and procedures</p> <p>1.4 Identify tools and equipment required for inspecting activity and establishing serviceability according to workplace procedures</p>
2.Test RESS and drive motor system operation	<p>2.1 Use diagnostic equipment to retrieve system parameters and information</p> <p>2.2 Test RESS and vehicle drive motor system for correct operation according to manufacturer specifications</p> <p>2.3 Identify problems associated with performance of RESS or drive motor system according to workplace procedures</p>
3.Deactivate vehicle RESS	<p>3.1 Check vehicle is depowered according to manufacturer specifications and workplace procedures</p> <p>3.2 Check vehicle is identified with warning tag or sign to indicate potential hazards</p> <p>3.3 Locate SELV supply and disconnect according to manufacturer specifications</p> <p>3.4 Locate and remove RESS service plug or manual service and disconnect to depower vehicle HV RESS according to manufacturer specifications</p> <p>3.5 Stabilise vehicle and check for zero residual voltage according to manufacturer procedures</p> <p>3.6 Secure RESS service plug or manual service disconnect to prevent refitting by third party</p>
4.Check drive motor, electrical subsystems and associated components	<p>4.1 Check electrical drive motor and electrical subsystem and confirm condition</p> <p>4.2 Identify problems associated with performance of electrical drive motor, electrical subsystems and associated components</p> <p>4.3 Report corrective action according to workplace procedures</p>
5.Reinitialise vehicle RESS	<p>5.1 Reconnect SELV and RESS service plug or manual service and disconnect in the correct order and reactivate vehicle</p> <p>5.2 Carry out diagnostic tests and confirm correct recalibration of subsystems affected by depower process according to manufacturer specifications</p> <p>5.3 Check RESS and vehicle subsystems for correct operation according to manufacture specifications</p> <p>5.4 Report post-reactivation faults according to workplace</p>

	procedures
6.Complete work processes	<p>6.1 Conduct final inspection according to workplace procedures and confirm vehicle is ready for use</p> <p>6.2 Clear work area and dispose of or recycle materials according to workplace procedures</p> <p>6.3 Check tools and equipment are stored, and faulty equipment is identified, tagged and isolated according to workplace procedures</p> <p>6.4 Complete documentation according to workplace procedures</p>

Foundation Skills

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

Skill	Description
Learning	<ul style="list-style-type: none"> Locates appropriate sources of information efficiently
Reading	<ul style="list-style-type: none"> Interprets text, symbols and diagrams in testing, servicing and maintenance information from manufacturer specifications, and workplace instructions and procedures
Writing	<ul style="list-style-type: none"> Legibly and accurately fills out workplace documentation
Oral	<ul style="list-style-type: none"> Listens to workplace instructions and asks questions to clarify job requirements Participates in verbal exchanges to report faults and inspect and maintenance findings, and makes required repair recommendations
Numeracy	<ul style="list-style-type: none"> Interprets measurements of residual voltage and high voltages relating to BEVs
Planning and organising	<ul style="list-style-type: none"> Plans own work requirements Prioritises actions to achieve required outcomes Confirms tasks are completed within workplace timeframes
Technology	<ul style="list-style-type: none"> Uses specialised tools and equipment

Unit Mapping Information

Supersedes and is equivalent to AURETH002 Service and maintain battery electric vehicles.

Links

Companion Volume Implementation Guide is found on VETNet -

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