



Australian Government

AURETR112 Test and repair basic electrical circuits

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with AUR Automotive Retail, Service and Repair Training Package Version 6.0

Application

This unit describes the skills and knowledge required to inspect, test and repair basic electrical circuits in vehicle and machinery electrical systems. It involves preparing for the task, inspecting and testing the circuit, repairing the circuit, and completing workplace processes and documentation.

The unit applies to those who work in the automotive service and repair industry. The basic electrical circuits include those in agricultural machinery, heavy commercial vehicles, light vehicles, vessels, motorcycles, mobile plant machinery or outdoor power equipment.

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

Unit Sector

Electrical Technical – Electrical and Electronics

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 test basic electrical circuit	1.1 Determine job requirements from workplace instructions 1.2 Identify required information for testing activity and select fault finding options according to workplace procedures 1.3 Identify hazards and environmental issues associated with test and repair activity, assess potential risks and implement control measures in line with workplace policies and procedures 1.4 Identify tools and equipment required for testing activity and establish serviceability according to workplace procedures
2. Test circuit	2.1 Inspect extent of failure or damage to basic electrical circuit

ELEMENT	PERFORMANCE CRITERIA
	<p>according to workplace procedures</p> <p>2.2 Test circuit according to workplace procedures and workplace health and safety requirements</p> <p>2.3 Identify cause of fault through analysis of test results.</p> <p>2.4 Confirm and report cause of fault according to workplace procedures</p>
3. Repair circuit	<p>3.1 Identify required information for repair activity</p> <p>3.2 Analyse repair options and select procedure according to workplace procedures.</p> <p>3.3 Identify tools and equipment required for repair activity and establish serviceability according to workplace procedures</p> <p>3.4 Carry out repairs according to workplace and manufacturer procedures, manufacturer specifications, workplace health and safety and environmental requirements</p> <p>3.5 Carry out post-repair testing according to workplace procedures, workplace health and safety and environmental requirements</p>
4. Complete work processes	<p>4.1 Conduct final inspection according to workplace procedures and confirm vehicle is ready for use</p> <p>4.2 Clear work area and dispose of or recycle materials according to workplace procedures</p> <p>4.3 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 required sources of information efficiently
Reading	<ul style="list-style-type: none"> • Interprets text, symbols and wiring diagrams in information relating to basic electrical system testing and repair equipment from manufacturer specifications, and workplace instructions and procedures
Oral communication	<ul style="list-style-type: none"> • Clarifies instructions
Numeracy	<ul style="list-style-type: none"> • Interprets vehicle electrical measurements and readings • Measures voltage, current and resistance • Uses basic mathematical operations, including addition,

SKILL	DESCRIPTION
	subtraction, multiplication and division, to calculate deviations from manufacturer specifications
Planning and organising	<ul style="list-style-type: none">• Plans own work requirements• Prioritises actions to achieve required outcomes• Ensures 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 AURETR012 Test and repair basic electrical circuits.

Links

Companion Volume Implementation Guide is found on VETNet -

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