



Australian Government

AURETR116 Read and apply vehicle wiring schematics and drawings

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 read and apply technical information in the wiring schematics and drawings of vehicles, vessels and machinery when testing and fault-finding electrical wiring systems. It involves preparing for the task, reading and interpreting the schematics and drawings, and completing work processes.

The unit applies to those who work in the automotive service and repair industry. The wiring schematics and diagrams include those in electrical systems in 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.

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 read and apply vehicle wiring schematics and drawings	1.1 Identify job requirements from workplace instructions 1.2 Identify wiring schematics and drawings for vehicle, vessel or machinery electrical system being tested 1.3 Check schematics and drawings for currency and inclusion of latest amendments
2. Apply information	2.1 Identify and interpret electrical circuit information in schematics and drawings 2.2 Use information to assist when carrying out testing and

ELEMENT	PERFORMANCE CRITERIA
	repair procedures on electrical wiring systems
3. Complete work processes	3.1 Store schematics and drawings according to workplace procedures 3.2 Report damage to schematics and drawings according to workplace procedures

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	• Locates required sources of information efficiently
Oral communication	• Clarifies information
Numeracy	• Interprets numbers and units relating to electrical circuits and wiring systems in automotive workshop hard copy and online documentation • Determines correct measurement relationships for voltage, current and resistance in electrical circuits from wiring schematics and drawings • Interprets correct wiring gauge and dimensions from wiring schematics and drawings

Unit Mapping Information

Supersedes and is equivalent to AURETR016 Read and apply vehicle wiring schematics and drawings.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for AURETR116 Read and apply vehicle wiring schematics and drawings

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- read, interpret and apply information from three different vehicle, vessel or machinery wiring schematics and diagrams when testing and fault finding their electrical wiring systems.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- methods to locate and interpret vehicle wiring schematics and drawings, including:
 - procedures for identifying currency and version control of wiring schematics and drawings
- workplace procedures required to apply vehicle wiring schematics and drawings, including:
 - storage and maintenance of vehicle wiring schematics and drawings
 - reporting damage to vehicle wiring schematics and drawings
- types of information in wiring schematics and drawings, including:
 - circuit symbols
 - wiring codes
 - vehicle zone tables
 - legends
 - diagrammatic representations
- key components of wiring schematics and drawings, including:
 - vehicle wiring schematics
 - electrical component symbols
 - electrical operational block schematics
 - controller area network databus (CAN-bus) circuit diagrams

- vehicle zoning information tables
- electrical component drawings
- connector drawings that include connector end view drawings.

Assessment Conditions

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 vehicle or machinery wiring schematics and drawings they have interpreted, 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
- wiring schematics and drawings relating to three different vehicles, vessels or machinery.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

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