



Australian Government

AURPTR001 Test and service 240 volt portable generators

Release: 1

AURPTR001 Test and service 240 volt portable generators

Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes required to test and service 240 volt portable generators according to manufacturer specifications. It involves preparing for the task, testing and servicing the equipment, performing post-service testing, and completing workplace processes and documentation.

It applies to those working in the outdoor power equipment service and repair industry. The portable generators may be driven by petrol or diesel engines. Testing and servicing relates only to the 240 volt generator, and not the engine driving the generator.

Licensing, legislative, regulatory or certification requirements may apply to this unit in some jurisdictions. Users are advised to check with the relevant regulatory authority.

Competency Field

Outdoor Power Equipment

Unit Sector

Technical - Electrical and Electronic

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	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 undertake load test of portable generator	1.1 Job requirements are determined from workplace instructions 1.2 <i>Test and service procedures</i> and information are sourced and interpreted 1.3 Hazards associated with the work are identified and risks are

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	managed 1.4 <i>Load testing equipment</i> and tools are selected and checked for serviceability
2. Conduct test and interpret results	2.1 Load test is carried out according to manufacturer specifications, workplace procedures and <i>safety requirements</i> 2.2 Test results are compared with manufacturer specifications to determine service requirements 2.3 Authorisation to proceed is obtained according to workplace procedures
3. Prepare to service generator	3.1 Service options are analysed and those most appropriate to the circumstances are selected 3.2 Tools, equipment and materials are selected and checked for serviceability
4. Service generator	4.1 Components are serviced, adjusted and replaced according to manufacturer specifications, workplace procedures, and safety requirements, and without causing damage to components or systems 4.2 Generator is run and resistive load test is compared with manufacturer specifications
5. Complete work processes	5.1 Final inspection is made to ensure work is to workplace expectations and generator is presented ready for use, including protective guards, cowlings and safety features 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 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.

Skills	Description
Reading skills to:	interpret information from manufacturer and workshop literature when seeking test and service specifications and procedures relating to 240 volt portable generator.
Writing skills to:	legibly and accurately fill out workplace documentation when reporting inspection findings, and recording parts and material used.
Oral communication skills to:	clarify instructions.
Numeracy skills to:	- use basic mathematical operations, including addition and subtraction, when testing and servicing generator - interpret gauges and test equipment.
Planning and organising skills to:	plan own work requirements and prioritise actions to achieve required outcomes and ensure tasks are completed within workplace timeframes.
Technology skills to:	operate electrical load test equipment and engine tachometer.

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.

<i>Test and service procedures</i> must include:	- alternating current (AC) output voltage and frequency - resistive load testing - engine speed.
<i>Load testing equipment</i> must include:	- load testing device - load appliances and equipment.
<i>Safety requirements</i> must include:	- work health and safety (WHS) and occupational health and safety (OHS) requirements, including procedures for: - selecting and using personal protective equipment (PPE) - safely using electrical test equipment - working with exhaust fume hazards - working with hot or rotating parts.

Unit Mapping Information

Equivalent to AURPTR3001 Test and service 240V portable generators

Links

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for AURPTR001 Test and service 240 volt portable generators

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Performance Evidence

Before competency can be determined, individuals must demonstrate they can perform the following according to the standards defined in this unit's elements, performance criteria, range of conditions and foundation skills:

- test and service two different 240 volt portable generators.

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 and servicing 240 volt portable generators, including procedures for:
 - selecting and using personal protective equipment (PPE)
 - safely using electrical test equipment
 - working with exhaust fume hazards
 - working with hot or rotating parts
- licensing and regulatory requirements for working with 240 volt components
- application, purpose and operation of different types of 240 volt portable generators, including:
 - inverter
 - standard, including:
 - brush
 - brushless
- test and service procedures for 240 volt portable generators, including:
 - alternating current (AC) output voltage and frequency
 - battery voltage
 - load testing
 - generator mountings and frame

- engine oil level check
- engine performance test
- control panel inspection
- post-service testing procedures for 240 volt portable generators, including operating portable generators through full operating range.

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 240 volt portable generators that they have tested and serviced, 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:

- outdoor power equipment repair workplace or simulated workplace
- workplace instructions
- manufacturer specifications for 240 volt portable generators
- area and equipment, including PPE, for safely testing 240 volt portable generators
- two different 240 volt portable generators requiring testing and service
- tools, equipment and materials appropriate for testing and servicing 240 volt portable generators, including electrical load test equipment and engine tachometer.

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