



Australian Government

UEPMNT445 Diagnose and repair faults in large scale wind turbine generators

Release: 1

UEPMNT445 Diagnose and repair faults in large scale wind turbine generators

Modification History

Release 1. This is the first release of this unit of competency in the UEP Generation Training Package.

Application

This unit involves the skills and knowledge required to diagnose and repair faults in large scale wind turbine generator systems.

Diagnosing and repairing faults is the process of inspecting wind turbine generator systems to identify problems and ensure repairs take place. The aim is to enhance the overall delivery of large scale wind turbine generator systems.

Competency in this unit requires the ability to gather data, interpret data to establish a theory about fault, repair faults and record faults. Individuals will, in general, work under supervision in an electrical, electronic and/or mechanical equipment repair workshop or on site.

Power generation maintenance personnel are typically trained and authorised to receive permits to work.

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

Note: Workplace practice

The application of the skills and knowledge described in this unit of competency may require a licence or training permit to practice in the workplace, where work is carried out on gas and electrical installations. Additional and/or other conditions may apply under state and territory legislative and regulatory licensing requirements.

Pre-requisite Unit

UEPMNT371 Maintain large scale wind turbines generators

UEENEEG108A Troubleshoot and repair faults in low voltage electrical apparatus and circuits

UEENEEE102A Fabricate, assemble and dismantle utilities industry components

UEENEEE104A Solve problems in D.C. circuits

UEENEEE105A Fix and secure electrotechnology equipment

UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications

UEENEEG006A Solve problems in single and three phase low voltage machines

UEENEEG033A Solve problems in single and three phase low voltage electrical apparatus and circuits

UEENEEG063A Arrange circuits, control and protection for general electrical installations

UEENEEG101A Solve problems in electromagnetic devices and related circuits

UEENEEG102A Solve problems in low voltage A.C. circuits

UEENEEG106A Terminate cables, cords and accessories for low voltage circuits

Competency Field

Maintenance

Unit Sector

Electricity generation

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Gather data

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1 Wind turbine generator system's data logging information and error codes are accessed, in accordance with workplace procedures
- 1.2 Wind turbine generator system's sensory data on fault is gathered
- 1.3 Hard copy or online documentation is accessed to support fault finding process, in accordance with workplace procedures
- 1.4 Fault indicators and error codes are examined and interpreted, in accordance with workplace procedures
- 1.5 Circuit diagrams, manufacturers' specifications, schematics and/or consultation with technical advisors are used to determine circuit and system characteristics and function

2 Interpret data to establish hypothesis about fault

- 2.1 Wind turbine generator system performance parameters are identified and applied to interpretation of fault data
- 2.2 Wind turbine generator system faults are verified, or localised, using approved techniques, procedures, tools and test equipment

- 2.3** Priorities are set for testing or replacement of specific components, wiring and connections in wind turbine generator systems
- 3 Repair fault**
- 3.1** Risk analysis is undertaken, in accordance with workplace procedures, and is communicated to the work team
- 3.2** Safety precautions including circuit isolations, physical barriers and other protective devices or systems are used, where appropriate
- 3.3** Tests are conducted to ensure fault has been correctly repaired or isolated, in accordance with workplace procedures
- 3.4** Wind turbine generator system faulty components that have been removed from service are examined and cause of problem is identified
- 3.5** Loose connections or wiring in the wind turbine generator system are repaired, in accordance with workplace procedures
- 3.6** Parts or components are removed and replaced with tested and operational parts
- 3.7** Wind turbine generator system is tested, in accordance with workplace procedures, to ensure correct operation
- 3.8** Fault finding process is escalated to repairing a complex fault using a technical adviser, if required
- 4 Record fault**
- 4.1** Wind turbine generator system's faulty components and parts are correctly tagged, identified and stored, in accordance with workplace procedures
- 4.2** Wind turbine generator system's faults are recorded, in accordance with workplace procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UEPMNT445A Diagnose and repair faults in large scale wind turbine generators.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1715b9fa-e7bd-441c-bb8d-cf22c9c825a8>