



Australian Government

UEPMNT004 Diagnose and repair faults in large scale wind turbines

Release: 1

UEPMNT004 Diagnose and repair faults in large scale wind turbines

Modification History

Release 1. This is the first release of this unit of competency in the UEP Electricity Supply Industry - Generation Sector Training Package Release 2.0.

Application

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

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

The application of the skills and knowledge described in this unit may require a licence/registration to practice in the workplace.

Other conditions may apply under state and territory legislative and regulatory licensing requirements which must be confirmed prior to commencing this unit.

Pre-requisite Unit

UEPMNT009 Maintain large scale wind turbines

Competency Field

Maintenance

Unit Sector

Electricity generation

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Gather data

2 Interpret data to establish hypothesis about fault

3 Repair fault

PERFORMANCE CRITERIA

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

- 1.1 Wind turbine system's data logging information and error codes are accessed in accordance with workplace procedures
- 1.2 Wind turbine 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' recommendations and specifications, schematics and/or consultation with technical advisors are used to determine circuit and system characteristics and function
- 2.1 Wind turbine system performance parameters are identified and applied to interpretation of fault data
- 2.2 Wind turbine 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 systems
- 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 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 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 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 system's faulty components and parts are correctly tagged, identified and stored in accordance with workplace procedures
- 4.2 Wind turbine 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 UEP Electricity Supply Industry - Generation Sector Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UEPMNT445 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>