



Australian Government

UEERE0041 Maintain operation of remote area power generation plant

Release: 1

UEERE0041 Maintain operation of remote area power generation plant

Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

Application

This unit involves the skills and knowledge required to maintain operation of remote area power generation plant where the exposed voltage is not greater than 50 volt (V) alternating current (a.c.) or 120 V direct current (d.c).

It includes preparing for, conducting, completing and reporting on maintenance of power generation plant.

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

Pre-requisite Unit

UEERE0018 Maintain and repair remote area power generation facilities

Competency Field

Renewable Energy

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare for maintenance

PERFORMANCE CRITERIA

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

1.1 Work health and safety (WHS)/occupational health and safety (OHS) requirements for a remote area power generation plant are identified and applied in accordance with workplace procedures

- 1.2 Risks are identified, assessed and control measures applied in accordance with workplace procedures prior to commencing work
 - 1.3 Risks/hazards are identified, assessed, reported to relevant person/s and control measures implemented
 - 1.4 Nature and location of the power plant are obtained from documentation or from work supervisor to determine the scope of work to be undertaken
 - 1.5 Advice on coordinating work with others and the local community is obtained from relevant person/s and applied
 - 1.6 Sources of materials required for work are identified and accessed in accordance with workplace routines and procedures
 - 1.7 Tools, equipment and testing devices required for work are obtained and checked for correct operation and safety
- 2 **Conduct maintenance work**
 - 2.1 Workplace risk control measures and procedures are applied
 - 2.2 Circuits/machines/plant are isolated in accordance with WHS/OHS requirements and workplace procedures
 - 2.3 Relevant maintenance procedures are applied to test and check remote area power plant
 - 2.4 Known types of remote area power plant functional faults are identified and repaired in accordance with workplace procedures
 - 2.5 Maintenance performance measurements and repairs are conducted safely in accordance with workplace routines and procedures
 - 2.6 Workplace procedures are applied for referring non-routine events to relevant person/s for directions
 - 2.7 Maintenance and repair work is conducted minimising waste of materials, energy, damage to apparatus, circuits, the surrounding environment and services
 - 2.8 Quality checks are conducted in accordance with instructions and workplace procedures

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| 3 Complete maintenance work and reporting | 3.1 Workplace risk control measures and procedures are applied |
| | 3.2 Worksite is cleaned and made safe in accordance with workplace procedures |
| | 3.3 Maintenance issues beyond the scope of work are referred to relevant person/s in accordance with workplace procedures |
| | 3.4 Work completed is reported to relevant person/s in accordance with maintenance reporting and 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 UEE Electrotechnology Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UEENEEK120A Maintain operation of remote area power generation plant.

Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>

Assessment Requirements for UEERE0041 Maintain operation of remote area power generation plant

Modification History

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- understanding the location and nature of the work required
- following prescribed procedures to testing and checking plant
- identifying and repairing known functional faults
- carrying out maintenance and repairs effectively
- identifying maintenance issues beyond the scope of prescribed work and notifying appropriate person/s
- documenting work activities accurately
- dealing with unplanned events
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements and workplace procedures and practices, including the use of risk control measures
- checking isolation of circuits/machines/systems
- conducting quality checks
- identifying and accessing materials, tools, equipment and testing devices
- maintaining operation of remote area power generation plant.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- minor servicing of a remote area power generating plant encompassing:
 - engine oil and filters
 - fuel filters
 - coolant filters
 - water trap devices
 - air cleaners
- minor maintenance of a remote area power generating plant encompassing:
 - fan and accessory drive belts
 - repair of minor leaks: coolant, oil and fuel

- servicing of a remote area power generating plant battery systems encompassing:
 - starting battery set
 - switchboard (nicad) batteries
- information displayed by the instruments/meters in a remote area power generating plant encompassing:
 - generating equipment (diesel engine)
 - engine lubrication
 - system oil pressure
 - engine cooling system coolant
 - temperature (in and out)
 - fuel pressure
 - current
 - voltage
 - power (kW)
 - kilowatt hours
 - frequency, hertz (Hz)
 - engine running hours
 - station services: fuel tank dip and lubricating oil tank level
 - fuel flow meter
- use of the information gathered from instruments/meters encompassing:
 - ordering of fuel, lubricating oil and coolant
 - scheduling regular servicing and maintenance for engine oil and filter changes, fuel filters, drive belt (condition/adjustment), valve adjustments (if applicable), major and minor mechanical servicing by outside agents and air cleaner (both dry paper and oil bath types)
- power plant log sheets and readings encompassing:
 - completed log sheets
 - forwarding information to appropriate person/location at regular intervals (weekly)
- general cleanliness of the power generating plant and buildings encompassing:
 - generation plant
 - oil leaks
 - water leaks
 - fuel leaks
 - safety awareness
 - plant buildings
 - internal floor area
 - used consumables
 - spare parts storage
 - spider webs and other pests
 - rubbish containers

- ventilation
- power station compound
- fence and gate (if applicable)
- weeds
- grass (if applicable)
- rubbish containers
- fuel and oil supply (drums)
- water reticulation (if applicable)
- tools and equipment
- location/storage
- cleanliness
- maintenance
- drain/drip tins
- safety signage
- location
- condition
- suitability
- relevant manufacturer specifications
- relevant safe work method statements (SWMS)/job safety assessments or risk mitigation processes
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace policies and procedures.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in suitable workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in suitable simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry

- resources that reflect current industry practices in relation to maintaining operation of remote area power generation plant
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

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