



Australian Government

UEEEEC0031 Fault find and repair global positioning systems

Release: 1

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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 fault find and repair global positioning systems (GPS).

It includes preparing to find and repair faults, finding and repairing faults, and completing and reporting on fault-finding and repair activities.

The skills and knowledge described in this unit require a licence or permit to practice in the workplace where work is carried out on electrical installations which are designed to operate at voltages greater than 50 volt (V) alternating current (a.c.) or 120 V direct current (d.c.).

Competency development activities in this unit are subject to regulations directly related to licensing. Where a licence or permit to practice is not held, skills and knowledge described in this unit require a relevant contract of training, such as an Australian Apprenticeship.

Additional and/or other conditions may apply in some jurisdictions subject to regulations related to electrical work. Practice in the workplace and during training is also subject to work health and safety (WHS)/occupational health and safety (OHS) regulations.

Permits may also be required for some work environments, such as confined spaces, working aloft, near live electrical apparatus and site rehabilitation.

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

Pre-requisite Unit

UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

UEEEEC0060 Repairs basic electronic apparatus faults by replacement of components

UEEEEC0066 Troubleshoot amplifiers in an electronic apparatus

UEEEEC0038 Find and repair microwave amplifier section faults in electronic apparatus

UEEEEC0067 Troubleshoot basic amplifier circuits

UEEEEC0063 Solve fundamental electronic communications system problems

UEEEEC0068 Troubleshoot communication systems

and

UEECD0043 Solve problems in direct current circuits

or

UEECD0044 Solve problems in multiple path circuits

UEECD0046 Solve problems in single path circuits

and

UEEEEC0074 Troubleshoot resonance circuits in an electronic apparatus

UEEEEC0065 Solve problems in basic electronic circuits

or

UEEEL0019 Solve problems in direct current (d.c.) machines

UEEEL0021 Solve problems in magnetic and electromagnetic devices

UEEEL0020 Solve problems in low voltage a.c. circuits

Competency Field

Electronics and Communications

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to find and repair faults

PERFORMANCE CRITERIA

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

- 1.1** WHS/OHS requirements and workplace procedures for relevant work area are identified, obtained and applied
- 1.2** Risk control measures are applied in accordance with workplace procedures prior to commencing work
- 1.3** Risks/hazards are identified, assessed and reported to relevant person/s, and control measures implemented
- 1.4** Extent of faults is determined from reports, other relevant documentation and discussions with relevant person/s
- 1.5** Relevant person/s is consulted to ensure the work is coordinated effectively with others

- 1.6** Tools, equipment and testing devices required to diagnose faults are obtained in accordance with workplace procedures and checked for correct operation and safety
- 2 Find and repair faults**
- 2.1** Workplace risk control measures and procedures are applied
- 2.2** Need to test and measure live work is determined in accordance with WHS/OHS requirements and workplace procedures
- 2.3** Circuits/machines/plant are checked and isolated, as required, in accordance with WHS/OHS requirements and workplace procedures
- 2.4** Logical diagnostic methods are applied to diagnose GPS faults employing measurements and estimations of system operating parameters referenced to system operational requirements in accordance with workplace procedures and job specifications
- 2.5** Suspected fault scenarios are tested in accordance with workplace procedures and job specifications
- 2.6** Source of the fault is identified and relevant person/s engaged to rectify the fault where it is outside the scope of capability in accordance with workplace procedures and relevant industry standards
- 2.7** Faults in electronic components are rectified to raise GPS to its operation standard
- 2.8** System is tested to verify that the system operates as intended and to specified requirements
- 2.9** Decisions for dealing with unplanned situations are made in accordance with workplace procedures, relevant industry standards and discussions with relevant person/s
- 2.10** Methods for dealing with unplanned situations are selected on the basis of safety and specified work outcomes
- 2.11** Diagnosis and rectification activities are carried out efficiently without waste of materials, damage to apparatus, the surrounding environment or services applying sustainable energy practices

3 Complete and report fault-finding and repair activities

- 3.1** WHS/OHS work completion risk control measures and workplace procedures are followed
- 3.2** Worksite is made safe in accordance with workplace procedures
- 3.3** Rectification of faults is reported in accordance with workplace procedures
- 3.4** Relevant person/s is notified that the system faults have been rectified 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 UEE Electrotechnology Training Package Companion Volume Implementation Guide.

Fault finding and repairing faults in GPS must include at least the following:

- two system faults in electronic GPS

Unit Mapping Information

This unit replaces and is equivalent to UEENEEH132A Fault find and repair global positioning systems.

Links

Companion Volume implementation guides are found in VETNet - -

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