



**Australian Government**

# **UEEEEC0036 Fault find and repair sonar apparatus and systems**

**Release: 1**

# UEEEEC0036 Fault find and repair sonar apparatus and systems

## 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 sonar apparatus and systems.

It includes safe working practices, interpreting diagrams, applying logical diagnostic methods and knowledge of sonar system components, rectifying faults, safety and functional testing, and completing service documentation.

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

UEEEEC0069 Troubleshoot digital sub-systems

UEEEEC0066 Troubleshoot amplifiers in an electronic apparatus

UEEEEC0019 Develop software solutions for microcontroller-based systems

UEEEEC0038 Find and repair microwave amplifier section faults in electronic apparatus

UEEEEC0068 Troubleshoot communication systems

## 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 are determined from reports, other 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
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- 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 sonar apparatus and system faults employing measurements and estimations of system operating parameters referenced to system operational requirements

#### **2 Find and repair fault**

- |          |                                                                |                                                                                                                                                                                                   |
|----------|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          | <b>2.5</b>                                                     | Suspected fault scenarios are tested in accordance with workplace procedures and job specifications                                                                                               |
|          | <b>2.6</b>                                                     | Source of the fault is identified and relevant person/s engaged to rectify fault in accordance with workplace procedures and relevant industry standards                                          |
|          | <b>2.7</b>                                                     | Faults in electronic components are rectified to raise sonar apparatus and system to its operation standard                                                                                       |
|          | <b>2.8</b>                                                     | System is tested to verify that the system operates as intended and to specified requirements                                                                                                     |
|          | <b>2.9</b>                                                     | Decisions for dealing with unplanned situations are made based on job specifications and requirements and discussions with relevant person/s                                                      |
|          | <b>2.10</b>                                                    | Methods for dealing with unplanned situations are selected on the basis of safety and specified work outcomes                                                                                     |
|          | <b>2.11</b>                                                    | Diagnosis and rectification activities are carried out efficiently without waste of materials, damage to apparatus, the surrounding environment or services applying sustainable energy practices |
| <b>3</b> | <b>Complete and report fault-finding and repair activities</b> |                                                                                                                                                                                                   |
|          | <b>3.1</b>                                                     | WHS/OHS work completion risk control measures and workplace procedures are followed                                                                                                               |
|          | <b>3.2</b>                                                     | Worksite is made safe in accordance with workplace procedures                                                                                                                                     |
|          | <b>3.3</b>                                                     | Rectification of faults is reported in accordance with workplace procedures                                                                                                                       |
|          | <b>3.4</b>                                                     | 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.

Finding and repairing faults in sonar apparatus • two system faults  
and systems must include at least the  
following:

## Unit Mapping Information

This unit replaces and is equivalent to UEENEEH140A Fault find and repair sonar apparatus and systems.

## Links

Companion Volume implementation guides are found in VETNet - -

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