



Australian Government

DEFSIM019 Fault find and repair simulator weapons systems

Release: 1

DEFSIM019 Fault find and repair simulator weapons systems

Modification History

Release 1. This is the first release of this unit of competency in the DEF Defence Training Package Release 4.0.

Application

This unit describes the knowledge and skills required to conduct fault finding and repairs to the simulator weapons systems which may include fire control, aiming and sighting systems. The unit includes analysing fault reports, identifying and rectifying faults, conducting functional tests and the documentation and certification processes. In the context of this unit, simulators are used to replicate land, air, sea and undersea systems to facilitate training and development.

Simulator weapons systems which may include simulated cannons/guns, non-guided weapons and guided weapons.

Simulator fire control systems which may include simulator fire control safety interlock systems, simulator armament control systems and simulator armament control buses.

Simulator aiming and sighting systems which may include simulator helmet mounted displays, simulator head-up displays, simulator head-in displays, simulator TV sighting systems, simulator on-screen displays and simulator infrared/thermal sighting systems.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to.

Those undertaking this unit would work independently, or as part of a team, with minimal supervision, while performing complex tasks, including complex problem solving, in a limited range of contexts. They would use discretion and judgement and take responsibility for the quality of their outputs.

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

Pre-requisite Unit

Not applicable.

Competency Field

Simulator Operations

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

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

1 Receive and analyse fault report	1.1	Receive and analyse simulator weapons systems fault report
	1.2	Identify and select appropriate fault finding method(s) that will apply across the range of simulator weapon systems
	1.3	Prepare the simulator weapons systems, for fault finding
2 Identify and find fault	2.1	Apply fault finding method(s) to weapon systems
	2.2	Identify and analyse fault indicators to weapon systems
	2.3	Identify simulator weapon systems fault
	2.4	Confirm that the fault is the one initially reported
3 Repair fault	3.1	Identify and confirm cause of fault
	3.2	Identify and confirm repair method(s)
	3.3	Complete simulator weapon systems repair
	3.4	Conduct post repair safety check
	3.5	Restart simulator weapons systems
4 Conduct functional test	4.1	Test simulator weapons systems, to ensure operational integrity
	4.2	Confirm operational parameters to weapon systems
5 Finalise repair process	5.1	Finalise simulator weapons systems reports including a detailed synopsis of the fault and the repair process and any certification requirements
	5.2	Report the operational status of the simulator weapons systems

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 DEFSIM006 Fault find and repair simulator weapons systems

Links

Companion Volume Implementation Guides are found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6bdbab1e-11ed-4bc9-9cba-9e1a55d4e4a9>

Assessment Requirements for DEFSIM019 Fault find and repair simulator weapons systems

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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 includes:

- undertaking research and analysis related to simulator weapons systems
- following logical, complex fault finding techniques
- using tools, measuring instruments and diagnostics
- applying simulator weapons systems repair methodologies
- following configuration management processes
- using appropriate information technology and software including at least one of:
 - customer diagnostics software
 - electronics configuration software
 - electronics instrument check diagnostics software
 - proprietary helmet mounted sight diagnostic software
 - Vector CANalyzer CAN bus diagnostic software
- identifying, reviewing and analysing information that may impact on the simulator weapons systems fault finding
- conducting simulator weapons systems functional testing
- negotiating and communicating effectively with key stakeholders.

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:

- operational capabilities and limitations of the relevant simulator
- operational capabilities and limitations of the relevant simulator weapons systems, fire control, aiming and sighting systems
- simulator operating modules comprising the simulator system being worked on
- fault indicators related to the simulator weapons systems being worked on
- repair methodologies related to the simulator weapons systems being worked on
- legislative and regulatory requirements related to the simulator being worked on
- organisational policy and procedures related to the relevant simulator weapons systems, fire control, aiming and sighting systems

- configuration management related to the simulator weapons systems being worked on
- product knowledge related to systems and/or equipment in service.

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 workplace operational situations. Where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect 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.

Retail or commercial systems whose primary purpose is entertainment do not meet the requirements.

Individual domestic use systems whose primary purpose is entertainment do not meet the requirements.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- acceptable means of simulation assessment
- applicable documentation, including workplace procedures, regulations, codes of practice and operation manuals
- relevant materials, tools, equipment and PPE currently used in industry.

Links

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