



Australian Government

DEFSIM006 Fault find and repair simulator weapons systems

Release: 1

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Modification History

Release	Comments
1	This unit was released in DEF Defence Training Package release 1.0 and meets the Standards for Training Packages.

Application

This unit describes the knowledge and skills required to conduct fault finding and repairs to the simulator weapons systems including 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 include simulated cannons/guns, non-guided weapons and guided weapons.

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

Simulator aiming and sighting systems 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.

This unit was developed in a Defence environment but may be relevant to others who work in this field.

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.

Competency Field

Simulator Operations

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section.
1. Receive and analyse fault report	1.1 Receive and analyse simulator weapons systems, fire control, aiming and sighting 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, fire control, aiming and sighting systems for fault finding.
2. Identify and find fault	2.1 Apply fault finding method(s). 2.2 Identify and analyse fault indicators. 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, fire control, aiming and sighting systems.
4. Conduct functional test	4.1 Test simulator weapons systems, fire control, aiming and sighting systems to ensure operational integrity. 4.2 Confirm operational parameters.
5. Finalise repair process	5.1 Finalise simulator weapons systems, fire control, aiming and sighting systems repair 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, fire control, aiming and sighting systems.

Foundation Skills

The foundation skills demands of this unit have been mapped for alignment with the Australian Core Skills Framework (ACSF). The following tables outline the performance levels indicated for successful attainment of the unit.

ACSF levels indicative of performance:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Learning					Reading					Writing					Oral communication					Numeracy				
Performance variables																								
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Support					Context					Text complexity					Task complexity									

Further information on ACSF and the foundation skills underpinning this unit can be found in the Foundation Skills Guide on the GSA website.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet -

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

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Assessment Requirements for DEFSIM006 Fault find and repair simulator weapons systems

Modification History

Release	Comments
1	These Assessment Requirements were released in DEF Defence Training Package release 1.0 and meet the Standards for Training Packages.

Performance Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the candidate must demonstrate evidence of performance of the following on at least one occasion.

- undertaking research and analysis related to simulator weapons systems
- following logical, complex fault finding techniques
- using measuring instruments including thermal array recorders
- applying simulator weapons systems, fire control, aiming and sighting 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
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Knowledge Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the depth of knowledge demonstrated must be appropriate to the job context of the candidate.

- 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

Competency should be assessed in an actual workplace or in a simulated environment, with access to equipment and infrastructure appropriate to the outcome. Competency should be demonstrated over time to ensure the candidate is assessed across a variety of situations.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

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