



Australian Government

DEFSIM004 Fault find and repair simulator motion and control loading 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 motion and control loading systems. This 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 motion system are mechanical/electric and/or mechanical/hydraulic.

Simulator control loading systems include electric and hydraulic.

This unit was developed in a Defence environment but may be relevant to others who work in this field. This unit applies to those working in fault finding and repairing simulator motion and/or control loading systems and was developed for technicians 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, particularly those relating to WHS, fault finding and repairing the simulator motion and/or control loading systems.

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 motion and/or control loading system fault report. 1.2 Identify and select appropriate fault finding method(s) that will apply across the range of simulator motion and/or control loading systems. 1.3 Prepare the simulator motion and/or control loading system 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 the simulator motion and/or control loading system 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. 3.3 Complete simulator motion and/or control loading system repair. 3.4 Conduct post repair safety check. 3.5 Restart simulator motion and/or control loading system.
4. Conduct functional test	4.1 Test simulator motion and/or control loading systems to ensure operational integrity. 4.2 Confirm operational parameters.
5. Finalise repair process	5.1 Finalise simulator motion and/or control loading system 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 motion and/or control loading system.

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 DEFSIM004 Fault find and repair simulator motion and control loading 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 motion and control loading systems
- following logical, complex fault finding techniques
- using measuring instruments including thermal array recorders and calibrated pressure gauges
- applying simulator motion and control loading systems repair methodologies
- using tools including hydraulic flushing faucets, motion specialist tool kits and inflation kits for hydraulic accumulators
- following configuration management processes
- using appropriate information technology and software including proprietary motion control loading system calibration software and general online diagnostic tool software
- identifying, reviewing and analysing information that may impact on the simulator motion and control loading systems fault finding
- conducting simulator motion and control loading systems functional testing
- negotiating and communicating effectively with key stakeholders

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 motion and/or control loading systems
- simulator operating modules comprising the simulator system being worked on
- fault indicators related to the simulator motion and control loading systems being worked on

- repair methodologies related to the simulator motion and control loading systems being worked on
- legislative and regulatory requirements related to the simulator motion and control loading systems being worked on
- organisational policy and procedures related to the relevant simulator motion and/or control loading systems
- configuration management related to the simulator motion and control loading 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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