



Australian Government

MEM234037 Perform maintenance-related integrated logistic support management activities

Release: 1

MEM234037 Perform maintenance-related integrated logistic support management activities

Modification History

Release 1. Supersedes and is equivalent to MEM234037A Perform maintenance-related integrated logistic support management activities.

Application

This unit of competency defines the skills and knowledge required to perform a range of maintenance-related integrated logistic support (ILS) activities at a managerial level for any complex system or product where ILS has been selected as the through-life management system. It also includes the application of data produced through the configuration management (CM) process where that process has been selected to establish and maintain the design baseline of a system or product. Technical information may also be taken from maintenance records and data.

This unit requires application of competencies relating to ILS elements and related data management and analysis tools in maintenance-related management and support of systems/products throughout their life of type.

Application of the CM process is covered by unit MEM234036 Apply configuration management procedures in engineering project management.

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

Pre-requisite Unit

MEM23003 Operate and program computers and/or controllers in engineering situations

MEM234028 Produce and manage technical documentation

MEM234029 Produce and manage technical publications

Competency Field

Engineering science

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assist to develop and maintain logistic support	1.1 Draft accurate and complete technical content for logistic support analysis plans

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
analysis plans	1.2 Review the technical content of logistic support analysis plans in line with trends in system supportability and affordability and with changes in the design baseline 1.3 Propose revisions to logistic support analysis plans
2. Perform life cycle cost analysis	2.1 Identify actual and anticipated costs through to life of type 2.2 Analyse cost data and extract key information for ILS activities
3. Establish and maintain baselines for reliability, availability and maintainability	3.1 Gather data on in-service reliability, availability and maintainability (RAM) and establish baselines 3.2 Review data against established baselines and initiate action to deal with deviations from established baselines
4. Develop and maintain a maintenance plan and identify associated requirements	4.1 Perform a level of repair analysis (LORA) 4.2 Specify maintenance activities and timelines 4.3 Identify and document support and test equipment requirements 4.4 Identify and document skills and maintenance manpower requirements 4.5 Identify and document requirements for maintenance facilities 4.6 Identify and document technical documentation requirements 4.7 Provide data for initial spares assessment 4.8 Revise the maintenance plan and applicable associated requirements required by baseline changes
5. Revise technical logistic support analysis record data	5.1 Analyse logistic support analysis parameters using current data 5.2 Enter analysis results in the logistic support analysis record
6. Manage data	6.1 Develop and manage a technical data management system in accordance with contractual and regulatory requirements 6.2 Monitor the relevance of technical data and initiate amendment action where necessary 6.3 Apply and support logistic support management information systems

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Analysis results include:	• in-service failure mode effects and criticality analysis • corrective and reliability-centred maintenance analysis • maintenance task and repair level analysis.
ILS standards and references include one or more of the following:	• Army Regulation 700-127 Integrated Logistics Support • Defence Standard 00-600 Integrated Logistic Support for MOD Projects • Defence Standard 00-40 Reliability and Maintainability Pt 1 • Defence Standard 00-41 Reliability and Maintainability MOD Guide to Practices and Procedures • MIL-STD 1390D Level of Repair Analysis • NAVAIR-00 -25-403 Guidelines for the Naval Aviation Reliability-Centred Maintenance Process • Integrated Logistic Support Handbook, third edition • NASA Fault Tree Assessment Handbook.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM234037A Perform maintenance-related integrated logistic support management activities.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

Assessment Requirements for MEM234037 Perform maintenance-related integrated logistic support management activities

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include:

- populating and extracting data from databases and reviewing data against established baselines and initiate required actions
- applying data from design sources including configuration management (CM) data
- performing task analysis and specifying maintenance activities and timelines on at least two occasions
- identifying and documenting technical and technical documentation requirements for maintenance facilities on at least two occasions
- revising maintenance plan against baseline changes including applying integrated logistic support (ILS) principles
- developing and managing a technical data management system including monitoring relevance of data and initiating required amendment action.

Note: Where a volume and/or frequency is not specified, demonstration must be provided at least once.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- ILS management and support philosophy and practice
- sources of technical data for logistics plans
- life cycle cost analysis and factors that give rise to costs through to life of type including:
 - operation, engineering, maintenance and supply support
 - facilities and personnel costs.
- logistic support analysis concepts and methods including:
 - preparation of logistic support analysis plans
 - management and conduct of logistic support analysis programs
 - supportability analysis
 - task analysis

- logistic support analysis record population
- reliability, availability and maintainability (RAM) determination and application including:
 - baseline determination and application
 - RAM modelling
 - reliability and maintainability apportionment
- performance of level of repair analysis (LORA) and development of maintenance plans and associated requirements
- ILS standards and references
- data management concepts and methods including features of a technical data management system.

Assessment Conditions

- Assessors must:
 - have vocational competency in performing maintenance-related integrated logistic support management activities at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015 or its replacement* and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring State as the case requires.
- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions that cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required including relevant workplace procedures, product and manufacturing specifications.
- 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.
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