



Australian Government

MEA161 Assess aviation maintenance spares and manage repairable items

Release: 1

MEA161 Assess aviation maintenance spares and manage repairable items

Modification History

Release 1. Equivalent to MEA136 Assess aviation maintenance spares and manage repairable items. Code changes due to changed titles.

Application

This unit of competency describes the skills and knowledge required to apply integrated logistic support (ILS) procedures when assessing spares and managing repairable items, including aircraft and mechanical and avionic items of aeronautical product. Work may be performed individually or as part of a team.

The unit applies to scheduled and unscheduled maintenance. It is used in workplaces that operate under the airworthiness regulatory systems of Australian Defence Force (ADF) and the Civil Aviation Safety Authority (CASA).

This unit forms part of the CASA requirement for maintenance certification licences under Civil Aviation Safety Regulation (CASR) Part 66. Where a CASA licensing outcome is sought, users must refer to the licensing provisions in the MEA Aeroskills Companion Volume Implementation Guide.

Pre-requisite Unit

MEA135 Use computers in aviation maintenance-related integrated logistic support activities

Competency Field

Integrated logistic support

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1. Assess spares

PERFORMANCE CRITERIA

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

1.1 Identify and apply organisational spares assessment and supply information systems

1.2 Monitor maintenance data, spares usage data, and trends

ELEMENTS**PERFORMANCE CRITERIA**

- and vary required holdings of spares as required
- 1.3 Identify problems in spares availability, and determine strategies to resolve them
 - 1.4 Determine the need for suitable substitute parts and, if parts are needed, obtain required engineering approvals according to applicable regulations, and organisational policies and procedures
 - 1.5 Identify acceptable sources of substitute parts and specify requirements for documentation, according to regulatory requirements, and organisational policies and procedures
 - 1.6 Observe configuration management (CM) requirements when assessing spares
 - 1.7 Provide data required for input to ILS records where applicable
2. Manage repairable items
- 2.1 Monitor maintenance and reliability data and propose changes to maintenance programs where necessary
 - 2.2 Raise documentation to allocate repairable items to maintenance facilities according to contractual requirements, and organisational policies and procedures
 - 2.3 Specify specific investigation or additional maintenance requirements
 - 2.4 Provide data required for input to ILS records where applicable

Foundation Skills

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

Unit Mapping Information

Release 1. Equivalent to MEA136 Assess aviation maintenance spares and manage repairable items.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ce216c9c-04d5-4b3b-9bcf-4e81d0950371>

Assessment Requirements for MEA161 Assess aviation maintenance spares and manage repairable items

Modification History

Release 1. Equivalent to MEA136 Assess aviation maintenance spares and manage repairable items. Code changes due to changed titles.

Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, which must include the ability to:

- assess aviation maintenance spares during one scheduled or one unscheduled aviation maintenance activity; and, during the activity:
 - use manual or computer-based organisational or proprietary system
 - identify suitable substitute parts from modification data; drawings, standards and specifications (in the case of piece parts and materials); and manufacturer catalogues and specifications (in the case of complete components, items of aeronautical product)
 - specify documentation required for substitute parts, including certification reports and release notes
 - seek required engineering approvals obtained in line with regulations, and organisational policies and procedures
- manage the repair of at least three of the following repairable items during one scheduled or one unscheduled aviation maintenance activity:
 - removable structural components
 - mechanical components
 - items of role equipment
 - hydraulic, pneumatic and fuel components
 - items of safety equipment
 - fire detection and extinguishing components
 - engines and engine components
 - propellers and rotors
 - electrical system components
 - instrument system components
 - radio system components
 - electronic systems components.

In the course of the above work, the candidate must as required:

- apply regulatory and organisational procedural requirements
- use software packages relevant to assessing spares and managing repairable items
- identify and resolve problems relating to availability of spares

- provide data required for input to integrated logistic support (ILS) records
- observe configuration management (CM) requirements
- specify the need for further investigation or additional maintenance, including that involving:
 - service difficulty (defect) report investigation
 - incident investigation
 - warranty claims
 - modifications
 - compliance with Airworthiness Directives or special technical instructions
 - service bulletin compliance
- monitor maintenance and reliability data and provide feedback on maintenance programs
- demonstrate oral communication, written communication, and problem-solving skills to the required level.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- ILS principles and procedures relating to assessing spares, managing repairable items, and configuration management
- key features of ILS records, including:
 - logistic support analysis plans
 - life cycle costing data
 - failure modes, effects and criticality analysis
 - baselines for reliability, availability, and maintainability
 - life support analysis record data
- software packages used by the organisation for assessing spares, managing supply, and managing repairable items
- use of drawings, standards and specifications to identify substitute piece parts and materials
- use of catalogues and specifications to identify substitute components (items of aeronautical product)
- regulations, organisational policies and procedures for assessing spares and managing repairable items for:
 - obtaining engineering approvals for the use of substitute parts
 - work health and safety (WHS) requirements relating to substitute piece parts, materials and components
 - applying fraud and ethics requirements set out in organisational code of conduct specific to the work described in the performance evidence
- regulations, organisational policies and procedures, including:
 - Civil Aviation Regulations (CARs) and associated advisory circulars (ACs)
 - Civil Aviation Safety Regulations (CASRs), Manuals of Standards and associated Acceptable Means of Compliance and Guidance Material

- aviation maintenance organisation expositions
- continuing airworthiness management organisation expositions
- AAP 7001.053 Technical Airworthiness Management Manual
- organisational policy manuals
- quality manuals
- organisational procedures manuals
- work instructions
- Defence regulations and instructions
- maintenance management plan
- standing instructions.

Assessment Conditions

The following conditions of assessment represent the requirements of the regulators (Australian Defence Force [ADF] and Civil Aviation Safety Authority [CASA]) and maintenance stakeholders, and must be rigorously observed.

This unit may be assessed on the job, off the job, or a combination of both. Where assessment occurs off the job, that is, the candidate is not in productive work an appropriate simulation must be used where the range of conditions reflects realistic workplace situations encountered in assessing aviation maintenance spares and managing repairable items, especially in relation to component or piece-part substitution.

The candidate must be permitted to refer to relevant workplace procedures, product and manufacturing specifications, codes, drawings, standards, manuals, and reference materials.

The candidate must have access to:

- equipment and materials required to demonstrate the performance evidence above, including software packages used by the organisation.

Candidate capability of providing the required performance and knowledge evidence must be established via the records in the Maintenance Management Competency Log. Where the individual does not have a Competency Log, evidence of capability can be gathered through direct observation, supervisor's reports, project work, samples and questioning.

Assessors of this unit must satisfy the assessor requirements in applicable vocational education and training legislation, frameworks and/or standards.

Where the unit is to be used for CASA licensing purposes the assessor must also meet the criteria specified in the CASR Part 147 Manual of Standards.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ce216c9c-04d5-4b3b-9bcf-4e81d0950371>