



Australian Government

Department of Education, Employment and Workplace Relations

MEA112B Plan and implement civil aircraft maintenance activities

Revision Number: 2

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Modification History

Minor formatting and editorial changes made.

Unit Descriptor

This is one of the units of competency that must be attained to progress from Aircraft Maintenance Engineer to the grant of an Aircraft Maintenance Engineer Licence or Aviation Maintenance Specialist Certificate under CASR Part 66, in accordance with the licensing provisions in the Assessment Guidelines. It covers the competencies required to plan and implement aircraft maintenance activities.

The skills and knowledge covered by the units of competency at Certificate IV level listed in the MEA11 Aeroskills Training Package for the qualification leading to the applicable Aircraft Maintenance Engineer Licence sought are prerequisite to the attainment of the elements of competency specified in this unit. This includes full coverage of the CASR Part 66 Avionics or Mechanical Syllabus subjects/topics listed in the Assessment Guidelines.

Application of the Unit

This unit requires application of maintenance planning and management skills to plan, implement, evaluate and report on aviation maintenance activities while complying with all legislative and regulatory requirements.

Applications include all aviation maintenance activities.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

1. Plan aircraft maintenance activities
 - 1.1. **Maintenance requirements** are determined from applicable sources
 - 1.2. Maintenance tasks are analysed and prioritised
 - 1.3. **Resource requirements** are identified and allocated to ensure the timely and efficient completion of maintenance tasks
 - 1.4. Maintenance tasks to be performed are recorded in a maintenance schedule in accordance with enterprise policy and procedures
2. Implement aircraft maintenance activities
 - 2.1. Roles and responsibilities of maintenance personnel are communicated and agreed
 - 2.2. **Resources and equipment required to perform maintenance tasks** are identified and arranged
 - 2.3. Regular liaison with maintenance personnel is maintained to ensure scheduled/unscheduled tasks are being completed and continuity is maintained
 - 2.4. Management/stakeholders are provided with **regular updates** on maintenance progress, as required
 - 2.5. Maintenance activities are monitored to ensure compliance with **prescribed instructions, policy, procedures and/or regulatory requirements**
 - 2.6. **Advice and assistance with maintenance activities** is provided, as required
 - 2.7. Maintenance problems are resolved in accordance with the approved maintenance data
 - 2.8. Proposed changes to the maintenance schedule are processed and negotiated with management/stakeholders
3. Evaluate and report maintenance outcomes
 - 3.1. Final maintenance outcomes are evaluated against the schedule in accordance with enterprise policy and procedures
 - 3.2. Maintenance reports are collated, evaluated and forwarded to appropriate management personnel in accordance with enterprise policy and procedures

Required Skills and Knowledge

Required skills

Look for evidence that confirms skills in:

- application of the procedures for the identification of specific maintenance requirements through the review of:
 - maintenance releases
 - manufacturers' maintenance manuals and servicing schedules
 - computer maintenance data systems
 - service bulletins
 - modification incorporation instructions
 - repair instructions
 - feedback from maintenance personnel and aircrew via Technical Logs or approved maintenance documentation
- Aircraft Maintenance Organisation (AMO) internal work instructions or directives
- Airworthiness Directives (AD)
- basic project planning techniques, including planning chart development, timing, prioritising, resourcing, monitoring, performance measurement and evaluation of maintenance tasks
- financial and inventory management as an element of task planning
- the basic function, components, operation and interrelationship of all aircraft systems for the initial rating sought
- problem solving techniques and troubleshooting procedures
- damage assessment philosophies and procedures, particularly with regard to corrosion damage
- cost control during maintenance, including cost-effectiveness considerations for different repair types
- philosophies and considerations in repair versus replacement options
- the application of quality management systems in aircraft maintenance
- enterprise and regulatory requirements for undertaking, recording and reporting maintenance activities, including relevant OHS requirements and the use of PPE

Required knowledge

Look for evidence that confirms knowledge of:

- methods of determining and specifying maintenance requirements (MRB, MSG, EROPS, RVSM, Maintenance Programs, Minimum Equipment List, reliability, ATA codes)
- the procedures for the identification of specific maintenance requirements through the review of:
 - maintenance releases
 - manufacturers' maintenance manuals and servicing schedules
 - computer maintenance data systems

- service bulletins
- modification incorporation instructions
- repair instructions
- feedback from maintenance personnel and aircrew via Technical Logs or approved maintenance documentation
- AMO internal work instructions or directives
- AD
- the regulations governing aircraft maintenance coordination
- basic project planning techniques, including planning chart development, timing, prioritising, resourcing, monitoring, performance measurement and evaluation of maintenance tasks
- financial and inventory management as an element of task planning
- the basic function, components, operation and interrelationship of all aircraft systems for the initial rating sought
- problem solving techniques and troubleshooting procedures
- damage assessment philosophies and procedures, particularly with regard to corrosion damage
- cost control during maintenance, including cost-effectiveness considerations for different repair types
- philosophies and considerations in repair versus replacement options
- the application of quality management systems in aircraft maintenance
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Evidence Guide

<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>A person who demonstrates competency in this unit must be able to plan and implement aviation maintenance activities and evaluate and report on the outcome of the activities while complying with all relevant legislative and regulatory requirements.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>It is essential that maintenance requirements are fully identified and that all applicable aspects of planning and implementation are identified and applied to meet organisational priorities and minimise workplace disruptions.</p> <p>Evidence is required of underlying knowledge and skills in the planning and implementation of maintenance activities, and in the associated compliance with airworthiness regulatory requirements.</p> <p>A person cannot be assessed as competent until it can be demonstrated to the satisfaction of the workplace assessor that the relevant elements of the unit of competency are being achieved on a task representative of Groups 1 to 7 in the Range Statement. This shall be established via simulated activities at the CASR Part 147 MTO and performance during supervised workplace activities.</p>
<p>Context of and specific resources for assessment</p>	<p>Competency should be assessed under supervision without intervention in the work environment, and/or by use of simulated activities in a CASR Part 147 Maintenance Training Organisation (MTO), covering the full range of maintenance planning and implementation.</p>
<p>Method of assessment</p>	<p>This unit must be linked in its assessment and application to those that apply to the exercise of Aircraft Maintenance Engineer Licence or Aircraft Maintenance Specialist Certificate privileges in the actual maintenance of aircraft.</p>
<p>Guidance information for assessment</p>	

Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Note</p>	<p>Range statements listed below are numbered to facilitate specification of the assessment requirements included in the Evidence Guide</p>
<p>Maintenance requirements</p>	<p>1. Maintenance requirements may be determined from any or all of:</p> <ul style="list-style-type: none"> • maintenance releases • manufacturers' maintenance manuals and servicing schedules • computer maintenance data systems • service bulletins • modification incorporation instructions • repair instructions • feedback from maintenance personnel and aircrew via Technical Logs or approved maintenance documentation • Aircraft Maintenance Organisation (AMO) internal work instructions or directives • Airworthiness Directives (ADs)
<p>Resource requirements</p>	<p>2. Resource requirements may include:</p> <ul style="list-style-type: none"> • required numbers of personnel and their availability • personnel qualifications, experience and authorisations • the availability of the resources listed in Group 3
<p>Resources and equipment required to perform maintenance tasks</p>	<p>3. Resources and equipment required to perform maintenance tasks may include:</p> <ul style="list-style-type: none"> • personnel • spares • lubricants • consumables • tools • special equipment • PPE • associated equipment, including various items of ground support equipment

Regular updates	<p>4. Regular updates may include:</p> <ul style="list-style-type: none"> • both written and verbal reports, including notes, work sheets, status reports, briefs and individual directives
Prescribed instructions, policy, procedures and/or regulatory requirements	<p>5. Prescribed instructions, policy, procedures and/or regulatory requirements may include:</p> <ul style="list-style-type: none"> • manufacturers operating and maintenance manuals • CASA-approved enterprise operation manuals • quality procedures and work instructions • OHS policies and instructions, including MSDS • management directives.
Advice and assistance in maintenance activities	<p>6. Advice and assistance in maintenance activities may include:</p> <ul style="list-style-type: none"> • fault diagnosis procedures • troubleshooting • damage assessment • assessment of repair cost effectiveness • assessment of replacement options • technical services advice or directives
Maintenance problems	<p>7. Maintenance problems may include:</p> <ul style="list-style-type: none"> • lack of resources • unanticipated breakdowns or faults • changes in priorities
Application	<p>The competency applies to the planning and implementation of aircraft maintenance activities, including:</p> <ul style="list-style-type: none"> • scheduled maintenance • unscheduled maintenance • configuration changes • modification incorporation • repair

Unit Sector(s)

Aviation maintenance

Competency field

Co-requisite units

Not applicable