



Australian Government

MEA328C Maintain and/or repair aircraft mechanical components or parts

Revision Number: 2

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Modification History

Minor formatting and editorial changes made. Prerequisite unit version code updated. Additional assessment advice provided in the Evidence Guide.

Unit Descriptor

This unit of competency is part of the Mechanical Certificate IV (Aircraft Maintenance Stream) training pathway. It covers the competencies required to maintain and repair a range of aircraft mechanical components and parts. This unit is used in workplaces that operate under the airworthiness regulatory systems of the ADF and CASA.

Where a CASA licensing outcome is sought this unit forms part of the CASA requirement for the granting of the chosen Aircraft Maintenance Engineer Licence under CASR Part 66, in accordance with the licensing provisions in Section 3, Assessment Guidelines.

Application of the Unit

This unit requires application of hand skills and the use of relevant maintenance publications to maintain and repair a range of aircraft mechanical components.

Applications include fixed and rotary wing aircraft, and components in workshops.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

MEA302C	Remove and install aircraft hydro-mechanical and landing gear system components
MEA303D	Remove and install aircraft pneumatic system components

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

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| 1. Maintain and/or repair mechanical components or parts | <p>1.1. Maintenance and/or repair requirements are determined, following disassembly and assessment of component parts for serviceability, in accordance with the relevant maintenance documentation</p> <p>1.2. Tagging and repair instructions are accurately specified for parts requiring specialist repair</p> <p>1.3. Appropriate materials, tools, equipment and assembly or fabrication jigs are selected and prepared for the particular specification requirements</p> <p>1.4. <i>Components or parts</i> are maintained, repaired or modified, as approved by relevant manufacturers' bulletins or procedures, in accordance with required specifications</p> <p>1.5. Mechanical component parts are assembled within specified tolerances and in accordance with the appropriate maintenance documents</p> <p>1.6. Mechanical components are adjusted, as required, to operate within prescribed specifications</p> <p>1.7. Test equipment and rigs are used, where applicable, to confirm serviceability</p> <p>1.8. Maintained/repaired or modified components are tagged, sealed and packaged within specified procedures</p> <p>1.9. Required maintenance documentation is completed and processed in accordance with standard enterprise procedures</p> |
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Required Skills and Knowledge

Required skills

Look for evidence that confirms skills in:

- applying relevant OHS practices, including the use of MSDS and PPE
- using relevant maintenance documentation, specifications and aircraft/component manuals to:
 - recognise state of serviceability and repair requirements for the range of mechanical components listed in the Range Statement
 - identify requirements and complete repairs and/or modifications
 - test and/or adjust components as required
 - correctly tag, seal and package completed components

Required knowledge

Look for evidence that confirms knowledge of:

- construction, repair procedures and processes for:
 - cables
 - pulleys
 - chains,=
 - sprockets
 - gear drives
 - control rods
 - bellcranks
 - linkages
 - non-structural removable components of fuselages, fairings, nacelles, empennage and wings
 - engine thrust reversers
 - from unpressurised aircraft:
 - entry, cargo and access doors
 - windows
 - transparent panels
- construction and serviceability criteria for hoses and pipes, including pressure test requirements
- construction, materials, cleaning and repair requirements for:
 - trim panels
 - cabin linings
 - seats
 - cabin equipment and consoles
 - floor panels
 - coverings

- emergency equipment and stowages
- cargo, crew and/or passenger seat restraints
- relevant OHS practices
- how to obtain MSDS
- use of PPE
- relevant maintenance manuals, standards and specifications
- relevant regulatory requirements and standard procedures

Evidence Guide

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.

Overview of assessment	A person who demonstrates competency in this unit must be able to apply hand skills and use relevant maintenance publications to maintain and repair mechanical components while applying all relevant safety precautions.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	The underlying skills inherent in this unit should be transferable across a range of maintenance and repair applications associated with aircraft components. It is essential that the relevant procedures are interpreted and applied to ensure quality and safety standards are achieved. Evidence of transferability of skills and knowledge related to maintenance/repair is essential. This may be demonstrated through application across a number of different aircraft components. Ability to assess component serviceability and interpret parts requirements will be necessary before undertaking any action. The work plan should take account of applicable safety and quality requirements in accordance with the industry and regulatory standards. 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 under routine supervision on a representative range of components or parts from each of Groups 1 to 6, as listed in the Range Statement. This shall be established via the records in the Log of Industrial Experience and Achievement or, where appropriate, an equivalent Industry Evidence Guide.
Context of and specific resources for assessment	Competency should be assessed in the work environment or simulated work environment using tools and equipment specified in maintenance documentation. It is also expected that general and special purpose tools and test equipment found in most routine situations would be used where appropriate.
Method of assessment	
Guidance information for	Individuals being assessed who have already attained MEA327B Fabricate and/or repair aircraft mechanical

assessment	components or parts, will have partially met the Performance Criteria for Element 1 for some of the listed variables. Log of Industrial Experience and Achievement records relating to MEA327B Fabricate and/or repair aircraft mechanical components or parts, may be accepted as also meeting the evidence requirements for the Performance Criteria for this Element in respect to common variables.
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Range Statement

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.

Note	Range statements listed below are numbered to facilitate specification of the assessment requirements included in the Evidence Guide
Components or parts to be maintained and/or repaired	Components or parts to be maintained and/or repaired may include: 1. Hoses 2. Pipes 3. Cables, pulleys, chains, sprockets and gear drives 4. Control rods, bellcranks and links 5. Non-structural removable components of fuselages, fairings, nacelles, empennage, wings, thrust reversers. For non-pressurised aircraft - entry, cargo, access doors and associated seals, windows and transparent panels 6. Trim panels, linings, seats, cabin equipment and consoles, floor panels, coverings, emergency equipment (including passenger escape systems, inflatable slides, life jackets, rafts, location transmitters, beacons, cargo, crew and/or passenger seat restraints)
Repair	Repair comprises standard techniques for pipes and replacement of eye-ends, tubes or bearings for control rods/pulleys/sprockets and bushes or bearings for bellcranks and links
Maintain	Maintain involves cleaning, inspection for wear or damage and adjustment and lubrication, where applicable
Application	Application of this unit may relate to: • scheduled or unscheduled maintenance activities • individual or team-related activities
Procedures and requirements	Refer to industry standard procedures specified by manufacturers, regulatory authorities or the enterprise

Unit Sector(s)

Aviation maintenance

Competency field

Co-requisite units

Not applicable