



Australian Government

MEA328 Maintain and/or repair aircraft mechanical components or parts

Release: 2

MEA328 Maintain and/or repair aircraft mechanical components or parts

Modification History

Release 2. Equivalent to MEA328 Maintain and/or repair aircraft mechanical components or parts with amended prerequisite codes.

Application

This unit of competency requires application of hand skills and the use of relevant maintenance publications to maintain and repair a range of aircraft mechanical components during the performance of scheduled or unscheduled maintenance. Maintenance may be performed individually or as part of a team.

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

This unit is part of the Mechanical Certificate IV (Aircraft Maintenance Stream) training pathway

The unit is used in workplaces that operate under the airworthiness regulatory systems of the Australian Defence Force (ADF) and the Civil Aviation safety Authority (CASA).

Where a CASA licensing outcome is sought this unit forms part of the CASA requirement for the granting of the chosen maintenance certification licence under Civil Aviation Safety Regulation (CASR) Part 66, in accordance with the licensing provisions in the Companion Volume Implementation Guide.

Pre-requisite Unit

MEA303	Remove and install aircraft pneumatic system components
MEA398	Remove and install aircraft hydro-mechanical and landing gear system components

Competency Field

Aviation maintenance

Unit Sector

Elements and Performance Criteria

Elements describe the essential outcomes.

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

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|----|---|-----|---|
| 1. | Maintain and/or repair mechanical components or parts | 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 |
| | | 1.2 | Tagging and repair instructions are accurately specified for parts requiring specialist repair |
| | | 1.3 | Appropriate materials, tools, equipment and assembly or fabrication jigs are selected and prepared for the particular specification requirements |
| | | 1.4 | Components or parts are maintained, repaired or modified, as approved by relevant manufacturers' bulletins or procedures, in accordance with required specifications while observing all relevant work health and safety (WHS) requirements, including the use of material safety data sheets (MSDS) and items of personal protective equipment (PPE) |
| | | 1.5 | Mechanical component parts are assembled within specified tolerances and in accordance with the appropriate maintenance documents |
| | | 1.6 | Mechanical components are adjusted, as required, to operate within prescribed specifications |
| | | 1.7 | Test equipment and rigs are used, where applicable, to confirm serviceability |
| | | 1.8 | Maintained/repaired or modified components are tagged, sealed and packaged within specified procedures |
| | | 1.9 | Required maintenance documentation is completed and processed in accordance with standard enterprise procedures |

Foundation Skills

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.

Components or parts to be maintained and/or repaired include:

- Hoses
- Pipes
- Cables, pulleys, chains, sprockets and gear drives
- Control rods, bellcranks and links
- Non-structural removable components of fuselages, fairings, nacelles, empennage, wings and thrust reversers. for non-pressurised aircraft – entry, cargo, access doors and associated seals, windows and transparent panels
- Trim panels, linings, seats, cabin equipment and consoles, floor panels, coverings and emergency equipment (including passenger escape systems, inflatable slides, life jackets, rafts, location transmitters, beacons, and cargo, crew and/or passenger seat restraints)

Repair includes:

- 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 involves:

- Cleaning, inspection for wear or damage, and adjustment and lubrication, where applicable

Procedures and requirements include:

- Industry standard procedures specified by manufacturers, regulatory authorities or the enterprise

Unit Mapping Information

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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 MEA328 Maintain and/or repair aircraft mechanical components or parts

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Performance Evidence

Evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria under the specified conditions of assessment, and must include:

- applying relevant WHS 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 of Conditions
 - identify requirements and complete repairs and/or modifications
 - test and/or adjust components, as required.
- correctly tag, seal and package completed components

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.

This shall be demonstrated through application across a number of different aircraft components as listed in the Assessment Conditions.

Knowledge Evidence

Evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include 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 WHS practices
- how to obtain MSDS
- use of PPE
- relevant maintenance manuals, standards and specifications
- relevant regulatory requirements and standard procedures.

Assessment Conditions

- 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 applicable general and special-purpose tools and test equipment found in most routine situations would be used where appropriate.
- 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.
- The following conditions of assessment represent the requirements of the Regulators (ADF and CASA) and maintenance stakeholders and must be rigorously observed.
- A person cannot be assessed as competent until it can be demonstrated to the satisfaction of the workplace assessor that the relevant elements and performance criteria of the unit of competency are being achieved under routine supervision on a representative range of components or parts from each of the following groups:
 - hoses
 - pipes
 - cables, pulleys, chains, sprockets and gear drives
 - control rods, bellcranks and links

- non-structural removable components of fuselages, fairings, nacelles, empennage, wings and thrust reversers. for non-pressurised aircraft – entry, cargo, access doors and associated seals, windows and transparent panels
- trim panels, linings, seats, cabin equipment and consoles, floor panels, coverings and emergency equipment (including passenger escape systems, inflatable slides, life jackets, rafts, location transmitters, beacons, and cargo, crew and/or passenger seat restraints.
- This shall be established via the records in the Log of Industrial Experience and Achievement or, where appropriate, an equivalent Industry Evidence Guide (for details refer to the Companion Volume Assessment Guidelines).
- Assessors must satisfy the requirements of the National Vocational Education and Training Regulator (Australian Skills Quality Authority, or its successors).
- 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.
- Individuals being assessed who have already attained MEA327 Fabricate and/or repair aircraft mechanical components or parts will have partially met the performance criteria for Element 1 for some of the listed variables. The Log of Industrial Experience and Achievement records relating to MEA327 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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