



Australian Government

MEA364 Maintain and/or repair small aircraft mechanical components or parts

Release: 2

MEA364 Maintain and/or repair small aircraft mechanical components or parts

Modification History

Release 2. Equivalent to MEA364 Maintain and/or repair small 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 classified by the Civil Aviation Safety Authority (CASA) as small aircraft and components in workshops.

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

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

MEA107	Interpret and use aviation maintenance industry manuals and specifications
MEA154	Apply work health and safety practices in aviation maintenance
MEA155	Plan and organise aviation maintenance work activities
MEA156	Apply quality standards during aviation maintenance activities
MEA157	Complete aviation maintenance industry documentation
MEA158	Perform basic hand skills, standard trade practices and fundamentals in aviation maintenance

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 |
| | 1.5 Mechanical component parts are assembled within specified tolerances and in accordance with the appropriate maintenance documents 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) |
| | 1.6 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.

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| Components or parts to be maintained and/or repaired, if applicable to the enterprise, include: | <ul style="list-style-type: none">• Hoses• Pipes• Cables, pulleys, chains, sprockets and gear drives• Control rods, bellcranks, links and screwjacks• Trim panels; linings; seats; cabin equipment and consoles; coverings; and emergency equipment stowage, including passenger escape systems, life jackets, rafts, location transmitters, cargo, crew and/or passenger seat restraints |
| Maintain includes: | <ul style="list-style-type: none">• Cleaning, inspection for wear or damage and adjustment and lubrication, where applicable |
| Repair includes: | <ul style="list-style-type: none">• 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• The use of adhesives and appropriate patch materials for trim and upholstery repairs (more extensive repairs involving sewing are covered by MEA509 Manufacture, repair and alter aircraft-related fabric components)• Replacement of restraint system components where sewing is not required (more extensive repairs are covered by MEA508 Maintain, install and remove restraint systems) |
| Procedures and requirements include: | <ul style="list-style-type: none">• Industry standard procedures specified by manufacturers, regulatory authorities or the enterprise |

Unit Mapping Information

Release 2. Equivalent to MEA364 Maintain and/or repair small aircraft mechanical components or parts

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 MEA364 Maintain and/or repair small 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 include:

- applying relevant WHS practices including the selection and use of PPE and MSDS
- using relevant maintenance documentation, specifications and aircraft/component manuals to:
 - recognise state of serviceability and repair requirements for the range of components listed in the Range of Conditions that are applicable to the enterprise
 - identify requirements and complete repairs and/or modifications
 - test and/or adjust components as required
- correctly tagging, sealing and packaging completed components that are not being immediately refitted.

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.

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:

- mechanical component operation and repair procedures and processes:
 - hoses
 - pipes
 - cables, turnbuckles and tensioning devices
 - pulleys
 - chains and sprockets
 - gear drives
 - screwjacks
 - control rods

- bellcranks
- links
- internal fittings and emergency equipment operation, construction, installation and maintenance/repair:
 - trim panels
 - linings and coverings
 - seats and crew/passenger restraints
 - cargo restraints
 - cabin equipment and consoles
- emergency equipment inspection and stowage requirements:
 - passenger escape systems
 - life jackets
 - rafts
 - emergency location transmitters
- applicable WHS procedures, including the selection and use of items of PPE
- how to obtain relevant MSDS
- how to identify suitable adhesives and patching materials for upholstery and trim
- inspection and test requirements for restraint system components
- safe stowage requirements for items of emergency equipment
- how to determine serviceability of items of emergency equipment
- 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 the components or parts that are applicable to the enterprise, from each of the following groups:
 - hoses
 - pipes
 - cables, pulleys, chains, sprockets and gear drives
 - control rods, bellcranks, links and screwjacks

- trim panels; linings; seats; cabin equipment and consoles; coverings; and emergency equipment stowage, including passenger escape systems, life jackets, rafts, location transmitters, 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.

Links

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