



Australian Government

MEAMEC0051 Maintain and repair small aircraft mechanical components and parts

Release: 1

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Modification History

Release 1. Application changed. Performance Criteria changed. Foundation Skills made explicit. Range of Conditions removed, and relevant information moved to Assessment Requirements. Assessment Requirements clarified. Supersedes and is equivalent to MEA364 Maintain and/or repair small aircraft mechanical components or parts.

Application

This unit describes the skills and knowledge required to apply hand skills and use relevant maintenance publications to maintain and repair a range of aircraft mechanical components during the performance of scheduled or unscheduled maintenance. Work 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.

Repair includes using 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. Repair also includes replacing restraint system components where sewing is not required; more extensive repairs are covered by MEA508 Maintain, install and remove restraint systems.

The unit is used in workplaces that operate under the airworthiness regulatory systems of the Civil Aviation Safety Authority (CASA) and the Defence Aviation Safety Authority (DASA).

Any other relevant legislation, industry standards and codes of practice within Australia must be applied.

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

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Determine requirements	1.1 Determine maintenance or repair requirements following disassembly and assessment of component parts for serviceability, in accordance with the relevant maintenance documentation 1.2 Specify tagging and repair instructions for parts requiring specialist repair 1.3 Select and prepare appropriate materials, tools, equipment and assembly or fabrication jigs for the specification requirements
2. Maintain, repair or modify mechanical components or component parts	2.1 Maintain, repair or modify components or component parts as approved by relevant manufacturers' bulletins or procedures in accordance with required specifications 2.2 Assemble mechanical component parts 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 (MSDSs) and items of personal protective equipment (PPE) 2.3 Adjust mechanical components, when required, to operate within prescribed specifications 2.4 Use test equipment and rigs, when required, to confirm serviceability 2.5 Tag, seal and pack maintained or repaired or modified components within specified procedures 2.6 Complete required maintenance documentation and process in accordance with standard enterprise procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

- Reading skills to interpret maintenance documentation and procedures.
- Writing skills to complete maintenance documentation.
- Numeracy skills to interpret and communicate technical information.

Other foundation skills essential to performance are explicit in the performance criteria of this unit.

Unit Mapping Information

Release 1. Supersedes and is 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 MEAMEC0051 Maintain and repair small aircraft mechanical components and parts

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Performance Evidence

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

- recognise the state of serviceability and repair requirements and maintain (clean, inspect for wear or damage and adjust and lubricate, where applicable) or repair (showing 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) at least three of the following components or parts that are applicable to the enterprise:
 - 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 or passenger seat restraints.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- mechanical component operation and repair procedures and processes of:
 - 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 and repair of:
 - trim panels
 - linings and coverings
 - seats and crew/passenger restraints
 - cargo restraints
 - cabin equipment and consoles
- emergency equipment inspection and stowage requirements of:
 - passenger escape systems
 - life jackets
 - rafts
 - emergency location transmitters
- maintenance and repair:
 - work health and safety (WHS) procedures, including the selection and use of items of personal protective equipment (PPE)
 - maintenance manuals, standards and specifications
 - regulatory requirements and standard procedures
- how to obtain relevant material safety data sheets (MSDSs)
- 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.

Assessment Conditions

The following conditions of assessment represent the requirements of the regulators Defence Aviation Safety Authority (DASA) and Civil Aviation Safety Authority (CASA) and maintenance stakeholders and must be rigorously observed.

Skills must have been demonstrated under routine supervision in the workplace or in a simulated environment that reflects workplace conditions and contingencies encountered in maintaining and repairing small aircraft mechanical components and parts. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
- workplace procedures, manufacturing specifications, codes, standards, manuals, and reference materials encountered in maintaining and repairing small aircraft mechanical components and parts
- tools and equipment specified in maintenance documentation.
- general- and special-purpose tools and test equipment found in most routine situations.

Evidence of tasks demonstrating competency must be recorded in a log of industrial experience and achievement.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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