



Australian Government

Department of Education, Employment and Workplace Relations

MEA329B Dismantle, inspect, maintain and assemble aircraft basic hydraulic and pneumatic components or parts

Release: 2

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Modification History

Minor formatting and editorial changes made. Prerequisite unit version code updated. Missing knowledge requirements reinstated.

Unit Descriptor

This unit of competency is part of a Mechanical Certificate II training pathway. It covers the competencies required to maintain and/or repair aircraft basic hydraulic and pneumatic components under the guidance of a qualified person. This unit is used in workplaces that operate under the airworthiness regulatory systems of the ADF and CASA.

Application of the Unit

This unit requires application of hand skills and maintenance documentation to maintain, repair and modify aircraft basic hydraulic and pneumatic components under the guidance of a qualified person.

Applications include fixed and rotary wing aircraft components either attached to the aircraft or in a workshop.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

MEA101B	Interpret occupational health and safety practices in aviation maintenance
MEA103B	Plan and organise aviation maintenance work activity
MEA105C	Apply quality standards applicable to aviation maintenance processes
MEA107B	Interpret and use aviation maintenance industry manuals and specifications
MEA108B	Complete aviation maintenance industry documentation
MEA109B	Perform basic hand skills, standard trade practices and fundamentals in aviation maintenance

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. Prepare to dismantle, inspect, maintain and assemble basic hydraulic and pneumatic components or parts | 1.1. Components are removed and/or disassembled in accordance with enterprise relevant maintenance documentation and qualified person guidance
1.2. Maintenance and/or repair requirements, as defined by the qualified person, procedures and the relevant maintenance documentation, are understood
1.3. Tagging and repair instructions are accurately specified in accordance with procedures and qualified person directions for parts requiring specialist repair
1.4. Appropriate materials, tools, equipment and assembly or fabrication jigs, where required, are selected and prepared for the particular maintenance and repair requirements in accordance with enterprise procedures and relevant maintenance documentation |
| 2. Dismantle, inspect, maintain and assemble basic hydraulic and pneumatic components or parts | 2.1. Routine maintenance, repair or modification procedures are carried out, as required, in accordance with relevant manufacturers' bulletins or procedures, in accordance with required procedures and specifications
2.2. Component parts are assembled within specified tolerances and in accordance with procedures and the appropriate maintenance documents
2.3. Where applicable and as required by the qualified person, assistance is provided for adjustment and testing of components to confirm serviceability |
| 3. Complete maintenance and repair activities | 3.1. Required documentation is completed and processed in accordance with standard procedures
3.2. Maintained/repaired or modified components are tagged, sealed and packaged in accordance with specified procedures |

Required Skills and Knowledge

Required skills

Look for evidence that confirms skills in:

- applying relevant OHS procedures
- using relevant maintenance documentation, specifications and aircraft/component manuals to:
 - recognise state of serviceability and standard/routine repair requirements for the range of hydraulic and pneumatic components listed in the Range Statement
 - identify requirements under the guidance of a qualified person and complete routine repairs and/or modifications
 - adjust components under expert guidance, as required
 - where post-assembly testing is applicable, set up components for testing and have a basic understanding of the test procedures
 - correctly tag, seal and package completed components

Required knowledge

Look for evidence that confirms knowledge of:

- component operation at a basic level
- standard/routine repair procedures and processes
- relevant OHS practices
- how to obtain MSDS
- use of PPE

For the purpose of this unit of competency, basic knowledge is defined as the level of knowledge required to:

- understand the instructions provided by qualified persons and relevant documentation for the disassembly, routine replacement of component parts and seals and reassembly of components
- under guidance and in the training environment make post-assembly adjustments such as length of stroke or operating pressure
- under guidance and in the training environment perform simple tests involving pressure and function

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 maintain, repair and modify aircraft basic hydraulic and pneumatic components under qualified person guidance while observing 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 enterprise procedures are interpreted and applied to ensure quality and safety standards are achieved.

Evidence of transferability of skills and knowledge related to maintenance/repair standard operating procedures is essential. This may be demonstrated through application across a number of different aircraft components. Ability to assess component serviceability under qualified person guidance 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 qualified person guidance on a representative range of components or parts from each of Groups 1 to 4, 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 found in most routine situations would be used where appropriate.

Method of assessment

Guidance information for

assessment	
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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	The Range Statements below are numbered to facilitate specification of the assessment requirements included in the Evidence Guide
Components to be maintained and/or repaired/modified	Components to be maintained and/or repaired/modified may include: 1. Hoses 2. Pipes 3. Simple check or shutoff valves 4. Basic hydraulic and pneumatic actuators and valves
Routine work	Routine work is carried out using basic operational knowledge and a defined range of skills ('routine' work is that which follows a customary or regular course of procedure)
Work outcomes	All work outcomes are achieved by applying known solutions chosen from a limited range of pre-determined options consistent with enterprise procedures. This includes accepting responsibility for own work in terms of quality of outcomes using pre-determined specifications of quality
Scope of work	Note that the scope of any repair or modification and the procedure to be followed will be provided by the qualified person, and be within the scope of the skills and knowledge included in the unit of competency MEA109B Perform basic hand skills, standard trade practices and fundamentals in aviation maintenance
Maintain	Maintain involves cleaning, inspection for wear or damage and consequent replacement of parts, and routine adjustment and lubrication where applicable in accordance with enterprise procedures
Application	Work can relate to: • routine scheduled or unscheduled maintenance activities performed under qualified person guidance in accordance with enterprise procedures • tasks performed either autonomously or as part of a team and under the guidance of a qualified person

Procedures and requirements	Refer to procedures specified by manufacturers, regulatory authorities or the enterprise
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Unit Sector(s)

Aviation maintenance

Competency field

Co-requisite units

Not applicable