



Australian Government

Department of Education, Employment and Workplace Relations

MEA344A Remove and install aircraft components

Revision Number: 2

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Modification History

Minor formatting and editorial changes made. Prerequisite unit version code updated.

Unit Descriptor

This unit covers the competencies required to remove and install aircraft components that are within the privileges of the Aircraft Maintenance Engineer A Licence. It is one of the units required for the granting of the chosen Aircraft Maintenance Engineer A 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 standard trade practices in the removal and installation of aircraft components, including hydro-mechanical and mechanical components, and emergency equipment that is within the privileges of the A Licence.

Applications include component removal and installation on both fixed and rotary wing aircraft.

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. Remove landing gear components | 1.1. The aircraft is jacked as specified in the maintenance manual for landing gear component removal
1.2. Removal of components is carried out in accordance with the applicable maintenance publications
1.3. Required maintenance documentation is accurately completed and correctly processed
1.4. Removed components are tagged, sealed and packaged in accordance with standard organisational procedures |
| 2. Remove hydro-mechanical components | 2.1. Hydro-mechanical system is rendered safe and prepared in accordance with the applicable maintenance publication, including fitment of isolation tags, where necessary, to ensure personal safety
2.2. Removal of hydro-mechanical components is carried out in accordance with the applicable maintenance publications
2.3. Required maintenance documentation is accurately completed and correctly processed
2.4. Removed components are tagged, sealed and packaged in accordance with standard organisational procedures |
| 3. Remove mechanical components/emergency equipment | 3.1. Applicable safety precautions are identified and observed for the removal and handling of components
3.2. Removal of mechanical components/emergency equipment is carried out in accordance with the applicable maintenance publications
3.3. Required maintenance documentation is accurately completed and correctly processed
3.4. Removed components and/or items of emergency equipment are tagged, sealed and packaged in accordance with standard organisational procedures |
| 4. Install landing gear components | 4.1. Components to be installed are checked to confirm correct part numbers, serviceability and modification status
4.2. Component installation is carried out in accordance with applicable maintenance publications
4.3. Required maintenance documentation is completed and processed in accordance with standard enterprise procedures. |
| 5. Install hydro-mechanical components | 5.1. Components to be installed are checked to confirm correct part numbers, serviceability and modification status. |

- 5.2. Component installation is carried out in accordance with applicable maintenance publications.
 - 5.3. Required maintenance documentation is completed and processed in accordance with standard enterprise procedures
- 6. Install mechanical components/emergency equipment
 - 6.1. Components to be installed are checked to confirm correct part numbers, serviceability and modification status
 - 6.2. Component installation is carried out in accordance with applicable maintenance publications
 - 6.3. Required maintenance documentation is completed and processed in accordance with standard enterprise procedures

Required Skills and Knowledge

Required skills

Look for evidence that confirms skills in:

- applying applicable OHS procedures, including the use of MSDS and PPE
- jacking of aircraft for landing gear component removal
- using hand skills and tools to perform component removal and installation tasks
- correctly installing and securing of aircraft hardware
- inspecting and correctly installing bearings
- safely handling heavy components
- using maintenance publications to prepare the aircraft for component removal and installation and correct interpretation of removal and installation instructions
- applying standard procedures

Required knowledge

Look for evidence that confirms knowledge of:

- standard trade practices relating to tool usage and installation/securing of aircraft hardware
- how to locate and correctly remove and install components
- how to locate and correctly remove and install items of emergency equipment
- OHS procedures relating to component removal and installation and handling of heavy components
- how to obtain PPE
- how to obtain MSDS
- relevant maintenance publications
- 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 use maintenance publications and applicable tools to remove and install specified landing gear, hydro-mechanical and mechanical components and emergency equipment while applying all relevant OHS procedures and standards processes.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	The underlying skills inherent in this unit should be transferable into other units that require similar techniques. It is essential that system cleanliness requirements and safety precautions applicable to the system being maintained are fully observed, understood and complied with. Evidence of transferability of skills and knowledge related to removal and installation is essential. This may be demonstrated through application across a number of aircraft systems or aircraft types, but must cover a sufficient range of tasks to demonstrate familiarity with attachment methods, connection hardware and couplings peculiar to each type of system, and of safe handling of heavy components. An understanding of system operation as it relates to the work must be demonstrated 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 this unit of competency are being achieved under supervision without intervention on at least one component from each of Groups 1 to 8 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 using procedures, tools and equipment specified in maintenance documentation. It is also expected that general purpose tools, test and ground support equipment found in most routine situations would be used where

	appropriate.
Method of assessment	
Guidance information for assessment	

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
Landing gear components	Landing gear components may include: 1. Main and nose wheel assemblies 2. Brake units
Components	Hydro-mechanical components may include: 3. Toilet system components, excluding gate valves 4. Windscreen wiper blades Mechanical components/emergency equipment may include: 5. Passenger and crew seats, seat belts and harnesses 6. Internal doors excluding any doors that form part of the pressure hull 7. Trim panels, linings, cabin equipment and consoles 8. Applicable emergency equipment, such as life jackets, rafts, location transmitters/beacons
Application	Application of this unit may relate to: • scheduled or unscheduled maintenance 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