



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **MEA317C Remove and install pressurised aircraft structural and non-structural components**

Release: 2

## **MEA317C Remove and install pressurised aircraft structural and non-structural components**

### **Modification History**

Minor formatting and editorial changes made. Prerequisite unit version code updated. Reference to relevant units in the Range Statement corrected.

### **Unit Descriptor**

This unit of competency is part of the Mechanical Certificate IV (Aircraft Maintenance Stream) training pathway and may also be part of a Structures Maintenance Certificate IV training pathway. It covers the competencies required to remove and install a range of pressurised aircraft structural and non-structural components. This unit is used in workplaces that operate under the airworthiness regulatory systems of the ADF and CASA.

Where a CASA licensing outcome is sought this unit forms part of the CASA requirement for the granting of the chosen Aircraft Maintenance Engineer 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 maintenance publications to remove and install structural and non-structural components from pressurised aircraft. Applications include fixed wing aircraft with pressurised cabins.

### **Licensing/Regulatory Information**

Not applicable.

### **Pre-Requisites**

MEA302C	Remove and install aircraft hydro-mechanical and landing gear system components
MEA303D	Remove and install aircraft pneumatic system components

## Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>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.</p>
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### Elements and Performance Criteria

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|-----------------------|--|
| 1. Remove components  | <p>1.1. Structure is supported and prepared in accordance with the applicable maintenance procedures to ensure personnel safety and freedom from damage to aircraft or component during component removal</p> <p>1.2. Component removal is carried out in accordance with the applicable maintenance procedures</p> <p>1.3. Required maintenance documentation is completed and processed in accordance with standard enterprise procedures</p> <p>1.4. Removed components are tagged and prepared for transport in accordance with standard enterprise procedures</p> |
| 2. Install components | <p>2.1. <b><i>Structural components</i></b> to be installed are checked to confirm correct part number, serviceability and modification status</p> <p>2.2. Component installation is carried out in accordance with the applicable maintenance procedures</p> <p>2.3. Support/safety equipment is removed at an appropriate time to ensure personnel safety and freedom from structural damage</p> <p>2.4. Required maintenance documentation is completed and processed in accordance with standard enterprise procedures</p>   |

## Required Skills and Knowledge

### Required skills

Look for evidence that confirms skills in:

- applying relevant OHS practices, including the use of MSDS and PPE
- using relevant maintenance documentation and aircraft manuals to:
  - remove structural components
  - install structural components
  - remove doors, door seals, windows and transparent panels
  - install doors, door seals, windows and transparent panels
- checking and adjusting all doors and access panels, including locking mechanisms and ensuring effective sealing

### Required knowledge

Look for evidence that confirms knowledge of:

- structural component methods of construction and attachment
- faying surface treatment and fuel tank and pressure hull sealing
- aircraft doors and related seals
- window and transparent panel construction, attachment methods and sealing
- aircraft interior fittings (trim, linings, seats, floor panels, and so on) construction and attachment methods
- the location and attachment or stowage methods for emergency equipment:
  - passenger escape systems
  - inflatable slides
  - life jackets
  - life rafts
  - location transmitters, beacons
  - crew and/or passenger seat restraints
- relevant maintenance manuals
- relevant regulatory requirements and standard procedures
- relevant OHS practices
- how to obtain MSDS
- use of PPE
- relevant maintenance manuals

## 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.

<p><b>Overview of assessment</b></p>	<p>A person who demonstrates competency in this unit must be able to use maintenance manuals and applicable tools to remove and install removable structural and non-structural components from pressurised aircraft while observing all relevant safety precautions.</p>
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The underlying skills inherent in this unit should be transferable into other units that require similar techniques. It is essential that shoring, trestling and lifting requirements and safety precautions applicable to the structure being maintained are fully observed, understood and complied with.</p> <p>Evidence of transferability of skills and knowledge related to removal and installation is essential. This may be demonstrated through application across a representative range of the areas listed in the Range Statement. An understanding of component handling, attachment methods, adjustment and sealing 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.</p> <p>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 routine supervision on at least one item from each of Groups 1 to 6, 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.</p>
<p><b>Context of and specific resources for assessment</b></p>	<p>Competency should be assessed in the work environment or simulated work environment using tools and equipment specified in maintenance manuals. It is also expected that general purpose tools, test and ground support equipment found in most routine situations would be used where appropriate.</p>
<p><b>Method of assessment</b></p>	
<p><b>Guidance information for</b></p>	

<b>assessment</b>	
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## Range Statement

<p>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.</p>	
<p><b>Note</b></p>	<p>Range statements listed below are numbered to facilitate specification of the assessment requirements included in the Evidence Guide</p>
<p><b>Removable components of structure</b></p>	<p>Removable components are those that are installed using bolts and/or screws. Where component removal and installation requires the removal and installation of rivets the applicable unit is either:</p> <ul style="list-style-type: none"> <li>• MEA311D Inspect and repair/modify aircraft structures, or</li> <li>• MEA423A Aircraft structure major disassembly and reassembly</li> </ul> <p>Structural components may include:</p> <ol style="list-style-type: none"> <li>1. Removable components of wings, pylons, empennage, landing gear support structure, fairings, nacelles and thrust reversers</li> <li>2. Removable components or sections of pressurised aircraft fuselage</li> <li>3. Pressurised fuselage entry, cargo, access doors and associated pressure seals</li> <li>4. Pressurised fuselage windows, transparent panels and associated seals</li> <li>5. Where applicable, trim panels, linings, seats, cabin equipment and consoles, floor panels and coverings</li> <li>6. Applicable emergency and safety equipment, including passenger escape systems, inflatable, slides, life jackets, rafts, location transmitters, beacons, crew and/or passenger seat restraints</li> </ol>
<p><b>Installation</b></p>	<p>Installation includes:</p> <ul style="list-style-type: none"> <li>• checking and adjustment of all doors and access panels, including locking mechanisms, for correct fit and sealing</li> </ul>
<p><b>Sealant removal and application</b></p>	<p>The removal and application of faying (contact or overlapping) surface, pressure hull and fuel tank sealants is included, where applicable</p>
<p><b>Application</b></p>	<p>Application of this unit may relate to:</p>

	<ul style="list-style-type: none"><li>• scheduled or unscheduled maintenance activities</li><li>• individual or team-related activities</li></ul>
<b>Procedures and requirements</b>	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