



Australian Government

MEA317 Remove and install pressurised aircraft structural and non-structural components

Release: 3

MEA317 Remove and install pressurised aircraft structural and non-structural components

Modification History

Release 3. Equivalent to MEA317 Remove and install pressurised aircraft structural and non-structural components with amended prerequisite codes.

Application

This unit of competency requires application of hand skills and maintenance publications to remove and install structural and non-structural components from fixed wing aircraft with pressurised cabins during the performance of scheduled or unscheduled maintenance. Maintenance may be performed individually or as part of a team.

The unit 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

The unit is used in workplaces that operate under the airworthiness regulatory systems of the Australian Defence Force (ADF) and the Civil Aviation safety Authority (CASA).

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

MEA369 Inspect and maintain structures and related components of non-pressurised small aircraft

OR

MEA398 Remove and install aircraft hydro-mechanical and landing gear system components

AND

MEA303 Remove and install aircraft pneumatic system components

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.
1. Remove components	1.1 Structure is supported and prepared in accordance with the applicable maintenance manual to ensure personnel safety and freedom from damage to aircraft or component during component removal
	1.2 Component removal is carried out in accordance with the applicable maintenance manual 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)
	1.3 Required maintenance documentation is completed and processed in accordance with standard enterprise procedures
	1.4 Removed components are tagged and prepared for transport in accordance with specified procedures
2. Install components	2.1 Structural components to be installed are checked to confirm correct part numbers, serviceability and modification status
	2.2 Component installation is carried out in accordance with the applicable maintenance manual while observing all relevant WHS requirements, including the use of MSDS and items of PPE
	2.3 Support/safety equipment is removed at an appropriate time to ensure personnel safety and freedom from structural damage
	2.4 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.

Removable components of structure include:

- 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 MEA339 Inspect, repair and maintain aircraft structures, MEA370 Repair the structure of non-pressurised small aircraft or MEA371 Perform major repairs and modifications to small aircraft metal structure.
- Structural components include:
 - removable components of wings, pylons, empennage, landing gear support structure, fairings, nacelles and thrust reversers
 - removable components or sections of pressurised aircraft fuselage
 - pressurised fuselage entry, cargo, access doors and associated pressure seals
 - pressurised fuselage windows, transparent panels and associated seals
 - trim panels, linings, seats, cabin equipment and consoles, floor panels and coverings (where applicable to the enterprise)
 - applicable emergency and safety equipment, including passenger escape systems, inflatable, slides, life jackets, rafts, location transmitters, beacons, and crew and/or passenger seat restraints

Installation includes:

- Checking and adjustment of all doors and access panels, including locking mechanisms, for correct fit and sealing

Sealant removal and application includes:

- The removal and application of faying (contact or overlapping) surface, pressure hull and fuel tank sealants (where applicable to the enterprise)

Procedures and requirements include:

- Industry standard procedures specified by manufacturers, regulatory authorities or the enterprise

Unit Mapping Information

Release 3. Equivalent to MEA317 Remove and install pressurised aircraft structural and non-structural components

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 MEA317 Remove and install pressurised aircraft structural and non-structural components

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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 must include:

- applying relevant WHS 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.

The underlying skills inherent in this unit should be transferable to 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.

This may be demonstrated through application across a representative range of the component groups listed in the Assessment Conditions.

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:

- 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 WHS practices
- how to obtain MSDS
- use of PPE.

Assessment Conditions

- 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 applicable general-purpose tools, test and ground support equipment found in most routine situations would be used where appropriate.
- 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.
- 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 at least one (1) item from each of the following groups:
 - removable components of wings, pylons, empennage, landing gear support structure, fairings, nacelles and thrust reversers
 - removable components or sections of pressurised aircraft fuselage
 - pressurised fuselage entry, cargo, access doors and associated pressure seals
 - pressurised fuselage windows, transparent panels and associated seals
 - trim panels, linings, seats, cabin equipment and consoles, floor panels, coverings (items may be omitted where not applicable to the enterprise)
 - applicable emergency and safety equipment, including passenger escape systems, inflatable, slides, life jackets, rafts, location transmitters, beacons, and 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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