



**Australian Government**

# **MEA344 Remove and install aircraft components**

**Release: 2**

# MEA344 Remove and install aircraft components

## Modification History

Release 2. Equivalent to MEA344 Remove and install aircraft components with amended prerequisite codes.

## Application

This unit of competency requires application of hand skills and standard trade practices in the removal and installation of fixed and rotary wing aircraft components during scheduled or unscheduled maintenance, including hydro-mechanical and mechanical components, and emergency equipment that is within the privileges of the A Licence.

This is one of the units required for the granting of the chosen maintenance certification A Licence under Civil Aviation Safety Regulation (CASR) Part 66, in accordance with the licensing provisions in the Companion Volume Implementation Guide.

## 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

## 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 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 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 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 while observing all relevant WHS requirements, including the use of MSDS and items of PPE                                                                       |
|    |                                                  | 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 while observing all relevant WHS requirements, including the use of MSDS and items of PPE                                                         |
|    |                                                  | 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 while observing all relevant WHS requirements, including the use of MSDS and items of PPE |
|                                                      | 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 while observing all relevant WHS requirements, including the use of MSDS and items of PPE |
|                                                      | 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 while observing all relevant WHS requirements, including the use of MSDS and items of PPE |
|                                                      | 6.3 | 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.

|                                                            |                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Landing gear components include:</b>                    | <ul style="list-style-type: none"><li>• Main and nose wheel assemblies</li><li>• Brake units</li></ul>                                                                                                                                                                                                                                                    |
| <b>Hydro-mechanical components include:</b>                | <ul style="list-style-type: none"><li>• Toilet system components (excluding gate valves)</li><li>• Windscreen wiper blades</li></ul>                                                                                                                                                                                                                      |
| <b>Mechanical components/emergency equipment includes:</b> | <ul style="list-style-type: none"><li>• Passenger and crew seats, seat belts and harnesses</li><li>• Internal doors (excluding any doors that form part of the pressure hull)</li><li>• Trim panels, linings, cabin equipment and consoles</li><li>• Applicable emergency equipment, such as life jackets, rafts, location transmitters/beacons</li></ul> |
| <b>Procedures and requirements include:</b>                | <ul style="list-style-type: none"><li>• Industry standard procedures specified by manufacturers, regulatory authorities or the enterprise</li></ul>                                                                                                                                                                                                       |

## Unit Mapping Information

Release 2. Equivalent to MEA344 Remove and install aircraft 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 MEA344 Remove and install aircraft components

## Modification History

Release 2. Equivalent to MEA344 Remove and install aircraft components with amended prerequisite codes.

## 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
- 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 of bearings
- safe handling of 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.

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.

This shall 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.

## 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:

- 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
- WHS 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.

## Assessment Conditions

- Competency should be assessed in the work environment or simulated work environment using procedures, tools and equipment specified in maintenance documentation. 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 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.
- The following conditions of assessment represent the requirements of 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 this unit of competency are being achieved under supervision without intervention on at least one (1) component from each of the following groups:
  - main and nose wheel assemblies
  - brake units
  - toilet system components (excluding gate valves)
  - windscreen wiper blades
  - passenger and crew seats, seat belts and harnesses
  - internal doors (excluding any doors that form part of the pressure hull)
  - trim panels, linings, cabin equipment and consoles
  - applicable emergency equipment, such as life jackets, rafts, location transmitters/beacons.
- 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

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ce216c9c-04d5-4b3b-9bcf-4e81d0950371>