



Australian Government

MEAMEC0061 Repair and overhaul aircraft pneumatic system components

Release: 1

MEAMEC0061 Repair and overhaul aircraft pneumatic system components

Modification History

Release 1. Unit code and title changed. Application changed. Performance Criteria changed. Foundation Skills made explicit. Range of Conditions removed, and relevant information moved to Assessment Requirements. Assessment Requirements clarified. Supersedes and is equivalent to MEA381 Repair and/or overhaul aircraft pneumatic system components.

Application

This unit describes the skills and knowledge required to apply hand skills, theory knowledge and maintenance publication procedures to repair and overhaul pneumatic system components from fixed and rotary wing aircraft in workshops during scheduled or unscheduled maintenance. Work may be performed individually or as part of a team.

The unit is used in workplaces that operate under the airworthiness regulatory systems of the Civil Aviation Safety Authority (CASA) and the Defence Aviation Safety Authority (DASA).

Any other relevant legislation, industry standards and codes of practice within Australia must be applied.

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

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Determine requirements	1.1 Interpret and match component defect reports (removal tags) or customer order by part and serial numbers

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	1.2 Inspect and/or operate pneumatic components through prescribed test procedures to establish serviceability or confirm defects, when required 1.3 Clearly establish modification status to assist in determining the overhaul requirements for the components 1.4 Identify and document the extent of overhaul or repair in accordance with standard enterprise procedures
2. Troubleshoot pneumatic components	2.1 Use available information from maintenance records and test results, when required 2.2 Use logical processes to ensure efficient and accurate troubleshooting 2.3 Obtain specialist advice, when required, to assist with or confirm the fault and rectification requirement 2.4 Locate pneumatic component faults and clearly identify the causes of the faults 2.5 Determine fault rectification requirements to assist in planning the repair
3. Dismantle and inspect pneumatic parts	3.1 Dismantle pneumatic component parts in accordance with maintenance manuals while observing all relevant work health and safety (WHS) requirements, including the use of material safety data sheets (MSDSs) and items of personal protective equipment (PPE) 3.2 Assess component parts for serviceability in accordance with the relevant maintenance documentation 3.3 Tag parts requiring specialist repair and specify repair instructions in accordance with standard enterprise procedures 3.4 Prepare parts requiring non-destructive testing (NDT) for testing in accordance with the relevant maintenance documentation 3.5 Compile and process parts lists in accordance with standard enterprise procedures
4. Repair and/or modify pneumatic components or parts	4.1 Repair and replace component parts in accordance with the relevant maintenance documentation 4.2 Modify components or parts, when required, according to manufacturer's bulletins or procedures
5. Assemble, test and adjust pneumatic	5.1 Assemble pneumatic component parts within specified tolerances and in accordance with the appropriate maintenance documents while

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
components	observing all relevant WHS requirements, including the use of MSDSs and items of PPE 5.2 Adjust, test or calibrate components to operate within prescribed specifications, and seek required supervisory guidance for complex testing and adjustments 5.3 Tag, seal and pack finished components in accordance with standard enterprise procedures 5.4 Complete required maintenance documentation and modification records and process in accordance with standard enterprise procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

- Reading skills to interpret maintenance documentation, specifications (allowable limits) and procedures.
- Writing skills to complete maintenance documentation.
- Numeracy skills to interpret and communicate technical information.

Other foundation skills essential to performance are explicit in the performance criteria of this unit.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEA381 Repair and/or overhaul aircraft pneumatic system 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 MEAMEC0061 Repair and overhaul aircraft pneumatic system components

Modification History

Release 1. Unit code and title changed. Application changed. Performance Criteria changed. Foundation Skills made explicit. Range of Conditions removed, and relevant information moved to Assessment Requirements. Assessment Requirements clarified. Supersedes and is equivalent to MEA381 Repair and/or overhaul aircraft pneumatic system components.

Performance Evidence

There must be evidence the candidate has completed all the tasks outlined in the elements and performance criteria of this unit, and demonstrated the ability to:

- repair or overhaul at least one aircraft pneumatic system component from each of the following groups:
 - valves, pumps, motors, expansion turbines, actuators, regulators, temperature sensors, mechanical pressurisation controllers, temperature controllers and thrust reversers
 - heat exchangers and pressure vessels
 - rigid and flexible pipelines, hoses, fittings and ducting
- during the above work, or separately, demonstrate the following repair processes:
 - finish or re-finish metal surfaces through processes
 - remove corrosion within maintenance manual limits
 - replace seals and backing rings
 - replace bearings
 - apply surface treatments
 - restore paint finishes.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- how to obtain relevant material safety data sheets (MSDSs)
- identification and use of items of personal protective equipment (PPE) for repairing or overhauling aircraft pneumatic system components
- work health and safety (WHS) procedures for repairing or overhauling aircraft pneumatic system components
- fault diagnosis techniques for pneumatic system components
- pneumatic system and component operation
- repair and overhaul procedures and processes for pneumatic system components
- the use of pneumatic test rigs
- maintenance documentation and aircraft or component manuals for pneumatic, pressurisation and air cycle air conditioning system components.

Assessment Conditions

The following conditions of assessment represent the requirements of the regulators Defence Aviation Safety Authority (DASA) and Civil Aviation Safety Authority (CASA) and maintenance stakeholders and must be rigorously observed.

Skills must have been demonstrated under routine supervision in the workplace or in a simulated environment that reflects workplace conditions and contingencies encountered in repairing and overhauling aircraft pneumatic system components. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - workplace procedures, manufacturing specifications, codes, standards, manuals, and reference materials relevant to repairing and overhauling aircraft pneumatic system components
 - pneumatic system components, tools and equipment specified in maintenance documentation
 - general-purpose tools and test equipment found in most routine situations.

Evidence of tasks demonstrating competency must be recorded in a log of industrial experience and achievement.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -

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