



Australian Government

MEAAVI0057 Repair and overhaul aircraft oxygen system

Release: 1

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Modification History

Release 1. Application changed. Elements and 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 MEA287 Repair or overhaul aircraft oxygen system components.

Application

This unit describes the skills and knowledge required to apply hand skills and use maintenance publications, test equipment and knowledge of oxygen component maintenance and hygiene requirements to repair and overhaul aircraft oxygen system components from fixed and rotary wing aircraft that are repaired or overhauled in aviation maintenance 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 component defect reports (removal tags) or customer orders and match by part and serial numbers to identify requirements

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	1.2 Inspect or operate system components through prescribed test procedures to establish serviceability or confirm defects 1.3 Establish modification status to assist in determining the overhaul requirements for the components 1.4 Identify and document extent of overhaul or repair in accordance with standard enterprise procedures
2. Troubleshoot oxygen system components	2.1 Use available information from maintenance records and test results to assist in fault determination 2.2 Troubleshoot oxygen system components using logic processes 2.3 Obtain required specialist or supervisory advice to assist with or confirm faults and rectification requirements 2.4 Locate system component faults and identify causes of faults in accordance with standard enterprise procedures 2.5 Determine fault rectification requirements to assist in planning repair
3. Dismantle and inspect oxygen system components	3.1 Dismantle system component parts in accordance with maintenance manuals while observing all relevant work health and safety (WHS) requirements 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 3.4 Compile and process parts lists in accordance with standard enterprise procedures
4. Repair, replace or modify oxygen system components	4.1 Repair or replace system component parts in accordance with maintenance documentation 4.2 Make required modifications to components or parts in accordance with relevant manufacturer's bulletins or procedures
5. Assemble, test and adjust oxygen system components	5.1 Assemble component parts in accordance with specified tolerances and maintenance documents 5.2 Test assembled components and adjust or calibrate system components to operate within prescribed specifications 5.3 Tag, seal and package finished components in accordance with specified procedures 5.4 Complete and process required maintenance documentation and modification records 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 manuals, inspection procedures and specifications (allowable limits).
- Writing skills to record and report on defects and faults and their causes.
- Numeracy skills to interpret and communicate technical information and perform and interpret technical testing.

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 MEA287 Repair or overhaul aircraft oxygen 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 MEAAVI0057 Repair and overhaul aircraft oxygen system

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Performance Evidence

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

- repair and overhaul aircraft oxygen system components during scheduled or unscheduled maintenance across the following groups:
- pressure vessels (testing and charging)
- regulators, control valves and indicators
- chemical oxygen generators
- product hygiene
- recognise the serviceability state and repair or overhaul requirements for:
- oxygen pressure cylinders
- valves
- gauges
- chemical generators
- regulators
- masks
- pipes, hoses and fittings
- liquid dry breathing oxygen (LDBO) converters
- perform functional testing by applying logic processes, and using test equipment and appropriate wiring diagrams and manuals to isolate component faults and assess post-repair or overhaul serviceability
- correctly disassemble, inspected component parts, repaired, replaced or modified component parts and assembling oxygen components
- apply product hygiene procedures.

Evidence of transferability of skills and knowledge related to repair is essential. This may be demonstrated through application across a representative range of oxygen components.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- component and system operation

- the basic function and operation of oxygen components to enable testing for fault isolation or confirmation, to determine repair or overhaul requirements, and serviceability status post-repair or overhaul
- basic principles and functions relating to oxygen components and associated with:
 - pressure sensitive devices (bellows and controllers)
 - vacuum system generation
- atmosphere and its properties
- work health and safety (WHS) requirements for repairing or overhauling aircraft oxygen system components
- maintenance publications for repairing or overhauling aircraft oxygen system components.

Assessment Conditions

The following conditions of assessment represent the requirements of the regulators (DASA and 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 or overhauling aircraft oxygen system components. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - required workplace procedures, manufacturing specifications, codes, standards, manuals, and reference materials relevant to repairing or overhauling aircraft oxygen system components
 - tools and equipment specified in maintenance manuals
 - general and special-purpose tools and test equipment.

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.

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