



Australian Government

MEA504 Maintain and fit oxygen masks

Release: 2

MEA504 Maintain and fit oxygen masks

Modification History

Release 2. Equivalent to MEA504 Maintain and fit oxygen masks with amended prerequisite codes.

Application

This unit of competency requires application of skills and knowledge relating to the maintenance and fitment of oxygen masks worn by aircrew. Maintenance involves inspection, testing, fault diagnosis, replacement of parts, cleaning and functional testing and may be performed individually or as part of a team.

Fitment involves adjusting the oxygen mask to correctly fit an individual (oxygen masks are not an off-the-shelf issue).

This unit is part of the Aeroskills Life Support and Furnishing Certificate III and IV training pathways.

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).

Pre-requisite Unit

MEA107	Interpret and use aviation maintenance industry manuals and specifications
MEA118	Conduct self in the aviation maintenance environment
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
MEA295	Use electrical test equipment to perform basic electrical tests on aircraft and components

Competency Field

Aircraft life support

Unit Sector

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | |
|-------------------------|--|
| 1. Maintain oxygen mask | 1.1 Oxygen mask is inspected for serviceability in accordance with standard procedures |
| | 1.2 Oxygen mask is tested for serviceability in accordance with standard procedures and manufacturer's specifications |
| | 1.3 Identified faults beyond own authority to rectify are reported to supervisor and faulty oxygen mask is quarantined |
| | 1.4 Unserviceable parts of the oxygen mask are replaced in accordance with standards procedures 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) |
| | 1.5 Communication system components are tested in accordance with standard procedures |
| | 1.6 Oxygen mask is cleaned in accordance with standard procedures |
| | 1.7 Oxygen mask is presented for inspection by supervisor in accordance with standard procedures |
| | 1.8 Maintenance documentation is completed and processed in accordance with standard enterprise procedures |
| 2. Fit oxygen mask | 2.1 Fitting process is explained to the participant so that optimal fit can be achieved through relevant feedback |
| | 2.2 Participant is measured to select an appropriate size oxygen mask |
| | 2.3 Components of oxygen mask are adjusted to optimise fit |
| | 2.4 Integration of the oxygen mask and helmet is confirmed for correct function during operations |

- 2.5 Oxygen mask fit is verified through participant feedback and by the supervisor
- 2.6 Relevant 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.

Standard procedures are found in any or all of:

- Commonwealth/state/territory WHS legislation, regulations and codes
- Australian Standards
- Equipment manufacturers' specifications and procedures
- Industry practices
- Safety manuals
- Maintenance schedules
- Work instructions
- Maintenance organisation manuals
- MSDS
- Defence regulations and instructions
- Standing instructions

Faults include:

- Contamination
- Corrosion
- Cracks
- Excessive wearing
- Fraying
- Incorrect manufacture
- Intermittent communication
- Leaks
- Perishing

Parts of the oxygen mask include:

- Communication system (e.g. microphone)
- Delivery tube
- Exo-skeleton (e.g. outer shell)

	• Face piece (e.g. trimming) • Retention system (e.g. strap) • Valves
Communication system components include:	• Microphone • Electric cables • Switches
Adjustable components include:	• Retention system (e.g. strap) • Seals

Unit Mapping Information

Release 2. Equivalent to MEA504 Maintain and fit oxygen masks

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 MEA504 Maintain and fit oxygen masks

Modification History

Release 2. Equivalent to MEA504 Maintain and fit oxygen masks 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 WHS practices relating to oxygen mask maintenance processes
- using MSDS
- using applicable tools, testing/measuring equipment and maintenance documentation to:
 - solder oxygen mask electronic/electrical components
 - test the operation of helmet electronic/electrical components
 - replace unserviceable components in accordance with approved procedures
 - select and use appropriate oxygen mask cleaning materials
 - correctly fit oxygen masks to users
- safely using the oxygen test rig
- cleaning and maintenance of equipment and tools
- correctly disposing of hazardous waste.

The underlying skills inherent in this unit should be transferable across a range of aircraft life support equipment maintenance activities. It is essential that oxygen mask testing and inspection procedures, cleanliness requirements and safety precautions are fully observed, understood and complied with. Ability to interpret maintenance and fitting procedures and apply them in practice is critical.

This is to be demonstrated through demonstration of the ability to recognise faults and damage and perform appropriate repairs that are within the bounds of the individual's authority, and through the demonstration of correct fitting procedures.

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:

- relevant enterprise procedures and maintenance publications
- WHS procedures relating to oxygen mask maintenance
- how to obtain MSDS
- safety precautions relating to oxygen and the operation of the oxygen test rig
- requirements for an oxygen mask servicing facility

- oxygen in flight
- components of an oxygen mask and their function
- oxygen mask operation in relation to flight
- oxygen regulator operation
- physiological effects of flight
- hypoxia
- critical nature of maintaining and fitting oxygen masks
- need to regularly assess correct fitment of oxygen masks
- oxygen mask fitting procedures
- fitting procedures relating to the fitment of oxygen masks to helmets
- G forces
- forces of ejection
- basic electrical principles
- environmental conditions that may affect oxygen equipment
- approved cleaning methods for aviation life support equipment
- handling, storage and transit procedures relating to life support equipment
- handling and storage procedures for oxygen masks
- types of corrosion and contamination that may affect oxygen masks
- modification requirements for oxygen masks
- oxygen mask repair procedures and limitations
- soldering techniques
- operation of testing and measuring equipment and tools used to maintain oxygen masks
- use and storage of adhesives.

Assessment Conditions

- Competency should be assessed in the workplace or simulated workplace using materials, tools and equipment specified in the maintenance manuals and applicable procedures. It is also expected that general and special-purpose tools and ground support equipment would be used where appropriate.
- The work plan should take account of applicable safety and quality requirements in accordance with the industry and regulatory standards.
- 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 three (3) unserviceable oxygen masks providing a representative range of maintenance tasks and on the correct fitting of oxygen masks to at least three (3) individuals.
- This shall be established via the records in the Log of Industrial Experience and Achievement or, where appropriate, an equivalent Industry Evidence Guide.
- Assessors must satisfy the requirements of the National Vocational Education and Training Regulator (Australian Skills Quality Authority, or its successors).

Links

Companion Volume implementation guides are found in VETNet -

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