



Australian Government

Department of Education, Employment and Workplace Relations

MEA504A Maintain and fit oxygen masks

Revision Number: 2

MEA504A Maintain and fit oxygen masks

Modification History

Minor formatting and editorial changes made. Prerequisite unit version code updated. Unit version code updated in unit descriptor.

Unit Descriptor

This unit of competency is part of the Aeroskills Life Support and Furnishing Certificate III and IV training pathways. It covers the competencies required to maintain and fit oxygen masks worn by aviation aircrew. Maintenance involves inspecting, testing, isolating faults, replacing parts, cleaning and testing prior to placing the item back in service. Fitting an oxygen mask includes adjusting the mask to fit the individual (oxygen masks are not an off-the-shelf issue). This unit is used in workplaces that operate under the airworthiness regulatory systems of the ADF and CASA.

This unit is equivalent to PUADEFSL004B Maintain and fit oxygen masks.

Application of the Unit

This unit 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. Fitment involves adjusting the oxygen mask to correctly fit an individual.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

MEA101B	Interpret occupational health and safety practices in aviation maintenance
MEA103B	Plan and organise aviation maintenance work activity
MEA105C	Apply quality standards applicable to aviation maintenance processes
MEA107B	Interpret and use aviation maintenance industry manuals and specifications
MEA108B	Complete aviation maintenance industry documentation
MEA109B	Perform basic hand skills, standard trade practices and fundamentals in aviation maintenance

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

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
 - 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

Required Skills and Knowledge

Required skills

Look for evidence that confirms skills in:

- applying OHS 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 maintaining equipment and tools
- correctly disposing of hazardous waste

Required knowledge

Look for evidence that confirms knowledge of:

- relevant enterprise procedures and maintenance publications
- OHS 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

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<p>Overview of assessment</p>	<p>A person who demonstrates competency in this unit must be able to maintain and fit oxygen masks while observing all relevant safety precautions, especially those relating to oxygen.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>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.</p> <p>Evidence of transferability of skills and knowledge related to oxygen mask maintenance and fitting is essential. 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. The work plan should take account of applicable safety and quality requirements in accordance with the industry and regulatory standards.</p> <p>A person cannot be assessed as competent until it can be demonstrated to the satisfaction of the workplace assessor that the relevant elements 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 individuals. This shall be established via the records in the Log of Industrial Experience and Achievement or, where appropriate, an equivalent Industry Evidence Guide.</p>
<p>Context of and specific resources for assessment</p>	<p>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.</p>

Method of assessment	
Guidance information for assessment	

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Standard procedures</p>	<p>Standard procedures may be found in any or all of:</p> <ul style="list-style-type: none"> • state/territory/Commonwealth OHS legislation, regulations and codes • Australian Standards • equipment manufacturers' specifications and procedures • industry practices • safety manual • maintenance schedules • work instructions • maintenance organisation manual • MSDS • Defence regulations and instructions • standing instructions
<p>Faults</p>	<p>Faults may include:</p> <ul style="list-style-type: none"> • contamination • corrosion • cracks • excessive wearing • fraying • incorrect manufacture • intermittent communication • leaks • perishing
<p>Parts of the oxygen mask</p>	<p>Parts of the oxygen mask may include:</p> <ul style="list-style-type: none"> • communication system (e.g. microphone) • delivery tube • exo-skeleton (e.g. outer shell) • face piece (e.g. may include trimming) • retention system (e.g. strap) • valves
<p>Communication system components</p>	<p>Communication system components may include:</p> <ul style="list-style-type: none"> • microphone • electric cables

	<ul style="list-style-type: none"> switches
Adjustable components	<p>Components may include:</p> <ul style="list-style-type: none"> retention system (e.g. strap) seals
Application	<p>Application of this unit may relate to:</p> <ul style="list-style-type: none"> scheduled or unscheduled maintenance activities individual or team-related activities

Unit Sector(s)

Aircraft life support

Competency field

Co-requisite units

MEA118A Conduct self in the aviation maintenance environment

MEA240B Use electrical test equipment to perform basic electrical tests