



Australian Government

MEA511 Operate and maintain sewing machines and overlockers

Release: 1

MEA511 Operate and maintain sewing machines and overlockers

Modification History

Release 1 - New unit of competency

Application

This unit of competency requires application of skills and knowledge relating to the operation and maintenance of sewing machines and overlockers in the maintenance of items of aircraft life support equipment and in the fabrication and maintenance of items of aircraft soft furnishings.

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

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. Plan work and prepare work area	<table><tr><td>1.1</td><td>Work is planned to maximise safety and productivity</td></tr><tr><td>1.2</td><td>Work area is cleared and cleaned to provide work table free of obstructions and clear access to sewing/overlocking machine</td></tr><tr><td>1.3</td><td>Safe working environment is established</td></tr><tr><td>1.4</td><td>Suitable electrical power outlets, if required, are identified</td></tr><tr><td>1.5</td><td>Assistance to move and position work piece is obtained if necessary</td></tr></table>	1.1	Work is planned to maximise safety and productivity	1.2	Work area is cleared and cleaned to provide work table free of obstructions and clear access to sewing/overlocking machine	1.3	Safe working environment is established	1.4	Suitable electrical power outlets, if required, are identified	1.5	Assistance to move and position work piece is obtained if necessary
1.1	Work is planned to maximise safety and productivity										
1.2	Work area is cleared and cleaned to provide work table free of obstructions and clear access to sewing/overlocking machine										
1.3	Safe working environment is established										
1.4	Suitable electrical power outlets, if required, are identified										
1.5	Assistance to move and position work piece is obtained if necessary										
2. Select thread and	<table><tr><td>2.1</td><td>Type of material to be sewn, type of stitch to be used and nature of duty to which finished product is to be</td></tr></table>	2.1	Type of material to be sewn, type of stitch to be used and nature of duty to which finished product is to be								
2.1	Type of material to be sewn, type of stitch to be used and nature of duty to which finished product is to be										

needle		subjected is determined to assist in selection of thread and needle
	2.2	Suitable thread is selected with regard to thread material, diameter of thread, tensile strength and colour
	2.3	Appropriate needle is chosen to suit type of thread, type of stitch and material to be sewn
3. Set up machine	3.1	Machine is examined for damage, missing components or other defects
	3.2	Power cords are examined for knots, unsafe routing and insulation damage
	3.3	Machine is safely connected to power and correct 'power-on' procedure is followed
	3.4	Condition of needle is checked to ensure it is sharp, clean and free from rust and dirt
	3.5	Needle is fitted to machine
	3.6	Machine is threaded and thread is checked for free travel from spool
	3.7	Thread tension and other machine settings are checked and adjusted using test pieces if necessary
4. Operate machine	4.1	Work piece is correctly aligned to machine
	4.2	Machine is operated in accordance with standard procedures while observing all relevant work health and safety (WHS) requirements
	4.3	Work piece is appropriately fed into machine
	4.4	Performance of machine is monitored through regular checking of thread tension and other settings and inspection of stitching in finished product
5. Inspection, quality, labelling and documentation	5.1	Work piece is removed from machine using assistance if necessary
	5.2	Completed work is inspected to verify that it meets applicable technical instructions
	5.3	Any areas in need of rework or rectification are identified and marked

		5.4	Rework is performed or other appropriate action arranged
		5.5	Completed product is labelled or tagged and any necessary documentation completed in accordance with standard enterprise procedures
6.	Clean up and maintain equipment	6.1	Machine is switched off using correct 'power off' procedures
		6.2	Machine is cleaned and programmed maintenance, which is within the province of the operator, is performed in accordance with enterprise requirements and manufacturer's specifications while observing all relevant WHS requirements, including the use of material safety data sheets (MSDS)
		6.3	Worn or damaged needles are disposed of in accordance with safe working practice
		6.4	Supervisor is notified of any abnormal conditions requiring maintenance or repair

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.

Procedures and requirements include:

Working environment includes:

- Industry standard procedures specified by manufacturers, regulatory authorities or the enterprise
- Work organisation procedures and practices relating to the sewing/overlocking of materials
- Safe use of sewing/overlocking machines and relevant hand and power tools
- Storage, safe handling and disposal of needles, threads and materials associated with sewing/overlocking
- Reporting actions which include verbal and written communication in accordance with enterprise policies

	and procedures
	• Oral, written or visual communication, including completion of standard forms, interpretation of information and instructions associated with workplace activities, and recording and reporting of work outcomes • Procedures for safety, environmental protection, housekeeping and quality as specified by equipment and materials manufacturers, regulatory authorities and the enterprise
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 manual • Maintenance schedules • Work instructions • Maintenance organisation manual • MSDS • Defence regulations and instructions • Civil Aviation Safety Regulations (CASRs) and advisory material • Standing instructions
Technical instructions include:	• Aircraft operational requirements • Job orders • Manufacturers' specifications • Maintenance manuals • Modification instructions • Technical drawings

Unit Mapping Information

Release 1 – equivalent to MEA511A Operate and maintain sewing machines and overlockers

Links

Companion Volume implementation guides are found in VETNet -

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