



Australian Government

MSTTF3006 Cut and join sail panels

Release: 1

MSTTF3006 Cut and join sail panels

Modification History

Release 1. Supersedes and is equivalent to LMTTF3006A Cut and join sail panels

Application

This unit of competency covers the skills and knowledge required to cut and join sail panels for a range of sail types and sizes.

The unit of competency applies to the lay-up, marking, and cutting of sail panels using manual methods. The joining of panels will involve sewing and bonding techniques. Interpretation of sail designs and specification sheets is required.

Work may be conducted in small to large scale enterprises and may involve individual and team activities. Work is performed within defined procedures under supervision of the sail designer.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Textile fabrication

Unit Sector

Not applicable

Elements and Performance Criteria

Elements describe the essential outcomes.

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

1 Determine job requirements

- 1.1 Follow standard operating procedures (SOPs)
- 1.2 Comply with work health and safety (WHS) requirements at all times
- 1.3 Use appropriate personal protective equipment (PPE) in accordance with SOPs
- 1.4 Identify job requirements from specifications, drawings,

job sheets or work instructions

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|---|-----------------------------------|--|
| 2 | Lay up, plot and mark sail | <div>2.1 Interpret sail design specifications and clarify sail type, where necessary</div> <div>2.2 Interpret lay-up instructions and check sail cloth width and quality against lay-up instructions</div> <div>2.3 Plot lay marker on the sail cloth using manual techniques and copy mark on the sail cloth</div> <div>2.4 Check marker and lay alignment against design specifications and make adjustments, as required</div> <div>2.5 Store master copy of lay marker according to workplace procedures, as appropriate</div> |
| | | |
| 3 | Cut sail | <div>3.1 Lay out sail cloth correctly using proper handling techniques</div> <div>3.2 Check sail cloth for faults or inconsistencies and take appropriate action</div> <div>3.3 Obtain and check cutting equipment according to specifications for work</div> <div>3.4 Cut sail cloth according to WHS and workplace procedures</div> <div>3.5 Inspect cut sail cloth, identify any faults and take appropriate action to ensure cut pieces meet required quality standards and design specifications</div> |
| | | |
| 4 | Join sail panels | <div>4.1 Identify required joining technique according to design and sail specifications, and prepare work area and resource requirements</div> <div>4.2 Prepare, align, anchor or otherwise stabilise sail cloth surfaces for application of adhesive or sewing</div> <div>4.3 Join sail panels according to design specifications, WHS and workplace procedures</div> <div>4.4 Monitor joining continuously for errors and to ensure</div> |

		correct alignment and integrity to design specifications
	4.5	Allow bonded joins to cure for specified time, using heat application, where appropriate
5	Finalise work	5.1 Remove sail and inspect bonded or sewn joins, and test for strength and accuracy against design specifications 5.2 Identify and address faults and inconsistencies or discrepancies with design 5.3 Transfer sail to next area for finishing, and complete housekeeping and required production documentation 5.4 Clean work area, clean and return tools and equipment to safe storage, and perform normal basic maintenance, in accordance with workplace requirements and manufacturer specifications

Foundation Skills

This section describes those required skills (language, literacy and numeracy) that are essential to performance.

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.

Workplace procedures include one or more of the following:

- requirements prescribed by legislation, awards, agreements and conditions of employment
- SOPs
- work instructions
- oral, written and visual communication
- quality practices, including responsibility for maintenance of own work quality and contribution to quality improvement of team or section output
- housekeeping
- tasks related to environmental protection, waste disposal, pollution control and recycling

	• WHS practices
Australian Standards include:	• the relevant industry or Australian Standards that are current at the time this unit is being undertaken
Sail types include one or more of the following:	• one design • cruising • cruiser and racing • racing yacht • sails for a range of boat sizes
Lay-up includes the following:	• cross-cut, radial and membrane panel layouts
Sail cloth includes two or more of the following:	• dacron • nylon • vinyl • canvas • wovens • spinnaker • laminet • composite sailcloth
Cutting equipment includes the following:	• scissors • power tools
Resource requirements include one or more of the following:	• power tools • spray guns • portable ventilation fans • hot air dryers • heat lamps • sewing machines • needles • threads • adhesive applicators • cleaning cloths • solvents
Joining techniques	• sewing, using a variety of stitch types

include one or more of the following:

- use of adhesives, such as glue, tape and other bonding agents
- combination of both sewing and adhesives

PPE includes one or more of the following:

- masks
- goggles
- aprons or other protective covers
- gloves

Required production documentation includes the following:

- record of inconsistencies or faults
- record of adhesives used
- instructions for finishing
- production information
- time and date
- labelling
- packing or transfer information

WHS practices

WHS practices must include hazard identification and control, risk assessment and implementation of risk reduction measures specific to the tasks described by this unit, and include one or more of the following:

- manual handling techniques
- SOPs
- PPE
- safe materials handling
- taking of rest breaks
- ergonomic arrangement of workplaces
- following marked walkways
- safe storage of equipment
- housekeeping
- reporting accidents and incidents
- other WHS practices relevant to the job and enterprise

Unit Mapping Information

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Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a203ec5c-de7d-406b-b3e1-8f1a9b76e92e>

Assessment Requirements for MSTTF3006 Cut and join sail panels

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria, and include:

- reading and following work instructions, standard operating procedures (SOPs), safe work practices
- applying relevant standards
- correctly interpreting sail design and lay-up instructions for at least three (3) sails types
- laying up, plotting and marking sail according to specifications
- correctly adjusting lay height and position of sail cloth and cutting sail cloth to lay
- selecting appropriate joining method on at least three (3) occasions to industry standards on different sail types or sizes
- checking work against information and specifications throughout sail making process
- identifying faults and inconsistencies in sailcloth, markings, and joined sails
- storing materials and equipment and disposing of wastes according to work health and safety (WHS) practices and industry regulations
- maintaining machines and work area
- documenting and transferring production information and maintaining accurate records according to workplace procedures.

Knowledge Evidence

Evidence must be provided that demonstrates knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- relevant Australian Standards
- sail types for various uses and boat sizes
- cross-cut, radial and membrane panel layouts
- sail cloths commonly used in sail making, and their performance factors
- manual plotting and marking techniques
- manual handling techniques for sailcloth
- operating principles of sewing machines used in sail making
- needle, thread and stitch specifications
- adhesives used in sail making, and practices and procedures for application
- WHS and environmental and waste-management requirements of sail making industry
- curing requirements
- procedures for strength testing of joined sail cloth

- WHS practices, including hazard identification and control measures
- practices for recording and reporting
- workplace procedures.

Assessment Conditions

- Assessors must:
 - satisfy the assessor competency requirements that are in place at the time of the assessment, as set by the VET regulator
 - have vocational competency in cutting and joining sail panels, at least to the level being assessed, with relevant industry knowledge and experience.
- Assessment should occur in operational workplace situations. Where this is not possible, or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment reflecting realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications associated with this unit.

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