



Australian Government

MSTTF3005 Apply lofting skills to sail making

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to LMTTF3005A Apply lofting skills to sail making

Application

This unit of competency covers the skills and knowledge required to reproduce design lines onto sail cloth using manual techniques, for the purpose of sail making.

The unit of competency applies to a traditional sail making technique that does not require the use of computerised equipment.

The unit of competency applies to the laying out of sail cloth on a floor and reproducing in full scale, the 'line drawings' and 'table of offsets' supplied by the sail designer onto the fabric in order to achieve a pattern with a 3-D outcome.

Work may involve interaction with other people in the workplace, including supervisors and production personnel or sail designers.

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.

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|-------------------------------------|---|
| 1 Determine job requirements | 1.1 Follow standard operating procedures (SOPs) |
| | 1.2 Comply with work health and safety (WHS) requirements at all times |

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|---|---------------------------------------|-----|--|
| | | 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 |
| 2 | Interpret lofting requirements | 2.1 | Access sail design specifications and identify sail type |
| | | 2.2 | Interpret design lines and table of offsets correctly, and identify sail features |
| | | 2.3 | Identify lay-up specifications of sail cloth and determine amount of floor space is required to lay out sailcloth |
| | | 2.4 | Select and set up equipment needed for lofting according to workplace procedures |
| | | 2.5 | Determine steps in lofting processes and sequence for maximum productivity |
| 3 | Lay out sail cloth | 3.1 | Clean loft floor and check for foreign objects |
| | | 3.2 | Lay out sail cloth correctly using proper handling techniques, according to WHS practices |
| | | 3.3 | Check sail cloth for faults or inconsistencies and take appropriate action |
| | | 3.4 | Check directional and topside layout of sail cloth, according to fabric cutting requirements and design specifications |
| | | 3.5 | Brace sail cloth to the loft floor using appropriate method |
| 4 | Create lofted lines | 4.1 | Determine and create straight baseline using appropriate baseline marker |
| | | 4.2 | Measure grid and line markings from line drawings and mark onto sail cloth square to the baseline |
| | | 4.3 | Draw profile lines correctly |
| | | 4.4 | Draw pattern from lofted lines directly onto sail cloth, |

with accurate allowances made for seams, joins, reinforced edges and other design features

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|---|---------------------------------|-----|--|
| 5 | Complete lofting process | 5.1 | Check pattern markings for accuracy of 3-D outcome against design specifications |
| | | 5.2 | Identify faults in marking and record and correct inconsistencies with design specifications, if possible |
| | | 5.3 | Label, fold, pack and load completed work correctly and transfer to next area for cutting, where appropriate |
| | | 5.4 | Complete housekeeping and required documentation |

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

- the relevant industry or Australian Standards that are current at the time this unit is being undertaken

include:**Sail types include one or more of the following:**

- one design
- cruising
- cruiser and racing
- racing yacht
- sails for a range of boat sizes

Equipment includes one or more of the following:

- marking chalk, tape, or other suitable implement for marking lines onto sail cloth
- measuring tools
- bracing materials
- baseline marker
- calculator
- specifications charts
- relevant plans and design drawings

Lay-up includes the following:

- cross-cut, radial and membrane panel layouts

Sail features include one or more of the following:

- luff curves
- roach profiles
- leech hollows
- foot rounds
- marking reef points
- batten pockets
- openings
- inserts
- gussets
- reinforcing
- attachments

Sail cloth includes one or more of the following:

- dacron
- nylon
- vinyl
- canvas
- wovens
- spinnaker
- laminet
- composite sailcloth

Required documentation includes the following:

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

WHS practices

WHS practices 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
- environmental practices

Unit Mapping Information

Release 1. Supersedes and is equivalent to LMTTF3005A Apply lofting skills to sail making

Links

Companion Volume implementation guides are found in VETNet -

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