



Australian Government

MSTTX3003 Set up, adjust and maintain industrial sewing machines

Release: 1

MSTTX3003 Set up, adjust and maintain industrial sewing machines

Modification History

Release 1. Supersedes and is equivalent to LMTTX3017A Set up, adjust and maintain industrial sewing machines

Application

This unit of competency covers the skills and knowledge required to set up, adjust and maintain industrial sewing machines used in a textile enterprise.

The unit of competency applies to setting up industrial sewing machines for production, conducting sample runs, problem solving, repair, adjustment, preventative maintenance and testing of machines to ensure efficient working order. The unit covers operator controlled single station industrial sewing machines and high volume automatic and manually operated hem, selvedge and embroidery sewing machines.

Discretion and judgement may be required, for both self and others, in planning and selecting processes, procedures or outcomes.

This unit does not cover all maintenance, repair and adjustment functions associated with industrial sewing machines. In particular, skills associated with general engineering (fitting), electrical and electronic systems, and fluid power systems, may be required according to the nature of the set-up, repair or adjustment, and the workplace practices of a particular enterprise.

Work may be conducted in a variety of environments, such as operational workplace activities, restricted space, hazardous, controlled or exposed conditions.

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

Pre-requisite Unit

Nil

Competency Field

Textile production

Unit Sector

Not applicable

Elements and Performance Criteria

Elements describe the Performance criteria describe the performance needed to

essential outcomes.	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
2 Prepare to set up, adjust and maintain industrial sewing machines	2.1 Interpret machine manufacturer specifications and work description from operator to determine optimum sewing machine settings for product and operator 2.2 Select, prepare and use tools appropriate for the machine and task to set up machine for operation 2.3 Set up machine according to required specifications, including fixing of required attachments and operating run at optimum quality and efficiency levels 2.4 Thread and check needles and set tension for planned sewing operations 2.5 Check lubrication prior to operation and instruct sewing machine operators of any special operating requirements
3 Test industrial sewing machine settings	3.1 Operate sewing machine in accordance with manufacturer and workplace instructions to test settings against specifications and operational standards 3.2 Examine sewn product or sample to confirm desired sewing motion and stitch is achieved, and identify any adjustments needed to machine settings 3.3 Identify and document adjustments and adjust machine settings accordingly
4 Diagnose industrial sewing problems	4.1 Monitor industrial sewing machine operation to ensure it is efficient, safe and complies with workplace procedures

		4.2	Communicate with operator and assess sewn product to identify the nature and extent of sewing faults
		4.3	Analyse problems and faults to determine root cause and determine strategy for repair
5	Fix machine and communicate outcomes	5.1	Readjust settings, repair or replace faulty machine parts and return sewing machine to optimal performance
		5.2	Test sewing machine and produce sample to ensure problems have been fixed
		5.3	Maintain records and prepare reports, where necessary
		5.4	Document adjustments to machines and patterns and communicate to appropriate personnel
		5.5	Document operational instructions

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
- PPE
- 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
Industrial sewing machines include one or more of the following:	- lockstitch and chain stitch table mounted machines with power being from a motor mounted under the table and connected to the sewing machine by a pulley - overlock table mounted sewing machines and sergers with power being from a motor mounted under the table and connected to the sewing machine by a pulley - high volume automatic and manually operated hem, selvedge and embroidery sewing machines
Machine settings for sewing machine include one or more of the following:	- gaps - tolerances - clearances - tension - needle speed and timing - direction - other settings depending on the industrial sewing machine settings depending on the machine model and function and production requirements
Faults in sewing include one or more of the following:	- contamination - incorrect thread tension - mechanical breakdown - electrical or electronic fault - poor feeding and threading of needles - dirty or oily marks on thread or fabric - incorrect stitch - thread, lint or debris in rotary hook, bobbin case, needleplate and feed dog, motor and oil reservoir - puckering - thread breakages - uneven thread delivery including loop stitches and slip stitches - poor lubrication and cooling resulting in needle overheating and fabric burn

- Repairs in sewing include one or more of the following:**
- correcting threading faults
 - tensioning
 - removal and replacement of faulty or worn parts
 - setting of clearances, limits and fits
 - re-setting or re-programming of controls and sensors
 - repair or replacement of pneumatic or hydraulic components

Unit Mapping Information

Release 1. Supersedes and is equivalent to LMTTX3017A Set up, adjust and maintain industrial sewing machines

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 MSTTX3003 Set up, adjust and maintain industrial sewing machines

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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, machine manufacturer specifications
- applying relevant standards
- interpreting production specifications accurately
- setting up industrial sewing machine with required equipment and attachments, and operating safely and correctly according to specifications
- monitoring industrial sewing machine operation to ensure it is efficient, safe and complies with workplace procedures
- performing at least four (4) sample runs of all stitching operations required for an identified garment, range or product and analysing results
- determining root cause and determining strategy for repair of sewing faults
- identifying and making appropriate readjustments
- maintaining records and preparing reports, where necessary
- documenting adjustments to machines and patterns and communicating to appropriate personnel
- documenting operational instructions.

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
- sewing methods and the various types of sewing operations, stitches, fabrics and knit effects
- threads
- pattern specifications
- factors affecting machine performance, including thread strength, dust and other contaminants, lubrication, needle condition, operator skill and ambient conditions
- industrial sewing machines:
 - lockstitch and chain stitch table mounted machines with power being from a motor mounted under the table and connected to the sewing machine by a pulley

- overlock table mounted sewing machines and sergers with power being from a motor mounted under the table and connected to the sewing machine by a pulley
- high volume automatic and manually operated hem, selvedge and embroidery sewing machines
- machine manufacturer specifications and adjustment methods
- work health and safety (WHS) and environmental aspects of relevant enterprise activities
- quality practices
- workplace procedures
- recording and reporting practices.

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 setting up, adjusting and maintaining industrial sewing machines, 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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