



Australian Government

Department of Education, Employment and Workplace Relations

LMTDE3009A Maintain computerised embroidery machines

Release: 1

LMTDE3009A Maintain computerised embroidery machines

Modification History

New unit

Unit Descriptor

This unit of competency covers the skills and knowledge required to set up and maintain computerised embroidery machines to ensure efficient operation.

Application of the Unit

The unit covers the skills and knowledge to conduct maintenance work on embroidery machines and address production problems. It targets the operator or assigned personnel who address machine common performance problems that do not require specialised sewing machine mechanic skills.

Work involves some discretion, initiative and judgement on the job in own work, including liaison with operators, if required.

Work may be conducted in a variety of environments, such as operational workplace activities, or home-based activities.

Embroidery machines used in completion of this unit may include domestic (single or multi-needle) or commercial (single or multi-head) machines.

This unit requires the application of skills associated with planning, organising and problem solving to assess machine operation performance and identify and address problems.

Communication skills are used to refer to specifications and complete required documentation. Self-management skills are used to ensure safe use of technology and conformance of own work to quality standards. Ability to work with technology is also a requirement.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

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.

Elements and Performance Criteria

1	Determine machine maintenance requirements	1.1	Type of machine is identified and maintenance schedule examined
		1.2	Componentry of equipment is inspected and assessed for wear and maintenance requirement
		1.3	Machine is operated to assess performance
2	Assess impact of materials and equipment	2.1	Impact of <i>fabric</i>
		2.2	Impact of <i>needles</i>
		2.3	Possible faults in <i>software</i> application or digitised file are identified and adjusted
3	Conduct basic maintenance	3.1	<i>Performance problems</i> are identified and <i>root cause</i> determined
		3.2	Timing is assessed and adjusted according to manufacturer specifications
		3.3	Positioning and timing of cutters is assessed and adjusted, as required
		3.4	Other operational problems are assessed and addressed
		3.5	Electronic or major operational problems are identified and referred to suitable personnel
		3.6	Work is conducted according to <i>occupational health and safety (OHS) practices</i> and waste disposed of according to environmental guidelines
		3.7	Maintenance work is documented according to

workplace procedures

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills include:

- applying workplace health and safety requirements for a production environment
- applying embroidery machining skills
- applying basic computer skills
- selecting fabric, needles, thread, stabiliser and hoop to meet design specifications
- assembling and attaching hoop
- applying hooping techniques and using hooping accessories
- assessing suitability of materials and equipment for production requirements
- recognising and addressing production problems and determining root cause
- reading, interpreting and following information on work specifications, standard operating procedures and work instructions, and other reference material
- maintaining accurate records
- communicating within the workplace
- sequencing operations
- meeting specifications
- clarifying and checking task-related information

Required knowledge includes:

- computer navigation to use basic software functions
- machine embroidery techniques
- types and properties of fabric
- hoop types
- needle types
- thread types
- stabiliser types
- workplace policies and procedures
- environmental aspects related to workplace and machine or equipment operation and manual handling
- OHS practices, including hazard identification and control measures
- quality practices
- practices for recording and reporting

Evidence Guide

<p>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>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>It is essential that competence be demonstrated in the identification and rectification of basic performance problems and maintenance requirements for computerised embroidery machines. The candidate must be able to:</p> <ul style="list-style-type: none"> • assess operational performance • determine impacts of materials and componentry on performance • identify operational problems and determine root cause • address operational problems and conduct basic maintenance.
<p>Context of and specific resources for assessment</p>	<p>Assessment may occur on the job or in an appropriately simulated environment and requires access to work areas, materials and equipment and to information on workplace practices and OHS practices.</p> <p>The resource requirements for this unit include access to:</p> <ul style="list-style-type: none"> • embroidery machine • hoops • a range of fabrics • a range of threads • a range of needles • hooping accessories • notions.
<p>Method of assessment</p>	<p>This unit may be assessed independently or in combination with other relevant units.</p> <p>Assessment methods may include:</p> <ul style="list-style-type: none"> • written and oral questioning • completion of practical activities/tasks.
<p>Guidance information for assessment</p>	<p>Assessment processes and techniques must be culturally appropriate and appropriate to the language and literacy capacity of the candidate and the work being performed.</p>

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.

Fabric types	Fabric types must include: <ul style="list-style-type: none"> • wovens • non-wovens • knits • lightweight • heavyweight
Threads types	Threads types may include: <ul style="list-style-type: none"> • polyester • metallic • rayon • cotton
Stabilisers, toppings and backings	Stabilisers, toppings and backings may include: <ul style="list-style-type: none"> • water soluble • tear away • iron on • cut away Colours may include: <ul style="list-style-type: none"> • black • white Weights may vary
Needle types	Needle types may include: <ul style="list-style-type: none"> • standard • metalfil • embroidery eye • stretch
Hoop types	Hoop types may include: <ul style="list-style-type: none"> • tubular • sash • screw • cap • square

	<ul style="list-style-type: none"> • round • spring
Software	<p>Software may include:</p> <ul style="list-style-type: none"> • any software classed as a digitising software (as opposed to customising or editing software)
Performance problems	<p>Performance problems must include:</p> <ul style="list-style-type: none"> • needle breaking • thread breaking • missing stitches • stoppage
Root cause	<p>Root cause refers to the identification of the origin of the fault or problem and may include:</p> <ul style="list-style-type: none"> • incorrect timing • electrical faults • sharp or worn edges or components • incorrect needle or positioning • incorrect thread or material components • machine needs oiling or cleaning • incorrect tension • blockages or clogging in components • lack of operator skill
OHS practices	<p>OHS practices must include hazard identification and control, risk assessment and implementation of risk reduction measures specific to the tasks described by this unit, and may include:</p> <ul style="list-style-type: none"> • manual handling techniques • standard operating procedures • personal protective equipment • safe materials handling • taking of rest breaks • ergonomic arrangement of workplaces • following marked walkways • safe storage of equipment • housekeeping • reporting accidents and incidents • other OHS practices relevant to the job and enterprise
Workplace procedures	<p>Workplace procedures may include:</p> <ul style="list-style-type: none"> • requirements prescribed by legislation, awards, agreements and conditions of employment

	<ul style="list-style-type: none">• standard operating procedures• 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
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Unit Sector(s)

Digitising and computerised embroidery

Custom Content Section

Not applicable.