



Australian Government

MSFFM3018 Set up, operate and maintain mechanical wood-turning lathes

Release: 1

MSFFM3018 Set up, operate and maintain mechanical wood-turning lathes

Modification History

Release 1 - New unit of competency

Application

This unit of competency covers setting up, operating and maintaining mechanical wood-turning lathes used in the production of furniture.

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

Pre-requisite Unit

Competency Field

Unit Sector

Furniture Making

Elements and Performance Criteria

Elements describe the essential outcomes.

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

1	Prepare for work	1.1	Work instructions are used to determine job requirements, including design, quality, materials, equipment and quantities
		1.2	Work health and safety (WHS) requirements, including personal protection needs, are observed throughout the work
		1.3	Material for turning is selected and inspected for quality
		1.4	Machines, cutting tools and templates are identified and checked for safe and effective operation
		1.5	Procedures are determined for minimising waste material
		1.6	Procedures are identified for maximising energy efficiency while completing the job

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| 2 | Set up machines | 2.1 | Machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions |
| | | 2.2 | Trial runs are conducted to check machine operation, accuracy and quality of finished work |
| | | 2.3 | Necessary adjustments are made to machine settings |
| 3 | Operate machines | 3.1 | Machine start-up procedure is carried out in accordance with manufacturer instructions |
| | | 3.2 | Material is fed into machine in accordance with manufacturer instructions, tooling requirements, safe handling procedures and standard workplace operating procedures |
| | | 3.3 | Machine is operated in accordance with its designed capacity and purpose, and to manufacturer recommendations |
| | | 3.4 | Machine operation is monitored to ensure product quality and output |
| | | 3.5 | Waste quantities are checked and minimised |
| | | 3.6 | Items that do not meet quality requirements are repaired, recycled or discarded according to workplace procedures |
| | | 3.7 | Problems with the required work and/or the operation of the machine are identified and reported to appropriate persons |
| 4 | Finalise operation and maintain equipment | 4.1 | Work area is cleaned, hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures |
| | | 4.2 | Machinery is cleaned and left in a safe mode |
| | | 4.3 | Faulty and/or defective equipment is tagged and reported in accordance with workplace practices |
| | | 4.4 | Unused hardware is collected and stored for re-use or disposal following workplace procedures |
| | | 4.5 | Waste and scrap materials are dealt with following workplace procedures |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency. Detail on appropriate performance levels for each furnishing unit of competency in reading, writing, oral communication and numeracy utilising the Australian Core Skills Framework (ACSF) are provided in the Furnishing Training Package Implementation Guide.

Range of Conditions

Specifies 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. Range is restricted to essential operating conditions and any other variables essential to the work environment.

Lathes include:	• two of fixed knife • rotary knife and copying lathe
Unit scope includes:	• reading the plans and specifications manufacture of templates • freehand grinding of cutters • application of cutting tools • set-up and operation of lathes to produce turned components
Unit context includes:	• WHS requirements, including legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes, and local safe operating procedures • work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • work requires individuals to demonstrate some discretion, judgement and problem solving in the set up and operation of machines • competency may be demonstrated in workplaces involved in the manufacture of solid timber furniture, domestic furniture, commercial furniture, kitchen and bathroom cabinets and/or furniture components
Tools include:	• machine-specific tools • tension wrench • pedestal grinder or bench grinder
Personal protective equipment includes:	• that prescribed under legislation, regulations and enterprise policies and practices
Information and	• workplace procedures relating to the use of tools and

procedures include:

- equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturer specifications and operational procedures

Unit Mapping Information

Supersedes and is equivalent to LMFFM3026B Set up, operate and maintain mechanical wood turning lathes.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0601ab95-583a-4e93-b2d4-cfb27b03ed73>

Assessment Requirements for MSFFM3018 Set up, operate and maintain mechanical wood-turning lathes

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Performance Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Read and interpret cutting lists and job specifications to prepare for work
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Identify, set up, operate and maintain at least two (2) different lathes, including the use of safety cut-outs and guards, to complete the following:
 - off-hand grind a range of cutters
 - manufacture and apply a template
 - complete a minimum of two (2) detailed turnings which are to include fillets, beads, covers and square shoulder
- Conduct operator maintenance on the lathes
- Use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- Communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of work outcomes and problems, interpret basic plans and follow safety procedures
- Minimise wastage of resources, including materials, time and money
- Work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity

Knowledge Evidence

- Types, characteristics, uses and limitations of lathes
- Characteristics of materials and uses of products produced
- Workplace guidelines regarding acceptable tolerance levels
- Workplace safety policies and procedures
- Procedures for reporting machinery faults and material defects

Assessment Conditions

- Assessors must:
 - hold training and assessment competencies as determined by the National Skills Standards Council (NSSC) or its successors
 - have vocational competency in the furnishing industry at least to the level being assessed with broad industry knowledge and experience, usually combined with a relevant industry qualification
 - be familiar with the current skills and knowledge used and have relevant, current experience in the furnishing industry.
- Assessment methods must confirm consistency of performance over time rather than a single assessment event and in a range of workplace relevant contexts.
- Assessment must be by observation of relevant tasks with questioning on underpinning knowledge and, where applicable, multimedia evidence, supervisor's reports, projects and work samples.
- Assessment is to be conducted on single units of competency or in conjunction with other related units of competency. Foundation skills are integral to competent performance in the unit and should not be assessed separately.
- Assessment must occur on the job or in a workplace simulated facility with relevant process, equipment, materials, work instructions and deadlines.
- Access is required to lathes, standard operating procedures and unprocessed materials.

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