



Australian Government

MSFFDT4014 Set up and operate a wood-turning lathe to produce off-centre work

Release: 1

MSFFDT4014 Set up and operate a wood-turning lathe to produce off-centre work

Modification History

Release 1 - New unit of competency

Application

This unit of competency covers maintaining, setting up and operating a wood-turning lathe and holding devices used to produce off-centre work for the production of furniture and building work. It involves application of skills and knowledge at the highly skilled craftsman or artisan level.

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

Pre-requisite Unit

Competency Field

Unit Sector

Furniture design and technology

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	<table><tr><td>1.1</td><td>Applicable work health and safety (WHS), legislative and organisational requirements and instructions relevant to lathe operations are verified and complied with</td></tr><tr><td>1.2</td><td>Work instructions are used to determine job requirements including design, quality, materials, equipment and quantity</td></tr><tr><td>1.3</td><td>Material for turning is selected and inspected for safety</td></tr><tr><td>1.4</td><td>The wood-turning lathe, holding devices, tools and gauges are identified and checked for safe and efficient operations</td></tr><tr><td>1.5</td><td>Procedures are determined for minimising waste</td></tr></table>	1.1	Applicable work health and safety (WHS), legislative and organisational requirements and instructions relevant to lathe operations are verified and complied with	1.2	Work instructions are used to determine job requirements including design, quality, materials, equipment and quantity	1.3	Material for turning is selected and inspected for safety	1.4	The wood-turning lathe, holding devices, tools and gauges are identified and checked for safe and efficient operations	1.5	Procedures are determined for minimising waste
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1.2	Work instructions are used to determine job requirements including design, quality, materials, equipment and quantity										
1.3	Material for turning is selected and inspected for safety										
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1.5	Procedures are determined for minimising waste										

		1.6	Procedures are identified for maximising energy efficiency while completing the job
2	Set up machines with holding devices	2.1	Lathe speed is selected in accordance with job requirements, safety considerations and manufacturer recommendations
		2.2	Holding devices are mounted in accordance with job requirements and safety considerations
		2.3	Necessary gauges and tools are selected for job
3	Operate lathe	3.1	Lathe start-up instructions are carried out in accordance with manufacturer instructions
		3.2	Material is mounted in lathe in accordance with manufacturer instructions, safe handling procedures and standard workplace operating procedures
		3.3	Lathe is operated in accordance with its designed capacity, purpose and to manufacturer recommendations
		3.4	Lathe operation is monitored to ensure produce 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 operation of the machine are identified and reported to the appropriate person
4	Clean up work area and maintain equipment	4.1	Materials that can be re-used are collected and stored
		4.2	Waste and scraps are removed following workplace procedures
		4.3	Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures
		4.4	Unserviceable equipment is tagged and faults identified in accordance with workplace procedures
		4.5	Operator maintenance is completed in accordance with manufacturer specifications and 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.

- Unit context includes:**
- WHS requirements, including legislation, building codes, material safety management systems, hazardous and dangerous goods codes, and local safe operating procedures or equivalent
 - 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 conceptual and analytical ability, discretion, judgement and problem solving
 - customers or suppliers may be internal or external
- Instructions include:**
- workplace procedures relating to the use and operation of tools and equipment
 - production planning figures
 - workplace instructions:
 - job sheets
 - plans
 - specifications
 - drawings and designs
 - workplace procedures relating to reporting and communications
 - manufacturer instructions for the use of equipment and materials
- Procedures include:**
- drawing articles from plans or samples
 - manufacturing pencil and scratch gauges
 - freehand grinding of tools

- set-up and operation of the lathe to produce turned components
- Holding devices include:**
 - faceplates
 - scroll checks
 - function checks
- Personal protective equipment includes:**
 - that prescribed under legislation, regulations and enterprise policies and practices
- Information and procedures include:**
 - work procedures/instructions
 - manufacturer specifications and instructions
 - standard forms of workplace process and procedures
 - organisation work specifications and requirements
 - legislation, regulations and codes of practice
 - quality and Australian Standards and procedures
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Unit Mapping Information

Supersedes and is equivalent to LMFFDT4017A Set up and operate a wood turning lathe to produce off-centre work

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 MSFFDT4014 Set up and operate a wood-turning lathe to produce off-centre work

Modification History

Release 1 - New unit of competency

Performance Evidence

- Collect, organise and understand information related to furnishing work instructions and work orders and safety procedures
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- 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 and maintain holding devices, safe speed selection and balance limitations to complete:
 - freehand turn articles between centres that have multiple axis
 - a minimum of eight (8) hand turned articles to detail between centres
 - manufacture of templates and gauges
 - scroll cut material prior to turning
 - a minimum of four (4) hand turned articles to detail with grain at 90° to the axis of the lathe
- Use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- Lead others and work effectively to improve production quality and outcomes
- 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
- Use workplace technology related to the coordination, including communication equipment, time and management aids and other measuring devices
- 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 and encourage participation of employees in the planning of work activities and changes

Knowledge Evidence

- State or territory WHS legislation, regulations, standards and codes of practice relevant to wood-turning
- Terminology covering wood-turning operations and materials

- Types, characteristics, used and limitations of timber species for wood-turning
- Techniques for the design and documentation of specifications for wood-turned products
- Organisational and site standards, requirements, policies and procedures for turning of wood
- Types, characteristics, uses, limitations and maintenance requirements of the range of tools used in wood-turning
- Processes for evaluating the quality of wood-turning tools in terms of specifications, safety, maintainability and commercial reputation
- Range of commonly used wood-turning techniques
- Established communication channels and protocols
- Relevant lathe and wood-turning problem identification and resolution
- Workplace safety requirements and WHS legislation
- Work flow within the workplace

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 significant wood turning requirements, including design brief or specification, a range of optional timbers, a range of quality wood turning tools, materials and specifications for the preparation of the product for finishing.

Links

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