



Australian Government

FBPSUG2027 Perform general lathe operations

Release: 1

FBPSUG2027 Perform general lathe operations

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to carry out general lathe operations on non-CNC lathes using a three and four jaw chuck.

The unit applies to individuals who work under supervision in the sugar milling industry.

All work must be carried out to comply with workplace procedures according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

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

Pre-requisite Unit

Nil

Unit Sector

Sugar milling (SUG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for lathe operations	1.1 Identify machining requirements according to job specifications 1.2 Select, fit and use personal protective equipment according to health and safety procedures 1.3 Collect and prepare materials to be machined 1.4 Set up lathe and tooling for machining operation according to workplace procedures and manufacturer's guidelines 1.5 Conduct pre-operational equipment checks according to operating

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	procedures 1.6 Identify and report health and safety hazards and maintenance requirements according to health and safety procedures
2. Operate lathe to achieve specifications	2.1 Set machining parameters to meet job requirements 2.2 Position materials for lathe operation according to operating procedures 2.3 Start, operate and shut down the lathe according to operating procedures 2.4 Check work for conformance to job specifications 2.5 Identify non-conforming components, and correct as required 2.6 Undertake basic routine operational maintenance according operating procedures 2.7 Ensure the work area is maintained to meet work cleaning standards

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	- Identify routine machining requirements from work instructions and technical drawings and sketches - Interpret standard operating procedures
Numeracy	- Select lathe speeds, feeds and stops - Measure and calculate to specified tolerances and dimensions - Check for conformance to specification
Navigate the world of work	- Apply workplace procedures relevant to own role - Understand main tasks, responsibilities and boundaries of own role
Interact with others	Follow accepted communication practices to communicate and report information about machining operations, operational maintenance and safety

Skill	Description
Get the work done	• Use measuring equipment to measure materials and machined components • Access and interpret lathe speeds and feeds • Recognise and respond to non-conforming components • Identify and correct machining problems, including effects of tool wear, and incorrect set-up

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPSUG2027 Perform general lathe operations.	FDFSUG227A Perform general lathe operations	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPSUG2027 Perform general lathe operations

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has performed general lathe operations in line with workplace contexts and demonstrated each of the following points at least once:

- identified machining requirements
- collected and prepared materials
- safely set up the lathe and conducted pre-operational checks on equipment
- selected, fitted and used personal protective equipment (PPE)
- operated, monitored and adjusted process and equipment during parallel cutting, parting off, drilling, tapping and knurling
- measured components using rulers, calipers and dividers, vernier calipers and micrometers
- confirmed that work conforms to specification
- safely shut down the lathe
- maintained workplace cleaning standards
- reported health and safety risks and maintenance requirements in the workplace.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for performing general lathe operations
- site operating procedures and practices for lathe operations
- purpose and operating principles of lathe and accessory equipment, including equipment operating capacities
- care, maintenance and storage of tooling, accessories and measuring equipment for lathe operations
- scope to adjust machining parameters, and related effect on outcome
- the impact of speeds, feeds, coolant, cutting lubricant and materials on tool life

- safe work procedures, including awareness of hazards related to the operation of the lathe and related equipment
- workplace cleaning standards for the work area.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a sugar milling workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - PPE
 - lathe and related tooling and equipment
 - relevant measuring instrumentation
 - materials for machining
 - drawings, templates and specifications as required
- specifications:
 - equipment operating procedures and related safety information
 - workplace cleaning standards and procedures.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>