



Australian Government

Department of Education, Employment and Workplace Relations

SUGSPGL2A Perform general lathe operations

Revision Number: 1

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Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to carry out general lathe operations. It achieves part of the outcomes of MEM 7.5AA Perform general machining. A person who has achieved competence in this MEM unit is recognised as competent in this sugar milling unit.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare for lathe operations	<ul style="list-style-type: none">1.1 Machining requirements are identified1.2 Materials are to be machined collected1.3 Lathe equipment is set up for operation1.4 Pre-operational equipment checks are conducted1.5 Health and safety hazards / maintenance requirements are identified and reported to appropriate personnel according to workplace reporting procedures
2. Operate lathe to achieve specifications	<ul style="list-style-type: none">2.1 Machining parameters are set to meet job requirements2.2 Materials are accurately positioned for lathe operation2.3 The lathe is started, operated and shut down according to operating procedures and manufacturer's specification2.4 Work is checked against specification2.5 Non-conforming components are identified and corrected as required2.6 Basic routine maintenance is carried out as required2.7 The workplace meets housekeeping standards

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Identify lathe requirements. This may require interpretation of technical drawings or sketches
2. Select, fit and use personal protective clothing and/or equipment
3. Confirm status of equipment, that safety guards are in place, equipment is fit for operation and required services are available
4. Collect and position materials according to job and equipment requirements. This may require locating datum
5. Set up, operate and shut down equipment according to workplace procedures to meet job specification
6. Monitor and adjust process and equipment during operation to stay within specification
7. Confirm that components meet specification. This may involve the use of measuring instruments
8. Maintain work area to meet housekeeping standards

May include ability to:

9. Use process control systems

Knowledge of:

10. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
11. Relevant site operating procedures and practices
12. Purpose and basic operating principles of lathe and accessory equipment. This includes awareness of equipment operating capacities
13. Care, maintenance and storage of tool parts and accessories
14. Scope to adjust machining parameters and related effect on outcome
15. The impact of machining parameters and materials used on tool life
16. Safe work procedures including awareness of health and safety hazards related to the operation of the lathe and related equipment
17. Housekeeping standards for the work area

May include knowledge of:

18. Basic operating principles of process control where relevant. This includes the relationship between control panels and the physical equipment
19. Method used to determine datum

Relationship with other standards

Pre-requisite units

The pre-requisites for this competency standard are:

- BCG1004A Carry out measurements and calculations
- BCC1005A Use hand and power tools

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Lathe and related equipment
- Relevant measuring instrumentation
- Materials for lathing
- Drawings, templates and specifications as required
- Operating procedures and related advice on equipment/instrumentation operation
- Personal protective clothing and equipment
- Housekeeping standards and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice.
- Work is undertaken to predetermined specifications
- Lathes are not CNC (Computer Numerical Control) machines and may be fitted with three or four jaw chucks
- Typical operations include parallel cutting, parting off, drilling and knurling
- Machining parameters are typically given and include speeds, feeds, stops, coolant and cutting lubricants
- Measuring instrumentation may include callipers, verniers, micrometers and rulers
- Pre-operational checks may include confirming that safety guards are in place, equipment is operational and other pre-start checks as required by workplace procedure
- Basic routine maintenance includes cleaning and lubrication
- Work may require the ability to work within a team environment
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Unit Sector(s)

Not applicable.