



Australian Government

MEM18015 Maintain tools and dies

Release: 2

MEM18015 Maintain tools and dies

Modification History

Release 2. Quantum of hours of workplace practice removed. Supersedes and is equivalent to MEM18015 Maintain tools and dies (Release 1).

Release 1. Supersedes and is equivalent to MEM18015B Maintain tools and dies.

Application

This unit of competency defines the skills and knowledge required to maintain tools and dies.

It covers identifying and analysing defects in tooling, disassembling and assessing tooling components, manufacturing or repairing tooling components to conform to specifications, and assembling tooling components. Potential production/maintenance problems are also identified.

Where simple maintenance not requiring precision repair is required unit MEM18006 Perform precision fitting of engineering components should be selected.

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

Band: A

Unit Weight: 4

Pre-requisite Unit

MEM06007	Perform basic incidental heat/quenching, tempering and annealing
MEM07005	Perform general machining
MEM07006	Perform lathe operations
MEM07007	Perform milling operations
MEM07008	Perform grinding operations
MEM09002	Interpret technical drawing
MEM11011	Undertake manual handling
MEM12003	Perform precision mechanical measurement
MEM12023	Perform engineering measurements
MEM12024	Perform computations

MEM13015	Work safely and effectively in manufacturing and engineering
MEM14006	Plan work activities
MEM16006	Organise and communicate information
MEM18001	Use hand tools
MEM18002	Use power tools/hand held operations
MEM18003	Use tools for precision work
MEM18006	Perform precision fitting of engineering components
MEM18055	Dismantle, replace and assemble engineering components

Competency Field

Maintenance and diagnostics

Elements and Performance Criteria

Elements describe the essential outcomes.

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

1	Determine job requirements	1.1	Follow standard operating procedures (SOPs)
		1.2	Comply with work health and safety (WHS) requirements at all times
		1.3	Use appropriate personal protective equipment (PPE) in accordance with SOPs
		1.4	Identify job requirements from specifications, drawings, job sheets or work instructions
2	Identify and analyse defects in tooling	2.1	Determine defects from production components produced, production reports or tool inspections
		2.2	Plan sequence of maintenance operations
3	Disassemble and assess tooling	3.1	Disassemble tooling and assess condition of components against prints, drawings and manufacturers' drawings

Elements describe the essential outcomes.

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

	components	3.2	Replace/recondition worn/damaged parts
4	Manufacture/repair and assemble tooling components	4.1	Obtain materials to meet tooling requirements
		4.2	Select and use appropriate hand and hand held power tools
		4.3	Choose appropriate machining process from a range of standard tool room machines
		4.4	Set machining parameters to produce components to specification
		4.5	Initiate heat treatment according to specification, where appropriate
		4.6	Check tooling components and assemble in conformance with specifications and procedures
		4.7	Check production components to ensure compliance to specifications, as required
5	Identify potential production/maintenance problems	5.1	Identify and record conditions leading to tooling failure
		5.2	Identify recurrent faults and initiate solutions

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for 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.

Tooling includes one (1) or more of the following:

- press tools
- plastic moulds
- forging dies
- die casting
- jigs
- fixtures
- gauges

Tool room equipment includes one (1) or more of the following:

- lathes
- mills
- grinders
- hand and power tools used for precision work

Unit Mapping Information

Release 2. Supersedes and is equivalent to MEM18015 Maintain tools and dies (Release 1).

Release 1. Supersedes and is equivalent to MEM18015B Maintain tools and dies.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>