



Australian Government

Assessment Requirements for MEM07041 Perform production machining

Release: 1

Assessment Requirements for MEM07041 Perform production machining

Modification History

Release 1. Supersedes and is equivalent to MEM07041A Perform production machining

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- identifying and interpreting specifications, drawings and other applicable reference documents to perform production machining
- selecting appropriate tooling, measuring equipment, material and accessories and determining sequencing of operations
- sharpening and shaping cutting tools and drills
- selecting and mounting required tooling or grinding wheels
- setting machining parameters, including using appropriate coolant and lubricants
- checking machined components for conformance to specifications and identifying adjustments to be made to settings/tooling.
- rectifying non-compliant product
- carrying out routine maintenance and adjustments, as required
- reporting/logging malfunctions according to SOPs

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- reasons for selecting the chosen sequence of operations
- methods of work holding
- basic marking out techniques, including datum points/lines
- benefits of using correctly sharpened cutting tools
- machine operation
- selection of feeds and speeds to SOPs
- correct methods of mounting selected cutting tools to sops
- safety issues with regard to correct clamping, guards and shields
- tolerances and limits of size
- situations indicating the need for machine adjustment, lubrication and cleaning

- techniques, tools and equipment to measure materials and machined components
- types and features of industrial grinding wheels, including:
 - international grinding wheel identification system
 - grinding wheel make-up, including bonds and grits
 - purpose and procedure for grinding wheel trueing
 - indicators of a need for grinding wheel dressing, including:
 - wheel glazing
 - wheel loading
 - wheel dresses
 - wheel drilling
- difference between centred and centreless grinding
- indicators of need for dressing, including:
 - loading
 - dulling
 - glazing
 - burn/thermal damage
 - surface finish
- grinding wheel storage and handling
- wheel safety checking, including checks for:
 - cracks
 - defects, including holes, moisture and deterioration
- grinding wheel blotters
- typical range of industrial drills and classification
- drilling machines
- drill sharpening procedures
- drill clamping arrangements
- common reasons for machining failure, including:
 - incorrect speed
 - faulty positioning of work
 - incorrect feed
 - rotation
 - incorrect coolant selection and positioning
- tools, techniques and equipment for checking components for conformance to specifications and rectifying non-compliant components.

Assessment Conditions

- Assessors must:
 - have vocational competency in performing production machining at least to the level being assessed with relevant industry knowledge and experience

- satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires
- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Links

Companion Volume implementation guides are found in VETNet -

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