



Australian Government

PMBPROD357E Construct jigs and fixtures

Release: 1

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Modification History

Release 1. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed. Supersedes and is equivalent to PMBPROD357 Construct jigs and fixtures.

Application

This unit describes the skills and knowledge required to construct jigs and fixtures used in the assembly or construction of plastic products.

This unit applies to an experienced technician working alone or as part of a team.

The unit principally refers to using jigs and fixtures to assist with assembly and/or trimming tasks during production processes. While some workplaces may use semi-automated or robotic helper units, and skills relating to programming or operating these are not covered by this unit.

No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.

Pre-requisite Unit

Nil.

Competency Field

Production – Plastics Fabrication

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify purpose of jigs and fixtures	1.1 Identify purpose and performance requirements of jigs and fixtures from job specifications 1.2 Establish service life of jigs and fixtures from job specifications 1.3 Establish availability of sample products, prototypes or existing jigs and fixtures for specified duty to inform production plan 1.4 Identify checks and testing processes required for equipment, materials, quality and production management, including check points for measurements and tests

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
2. Plan construction of jigs and fixtures	2.1 Produce plan for jigs and fixtures that meets job requirements 2.2 Organise for jig and fixture design to be put into operation according to workplace procedures 2.3 Set production process according to equipment and workplace specifications, and adjust process to optimise output based on selected materials 2.4 Set up and adjust work area, tools, materials and equipment ready for production according to workplace procedures 2.5 Verify materials for construction of jigs and fixtures against job specifications
3. Construct jigs and fixtures	3.1 Construct jigs and fixtures according to job specifications 3.2 Ensure dimensions, structural strength and operability meet job and design specifications 3.3 Install jigs and fixtures in production area and recheck features meet job specifications 3.4 Accurately complete logs and records according to workplace procedures
4. Anticipate and solve process control variances	4.1 Recognise existing or potential process control variances and their causes 4.2 Determine, prioritise and implement remedial and preventative actions based on identified issues and causes 4.3 Monitor process control variances and corrective actions taken until resolved 4.4 Accurately maintain records and logbooks

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

- Numeracy skills to perform and verify measurements and other job specification requirements.
- Reading skills to interpret job and equipment specifications and workplace procedures.
- Writing and oral communication skills to record and report on jig and fixture construction and process control variances.

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

Unit Mapping Information

Supersedes and is equivalent to PMBPROD357 Construct jigs and fixtures.

Links

Companion Volume implementation guides are found in VETNet – -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=932aacef-7947-4c80-acc6-593719fe4090>

Assessment Requirements for PMBPROD357E Construct jigs and fixtures

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and demonstrated the ability to:

- construct jigs and fixtures to meet job specifications.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- manufacturing process and product characteristics that determine jig and fixture construction and operational parameters
- production workflow sequences and materials demand
- typical quality standards required at each stage of production
- key variables that may affect product quality and production output, and possible options for adjustments including introduction of automated extras
- typical and atypical process and product problems, including early warning signs, possible causes and corrective actions
- organisational procedures relevant to the work environment or job role
- hazards that may arise in the job or work environment, and:
 - their possible causes
 - potential consequences
 - appropriate risk controls.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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