



Australian Government

PMBPREP304E Set a die for injection moulding production

Release: 1

PMBPREP304E Set a die for injection moulding production

Modification History

Release 1. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed. Supersedes and is equivalent to PMBPREP304 Set a die.

Application

This unit describes the skills and knowledge required to remove, refit and set approved and operational dies used in injection moulding.

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

The unit principally refers to an in-production changeover of the die or mould to make a new product, using dies or moulds that have been trialled and have approved set-up specifications.

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

Preparation – Injection Moulding

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. Prepare to change dies	1.1 Determine when changeover will be required, and plan requirements for die change 1.2 Prepare dies and all required cores, parts, tools and equipment related to changing dies according to plan 1.3 Prepare moulding machine for shutdown and die removal according to plan 1.4 Take last-off samples from machine to inform die reports 1.5 Shut down machine according to machine specifications 1.6 Prepare machine for changeover according to workplace procedures

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	1.7 Plan a safe die removal process that meets workplace safety standards
2. Change dies	2.1 Remove, clean and store die according to workplace procedures 2.2 Assess die to establish if corrosion protection is required 2.3 Attach replacement die, ensuring that locating devices and marks are matched and securing devices are installed and tightened according to specifications
3. Set dies	3.1 Set machine conditions for new die according to machine specifications 3.2 Start up machine according to workplace procedures 3.3 Run machine and die through dry cycle according to workplace procedures 3.4 Check installation and operation of die against product quality specifications and expected operation standards 3.5 Check a first-off sample for compliance with required standards 3.6 Fine-tune settings and other production variables to improve output compliance 3.7 Ensure workplace documentation is up-to-date, including noting any equipment variances between actual production and documented set-up conditions
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 Identify possible system or process improvements and make recommendations to relevant personnel

Foundation Skills

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

- Numeracy skills to interpret technical specifications and equipment readings.
- Reading skills to interpret specifications and workplace procedures.
- Writing and oral communication skills to record and report on equipment set-up 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 PMBPREP304 Set a die.

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 PMBPREP304E Set a die for injection moulding production

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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:

- set a die for injection moulding production at least once to meet changeover requirements.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- construction of dies and their components, including fixed and removable cores, inserts, ejection systems and vents
- methods of connecting dies to machines
- function of machine settings and appropriate ranges of settings for specific dies
- criteria used to decide whether corrosion protection is required
- injection moulding production workflow sequences
- key variables that may affect output
- typical 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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