



**Australian Government**

# **PMBPROD306 Prepare and start equipment for production**

**Release: 1**

# **PMBPROD306 Prepare and start equipment for production**

## **Modification History**

Release 1. Supersedes and is equivalent to PMBPROD306B Prepare and start equipment for production

## **Application**

This unit of competency covers the skills and knowledge required to prepare and start equipment for production. It applies to bringing a machine from 'power-off' to first-off product and making ready to hand over to the operator to continue the production run.

This unit of competency applies to advanced operators who are required to confirm production requirements, perform pre-start checks, check equipment set-up, start up and adjust operation, and hand over operating machine to operator.

This unit applies when start-up is performed as an activity by itself and the started plant is then handed over to an operator to operate. It does not apply when start-up is part of operation and is included in the relevant operate/produce unit of competency.

This unit of competency applies to an advanced operator demonstrating theoretical and technical knowledge and well developed skills in situations that require some discretion and judgement. The advanced operator may work alone or as a member of a team or group and will work in liaison with other shift team members, team leader and supervisor, as appropriate.

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

## **Pre-requisite Unit**

Nil

## **Competency Field**

Production

## **Unit Sector**

Not applicable

## Elements and Performance Criteria

Elements describe the essential outcomes.

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

- |   |                                                     |     |                                                                                                                            |
|---|-----------------------------------------------------|-----|----------------------------------------------------------------------------------------------------------------------------|
| 1 | <b>Perform pre-start checks</b>                     | 1.1 | Check all emergency stops, guards and controls                                                                             |
|   |                                                     | 1.2 | Identify requirements for materials, quality and production run                                                            |
|   |                                                     | 1.3 | Check and adjust equipment as required                                                                                     |
|   |                                                     | 1.4 | Check that the equipment has been set-up correctly                                                                         |
|   |                                                     |     |                                                                                                                            |
| 2 | <b>Carry out pre-start operations to procedures</b> | 2.1 | Restore all power to the machine and ancillary equipment                                                                   |
|   |                                                     | 2.2 | Start up the ancillary equipment and set the temperature and other controllers as required                                 |
|   |                                                     | 2.3 | Check all machine settings as required                                                                                     |
|   |                                                     | 2.4 | Select and load the correct raw material                                                                                   |
|   |                                                     | 2.5 | Charge, purge and clean machine as required                                                                                |
|   |                                                     |     |                                                                                                                            |
| 3 | <b>Start machine and hand over to operator</b>      | 3.1 | Start and check machine                                                                                                    |
|   |                                                     | 3.2 | Adjust machine as required to bring to operational speed/ condition                                                        |
|   |                                                     | 3.3 | Check and run machine until a quality product is obtained                                                                  |
|   |                                                     | 3.4 | Make adjustments to machine and extra equipment in line to produce an acceptable product                                   |
|   |                                                     | 3.5 | Make any adjustments required to ensure the machine and its upstream and downstream extra equipment in line are in balance |
|   |                                                     | 3.6 | Give the operator all necessary instructions and hand over the machine                                                     |
|   |                                                     | 3.7 | Shut down machine as required                                                                                              |

- |   |                                      |     |                                                                                           |
|---|--------------------------------------|-----|-------------------------------------------------------------------------------------------|
| 4 | <b>Anticipate and solve problems</b> | 4.1 | Recognise a problem or a potential problem                                                |
|   |                                      | 4.2 | Determine problems needing priority action                                                |
|   |                                      | 4.3 | Refer problems outside area of responsibility to appropriate person, with possible causes |
|   |                                      | 4.4 | Seek information and assistance as required to solve problems                             |
|   |                                      | 4.5 | Solve problems within area of responsibility                                              |
|   |                                      | 4.6 | Follow through items initiated until final resolution has occurred                        |

## Foundation Skills

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

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.

**Regulatory framework** The latest version of all legislation, regulations, industry codes of practice and Australian/international standards, or the version specified by the local regulatory authority, must be used.

Applicable legislation, regulations, standards and codes of practice include:

- health, safety and environmental (HSE) legislation, regulations and codes of practice relevant to the workplace, manual handling and hazardous materials
- Australian/international standards relevant to the materials being used and products being made
- any relevant licence and certification requirements.

All operations to which this unit applies are subject to stringent HSE requirements, which may be imposed through state/territory or federal legislation, and these must not be compromised at any time. Where there is an apparent conflict between performance criteria and such requirements the legislative requirements take precedence.

**Procedures** All operations must be performed in accordance with relevant procedures.

Procedures are written, verbal, visual, computer-based or in some other form, and include one or any combination of:

- emergency procedures
- work instructions
- standard operating procedures (SOPs)
- safe work method statements (SWMS)
- formulas/recipes
- batch sheets
- temporary instructions
- any similar instructions provided for the smooth running of the plant.

**Tools and equipment** Tools and equipment include:

- production plant/equipment
- machine control systems

- safety interlocks and systems
- measuring instruments
- ancillary equipment that is integral to the process.

Additional tools and equipment will be selected as required from:

- hand tools used in the process
- hoists/lifting equipment not requiring any special permits or licences
- manual handling aids, such as hand carts and trolleys
- relevant personal protective equipment (PPE).

## **Hazards**

Hazards must be identified and controlled. Identifying hazards requires consideration of:

- weight, shape, volume of materials to be handled
- hazardous products and materials
- sharp edges, protrusions or obstructions
- slippery surfaces, spills or leaks
- smoke, dust, vapours or other atmospheric hazards
- high temperatures
- electricity
- gas
- gases and liquids under pressure
- structural hazards
- equipment failures
- machinery, equipment and product mass
- other hazards that might arise.

## **Problems**

Routine and non-routine problems must be resolved.

Non-routine problems must be resolved by applying operational knowledge to develop new solutions, either individually or in collaboration with relevant experts, to:

- determine problems needing action
- determine possible fault causes
- develop solutions to problems which do not have a known solution
- follow through items initiated until final resolution has occurred
- report problems outside area of responsibility to designated person.

Non-routine problems are unexpected problems or variations of previous

problems and include one or more of:

- unstable process variables
- sub-optimal operation
- variations in feed rates
- variations in quality
- emergency situations.

Operational knowledge includes one or more of:

- procedures
- training
- technical information, such as journals and engineering specifications
- remembered experience
- relevant knowledge obtained from appropriate people.

Routine problems are predictable and have known solutions and include one or more of:

- processing problems
- equipment malfunctions
- materials problems.

## **Unit Mapping Information**

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## **Links**

MSA Training Package Implementation Guides - <http://mskills.org.au/training-packages/info/>