



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **ICPSU583C Troubleshoot and optimise the production process**

**Revision Number: 1**

## ICPSU583C Troubleshoot and optimise the production process

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit describes the performance outcomes, skills and knowledge required to troubleshoot and optimise the production process. This unit focuses on the systems analysis and design.
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### Application of the Unit

<b>Application of the unit</b>	This unit requires the individual to troubleshoot and optimise the production process. The individual will evaluate and recommend changes to the production process and adjust and tune machinery to make efficiency gains.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Evaluate production for efficiency purposes	1.1. Machine operations, staff and <i>production process</i> organisation are evaluated on an ongoing basis to make production efficiency gains 1.2. <i>Production schedule</i> is analysed according to production output, inventory, procurements, time constraints, supply capacities and requirements 1.3. Quality standards and safe work practices are examined to ensure compliance 1.4. Changeover/make ready <i>processes</i> are reviewed for production efficiency gains 1.5. Recommendations covering the above areas are developed and documented
2. Optimise production efficiency	2.1. Compliance to specified requirements is checked to ensure efficiency is maintained 2.2. Non-compliance is identified and investigated to determine causes 2.3. Production standards or machines are set and/or changed according to enterprise procedures 2.4. Changeover/ make ready times and processes are monitored to ensure times are maintained or improved 2.5. Production schedule is monitored and adjusted according to production output, inventory, procurements, time constraints and supply capacities and requirements to ensure efficiency is maintained
3. Troubleshoot production efficiency problems	3.1. Corrective or preventive action is implemented where appropriate 3.2. Changes are communicated to relevant personnel in a logical and easily understood manner 3.3. Changes are monitored and adjusted to confirm improvement to production efficiency
4. Troubleshoot material and machining problems	4.1. Evaluation of material or product structure is conducted to identify options for production and required tuning and adjustments are completed 4.2. Idiosyncrasies of machines are reviewed and adjustments or tuning undertaken to compensate or to exploit the idiosyncrasy within the manufacturer's specifications 4.3. Options are assessed to determine most effective/efficient method of production, ensuring

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	highest quality and yield from materials and ease of production 4.4. Options and recommendations are documented for future reference according to enterprise procedures
5. Document changes and remedies	5.1. Changes to the production process are documented according to enterprise procedures 5.2. Adjustments to machines are recorded according to enterprise procedures 5.3. Documentation is circulated according to enterprise procedures, if required

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- OHS in relation to operating machinery such as safely switching off machinery before cleaning is started
- communication of ideas and information by documenting recommendations to optimise the production process
- collecting, analysing and organising information by reviewing the production schedule and evaluating its effectiveness
- planning and organising activities by determining the most effective production processes
- teamwork when communicating with colleagues over changes to production
- mathematical ideas and techniques by determining optimised yield for machinery
- problem-solving skills by compensating or optimising machine idiosyncrasies
- use of technology by evaluating machine operations and making changes to improve the production process

#### Required knowledge

- setting quality standards
- setting the criteria for inspection of print quality set
- the quality of artwork/film bearing on the quality of the printed product
- quality standards that have been set by the customer
- inspection specifications determined by standards
- identifying production requirements and capacities
- job requirements that determine the production processes
- identifying special production requirements and possible problems
- criteria that are used to determine the availability of machines, materials and labour
- OHS concerns that need to be considered when planning production
- causes of failure
- common causes of failure in each production area that need to be monitored
- procedures that have you implemented to minimise the effect of these
- revising schedules
- monitoring and amending production schedules if required
- consideration that is given to revising production schedules to take into account customer requirements and job complexity
- evaluating re-work methods
- responsibility for evaluating the re-work of unacceptable items
- method of re-work that has been determined
- criteria that have been set to monitor the re-work

**REQUIRED SKILLS AND KNOWLEDGE**

- requirements that have been established for the inspection of re-working material to customer's specifications
- determining unacceptable items and evaluating production procedures
- determining the cause of unacceptable items
- records that are kept of acceptable and rejected items
- records that are kept for the reason for the rejection
- determining the cause for the rejection and how have you rectified the problem
- quality improvements
- information that needs to be monitored so as to maintain standards
- monitoring quality standards
- enterprise improvements affect on quality standards

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• recommend and implement new, more efficient production processes and troubleshoot problems within the production process that effect efficiency gains</li> <li>• produce a portfolio that demonstrates that each element has been carried out. This should include records of standards and monitoring procedures and evidence that they are being effectively carried out</li> <li>• production efficiencies are confirmed through discussions with senior management and review of workplace documentation</li> <li>• evidence for assessment may be gathered from assessment of the unit of competency alone or through an integrated assessment activity.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>• assessment may take place on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• BSBFLM509A Promote continuous improvement.</li> </ul>



## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b><i>Production context</i></b> may include:	<ul style="list-style-type: none"> <li>production processes and associated machines/equipment include those generally operating in the various sectors of the printing and graphic arts industry.</li> </ul>
<b><i>Production schedules</i></b> may include:	<ul style="list-style-type: none"> <li>production schedules may apply to daily or production runs, including repetitive production runs, short runs and quick changes.</li> </ul>
<b><i>Range of processes</i></b> may include:	<ul style="list-style-type: none"> <li>applies to the development of complex new processes or the modification of existing complex processes based on significant judgement. Applies to the overall production process.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	
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## Competency field

<b>Competency field</b>	Support
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## Co-requisite units

<b>Co-requisite units</b>		

