



**Australian Government**

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

# **ICPPR393A Set up for basic relief printing**

**Revision Number: 1**

## ICPPR393A Set up for basic relief printing

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to set up for basic relief printing.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit requires the individual to set up reel- or sheet-fed platen, cylinder or rotary printing machines for routine print jobs. The individual will conduct a proof run and adjust settings to ensure production speeds are attained.</p>
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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. Confirm job specifications	1.1. Job requirements are read and interpreted from job documentation or production control system 1.2. Set-up is carried out correctly in minimum time with minimum wastage and availability of all job related components is checked
2. Set up reel system	2.1. Unwind and rewind reels are set up and adjusted according to job specifications 2.2. Webbing procedures are carried out and web-control system is set up and adjusted according to job specifications 2.3. Reels are spliced/joined according to job specifications 2.4. Printed web viewing devices are set up and adjusted according to job specifications 2.5. Folder and sheets are set up and adjusted according to job specifications 2.6. Set off/marketing prevention devices are set up and adjusted according to job specifications
3. Set up sheet transportation system on sheet-fed machine	3.1. Feeder and delivery sections are set up and adjusted according to job specifications 3.2. Sheet pick-up and transportation systems are set up and adjusted according to job specifications 3.3. Transfer and control systems are set up and adjusted according to job specifications 3.4. Set-off/marketing prevention devices are set up and adjusted according to job specifications 3.5. <b>Substrate</b> is added to and removed from process according to job instructions
4. Select and prepare inks and additives	4.1. Quality and suitability of <b>inks</b> , dyes or additives are selected according to job specifications and end-user requirements 4.2. Quality and suitability of inks, dyes or additives are checked and appropriate action is taken 4.3. Inks, dyes and additives are prepared according to occupational health and safety (OHS) requirements, and manufacturer's/supplier's instructions with suitable precautions to minimise waste 4.4. Correct <b>colour</b> and weight/volume of ink are mixed and prepared to match the requirements of the printing process and job specifications

ELEMENT	PERFORMANCE CRITERIA
	<p>4.5. Formulation of the ink, colour match and the approved colour are appropriately recorded</p> <p>4.6. Inks, dyes and additives are appropriately labelled, handled and stored according to manufacturer's/supplier's instructions to prevent damage and hazards to personnel and to prolong shelf life</p>
<p>5. Select and prepare embellishment dyes</p>	<p>5.1. Quality and suitability of dies are selected according to job specifications and end user requirements</p> <p>5.2. Dyes are prepared according to OHS requirements, manufacturer's/supplier's instructions with suitable precautions to minimise waste</p> <p>5.3. Dyes are appropriately labelled, handled and stored according to manufacturer's/suppliers instructions to prevent damage and hazards to personnel and to prolong shelf life</p> <p>5.4. Impression is set up and adjusted according to job specifications (platen and rotary)</p> <p>5.5. Inking system is set up and adjusted according to the relief process and job specifications (platen and rotary)</p> <p>5.6. Drying system is set up and adjusted according to job specifications</p>
<p>6. Set up machine for basic relief printing</p>	<p>6.1. Appropriate relief plates are selected and secured to the <i>machine</i></p> <p>6.2. Relief plates or formes or cylinders are positioned and set up and adjusted according to job specifications (platen and rotary)</p> <p>6.3. Impression is set up and adjusted according to job specifications (platen and rotary)</p> <p>6.4. Inking system is set up and adjusted according to relief process and job specifications (platen and rotary)</p> <p>6.5. Drying system is set up and adjusted according to job specifications</p>
<p>7. Set up machine for basic embellishment</p>	<p>7.1. Appropriate dyes are selected and secured to the machine</p> <p>7.2. Dyes are positioned and set up and adjusted according to job specifications (platen and rotary)</p> <p>7.3. Impression is set up and adjusted according to job specifications (platen and rotary)</p>

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
8. Conduct proof run	8.1. Material to be used for proof is organised correctly 8.2. Machine is operated according to manufacturer's and enterprise producers to produce specified proof 8.3. Proof is visually inspected and/or tested or laboratory testing organised according to enterprise procedures 8.4. Client approval or authority is sought prior to production run where appropriate. 8.5. Results are interpreted and adjustment changes are carried out according to product and machine specifications to determine adjustment requirements

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

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

#### Required skills

- OHS skills for operating machinery, such as safely switching off machinery before cleaning is started
- communication skills for interpreting job tickets and requirements
- collecting, analysing and organising skills for collecting and assessing data about printing process and machine specifications and characteristics and how these interact
- planning and organising skills for providing input into production scheduling about time requirements for set-up to ensure efficient operation
- teamwork skills for working with others to coordinate set-up to ensure efficient operation
- numeracy skills for calculating plate position and substrate requirements for the job
- problem-solving skills for recognising proofing faults and determining adjustments to correct them
- technical skills for using monitoring equipment and interpreting readouts

#### Required knowledge

- interpreting job specifications:
  - actions to be taken if vital information was missing from the job ticket
  - checks to be undertaken prior to set-up
- relief plates:
  - effect of plates with poor relief
  - importance of caliper of mounting material
  - positioning the plate on the mount
  - ensuring the edges of the plate do not lift
- reel in-feed:
  - major OHS concerns when setting up the reel in-feed
  - determining the printing side of the material
  - effect of low web tension on the print
  - other types of web splices that could be used appropriately for the job
- sheet in-feed:
  - major OHS concerns when setting up the sheet in-feed
  - how the sheet position is determined for the job
  - the effect that side lay selection has on the job
  - appropriate selection of front lays
  - procedures for a register check

**REQUIRED SKILLS AND KNOWLEDGE**

- reasons why a two-sheet cut is used on most feeders
- means by which the machine knows if the sheet is missing or late
- reel delivery system:
  - the effect of excessive web tension at the rewind of the machine
  - the major risks associated with the rewind of the machine
- sheet delivery system:
  - why application of spray powder is sometimes advisable
  - effects of too much spray powder
  - use of slowdown devices in the delivery
  - effect of excessive jogging on the stack
- preparation of inks and additives:
  - main environmental and OHS concerns about inks and additives
  - matching ink to a particular job
  - results of ink being too tacky
  - process for changing ink that is too light
  - methods that are available to check the ink for correct colour
  - responsibility for passing the colour prior to running the job
- machine set-up:
  - OHS concerns when setting up the machine
  - determining specifications relating to the specific job
  - effects incorrectly set inking rollers have on the print
  - ways in which the ink profile may vary across the machine
  - optimum ink duct sweep
- basic in-line processes:
  - precautions that should be taken if UV drying is to be utilised to dry the ink film
  - steps to be taken to incorporate the in-line processes into the make ready
  - how can the equipment used in in-line processing be protected against damage during set-up
- proofing and adjustment:
  - methods that can be used to minimise waste during make ready
  - procedures to be adopted to have the print approved
  - quality control measurements applied to the print to test against known standards
  - checks on the initial print prior to running
  - settings to be adjusted are determined
  - process to be used to plot the success of the machine adjustment
  - recording final results for future reference



**REQUIRED SKILLS AND KNOWLEDGE**

- information sources
- machine manuals, safety and other documentation relevant to basic relief printing

## Evidence Guide

### EVIDENCE GUIDE

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.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the ability to:

- set up reel- or sheet-fed platen, cylinder or rotary printing machines for routine print jobs
- conduct a proof run and adjust settings to ensure production speeds are attained
- use computerised control, monitoring and data entry systems if available and appropriate
- find and use information relevant to the task from a variety of information sources
- demonstrate all safety devices on the machine
- manipulate embellishment tools and operations
- set up for two basic relief printing jobs (if possible including at least one in-line process) according to manufacturer's specifications and enterprise procedures.

#### Context of and specific resources for assessment

Assessment must ensure:

- that conditions are typical ambient conditions found in the workplace
- access to relevant facilities and equipment, including reel or sheet-fed platen, cylinder or rotary printing machine
- use of culturally appropriate processes and techniques appropriate to the language and literacy capacity of learners and the work being performed.

#### Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct questioning combined with review of portfolios of evidence
- third party workplace reports of on-the-job performance by the candidate
- practical demonstration by the candidate in setting up machinery for routine print jobs.

#### Guidance information for

Holistic assessment with other units relevant to the

**EVIDENCE GUIDE****assessment**

industry sector, workplace and job role is recommended, for example:

- ICPSU201C Prepare, load and unload reels and cores on and off machine
- ICPSU202C Prepare, load and unload product on and off machine
- ICPSU207C Prepare machine for operation (basic)
- ICPSU211C Prepare ink and additives
- ICPPR288A Produce basic relief printed product.

For valid and reliable assessment of this unit, evidence should be gathered over a period of time through a range of methods for assessment to indicate consistent performance.

## Range Statement

### RANGE STATEMENT

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.

<b><i>Substrates</i></b> may include:	<ul style="list-style-type: none"> <li>• range of substrates within the major categories of:             <ul style="list-style-type: none"> <li>• paper</li> <li>• pressure sensitive material</li> <li>• board</li> <li>• plastics</li> <li>• related films or metal.</li> </ul> </li> </ul>
<b><i>Inks</i></b> may include:	<ul style="list-style-type: none"> <li>• range of standard inks commonly used in 1-2 colour printing.</li> </ul>
<b><i>Colour</i></b> may include:	<ul style="list-style-type: none"> <li>• use of visual colour assessment and densitometry to match basic standard colours under controlled lighting conditions.</li> </ul>
<b><i>Machines</i></b> may include:	<ul style="list-style-type: none"> <li>• a range of platen, cylinder and rotary printing machines with manual, semi-automated, fully automated or computerised process control.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Printing and graphic arts
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## Competency field

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

Co-requisite units		