



Australian Government

Department of Education, Employment and Workplace Relations

ICPPR331C Set up for basic lithographic printing

Revision Number: 1

ICPPR331C Set up for basic lithographic printing

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to set up for basic lithographic printing sheet-fed and web-fed machines, including small offset.
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Application of the Unit

Application of the unit	This unit requires the individual to set up either wide or narrow reel or sheet-fed lithographic printing machines for routine print jobs. The individual will conduct a proof run and adjust settings to ensure production speeds are attained in minimum time with minimum wastage.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	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. Standard set up is planned for carried out correctly in minimum time with minimum wastage 1.3. Availability of all job related components is checked
2. Set up reel system (OR Element 3)	2.1. Unwind and rewind reels is are set up and standard settings adjusted according to job specifications 2.2. Webbing procedures are carried out according to standard operating procedures and OHS 2.3. Web-control system is set up and standard settings adjusted according to job specifications 2.4. Reels are spliced/joined according to job specifications 2.5. The folder and sheeter are is set up and standard settings adjusted according to job specifications
3. Set up sheet system (OR Element 2)	3.1. Feeder and delivery sections are is set up and standard settings adjusted according to job specifications 3.2. Registration system is identified and adjusted according to job specifications 3.3. Sheet pick-up, and transportation, control and transfer systems is are set up and standard settings adjusted according to job specifications 3.4. Substrate is removed from process according to job instructions
4. Select and prepare inks and additives (basic)	4.1. Inks , dyes or additives are checked and appropriate action is taken and end-user requirements 4.2. Quality and suitability of inks, dyes or additives are selected according to job specifications and en-user requirements 4.3. Inks, dyes and additives are prepared according to OHS requirements, and manufacturer's/supplier's instructions with suitable precautions to minimise waste 4.4. Correct colour and weight/volume of ink are mixed and prepared to match the requirements of the printing process and job specifications 4.5. Formulation of the ink, colour match and the approved colour are appropriately recorded 4.6. Inks, dyes and additives are appropriately labelled,

ELEMENT	PERFORMANCE CRITERIA
	<p>handled and stored according to manufacturer's/supplier's instructions to prevent damage and hazards to personnel and prolong shelf life</p>
<p>5. Set up machine for basic offset lithographic printing</p>	<p>5.1. Plate cylinder are set up and adjusted and lithographic plates are selected and installed according to job specifications</p> <p>5.2. Blanket and blanket cylinder are set up and adjusted according to job specifications</p> <p>5.3. Impression cylinder is set up and adjusted according to job specifications</p> <p>5.4. Inking system is set up and adjusted according to the lithographic process and job specifications</p> <p>5.5. Dampening system is set up and adjusted according to job specifications</p>
<p>6. Conduct ok print run</p>	<p>6.1. Material to be used for proof ok sheet/section is organised correctly</p> <p>6.2. Machine is operated according to manufacturer's and enterprise procedures to produce a specified proof ok/section</p> <p>6.3. Ok/section is visually inspected and/or tested or laboratory testing organised according to enterprise procedures</p> <p>6.4. Production does not commence without client OK or authority where appropriate</p> <p>6.5. If necessary, results are interpreted and adjustment are carried out according to product and machine specifications</p>

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 interpreting job tickets and requirements
- collecting, analysing and organising information by collecting and assessing data about printing process and machine specifications and characteristics and how these interact
- planning and organising activities by providing input into production scheduling about time requirements for set up to ensure efficient operation
- teamwork when working with others to coordinate set up to ensure efficient operation
- mathematical ideas and techniques by calculating plate position and substrate requirements for the job
- problem-solving skills by recognising proofing faults and determining adjustments to correct them
- use of technology by using monitoring equipment and interpreting readouts

Required knowledge

- vital information missing from the job ticket
- checks that should be undertaken prior to set up (availability of materials etc)
- problems that can result from the cylinder not being cleaned prior to plate fitting
- how the grip edge of the plate is identified
- effect of over packing the printing plate cylinder
- pitch lines to be used to assist in plate installation
- tools or actions are likely to damage the plate
- plates be consistently tensioned
- OHS precautions that must be observed when webbing up the machine
- determining the printing side of the material
- effect of low web tension on the print
- purpose of nip rollers
- types of web splices appropriate for the job
- OHS factors that need to be considered when setting up the sheet in-feed and transfer systems
- sheet normally set up in the middle of the machine
- effect side lay selection has on the job
- determining the position of the sheet before it is transported to the printing unit
- how a register check would be carried out

REQUIRED SKILLS AND KNOWLEDGE

- two-sheet cut used on most feeders
- sheet is missing or late
- effect of excessive web tension at the rewind of the machine
- risks associated with the rewind of the machine
- application of spray powder is sometimes advisable
- affects of too much spray powder
- slowdown devices to be used in the delivery
- effect excessive jogging would have on the stack
- OHS and environmental concerns of inks and additives
- details that are necessary to check the suitability of an ink for a job
- modifying ink that is slightly light
- methods that are available to check the ink for correct colour
- who passes the colour prior to running the job
- OHS factors that need to be considered when setting up the machine
- how the cylinder (plate, blanket and impression) specifications are determined for the specific job
- effects an incorrectly set dampening system may have on the job
- ink profile varies across the machine
- optimum ink duct sweep
- machine position to engage in-line processing units
- precautions necessary when setting up in-line processing units
- precautions to be taken if UV drying was utilised to dry the ink film
- methods that can be used to minimise waste during make ready
- check on the initial print prior to running
- how the machine is proof tested
- ideal conditions for inspecting the proof
- methods that are available to check and adjust ink colour and consistency
- adjustments that may have caused mis-register
- adjustments that are made to position the image laterally
- adjustments that are made to position the image circumferentially
- who has the final say in the "OK" of the job
- machine manuals, safety and other documentation that are relevant to this task and where are they kept and information that is included in these documents

Evidence Guide

EVIDENCE GUIDE	
<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>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> • set up either wide or narrow reel or sheet-fed lithographic printing machines for routine print jobs. The individual will conduct a proof run and adjust settings to ensure production speeds are attained • demonstrate use of computerised control, monitoring and data entry systems if available and appropriate • demonstrate an ability to find and use information relevant to the task from a variety of information sources • demonstrate all safety devices on the machine • set up for TWO basic lithographic printing jobs according to manufacturer's specifications, enterprise procedures and the Performance Criteria • evidence for assessment may be gathered from assessment of the unit of competency alone or through an integrated assessment activity.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • 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 • a lithographic printing machine.
Method of assessment	<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"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate.
Guidance information for assessment	<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"> • ICPSU201C Prepare, load and unload reels and cores on and off machine

EVIDENCE GUIDE

- ICPSU202C Prepare, load and unload product on and off machine
- ICPSU207C Prepare machine for operation (basic)
- ICPSU211C Prepare ink and additives
- ICPPR232C Produce basic lithographic printed product.

Range Statement

RANGE STATEMENT	
<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>	
<i>Substrate handling</i> may include:	<ul style="list-style-type: none"> • wide or narrow reel or large or small sheet handling systems.
<i>Inks/coatings</i> may include:	<ul style="list-style-type: none"> • range of standard inks commonly used in printing.
<i>Colour matching systems</i> may include:	<ul style="list-style-type: none"> • use of visual colour assessment to match basic standard colours under controlled lighting conditions.
<i>Machines</i> may include:	<ul style="list-style-type: none"> • a range of single sheet, stream and reel-fed machines with manual, semi-automated, fully automated or computerised process control.
<i>Design</i> may include:	<ul style="list-style-type: none"> • simple graphics and text. Minor variation in registration and position.
<i>Substrate types</i> may include:	<ul style="list-style-type: none"> • range of substrates within the major categories of paper, pressure sensitive material, board, plastics and related films, or metal.
<i>Routine</i> may include:	<ul style="list-style-type: none"> • routine within this context relates to the set up and production of print runs. The set up of equipment and production is straightforward and does not involve a significant amount of deviation from using standard equipment settings. In this sense, routine does not refer to a job that an individual might repeat on a regular basis.

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Printing
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Co-requisite units

Co-requisite units		