



Australian Government

ICPPRN331 Set up for basic lithographic printing

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with ICP Printing and Graphic Arts Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to set up basic lithographic printing sheet-fed and web-fed machines, including small offset for routine print jobs.

It applies to individuals working under direct supervision who prepare material, monitor and run equipment and machinery, and maintain the production process.

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

Unit Sector

Printing

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
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 carried out correctly in minimum time with minimum wastage 1.3 Availability of all job-related components are checked
2. Set up delivery systems	2.1 Delivery systems are set up and adjusted according to job specifications 2.2 Substrate is added to and removed from the process according to job specifications
3. Select and prepare inks and additives (basic)	3.1 Inks, dyes or additives are checked and appropriate action is taken for end-user requirements

ELEMENT	PERFORMANCE CRITERIA
	3.2 Quality and suitability of inks, dyes or additives are selected according to job specifications and end-user requirements 3.3 Inks, dyes and additives are prepared according to work health and safety (WHS) requirements, and manufacturer's/supplier's instructions with suitable precautions taken to minimise waste 3.4 Correct colour and weight/volume of ink are mixed and prepared to match requirements of the printing process and job specifications 3.5 Formulation of ink, colour match and approved colour are appropriately recorded 3.6 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 prolong shelf life
4. Set up machine for basic offset lithographic printing	4.1 Plate cylinder is set up and adjusted and lithographic plates are selected and installed according to job specifications 4.2 Blanket and blanket cylinder are set up and adjusted according to job specifications 4.3 Impression cylinder is set up and adjusted according to job specifications 4.4 Inking system is set up and adjusted according to the lithographic process and job specifications 4.5 Dampening system is set up and adjusted according to job specifications
5. Conduct ok print run	5.1 Material to be used for proof ok sheet/section is organised correctly 5.2 Machine is operated according to manufacturer's and enterprise procedures to produce a specified proof ok/section 5.3 Ok/section is visually inspected and/or tested or laboratory testing organised according to enterprise procedures 5.4 Production does not commence without client OK or authority where appropriate 5.5 If necessary, results are interpreted and adjustment are carried out according to product and machine specifications

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 3.1, 3.3, 3.4, 3.6, 4.1-4.5, 5.5	Recognises and interprets text to establish job requirements from information contained within relevant procedures and specifications
Writing	3.5, 5.4	Enters routine data associated with production processes and enterprise procedures
Oral Communication	4.1-4.5, 5.3-5.5	Participates effectively in spoken interactions by using strategies to confirm, clarify or repair understanding
Numeracy	3.4	Interprets and analyses a range of mathematical information used in familiar and routine tasks
Navigate the world of work	1.1, 1.2, 3.1-3.4, 3.6, 4.1-4.5, 5.2-5.5	- Recognises and follows explicit and implicit protocols and meets expectations associated with own role - Complies with WHS, legislative requirements and follows organisational policies and procedures relevant to own role
Interact with others	3.1, 3.3, 3.4, 3.6, 4.1-4.5, 5.3-5.5	- Cooperates with others as part of familiar routine activities, and contributes to specific activities requiring joint responsibility and accountability - Understands what to communicate, with whom and how, in routine work situations
Get the work done	1.2, 1.3, 3.1-3.4, 3.6, 4.1-4.5, 5.1, 5.2, 5.5	- Takes responsibility for planning and organising own workload, identifying ways of sequencing and combining elements for greater efficiency - Plans, identifies and assembles resources required to complete tasks - Responds to predictable problems and implements standard or logical solutions - Follows routine procedures for using digital technology by reading data from electronic monitoring and control systems

Range of Conditions

This section specifies 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.

Delivery systems MUST include EITHER:	• reel OR • sheet
Setting up and adjusting MUST include EITHER:	• unwind and rewind reels • webbing procedures and web control systems • splicing reels • folder and sheeter OR • feeder and delivery • registration systems • sheet pick-up and transportation, control and transfer systems

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICPPRN331 Set up for basic lithographic printing	ICPPRN331C Set up for basic lithographic printing	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a74b7a0f-a253-47e3-8be0-5d426e24131d>

Assessment Requirements for ICPPRN331 Set up for basic lithographic printing

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Performance Evidence

Evidence of the ability to:

- demonstrate use of control, monitoring and data entry systems
- demonstrate all safety devices on the machine
- set up for TWO basic lithographic printing jobs using either a wide or narrow reel or sheet-fed lithographic machine according to manufacturer's specifications and enterprise procedures and conduct a proof run and adjust settings to ensure production speeds are attained.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

Interpreting job specifications

- explain what to do if vital information is missing from the job ticket
- explain checks to be done prior to set-up e.g. availability of materials

Preparing and fitting plates

- list problems that can result if the cylinder is not cleaned prior to plate fitting
- explain how the grip edge of the plate is identified
- describe the effect of over packing the printing plate cylinder
- discuss how pitch lines can be used to assist in plate installation
- name tools or actions likely to damage the plate
- explain why plates should be consistently tensioned

For reel systems only

Reel in-feed

- identify work health and safety (WHS) precautions for webbing up the machine
- discuss how to determine the printing side of the material
- explain the effect of low web tension on the print
- explain the purpose of nip rollers
- identify types of web splices appropriate for the job

Reel delivery system

- describe the effect of excessive web tension at the rewind of the machine
- list risks associated with the rewind of the machine

For sheet systems only

Sheet in-feed and transfer

- identify WHS factors to be considered when setting up sheet in-feed and transfer systems
- explain why the sheet is normally set up in the middle of the machine
- describe the effect of side lay selection on the job
- explain how to determine the position of the sheet before it is transported to the printing unit
- outline how a register check is carried out
- describe why a two-sheet cut is used on most feeders
- explain how the machine knows if a sheet is missing or late
- explain why the application of spray powder is sometimes advisable
- explain the effects of too much spray powder
- explain why slowdown devices might be used in delivery
- outline the effect of excessive jogging on the stack

Preparation of inks and additives

- identify all WHS and environmental concerns associated with inks and additives
- explain what details to check for suitability of an ink for a job
- describe how to modify ink that is slightly light
- outline methods available to check ink for correct colour
- identify who passes the colour prior to running the job

Machine set-up

- list all work health and safety (WHS) factors to consider when setting up the machine
- explain how cylinder (plate, blanket and impression) specifications are determined for the specific job
- explain effects an incorrectly set dampening system may have on the job
- explain why ink profile varies across the machine

- explain what optimum ink duct sweep is

Basic in-line processes

- explain the correct machine position to engage in-line processing units
- list essential precautions required when setting up in-line processing units
- outline necessary precautions if UV drying is utilised to dry the ink film

Proofing and adjustment

- identify methods to minimise waste during make ready
- describe what to check on the initial print prior to running
- explain how the machine is proof tested
- outline ideal conditions for inspecting the proof
- describe methods to check and adjust ink colour and consistency
- identify adjustments that may cause mis-register
- list adjustments to position the image laterally
- identify adjustments to position the image circumferentially
- identify who has the final say in the approval of the job

Information sources

- identify machine manuals, safety and other documentation relevant to this task, where are they kept and the information contained.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the printing field of work and include access to:

- special purpose tools, equipment and materials
- lithographic machine.

Assessment processes and techniques must be able to be modified for distance-based learners and be culturally appropriate and suitable to the communication skill level, language, literacy and numeracy capacity of the candidate and the work being performed.

Additional support may be needed for the Indigenous community and others from a non-English speaking background.

Where applicable, physical resources should include equipment modified for people with special needs as well as assistance to support their participation in the assessment process.

Assessors must satisfy NVR/AQTF assessor requirements.

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