



Australian Government

ICPPRN541 Set up for specialised pad 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 for specialised pad printing.

It applies to individuals who set up pad printing machines for multi-coloured or specialised print jobs, which usually require problem-solving and experimentation with the substrate and press settings.

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 specialised job specifications	1.1 Job requirements are read and interpreted from job documentation or production control system 1.2 Availability of all job related components is checked
2. Plan and carry out specialised set-up	2.1 Specialised job specifications are identified and analysed 2.2 Specialised set-up requirements are determined 2.3 Specialised set-up is completed in minimum time with minimum wastage 2.4 Appropriate tampons are selected according to job specifications 2.5 Tampons are secured into machine

ELEMENT	PERFORMANCE CRITERIA
3. Conduct specialised set-up of fixtures onto machine bed or conveyor	3.1 Appropriate fixtures are selected and secured to xy table or conveyor jig plates 3.2 Height of machine bed is adjusted to suit size of object to be printed 3.3 Xy table of machine bed is adjusted to suit position of image on object
4. Select and prepare inks and additives	4.1 Inks and additives are evaluated according to job specifications 4.2 Inks and additives are selected according to job specifications 4.3 Inks and additives are prepared according to work health and safety (WHS) 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 according to requirements of the printing process and job specifications 4.5 Formulation of ink, colour match and approved colour are appropriately recorded 4.6 Inks 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
5. Set up machine for specialised pad printing	5.1 Plate holders are set up and adjusted for register according to job specifications 5.2 Appropriate plates and plate holders are selected and plates are secured into plate holders 5.3 Tampons are set up, evaluated and adjusted according to job specifications 5.4 Spatula and doctor blade are set up, evaluated and adjusted according to requirements of the pad printing process and job specifications OR 5.5 Ink cups are set up, evaluated and adjusted according to job specifications
6. Set up pre- and post-treatment processes	6.1 In-line loading is set up according to specialised object requirements and job specifications 6.2 In-line drying is set up according to specialised object requirements and job specifications 6.3 In-line ejection is set up according to specialised object requirements and job specifications

ELEMENT	PERFORMANCE CRITERIA
7. Conduct specialised proof run	7.1 Material to be used for proof is organised correctly 7.2 Machine is operated according to manufacturer's specifications and enterprise procedures to produce a specified proof 7.3 Proof is visually inspected and/or tested or laboratory testing is organised according to enterprise procedures 7.4 Production does not commence without client approval or authority where appropriate 7.5 Results are interpreted and evaluated with adjustments carried out according to product and machine specifications
8. Troubleshoot machinery and material problems	8.1 Corrective or preventive action is recommended and implemented where appropriate 8.2 Changes are communicated to relevant personnel in a logical and easily understood manner 8.3 Changes are monitored to confirm improvement to production efficiency 8.4 Ongoing problems are reported according to enterprise procedures

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, 2.1, 2.4, 4.1-4.3, 4.6, 5.1, 5.3-5.5, 6.1-6.3, 7.2, 7.5	Recognises and interprets text to establish job requirements from information contained within relevant instructions, procedures and specialised specifications
Writing	4.5, 4.6, 7.4, 8.2, 8.4	- Completes workplace records and labels accurately and according to requirements - Considers context and audience when composing texts
Oral Communication	7.4, 8.2, 8.4	Participates effectively in spoken interactions using appropriate vocabulary, questioning and listening techniques to gain approvals, report problems or provide information
Numeracy	2.3, 4.4	Interprets and analyses a range of mathematical information used in familiar and routine tasks

Navigate the world of work	4.3, 4.5, 4.6, 7.2-7.4, 8.4	- Complies with legislative requirements and follows organisational policies and procedures relevant to own role - Recognises boundaries of own role responsibilities
Interact with others	7.4, 8.2, 8.4	- Collaborates with others to complete tasks according to requirements - Follows accepted communication practices and protocols when seeking approvals or reporting problems
Get the work done	1.2, 2.2-2.5, 3.1-3.3, 4.1-4.3, 4.6, 5.1-5.5, 6.1-6.3, 7.1-7.3, 7.5, 8.1, 8.3	- Plans, evaluates, identifies and assembles resources required to complete tasks - Determines priorities and sequences steps involved in complex tasks with a focus on production efficiency - Monitors results to determine whether requirements are met and identify opportunities for improvement - Takes responsibility for addressing predictable and unpredictable problems in familiar work contexts - Uses familiar digital systems and tools to access, organise, analyse and display information relevant to role - Reads data from electronic monitoring and control systems

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICPPRN541 Set up for specialised pad printing	ICPPRN541C Set up for specialised pad 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 ICPPRN541 Set up for specialised pad printing

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Performance Evidence

Evidence of the ability to:

- safely set up a machine for specialised pad printing on TWO occasions, on different substrates, to meet manufacturer's and job specifications, enterprise procedures and the performance criteria
- set up manual pre- and post-treatment processes and conduct a proof run including adjusting settings to ensure production speeds are attained
- find and use information relevant to the task from a variety of information sources.

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:

- identify FOUR different substrate groups and suggest correct ink type for each group
- explain THREE possible sub-groups of plastic in relation to ink selection
- explain how to adjust process colour inks for correct colour balance
- describe TWO methods of improving opacity of a light coloured ink on a dark substrate
- outline how to determine correct pad shape for the FOUR applications
- explain the effect that pad shape and hardness have on print quality
- describe the effect commonly seen at the contact point of the nipple of a pad in a large solid print and how can it be avoided
- outline how to prepare a new pad before its first printing
- describe the correct plate type for these (given) applications
- explain the difference between steel and photopolymer plates for process printing
- discuss reasons for mis-registered images, and how they can be corrected
- list work health and safety (WHS) concerns of setting presses and doctor blades
- discuss possible machine adjustments so the doctor blade operates correctly

- describe the effect of a damaged doctor blade
- list various types of doctor blades and explain their applications
- list WHS concerns when using pre- and post-treating substrates
- outline common pre- and post-treatment methods for different substrates
- explain the importance of pre- and post-treatments for different substrates
- list causes and solutions for SIX common print problems (eg hairlines around image, loss of density in the centre of a solid image, fine lines of ink running through image, distortion of image, picking up ink from substrate by subsequent pads, washed out images, loss of fine lines in images, inconsistent colour)
- identify where machine manuals, safety and other documentation relevant to this task are kept, and describe the information in them.

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, including a pad printing machine.

Assessors must satisfy NVR/AQTF assessor requirements.

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