



Australian Government

ICPPRN551 Set up for specialised relief 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 relief printing.

It applies to individuals who can problem-solve and experiment with substrate and press settings when operating reel- or sheet-fed plate, cylinder or rotary printing machines for specialised print jobs.

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
3. Set up delivery systems	3.1 Delivery systems are set up, evaluated and adjusted according to job specifications 3.2 Substrate is added to and removed from process according to

ELEMENT	PERFORMANCE CRITERIA
	job specifications
4. Evaluate, select and prepare inks and additives	4.1 Inks, dyes or additives are evaluated according to end-user requirements and job specifications 4.2 Inks, dyes and additives are selected according to end-user requirements and job specifications 4.3 Inks, dyes 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, 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
5. Set up machine for specialised relief printing	5.1 Appropriate relief plates are selected and secured to the machine 5.2 Relief polymer plates/forme are set up and adjusted according to job specifications (platen) 5.3 Relief polymer cylinders are set up and adjusted according to job specifications (platen) 5.4 Impression is set up and adjusted according to job specifications (platen and rotary) 5.5 Inking system is set up and adjusted according to requirements of the relief process and job specifications (platen and rotary) 5.6 Drying system is set up and adjusted according to job specifications
6. Conduct specialised proof run	6.1 Material to be used for specialised proof is organised correctly 6.2 Machine is operated according to manufacturer's specifications and enterprise procedures to produce a specialised proof 6.3 Specialised proof is visually inspected and/or tested or laboratory testing is organised according to enterprise procedures 6.4 Production does not commence without client approval or authority where appropriate 6.5 Results are interpreted and adjustments are carried out according to product and machine specifications

ELEMENT	PERFORMANCE CRITERIA
7. Troubleshoot machinery and material problems	7.1 Corrective or preventive action is recommended and implemented where appropriate 7.2 Changes are communicated to relevant personnel in a logical and easily understood manner 7.3 Changes are monitored to confirm improvement to production efficiency 7.4 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, 4.1-4.4, 4.6, 5.2-5.6, 6.2, 6.5	Recognises and interprets text to establish job requirements from information contained within relevant instructions, procedures and specifications
Writing	4.5, 4.6, 6.4, 7.2, 7.4	- Completes workplace records and labels accurately and according to requirements - Considers context and audience when composing texts
Oral Communication	6.4, 7.2, 7.4	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, 6.2-6.4, 7.4	- Complies with legislative requirements and follows organisational policies and procedures relevant to own role - Recognises boundaries of own role and responsibilities
Interact with others	6.4, 7.2, 7.4	- Complies with legislative requirements and follows organisational policies and procedures relevant to own role - Recognises boundaries of own role and responsibilities
Get the work done	1.2, 2.2, 2.3, 4.3, 4.4, 4.6, 5.1-5.6,	- Plans, evaluates, identifies and assembles resources required to complete tasks - Determines priorities and sequences steps involved in

	6.1-6.5, 7.1-7.4	complex tasks • Monitors results to determine whether requirements are met and to 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
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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, evaluating and adjusting MUST include EITHER:	• unwind and rewind reels • webbing procedure and web control systems • splicing/joining reels • print web viewing devices • folders and sheeters • set off / marking prevention devices OR • feeder and delivery sections • sheet pick-up and transportation system • transfer and control system • set off / marking prevention devices

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICPPRN551 Set up for specialised relief	ICPPRN551C Set up for specialised relief	Updated to meet Standards for	Equivalent unit

Code and title current version	Code and title previous version	Comments	Equivalence status
printing	printing	Training Packages	

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 ICPPRN551 Set up for specialised relief printing

Modification History

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

Performance Evidence

Evidence of the ability to:

- safely set up a relief printing machine for specialised printing on TWO occasions, using different substrates and including at least two in-line processes, according to manufacturer's and job specifications, enterprise procedures and the performance criteria
- set up reel- or sheet-fed platen, cylinder or rotary printing machines for specialised print jobs including conducting a proof run and 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:

- explain why it is important that job specifications are read and properly understood
- discuss production problems that might occur if job specifications are not read and properly understood
- name the person to discuss any production problems with
- outline the importance of printing plate hardness
- list faults that may be detected on new plates
- identify type of solvents used on photopolymer plates
- define V-block mounting
- explain how V-block mounting is achieved
- discuss the purpose of binding plates after mounting
- list checks to perform prior to cylinder installation
- explain precautions to ensure plate/cylinders are not damaged during installation
- list WHS precautions for preparing inks and additives

- list details to check for an ink's suitability for the printing process
- describe any special end-use requirements that may be necessary
- discuss additives and their use in inks
- explain the use of a spectrophotometer to assess colour of an ink
- outline the formula for calculating correct quantity of lithographic ink
- describe the print fault likely if excessive driers are mixed into the ink
- identify precautions to minimise waste when preparing the ink
- explain shelf life of most inks
- discuss conditions relevant to storage of inks and additives
- describe conventions for labelling mixed inks
- list major WHS concerns of setting up the machine
- list the order eccentric or concentric roller adjustments should be made in
- discuss the width of the contact stripe between two rollers when setting rollers
- discuss how to determine the ink duct setting
- explain the ideal ink duct sweep setting
- outline recommended degrees shore hardness for forme rollers
- name various types of ink drying/curing systems
- explain the operation of the true inch function fitted to some machines
- identify problems that may cause the machine to keep stopping
- list necessary checks prior to engaging the impression
- outline checks performed when running the machine
- describe the effect of the position of certain guards on the operation of the machine
- explain importance of communicating steps involved in operating the machine to other team members
- identify aids available for testing the machine proof
- explain what tests are necessary for an individual job
- identify where testing should take place
- describe the function of a polarisation filter in a densitometer
- explain ideal conditions for inspecting the proof
- explain the cause of a halo effect on the image
- identify methods available to check and adjust ink colour and consistency
- discuss adjustments that may cause mis-register
- outline adjustments made to position the image laterally
- outline adjustments made to position the image circumferentially
- describe the effect of changing the colour sequence on the final colour cast
- explain the difference between mechanical and optical dot gain
- explain the cause of excessive mechanical dot gain
- name who has responsibility for the final say in the OK of the job
- discuss in-line processes used in specialised pad printing
- identify machine manuals, safety and other documentation relevant to this task and where they are kept, and describe the information in them.

For reel systems only

- describe how to determine position of the reel
- discuss what happens if brake tension is not set correctly
- explain the function of the 'dancer' roller on a web machine
- outline the function of nip rollers
- discuss what happens if the web is not spliced correctly
- explain how the web is controlled in the rewind unit
- outline the function of a slit on a web machine
- list problems attributable to a blunt knife when sheeting
- list the main reason for blistering on a heatset machine
- explain how the drying unit cures the ink

For sheet systems only

- list the major work health and safety (WHS) concerns of setting up the sheet transportation system
- explain the cause of more than one sheet being picked up in the feeder
- explain why accurate feeder set up is essential
- describe what determines position of the sheet prior to being transferred to the printing unit
- outline how to determine which front lays to use
- identify the type of substrate that requires additional front lays to be engaged
- explain the need for additional front lays when printing this type of substrate
- identify the most important WHS precaution to observe when setting up the delivery
- List WHS precautions for removing sheets from the delivery
- explain the cause of sheets being delivered incorrectly
- outline necessary adjustments if changing from lightweight to heavyweight stocks
- explain what determines sheet release into the delivery
- identify problems from excessive use of anti-set off spray powder
- explain what causes printed sheets to set off in the delivery
- describe how to reduce the possibility of set off in the delivery
- explain how air blast can assist sheet delivery
- explain how much packing is required in the tympan
- explain how the level of printing pressure is determined
- explain the ideal condition of the tympan
- discuss how to achieve the correct top sheet tension when fitting a new tympan
- identify print faults that can occur if the tympan is not tensioned correctly
- discuss the need to use visual aids on the printed sheets
- explain the procedure to lengthen print length on this type of press
- explain the procedure to shorten print length on this type of press
- explain the importance of keeping machine frames and unit slides clean
- list WHS precautions for installing printing cylinders in the machine

- explain how to determine the optimum print sequence
- point out the visual aid on the plate that identifies the colour of ink to be used
- list WHS precautions for webbing up the machine
- discuss remedial steps to take if there is a possibility of the ink marking in the rewind sheet delivery system on a sheet-fed machine

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 a reel- or sheet-fed platen, cylinder or rotary printing machine.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

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