



Australian Government

ICPPRN3130 Set up for basic flexographic 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 4.0.

Application

This unit describes the skills and knowledge required to set up machines for routine flexographic printing.

It applies to individuals who work as print machinists. They prepare material, monitor and run equipment and machinery, and apply solutions to printing difficulties as they arise.

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. Prepare for job	1.1 Identify job requirements 1.2 Set up required printing machinery according to manufacturer specifications and work health and safety (WHS) requirements 1.3 Confirm availability of all job components 1.4 Check proofed job for conformance with job specifications 1.5 Set up and adjust delivery 1.6 Add substrate to and remove substrate from process
2. Select and prepare inks and solvents	2.1 Select inks and solvents according to end-user requirements and confirm they meet quality requirements 2.2 Prepare inks and solvents according to work health and safety

ELEMENT	PERFORMANCE CRITERIA
	(WHS) requirements and manufacturer specifications 2.3 Mix and prepare colour and volume of ink to match requirements of the printing process 2.4 Record ink formula and approved colour drawdowns 2.5 Label, handle and store inks and solvents according to manufacturer specifications and hazardous liquids storage regulations
3. Set up machine for basic flexographic printing	3.1 Install and mount required flexographic plate cylinders, sleeves and mounting sheets and make register adjustments as required 3.2 Prepare plate cylinders 3.3 Set up inking system and set roller nips and blades 3.4 Check ink circulation meets machine requirements 3.5 Adjust viscosities according to job specifications 3.6 Select and adjust air volume and drier temperatures and curing systems, as required
4. Set up in-line units for basic process(es)	4.1 Set up and adjust minor in-line units for basic process(es) according to machine requirements 4.2 Provide assistance in set-up of major in-line units
5. Conduct print run	5.1 Set print impressions to minimum kiss impression 5.2 Set web tensions for unwind, between stations and rewind 5.3 Check print for register 5.4 Check drying and confirm sufficient key ink to the substrate 5.5 Adjust viscosities according to colour requirement at proof speed and check against colour matching system 5.6 Inspect and test proof as required according to enterprise procedures 5.7 Seek client approval and authority prior to the production run as required
6. Readjust settings to production speed	6.1 Interpret production speed print results and make adjustments to press, ink and substrate settings as required 6.2 Splice web at production speed and obtain samples for quality inspections according to enterprise procedures 6.3 Document press setting and store samples

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Writing	Enters routine data associated with production processes and enterprise procedures
Numeracy	Interprets and analyses a range of mathematical information used in familiar and routine tasks
Self-management	- Identifies and follows explicit and implicit protocols and meets expectations associated with own role - Identifies and follows all procedures for cleaning and maintenance of equipment
Teamwork	- Cooperates with others as part of familiar routine activities, and contributes to specific activities requiring joint responsibility and accountability - Identifies what to communicate, with whom and how, in routine work situations
Planning and organising	Determines priorities and sequences steps involved in clearly defined, familiar tasks
Problem solving	Identifies and takes responsibility for addressing predictable, and some less predictable, problems in familiar work contexts
Technology	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. It is restricted to essential operating conditions and any other variables essential to the work environment.

Delivery systems must include either:	- reel or - sheet
Setting up and adjusting must include either:	- checking reels for treatment levels, coatings, printing side and age of product - securing reels on reel shaft - correctly positioning reels on unwind stand

	• positioning and mounting correctly cut cores on rewind shafts • centring and setting edge guide • setting unwind and rewind tension to suit substrate • setting nip rollers or • feeder • sheet pick-up and transportation system • transfer system • delivery • sheet transfer and control system • set off / marking prevention devices
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Unit Mapping Information

Supersedes and is equivalent to ICPPRN313 Set up for basic flexographic printing.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for ICPPRN3130 Set up for basic flexographic printing

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- set up a press on two occasions for basic flexographic printing, according to manufacturer specifications and enterprise procedures.

In the course of the above the candidate must:

- demonstrate all safety devices on the machine
- demonstrate use of control, monitoring and data entry systems.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- enterprise procedures, manufacturer specifications and work health and safety (WHS) requirements for:
 - operating the sheet and reel in-feed and delivery systems
 - handling inks and additives
 - handling blades
 - setting up and operating the machine
- actions required if vital information is missing from the job ticket
- precautions and checks required:
 - to avoid damaging plates and cylinders
 - for materials availability prior to set up
 - to protect in-line processing from damage
 - for quality control of proof and initial print
- common issues arising with reel systems and correction methods, including:
 - low or excessive web tension
 - selecting printing side of the material

- when UV drying is used to dry the ink film
- types of web splices available for the job
- common issues arising with sheet systems and correction methods, including:
 - sheet positioning in the in-feed
 - selection of front and side lays
 - machine indications of missing sheets
 - required applications of spray powder
 - excessive jogging on the stack
- procedures for:
 - a register check
 - matching inks to jobs and modifying ink colour
 - required for print approval
 - determining machine specifications for particular jobs
 - minimising and handling waste
 - recording final results for future reference
- reasons for a two-sheet cut in most sheet system feeders
- slowdown devices and their uses in delivery
- effects on the job of ink viscosity
- enterprise personnel who pass colour prior to the job
- steps taken to ensure inking system is adjusted as required and the reasons for maintaining ink levels within a required range
- optimum make-ready-speed for the job
- basic in-line processes and the steps taken to incorporate them into the make-ready
- quality control measurements to apply to proof and initial print
- machine setting adjustments, the criteria determining their use, and processes to plot their success
- tests for scuffing and coefficient of friction and the circumstances requiring them
- leaching
- major environmental concerns with regard to inks and additives
- manufacturer manuals, enterprise procedures and work health and safety documentation, including their location and purpose.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- special purpose tools, equipment and materials
- a range of standard inks and substrates
- a variety of stack, in-line and central impression flexographic printing machines.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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