



Australian Government

ICPPRN4510 Set up for complex 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 4.0.

Application

This unit describes the skills and knowledge required to set up reel, sheet-fed platen, cylinder or rotary printing machines for non-routine relief printing jobs.

It applies to skilled individuals working as a print machinist in the printing and graphic arts industry. They may prepare material, setup, monitor and operate equipment and machinery, analyse and evaluate information, applying solutions to a defined range of problems. They may also provide leadership and guidance to others, with some limited responsibility for the output of others.

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 1.3 Confirm availability of all job components 1.4 Set up and adjust delivery system 1.5 Add substrate to and remove substrate from process according to job specifications
2. Select and prepare inks	2.1 Select inks, dyes and additives required according to job

ELEMENT	PERFORMANCE CRITERIA
and additives	specifications and end-user requirements and confirm they meet quality requirements 2.2 Prepare inks, dyes and additives according to work health and safety (WHS) requirements, and manufacturer specifications 2.3 Mix and prepare colour and volume of ink to match requirements of the printing process and job specifications 2.4 Approve and record formulation of ink, colour match and approved 2.5 Label, handle and store inks, dyes and additives according to manufacturer specifications
3. Set up machine for complex relief printing	3.1 Select relief plates and secured the machine 3.2 Set up and adjust relief polymer plates, polymer cylinders, impression and inking system, as required 3.3 Set up and adjust drying system
4. Conduct proof run	4.1 Operate machine according to manufacturer specifications and enterprise procedures to produce specified proof 4.2 Inspect and test proof as required according to enterprise procedures 4.3 Seek client approval and authority prior to the production run as required 4.4 Interpret results and make adjustments according to product and machine specifications as required

Foundation Skills

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

Skill	Description
Writing	Completes records and labels according to workplace requirements
Numeracy	Uses simple mathematical calculations to select weight and volume of ink and ensure optimum output
Self-management	Complies with enterprise procedures relevant to own role
Teamwork	Follows accepted communication practices and protocols when seeking approval

Planning and organising	Determines priorities and sequences the steps involved in clearly defined, familiar tasks and identifies and assembles the resources required
Problem solving	Responds to predictable problems and implements standard or logical solutions related to the role in the immediate work environment
Technology	Reads 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 system - Splicing/joining reels - Printed web viewing devices - Folder and sheeter - Set off/marketing prevention devices or - Feeder and delivery systems - Sheet pick-up and transportation systems - Transfer and control systems - Set off/marketing prevention devices

Unit Mapping Information

Supersedes and is equivalent to ICPPRN451 Set up for complex relief 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 ICPPRN4510 Set up for complex relief 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 relief printing machine for complex printing on two occasions according to manufacturer and job specifications, enterprise procedures and work health and safety (WHS) requirements.

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) risks and requirements for:
 - setting up and operating the reel and sheet delivery and transportation systems
 - installing printing cylinders in the machine
 - webbing up and setting up the machine
 - slitting on a machine and operating in-line units
 - preparing and handling inks and additives
- enterprise personnel and escalation procedures
- solvents to use on photopolymer plates
- purpose of binding plates after mounting and types of mounting
- checks required for installing machine components, setup and operation
- the purpose of machine frames, and keeping unit slides clean
- the required print sequence
- features and functions of sections of the machine in all systems, issues that can arise and methods to resolve them, including:
 - transportation and delivery
 - in-line processing and printing units
 - the rewind unit

- drying and curing
- plates, cylinders, rollers and blankets
- inks and additives required for job, their applications, key features, common issues and adjustment procedures
- quality and suitability requirements for inks and additives
- ink and additive labelling and storage procedures, and factors affecting shelf life
- cleaning and waste management procedures for machine components
- circumstances requiring mixing additives into ink and any special end-use requirements
- precautions to ensure plate and cylinders are not damaged during installation
- web splices required, common issues and adjustment procedures
- problems arising from deviations in tension on machine components
- reason for blistering on a heat set machine
- embossing and top cutting procedures, and their benefits
- front lays, their purpose, substrate they are applied to, and selection criteria
- required adjustments when changing stock weight or print length
- problems from excessive use of anti-set off spray powder
- causes of print sheets set off in delivery and adjustment methods
- packing required in the tympan, and its ideal condition
- process for determining printing pressure
- the procedure of achieving required top sheet tension when fitting a new tympan
- process for determining required ink duct setting
- the effect of differing tooth counts on perforated products
- proofing tests and adjustment procedures, problems that may occur and visual aids
- problems that may cause the machine to keep stopping
- the effect of certain guards on machine operation
- machine operating steps requiring communication to other team members
- the function of a polarisation filter in a densitometer
- adjustments that may cause mis-register
- adjustments to position the image laterally and circumferentially
- the effects of changes in colour sequence on the final colour cast
- mechanical and optical dot gain and correction methods
- the final approval process before a print run
- manufacturer manuals, enterprise procedures and work health and safety documentation, including their location and purpose.

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

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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