



Australian Government

ICPPRN3940 Produce complex relief printed product

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 safely operate, monitor and clean a platen, cylinder or rotary printing machine using an efficient non-routine production flow.

It applies to skilled individuals working as print machinists in the printing and graphic arts industry who set up, operate and monitor equipment and machinery, and who may have to prepare material and apply solutions to 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. Maintain non-routine operation of reel system	1.1 Monitor and adjust reel stand, rewind section and web control system according to work health and safety (WHS) requirements 1.2 Add substrate to and remove substrate from process according to job specifications 1.3 Review and adjust sheeting section and set-off and marking prevention system
2. Maintain operation of sheet system	2.1 Monitor and adjust feeder and delivery 2.2 Monitor and adjust sheet pick-up and transport system 2.3 Monitor and adjust transfer systems

ELEMENT	PERFORMANCE CRITERIA
3. Maintain complex relief printing process	3.1 Review and adjust relief polymer forme or plate cylinder condition 3.2 Review and adjust relief polymer impression surface condition 3.3 Monitor and adjust relief polymer inking system and drying systems
4. Maintain production process	4.1 Monitor and adjust in-line processes 4.2 Use machine controls as required 4.3 Review and verify performance using the process control system according to product quality requirements 4.4 Monitor and adjust ink performance, colour, register and position 4.5 Report process adjustments to eliminate problems according to enterprise procedures
5. Identify and rectify problems	5.1 Identify and report problems in machine operation according to enterprise procedures 5.2 Carry out adjustments or corrections according to specified procedures, and within scope of own role 5.3 Verify repairs and adjustments as required prior to resumption of operations
6. Conduct shutdown of production process	6.1 Follow shutdown sequence according to manufacturer specifications and enterprise procedures 6.2 Label and store unused ink according to manufacturer specifications and enterprise procedures 6.3 Remove solid and liquid waste from operating area and recycle and dispose of, as required, according to regulatory requirements and enterprise procedures 6.4 Clean and disengage all required parts of machinery used in printing process according to manufacturer specifications and enterprise procedures 6.5 Complete required production records and enterprise documentation

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	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, incorporating regulatory requirements and enterprise procedures
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 anticipates an increasing range of familiar problems, their symptoms and causes, actively looking for early warning signs and implementing contingency plans
Technology	Follows routine procedures for using digital technology by reading data from electronic monitoring and control systems

Unit Mapping Information

Supersedes and is equivalent to ICPPRN394 Produce complex relief printed product.

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 ICPPRN3940 Produce complex relief printed product

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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:

- produce two complex relief printing products.

In the course of the above the candidate must:

- operate production process in association with fellow workers and according to enterprise procedures and planned daily schedule
- follow work health and safety (WHS) requirements, manufacturer specifications and enterprise procedures
- anticipate production difficulties and take preventive action to prevent occurrence.

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 and manufacturer procedures, and WHS risks and requirements for:
 - setting up and operating the sheet and reel delivery and transportation systems
 - operating cutting devices
 - the rewind function in the reel system
 - handling inks and materials
 - cleaning printing cylinders and feed, transportation, delivery, and in-line sections of the machine
 - machine shutdown
- enterprise escalation procedures and required personnel
- features and functions, common issues and faults and methods to resolve them for the following machine sections in all systems:
 - transportation
 - delivery
 - in-line processing units

- printing units
- the rewind unit
- drying and curing
- causes of faults and errors, including:
 - the reel wandering and web breaking at the unwind unit
 - mis-register of the sheet feeder and visible signs of sheet registering in the feeder
 - an uneven feeder stack
 - sheet cut-off wander
 - ink leaking back into the duct
 - diminished impression during the print run
 - premature wear of plate surface during production
 - substrate blistering
- faults and issues that arise from:
 - the reel being run out of centre
 - worn suckers at the feeder suction head
 - poorly adjusted nip rollers during rewinding and sheeting
 - the feeder stack not being loaded level
 - incorrectly set grippers in the machine transfer section
 - the plate lifting at the grip edge during a print run
 - ink-build up on the impression cylinder
 - eating or drinking near the machine when using UV inks
 - incorrect drying temperature on the finished product
 - inadequate communication in the work team on a relief printing machine
 - excessive pressure on the slitters
 - increases in relative humidity in the press room on a stack of paper
 - not following shutdown procedures with fellow workers
 - removing machine guards and disconnecting micro switches on a machine
- adjustments required for:
 - sheet transfer mechanisms to address gripper malfunctions in sheet control and transfer
 - devices to maintain sheet control in the delivery section
- advantages and benefits of:
 - die cutting using a rotary die
 - spraying moving sheets with anti-set-off powder in delivery
 - using a perforation wheel to perforate
 - labelling and storage procedures
 - maintaining completed records for future jobs
 - sorting waste and keeping reusable waste
- purpose and function of:
 - checking consistency of the cutting and creasing unit
 - safety features within the organisation in maintaining production

- clearly labelling printed product prior to removal from the press room
- maintaining a clean substrate handling machine section
- completing records used in final analysis of the job
- two-sheet detection on the machine, and the amount of movement the sheet should have when being registered by the side lay
- safety features in the delivery system if the web jams up
- effect of machine speed on sheet delivery
- items in the delivery that can cause marking on the printed image, and remedial steps required to eliminate marking
- problem of paper surface picking being rectified
- link between driers, set-off and marking, and factors causing UV ink to dry
- enterprise personnel with responsibility for removing machine guards and disconnecting micro switches
- available measurements other than optimum solid ink density used to assess print quality
- different methods of checking register during a production run and their advantages
- steps to take when production problems are anticipated to eliminate further processing of unacceptable printed product
- procedure to care for a newly delivered skid of paper to the press room
- industry standards to enhance effective communication with clients and required procedures for client approval of printed product
- circumstances requiring a call to service personnel to correct a machine problem
- labelling and storage procedures for excess inks and materials
- cleaning and washing techniques for the printing unit prior to the next print run and plate storing procedures to minimise damage
- 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
- relief printing machinery.

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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