



Australian Government

ICPPRN394 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 1.0.

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 Reel stand and rewind section are monitored and adjusted to maintain correct tension, avoid marks, blemishes or damage to finished product, and to ensure efficient continuous operation 1.2 Web control system is monitored and adjusted to ensure correct tension and accurate continuous positioning of the web for efficient operation 1.3 Substrate is added to and removed from the process according to job instructions 1.4 Sheeting section is monitored and adjusted to ensure quality and efficient product delivery

ELEMENT	PERFORMANCE CRITERIA
	1.5 Set-off / marking prevention system is monitored and adjusted to ensure quality of the printed product meets the approved proof standard
2. Maintain operation of sheet system	2.1 Feeder and delivery are monitored and adjusted to ensure continuous and efficient feed to machine 2.2 Sheet pick-up and transport system is monitored and adjusted to ensure accurate and continuous sheet handling and efficient operation 2.3 Transfer systems are monitored and adjusted to ensure correct and continuous sheet handling and efficient operation 2.4 Substrate is added to and removed from process according to job instructions
3. Maintain complex relief printing process	3.1 Relief polymer forme or plate cylinder condition is monitored and adjusted to ensure quality of the printed product meets the sample sheet standard 3.2 Relief polymer impression surface condition is monitored and adjusted to ensure quality of the printed product meets the sample sheet standard 3.3 Relief polymer inking system is monitored and adjusted to ensure quality of the printed product meets the sample sheet standard 3.4 Drying systems are monitored and adjusted to ensure quality of the printed product meets the approved proof standard
4. Maintain production process	4.1 Production process is operated in association with fellow workers and according to company specifications and planned daily schedule 4.2 In-line printing/converting/binding/finishing processes are monitored and adjusted to ensure quality of the product meets the approved proof standard 4.3 Production is maintained within work health and safety (WHS) requirements and company and manufacturer's specifications 4.4 Manual and/or automatic control is used according to specification 4.5 Performance is monitored and verified using the process control system according to enterprise procedures 4.6 Ink performance, colour, register and embellishment of print are monitored and adjusted throughout production run 4.7 Production difficulties are anticipated and preventive action is

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	taken to prevent occurrence by timely intervention 4.8 Process adjustments to eliminate problems are reported according to enterprise procedures 4.9 Faulty performance of equipment is identified and reported according to enterprise procedures 4.10 Waste is sorted according to enterprise procedures
5. Identify and rectify problems	5.1 Problems in relief machine operation are identified and reported according to enterprise procedures 5.2 Faulty performance of equipment is identified and reported according to enterprise procedures 5.3 Adjustments or corrections are carried out according to specified procedures 5.4 Relief machine operation is checked to ensure correct operation
6. Conduct shutdown of production process	6.1 Correct shutdown sequence is followed according to manufacturer's specifications and enterprise procedures 6.2 Shutdown is conducted in association with fellow workers and in compliance with WHS requirements 6.3 Unused ink is correctly labelled and stored according to manufacturer's/supplier's specifications and enterprise procedures 6.4 Solid and liquid waste is removed from operating area and recycled or disposed of, where required, according to regulatory requirements and enterprise procedures 6.5 Machine faults requiring repair are identified and reported to designated person according to enterprise procedures 6.6 Repair/adjustment is verified prior to resumption of operations
7. Clean and wash up printing machine at end of print run	7.1 Cylinders, plate and roller surfaces are cleaned ready for next run 7.2 Inking system is washed ready for next run, and liquid waste is disposed of according to company and regulatory requirements 7.3 In-line printing/converting/binding/finishing units are cleaned ready for next run 7.4 Reel feed, transportation and delivery systems are disengaged and cleaned ready for next run 7.5 Sheet feed, transport and delivery systems are disengaged and cleaned ready for next run 7.6 Production records or other documentation are accurately

ELEMENT	PERFORMANCE CRITERIA
	completed where required by 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	1.3, 2.4, 4.1, 4.3, 4.4, 6.1, 6.3	Recognises and interprets text to establish job requirements from information contained within relevant procedures and specifications
Writing	4.8, 4.9, 5.1, 5.2, 6.3, 6.5, 6.6, 7.6	Enters routine data associated with production processes and enterprise procedures
Oral Communication	1.3, 4.1, 4.3, 4.4, 4.8, 4.9, 5.1, 5.2, 6.1-6.3, 6.5, 6.6	Speaks clearly using appropriate vocabulary, tone and pace to report faults and discrepancies
Numeracy	1.3, 2.4	Interprets and analyses a range of mathematical information used in familiar and routine tasks
Navigate the world of work	1.4, 1.5, 2.1-2.4, 3.1-3.4, 4.1-4.10, 5.1-5.4, 6.1-6.5, 7.1-7.6	- Recognises and follows explicit and implicit protocols and meets expectations associated with own role - Recognises and follows all procedures for cleaning and maintenance of equipment, incorporating regulatory requirements and enterprise procedures
Interact with others	1.3, 4.1, 4.3, 4.4, 4.8, 4.9, 5.1, 5.2, 6.1-6.3, 6.5, 6.6	- Cooperates with others as part of familiar routine activities, and contributes to specific activities requiring joint responsibility and accountability - Understands what to communicate, with whom and how, in routine work situations
Get the work done	1.1-1.5, 2.1-2.4, 3.1-3.4, 4.1-4.10, 5.1-5.4, 6.1-6.6, 7.1-7.5	- Determines priorities and sequences steps involved in clearly defined, familiar tasks - Recognises and anticipates an increasing range of familiar problems, their symptoms and causes, actively looking for early warning signs and implementing contingency plans - Follows routine procedures for using digital technology by reading data from electronic monitoring and control systems

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICPPRN394 Produce complex relief printed product	ICPPR394A Produce complex relief printed product	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 ICPPRN394 Produce complex relief printed product

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Performance Evidence

Evidence of the ability to:

- accurately monitor production output and make necessary adjustments to maintain print quality on a relief printing machine while producing a complex print on TWO occasions (if possible using different substrates and at least two in-line processes) according to job specifications, enterprise procedures and work health and safety (WHS) requirements.

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:

- outline major WHS concerns of setting up the reel transportation system
- describe possible causes of reel wandering and web breaks at the unwind unit
- outline print faults resulting from the reel being run out of centre
- outline major WHS concerns of setting up the sheet transportation system
- identify the result of worn suckers at the feeder suction head
- describe the two-sheet detection on the machine, and the amount of movement the sheet should have when being registered by the side lay
- outline possible causes of mis-register of the sheet feeder and visible signs of the sheet being registered in the feeder
- describe a gripper malfunction of sheet control and transfer, and the sheet transfer mechanisms that require adjusting
- identify causes of the feeder stack becoming uneven, and the result if the feeder stack not loaded level
- describe the process of reel delivery for rewinding and sheeting and the associated WHS risks
- list the safety feature in the delivery system if the web jams up, and reasons for sheet cut-off wander

- describe the effect of poorly adjusted nip rollers when rewinding and sheeting
- outline the effect machine speed has on sheet delivery, and the advantage of spraying moving sheets with anti-set-off powder in delivery
- outline items in the delivery that can cause marking on the printed image, and remedial steps necessary to eliminate marking
- outline faults from incorrectly set grippers in the transfer section of a machine, and devices to adjust to maintain sheet control in the delivery
- identify the result if the plate lifts at the grip edge during a print run, and build-up of ink on the impression cylinder affecting printed product
- list possible causes of ink leaking back in the duct
- outline the problem of paper surface picking being rectified
- identify causes of diminished impression during the print run
- identify causes of plate surface prematurely wearing during production
- describe possible issues if eating or drinking near the machine when using UV inks
- identify link between driers and set-off and marking, and what causes UV ink to dry
- identify causes of substrate blistering and the effect of incorrect drying temperature on finished product
- outline major WHS concerns when operating cutting devices, and importance of checking consistency of the cutting and creasing unit
- identify the result of excessive pressure on the slitters, and the benefit of die cutting using a rotary die
- outline advantages of using a perforation wheel to perforate
- describe the effect of inadequate communication within the work team on a relief printing machine
- describe importance of safety features within organisation and in maintaining effective production
- identify ramifications if machine guards are removed and/or micro switches are disconnected on a machine
- explain legal responsibility for removal of machine guards and/or disconnection of micro switches
- identify measurement other than optimum solid ink density that can be used to assess print quality
- identify the most accurate method of checking register during a production run
- explain actions to take when production problems are anticipated and to eliminate further processing of unacceptable printed product
- describe the effect on a stack of paper if relative humidity is increased in the press room, and the procedure to care for a newly delivered skid of paper to the press room
- explain reasons for sorting waste and advantages of keeping reusable waste
- explain industry standards to enhance effective communication with clients and necessary procedures clients should follow to approve a printed product
- explain when it is necessary to call service personnel to correct a machine problem
- outline enterprise procedures to report any machine operating problems
- describe the result if correct shutdown procedures are not followed, and correct shutdown procedures to be followed with fellow workers

- explain advantages of proper labelling and storage of excess inks and materials
- explain importance of clearly labelling printed product prior to removal from the press room
- explain WHS requirements for handling ink and cleaning printing cylinders
- explain cleaning and washing techniques for the printing unit prior to the next print run and procedures for storing plates so as to minimise damage
- outline WHS precautions for cleaning the feed, transportation, delivery and in-line sections of the machine
- explain importance of maintaining a clean substrate handling section of the machine
- explain importance of completing records used in final analysis of the job, and benefits for future jobs
- identify machine manuals, safety and other documentation relevant to the production of complex relief printed products and other sources of relevant information.

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.

Assessors must satisfy NVR/AQTF assessor requirements.

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