



Australian Government

Department of Education, Employment and Workplace Relations

ICPSP376C Operate an automatic screen printing machine

Revision Number: 1

ICPSP376C Operate an automatic screen printing machine

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to produce a print on a range of common substrates, using automatic equipment and screening techniques.
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Application of the Unit

Application of the unit	This unit requires the individual to produce a print on a range of common substrates, using automatic equipment and screening techniques.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify job requirements	1.1. Substrate is checked for conformance to job specifications with any irregularities reported and/or rectified 1.2. Ink is checked for conformance to job specifications 1.3. Artwork is checked for conformance to job specifications
2. Prepare machine to print	2.1. Correct film/emulsion exposure is set and correctly completed according to job specifications 2.2. Substrate position and screen alignment are set according to job specifications 2.3. Ink is applied to the screen in the quantity required for the screen size 2.4. Equipment is kept clean and spillage is minimised
3. Produce proof print	3.1. A proof print is run off and checked for colour, strength, registration, adhesion, clarity, gloss level, drying/curing, artwork detail and other technical aspects according to job specifications 3.2. Adjustments are made according to product and machine specifications 3.3. Belt speed and temperature required are set to achieve desired curing or drying properties 3.4. Appropriate approval to commence production is sought prior to commencement
4. Run job and monitor print quality	4.1. Printing speed production is adjusted to maximise quality and output 4.2. Print quality is continuously evaluated and adjusted as required 4.3. Effects of ink alterations during run are monitored and appropriate action taken according to manufacturer's/supplier's and job specifications 4.4. Workplace documentation on job is completed as required 4.5. Curing and drying are constantly monitored and adjusted according to manufacturer's/supplier's and job specifications
5. Carry out routine user maintenance	5.1. Equipment is cleaned according to enterprise procedures 5.2. Lights are replaced as necessary and alerts/alarms are tested

ELEMENT	PERFORMANCE CRITERIA
	5.3. Fault conditions are identified and reported according to enterprise procedures
6. Stack production output	6.1. Output is checked for thorough drying/curing before stacking 6.2. Job is labelled and recorded according to enterprise procedures 6.3. Job status and progress are checked for conformance to job specifications and any necessary action is taken
7. Conduct shutdown of the production process	7.1. Material is transferred to correct destination in a safe manner 7.2. Excess ink, screens, squeegees and flood coaters are removed and cleaned according to OHS requirements and manufacturer's/supplier's specifications 7.3. Waste materials are disposed of according to manufacturer's/supplier's specifications, regulatory requirements and enterprise procedures 7.4. Equipment and surrounding areas are cleaned according to manufacturer's/supplier's specifications and enterprise procedures 7.5. Tools and equipment are stored and maintained according to manufacturer's specifications to ensure ease of access and operator safety 7.6. The correct procedure for dealing with spilt chemicals is demonstrated according to OHS requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- OHS in relation to operating machinery such as safely switching off machinery before cleaning is started
- communication of ideas and information by seeking appropriate approval to commence production
- collecting, analysing and organising information by checking technical aspects of the proof print
- planning and organising activities by organising materials and equipment in the correct order for the print run
- teamwork when maintaining the production process in association with others
- mathematical ideas and techniques by making adjustments according to product and machine specifications
- problem-solving skills by monitoring and responding to the effect of ink alterations
- use of technology by operating automatic screen printing machines

Required knowledge

- process of recording and reporting any substrate irregularities
- checks for ink compatibility
- criteria used to check the stencil compatibility
- limitations that you have when setting the substrate position
- precautions that need to be undertaken when applying ink to the screen
- products and materials that are used to keep the equipment clean
- OHS concerns that are there when producing an automated print run
- quality control devices that are used to check the print standards
- variables/tolerances that you need to be aware of when checking the print to the proof
- relationship between ink film thickness and ink density
- maximum and minimum ink densities permissible
- properties that determine belt speed
- properties that determine heat unit setting for curing
- responsibility for the final approval before commencing the production run
- quality inspection that occurs during printing
- frequency of inspections for quality
- ink monitoring during the print run
- purpose of workplace documentations
- OHS concerns that are there in relationship to monitoring drying/curing systems
- maintenance that should be carried out on this machine

REQUIRED SKILLS AND KNOWLEDGE

- expected result of not reporting faulty equipment
- result of stacking while the ink film is still wet
- advantages of labelling prior to removal
- result of not taking action if problems occur with the progress of the job?
- advantages that result from proper labelling and storage of excess inks and materials
- OHS practices that must be adhered to when reclaiming screens
- result of not keeping screens and squeegees clean
- result of not following correct procedures when disposing of liquid waste
- result of not keeping equipment and surrounding areas clean
- storage of screens so as to minimise damage
- location of documentation dealing with spilt chemicals

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- set up screen printing machinery and produce a print on a range of common substrates using automatic equipment according to job specifications
- complete TWO different jobs on an automatic machine according to manufacturer's and job specifications, enterprise procedures and the listed Performance Criteria
- evidence for assessment may be gathered from assessment of the unit of competency alone or through an integrated assessment activity.

Context of and specific resources for assessment

Assessment must ensure:

- assessment may take place on the job, off the job or a combination of both of these. Off the job assessment must be undertaken in a closely replicated workplace environment.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<i>Substrate</i> may include:	t-shirts, tote bags, binders, hats, boxes, CD-ROMs, DVDs.
<i>Job specifications</i> may include:	job sheets, work tickets or processing orders.
<i>Drying/curing unit</i> may include:	manual/semi-automatic drying systems commonly used in specific industry sections.
<i>Appropriate approval</i> may include:	enterprise or client approval from supervising personnel.
<i>Workplace documentation</i> may include:	enterprise procedural documents.
<i>Automatic equipment</i> may include:	up to six colours, with exposure unit, curing unit, screen alignment system and conveyor drying system.

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Screen Printing
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Co-requisite units

Co-requisite units		