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| Title | Make ready a pad printing machine for single colour printing | | |
| Level | 3 | Credits | 10 |

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| Purpose | People credited with this unit standard are able to: check documentation and confirm requirements for the pad printing job are available; prepare objects for pad printing; set up pre- and post-treatment in-line processes for single colour pad printing; install pads into pad printing machine; set up pad printing machine components onto machine bed; select and use inks and ink additives, and pre-set the inking system; set up plate holder, plates, and pads, for printing; load pad printing machine, position objects, unload safely, and set up drying racks; and take a print and prepare for pad printing production run. |
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| Classification | Printing > Pad Printing |
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| Available grade | Achieved |
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| Prerequisites | Unit 340, <i>Demonstrate knowledge of safe working practices in the print industry</i> , or demonstrate equivalent knowledge and skills. |
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Guidance Information

1 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the:

- Hazardous Substances and New Organisms Act 1996;
- Health and Safety at Work Act 2015;
- Privacy Act 2020;
- Resource Management Act 1991.

Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.

2 Definitions

Job documentation refers to the documentation that is used in the workplace that contains the instructions and requirements for a particular production job. This may include but is not limited to factory orders, production orders, factory specifications, samples, lay cards.

Job requirements refer to specific requirements for the print job at hand. These requirements may or may not be covered in the job documentation and may include special instructions, quality requirements expected by the customer, and/or production standards as set down by the print workplace and/or organisation.

Workplace procedures refer to organisation policies and procedures that are documented in memo, electronic, or manual format and available in the workplace. They may include but are not limited to – standard operating procedures, site specific procedures, site safety procedures, equipment operating procedures, quality assurance procedures, product quality specifications, manufacturer's requirements, references, approved codes of practice, housekeeping standards, environmental considerations, on-site briefings, supervisor's instructions, and procedures to comply with legislative and local body requirements relevant to the print sector.

- 3 It is recommended that people hold credits for Unit 24988, *Demonstrate introductory knowledge of pad printing*; Unit 33238, *Handle substrates used for pad printing*; and Unit 24990, *Wash up a pad printing machine*, before being assessed against this unit standard.
- 4 **Assessment information**
Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable service information, workplace procedures and legislative requirements.

Outcomes and performance criteria

Outcome 1

Check documentation and confirm the requirements for the pad printing job are available.

Performance criteria

- 1.1 Check job documentation to ensure that all specifications for the process being undertaken are complete and report any discrepancies.
- 1.2 Check job components against the job documentation, and confirm their availability.
- 1.3 Confirm availability of equipment, as determined by the job documentation.

Outcome 2

Prepare objects for pad printing.

Performance criteria

- 2.1 Confirm object suitability meets the job requirements and the production process.
- 2.2 Confirm object quantity issued against the job documentation.

2.3 Condition objects for surface tension.

Range may include but is not limited to – corona discharge, flaming, chemical treatment.

Outcome 3

Set up pre- and post-treatment in-line processes for single colour pad printing.

Performance criteria

3.1 Set up in-line loading.

3.2 Set up in-line pre-treatment.

3.3 Set up in-line drying.

3.4 Set up in-line ejection.

Outcome 4

Install pads into pad printing machine.

Performance criteria

4.1 Select pads to meet the job requirements.

Range may include but is not limited to – cone, rotary, roof top, bar, rectangular, circular.

4.2 Secure pads into the machine in accordance with machine operating manual.

Outcome 5

Set up pad printing machine components onto machine bed.

Range components may include but are not limited to – doctor blade, spatula, support bar, ink cup.

Performance criteria

5.1 Select machine components and secure in place.

5.2 Adjust height of machine bed to suit size of object to be printed.

5.3 Adjust machine bed to suit position of image on object to be printed.

Outcome 6

Select and use inks and ink additives, and pre-set the inking system.

Performance criteria

- 6.1 Select and use inks and ink additives to ensure that they meet manufacturers' specifications.
- Range may include but not limited to – adhesion modifiers, antistatic agents, catalysts (hardeners), flow agents, matt and gloss agents, retarders, thinners.
- 6.2 Explain make ready the machine inking system in terms of operation.
- 6.3 Set up and adjust inking system to meet the job requirements.

Outcome 7

Set up plate holder, plates, and pads, for pad printing.

Performance criteria

- 7.1 Select, set up and adjust plate holder to meet the job requirements.
- 7.2 Select appropriate plate, and secure plate into plate holder.
- 7.3 Position and adjust pads to meet the job requirements.

Outcome 8

Load pad printing machine, position objects, unload safely, and set up drying racks.

Performance criteria

- 8.1 Load and position objects into machine to meet the job requirements.
- 8.2 Identify and report any faults found while loading substrate.
- Range faults may include but are not limited to – damage, dimensional distortion, foreign matter, marking.
- 8.3 Unload objects safely, and rectify or report any identified defects.
- Range defects may include but are not limited to – marking, mis-registration, adhesion, splitting, crushing, inking system faults.
- 8.4 Set up drying racks to suit the objects being dried.

Outcome 9

Take a print and prepare for pad printing production run.

Performance criteria

- 9.1 Identify and report potential hazards for the equipment being used.

- 9.2 Check impression for image transfer, and make necessary adjustments to meet the job requirements.
- 9.3 Take print and confirm against job documentation and available proof for correct image transfer and position.
- 9.4 Fine-tune machine to achieve the required quality and production standards.
- 9.5 Pass print for production run, and obtain approval to run.
- 9.6 Set counters ready for commencement of run.

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| Replacement information | This unit standard replaced unit standard 24991. |
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| Planned review date | 31 December 2027 |
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Status information and last date for assessment for superseded versions

| Process | Version | Date | Last Date for Assessment |
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| Registration | 1 | 30 March 2023 | N/A |

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| Consent and Moderation Requirements (CMR) reference | 0013 |
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council qualifications@hangaarorau.nz if you wish to suggest changes to the content of this unit standard.