

PROMP255

Set and operate over-printing machinery



Overview

This standard is for printing machine operators who set up and operate printing machinery designed to print onto a pre-made product.

It covers a range of printing processes, including screen printing, foiling, pad printing, thermal transfer, flexographic and gravure printing, usually printing a single colour at a time and with manual or semi-automatic feeding.

This standard may only be assessed in the workplace and simulation is not permitted.

This standard requires a printer to be able to set up and operate over-printing machinery. Examples of over-printing machines and the products typically printed by them include foil blocking machines, either hand-lever operated or converted platens, (covers, key fobs, stationery); screen printing machines (signs, clothing or ceramics); thermal transfer machines (mousemats, door-signs, fridge magnets etc); pad printing (pens or other personalised small consumer items); gravure or flexo (corrugated cartons).

The printer needs to have an understanding of the printing process used by the machinery and the critical factors that affect the quality of print, which typically include impression pressure, ink characteristics, dwell time and temperature, depending on the process employed.

Practical ability must be demonstrated through the production of printed work of a commercial standard from the machine.

As well as making ready and running the machinery for particular jobs, the printer must also be able to identify and correct faults on the machine so that it prints to an acceptable quality.

Getting colour right when printing is one of the fundamental requirements of almost all printing processes, so the candidate must be able to understand colour reproduction and how to maintain consistency of colour throughout a print run where there is the risk of it changing.

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Performance criteria

Set up an over-printing machine for production

You must be able to:

- P1 check that you have all the details required for the job and authority to start the job
- P2 check that you have the correct products and/or materials for over-printing
- P3 check that the machine and your work area are safe and ready for production
- P4 check that the general condition of the image carrier is suitable for production and meets any job imposition requirements
- P5 fit the image carrier(s) correctly to the machinery
- P6 where relevant, ink up the printing units so that required colour strength is achieved
- P7 make adjustments to the printing settings as necessary to achieve the required job specification and print quality
- P8 report promptly to your manager if circumstances beyond your control prevent you from producing a pass sheet to the required standard.

Run an over-printing machinery

You must be able to:

- P9 regularly check that the output from the printing machine matches the 'pass' product and/or is within the tolerance of any standards established for printing within your company
- P10 make the correct running adjustments to the unit to achieve the standard set for the job
- P11 identify and correct the cause of problems which affect the quality of the image or reduce the rate of output
- P12 report promptly to your manager if circumstances beyond your control prevent you from achieving the required quality from the printing machine.

Identify and correct faults on over-printing machinery

You must be able to:

- P13 accurately identify faults which
 - P13.1 affect the quality of the image
 - P13.2 produce a shortfall in output
 - P13.3 create risks to health and safety
- P14 accurately identify and correct mechanical faults which it is your job to rectify
- P15 promptly report faults which are not your job to correct or are not corrected by the action you take
- P16 give constructive help to colleagues who are correcting faults on your machine
- P17 check that the machine is safe to operate, once faults are corrected.

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Knowledge and understanding

You need to know and understand:

The Law as it affects printing

- K1 copyright and ownership of images
- K2 forgery
- K3 data protection

You need to know and understand:

Ethical issues relevant to printing

- K4 confidentiality

You need to know and understand:

Health and safety

- K5 your duties and responsibilities for health and safety as defined by any specific legislation covering your job role
- K6 manufacturer's health and safety requirements relevant to your job
- K7 how to stop a machine in the event of an emergency

You need to know and understand:

Communication

- K8 with colleagues
- K9 with customers

You need to know and understand:

Workplace policy and practice

- K10 workplace objectives, priorities, standards and procedures
- K11 the range of work carried out in the workplace

You need to know and understand:

The identification and assessment of printing options

- K12 the stages in the printing process from pre-press to printed product

You need to know and understand:

Time and resources

- K13 how to maximise productivity

You need to know and understand:

The operation of equipment

- K14 the operation of the over-printing machinery that you use

You need to know and understand:

Printing

- K15 the principles of the printing process that you use

You need to know and understand:

The causes and treatment of common faults

- K16 raw material faults
- K17 processing faults
- K18 machine faults

You need to know and understand:

Administrative procedures

- K19 recording and reporting
- K20 product labelling

Environmental

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You need to know and understand:

- K21 any specific environmental legislation that covers processes in your company
- K22 control of pollution

You need to know and understand:

Quality assurance and control

- K23 techniques for controlling quality
- K24 equipment for controlling quality in printing

You need to know and understand:

Problem solving

- K25 sources of information
- K26 techniques for assessing machine faults

You need to know and understand:

Materials

- K27 the types and characteristics of paper, board and other commonly used substrates
- K28 the types and characteristics of inks and coatings
- K29 maintaining the quality of materials during storage and handling

You need to know and understand:

Cleaning, lubrication and maintenance

- K30 the principal activities involved with machine cleaning, lubrication and maintenance
- K31 roles and responsibilities for cleaning, lubrication and maintenance
- K32 machine faults and how they can be rectified
- K33 the maintenance plans for machines which you operate
- K34 which components wear or become degraded over time
- K35 the choice and use of suitable cleaning agents and lubricants
- K36 what parts of the machine you are allowed to clean, lubricate and maintain

You need to know and understand:

Proofing

- K37 the principal types of proof and their role in the printing process

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Originating organisation	Proskills
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Relevant occupations	Originators compositors and print preps; Printers; Screen printers; Printing machine minders and assistants; Bookbinders and print finishers; Graphic designers
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Suite	Machine Printing
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Key words	machines; printing; lithographic; equipment; flexographic; operate; maintain; inks; coatings;
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