

Overview

This standard is for machine managers with responsibility for running 'wide-web' printing machinery. It includes lithographic, flexographic, digital and gravure printing machines. For the purpose of this standard, a wide web machine is one that prints on a reel-fed substrate that is more than 457mm width and requires one or more printers together with one or more assistants to operate the machine.

The machine manager is a printer who has overall responsibility at any time for the wide web machine. Typically in the UK printing industry such people are known as a 'Number One' or 'Number Two' printer. This standard may only be assessed in the workplace and simulation is not permitted.

Wide web printing machines have many possible configurations and features and are found particularly in the publications and packaging sectors. The printing processes employed may be lithography, gravure, flexography, digital or a combination of these. Many wide web machines have inline enhancing, converting, folding and sheeting equipment fitted to them. Most will also have a drying or ink curing system.

The machine manager has overall responsibility for the machine, although tasks are usually shared with colleagues: one printer might take responsibility for the 'colour' output and another for 'registration'. Reel handling and stacking of printed product may be undertaken by machine assistants.

The machine manager must understand the setting and operation of all parts of the machine and be able to direct the crew during the make ready and operation of the machine. Problems that occur need to be solved either by an individual or by the team under the direction of the machine manager.

Practical ability must be demonstrated in managing the production of printed work to a commercially acceptable standard, with consistency throughout the run. Machine managers must be able to identify subsequent processing operations and relate them to the production of work from the printing machine.

It is also essential that a printing machine manager ensures the supply of materials to the press for jobs that are to be printed, and also ensures that all other consumables are readily available should they be required, such as replacement blankets, spray powders, inks, fount solutions and doctor blades

Making sure that the machine is fit for use also requires that a machine manager makes sure that routine cleaning and maintenance is undertaken and also that developing faults requiring specialist attention are acted upon before the press becomes inoperable or suffers damage.

A machine manager must be able to check and assess the quality of print under correct viewing conditions against an approved proof and make whatever adjustments are necessary to the press to achieve and maintain the quality required. On most modern machines, integral colour control hardware and software is installed, allowing the printer to check continually that colour reproduction meets recognised standards and/or is maintained within tolerance of an approved 'pass sheet'. As a minimum, the machine manager is required to understand colour standards and how such standards are maintained. If equipment for this purpose is in use in company, then the machine manager must be capable of operating and understanding it.

Note: This standard is intended for printers who work on wide web machines and who may take responsibility for the whole machine at some time. It is accepted that in some companies such printers may only provide brief cover whilst the 'No. 1' printer is temporarily absent from the machine. Where such printers 'act up' only rarely or briefly, that should not prevent them from achieving the standard, providing they can demonstrate they have the competences set out in the standard.

Performance criteria

Manage make-ready procedures on wide-web printing machines

- You must be able to:**
- P1 ensure the machinery and your work area are safe and ready for production
 - P2 check all the details of the job and make sure they are understood by you and the team
 - P3 check that enough materials of the right type for the job are available
 - P4 brief other members of the press team on the tasks required for the make ready
 - P5 monitor the progress of the make ready, making sure that tasks are completed correctly and are undertaken using safe systems of work
 - P6 assist members of the team where required and make sure that any problems are resolved effectively and efficiently
 - P7 monitor the 'run-up' of material, the establishing of good register and colour, and the satisfactory drying of ink and coatings
 - P8 make sure that any inline folding, converting, enhancing or other equipment has been correctly made ready and the output from the unit(s) meet the specification for the job
 - P9 manage adjustments to the machine settings as necessary to achieve the required job specification and quality standards
 - P10 report promptly to your manager if circumstances beyond your control prevent you from producing a 'pass' sheet to the required standard
 - P11 if required by your company, obtain a 'pass' from the relevant person when the job is ready to run

Control output and quality from wide-web printing machines

- You must be able to:**
- P12 ensure that approval has been given to commence production
 - P13 run the printing machine at the optimum speed, ensuring the required standard is achieved
 - P14 manage the press team in a way that ensures good quality and productivity from the press
 - P15 regularly check that the output matches the 'pass' sheet, keeping time-stamped print samples as required
 - P16 identify and correct the cause of problems which affect the quality of the image or reduce the rate of output
 - P17 report promptly to your manager if circumstances beyond your control prevent

you from achieving the required quantity or quality of printed sheets

- P18 run the required quantity of good product, keeping spoiled material to a minimum
- P19 identify or remove any sub-standard print from the finished work
- P20 follow the correct procedures for the removal of waste
- P21 accurately record the production and quality assurance details required
- P22 identify machine parts that may be in need of maintenance or replacement and make sure that those responsible for carrying out such work are kept informed of the requirements
- P23 liaise with relevant colleagues concerning scheduled maintenance and repair of the machine
- P24 manage the day to day cleaning and setting of the machine so that it is fit for use when required

Knowledge and understanding

You need to know and understand:

The law as it affects printing

- K1 defamation
- K2 copyright and ownership of images
- K3 obscenity
- K4 forgery
- K5 data protection
- K6 the printers imprint

Health and safety

You need to know and understand:

- K7 your legal duties for health and safety in the workplace as defined by the relevant health and safety legislation
- K8 your duties and responsibilities for health and safety as defined by any specific legislation covering your job role
- K9 workplace policies and procedures
- K10 working practices
- K11 hazards and risks in the workplace, their assessment and the action to take to deal with them
- K12 hazards and risks in your own job, their assessment and the action to take to deal with them - including relevant regulations on the safe handling of equipment and materials.
- K13 manufacturer's health and safety requirements relevant to your job
- K14 what personal protective equipment should be used in your job
- K15 how to stop a machine in the event of an emergency

Security and storage

You need to know and understand:

- K16 print with time-sensitive or restricted release dates
- K17 high value products or print with a high risk of theft

Communication

You need to know and understand:

- K18 how to communicate with colleagues, customers and suppliers

Workplace policy and practice

You need to know and understand:

- K19 workplace objectives, priorities, standards and procedures
- K20 the range of work carried out in the workplace
- K21 the working practices existing in the workplace
- K22 the key job roles within the printing and graphic communications industry and their main purposes

The identification and assessment of printing options

You need to know and understand:

- K23 the stages in the printing process from pre-press to printed product

Time and resources

You need to know and understand:

- K24 the different types of resource, including labour, materials, machinery
- K25 the relationship between resource usage and profitability
- K26 how to maximise productivity
- K27 the relationship between productivity and competitiveness

The operation of equipment

You need to know and understand:

- K28 the range of adjustments and settings on web-fed printing machines
- K29 the operating practices and procedures for web-fed printing machines
- K30 the use of colour control equipment, including densitometers and spectrophotometers

Printing

You need to know and understand:

- K31 the principles of web-fed printing machinery and the printing processes used

The causes and treatment of common faults

You need to know and understand:

- K32 raw material faults
- K33 processing (printing) faults
- K34 machine faults

Administrative procedures

You need to know and understand:

- K35 recording and reporting
- K36 product labelling

Management

You need to know and understand:

- K37 briefing techniques
- K38 business improvement techniques

Environmental

You need to know and understand:

- K39 the legal requirements for the classification, storage, carriage and disposal of waste
- K40 any specific environmental legislation that covers processes in your company
- K41 role of statutory authorities/agencies
- K42 control of pollution

Quality assurance and control

You need to know and understand:

- K43 the main features of quality assurance and quality control systems
- K44 techniques for controlling quality, including inspection, testing, sampling, use of input and output controls
- K45 equipment for controlling quality in machine printing
- K46 light standards for viewing and assessing colour print

Problem solving

You need to know and understand:

- K47 types of problems that may need to be solved
- K48 sources of information
- K49 techniques for solving complex problems
- K50 techniques for assessing machine faults

Materials

PROMP268 (SQA Unit Code – H9JG 04)

Control wide-web printing machinery



You need to know
and understand:

- K51 the types and characteristics of paper, board and other commonly used substrates
- K52 the types and characteristics of inks, coatings and coatings
- K53 how to maintain the quality of materials during storage and handling

Proofing

You need to know
and understand:

- K54 the principal types of proof and their role in the printing process

PROMP268 (SQA Unit Code – H9JG 04)
Control wide-web printing machinery



Developed by	Proskills
Version number	2
Date approved	October 2013
Indicative review date	April 2018
Validity	Current
Status	Original
Originating organisation	Proskills
Original URN	PROMP268
Relevant occupations	Originators compositors and print preps; Printers; Screen printers; Printing machine minders and assistants; Bookbinders and print finishers; Graphic designers
Suite	Machine Printing
Key words	machines; printing; lithographic; equipment; flexographic; operate; maintain; inks; coatings;
