
Overview

This standard is for print finishers who are setting up and operating multi-knife trimming machinery.

They will be expected to control the equipment whilst running production jobs.

This standard consists of **three** elements:

Element 364.1 Set up multi-knife trimming machinery under supervision

Element 364.2 Operate multi-knife trimming machinery

Element 364.3 Maintain multi-knife trimming machinery in clean, safe and useable condition

This is what the standard covers

- 1 Identifying the job requirements
- 2 Checking that the multi-knife trimming machinery is working properly
- 3 Checking that safety devices are working properly
- 4 Running the multi-knife trimming machinery equipment safely
- 5 Adjusting settings, where necessary to maintain the required standard
- 6 Checking that work meets the required standard
- 7 Identifying faults and taking action to deal with them
- 8 Unloading and stacking the finished product

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Set and operate multi-knife trimming machinery

Performance criteria

Set up multi-knife trimming machinery under supervision

You must be able to:

- P1 check that you have the job specification
- P2 identify the materials you must use for the job
- P3 check that safety devices are working properly
 - P4.1 set up the multi-knife trimmer under supervision, so that: piles are fed squarely into the trimmer
 - P4.2 the clamp holds the pile firmly without marking
 - P4.3 piles are trimmed squarely and delivered without damage or distortion the trimmed size is within variations permitted by your company
- P4 produce a sample from the machine and get it passed by your supervisor
- P5 assist your supervisor to make adjustments if necessary to enable the standards to be met
- P6 report promptly to your supervisor, if the standards cannot be met
- *check that your work area is safe and ready for production

Operate multi-knife trimming machinery

- P7 operate the machinery:
 - P7.1 at the required production speed
 - P7.2 safely and efficiently
- P8 regularly check that your company's quality standards are met
- P9 accurately identify faults in the product, which result in:
 - P9.1 unacceptable cut size variation
 - P9.2 score marks on cut surfaces
 - P9.3 glue marks on cut surfaces
 - P9.4 ragged cut on bottom pages
 - P9.5 book spines splitting at head or tail books not square
 - P9.6 creasing on spines
- P10 promptly and accurately report faults to your manager
- P11 make adjustments to settings if instructed to do so by your manager
- P12 check that the machine is safe to operate, once faults have been corrected
- P13 promptly report to your manager if the machine ceases to function properly
- P14 accurately record production and quality assurance details
- P15 follow the correct procedures for the removal of waste
- P16 stack finished work safely using your company's approved method

Keep multi-knife trimming machinery in a clean, safe and usable condition

- P17 have a 'safe system of work' before commencing any cleaning

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- P18 obtain or prepare a schedule of cleaning, lubrication and maintenance for the machine
- P19 identify the recommended intervals for maintenance and lubrication
- P20 ensure that the schedule is implemented and kept up to date, within the time allowed by your company for cleaning, lubrication and maintenance.
- P21 prevent any build up of debris in or around the machine by regularly removing it and cleaning the machine
- P22 regularly check that the machine is clean enough to prevent marking or damage to the product during normal operation
- P23 use cleaning methods which are safe, avoid harm to the environment and which follow the manufacturer's instructions
- P24 dispose of used cleaning agents and waste materials safely and in accordance with environment/waste disposal legislation
- P25 after cleaning, check that the machine is safe to operate
- P26 examine machinery for defective components or excessive wear at intervals required by your company
- P27 are able to remove and replace faulty or worn components that are your responsibility

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Knowledge and understanding

You need to know and understand:

Keep multi-knife trimming machinery in a clean, safe and usable condition

Health and safety

- K1 your duties and responsibilities for health and safety as defined by any specific legislation covering your job role
- K2 knowledge of regulations such as those covering:
 - K2.1 manual handling;
 - K2.2 noise at work;
 - K2.3 personal protective equipment;
- K3 workplace policies and procedures
 - K3.1 written health and safety policy statement;
 - K3.2 provision and use of workplace equipment regulations;
 - K3.3 training;
 - K3.4 prohibited equipment;
 - K3.5 young persons;
 - K3.6 written operating procedures for equipment use and processes, including safe systems of work

Working practices

You need to know and understand:

- K4 the way you actually do your job, more particularly the activities and techniques and the way that materials and equipment are used.
- K5 hazards and risks in your own job, their assessment and the action to take to deal with them
 - K5.1 including relevant regulations on the safe handling of equipment and materials, and the safe use of computer equipment;
 - K5.2 codes of practice issued by the health and safety executive or the printing industry advisory committee (PIAC);
 - K5.3 guarding of machinery;
 - K5.4 typical hazards and risks in the printing industry;
 - K5.5 risk assessment techniques
- K6 manufacturers' and suppliers' health and safety instructions / advice
 - K6.1 operating instructions for machinery;
 - K6.2 data sheets for substances harmful to health;
- K7 personal presentation
 - K7.1 personal hygiene
 - K7.2 clothing and accessories suitable to the particular workplace
 - K7.3 fitness for work, e.g. not under the influence of drugs, alcohol or medication
 - K7.4 smoking policies in the workplace
- K8 how to stop a machine in the event of an emergency

The causes and treatment of common faults

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You need to know and understand:

- K9 This knowledge will be specific to the materials, processes and equipment used by individual businesses - technical units, where necessary, will detail the scope of knowledge of faults for the standard
 - K9.1 raw material faults
 - K9.2 processing faults
 - K9.3 machine faults

Quality assurance and control

You need to know and understand:

- K10 techniques for controlling quality
 - K10.1 inspection,
 - K10.2 testing,
 - K10.3 sampling,
 - K10.4 use of input and output controls

Problem solving

You need to know and understand:

- K11 types of problems that may need to be solved
 - K11.1 machinery - electrical, mechanical, electronic, settings, component wear and tear, consumables needing replacement
 - K11.2 materials - defects, shortages, incompatibility
 - K11.3 systems,
 - K11.4 organisation
 - K11.5 lack of skills or knowledge
- K12 sources of information
 - K12.1 manufacturer's documentation / troubleshooting guides
 - K12.2 colleagues
 - K12.3 tutors / trainers / mentors
 - K12.4 reference material - in house or external, e.g. internet
- K13 techniques for solving complex problems
 - K13.1 change one thing only at a time and assess effect of the change
 - K13.2 problem solving cycle
 - K13.3 root cause analysis brainstorming
 - K13.4 visual representations, e.g. fishbone / mindmap diagrams
- K14 techniques for assessing machine faults
 - K14.1 observation
 - K14.2 listening
 - K14.3 inspection of product
 - K14.4 reports from colleagues / log reports
 - K14.5 touch or smell (if safe to do so)
 - K14.6 testing - e.g. electrical, mechanical, electronic

Materials

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You need to know and understand:

K15 the types and characteristics of paper, board and other commonly used substrates

K15.1 includes the range of commonly used uncoated, coated, embossed papers and boards;

K15.2 grammage, thickness, opacity, brightness/whiteness, strength, dimensional stability, gloss

K16 maintaining the quality of materials during storage and handling

K16.1 humidity and temperature;

K16.2 protection from physical damage

K16.3 labelling / identification

Cleaning, lubrication and maintenance

You need to know and understand:

K17 the principal activities involved with machine cleaning, lubrication and maintenance roles and responsibilities for cleaning, lubrication and maintenance

K17.1 engineers

K17.2 manufacturer's agents

K17.3 machine operators

Machine assistants

You need to know and understand:

K18 machine faults and how they can be rectified

K18.1 types of faults, e.g. electrical, mechanical, electronic

K18.2 skills needed to repair particular types of faults

K19 the maintenance plans for machines which you operate

K19.1 manufacturer's specifications / recommended maintenance plans

K19.2 company plans / arrangements for maintenance

K20 which components wear or become degraded over time

K20.1 filters

K20.2 bearings

K20.3 belts

K20.4 chains

K20.5 machine or process specific components

K21 what is meant by the phrase 'safe system of work' and how it applies to cleaning, lubrication and maintenance activities

K21.1 codes of practice issued by HSE or PIAC

K21.2 documented procedures to be followed

K21.3 isolating equipment before commencing cleaning and maintenance

K21.4 replacement of all guards after cleaning and maintenance

K22 the choice and use of suitable cleaning agents and lubricants

K22.1 manufacturer's specification / recommendations

K22.2 environmental considerations

K22.3 toxicity / health issues

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- K22.4 disposal of contaminated cleaning materials
- K23 what parts of the machine you are allowed to clean, lubricate and maintain
- K24 preventive v. predictive maintenance

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Additional Information

Scope/range

Set and operate multi-knife trimming machinery

In addition to being able to produce commercially acceptable work, the operator should be competent to operate the equipment to trim a range of products using three and/or five knife trimmers on a range of thicknesses and types of stock.

The operator should be able to deal with all running problems within his/her responsibility. The operator is also responsible for ensuring that the machine is in a safe and clean condition for normal production operations.

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