

Level 3 NVQ in Mechanised Print Finishing and Binding - General Print (5158-32)

Standards and assessment requirements
500/1475/4



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1 Introduction

About this document

This document contains the information that centres need to offer the following National Vocational Qualification (NVQ):

Level 3 NVQ in Mechanised Print Finishing and Binding - General Print (5158-32)

QCA accreditation number: 500/1475/4

This document contains details and guidance on:

- centre resource requirements
- candidate entry requirements
- information about links with other qualifications
- qualification standards and specifications
- assessment requirements.

2 About the qualification

2.1 Proskills UK and the National Occupational Standards

Background to the National Occupational Standards (NOS) development

The NVQs in Printing (5158) at Levels 2 and 3 are work-based qualifications, designed for those who work in the printing industry.

For workers in the print industry, job descriptions and task lists will indicate which NVQ and which optional units within the NVQ are most suitable.

Every centre (training providers, training centres, colleges, etc) must ensure that each candidate, trainee and student is enrolled for qualifications and programmes in which they stand every reasonable chance of succeeding.

Contacting the Standards Setting Bodies

This qualification is based on the National Occupational Standards (NOS) developed by:

Sector Skills Council	Proskills UK
Address	Centurion Court 85b Milton Park Abingdon Oxfordshire OX14 4RY
Telephone	01235 833844
URL	www.proskills.co.uk

Imported units

The majority of units have been developed by the Print and Graphic Communication National Training Organisation (PGCNTO). However, some units have been imported from the other NTOs, for example: Information Technology NTO (ITNTO); National Forum for Management, Education and Development (formerly MCI); Employment NTO (ENTO); Small Firms Enterprise Development Initiative (SFEDI) and; Institute for Customer Service (CSI).

The printing industry established that these units were directly relevant to individuals who would be expected to achieve the NVQs in Printing at Levels 2 or 3 and consequently decided to adopt them into the Printing qualifications

Apprenticeship frameworks

The NVQs in Printing have been approved by the SSC Proskills UK as part of the Apprenticeship Framework in England.

Full details of the requirements of the apprenticeship frameworks for the sector are available from:

Sector Skills Council Proskills UK
Address Centurion Court
85b Milton Park
Abingdon
Oxfordshire
OX14 4RY
Telephone 01235 833844
URL www.proskills.co.uk

City & Guilds also offers the following qualifications which are also part of the Apprenticeship framework:

- City & Guilds Level 2 Certificate in Printing and Graphic Communications 5261-02
- City & Guilds Level 3 Certificate in Printing and Graphic Communications 5261-03

Accreditation details

This qualification is accredited by the Qualifications and Curriculum Authority as part of the National Qualifications Framework.

For further details about accreditation, national qualification frameworks and level descriptors please refer to Appendix 1.

2 About the qualification

2.2 Publications and sources of information

This document has been designed to be used with the City & Guilds *N/SVQ Guides*:

Publication	Content	Available from
<i>Centre guide</i>	An overview of N/SVQ assessment, delivery and quality assurance issues.	EN-12-001
<i>Candidate guide</i>	An introduction to N/SVQs, candidate responsibilities and an overview of the assessment process.	TS-12-001
<i>Recording forms</i>	Forms both centres and candidates may use to record evidence.	TS-33-0001

Visit the City & Guilds website (www.cityandguilds.com) for the latest versions of these documents.

Other essential City & Guilds documents

There are other City & Guilds documents which contain general information on City & Guilds qualifications:

- ***Providing City & Guilds qualifications – a guide to centre and qualification approval*** contains detailed information about the processes which must be followed and requirements which must be met for a centre to achieve ‘approved centre’ status, or to offer a particular qualification.
- ***Ensuring quality*** contains updates on City & Guilds assessment and policy issues.
- ***Centre toolkit*** contains additional information on *Providing City & Guilds qualifications*, in a CD-ROM, which links to the internet for access to the latest documents, reference materials and templates.
- ***Directory of qualifications*** contains details of general regulations, registration and certification procedures and fees. This information is also available online.

For the latest updates on our publications and details of how to obtain them and other City & Guilds resources, please refer to the City & Guilds website.

3 Candidate entry requirements and progression

Candidate work role requirements

The NVQs in Printing are for those working in the printing industry in the following roles:

Pathway	Job Roles
Carton Manufacture	Carton Maker Printed carton operative Carton die maker
Digital Print Production – Digital Artwork for Print	Desk Top Publisher Graphic designer Print Designer Pre-press manager
Digital Print Production – Digital Printing	Printer Digital Printer
Digital Print Production – Pre-Press	Desk Top Publisher Graphic designer Print Designer Pre-press manager
Envelope Manufacture	Envelope printer
Machine Printing – Die stamping	Printer Die stamping printer
Machine Printing – Flexography	Printer Flexographic Printer
Machine Printing – Gravure	Printer Gravure Printer
Machine Printing – Lithography	Printer Lithographic printer
Machine Printing – Pad Printing	Printer Pad printer
Machine Printing – Screen	Printer Screen printer
Machine Printing – Web offset	Printer Web offset printer
Mechanised Print – Finishing and Binding	Print finisher
Print Administration	Print Production manager Print production scheduler Print administrator

Candidate entry requirements

Candidates should **not** be entered for a qualification of the same type, content and level as that of a qualification they already hold.

Age restrictions

The NVQs in Printing are **not** approved for use by candidates under the age of 16.

For candidates above this age, there are no age limits unless this is a legal requirement of the process or the environment.

Otherwise, there are no formal entry requirements for candidates undertaking these qualifications, however centres must ensure that candidates have the potential and opportunity to gain evidence for the qualification in the work place.

For funding purposes, centres are reminded that candidates should not be entered for a qualification of the same type, level and content as that of a qualification they already hold.

4 Centre resource requirements

4.1 Centre, qualification and fast track approval

Centres not yet approved by City & Guilds

To offer this qualification, new centres will need to gain both **centre and qualification approval**. Please refer to the *Centre guide* and *Providing City & Guilds Qualifications* for further information.

Existing City & Guilds centres

To offer this qualification, centres already approved to deliver City & Guilds qualifications will need to gain **qualification approval**. Please refer to the *Centre guide* and *Providing City & Guilds Qualifications* for further information.

Centres already offering City & Guilds qualifications in this subject area

Centres approved to offer the 5157 NVQs in Printing may apply for approval for the new 5158 NVQs in Printing using the **fast track form**, available from the regional/national office or City & Guilds website.

Centres may apply to offer the new qualifications using the fast track form:

- providing there have been no changes to the way the qualifications are delivered, and
- if they meet all of the approval criteria specified in the fast track form guidance notes.

Fast track approval is available for 12 months from the launch of the qualification. After this time, the qualification is subject to the **standard** Qualification Approval Process. It is the centre's responsibility to check that fast track approval is still current at the time of application.

4 Centre resource requirements

4.2 Registration and certification

Registration and certification period

Centres should be aware of time constraints regarding the registration and certification periods for the NVQs in Printing, as specified in the City & Guilds *Directory of qualifications*.

Please check the *Directory of qualifications* for the latest information on length of registration and the last registration and certification dates.

Where the period of access to assessment offered by a centre is less than the period covered by the candidates' registration with City & Guilds, centres must ensure that this is understood by the candidates.

5 Assessment method requirements

This guidance is based on and amplifies the assessment strategy developed for the NVQs in Printing, by the Sector Skills Council for Printing Proskills UK.

External quality control

External quality control is provided by the usual City & Guilds external verification process which includes the use of the electronically scannable report form which is designed to provide an objective risk analysis of individual centre assessment and verification practice.

Accreditation of Prior Experience and Learning (APEL)

Please refer to the City & Guilds *N/SVQ Guides* documents which can be found on our website, www.cityandguilds.com

Evidence and location of assessment

The majority of the candidate's evidence should come from direct observations of competence in the real workplace, unless specified in the unit content. Other types of acceptable evidence include, but are not limited to:

- Witness Testimony (details of acceptable witnesses are found in section 6 of this document 'Expertise of Assessors, Internal Verifiers and Witnesses')
- logs/diaries kept by the candidate
- recorded answers to questions posed by the Assessor
- recorded/transcribed interviews with the candidate
- recorded use of up-to-date commercial/industrial equipment
- e-portfolios and other forms of digital media
- works documentation attributable to the candidate
- both interim and final internal verification.

Although the majority of the candidate's evidence should come from direct observations of competence in the real work place, in exceptional circumstances simulation of the real workplace may be allowed. Occasions in which this may be approved are provided below.

Simulation

Where simulated activities are not stated within the unit, a centre **must** discuss and agree their use in advance with the external verifier. Consideration for simulation should be given to those units which have real health, safety and environment implications.

All evidence from simulated activities must result from activities that have taken place in a realistic working environment, which replicates the conditions and circumstances in which the candidate usually works and meets the following conditions:

- Working conditions should reflect those found in the workplace and include facilities, equipment and materials used in the workplace for the activities being assessed. It should also include relationships, constraints and pressures met in the workplace.
- The activity to which the candidate is required to demonstrate competence must be realistic and reasonable in terms of its scale.
- Any assessment conducted under simulated conditions must require the candidates to take into consideration what would be typical ambient conditions encountered in the normal workplace

- Information available to the candidate on the nature of the activity must be consistent with the policies and practices of typical recycling operations.

The overarching principle to be applied to units identified as suitable for simulation is that it should **only** be undertaken in a minority of cases where:

- there is a high risk to the security or safety of the candidate, individuals, key people in their lives and others
- the opportunity to present evidence from work-based practice happens infrequently and therefore insisting that candidates wait for such an occurrence would be unreasonable or create blockages in the assessment system and might carry the risk of de-motivating candidates
- there would otherwise be a breach of confidentiality or privacy.

To reiterate, any simulation **must** be approved in advance by the External Verifier, and clear reasons must be given for its intended use. If approval is given, all Awarding Body guidance and requirements must be observed. Simulation should **not** be the primary source of a candidate's claim to competence

6 Roles and occupational expertise requirements

Expertise of Assessors, Internal Verifiers and Witnesses

Assessors

Assessors must:

- be registered and recognised by an approved centre
- be competent to make qualitative judgements about the units they are assessing. Illustrations of competence include, but are not limited to, the assessor:
 - having achieved the award themselves
 - having substantial demonstrable experience in the job roles they are assessing
 - being in a day-to-day line management or quality assurance role with responsibility for the job roles they are assessing
- be in possession of or working towards the A1/A2 award or the D32/33 award, or (in Scotland only) has gained an exemption in TQFE/TQSE, as recommended by SQA/QCA and supported by an appropriate Continuing Professional Development (CPD) record
- carry out their duties in accordance with the current NOS for Assessment, and in line with current guidance on assessment practice issued by the regulatory authorities and the appropriate Awarding Body
- maintain appropriate evidence of development activities to ensure their assessment skills and occupational understanding are current (CPD)
- have a working knowledge of awards and a full understanding of that part of the award for which they have responsibility. The Awarding Body will confirm this through examination of relevant CVs supported by relevant references.
- be approved by the Awarding Body who must maintain records demonstrating how they meet the assessment strategy. The appointment of Assessors may require the prior approval of the Awarding Body
- meet any additional requirements as specified in the unit specific content.

Internal Verifiers

Internal verifiers must:

- be registered and recognised by an approved centre
- be in possession of or working towards the V1 award or the D34 award, as recommended by SQA/QCA and supported by an appropriate CPD record
- carry out their duties in accordance with the current NOS for Verification, and in line with current guidance on verification practice issued by the regulatory authorities and the appropriate Awarding Body
- maintain appropriate evidence of development activities to ensure their verification skills and occupational understanding are current (CPD)
- have expertise and knowledge of awards and a full understanding of that part of the award for which they have responsibility. The Awarding Body will confirm this through examination of relevant CVs supported by relevant references
- be approved by the Awarding Body who must maintain records demonstrating how they meet the assessment strategy. The appointment of Internal Verifiers may require the prior approval of the Awarding Body
- meet any additional requirements as specified in the award specific annex.

Enhanced Quality Control

All Internal Verifiers must provide evidence of having verified:

- evidence supporting any key units (where specified in the award specific guidance) and evidence supporting at least one other unit from the award

or

- the evidence supporting at least two distinct units (or as documented in the Award Specific Guidance) for each award per annum.

As well as:

- all evidence from all simulations/simulators
- over time, an example of each unit the Assessor is qualified to assess
- over time, an example of each assessment method used in the centre
- evidence of internal verification.

Witnesses

There are no specific occupational expertise requirements for witnesses. Witness testimony can provide evidence to establish consistency in a candidate's practice and/or to evidence events which are difficult to plan to observe.

As the assessment decision lies with the Assessor, it is their responsibility to verify this and, where challenged, to justify their acceptance of third party 'witness testimony' to the Internal Verifier.

In order that the assessor may make an informed judgement about the contribution of the witness' testimony to the overall evidence presented for a unit or qualification, a statement of the witness' status should be included in the candidate's portfolio of evidence. This can be done by using the Witness Status list (form N/SVQ5) or including it as part of the witness testimony itself.

The statement should indicate the relationship between the candidate and the witness and should enable the assessor, by defining the role that the witness has played in the gathering of evidence (ie as colleague, worker from another organisation) to judge the extent of the witness' knowledge of the National Occupational Standards and understanding of the work roles involved.

Please note: The use of witness testimony from relatives or those with whom the candidate has a significant personal relationship is **not** acceptable.

Continuous Professional Development requirements

City & Guilds expects all those with formal roles in the assessment or verification process to participate in a minimum of two CPD activities per annum. This can be to update either vocational skills/knowledge or assessment/verification skills/knowledge.

7 Recording assessment and evidence

7.1 Data protection and confidentiality

Data protection and confidentiality

Data protection and confidentiality must not be overlooked when assessing candidates.

Centres offering the NVQs in Printing may need to provide City & Guilds with personal data for staff and candidates. Guidance on data protection and the obligations of City & Guilds and centres are explained in *Providing City & Guilds qualifications*.

Protecting identity

It is extremely important to protect the identity of the service users encountered by candidates in the work setting, eg customers, clients and patients.

Confidential information must **not** be included in candidate portfolios or assessment records. Confidential information should remain in its usual location, and a reference should be made to it in the portfolio or assessment records.

When recording evidence towards these qualifications, candidates are expected in particular to protect the identity of children in their care by disguising their names and that of the placement nursery.

Images of minors being used as evidence

If videos or photographs of minors (those under 18) are used as the medium to present evidence as part of the qualification, **both centre and candidate** have responsibilities for meeting child protection legislation.

It is the responsibility of the centre to inform the candidate of the:

- need to obtain permission from the minor's parent/guardian prior to collecting the evidence
- reasons and restrictions for using photographs or video recordings as evidence
- period of time for which the photographs or video recordings may be kept
- obligation to keep photographs or video recordings secure from unauthorised access
- secure electronic storage requirements of photographs or video recordings
- associated child protection legislation.

7 Recording assessment and evidence

7.2 Recording forms to use

City & Guilds has developed a set of *Recording forms* including examples of completed forms, for new and existing centres to use as appropriate (see *NVQ Guide for centres and candidates - Recording forms*, available on the City & Guilds website).

Although it is expected that new centres will use these forms, centres may devise or customise alternative forms, which must be approved for use by the external verifier, before they are used by NVQ candidates and assessors at the centre. City & Guilds also endorses the electronic recording systems *Quick Step* and *Paper Free*.

Amendable (MS Word) versions of the forms are available on the City & Guilds website.

8 The qualification structure

Level 3 NVQ in Mechanised Print Finishing and Binding - General Print (5158-32)

To achieve the Level 3 NVQ in Mechanised Print Finishing and Binding - General Print (5158-32) candidates must complete **two** mandatory common units, plus **two** Group A optional technical units and **one** Group B optional technical unit.

Mandatory common units

- 301 Ensure your own actions reduce risks to health and safety in the workplace
- 302 Improve Individual and Organisational Performance

Optional technical units – Group A

- 328³ Control adhesive binding machinery
- 329 Control case making machinery
- 330 Control casing-in machinery
- 331 Control programmatic guillotines
- 332² Control folding machinery
- 333¹ Control in-line booklet making machinery

Optional technical units – Group B

- 246 Control foil blocking machinery
- 334 Control non-automatic finishing machines
- 335 Control multiple hopper feeders
- 336 Control auto-fed sewing machinery
- 337 Control multi-knife trimming machinery
- 338¹ Set and operate booklet-making machinery
- 339² Control parallel folding
- 340³ Run and monitor adhesive binding machinery
- 341 Control inline insetting-stitching-trimming machines
- 342 Control inline gathering-adhesive-binding-trimming machinery
- 343 Control inline block-feeding-forwarding-case binding machinery

Notes

¹ Unit 338 may not be used in conjunction with Unit 333

² Unit 339 may not be used in conjunction with Unit 332

³ Unit 340 may not be used in conjunction with Unit 328

9 Relationships to other qualifications

9.1 Relationship to previous versions of the qualifications

City & Guilds has identified the connections to the NVQ previously offered by City & Guilds in this subject area.

This mapping is provided as guidance and suggests areas of overlap and commonality between the qualifications. It does **not** imply that candidates completing units in the forerunner qualification are automatically covering all of the content of the new NVQs listed in the mapping.

Relationship between this Level 3 NVQ in Mechanised Print Finishing and Binding - General Print (5158-32) and the forerunner Level 3 NVQ in Mechanised Print Finishing and Binding - General Print (5157-18)

Level 3 NVQ in Mechanised Print Finishing and Binding - General Print (5158-32)	Level 3 NVQ in Mechanised Print Finishing and Binding - General Print (5157-18)
Unit Number/Title	Related units
246 Control foil blocking machinery	323 Control foil blocking machinery
301 Ensure your own actions reduce risks to health and safety in the workplace	001 Reduce risks to health and safety in your workplace
302 Improve Individual and Organisational Performance	002 Develop yourself in your job
328 Control adhesive binding machinery	316 Control adhesive binding machinery
329 Control case making machinery	317 Control case making machinery
330 Control casing-in machinery	318 Control casing-in machinery
331 Control programmatic guillotines	347 Control programmatic guillotines
332 Control folding machinery	348 Control folding machinery
333 Control in-line booklet making machinery	351 Control in-line booklet-making machinery
334 Control non-automatic finishing machines	340 Control non-automatic finishing machines
335 Control multiple hopper feeders	341 Control multiple hopper feeders
336 Control auto-fed sewing machinery	342 Control auto-fed sewing machinery
337 Control multi-knife trimming machinery	346 Control multi-knife trimming machinery
338 Set and operate booklet-making machinery	356 Set and operate booklet-making machinery

339 Control parallel folding

358 Control parallel folding

340 Run and monitor adhesive binding machinery

360 Run and monitor adhesive binding machinery

341 Control inline insetting-stitching trimming machines

352 Control in-line insetting-stitching-trimming machinery

342 Control inline gathering-adhesive binding-trimming machinery

353 Control in-line gathering-adhesive binding-trimming machinery

343 Control inline block-feeding forwarding-case binding machinery

354 Control in-line block-feeding-forwarding-case binding machinery

9 Relationships to other qualifications

9.2 Key skills

This qualification includes opportunities to develop and practise many of the underlying skills and techniques described in Part A of the standard for each key skills qualification in England, Northern Ireland and Wales.

Where candidates are working towards any key skills alongside this qualification they will need to be registered with City & Guilds for the key skills qualifications.

The 'signposts' below identify the **potential** for key skills portfolio evidence gathering that can be naturally incorporated into the completion of each unit. Any key skills evidence needs to be separately assessed and must meet the relevant standard defined in the QCA document 'Key skills qualifications standards and guidance'.

Please note: Key Skills Level 2 is illustrated as **2**
Key Skills Level 3 is illustrated as **3**

Unit number	Communication	Application of Number	Information Technology
246	2		
301	3	2	2
302	3	2	
328	2		
329	2		
330	2		
331	2	2	2
332	2		
333	2		
334	2		
335	2		
336	2		2
337	2		
338	2	2	
339	2	2	
340	2	2	
341	2	2	2
342	2	2	
343	2		

Unit number	Problem Solving	Improving own learning and performance	Working With Others
246	2	2	2
301	3	3	2
302	3	3	3
328	2	2	2
329	2	2	
330	2	2	
331	3	2	
332	2	2	2
333	2	2	
334	2	2	
335	3	3	2
336	2	2	2
337	2	2	
338	2	2	
339	2	2	
340		2	2
341	2	2	2
342	2	2	2
343	2	2	2

10 About the National Occupational Standards (NOS)

Availability of standards

The units for the qualification follow.

They may also be obtained from the Printing and Graphic Communications industry section of the City & Guilds website.

11 The units

Unit 246 Control foil blocking machinery

Introduction

To obtain your unit certificate, you must show that you can:

- 1 Element 246.1 Set up foil blocking machinery
- 2 Element 246.2 Run foil blocking machinery
- 3 Element 246.3 Maintain foil blocking machinery in clean, safe and useable condition

This involves:

- identifying and understanding the job requirements
- checking that the foil blocking machine is working properly
- checking that safety devices are working properly
- setting up the foil blocking unit
- running foil blocking machinery safely
- adjusting settings, where necessary to maintain the required standard
- checking that work meets the required standard
- identifying faults and taking action to deal with them
- unloading and stacking the finished product.

Note: this unit is for use on equipment that is either semi-automatic or fully automatic.

Collecting the evidence for this unit

Your performance evidence must show that you have covered all of the statements in the *You must show that* section in each element, and must be the result of real work activities in actual production situations. Simulation is **not** acceptable for this unit.

Your assessor will need to be satisfied that you have the necessary understanding specified in each 'K' list. Where this is not evident from your performance, you may be asked oral or written questions, or to write a short report.

You may need to provide other information to support your performance evidence. Here are some examples:

- a photocopy of the job instructions
- a photocopy of the documentation confirming all the material requirements for the production of the job
- samples of the job including a signed pass copy
- samples of running faults as they arise
- a written or spoken report describing faults, their causes and how you corrected them
- production records showing the time taken to produce the job and/or the quantity produced.

Element 246.1 Set up foil blocking machinery

Performance criteria

You must show that you:

- 1 check that you have all the details you need for the job
- 2 check that you have enough materials of the right type for the job
- 3 promptly report to your manager, if the materials provided are not correct or sufficient
- 4 set up foil blocking machinery correctly, so that:
 - a the temperature is correct for the material to be blocked
 - b material to be blocked is fed squarely, coming to the register against stops
 - c the foil is fed evenly, to give minimum gap between impressions
 - d images are clean, sharp and have overall solid colour density
 - e images are correctly positioned on the material
 - f subsequent colours are in register and fit with other colours
- 5 produce a sample from the machine and check that it matches the required standard
- 6 make adjustments when the standards cannot be met
- 7 report promptly to your manager, if the standards cannot be met
- 8 check that your work area is safe and ready for production.

Element 246.1 Set up foil blocking machinery

Knowledge and understanding

You must understand:

- K1 what details should be in a job specification
- K2 the principles of foil blocking
- K3 the sequence of set up tasks for foil blocking machinery
- K4 why temperature, pressure and dwell settings will vary for:
 - a paper
 - b coated fabrics
 - c PVC material
 - d leather
- K5 the range of foils available, and their different uses
- K6 how to achieve register in multi-colour workings
- K7 the risks associated with setting up foil blocking machinery, and how to avoid them
- K8 what the common foil blocking machine faults are, what causes them and how to prevent them
- K9 the emergency shut down procedures.

Element 246.1 Set up foil blocking machinery

Performance evidence

You must show that you can set blocking machinery consistently over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you can set up for at least **two** of the following:
 - a fine line patterns
 - b fine line type
 - c coarse line type or solid
- R2 for case, cover, card stock which is of at least **two** of the following kinds:
 - a plastic
 - b cloth
 - c paper
 - d leather
- R3 ... using at least **two** of the following blocking methods:
 - a single roll foil
 - b multi foil roll
 - c blind blocking
 - d blocking two-up.

Element 246.2 Run foil blocking machinery

Performance criteria

You must show that you:

- 1 run foil blocking machinery:
 - a at the required speed to produce the output
 - b safely and efficiently
- 2 keep up the supply of materials throughout the run
- 3 regularly check that quality standards are met
- 4 accurately identify the cause of production faults, which result in:
 - a image out of square
 - b foil not sticking to material surface
 - c image not having solid appearance
 - d image blurred
 - e marking of material outside image area
 - f loss of fine detail
- 5 correct mechanical faults which it is your job to remedy
- 6 promptly report mechanical faults which it is not your job to correct
- 7 check that the machine is safe to operate, once faults are corrected
- 8 accurately record production and quality assurance details
- 9 follow the correct procedures for the removal of waste
- 10 stack work safely using the approved method.

Element 246.2 Run foil blocking machinery

Knowledge and understanding

You must understand:

- K1 your company's quality standards
- K2 the principles of foil blocking
- K3 the merits of different materials used for block making
- K4 the risks associated with running foil blocking machinery and how to avoid them
- K5 the emergency shut down procedures
- K6 the common foil blocking machine faults, what causes them and how to correct them
- K7 what other faults can occur during foil blocking
- K8 how to recognise when you should correct faults yourself and when you should ask for help
- K9 to whom you must report:
 - a defects in the materials
 - b defects in the products (produced in previous processes)
 - c mechanical problems
- K10 where to find documents giving help in identifying the causes of faults
- K11 the procedures for the removal of waste from your machine
- K12 what production and quality assurance details you are required.

Element 246.2 Run foil blocking machinery

Performance evidence

You must show that you can run blocking machinery consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you can maintain the supply of:
 - a cases, covers, cards
 - b foils
- R2 you maintain the quality of the product and avoid waste by promptly identifying any defects in the product and taking appropriate action
- R3 you determine action to remedy faults:
 - a to be taken by yourself
 - b to be taken by others.

Element 246.3 Maintain foil blocking machinery in clean, safe and useable condition

Performance evidence

You must show that you:

- 1 have a 'safe system of work' before commencing any cleaning
- 2 obtain or prepare a schedule of cleaning, lubrication and maintenance for the machine
- 3 identify the recommended intervals for maintenance and lubrication
- 4 ensure that the schedule is implemented and kept up to date, within the time allowed by your company for cleaning, lubrication and maintenance.
- 5 prevent any build up of debris in or around the machine by regularly removing it and cleaning the machine
- 6 regularly check that the machine is clean enough to prevent marking or damage to the product during normal operation
- 7 use cleaning methods which are safe, avoid harm to the environment and which follow the manufacturer's instructions
- 8 dispose of used cleaning agents and waste materials safely and in accordance with environment/waste disposal legislation
- 9 after cleaning, check that the machine is safe to operate
- 10 examine machinery for defective components or excessive wear at intervals required by your company
- 11 are able to remove and replace faulty or worn components that are your responsibility

Element 246.3 Maintain foil blocking machinery in clean, safe and useable condition

Performance evidence

You must understand:

- K1 what 'safe systems of work' and 'risk assessments' are
- K2 the current legal requirements and industry guidelines for the safe handling and use of hazardous substances
- K3 the risks of handling cleaning materials
- K4 what the production schedule is and how this affects cleaning operations
- K5 why it is important to use cleaning methods which are safe, avoid harming the environment and meet manufacturers' requirements
- K6 what cleaning agents are suitable for use
- K7 your company's procedures for the safe disposal of waste
- K8 what you must do to comply with environmental and waste legislation
- K9 what records need to be kept
- K10 what kinds of components wear or become degraded over time on a foil blocking machine
- K11 what kinds of lubricants to use on a foil blocking machine.

Element 246.3 Maintain foil blocking machinery in clean, safe and useable condition

Performance evidence

Your evidence must show that you:

- R1 you keep appropriate documents to enable you to ensure that cleaning, lubrication and maintenance:
 - a is kept up to date as far as is permitted within your company's production schedule and policy
 - b takes account of the machine manufacturer's recommended cleaning, lubrication and maintenance schedule (if available)
 - c complies with any HSE/PIAC code of practice for foil blocking machines
 - d is undertaken at times required by your company
- R2 work in a tidy and safe environment and prevent the build up of debris:
 - a inside or on the machine
 - b around the machine
- R3 keep the machine and surrounding area free from:
 - a scrap paper
 - b dust, including paper dust
 - c excessive lubricant
- R4 check that after cleaning the machine is safe to operate and that:
 - a all fixed guards are in place on the machine
 - b any interlocking guards are in place and working correctly
- R5 dispose of the following waste materials properly:
 - a used cleaning agents
 - b solvents and lubricants
 - c production debris
 - d soiled materials.

Unit 301 Ensure your own actions reduce risks to health and safety in the workplace

Introduction

Workplaces and work activities contain hazards that may create risks to the health and safety of workers and visitors. One of the key ways of minimising risk is to identify hazards, evaluate the risks from them, and implement a programme of action to reduce any risks to an acceptable level. This process is known as risk assessment.

This unit requires the candidate to identify the hazards in the workplace and reduce risks from those hazards by ensuring that actual working practice follows the advice and guidance contained in written documents such as the employer's workplace policies and procedures, the industry's codes of practice, suppliers' data sheets on use of substances harmful to health, etc.

Users of this unit must refer to the Knowledge and Understanding Glossary for the Printing suite of NOS for important definitions of terms used in this unit. Text in bold in this unit is defined more fully in the glossary.

There are **two** elements in this unit:

- 1 Element 301.1 Identify hazards and evaluate risks
- 2 Element 301.2 Reduce risks to health and safety in the workplace

This is what the unit covers

Fundamental to this unit is an understanding of the terms hazard and risk. This unit does not require the candidate to undertake a full risk assessment; it is about having an appreciation of significant risks in the workplace and knowing how to identify them and deal with them.

The Health and Safety Executive define a hazard as 'something with the potential to cause harm' and a risk is 'the likelihood of a hazard's potential being realised'. Each organisation should have its own risk control strategy and the candidate is required to work within this.

Almost anything may be a hazard, but it may or may not become a risk. For example: a trailing electrical cable from a piece of equipment is a hazard. If it is trailing across a passageway there is a high risk of someone tripping over it, but if it lies along a wall out of the way, the risk is much less.

Toxic or flammable chemicals stored in a building are a hazard, and by their nature may present a high risk. However, if they are kept in a properly designed secure store, and handled by properly trained and equipped people, the risk is much less than if they are left about in a busy workshop for anyone to use -or misuse.

The risks covered by this unit are those which could result from:

- the use or maintenance of machinery or equipment
- the use of materials or substances
- working practices which do not conform to laid down policies or codes of practice
- unsafe behaviour
- accidental breakages and spillages
- environmental factors.

Element 301.1 Identify hazards and evaluate risks in your workplace

Performance criteria

This is what you need to do:

- 1 correctly name and locate the person(s) responsible for health and safety in your workplace
- 2 identify which workplace policies and procedures are relevant to your working practices
- 3 identify those working practices in any part of your job role which could harm yourself or other persons
- 4 identify those aspects of the workplace which could harm yourself or other persons
- 5 evaluate which of the potentially harmful working practices and the potentially harmful aspects of the workplace are those with the highest risk to you or to others
- 6 report any hazards which present a high risk to the persons responsible for health and safety in the workplace
- 7 deal with hazards with a low risk in accordance with workplace policies and legal requirements.

Element 301.2 Reduce risks to health and safety in the workplace

Performance criteria

This is what you need to do:

- 1 carry out your working practices in accordance with legal requirements
- 2 follow the most recent workplace policies and procedures for your job role
- 3 rectify those health and safety risks within your capability and the scope of your job responsibilities
- 4 pass on any suggestions for reducing risks to health and safety within your job role to the responsible persons
- 5 make sure your personal conduct in the workplace does not endanger the health and safety of yourself or other persons
- 6 follow suppliers' or manufacturers' instructions for the safe use of equipment, materials or products
- 7 report any differences between workplace policies and procedures and suppliers / manufacturers instructions
- 8 make sure your personal presentation at work:
 - a meets any legal duties
 - b ensures the health and safety of yourself and others
 - c is in accordance with workplace policies and procedures.

Unit 301 **Ensure your own actions reduce risks to health and safety in the workplace**

Knowledge and understanding

This is the knowledge and understanding you need to complete this unit successfully. For further detail you must refer to the Knowledge and Understanding Glossary for the Printing suite of National Occupational Standards.

K3 Health and Safety

- 1 Legal duties for health and safety in the workplace as defined by the relevant health and safety legislation
- 2 Your duties and responsibilities for health and safety as defined by any specific legislation covering your job role
- 3 Workplace policies and procedures
- 4 Working Practices
- 5 Hazards and risks in the workplace, their assessment and the action to take to deal with them
- 6 Hazards and risks in your own job, their assessment and the action to take to deal with them
- 7 Manufacturers' and suppliers' health and safety instructions / advice
- 8 Personal Presentation
- 9 How to stop a machine in the event of an emergency

K6 Communication

- 1 With colleagues
- 2 With visitors

K7 Workplace policy and practice

- 1 The working practices existing in the workplace

K21 Environmental

- 1 The legal requirements for the classification, storage, carriage and disposal of waste
- 2 Any specific environmental legislation that covers processes in your company
- 3 Control of pollution

K25 Cleaning, Lubrication and Maintenance

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

Unit 302

Improve individual and organisational performance

Introduction

In order to compete successfully, commercial businesses have to continuously improve their products and services; other kinds of organisations need to keep up to date with technology and best practice.

One of the ways in which organisations improve is by adopting a culture that encourages their people to take responsibility for improving their own and their organisation's performance. This often involves individuals acquiring new skills or expertise, taking on additional responsibilities and making improvements to working practices.

This unit is about regularly reviewing, planning, implementing and evaluating the success of objectives designed to improve your own performance as well as the performance of your organisation or team.

This unit consists of **three** elements:

- 1 Element 302.1 Evaluate and develop your own skills and expertise
- 2 Element 302.2 Improve customer service delivery
- 3 Element 302.3 Improve quality, productivity and team working within your organisation

This is what the unit covers

The first stage of the planning cycle involves review. You will need to involve colleagues at work and ideally customers. You should discuss which kinds of performance improvements are likely to benefit you and your organisation. Detailed notes should be kept to help in the preparation of an action plan.

Once you have collected sufficient constructive advice and ideas, you will need to discuss them with your manager and agree on the priorities. It is important to ensure that the objectives agreed are achievable.

The objectives that you agree with your manager should enable specific targets to be identified that can be written into an action plan. There must be a way of measuring any targets that you set and you should agree how they will be measured. It is also important to set out realistic timescale.

For the purpose of this unit, the action plan should include, as a minimum, proposals for:

- improvement to your own skills and knowledge
- improvement to customer service delivery
- improvements to quality, productivity and team working within your organisation.

Once agreed, the action plan should become a 'working' document – not one which is put away and forgotten about. You should frequently check progress towards achievement of the objectives, and make a note of any changes to the timescales that were previously agreed.

If the plan soon becomes out of date because, for example,

- all the targets or objectives are achieved very quickly
- it proves impossible to make progress towards any of the targets
- there is a change of strategy within your organisation
- operational changes affect your or your team's plans

you must go back to your manager and revise the plan as soon as it becomes apparent that major changes are necessary

It is perfectly normal to achieve some things in an action plan and not others. What is important is to honestly evaluate the progress made towards the entire plan at reasonable intervals – at least every three months, but more often if you wish -and then create a revised or a new plan for the next period.

Scope

To achieve this unit, it is not necessary to show that all objectives or targets in action plans have been met.

However, the evidence must show that action planning and review covering all the areas specified in this standard is a continuing activity over a reasonable timescale. It is unlikely that such evidence could be produced in less than six months.

The evidence must show that action plans have been used as working documents and updated regularly. A single action plan with little evidence of the cycle of review through to evaluation is also insufficient.

Element 302.1 Evaluate and develop your own skills and expertise

Performance criteria

This is what you need to do:

- 1 objectively assess your existing skills and expertise against current industry standards
- 2 identify ways in which you can improve your performance at work by improving your skills and expertise
- 3 seek constructive feedback from others on how your performance at work could be improved
- 4 identify with your manager areas for development to maintain and improve your own skills and expertise
- 5 set yourself improvement objectives which are specific and achievable
- 6 agree an action plan with your manager that includes realistic timescales and measurable targets
- 7 evaluate your progress and update your action plan regularly with your manager.

Element 302.2 Improve customer service delivery

Performance criteria

This is what you need to do:

- 1 check that the service you and your team give meets your customers' needs and expectations
- 2 where you or your team could have given better service to your customers identify how the service could have been improved
- 3 include in your personal action plan at least one target that should result in an improvement to the service you or your team give to customers
- 4 share relevant information with others in your team to improve your organisation's customer service delivery
5. provide evidence that the service you and / or your team give to customers has improved over time.

*customers in this context may be 'internal' or 'external' to the workplace

Element 302.3 Improve quality, productivity and team working within your organisation

Performance criteria

This is what you need to do:

- 1 periodically identify possible improvements to the quality of your organisation's products or services by improvements to:
 - a your organisation's systems or procedures
 - b your own skills or expertise
 - c your organisation's resources
 - d team working within your organisation
- 2 periodically identify possible improvements to your organisation's productivity by improvements to:
 - a your organisation's systems or procedures
 - b your own skills or expertise
 - c your organisation's resources
 - d team working within your organisation
- 3 discuss with your manager the improvements to quality, productivity and team working that you have identified
- 4 include in your personal development plan at least one target that might contribute to improvements in your organisation's quality of product / service, productivity and team working
- 5 provide evidence that the quality of product or service, productivity and team working within your organisation has been maintained or improved over time.

Unit 302 Improve individual and organisational performance

Knowledge and understanding

This is the knowledge and understanding you need to complete this unit successfully. For further detail you must refer to the Knowledge and Understanding Glossary for the Printing suite of National Occupational Standards.

K6 Communication

- 1 With colleagues
- 2 With customers

K7 Workplace policy and practice

- 1 Workplace objectives, priorities, standards and procedures
- 2 The range of work carried out in the workplace
- 3 The working practices existing in the workplace
- 4 The key job roles within the printing and graphic communications industry and their main purposes

K8 The identification and assessment of printing options

- 1 The reasons for selecting one process over another
- 2 The choice of processes for any particular product
- 3 The stages in the printing process from pre-press to printed product

K9 Time and Resources

- 1 The different types of resource, including labour, materials, machinery
- 2 The relationship between resource usage and profitability
- 3 How to maximise productivity
- 4 The relationship between productivity and competitiveness

K20 Management

- 1 Target-setting
- 2 Problem solving
- 3 Ways of presenting and describing workplace activities
- 4 Business Improvement Techniques

K22 Quality Assurance and Control

- 1 The main features of quality assurance and quality control systems
- 2 Techniques for controlling quality, including inspection, testing, sampling, use of input and output controls
- 3 Equipment for controlling quality in printing

K27 Personal Development

- 1 The principles of personal development planning and training
- 2 Developing people at work

Unit 328 Control adhesive binding machinery

Introduction

To achieve your unit certificate, you must show that you can:

- 1 Element 328.1 Set up adhesive binding machinery
- 2 Element 328.2 Run adhesive binding machinery
- 3 Element 328.3 Plan and implement a programme of maintenance for adhesive binding machinery
- 4 Element 328.4 Keep adhesive binding machinery in a clean and safe operating condition

This involves:

- identifying the job requirements
- checking that adhesive binding machinery is working properly
- checking that safety devices are working properly
- running the adhesive binding machine safely
- adjusting settings, where necessary to maintain the required standard
- checking that the work meets the required standard
- identifying faults and taking action to deal with them
- unloading and stacking the finished product.

Collecting the evidence for this unit

Your performance evidence must show that you have covered all of the statements in each element, and must be the result of real work activities in actual production situations. Simulation is **not** acceptable for this unit. Video recording evidence is ideal.

Your assessor will need to be satisfied that you have the necessary understanding specified in each 'K' list. Where this is not evident from your performance, you may be asked oral or written questions, or to write a short report.

You may need to provide other information to support your performance evidence or be able to point to where such evidence may be found within your company. Here are some examples:

- job instructions
- samples of finished jobs
- production records showing the time taken to produce the job and/or the quantity produced.

Please note: unit 340 may **not** be used in conjunction with unit 328.

Element 328.1 Set up adhesive binding machinery

Performance criteria

You must show that you:

- 1 check that you have all the details you need for the job
- 2 check that you have enough adhesive of the right type for the job
- 3 promptly report to your manager, if the adhesive provided is not correct or sufficient
- 4 correctly prepare the book-block spine to receive the adhesive
- 5 set up the adhesive binding machinery, so that:
 - a covers are fed squarely
 - b score lines do not break the cover surface
 - c book blocks are transferred squarely within clamps
 - d spine preparation gives the correct glue penetration of the paper
 - e glue is applied evenly at the correct temperature
 - f books are delivered from the machine without damage or marking
- 6 produce a sample from the machine and check that it matches the required standards
- 7 make adjustments if necessary, to enable the standards to be met
- 8 report promptly to your manager, if the standards cannot be met
- 9 check that your work area is safe and ready for production.

Element 328.1 Set up adhesive binding machinery

Knowledge and understanding

You must understand:

- K1 what details you need for the job
- K2 the principles of adhesive binding
- K3 the sequence of set up tasks for the adhesive binding machine
- K4 the common adhesive binding set-up faults, what causes them and how to prevent them
- K5 the risks associated with setting up adhesive binding machinery, and how to avoid them
- K6 the emergency shut-down procedures
- K7 the binding requirements of:
 - a unsewn and sewn sections
 - b covers with two and four scores
 - c coated and uncoated papers
- K8 the purpose of collating marks and signature marks
- K9 how grain direction of material affects binding quality
- K10 the difference between binding with Hot Melt and Emulsion adhesives.

Element 328.1 Set up adhesive binding machinery

Performance evidence

You must show that you can set up adhesive binding machinery consistently over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

R1 you set up for at least **one** of the following types of section:

- a unsewn sections
- b sewn book blocks

R2 and the following types of cover:

- a two scored
- b four scored (hinge) and side glue

R3 and at least **one** of the following types of cover stock:

- a paper
- b card
- c laminated/varnished

R4 you test and adjust machinery by:

- a visual inspection
- b checking control settings
- c producing a sample from the machine.

Element 328.2 Run adhesive binding machinery

Performance criteria

You must show that you:

- 1 run adhesive binding machinery:
 - a at the required speed
 - b safely and efficiently
- 2 keep up the supply of materials throughout the run
- 3 regularly check that your company's quality standards are met
- 4 accurately identify the causes of faults in production, which result in:
 - a cracking of the surface along score lines
 - b print being out of square on the front cover and spine
 - c rounding of spines
 - d too much and too little glue penetration
 - e poor page-pull strength
 - f covers not registering correctly with book blocks
- 5 correct faults which it is your job to remedy
- 6 promptly report faults which it is not your job to correct
- 7 check that the machine is safe to operate, once faults have been corrected
- 8 accurately record the production and quality assurance details
- 9 follow the correct procedures for the removal of waste
- 10 stack work safely using the approved method.

Element 328.2 Run adhesive binding machinery

Knowledge and understanding

You must understand:

- K1 your company's quality standards
- K2 the risks associated with running adhesive binding machines and how to avoid them
- K3 the emergency shut-down procedures
- K4 the common adhesive binding machine running faults, what causes them and how to correct them
- K5 what other faults can occur during adhesive binding
- K6 how to recognise when you should correct faults yourself, and when you should ask for help
- K7 to whom you should report faults
- K8 where to find documents giving help in identifying the causes of faults
- K9 the procedures for the removal of waste from your machine
- K10 your company's methods for stacking finished work from your machine
- K11 what production and quality assurance records you are required to keep.

Element 328.2 Run adhesive binding machinery

Performance evidence

You must show that you can run adhesive binding machinery consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you maintain the quality of the product and avoid waste by promptly identifying any defects in the product and taking appropriate action
- R2 you maintain the supply of:
 - a book blocks and/or sections
 - b end papers (if used)
 - c covers
 - d adhesive
- R3 and maintain the quality of:
 - a cover position
 - b bond strength
 - c spine and side-gluing
- R4 you decide on action to correct faults:
 - a to be taken by yourself
 - b to be taken by others.

Element 328.3 Plan and implement a programme of maintenance for adhesive binding machinery

Performance criteria

You must show that you:

- 1 obtain or prepare a schedule of maintenance for the adhesive binding machinery
- 2 identify the recommended intervals and points for lubrication and cleaning
- 3 ensure that the maintenance plan for the adhesive binding machine is implemented and kept up to date
- 4 keep records of maintenance work undertaken
- 5 examine machinery for defective components or excessive wear at intervals required by your company
- 6 keep records of faults that occur or are developing and that appropriate action is taken to deal with them either:
 - a as part of the maintenance programme
 - b as an urgent repair by you (if it is your job to deal with it) or
 - c by reporting the problem to the relevant person in your organisation
- 7 are able to remove and replace faulty or worn components that are your responsibility
- 8 maintain a list of parts or consumables that are likely to require periodic replacement and identify those parts that may be required at short notice
- 9 ensure that any parts or consumables identified as being required to be kept 'in stock' are available in the required quantities.

Element 328.3 Plan and implement a programme of maintenance for adhesive binding machinery

Knowledge and understanding

You must understand:

- K1 why manufacturer's of adhesive binding machines specify a schedule of preventative maintenance
- K2 what kinds of components wear or become degraded over time on an adhesive binder
- K3 what kinds of lubricants to use on the adhesive binder
- K4 the properties of different kinds of lubricants
- K5 how to replenish lubricants in dispensers and reservoirs
- K6 how to find part reference numbers and order replacement parts
- K7 the consequences of failing to maintain or inspect your machine in accordance with the manufacturer's specification or any relevant code of practice
- K8 legal requirements and industry guidelines for the safe handling, use and disposal of hazardous substances
- K9 the risks of handling lubricants
- K10 the personal protective equipment which should be worn when handling hazardous substances and lubricants.
- K11 where the principal lubrication points are on your adhesive binder
- K12 to whom you should report existing and developing faults
- K13 what is meant by the term 'safe system of work' and how it applies to maintenance and lubrication activities on an adhesive binder.

Element 328.3 Plan and implement a programme of maintenance for adhesive binding machinery

Performance evidence

You must show that you plan and implement maintenance of the adhesive binder consistently, over a period of time. Your evidence must show that:

- R1 you keep appropriate documents to enable the planning and implementation of maintenance, such as:
 - a the machine manufacturer's recommended maintenance schedules
 - b the machine manufacturer's operating manual and any other relevant documents
 - c HSE/PIAC code of practice for adhesive binders (if there is one)
 - d lists of consumables and parts, including those normally kept 'in stock'
 - e maintenance records
 - f fault reports
- R2 you have a maintenance schedule for the machine, and take part in its implementation as far as your company's production schedules and policies allow
- R3 you identify defective or deteriorating components during:
 - a normal machine running
 - b planned maintenance work
- R4 you are able to diagnose actual or developing machine faults by:
 - a examining output from the machine
 - b examining the machine.

Element 328.4 Keep adhesive binding machinery in a clean and safe operating condition

Performance criteria

You must show that you:

- 1 have a 'safe system of work' and a risk assessment in place before commencing any cleaning
- 2 use cleaning methods which are safe, avoid harm to the environment and which follow the manufacturer's instructions
- 3 dispose of used cleaning agents and waste materials safely and in accordance with environment/waste disposal legislation
- 4 prevent any build up of debris in or around the machine by regularly removing it and cleaning the machine
- 5 regularly check that the machine is clean enough to prevent marking or damage to the product during normal operation
- 6 after cleaning, check that the machine is safe to operate.

Element 328.4 Keep adhesive binding machinery in a clean and safe operating condition

Knowledge and understanding

You must understand:

- K1 what 'safe systems of work' and 'risk assessments' are
- K2 the current legal requirements and industry guidelines for the safe handling and use of hazardous substances
- K3 the risks of handling cleaning materials
- K4 what the production schedule is and how this affects cleaning operations
- K5 why it is important to use cleaning methods which are safe, avoid harming the environment and meet manufacturers' requirements
- K6 what cleaning agents are suitable for use
- K7 your company's procedures for the safe disposal of waste
- K8 what you must do to comply with environmental and waste legislation
- K9 what records need to be kept.

Element 328.4 Keep adhesive binding machinery in a clean and safe operating condition

Performance evidence

You must show that you keep the adhesive binding machinery in a clean and safe operating condition consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that you:

- R1 work in a tidy and safe environment and prevent the build up of debris:
 - a inside or on the machine
 - b around the machine
- R2 keep the machine and surrounding area free from:
 - a scrap paper
 - b dust, including paper dust
 - c excessive lubricant
 - d spent adhesive
- R3 check that after cleaning the machine is safe to operate:
 - a all fixed guards are in place on the machine
 - b any interlocking guards are in place and working correctly
 - c any guards designed to give protection from the milling station and the glue tank are fitted and working correctly
- R4 dispose of the following waste materials properly:
 - a used cleaning agents
 - b solvents and lubricants
 - c production debris
 - d soiled materials.

Unit 329 Control case making machinery

Introduction

To achieve your unit certificate, you must show that you can:

- 1 Element 329.1 Set up case making machinery
- 2 Element 329.2 Run case making machinery
- 3 Element 329.3 Plan and implement a programme of maintenance for case making machinery
- 4 Element 329.4 Keep case making machinery in a clean and safe operating condition

This involves:

- identifying the job requirements
- checking that case making machinery is working properly
- checking that safety devices are working properly
- running the case making machine safely
- adjusting settings, where necessary to maintain the required standard
- checking that work meets the required standard
- identifying faults and taking action to deal with them
- unloading and stacking the finished product.

Collecting the evidence for this unit

Your performance evidence must show that you have covered all of the statements in each element, and must be the result of real work activities in actual production situations. Simulation is **not** acceptable for this unit. Video recording evidence is ideal.

Your assessor will need to be satisfied that you have the necessary understanding specified in each 'K' list. Where this is not evident from your performance, you may be asked oral or written questions, or to write a short report.

You may need to provide other information to support your performance evidence or be able to point to where such evidence may be found within your company. Here are some examples:

- job instructions
- samples of finished jobs
- production records showing the time taken to produce the job and/or the quantity produced.

Element 329.1 Set up case making machinery

Performance criteria

You must show that you:

- 1 check that you have all the details you need for the job
- 2 check that you have enough materials of the right type for the job
- 3 promptly report to your manager, if the materials provided are not correct or sufficient
- 4 set up the case making machine correctly, so that:
 - a boards and hollows transfer from feeders squarely and evenly
 - b cover material transfers from the feeder squarely and evenly
 - c glue is applied evenly at the correct temperature
 - d cover material is turned in evenly and squarely onto boards
 - e cases are delivered from the machine without damage or distortion
- 5 produce a sample from the machine and check that it matches the required standards
- 6 make adjustments if necessary to enable the standards to be met
- 7 report promptly to your manager, if the standards cannot be met
- 8 check that your work area is safe and ready for production.

Element 329.1 Set up case making machinery

Knowledge and understanding

You must understand:

- K1 what details you need for the job
- K2 the principles of case making
- K3 the sequence of set up tasks for the case making machine
- K4 the common case making machine set-up faults, what causes them and how to prevent them
- K5 the risks associated with setting up case making machinery, and how to avoid them
- K6 the emergency shut-down procedures
- K7 which glues are suitable to use with:
 - a paper and cloth covering materials
 - b laminated and coated covering materials
- K8 how the grain direction of boards and cover materials can affect binding quality.

Element 329.1 Set up case making machinery

Performance evidence

You must show that you can set up case making machinery consistently over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you set up for at least **one** of the following binding styles:
 - a full bound case work
 - b quarter bound case work
- R2 and at least **one** of the following types of cover:
 - a plastic coated paper
 - b cloth
 - c paper
 - d pre-printed cover case work
- R3 and at least **one** of the following types of hollow lining:
 - a paper
 - b board
- R4 for at least **one** of the following types of book:
 - a rounded and backed
 - b square backed
- R5 you test and adjust machinery by:
 - a visual inspection
 - b checking control settings
 - c producing a sample from the machine.

Element 329.2 Run case making machinery

Performance criteria

You must show that you:

- 1 run case making machinery:
 - a at the required speed
 - b safely and efficiently
- 2 keep up the supply of materials throughout the run
- 3 regularly check that your company's quality standards are met
- 4 accurately identify the causes of faults in production which result in:
 - a blistering of cover material
 - b uneven turn-ins
 - c turn-ins not tight
 - d cover boards not parallel with each other
 - e cover material not adhering to boards
- 5 correct faults which it is your job to remedy
- 6 promptly report faults which it is not your job to correct
- 7 check that the machine is safe to operate, once faults have been corrected
- 8 accurately record the production and quality assurance details
- 9 follow the correct procedures for the removal of waste
- 10 stack work safely using the approved method.

Element 329.2 Run case making machinery

Knowledge and understanding

You must understand:

- K1 your company's quality standards
- K2 the risks associated with running case making machines and how to avoid them
- K3 the emergency shut-down procedures
- K4 the common case making machine running faults, what causes them and how to correct them
- K5 what other faults can occur during case making
- K6 how to recognise when you should correct faults yourself, and when you should ask for help
- K7 to whom you should report faults
- K8 where to find documents giving help in identifying the causes of faults
- K9 the procedures for the removal of waste from your machine
- K10 your company's methods for stacking finished work from your machine
- K11 what production and quality assurance records you are required to keep.

Element 329.2 Run case making machinery

Performance evidence

You must show that you can run of case making machinery consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you maintain the quality of the product and avoid waste by promptly identifying any defects in the product and taking appropriate action
- R2 you maintain the supply of:
 - a boards
 - b covers
 - c linings
 - d adhesive
- R3 ... and maintain the quality of:
 - a turn-ins
 - b hollow lining
- R4 you decide on action to correct faults:
 - a to be taken by yourself
 - b to be taken by others.

Element 329.3 Plan and implement a programme of maintenance for case making machinery

Performance criteria

You must show that you:

- 1 obtain or prepare a schedule of maintenance for the case making machinery
- 2 identify the recommended intervals and points for lubrication and cleaning
- 3 ensure that the maintenance plan for the case making machine is implemented and kept up to date
- 4 keep records of maintenance work undertaken
- 5 examine machinery for defective components or excessive wear at intervals required by your company
- 6 keep records of faults that occur or are developing and that appropriate action is taken to deal with them either:
 - a as part of the maintenance programme
 - b as an urgent repair by you (if it is your job to deal with it) or
 - c by reporting the problem to the relevant person in your organisation
- 7 are able to remove and replace faulty or worn components that are your responsibility
- 8 maintain a list of parts or consumables that are likely to require periodic replacement and identify those parts that may be required at short notice
- 9 ensure that any parts or consumables identified as being required to be kept 'in stock' are available in the required quantities.

Element 329.3 Plan and implement a programme of maintenance for case making machinery

Knowledge and understanding

You must understand:

- K1 why manufacturers of case making machines specify a schedule of preventative maintenance
- K2 what kinds of components wear or become degraded over time on a case making machine
- K3 what kinds of lubricants to use on the case making machine
- K4 the properties of different kinds of lubricants
- K5 how to replenish lubricants in dispensers and reservoirs
- K6 how to find part reference numbers and order replacement parts
- K7 the consequences of failing to maintain or inspect your machine in accordance with the manufacturer's specification or any relevant code of practice
- K8 legal requirements and industry guidelines for the safe handling, use and disposal of hazardous substances
- K9 the risks of handling lubricants
- K10 the personal protective equipment that should be worn when handling hazardous substances and lubricants
- K11 where the principal lubrication points are on your case making machine
- K12 to whom you should report existing and developing faults
- K13 what is meant by the term 'safe system of work' and how it applies to maintenance and lubrication activities on a case making machine.

Element 329.3 Plan and implement a programme of maintenance for case making machinery

Performance evidence

You must show that you plan and implement maintenance of the case making machine consistently over a period of time. Your evidence must show that:

- R1 you keep appropriate documents to enable the planning and implementation of maintenance, such as:
 - a the machine manufacturer's recommended maintenance schedules
 - b the machine manufacturer's operating manual and any other relevant documents
 - c HSE/PIAC code of practice for case making machines (if there is one)
 - d lists of consumables and parts, including those normally kept 'in stock'
 - e maintenance records
 - f fault reports
- R2 you have a maintenance schedule for the machine, and take part in its implementation as far as your company's production schedules and policies allow
- R3 you identify defective or deteriorating components during:
 - a normal machine running
 - b planned maintenance work
- R4 you are able to diagnose actual or developing machine faults by:
 - a examining output from the machine
 - b examining the machine.

Element 329.4 Keep case-making machinery in a clean and safe operating condition

Performance criteria

You must show that you:

- 1 have a 'safe system of work' and a risk assessment in place before commencing any cleaning
- 2 use cleaning methods which are safe, avoid harm to the environment and which follow the manufacturer's instructions
- 3 dispose of used cleaning agents and waste materials safely and in accordance with environment/waste disposal legislation
- 4 prevent any build up of debris in or around the machine by regularly removing it and cleaning the machine
- 5 regularly check that the machine is clean enough to prevent marking or damage to the product during normal operation
- 6 after cleaning, check that the machine is safe to operate.

Element 329.4 Keep case-making machinery in a clean and safe operating condition

Knowledge and understanding

You must understand:

- K1 what 'safe systems of work' and 'risk assessments' are
- K2 the current legal requirements and industry guidelines for the safe handling and use of hazardous substances
- K3 the risks of handling cleaning materials
- K4 what the production schedule is and how this affects cleaning operations
- K5 why it is important to use cleaning methods which are safe, avoid harming the environment and meet manufacturers' requirements
- K6 what cleaning agents are suitable for use
- K7 your company's procedures for the safe disposal of waste
- K8 what you must do to comply with environmental and waste legislation
- K9 what records need to be kept.

Element 329.4 Keep case-making machinery in a clean and safe operating condition

Performance evidence

You must show that you keep the case-making machinery in a clean and safe operating condition consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that you:

- R1 work in a tidy and safe environment and prevent the build up of debris:
 - a inside or on the machine
 - b around the machine
- R2 keep the machine and surrounding area free from:
 - a scrap materials
 - b dust, including paper dust
 - c excessive lubricant
 - d adhesive
- R3 check that after cleaning the machine is safe to operate:
 - a all fixed guards are in place on the machine
 - b any interlocking guards are in place and working correctly
- R4 dispose of the following waste materials properly:
 - a used cleaning agents
 - b solvents and lubricants
 - c production debris
 - d soiled materials.

Unit 330 Control casing-in machinery

Introduction

To achieve your unit certificate, you must show that you can:

- 1 Element 330.1 Set up casing-in machinery
- 2 Element 330.2 Run casing-in machinery
- 3 Element 330.3 Plan and implement a programme of maintenance for casing-in machinery
- 4 Element 330.4 Keep casing-in machinery in a clean and safe operating condition

This involves:

- identifying the job requirements
- checking that casing-in machinery is working properly
- checking that safety devices are working properly
- running the casing-in machine safely
- adjusting settings, when necessary to maintain the required standard
- checking that work meets the required standard
- identifying faults and taking action to deal with them
- unloading and stacking the finished product.

Collecting the evidence for this unit

Your performance evidence must show that you have covered all of the statements in each element, and must be the result of real work activities in actual production situations. Simulation is not acceptable for this unit. Video recording evidence is ideal.

Your assessor will need to be satisfied that you have the necessary understanding specified in each 'K' list. Where this is not evident from your performance, you may be asked oral or written questions, or to write a short report.

You may need to provide other information to support your performance evidence or be able to point to where such evidence may be found within your company. Here are some examples:

- job instructions
- samples of finished jobs
- production records showing the time taken to produce the job and/or the quantity produced.

Element 330.1 Set up casing-in machinery

Performance criteria

You must show that you:

- 1 check that you have all the details you need for the job
- 2 check that you have enough materials of the right type for the job
- 3 promptly report to your manager, if the materials provided are not correct or sufficient
- 4 set up the casing-in machine correctly, so that:
 - a book blocks are transported squarely and evenly
 - b cases are transported squarely, evenly and without distortion
 - c adhesive is applied evenly to book joints and endpapers
 - d book blocks are securely and cleanly attached to cases
 - e squares are of equal size all round
 - f books are delivered without damage or distortion
- 5 produce a sample from the machine and check that it matches the required standards
- 6 make adjustments if necessary to enable the standards to be met
- 7 report promptly to your manager, if the standards cannot be met
- 8 check that your work area is safe and ready for production.

Element 330.1 Set up casing-in machinery

Knowledge and understanding

You must understand:

- K1 what details you need for the job
- K2 the principles of casing-in
- K3 the sequence of set up tasks for the casing-in machine
- K4 the common casing-in machine set-up faults, what causes them and how to prevent them
- K5 the risks associated with making ready casing-in machinery, and how to avoid them
- K6 the emergency shut-down procedures
- K7 the different binding requirements of:
 - a square backed books
 - b rounded and backed books
- K8 which glues are suitable for the casing-in process
- K9 how the grain direction of boards and book blocks can affect binding quality
- K10 the degree of warping produced by gluing different types of boards and papers.

Element 330.1 Set up casing-in machinery

Performance evidence

You must show that you can set up casing-in machinery consistently over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you set up to produce:
 - a case bound rounded and backed books
 - or
 - b case bound square backed books
- R2 for jobs which include:
 - a tape sewn sections
 - or
 - b multi book back linings
 - or
 - c head and tail bands
- R3 and the following types of case cover stock:
 - a plastic/coated
 - or
 - b cloth
 - or
 - c paper
- R4 and the following types of hollow lining
 - a paper
 - or
 - b board
- R5 you test and adjust machinery by:
 - a visual inspection
 - b checking control settings
 - c producing a sample from the machine.

Element 330.2 Run casing-in machinery

Performance criteria

You must show that you:

- 1 run casing-in equipment:
 - a at the required speed
 - b safely and efficiently
- 2 keep up the supply of materials throughout the run
- 3 regularly check that your company's quality standards are met
- 4 accurately identify the causes of faults in production, which result in:
 - a the book block incorrectly positioned within the case
 - b the book block not glued securely into the case
 - c glue marking of the case and book block
 - d lifting of endpapers from cover turn-in
- 5 correct faults which it is your job to remedy
- 6 promptly report faults which it is not your job to correct
- 7 check that the machine is safe to operate, once faults have been corrected
- 8 accurately record the production and quality assurance details
- 9 follow the correct procedures for the removal of waste
- 10 stack work safely using the approved method.

Element 330.2 Run casing-in machinery

Knowledge and understanding

You must understand:

- K1 your company's quality standards
- K2 the risks associated with running casing-in machinery and how to avoid them
- K3 the emergency shut-down procedures
- K4 the common casing-in machine running faults, what causes them and how to correct them
- K5 what other faults can occur when casing-in
- K6 how to recognise when you should correct faults yourself and when you should ask for help
- K7 to whom you should report faults
- K8 where to find documents giving help in identifying the causes of faults
- K9 the procedures for the removal of waste from your machine
- K10 your company's methods for stacking finished work from your machine
- K11 what production and quality assurance details you are required to keep.

Element 330.2 Run casing-in machinery

Performance evidence

You must show that you can run casing-in machinery consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you produce:
- a case bound rounded and backed books
 - b case bound square backed books

- R2 you maintain the supply of:
- a cases
 - b book blocks
 - c adhesive

- R3 and maintain the quality of:
- a case position
 - b spine shape
 - c bond strength

- R4 you decide on action to correct faults:
- a to be taken by yourself
 - b to be taken by others.

Element 330.3 Plan and implement a programme of maintenance for casing-in machinery

Performance criteria

You must show that you:

- 1 obtain or prepare a schedule of maintenance for the casing-in machinery
- 2 identify the recommended intervals and points for lubrication and cleaning
- 3 ensure that the maintenance plan for the casing-in machine is implemented and kept up to date, within the time allowed by your company for lubrication and maintenance
- 4 keep records of maintenance work undertaken
- 5 examine machinery for defective components or excessive wear at intervals required by your company
- 6 keep records of faults that occur or are developing and that appropriate action is taken to deal with them either:
 - a as part of the maintenance programme
 - b as an urgent repair by you (if it is your job to deal with it) or
 - c by reporting the problem to the relevant person in your organisation
- 7 are able to remove and replace faulty or worn components that are your responsibility
- 8 maintain a list of parts or consumables that are likely to require periodic replacement and identify those parts that may be required at short notice
- 9 ensure that any parts or consumables identified as being required to be kept 'in stock' are available in the required quantities.

Element 330.3 Plan and implement a programme of maintenance for casing-in machinery

Knowledge and understanding

You must understand:

- K1 why manufacturers of casing-in machines specify a schedule of preventative maintenance
- K2 what kinds of components wear or become degraded over time on a casing-in machine
- K3 what kinds of lubricants to use on the casing-in machine
- K4 the properties of different kinds of lubricants
- K5 how to replenish lubricants in dispensers and reservoirs
- K6 how to find part reference numbers and order replacement parts
- K7 the consequences of failing to maintain or inspect your machine in accordance with the manufacturer's specification or any relevant code of practice
- K8 legal requirements and industry guidelines for the safe handling, use and disposal of hazardous substances
- K9 the risks of handling lubricants
- K10 the personal protective equipment which should be worn when handling hazardous substances and lubricants
- K11 where the principal lubrication points are on your casing-in machine
- K12 to whom you should report existing and developing faults
- K13 what is meant by the term 'safe system of work' and how it applies to maintenance and lubrication activities on a casing-in machine.

Element 330.3 Plan and implement a programme of maintenance for casing-in machinery

Performance evidence

You must show that you plan and implement maintenance of the casing-in machine consistently, over a period of time. Your evidence must show that:

- R1 you keep appropriate documents to enable the planning and implementation of maintenance, such as:
 - a the machine manufacturer's recommended maintenance schedules
 - b the machine manufacturer's operating manual and any other relevant documents
 - c any HSE/PIAC code of practice for casing-in machinery
 - d lists of consumables and parts, including those normally kept 'in stock'
 - e maintenance records
 - f fault reports
- R2 you have a maintenance schedule for the machine, and take part in its implementation as far as your company's production schedules and policies allow
- R3 you identify defective or deteriorating components during:
 - a normal machine running
 - b planned maintenance work
- R4 you are able to diagnose actual or developing machine faults by:
 - a examining output from the machine
 - b examining the machine.

Element 330.4 Keep casing-in machinery in a clean and safe operating condition

Performance criteria

You must show that you:

- 1 have a 'safe system of work' and a risk assessment in place before commencing any cleaning
- 2 use cleaning methods which are safe, avoid harm to the environment and which follow the manufacturer's instructions
- 3 dispose of used cleaning agents and waste materials safely and in accordance with environment/waste disposal legislation
- 4 prevent any build up of debris in or around the machine by regularly removing it and cleaning the machine
- 5 regularly check that the machine is clean enough to prevent marking or damage to the product during normal operation
- 6 after cleaning, check that the machine is safe to operate.

Element 330.4 Keep casing-in machinery in a clean and safe operating condition

Knowledge and understanding

You must understand:

- K1 what 'safe systems of work' and 'risk assessments' are
- K2 the current legal requirements and industry guidelines for the safe handling and use of hazardous substances
- K3 the risks of handling cleaning materials
- K4 what the production schedule is and how this affects cleaning operations
- K5 why it is important to use cleaning methods which are safe, avoid harming the environment and meet manufacturers' requirements
- K6 what cleaning agents are suitable for use
- K7 your company's procedures for the safe disposal of waste
- K8 what you must do to comply with environmental and waste legislation
- K9 what records need to be kept.

Element 330.4 Keep casing-in machinery in a clean and safe operating condition

Performance evidence

You must show that you keep the casing-in machinery in a clean and safe operating condition consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that you:

- R1 work in a tidy and safe environment and prevent the build up of debris
 - a inside or on the machine
 - b around the machine
- R2 keep the machine and surrounding area free from:
 - a scrap paper
 - b dust, including paper dust
 - c excessive lubricant
 - d adhesive
- R3 check that after cleaning the machine is safe to operate:
 - a all fixed guards are in place on the machine
 - b any interlocking guards are in place and working correctly
- R4 dispose of the following waste materials properly:
 - a used cleaning agents
 - b solvents and lubricants
 - c production debris
 - d soiled materials.

Unit 331 Control programmatic guillotines

Introduction

To achieve your unit certificate, you must show that you can:

- 1 Element 331.1 Set up programmatic guillotines
- 2 Element 331.2 Run programmatic guillotines
- 3 Element 331.3 Plan and implement a programme of maintenance for programmatic guillotines
- 4 Element 331.4 Keep programmatic guillotines in a clean and safe operating condition

This involves:

- identifying the job requirements
- checking that the guillotine is working properly
- checking that safety devices are working properly
- running the guillotine safely
- adjusting settings, where necessary to maintain the required standard
- checking that work meets the required standard
- identifying faults and taking action to deal with them
- unloading and stacking the finished product.

Collecting the evidence for this unit

Your performance evidence must show that you have covered all of the statements in each element, and must be the result of real work activities in actual production situations. Simulation is **not** acceptable for this unit. Video recording evidence is ideal.

Your assessor will need to be satisfied that you have the necessary understanding specified in each 'K' list. Where this is not evident from your performance, you may be asked oral or written questions, or to write a short report.

You may need to provide other information to support your performance evidence or be able to point to where such evidence may be found within your company. Here are some examples:

- job instructions
- samples of finished jobs
- production records showing the time taken to produce the job and/or the quantity produced.

Element 331.1 Set up programmatic guillotines

Performance criteria

You must show that you:

- 1 check that a current safety test certificate exists for the guillotine
- 2 check that the daily check-list has been completed and that guards are in place and operating correctly
- 3 check that you have all the details you need for the job
- 4 check that you have enough materials of the right type for the job
- 5 promptly report to your manager, if the materials provided are not correct or sufficient
- 6 assess whether the work should be cut:
 - a using an existing programmed cutting sequence
 - b using a newly created programmed cutting sequence
 - c by setting the back fence manually for each cut
(*manually means without the use of the programme)
- 7 set up the guillotine correctly so that:
 - a the required cut size(s) is(are) produced with minimum handling
 - b cuts are clean, square and accurately positioned
 - c clamp pressure does not cause marking or set-off
- 8 produce a sample from the machine and check that it matches the required standards
- 9 make adjustments if necessary to enable the standards to be met
- 10 report promptly to your manager, if the standards cannot be met
- 11 check that your work area is safe and ready for production.

Element 331.1 Set up programmatic guillotines

Knowledge and understanding

You must understand:

- K1 what details you need for the job
- K2 the principles of guillotining
- K3 how to use the programmatic features of the guillotine
- K4 common guillotine set-up faults, what causes them and how to prevent them
- K5 the risks associated with setting up a guillotine, and how to avoid them
- K6 the emergency shut-down procedures
- K7 the requirements of other processes which follow cutting
- K8 what is meant when printed material is produced by:
 - a sheetwork
 - b work and turn
 - c work and tumble.

Element 331.1 Set up programmatic guillotines

Performance evidence

You must show that you can set up guillotines consistently over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you can create and save a cutting programme for:
 - a trimming square to size
 - b sub-divisional work
 - c the removal of gutters imposed in the printed sheet
- R2 you can edit and save an existing programme in order to:
 - a alter a programmed cutting position
 - b delete a cut from the cutting sequence
 - c add a cut to the cutting sequence
- R3 you can set up the guillotine for job stock which is:
 - a flat printed stock
 - or
 - b made up work
- R4 and which is:
 - a coated or uncoated paper
 - and
 - b coated or uncoated board
- R5 you test and adjust machinery by:
 - a visual inspection
 - b checking control settings
 - c producing a sample from the machine.

Element 331.2 Run programmatic guillotines

Performance criteria

You must show that you:

- 1 run the guillotine:
 - a at the required speed
 - b safely and efficiently
- 2 keep up the supply of materials throughout the run
- 3 regularly check that your company's quality standards are met
- 4 accurately identify the causes of faults in production, which result in:
 - a cut work being out of square
 - b cut work being under or over size
 - c cut edges not smooth
 - d unacceptable size variation between top and bottom of pile
 - e marking of material from clamp
- 5 accurately record the production and quality assurance details
- 6 follow the correct procedures for the removal of waste
- 7 stack work safely using the approved method.

Element 331.2 Run programmatic guillotines

Knowledge and understanding

You must understand:

- K1 your company's quality standards
- K2 the risks associated with running guillotines, and how to avoid them
- K3 the emergency shut-down procedures
- K4 the common guillotine running faults, what causes them and how to correct them
- K5 what other faults can occur during guillotine cutting
- K6 how to recognise when you should correct faults yourself, and when you should ask for help
- K7 to whom you should report faults
- K8 where to find documents giving help in identifying the causes of faults
- K9 the procedure for the removal of waste from your machine
- K10 your company's methods for stacking finished work from your machine
- K11 what production and quality assurance records you are required to keep
- K12 how to deal with the cutting of pre-folded material.

Element 331.2 Run programmatic guillotines

Performance evidence

You must show that you can operate guillotines consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you operate the guillotine for:
 - a trimming square to size
 - b sub-divisional work
- R2 using material which is:
 - a flat printed stock
 - b processed work
- R3 and maintain the quality of:
 - a cuts
 - b the material.

Element 331.3 Plan and implement a programme of maintenance for programmatic guillotines

Performance criteria

You must show that you:

- 1 obtain or prepare a complete schedule of maintenance for the guillotine
- 2 identify the recommended intervals for maintenance and lubrication
- 3 ensure that the maintenance plan is implemented and kept up to date as far as is possible within the time allowed by your company for lubrication and maintenance.
- 4 keep records of maintenance work undertaken
- 5 examine the guillotine for defective components or excessive wear at intervals required by your company
- 6 keep records of faults that occur or are developing and that appropriate action is taken to deal with them either:
 - a as part of the maintenance programme
 - b as an urgent repair by you (if it is your job to deal with it) or
 - c by reporting the problem to the relevant person in your organisation
- 7 are able to change the guillotine blade correctly and safely
- 8 are able to check and, if necessary, adjust the back-fence to deal with:
 - a cutting out of square from side to side
 - b cutting inaccurately from top to bottom of the stack
 - c sheets becoming trapped under the back fence during forward travel
- 9 maintain a list of parts or consumables that are likely to require periodic replacement and identify those parts that may be required at short notice
- 10 ensure that any parts or consumables identified as being required to be kept 'in stock' are available in the required quantities.

Element 331.3 Plan and implement a programme of maintenance for programmatic guillotines

Knowledge and understanding

You must understand:

- K1 why manufacturer's of guillotines specify a schedule of preventative maintenance
- K2 what kinds of components wear or become degraded over time on a guillotine
- K3 what kinds of lubricants to use on the guillotine
- K4 the properties of different kinds of lubricants
- K5 how to replenish lubricants in dispensers and reservoirs
- K6 how to find part reference numbers and order replacement parts
- K7 the HSE/PIAC recommendation and requirements relating to guillotines
- K8 legal requirements and industry guidelines for the safe handling, use and disposal of hazardous substances
- K9 the risks of handling lubricants
- K10 the personal protective equipment which should be worn when handling hazardous substances and lubricants.
- K11 where the principal lubrication points are on your guillotine
- K12 to whom you should report existing and developing faults
- K13 what is meant by the term 'safe system of work' and how it applies to maintenance and lubrication activities on a guillotine
- K14 the types of knives and cutting sticks available for guillotines and their characteristics
- K15 knife grinding angles and their significance.

Element 331.3 Plan and implement a programme of maintenance for programmatic guillotines

Performance evidence

You must show that you plan and implement maintenance of the guillotine consistently, over a period of time. Your evidence must show that:

- R1 you keep appropriate documents to enable the planning and implementation of maintenance, such as:
 - a the machine manufacturer's recommended maintenance schedules
 - b the machine manufacturer's operating manual and any other relevant documents
 - c the HSE/PIAC code of practice for paper-cutting guillotines
 - d lists of consumables and parts, including those normally kept 'in stock'
 - e maintenance records
 - f fault reports
- R2 you have a maintenance schedule for the machine, and take part in its implementation as far as your company's production schedules and policies allow
- R3 you identify defective or deteriorating components during
 - a normal machine running
 - b planned maintenance work
- R4 you are able to diagnose actual or developing machine faults by:
 - a examining output from the machine
 - b examining the machine.

Element 331.4 Keep programmatic guillotines in a clean and safe operating condition

Performance criteria

You must show that you:

- 1 have a 'safe system of work' and a risk assessment in place before commencing any cleaning
- 2 use cleaning methods which are safe, avoid harm to the environment and which follow the manufacturer's instructions
- 3 dispose of used cleaning agents and waste materials safely and in accordance with environment/waste disposal legislation
- 4 prevent any build up of debris in or around the machine by regularly removing it and cleaning the machine
- 5 regularly check that the machine is clean enough to prevent marking or damage to the product during normal operation
- 6 after cleaning, check that the machine is safe to operate.

Element 331.4 Keep programmatic guillotines in a clean and safe operating condition

Knowledge and understanding

You must understand:

- K1 what 'safe systems of work' and 'risk assessments' are
- K2 the current legal requirements and industry guidelines for the safe handling and use of hazardous substances
- K3 the risks of handling cleaning materials
- K4 what the production schedule is and how this affects cleaning operations
- K5 why it is important to use cleaning methods which are safe, avoid harming the environment and meet manufacturers' requirements
- K6 what cleaning agents are suitable for use
- K7 your company's procedures for the safe disposal of waste
- K8 what you must do to comply with environmental and waste legislation
- K9 what records need to be kept.

Element 331.4 Keep programmatic guillotines in a clean and safe operating condition

Performance evidence

You must show that you keep the guillotine in a clean and safe operating condition consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that you:

- R1 work in a tidy and safe environment and prevent the build up of debris:
 - a inside or on the machine
 - b around the machine
- R2 keep the machine and surrounding area free from:
 - a scrap paper
 - b dust, including paper dust
 - c excessive lubricant
- R3 check that after cleaning the machine is safe to operate:
 - a all fixed guards are in place on the machine
 - b any interlocking or photo-electric guards are working correctly
- R4 dispose of the following waste materials properly:
 - a used cleaning agents
 - b solvents and lubricants
 - c production debris
 - d soiled materials.

Unit 332 Control folding machinery

Introduction

To achieve your unit certificate, you must show that you can:

- 1 Element 332.1 Set up folding machinery
- 2 Element 332.2 Run folding machinery
- 3 Element 332.3 Plan and implement a programme of maintenance for folding machinery
- 4 Element 332.4 Keep folding machinery in a clean and safe operating condition

This involves:

- identifying the job requirements
- checking that the folding machine is working properly
- checking that safety devices are working properly
- running folding machinery safely
- adjusting settings, where necessary to maintain the required standard
- checking that work meets the required standard
- identifying faults and taking action to deal with them
- unloading and stacking the finished product.

Collecting the evidence for this unit

Your performance evidence must show that you have covered all of the statements in each element, and must be the result of real work activities in actual production situations. Simulation is **not** acceptable for this unit. Video recording evidence is ideal.

Your assessor will need to be satisfied that you have the necessary understanding specified in each 'K' list. Where this is not evident from your performance, you may be asked oral or written questions, or to write a short report.

You may need to provide other information to support your performance evidence or be able to point to where such evidence may be found within your company. Here are some examples:

- job instructions
- samples of finished jobs
- production records showing the time taken to produce the job and/or the quantity produced.

Please note: unit 339 may **not** be used in conjunction with unit 332.

Element 332.1 Set up folding machinery

Performance criteria

You must show that you:

- 1 check that you have all the details you need for the job
- 2 check that you have enough materials of the right type for the job
- 3 promptly report to your manager, if the materials provided are not correct or sufficient
- 4 set up folding machinery correctly, so that:
 - a sheets are fed squarely and consistently, without damage or distortion
 - b mis-fed sheets are detected by the machine's device
 - c sheets are folded without damage, and are free from unacceptable creasing
 - d work is slit and perforated squarely and cleanly
 - e sections are delivered without damage
- 5 produce a sample from the machine and check that it matches the required standards
- 6 make adjustments if necessary to enable the standards to be met
- 7 report promptly to your manager, if the standards cannot be met
- 8 check that your work area is safe and ready for production.

Element 332.1 Set up folding machinery

Knowledge and understanding

You must understand:

- K1 what details you need for the job
- K2 the principles of machine folding
- K3 the sequence of set up tasks for the folding machine
- K4 the common folding machine set-up faults, what causes them and how to prevent them
- K5 the risks associated with setting up folding machines, and how to avoid them
- K6 the emergency shut-down procedures
- K7 the requirements of other processes which follow folding
- K8 what is meant when printed material is produced by:
 - a sheetwork
 - b half sheetwork
 - c work and turn
 - d work and tumble
- K9 the purpose of collating marks and signature marks
- K10 how folds are made by:
 - a knife method
 - b buckle method
- K11 how sheets are fed by:
 - a pile feeders
 - b continuous feeders
- K12 when to use perforating discs, and when not to use them
- K13 how a heavy perforation can cause problems for other processes.

Element 332.1 Set up folding machinery

Performance evidence

You must show that you can set up folding machinery consistently over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you identify:
 - a the job stock and grammage
 - b supplied and finished size
 - c grain direction
- R2 you check that the print layout matches:
 - a the imposition
 - b the required fold sequence
- R3 you can set up for the following folding schemes:
 - a parallel schemes
 - b right angle schemes
 - c combination schemes
- R3 for sections between 4 pp and 16 pp which are:
 - a portrait
 - b landscape
 - c lapped fore-edge
- R4 and for stock which is:
 - a coated paper
 - b uncoated paper
- R5 you test and adjust machinery by:
 - a visual inspection
 - b checking control settings
 - c producing a sample from the machine.

Element 332.2 Run folding machinery

Performance criteria

You must show that you:

- 1 run folding machinery:
 - a at the required speed
 - b safely and efficiently
- 2 keep up the supply of materials throughout the run
- 3 regularly check that your company's quality standards are met
- 4 accurately identify the causes of faults in production, which result in:
 - a sheets sticking together
 - b sheets failing to enter fold unit
 - c sheets failing to leave fold unit
 - d sheets folded out of square
 - e slitting and perforating not parallel to sheet edge
 - f unacceptable creasing of sections
 - g marking of sections
- 5 correct faults which it is your job to remedy
- 6 promptly report faults which it is not your job to correct
- 7 check that the machine is safe to operate, once faults have been corrected
- 8 accurately record the production and quality assurance details
- 9 follow the correct procedures for the removal of waste
- 10 stack work safely using the approved method.

Element 332.2 Run folding machinery

Knowledge and understanding

You must understand:

- K1 your company's quality standards
- K2 the risks associated with running folding machinery, and how to avoid them
- K3 the emergency shut-down procedures
- K4 the common folding machine running faults, what causes them and how to correct them
- K5 what other faults can occur during folding
- K6 how to recognise when you should correct faults yourself, and when you ask for help
- K7 to whom you should report faults
- K8 where to find documents giving help in identifying the causes of faults
- K9 the procedure for the removal of waste from your machine
- K10 your company's methods for stacking finished work from your machine
- K11 what production and quality assurance records you are required to keep
- K12 how grain direction affects the folding process
- K13 which types of material are most at risk of rub marking
- K14 which printed colours are most at risk of marking
- K15 the purpose of pre-creasing
- K16 the purpose of gluing attachments and how they work.

Element 332.2 Run folding machinery

Performance evidence

You must show that you can run folding machinery consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you can fold to:
 - a parallel schemes
 - b right angle schemes
 - c combination schemes
- R2 for sections between 4 pp and 16 pp which are:
 - a portrait
 - b landscape
 - c lapped fore-edge
- R3 and for stock which is:
 - a coated paper
 - b uncoated paper
- R4 and maintain the quality of:
 - a the material
 - b folded sections
- R5 you decide on action to correct faults:
 - a to be taken by yourself
 - b to be taken by others.

Element 332.3 Plan and implement a programme of maintenance for folding machinery

Performance criteria

You must show that you:

- 1 obtain or prepare a complete schedule of maintenance for the folding machine
- 2 identify the recommended intervals for maintenance and lubrication
- 3 ensure that the maintenance plan is implemented and kept up to date as far as is possible within the time allowed by your company for lubrication and maintenance.
- 4 keep records of maintenance work undertaken
- 5 examine machinery for defective components or excessive wear at intervals required by your company
- 6 keep records of faults that occur or are developing and that appropriate action is taken to deal with them either:
 - a as part of the maintenance programme
 - b as an urgent repair by you (if it is your job to deal with it) or
 - c by reporting the problem to the relevant person in your organisation
- 7 are able to remove and replace faulty or worn components that are your responsibility
- 8 maintain a list of parts or consumables that are likely to require periodic replacement and identify those parts that may be required at short notice
- 9 ensure that any parts or consumables identified as being required to be kept 'in stock' are available in the required quantities.

Element 332.3 Plan and implement a programme of maintenance for folding machinery

Knowledge and understanding

You must understand:

- K1 why manufacturer's of folding machinery specify a schedule of preventative maintenance
- K2 what kinds of components wear or become degraded over time on folding machinery
- K3 what kinds of lubricants to use on the folding machine
- K4 the properties of different kinds of lubricants
- K5 how to replenish lubricants in dispensers and reservoirs
- K6 how to find part reference numbers and order replacement parts
- K7 the consequences of failing to maintain or inspect your machine in accordance with the manufacturer's specification or any relevant code of practice
- K8 legal requirements and industry guidelines for the safe handling, use and disposal of hazardous substances
- K9 the risks of handling lubricants
- K10 the personal protective equipment which should be worn when handling hazardous substances and lubricants
- K11 where the principal lubrication points are on your folding machine
- K12 to whom you should report existing and developing faults
- K13 what is meant by the term 'safe system of work' and how it applies to maintenance and lubrication activities on folding machinery.

Element 332.3 Plan and implement a programme of maintenance for folding machinery

Performance evidence

You must show that you plan and implement maintenance of the guillotine consistently, over a period of time. Your evidence must show that:

- R1 you keep appropriate documents to enable the planning and implementation of maintenance, including:
 - a the machine manufacturer's recommended maintenance schedules
 - b the machine manufacturer's operating manual and any other relevant documents
 - c the HSE/PIAC code of practice for folding machines
 - d lists of consumables and parts, including those normally kept 'in stock'
 - e maintenance records
 - f fault reports
- R2 you have a maintenance schedule for the machine, and take part in its implementation as far as your company's production schedules and policies allow
- R3 you identify defective or deteriorating components during:
 - a normal machine running
 - b planned maintenance work
- R4 you are able to diagnose actual or developing machine faults by:
 - a examining output from the machine
 - b examining the machine.

Element 332.4 Keep folding machinery in a clean and safe operating condition

Performance criteria

You must show that you:

- 1 have a 'safe system of work' and a risk assessment in place before commencing any cleaning
- 2 use cleaning methods which are safe, avoid harm to the environment and which follow the manufacturer's instructions
- 3 dispose of used cleaning agents and waste materials safely and in accordance with environment/waste disposal legislation
- 4 prevent any build up of debris in or around the machine by regularly removing it and cleaning the machine
- 5 regularly check that the machine is clean enough to prevent marking or damage to the product during normal operation
- 6 after cleaning, check that the machine is safe to operate.

Element 332.4 Keep folding machinery in a clean and safe operating condition

Knowledge and understanding

You must understand:

- K1 what 'safe systems of work' and 'risk assessments' are
- K2 the current legal requirements and industry guidelines for the safe handling and use of hazardous substances
- K3 the risks of handling cleaning materials
- K4 what the production schedule is and how this affects cleaning operations
- K5 why it is important to use cleaning methods which are safe, avoid harming the environment and meet manufacturers' requirements
- K6 what cleaning agents are suitable for use
- K7 your company's procedures for the safe disposal of waste
- K8 what you must do to comply with environmental and waste legislation
- K9 what records need to be kept.

Element 332.4 Keep folding machinery in a clean and safe operating condition

Performance evidence

You must show that you keep the folding machinery in a clean and safe operating condition consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that you:

- R1 work in a tidy and safe environment and prevent the build up of debris:
 - a inside or on the machine
 - b around the machine
- R2 keep the machine and surrounding area free from:
 - a scrap paper
 - b dust, including paper dust
 - c excessive lubricant
- R3 check that after cleaning the machine is safe to operate:
 - a all fixed guards are in place on the machine
 - b any interlocking guards are in place and working correctly
- R4 dispose of the following waste materials properly:
 - a used cleaning agents
 - b solvents and lubricants
 - c production debris
 - d soiled materials.

Unit 333 Control in-line booklet-making machinery

Introduction

To achieve your unit certificate, you must show that you can:

- 1 Element 333.1 Set up in-line booklet-making machinery
- 2 Element 333.2 Run in-line booklet-making machinery
- 3 Element 333.3 Plan and implement a programme of maintenance for in-line-booklet-making machinery
- 4 Element 333.4 Keep in-line booklet-making machinery in a clean and safe operating condition

This involves:

- identifying the job requirements
- checking that machinery is working properly
- checking that safety devices are working properly
- running the machine safely
- adjusting settings, where necessary to maintain the required standard
- checking that work meets the required standard
- identifying faults and taking action to deal with them
- unloading and stacking the finished product.

Collecting the evidence for this unit

Your performance evidence must show that you have covered all of the statements in each element, and must be the result of real work activities in actual production situations. Simulation is **not** acceptable for this unit. Video recording evidence is ideal.

Your assessor will need to be satisfied that you have the necessary understanding specified in each 'K' list. Where this is not evident from your performance, you may be asked oral or written questions, or to write a short report.

You may need to provide other information to support your performance evidence or be able to point to where such evidence may be found within your company. Here are some examples:

- job instructions
- samples of finished jobs
- production records showing the time taken to produce the job and/or the quantity produced.

Please note: unit 338 may **not** be used in conjunction with unit 333.

Element 333.1 Set up in-line booklet-making machinery

Performance criteria

You must show that you:

- 1 check that you have all the details you need for the job
- 2 check that you have enough materials of the right type for the job
- 3 promptly report to your manager, if the materials provided are not correct or sufficient
- 4 set up the in-line machine correctly, so that:
 - a flat sheets are in the correct sequence with each pile
 - b showing its different, correctly-positioned printed image
 - c mis-feed and double detector(s) are working properly
 - d the staples are correctly positioned
 - e the fold is made in the correct position
 - f the fore-edge trim is correctly positioned
 - g the settings are appropriate for the booklet thickness
- 5 produce a sample from the machine and check that it matches the required standard
- 6 make adjustments if necessary to enable the standards to be met
- 7 report promptly to your manager, if the standards cannot be met
- 8 check that your work area is safe and ready for production.

Element 333.1 Set up in-line booklet-making machinery

Knowledge and understanding

You must understand:

- K1 what details you need for the job
- K2 the principles of in-line booklet-making
- K3 the sequence of set up tasks for the in-line booklet-making machine
- K4 the common in-line booklet-making set-up faults, what causes them and how to prevent them
- K5 the risks associated with setting in-line booklet-making machinery, and how to avoid them
- K6 the emergency shut-down procedures
- K7 to whom you should report set-up problems.

Element 333.1 Set up in-line booklet-making machinery

Performance evidence

You must show that you can set up in-line booklet-making equipment consistently over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

R1 you can set up the machine safely for:

a at least 2 different sheet sizes

R2 using:

a coated paper and board

or

b uncoated paper and board

R3 you set up the machine for:

a thin booklets or magazines

b bulky booklets or magazines.

Element 333.2 Run in-line booklet-making machinery

Performance criteria

You must show that you:

- 1 run the machinery:
 - a at the required production speed
 - b safely and efficiently
- 2 keep up the supply of materials throughout the run
- 3 regularly check that your company's quality standards are met
- 4 accurately identify causes of faults in the product, which result in:
 - a wire stitches or staples missing, broken or misformed
 - b wire stitches/staples and fold not aligned
 - c trimming faults such as out of square or wrong size
 - d marking of inside or outside pages
 - e pages missing or duplicated
- 5 correct faults which it is your job to remedy
- 6 promptly report faults which it is not your job to correct
- 7 check that the machine is safe to operate, once faults have been corrected
- 8 accurately record the production and quality assurance details
- 9 follow the correct procedures for the removal of waste
- 10 stack work safely using the approved method.

Element 333.2 Run in-line booklet-making machinery

Knowledge and understanding

You must understand:

- K1 your company's quality standards for booklet work
- K2 your company's methods for detecting defects in the product
- K3 what are the common booklet-making faults, what causes them and how to correct them
- K4 what other faults can occur during booklet-making
- K5 how to recognise when you should correct faults yourself, and when you should ask for help
- K6 to whom you should report:
 - a defects in the product
 - b mechanical problems
- K7 where to find documents giving help in identifying the causes of faults
- K8 the procedures for the removal of waste from your machine
- K9 what production and quality assurance records you are required to keep
- K10 your company's method for stacking of finished work from your machine.

Element 333.2 Run in-line booklet-making machinery

Performance evidence

You must show that you can control in-line booklet-making equipment consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you maintain the supply of materials
- R2 you maintain the quality of the product and avoid waste by promptly identifying any defects in the product and taking appropriate action
- R3 and take action:
 - a to adjust the machine if possible to correct the defect
 - b to report machine stoppages to your manager.

Element 333.3 Plan and implement a programme of maintenance for in-line booklet-making machinery

Performance criteria

You must show that you:

- 1 obtain or prepare a complete schedule of maintenance for the in-line bookletmaking machinery
- 2 identify the recommended intervals for maintenance and lubrication
- 3 ensure that the maintenance plan is implemented and kept up to date as far as is possible within the time allowed by your company for lubrication and maintenance.
- 4 keep records of maintenance work undertaken
- 5 examine machinery for defective components or excessive wear at intervals required by your company
- 6 keep records of faults that occur or are developing and that appropriate action is taken to deal with them either:
 - a as part of the maintenance programme
 - b as an urgent repair by you (if it is your job to deal with it), or
 - c by reporting the problem to the relevant person in your organisation
- 7 are able to remove and replace faulty or worn components that are your responsibility
- 8 maintain a list of parts or consumables that are likely to require periodic replacement and identify those parts that may be required at short notice
- 9 ensure that any parts or consumables identified as being required to be kept 'in stock' are available in the required quantities.

Element 333.3 Plan and implement a programme of maintenance for in-line booklet-making machinery

Knowledge and understanding

You must understand:

- K1 why manufacturers of in-line booklet-making machines specify a schedule of preventative maintenance
- K2 what kinds of components wear or become degraded over time on an inline booklet-making machine
- K3 what kinds of lubricants to use on the inline booklet-making machine
- K4 the properties of different kinds of lubricants
- K5 how to replenish lubricants in dispensers and reservoirs
- K6 how to find part reference numbers and order replacement parts
- K7 the consequences of failing to maintain or inspect your machine in accordance with the manufacturer's specification or any relevant code of practice
- K8 legal requirements and industry guidelines for the safe handling, use and disposal of hazardous substances
- K9 the risks of handling lubricants
- K10 the personal protective equipment which should be worn when handling hazardous substances and lubricants
- K11 where the principal lubrication points are on your in-line booklet-making machine
- K12 to whom you should report existing and developing faults
- K13 what is meant by the term 'safe system of work' and how it applies to maintenance and lubrication activities on an in-line booklet-making machine.

Element 333.3 Plan and implement a programme of maintenance for in-line booklet-making machinery

Performance evidence

You must show that you plan and implement maintenance of the in-line bookletmaking consistently, over a period of time. Your evidence must show that:

- R1 you keep appropriate documents to enable the planning and implementation of maintenance, such as:
 - a the machine manufacturer's recommended maintenance schedules
 - b the machine manufacturer's operating manual and any other relevant documents
 - c lists of consumables and parts, including those normally kept 'in stock'
 - d maintenance records
 - e fault reports
- R2 you have a maintenance schedule for the machine, and take part in its implementation as far as your company's production schedules and policies allow
- R3 you identify defective or deteriorating components during:
 - a normal machine running
 - b planned maintenance work
- R4 you are able to diagnose actual or developing machine faults by:
 - a examining output from the machine
 - b examining the machine
- R5 you are able to correctly and safely change the trimming knives
- R6 you are able to strip down, clean and service the stitching heads and replace any worn parts on them.

Element 333.4 Keep in-line booklet-making machinery in a clean and safe operating condition

Performance criteria

You must show that you:

- 1 have a 'safe system of work' and a risk assessment in place before commencing any cleaning
- 2 use cleaning methods which are safe, avoid harm to the environment and which follow the manufacturer's instructions
- 3 dispose of used cleaning agents and waste materials safely and in accordance with environment/waste disposal legislation
- 4 prevent any build up of debris in or around the machine by regularly removing it and cleaning the machine
- 5 regularly check that the machine is clean enough to prevent marking or damage to the product during normal operation
- 6 after cleaning, check that the machine is safe to operate.

Element 333.4 Keep in-line booklet-making machinery in a clean and safe operating condition

Knowledge and understanding

You must understand:

- K1 what 'safe systems of work' and 'risk assessments' are
- K2 the current legal requirements and industry guidelines for the safe handling and use of hazardous substances
- K3 the risks of handling cleaning materials
- K4 what the production schedule is and how this affects cleaning operations
- K5 why it is important to use cleaning methods which are safe, avoid harming the environment and meet manufacturers' requirements
- K6 what cleaning agents are suitable for use
- K7 your company's procedures for the safe disposal of waste
- K8 what you must do to comply with environmental and waste legislation
- K9 what records need to be kept.

Element 333.4 Keep in-line booklet-making machinery in a clean and safe operating condition

Performance evidence

You must show that you keep the inline booklet-making machinery in a clean and safe operating condition consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that you:

- R1 work in a tidy and safe environment and prevent the build up of debris:
 - a inside or on the machine
 - b around the machine
- R2 keep the machine and surrounding area free from:
 - a scrap paper and trimmings
 - b dust, including paper dust
 - c excessive lubricant
- R3 check that after cleaning the machine is safe to operate:
 - a all fixed guards are in place on the machine
 - b any interlocking guards are in place and working correctly
- R4 dispose of the following waste materials properly:
 - a used cleaning agents
 - b solvents and lubricants
 - c production debris
 - d soiled materials.

Unit 334 Control non-automatic finishing machines

Introduction

To achieve your unit certificate, you must show that you can:

- 1 Element 334.1 Set up non-automatic finishing machines
- 2 Element 334.2 Run non-automatic finishing machines
- 3 Element 334.3 Maintain non-automatic finishing machines in clean, safe and useable condition

This involves:

- identifying the job requirements
- checking that the non-automatic machines are working properly
- checking that safety devices are working properly
- running the non-automatic machines safely
- adjusting settings, where necessary to maintain the required standard
- checking that the work meets the required standard
- identifying faults and taking action to deal with them
- unloading and stacking the finished product.

Collecting the evidence for this unit

Your performance evidence must show that you have covered all of the statements in each element, and must be the result of real work activities in actual production situations. Simulation is **not** acceptable for this unit. Video recording evidence is ideal.

Your assessor will need to be satisfied that you have the necessary understanding specified in each 'K' list. Where this is not evident from your performance, you may be asked oral or written questions, or to write a short report.

You may need to provide other information to support your performance evidence or be able to point to where such evidence may be found within your company. Here are some examples:

- job instructions
- samples of finished jobs
- production records showing the time taken to produce the job and/or the quantity produced.

Element 334.1 Set up non-automatic finishing machines

Performance criteria

You must show that you:

- 1 check that you have all the details you need for the job
- 2 check that you have enough materials of the right type for the job
- 3 promptly report to your manager, if the materials provided are not correct or sufficient
- 4 set up the machine correctly, so that:
 - a finished work meets the requirements of your job instructions
 - b finished work consistently meets the quality of the approved sample
 - c material is processed without damage, marking or distortion
- 5 produce a sample from the machine and check that it matches the required standards
- 6 make adjustments if necessary to enable the standards to be met
- 7 report promptly to your manager, if the standards cannot be met
- 8 check that your work area is safe and ready for production.

Element 334.1 Set up non-automatic finishing machines

Knowledge and understanding

You must understand:

- K1 what details you need for the job
- K2 the sequence of set up tasks for your machines
- K3 the common set-up faults on your machines, what causes them and how to prevent them
- K4 the risks associated with setting up your machines, and how to avoid them
- K5 the requirements of any subsequent processes
- K6 the emergency shut down procedures.

Element 334.1 Set up non-automatic finishing machines

Performance evidence

You must show that you can set up at least **two** different non-automatic machines consistently over a period of time. The two machines must be those used in your workplace. Your performance will be observed on at least **four** occasions. Your evidence must show that:

R1 you can prepare machines with different functions - at least **two** from the following list:

Treadle operated:

- a wire stitching machines
- b drilling machines
- c punching machines
- d riveting machines
- e perforating machines
- f thread stitching machines
- g eyeletting machines
- h Rotary perforating machine

R4 you can set up for:

- a loading
- b operating

R6 for operations using **one** of the following types of job stock:

- a paper
- b board
- c plastic.

Element 334.2 Run non-automatic finishing machines

Performance criteria

You must show that you:

- 1 run non-automatic machines:
 - a at the required speed
 - b safely and efficiently
- 2 keep up the supply of materials throughout the run
- 3 regularly check that your company's quality standards are met
- 4 accurately identify causes of faults in production which result in:
 - a marking of material during processing
 - b finished product failing to match the approved sample
- 5 correct faults which it is your job to remedy
- 6 promptly report faults which it is not your job to correct
- 7 check that the machine is safe to operate, once faults have been corrected
- 8 accurately record the production and quality assurance details
- 9 follow the correct procedures for the removal of waste
- 10 stack work safely using the approved method.

Element 334.2 Run non-automatic finishing machines

Knowledge and understanding

You must understand:

- K1 your company's quality standards
- K2 the functions of your machines
- K3 the risks associated with running your machines, and how to avoid them
- K4 the emergency shut down procedures
- K5 the common faults which can arise when running your machines, what causes them and how to correct them
- K6 how to recognise when you should correct faults yourself and when you should ask for help
- K7 to whom you should report faults
- K8 where to find documents giving help in identifying the causes of faults
- K9 the procedure for the removal of waste from your machines
- K10 your company's methods for stacking finished work from your machine
- K11 what production and quality assurance details you are required to keep.

Element 334.2 Run non-automatic finishing machines

Performance evidence

You must show that you run at least two non-automatic machines consistently, over a period of time. Your performance will be observed on at least four occasions. Your evidence must show that:

- R1 you can maintain the supply of:
 - a your company materials
 - b customer materials
- R2 you can operate machines with different functions - at least **two** from the following list:
Treadle operated:
 - a wire stitching machines
 - b drilling machines
 - c punching machines
 - d riveting machines
 - e perforating machines
 - f thread stitching machines
 - g eyeletting machines
 - h rotary perforating machine
- R3 for operations using **one** of the following types of job stock:
 - a paper
 - b board
 - c plastic
 - d metal
- R4 you decide on action to correct faults:
 - a to be taken by yourself
 - b to be taken by others
- R5 you maintain the quality of the product and avoid waste by promptly identifying any defects in the product and taking appropriate action.

Element 334.3 Maintain non-automatic finishing machines in clean, safe and useable condition

Performance criteria

You must show that you:

- 1 have a 'safe system of work' before commencing any cleaning
- 2 obtain or prepare a schedule of cleaning, lubrication and maintenance for the machine
- 3 identify the recommended intervals for maintenance and lubrication
- 4 ensure that the schedule is implemented and kept up to date, within the time allowed by your company for cleaning, lubrication and maintenance
- 5 prevent any build up of debris in or around the machine by regularly removing it and cleaning the machine
- 6 regularly check that the machine is clean enough to prevent marking or damage to the product during normal operation
- 7 use cleaning methods which are safe, avoid harm to the environment and which follow the manufacturer's instructions
- 8 dispose of used cleaning agents and waste materials safely and in accordance with environment/waste disposal legislation
- 9 after cleaning, check that the machine is safe to operate
- 10 examine machinery for defective components or excessive wear at intervals required by your company
- 11 are able to remove and replace faulty or worn components that are your responsibility.

Element 334.3 Maintain non-automatic finishing machines in clean, safe and useable condition

Knowledge and understanding

You must understand:

- K1 what 'safe systems of work' and 'risk assessments' are
- K2 the current legal requirements and industry guidelines for the safe handling and use of hazardous substances
- K3 the risks of handling cleaning materials
- K4 what the production schedule is and how this affects cleaning operations
- K5 why it is important to use cleaning methods which are safe, avoid harming the environment and meet manufacturers' requirements
- K6 what cleaning agents are suitable for use
- K7 your company's procedures for the safe disposal of waste
- K8 what you must do to comply with environmental and waste legislation
- K9 what records need to be kept
- K10 what kinds of components wear or become degraded over time on the non-automatic finishing machines
- K11 what kinds of lubricants to use on the non automatic finishing machines.

Element 334.3 Maintain non-automatic finishing machines in clean, safe and useable condition

Performance evidence

Your evidence must show that you:

- R1 keep appropriate documents to enable you to ensure that cleaning, lubrication and maintenance:
 - a is kept up to date as far as is permitted within your company's production schedule and policy
 - b takes account of the machine manufacturer's recommended cleaning, lubrication and maintenance schedule (if available)
 - c is undertaken at times required by your company
- R2 work in a tidy and safe environment and prevent the build up of debris:
 - a inside or on the machine
 - b around the machine
- R3 keep the machine and surrounding area free from:
 - a scrap paper
 - b dust, including paper dust
 - c excessive lubricant
- R4 check that after cleaning the machine is safe to operate and that:
 - a all fixed guards are in place on the machine
 - b any interlocking guards are in place and working correctly
- R5 dispose of the following waste materials properly:
 - a used cleaning agents
 - b solvents and lubricants
 - c production debris
 - d soiled materials.

Unit 335 Control multiple hopper feeders

Introduction

To achieve your unit certificate, you must show that you can:

- 1 Element 335.1 Set up multiple hopper feeders
- 2 Element 335.2 Run multiple hopper feeders
- 3 Element 335.3 Maintain multiple hopper feeders in clean, safe and useable condition

This involves:

- identifying the job requirements
- checking that hopper feeders are working properly
- checking that safety devices are working properly
- running the hopper feeders safely
- adjusting settings, where necessary to maintain the required standard
- checking that the work meets the required standard
- identifying faults and taking action to deal with them
- unloading and stacking the finished product.

Collecting the evidence for this unit

Your performance evidence must show that you have covered all of the statements in each element, and must be the result of real work activities in actual production situations. Simulation is **not** acceptable for this unit. Video recording evidence is ideal.

Your assessor will need to be satisfied that you have the necessary understanding specified in each 'K' list. Where this is not evident from your performance, you may be asked oral or written questions, or to write a short report.

You may need to provide other information to support your performance evidence or be able to point to where such evidence may be found within your company. Here are some examples:

- job instructions
- samples of finished jobs
- production records showing the time taken to produce the job and/or the quantity produced.

Element 335.1 Set up multiple hopper feeders

Performance criteria

You must show that you:

- 1 check that you have all the details you need for the job
- 2 check that you have enough materials of the right type for the job
- 3 promptly report to your manager, if the materials provided are not correct or sufficient
- 4 set up the hopper feeders correctly, so that:
 - a sections are brought together to give the correct page sequence
 - b sections are fed squarely from hoppers to the transport chain
 - c separation ensures that sections are transported squarely, without damage
 - d the completed work is delivered without damage, distortion or marking
 - e any misfed or double-sheet detection devices function correctly
- 5 produce a sample from the machine and check that it matches the required standards
- 6 make adjustments if necessary, to enable the standards to be met
- 7 report promptly to your manager, if the standards cannot be met
- 8 check that your work area is safe and ready for production.

Element 335.1 Set up multiple hopper feeders

Knowledge and understanding

You must understand:

- K1 what details you need for the job
- K2 the principles of hopper feeding
- K3 the sequence of set-up tasks for multiple hopper feeders
- K4 the common faults in setting up hopper feeders, what causes them and how to prevent them
- K5 the risks associated with setting up hopper feeders, and how to avoid them
- K6 the emergency shut-down procedures
- K7 the purpose of collating marks and signature marks
- K8 how to feed open and closed head sections, with and without laps
- K9 how to feed sections perforated along the line of folds
- K10 the purpose of perforating folds on a folding machine.

Element 335.1 Set up multiple hopper feeders

Performance evidence

You must show that you can set up multiple hopper feeders consistently over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you set up for:
 - a multi-section work
- R2 you set up for the following types of section:
 - a open head
 - b closed head
 - c lapped
 - d non-lapped
- R3 you test and adjust equipment by:
 - a visual inspection
 - b checking control settings
 - c producing a sample run.

Element 335.2 Run multiple hopper feeders

Performance criteria

You must show that you:

- 1 run multiple hopper feeders:
 - a at the required speed
 - b safely and efficiently
- 2 keep up the supply of materials throughout the run
- 3 regularly check that your company's quality standards are met
- 4 accurately identify the causes of production faults, which result in:
 - a sections not gathered in the correct order
 - b sections not inserted in the correct order
 - c sections failing to feed and separate
 - d sections feeding unevenly
 - e sections tearing
 - f sections marking
- 5 correct faults which it is your job to remedy
- 6 promptly report faults which it is not your job to correct
- 7 check that the machine is safe to operate, once faults have been corrected
- 8 accurately record the production and quality assurance details
- 9 follow the correct procedures for the removal of waste
- 10 stack work safely using the approved method.

Element 335.2 Run multiple hopper feeders

Knowledge and understanding

You must understand:

- K1 your company's quality standards
- K2 the risks associated with running hopper-fed units and how to avoid them
- K3 the emergency shut down procedures
- K4 the common hopper feeder running faults, what causes them and how to correct them
- K5 what other faults can occur during hopper feeder work
- K6 how to recognise when you should correct faults yourself, and when you should ask for help
- K7 to whom you should report faults
- K8 where to find documents giving help in identifying the causes of faults
- K9 the procedures for the removal of waste from your machine
- K10 your company's methods for stacking finished work from your machine
- K11 what production and quality assurance records you are required to keep
- K12 what types of materials are most at risk of rub marking
- K13 which printed colours are most at risk of marking.

Element 335.2 Run multiple hopper feeders

Performance evidence

You must show that you can run multiple hopper feeder machinery consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you maintain the quality of the product and avoid waste by promptly identifying any defects in the product and taking appropriate action
- R2 you run the machinery to produce:
 - a multi-section work
- R3 for the following types of section:
 - a open head
 - b closed head
 - c lapped
 - d non-lapped
- R4 you decide on action to correct faults:
 - a to be taken by yourself
 - b to be taken by others.

Element 335.3 Maintain multiple hopper feeders in clean, safe and useable condition

Performance criteria

You must show that you:

- 1 have a 'safe system of work' before commencing any cleaning
- 2 obtain or prepare a schedule of cleaning, lubrication and maintenance for the machine
- 3 identify the recommended intervals for maintenance and lubrication
- 4 ensure that the schedule is implemented and kept up to date, within the time allowed by your company for cleaning, lubrication and maintenance.
- 5 prevent any build up of debris in or around the machine by regularly removing it and cleaning the machine
- 6 regularly check that the machine is clean enough to prevent marking or damage to the product during normal operation
- 7 use cleaning methods which are safe, avoid harm to the environment and which follow the manufacturer's instructions
- 8 dispose of used cleaning agents and waste materials safely and in accordance with environment/waste disposal legislation
- 9 after cleaning, check that the machine is safe to operate
- 10 examine machinery for defective components or excessive wear at intervals required by your company
- 11 are able to remove and replace faulty or worn components that are your responsibility.

Element 335.3 Maintain multiple hopper feeders in clean, safe and useable condition

Knowledge and understanding

You must understand:

- K1 what 'safe systems of work' and 'risk assessments' are
- K2 the current legal requirements and industry guidelines for the safe handling and use of hazardous substances
- K3 the risks of handling cleaning materials
- K4 what the production schedule is and how this affects cleaning operations
- K5 why it is important to use cleaning methods which are safe, avoid harming the environment and meet manufacturers' requirements
- K6 what cleaning agents are suitable for use
- K7 your company's procedures for the safe disposal of waste
- K8 what you must do to comply with environmental and waste legislation
- K9 what records need to be kept
- K10 what kinds of components wear or become degraded over time on a hopper feeder
- K11 what kinds of lubricants to use on a hopper feeder.

Element 335.3 Maintain multiple hopper feeders in clean, safe and useable condition

Performance evidence

Your evidence must show that you:

- R1 you keep appropriate documents to enable you to ensure that cleaning, lubrication and maintenance:
 - a is kept up to date as far as is permitted within your company's production schedule and policy
 - b takes account of the machine manufacturer's recommended cleaning, lubrication and maintenance schedule (if available)
 - c is undertaken at times required by your company
- R2 work in a tidy and safe environment and prevent the build up of debris:
 - a inside or on the machine
 - b around the machine
- R3 keep the machine and surrounding area free from:
 - a scrap paper
 - b dust, including paper dust
 - c excessive lubricant
- R4 check that after cleaning the machine is safe to operate and that:
 - a all fixed guards are in place on the machine
 - b any interlocking guards are in place and working correctly
- R5 dispose of the following waste materials properly:
 - a used cleaning agents
 - b solvents and lubricants
 - c production debris
 - d soiled materials.

Unit 336 Control auto-fed sewing machinery

Introduction

To achieve your unit certificate, you must show that you can:

- 1 Element 336.1 Set up auto-fed sewing machinery
- 2 Element 336.2 Run auto-fed sewing machinery
- 3 Element 336.3 Maintain auto-fed sewing machinery in clean, safe and useable condition

This involves:

- identifying the job requirements
- checking that auto-fed sewing machinery is working properly
- checking that safety devices are working properly
- running the auto-fed sewing machinery safely
- adjusting settings, where necessary to maintain the required standard
- checking that work meets the required standard
- identifying faults and taking action to deal with them
- unloading and stacking the finished product.

Collecting the evidence for this unit

Your performance evidence must show that you have covered all of the statements in each element, and must be the result of real work activities in actual production situations. Simulation is **not** acceptable for this unit. Video recording evidence is ideal.

Your assessor will need to be satisfied that you have the necessary understanding specified in each 'K' list. Where this is not evident from your performance, you may be asked oral or written questions, or to write a short report.

You may need to provide other information to support your performance evidence or be able to point to where such evidence may be found within your company. Here are some examples:

- job instructions
- samples of finished jobs
- production records showing the time taken to produce the job and/or the quantity produced.

Element 336.1 Set up auto-fed sewing machinery

Performance criteria

You must show that you:

- 1 check that you have all the details you need for the job
- 2 check that you have enough materials of the right type for the job
- 3 promptly report to your manager, if the materials provided are not correct or sufficient
- 4 set up the sewing machine correctly, so that:
 - a the feeder correctly locates the centre of each section
 - b sections are fed squarely and without damage into the sewing machine
 - c endpapers are glued squarely and securely onto sections
 - d stitch positions are spaced across spines within the finished trim size
 - e stitching holds sections securely without damage or distortion
 - f stitched book blocks are delivered without damage
- 5 produce a sample from the machine and check that it matches the required standards
- 6 make adjustments if necessary, to enable the standards to be met
- 7 report promptly to your manager, if the standards cannot be met
- 8 check that your work area is safe and ready for production.

Element 336.1 Set up auto-fed sewing machinery

Knowledge and understanding

You must understand:

- K1 what details you need for the job
- K2 the principles of mechanical sewing
- K3 the sequence of set up tasks for the auto-fed sewing machine
- K4 the common faults in setting up auto-fed sewing machinery, what causes them and how to prevent them
- K5 the risks associated with setting up auto-fed sewing machinery, and how to avoid them
- K6 the emergency shut-down procedures
- K7 the purpose of collating marks and signature marks
- K8 how to feed open and closed head sections, with and without laps.

Element 336.1 Set up auto-fed sewing machinery

Performance evidence

You must show that you can set up auto-fed sewing machinery consistently over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you can set up for sewing the following types of section:
 - a open head
 - b closed head
 - c lapped fore edge
- R2 for at least **one** of the following types of job:
 - a tipped on endpapers or plates
 - b outset/wrap-around plates
 - c inset plates
- R3 you identify:
 - a the opening requirements per section
- R4 you can identify which of the following section opening methods are appropriate for each job:
 - a pull up
 - b pull down
 - c hook up
 - d fore edge lap up or lap down
- R5 you test and adjust machinery by:
 - a visual inspection
 - b checking control settings
 - c producing a sample from the machine.

Element 336.2 Run auto-fed sewing machinery

Performance criteria

You must show that you:

- 1 run auto-fed sewing machinery:
 - a at the required speed
 - b safely and efficiently
- 2 keep up the supply of materials throughout the run
- 3 regularly check that your company's quality standards are met
- 4 accurately identify the causes of faults in production, which result in:
 - a missed stitches
 - b loose stitches
 - c sections not square at head
 - d glue marks on sections
 - e rub marking on sections
- 5 correct faults which it is your job to remedy
- 6 promptly report faults which it is not your job to correct
- 7 check that the machine is safe to operate, once faults have been corrected
- 8 accurately record the production and quality assurance details
- 9 follow the correct procedures for the removal of waste
- 10 stack work safely using the approved method.

Element 336.2 Run auto-fed sewing machinery

Knowledge and understanding

You must understand:

- K1 your company's quality standards
- K2 the risks associated with running auto-fed sewing machines and how to avoid them
- K3 the emergency shut-down procedures
- K4 the common section sewing machine running faults, what causes them and how to correct them
- K5 what other faults can occur during mechanical sewing
- K6 how to recognise when you should correct faults yourself, and when you should ask for help
- K7 to whom you should report faults
- K8 where to find documents giving help in identifying the causes of faults
- K9 the procedures for the removal of waste from your machine
- K10 your company's methods for stacking finished work from your machine
- K11 what production and quality assurance records you are required to keep
- K12 what materials are most at risk of rub marking
- K13 which printed colours are most at risk of marking.

Element 336.2 Run auto-fed sewing machinery

Performance evidence

You must show that you can run auto-fed sewing equipment consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you maintain the quality of the product and avoid waste by promptly identifying any defects in the product and taking appropriate action
- R2 you can keep up the supply of:
 - a sections
 - b thread
- R3 you maintain:
 - a the position of stitches
 - b the tightness of stitching
- R4 you decide on action to correct faults:
 - a to be taken by yourself
 - b to be taken by others.

Element 336.3 Maintain auto-fed sewing machinery in clean, safe and useable condition

Performance criteria

You must show that you:

- 1 have a 'safe system of work' before commencing any cleaning
- 2 obtain or prepare a schedule of cleaning, lubrication and maintenance for the machine
- 3 identify the recommended intervals for maintenance and lubrication
- 4 ensure that the schedule is implemented and kept up to date, within the time allowed by your company for cleaning, lubrication and maintenance
- 5 prevent any build up of debris in or around the machine by regularly removing it and cleaning the machine
- 6 regularly check that the machine is clean enough to prevent marking or damage to the product during normal operation
- 7 use cleaning methods which are safe, avoid harm to the environment and which follow the manufacturer's instructions
- 8 dispose of used cleaning agents and waste materials safely and in accordance with environment/waste disposal legislation
- 9 after cleaning, check that the machine is safe to operate
- 10 examine machinery for defective components or excessive wear at intervals required by your company
- 11 are able to remove and replace faulty or worn components that are your responsibility.

Element 336.3 Maintain auto-fed sewing machinery in clean, safe and useable condition

Knowledge and understanding

You must understand:

- K1 what 'safe systems of work' and 'risk assessments' are
- K2 the current legal requirements and industry guidelines for the safe handling and use of hazardous substances
- K3 the risks of handling cleaning materials
- K4 what the production schedule is and how this affects cleaning operations
- K5 why it is important to use cleaning methods which are safe, avoid harming the environment and meet manufacturers' requirements
- K6 what cleaning agents are suitable for use
- K7 your company's procedures for the safe disposal of waste
- K8 what you must do to comply with environmental and waste legislation
- K9 what records need to be kept
- K10 what kinds of components wear or become degraded over time on an auto-fed sewing machine
- K11 what kinds of lubricants to use on an auto-fed sewing machine.

Element 336.3 Maintain auto-fed sewing machinery in clean, safe and useable condition

Performance evidence

Your evidence must show that you:

- R1 you keep appropriate documents to enable you to ensure that cleaning, lubrication and maintenance:
 - a is kept up to date as far as is permitted within your company's production schedule and policy
 - b takes account of the machine manufacturer's recommended cleaning, lubrication and maintenance schedule (if available)
 - c complies with any HSE/PIAC code of practice for auto-fed sewing machines
 - d is undertaken at times required by your company
- R2 work in a tidy and safe environment and prevent the build up of debris:
 - a inside or on the machine
 - b around the machine
- R3 keep the machine and surrounding area free from:
 - a scrap paper
 - b dust, including paper dust
 - c excessive lubricant
- R4 check that after cleaning the machine is safe to operate and that:
 - a all fixed guards are in place on the machine
 - b any interlocking guards are in place and working correctly
- R5 dispose of the following waste materials properly:
 - a used cleaning agents
 - b solvents and lubricants
 - c production debris
 - d soiled materials.

Unit 337 Control multi-knife trimming machinery

Introduction

To achieve your unit certificate, you must show that you can:

- 1 Element 337.1 Set up multi-knife trimming machinery
- 2 Element 337.2 Run multi-knife trimming machinery
- 3 Element 337.3 Maintain multi-knife trimming machinery in clean, safe and useable condition

This involves:

- identifying the job requirements
- checking that multi-knife trimming machinery is working properly
- checking that safety devices are working properly
- running multi-knife trimming machinery safely
- adjusting settings, where necessary to maintain the required standard
- checking that work meets the required standard
- identifying faults and taking action to deal with them
- unloading and stacking the finished product.

Collecting the evidence for this unit

Your performance evidence must show that you have covered all of the statements in each element, and must be the result of real work activities in actual production situations. Simulation is **not** acceptable for this unit. Video recording evidence is ideal.

Your assessor will need to be satisfied that you have the necessary understanding specified in each 'K' list. Where this is not evident from your performance, you may be asked oral or written questions, or to write a short report.

You may need to provide other information to support your performance evidence or be able to point to where such evidence may be found within your company. Here are some examples:

- job instructions
- samples of finished jobs
- production records showing the time taken to produce the job and/or the quantity produced.

Element 337.1 Set up multi-knife trimming machinery

Performance criteria

You must show that you:

- 1 check that you have all the details you need for the job
- 2 check that you have enough materials of the right type for the job
- 3 promptly report to your manager, if the materials provided are not correct or sufficient
- 4 set up the multi-knife trimmer correctly, so that:
 - a piles are fed squarely into the trimmer
 - b the clamp holds the pile firmly without marking
 - c piles are trimmed squarely and delivered without damage or distortion
 - d the trimmed size is within variations permitted by your company
- 5 change trimmer knives correctly and safely
- 6 produce a sample from the machine and check that it matches the required standards
- 7 make adjustments if necessary to enable the standards to be met
- 8 report promptly to your manager, if the standards cannot be met
- 9 check that your work area is safe and ready for production.

Element 337.1 Set up multi-knife trimming machinery

Knowledge and understanding

You must understand:

- K1 what details you need for the job
- K2 the principles of multi-knife trimming
- K3 the sequence of set up tasks for multi-knife trimming machinery
- K4 the common multi-knife trimming machine set-up faults, what causes them and how to prevent them
- K5 the risks associated with setting up multi-knife trimming machinery, and how to avoid them
- K6 the emergency shut-down procedures
- K7 the procedure for trimming 2-up work
- K8 how to clamp piles of uneven height securely
- K9 what types of book cover materials are most at risk of marking
- K10 which printed colours are most at risk of marking.

Element 337.1 Set up multi-knife trimming machinery

Performance evidence

You must show that you can set up multi-knife trimming machinery consistently over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you set up for:
 - a multi-knife trimming
- R2 ... for job stock which is:
 - a coated
 - b uncoated
- R3 you test and adjust machinery by:
 - a visual inspection
 - b checking control settings
 - c producing a sample from the machine.

Element 337.2 Run multi-knife trimming machinery

Performance criteria

You must show that you:

- 1 run multi-knife trimming machinery:
 - a at the required speed
 - b safely and efficiently
- 2 keep up the supply of materials throughout the run
- 3 regularly check that your company's quality standards are met
- 4 accurately identify the causes of faults in production, which result in:
 - a unacceptable cut size variation
 - b score marks on cut surfaces
 - c shiny glue marks on cut surfaces
 - d ragged cut on bottom pages
 - e book spines splitting at head or tail
 - f books not square
 - g spines creasing
- 5 correct faults which it is your job to remedy
- 6 promptly report faults which it is not your job to correct
- 7 check that the machine is safe to operate, once faults have been corrected
- 8 accurately record the production and quality assurance details
- 9 follow the correct procedures for the removal of waste
- 10 stack work safely using the approved method.

Element 337.2 Run multi-knife trimming machinery

Knowledge and understanding

You must understand:

- K1 your company's quality standards
- K2 the risks associated with running multi-knife trimming machines and how to avoid them
- K3 the emergency shut-down procedures
- K4 the common multi-knife trimming machine running faults, what causes them and how to correct them
- K5 what other faults can occur when running a multi-knife trimmer
- K6 how to recognise when you should correct faults yourself and when you should ask for help
- K7 to whom you should report faults
- K8 where to find documents giving help in identifying the causes of faults
- K9 the procedures for the removal of waste from your machine
- K10 your company's methods for stacking finished work from your machine
- K11 what production and quality assurance details you are required to keep.

Element 337.2 Run multi-knife trimming machinery

Performance evidence

You must show that you can run multi-knife trimming machinery consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

R1 you maintain throughput on multi-knife trimming machinery

R2 ... and maintain the quality of:

a cuts

b the material

R3 you decide on action to correct faults:

a to be taken by yourself

b to be taken by others.

Element 337.3 Maintain multi-knife trimming machinery in clean, safe and useable condition

Performance criteria

You must show that you:

- 1 have a 'safe system of work' before commencing any cleaning
- 2 obtain or prepare a schedule of cleaning, lubrication and maintenance for the machine
- 3 identify the recommended intervals for maintenance and lubrication
- 4 ensure that the schedule is implemented and kept up to date, within the time allowed by your company for cleaning, lubrication and maintenance
- 5 prevent any build up of debris in or around the machine by regularly removing it and cleaning the machine
- 6 regularly check that the machine is clean enough to prevent marking or damage to the product during normal operation
- 7 use cleaning methods which are safe, avoid harm to the environment and which follow the manufacturer's instructions
- 8 dispose of used cleaning agents and waste materials safely and in accordance with environment/waste disposal legislation
- 9 after cleaning, check that the machine is safe to operate
- 10 examine machinery for defective components or excessive wear at intervals required by your company
- 11 are able to remove and replace faulty or worn components that are your responsibility.

Element 337.3 Maintain multi-knife trimming machinery in clean, safe and useable condition

Knowledge and understanding

You must understand:

- K1 what 'safe systems of work' and 'risk assessments' are
- K2 the current legal requirements and industry guidelines for the safe handling and use of hazardous substances
- K3 the risks of handling cleaning materials
- K4 what the production schedule is and how this affects cleaning operations
- K5 why it is important to use cleaning methods which are safe, avoid harming the environment and meet manufacturers' requirements
- K6 what cleaning agents are suitable for use
- K7 your company's procedures for the safe disposal of waste
- K8 what you must do to comply with environmental and waste legislation
- K9 what records need to be kept
- K10 what kinds of components wear or become degraded over time on multi-knife trimming machine
- K11 what kinds of lubricants to use on a multi-knife trimming machine.

Element 337.3 Maintain multi-knife trimming machinery in clean, safe and useable condition

Performance evidence

You must show that you keep the multi-knife trimming machine in a clean and safe operating condition consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that you:

- R1 you keep appropriate documents to enable you to ensure that cleaning, lubrication and maintenance:
 - a is kept up to date as far as is permitted within your company's production schedule and policy
 - b takes account of the machine manufacturer's recommended cleaning, lubrication and maintenance schedule (if available)
 - c complies with any HSE/PIAC code of practice for multi-knife trimming machines
 - d is undertaken at times required by your company
- R2 work in a tidy and safe environment and prevent the build up of debris:
 - a inside or on the machine
 - b around the machine
- R3 keep the machine and surrounding area free from:
 - a scrap paper
 - b dust, including paper dust
 - c excessive lubricant
- R4 check that after cleaning the machine is safe to operate and that:
 - a all fixed guards are in place on the machine
 - b any interlocking guards are in place and working correctly
- R5 dispose of the following waste materials properly:
 - a used cleaning agents
 - b solvents and lubricants
 - c production debris
 - d soiled materials.

Unit 338 Set and operate booklet-making machinery

Introduction

To achieve your unit certificate, you must show that you can:

- 1 Element 338.1 Set up booklet-making machinery under supervision
- 2 Element 338.2 Operate booklet-making machinery

This involves:

- understanding the job requirements
- checking that safety devices are working properly
- setting up the collator and the stitch-fold-trim unit(s)
- operating the booklet-making equipment safely
- reporting problems
- checking that work meets the required standard
- unloading and stacking the finished product.

Note: For this unit the collator and the stitch-fold-trim unit may be separate pieces of machinery or may be inline. However, hand collating is **not** acceptable; nor are booklet-makers without a trimmer.

Collecting the evidence for this unit

Your performance evidence must show that you have covered all of the statements in each element, and must be the result of real work activities in actual production situations. Simulation is **not** acceptable for this unit. Video recording evidence is ideal.

Your assessor will need to be satisfied that you have the necessary understanding specified in each 'K' list. Where this is not evident from your performance, you may be asked oral or written questions, or to write a short report.

You may need to provide other information to support your performance evidence or be able to point to where such evidence may be found within your company. Here are some examples:

- job instructions
- samples of finished jobs
- production records showing the time taken to produce the job and/or the quantity produced.

Please note: unit 338 may **not** be used in conjunction with unit 333.

Element 338.1 Set up booklet-making machinery under supervision

Performance criteria

You must show that you:

- 1 check that you have the job specification
- 2 identify the materials you must use for the job
- 3 check that safety devices are working properly
- 4 set the collator:
 - a for the size of the flat sheet
 - b so that flat sheets are in the correct sequence with each pile showing its different, correctly-positioned printed image
 - c mis-feed and double detector(s) correctly
- 5 set the stitch-fold-trim unit so that:
 - a the staples are correctly positioned
 - b the fold is made in the correct position
 - c the fore-edge trim is correctly positioned
 - d the settings are appropriate for the booklet thickness
- 6 produce a sample from the machine and get it passed by your supervisor
- 7 assist your supervisor to make adjustments, if necessary, to enable the quality standards to be met
- 8 report promptly to your supervisor, if the standards cannot be met
- 9 check that your work area is safe and ready for production.

Element 338.1 Set up booklet-making machinery under supervision

Knowledge and understanding

You must understand:

- K1 what details should be in a job specification
- K2 the principles of booklet-making
- K3 the behaviour of paper and board materials and how to avoid 'cracking'
- K4 the risks associated with setting booklet-making machinery, and how to avoid them
- K5 the common booklet-making machine set-up faults, what causes them and how to prevent them
- K6 the emergency shut-down procedures
- K7 to whom you should report set-up problems.

Element 338.1 Set up booklet-making machinery under supervision

Performance evidence

You must show that you can set up booklet-making equipment consistently over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

R1 you can set up the collator correctly and safely for:

a at least **two** different sheet sizes

R2 ... and which is:

a coated paper and board

or

b uncoated paper and board

R3 you set up the stitch-fold-trim unit for:

a thin booklets or magazines

b bulky booklets or magazines.

Element 338.2 Operate booklet-making machinery

Performance criteria

You must show that you:

- 1 operate the machinery:
 - a at the required production speed
 - b safely and efficiently
- 2 regularly check that your company's quality standards are met
- 3 accurately identify faults in the product, which result in:
 - a pages missing or duplicated
 - b wire stitches or staples missing, broken or misformed
 - c wire stitches/staples and fold not aligned
 - d trimming faults such as out of square or wrong size
 - e marking of inside or outside pages
- 4 promptly and accurately report faults to your manager
- 5 make adjustments to settings if instructed to do so by your manager
- 6 check that the machine is safe to operate, once faults have been corrected
- 7 promptly report to your manager if the machine ceases to function properly
- 8 accurately record production and quality assurance details
- 9 follow the correct procedures for the removal of waste
- 10 stack finished work safely using your company's approved method.

Element 338.2 Operate booklet-making machinery

Knowledge and understanding

You must understand:

- K1 your company's quality standards for booklet work
- K2 your company's methods for detecting faults in the product
- K3 what are the common booklet-making faults
- K4 what other faults can occur during booklet-making
- K5 to whom you should report:
 - a defects in the product
 - b mechanical problems
- K6 the procedures for the removal of waste from your machine
- K7 what production and quality assurance records you are required to keep
- K8 your company's method for stacking of finished work from your machine.

Element 338.2 Operate booklet-making machinery

Performance evidence

You must show that you can operate booklet-making equipment consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you maintain the quality of the product and avoid waste by promptly identifying any defects in the product and taking appropriate action:
 - a to report the problem
 - b to stop the machine if necessary
- R2 you report:
 - a product defects
 - b mechanical problems
- R3 you take action to deal with faults if instructed to do so.

Unit 339 Control parallel folding

Introduction

To achieve your unit certificate, you must show that you can:

- 1 Element 339.1 Set up parallel folding
- 2 Element 339.2 Run parallel folding
- 3 Element 339.3 Maintain parallel folding machines in clean, safe and useable condition

This involves:

- identifying the job requirements
- checking that the machine is working properly
- checking that safety devices are working properly
- running the machinery safely
- adjusting settings, where necessary to maintain the required standard
- checking that work meets the required standard
- identifying faults and taking action to deal with them
- unloading and stacking the finished product.

Collecting the evidence for this unit

Your performance evidence must show that you have covered all of the statements in each element, and must be the result of real work activities in actual production situations. Simulation is **not** acceptable for this unit. Video recording evidence is ideal.

Your assessor will need to be satisfied that you have the necessary understanding specified in each 'K' list. Where this is not evident from your performance, you may be asked oral or written questions, or to write a short report.

You may need to provide other information to support your performance evidence or be able to point to where such evidence may be found within your company. Here are some examples:

- job instructions
- samples of finished jobs
- production records showing the time taken to produce the job and/or the quantity produced.

Please note: unit 339 may **not** be used in conjunction with unit 332.

Element 339.1 Set up parallel folding

Performance criteria

You must show that you:

- 1 check that you have all the details you need for the job
- 2 check that you have enough materials of the right type for the job
- 3 promptly report to your manager, if the materials provided are not correct or sufficient
- 4 set up folding machine correctly, so that:
 - a sheets are fed squarely and consistently, without damage or distortion
 - b mis-fed sheets are detected by the machine's device
 - c sheets are folded without damage
 - d work is slit squarely and cleanly, if required
 - e folded sheets are delivered without damage
- 5 produce a sample from the machine and check that it matches the required standard
- 6 make adjustments if necessary, to enable the standards to be met
- 7 report promptly to your manager, if the standards cannot be met
- 8 check that your work area is safe and ready for production.

Element 339.1 Set up parallel folding

Knowledge and understanding

You must understand:

- K1 what details you need for the job
- K2 the principles of machine folding
- K3 the sequence of set up tasks for parallel folding
- K4 the requirements of other processes which follow folding
- K5 what is meant when printed material is produced by:
 - a sheetwork
 - b work and turn
 - c work and tumble
- K6 how folds are made by the buckle method
- K7 the risks associated with setting up folding machinery, and how to avoid them
- K8 what the common folding machine faults are, what causes them and how to prevent them
- K9 the emergency shut down procedures.

Element 339.1 Set up parallel folding

Performance evidence

You must show that you can set up parallel folding machinery consistently over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you identify:
 - a the job stock and grammage
 - b supplied and finished size
 - c grain direction
- R2 you check that the imposition will produce
- R3 the requested fold sequence
- R4 you can set up for parallel folding schemes using:
 - a roll folds
 - b concertina folds
- R5 and for stock which is:
 - a coated paper
 - b uncoated paper.

Element 339.2 Run parallel folding

Performance criteria

You must show that you:

- 1 run folding machinery:
 - a at the required speed
 - b safely and efficiently
- 2 keep up the supply of materials throughout the run
- 3 regularly check that quality standards are met
- 4 accurately identify the cause of faults in production which result in:
 - a sheets sticking together
 - b sheets failing to enter fold unit
 - c sheets failing to leave fold unit
 - d sheets folded out of square
 - e slitting not parallel to sheet edge
 - f marking of sheets
- 5 correct mechanical faults which it is your job to remedy
- 6 promptly report faults which it is not your job to correct
- 7 check that the machine is safe to operate, once faults are corrected
- 8 accurately record production and quality assurance details
- 9 follow the correct procedures for the removal of waste
- 10 stack work safely using the approved method.

Element 339.2 Run parallel folding

Knowledge and understanding

You must understand:

- K1 your company's quality standards for folded work
- K2 how grain direction affects the folding process
- K3 which types of material are most at risk of rub marking
- K4 which printed colours are most at risk of marking
- K5 the purpose of gluing attachments and how they work
- K6 the risks associated with running folding machinery and how to avoid them
- K7 the emergency shut down procedures
- K8 the common folding machine faults, what causes them and how to correct them
- K9 what other faults can occur during folding
- K10 how to recognise when you should correct faults yourself and when you should ask for help
- K11 to whom you must report faults
- K12 where to find documents giving help in identifying the causes of faults
- K13 the procedures for the removal of waste from your machine
- K14 what production and quality assurance details you are required to keep.

Element 339.2 Run parallel folding

Performance evidence

You must show that you can run folding machinery consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you maintain the quality of the product and avoid waste by promptly identifying any defects in the product and taking appropriate action
- R2 you can produce:
 - a roll folds
 - b concertina folds
- R3 and for stock which is:
 - a coated paper
 - b uncoated paper
- R4 you decide on action to remedy faults:
 - a to be taken by yourself
 - b to be taken by others.

Element 339.3 Maintain parallel folding machines in clean, safe and useable condition

Performance criteria

You must show that you:

- 1 have a 'safe system of work' before commencing any cleaning
- 2 obtain or prepare a schedule of cleaning, lubrication and maintenance for the machine
- 3 identify the recommended intervals for maintenance and lubrication
- 4 ensure that the schedule is implemented and kept up to date, within the time allowed by your company for cleaning, lubrication and maintenance
- 5 prevent any build up of debris in or around the machine by regularly removing it and cleaning the machine
- 6 regularly check that the machine is clean enough to prevent marking or damage to the product during normal operation
- 7 use cleaning methods which are safe, avoid harm to the environment and which follow the manufacturer's instructions
- 8 dispose of used cleaning agents and waste materials safely and in accordance with environment/waste disposal legislation
- 9 after cleaning, check that the machine is safe to operate
- 10 examine machinery for defective components or excessive wear at intervals required by your company
- 11 are able to remove and replace faulty or worn components that are your responsibility.

Element 339.3 Maintain parallel folding machines in clean, safe and useable condition

Knowledge and understanding

You must understand:

- K1 what 'safe systems of work' and 'risk assessments' are
- K2 the current legal requirements and industry guidelines for the safe handling and use of hazardous substances
- K3 the risks of handling cleaning materials
- K4 what the production schedule is and how this affects cleaning operations
- K5 why it is important to use cleaning methods which are safe, avoid harming the environment and meet manufacturers' requirements
- K6 what cleaning agents are suitable for use
- K7 your company's procedures for the safe disposal of waste
- K8 what you must do to comply with environmental and waste legislation
- K9 what records need to be kept
- K10 what kinds of components wear or become degraded over time on a parallel folding machine
- K11 what kinds of lubricants to use on a parallel folding machine.

Element 339.3 Maintain parallel folding machines in clean, safe and useable condition

Performance evidence

Your evidence must show that you:

- R1 you keep appropriate documents to enable you to ensure that cleaning, lubrication and maintenance:
 - a is kept up to date as far as is permitted within your company's production schedule and policy
 - b takes account of the machine manufacturer's recommended cleaning, lubrication and maintenance schedule (if available)
 - c complies with any HSE/PIAC code of practice for folding machines
 - d is undertaken at times required by your company
- R2 work in a tidy and safe environment and prevent the build up of debris:
 - a inside or on the machine
 - b around the machine
- R3 keep the machine and surrounding area free from:
 - a scrap paper
 - b dust, including paper dust
 - c excessive lubricant
- R4 check that after cleaning the machine is safe to operate and that:
 - a all fixed guards are in place on the machine
 - b any interlocking guards are in place and working correctly
- R5 dispose of the following waste materials properly:
 - a used cleaning agents
 - b solvents and lubricants
 - c production debris
 - d soiled materials.

Unit 340 Run and monitor adhesive binding machinery

Introduction

To achieve your unit certificate, you must show that you can:

- 1 Element 340.1 Run adhesive binding machine under supervision
- 2 Element 340.2 Monitor quality of adhesive binding

This involves:

- understanding the job requirements
- checking that safety devices are working properly
- starting up the adhesive binding machine
- running the adhesive binding machine safely
- reporting problems
- checking that work meets the required standard
- unloading and stacking the finished product.

Note: This unit may be used for inline adhesive binding machinery or off-line.

Collecting the evidence for this unit

Your performance evidence must show that you have covered all of the statements in each element, and must be the result of real work activities in actual production situations. Simulation is **not** acceptable for this unit. Video evidence is ideal.

Your assessor will need to be satisfied that you have the necessary understanding specified in each 'K' list. Where this is not evident from your performance, you may be asked oral or written questions, or to write a short report.

You may need to provide other information to support your performance evidence or be able to point to where such evidence may be found within your company. Here are some examples:

- job instructions
- samples of finished jobs
- production records showing the time taken to produce the job and/or the quantity produced
- samples of running faults as they arise.

Please note: unit 340 may **not** be used in conjunction with unit 328.

Element 340.1 Run adhesive binding machine under supervision

Performance criteria

You must show that you:

- 1 check that you have the job specification
- 2 identify the materials you must use for the job
- 3 check that safety devices are working properly
- 4 check that your work area is safe and ready for production
- 5 correctly start up the adhesive binding machine
- 6 run the adhesive binding machine:
 - a at the required speed
 - b safely and efficiently
- 7 promptly report to your manager if:
 - a the machine ceases to function properly
 - b you are running out of correct materials
- 8 accurately record the production details
- 9 follow the correct procedures for the removal of waste
- 10 stack work safely using the approved method.

Element 340.1 Run adhesive binding machine under supervision

Knowledge and understanding

You must understand:

- K1 what details should be in a job specification
- K2 the principles of adhesive binding
- K3 the risks associated with running adhesive binding machinery, and how to avoid them
- K4 the emergency shut-down procedures
- K5 the purpose of collating marks
- K6 what types of problems can occur when running adhesive binding machinery
- K7 to whom you should report problems
- K8 what production records you are required to keep
- K9 the procedures for the removal of waste from your machine
- K10 your company's method for stacking of finished work from your machine.

Element 340.1 Run adhesive binding machine under supervision

Performance evidence

You must show that you can run adhesive binding machinery under supervision consistently over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you start and run the machine:
 - a safely
 - b efficiently
- R2 you can run the adhesive binding machine for the following:
 - a sewn or unsewn sections
 - b board covers
 - c thin books
 - d bulky books
- R3 you promptly report problems:
 - a relating to mechanical faults
 - b of materials supply
- R4 you correctly follow procedures for:
 - a keeping records of production
 - b removal of waste
 - c safe stacking.

Element 340.2 Monitor quality of adhesive binding

Performance criteria

You must show that you:

- 1 regularly check that your company's quality standards are met
- 2 accurately identify faults in the product, which result in:
 - a cracking of the surface along score lines
 - b print being out of square on the front cover and spine
 - c rounding of spines
 - d too much and too little glue penetration
 - e poor page-pull strength
 - f covers not registering correctly with book blocks
- 3 promptly and accurately report quality defects to your manager
- 4 check that the machine is safe to operate, once quality defects are corrected
- 5 accurately record the quality assurance details.

Element 340.2 Monitor quality of adhesive binding

Knowledge and understanding

You must understand:

- K1 your company's quality standards for adhesive binding work
- K2 your company's methods for detecting defects in the product
- K3 the common adhesive binding faults
- K4 what other faults can occur during adhesive binding
- K5 to whom you should report faults
- K6 what quality assurance records you are required to keep
- K7 which types of material are most at risk of rub marking
- K8 which printed colours are most at risk of marking.

Element 340.2 Monitor quality of adhesive binding

Performance evidence

You must show that you can monitor the quality of adhesive binding consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you maintain the quality of the product and avoid waste by promptly identifying any defects in the product and taking appropriate action:
 - a to report the problem
 - b to stop the machine if necessary.

Unit 341

Control in-line insetting-stitching-trimming machinery

Introduction

To achieve your unit certificate, you must show that you can:

- 1 Element 341.1 Set up in-line insetting-stitching-trimming machinery
- 2 Element 341.2 Run in-line insetting-stitching-trimming machinery
- 3 Element 341.3 Plan and implement a programme of maintenance for in-line insetting-stitching-trimming machinery
- 4 Element 341.4 Keep in-line insetting-stitching-trimming machinery in a clean and safe operating condition

This involves:

- identifying the job requirements
- checking that the in-line insetting-stitching-trimming machine is working properly
- checking that safety devices are working properly
- running the machine safely
- adjusting settings, where necessary to maintain the required standard
- checking that work meets the required standard
- identifying faults and taking action to deal with them
- unloading and stacking the finished product.

Collecting the evidence for this unit

Your performance evidence must show that you have covered all of the statements in each element, and must be the result of real work activities in actual production situations. Simulation is **not** acceptable for this unit. Video recording evidence is ideal.

Your assessor will need to be satisfied that you have the necessary understanding specified in each 'K' list. Where this is not evident from your performance, you may be asked oral or written questions, or to write a short report.

You may need to provide other information to support your performance evidence or be able to point to where such evidence may be found within your company. Here are some examples:

- job instructions
- samples of finished jobs
- production records showing the time taken to produce the job and/or the quantity produced
- how you maintained the speed of output and quality of the product throughout the line.

Element 341.1 Set up in-line inseting-stitching-trimming machinery

Performance criteria

You must show that you:

- 1 check that you have all the details you need for the job
- 2 check that you have enough materials of the right type for the job
- 3 promptly report to your manager, if the materials provided are not correct or sufficient
- 4 set up the line correctly, so that:
 - a sections are inserted to give the correct page sequence
 - b sections and covers are fed into the stitcher squarely and without damage
 - c stitched books hold firmly, and are securely clenched
 - d stitched books are fed into the trimmer squarely and without damage
 - e books are trimmed evenly and squarely to the correct size, without marking
 - f books are delivered without damage or distortion
- 5 produce a sample from the machine and check that it matches the required standards
- 6 make adjustments if necessary to enable the standards to be met
- 7 report promptly to your manager, if the standards cannot be met
- 8 check that your work area is safe and ready for production.

Element 341.1 Set up in-line inseting-stitching-trimming machinery

Knowledge and understanding

You must understand:

- K1 what details you need for the job
- K2 the principles of inseting-stitching-trimming
- K3 the sequence of set up tasks for inseting-stitching-trimming machinery
- K4 the common in-line inseting-stitching-trimming set-up faults, what causes them and how to prevent them
- K5 the risks associated with setting up inseting-stitching-trimming machinery, and how to avoid them
- K6 the emergency shut-down procedures
- K7 the procedures for dealing with 2-up work
- K8 how attachments work for feeding glued inserts into the book
- K9 how to select wire of the appropriate shape and thickness for the job
- K10 the purpose of signature marks
- K11 which types of material are most at risk of rub marking
- K12 which printed colours are most at risk of marking
- K13 the danger to the book user of wires inadequately clenched.

Element 341.1 Set up in-line inseting-stitching-trimming machinery

Performance evidence

You must show that you can set up in-line inseting-stitching-trimming machinery consistently over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you identify from your examination of materials:
 - a the section make-up
 - b type of section
 - c section sequence
 - d trim positions
 - e signature marks
- R2 you set up for:
 - a multi-section work including cover
- R3 for sections which are:
 - a open head
 - b closed head
 - c lapped
 - d non-lapped
- R4 using:
 - a coated paper
 - b uncoated paper
- R5 you test and adjust machinery by:
 - a visual inspection
 - b checking control settings
 - c producing a sample from the machine.

Element 341.2 Run in-line insetting-stitching-trimming machinery

Performance criteria

You must show that you:

- 1 run in-line insetting-stitching-trimming machinery:
 - a at the required speed
 - b safely and efficiently
- 2 keep up the supply of materials throughout the run
- 3 regularly check that your company's quality standards are met
- 4 accurately identify the causes of production faults, which result in:
 - a stitch legs of unequal length
 - b stitch legs not closed
 - c stitches missing
 - d marks on book spines
- 5 correct faults which it is your job to remedy
- 6 promptly report faults which it is not your job to correct
- 7 check that the machine is safe to operate, once faults have been corrected
- 8 accurately record the production and quality assurance details
- 9 follow the correct procedures for the removal of waste
- 10 stack work safely using the approved method.

Element 341.2 Run in-line insetting-stitching-trimming machinery

Knowledge and understanding

You must understand

- K1 your company's quality standards
- K2 the risks associated with running in-line insetting-stitching-trimming machinery and how to avoid them
- K3 the emergency shut-down procedures
- K4 the common in-line insetting-stitching-trimming running faults, what causes them and how to correct them
- K5 what other faults can occur during insetting-stitching-trimming work
- K6 how to recognise when you should correct faults yourself and when you should ask for help
- K7 to whom you should report faults
- K8 where to find documents giving help in identifying the causes of faults
- K9 the procedures for the removal of waste from your machine
- K10 your company's methods for stacking finished work from your machine
- K11 what production and quality assurance details you are required to keep
- K12 why trimmer knives should be kept sharp and free from chips.

Element 341.2 Run in-line inseting-stitching-trimming machinery

Performance evidence

You must show that you can run in-line inseting-stitching-trimming machinery consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you can run the machine to produce:
 - a single section work inclusive of cover
 - b multi-section work including cover
- R2 and maintain the quality of:
 - a inseting
 - b stitches
 - c trims
 - d the material
- R3 you decide on action to correct faults:
 - a to be taken by yourself
 - b to be taken by others.

Element 341.3 Plan and implement a programme of maintenance for in-line inseting-stitching-trimming machinery

Performance criteria

You must show that you:

- 1 obtain or prepare a complete schedule of maintenance for in-line inseting-stitching-trimming machinery
- 2 identify the recommended intervals for maintenance and lubrication
- 3 ensure that the maintenance plan is implemented and kept up to date as far as is possible within the time allowed by your company for lubrication and maintenance
- 4 keep records of maintenance work undertaken
- 5 examine machinery for defective components or excessive wear at intervals required by your company
- 6 keep records of faults that occur or are developing and that appropriate action is taken to deal with them either:
 - a as part of the maintenance programme
 - b as an urgent repair by you (if it is your job to deal with it) or
 - c by reporting the problem to the relevant person in your organisation
- 7 are able to remove and replace faulty or worn components that are your responsibility
- 8 maintain a list of parts or consumables that are likely to require periodic replacement and identify those parts that may be required at short notice
- 9 ensure that any parts or consumables identified as being required to be kept 'in stock' are available in the required quantities.

Element 341.3 Plan and implement a programme of maintenance for in-line inseting-stitching-trimming machinery

Knowledge and understanding

You must understand:

- K1 why manufacturer's of in-line inseting-stitching-trimming machines specify a schedule of preventative maintenance
- K2 what kinds of components wear or become degraded over time on in-line inseting-stitching-trimming machinery
- K3 what kinds of lubricants to use on the in-line inseting-stitching-trimming machinery
- K4 the properties of different kinds of lubricants
- K5 how to replenish lubricants in dispensers and reservoirs
- K6 how to find part reference numbers and order replacement parts
- K7 the consequences of failing to maintain or inspect your machine in accordance with the manufacturer's specification or any relevant code of practice
- K8 legal requirements and industry guidelines for the safe handling, use and disposal of hazardous substances
- K9 the risks of handling lubricants
- K10 the personal protective equipment which should be worn when handling hazardous substances and lubricants.
- K11 where the principal lubrication points are on your in-line inseting-stitching-trimming machinery
- K12 to whom you should report existing and developing faults
- K13 what is meant by the term 'safe system of work' and how it applies to maintenance and lubrication activities on an in-line inseting-stitching-trimming machine.

Element 341.3 Plan and implement a programme of maintenance for in-line inseting-stitching-trimming machinery

Performance evidence

You must show that you plan and implement maintenance of the adhesive binder consistently, over a period of time. Your evidence must show that:

- R1 you keep appropriate documents to enable the planning and implementation of maintenance, such as:
 - a the machine manufacturer's recommended maintenance schedules
 - b the machine manufacturer's operating manual and any other relevant documents
 - c any HSE/PIAC code of practice for inline inseting-stitching-trimming machines
 - d lists of consumables and parts, including those normally kept 'in stock'
 - e maintenance records
 - f fault reports
- R2 you have a maintenance schedule for the machine, and take part in its implementation as far as your company's production schedules and policies allow
- R3 you identify defective or deteriorating components during:
 - a normal machine running
 - b planned maintenance work
- R4 you are able to diagnose actual or developing machine faults by:
 - a examining output from the machine
 - b examining the machine
- R5 you are able to correctly and safely change the trimming knives
- R6 you are able to strip down, clean and service the stitching heads and replace any worn parts on them.

Element 341.4 Keep in-line insetting-stitching-trimming machinery in a clean and safe operating condition

Performance criteria

You must show that you:

- 1 have a 'safe system of work' and a risk assessment in place before commencing any cleaning
- 2 use cleaning methods which are safe, avoid harm to the environment and which follow the manufacturer's instructions
- 3 dispose of used cleaning agents and waste materials safely and in accordance with environment/waste disposal legislation
- 4 prevent any build up of debris in or around the machine by regularly removing it and cleaning the machine
- 5 regularly check that the machine is clean enough to prevent marking or damage to the product during normal operation
- 6 after cleaning, check that the machine is safe to operate.

Element 341.4 Keep in-line insetting-stitching-trimming machinery in a clean and safe operating condition

Knowledge and understanding

You must understand:

- K1 what 'safe systems of work' and 'risk assessments' are
- K2 the current legal requirements and industry guidelines for the safe handling and use of hazardous substances
- K3 the risks of handling cleaning materials
- K4 what the production schedule is and how this affects cleaning operations
- K5 why it is important to use cleaning methods which are safe, avoid harming the environment and meet manufacturers' requirements
- K6 what cleaning agents are suitable for use
- K7 your company's procedures for the safe disposal of waste
- K8 what you must do to comply with environmental and waste legislation
- K9 what records need to be kept.

Element 341.4 Keep in-line insetting-stitching-trimming machinery in a clean and safe operating condition

Performance evidence

You must show that you keep the inline insetting-stitching-trimming machine in a clean and safe operating condition consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that you:

- R1 work in a tidy and safe environment and prevent the build up of debris:
 - a inside or on the machine
 - b around the machine
- R2 keep the machine and surrounding area free from:
 - a scrap paper
 - b dust, including paper dust
 - c excessive lubricant
 - d spent adhesive
- R3 check that after cleaning the machine is safe to operate:
 - a all fixed guards are in place on the machine
 - b any interlocking guards are in place and working correctly
- R4 dispose of the following waste materials properly:
 - a used cleaning agents
 - b solvents and lubricants
 - c production debris
 - d soiled materials.

Unit 342

Control in-line gathering-adhesive binding-trimming machinery

Introduction

To achieve your unit certificate, you must show that you can:

- 1 Element 342.1 Set up in-line gathering-adhesive binding-trimming machinery
- 2 Element 342.2 Run in-line gathering-adhesive binding-trimming machinery
- 3 Element 342.3 Plan and implement a programme of maintenance for in-line gathering-adhesive binding-trimming machinery
- 4 Element 342.4 Keep in-line gathering-adhesive binding-trimming machinery in a clean and safe operating condition

This involves:

- identifying the job requirements
- checking that the in-line gathering-adhesive binding-trimming machine is working properly
- checking that safety devices are working properly
- running in-line gathering-adhesive binding-trimming machinery safely
- adjusting settings, where necessary to maintain the required standard
- checking that work meets the required standard
- identifying faults and taking action to deal with them
- unloading and stacking the finished product.

Collecting the evidence for this unit

Your performance evidence must show that you have covered all of the statements in each element, and must be the result of real work activities in actual production situations. Simulation is **not** acceptable for this unit. Video recording evidence is ideal.

Your assessor will need to be satisfied that you have the necessary understanding specified in each 'K' list. Where this is not evident from your performance, you may be asked oral or written questions, or to write a short report.

You may need to provide other information to support your performance evidence or be able to point to where such evidence may be found within your company. Here are some examples:

- job instructions
- samples of finished jobs
- production records showing the time taken to produce the job and/or the quantity produced
- how you maintained the speed of output and quality of the product throughout the line.

Element 342.1 Set up in-line gathering-adhesive binding-trimming machinery

Performance criteria

You must show that you:

- 1 check that you have all the details you need for the job
- 2 check that you have enough materials of the right type for the job
- 3 promptly report to your manager, if the materials provided are not correct or sufficient
- 4 set up the in-line gathering-adhesive binding-trimming machinery correctly, so that:
 - a sections are gathered to give the correct page sequence
 - b sections are fed squarely from hoppers to the transport chain
 - c book blocks are fed into the binder squarely and without damage
 - d spine preparation gives the correct glue penetration of the paper
 - e glue is applied evenly at the correct temperature
 - f covers are fed squarely
 - g score lines do not break the cover surface
 - h books are fed into the trimmer squarely and without damage
 - i clamp holds pile firmly without marking
 - j piles are trimmed squarely and delivered without damage or distortion
 - k the trimmed size is within the variation permitted by your company
- 5 produce a sample from the machine and check that it matches the required standard
- 6 make adjustments if necessary to enable the standards to be met
- 7 report promptly to your manager, if the standards cannot be met
- 8 check that your work area is safe and ready for production.

Element 342.1 Set up in-line gathering-adhesive binding-trimming machinery

Knowledge and understanding

You must understand:

- K1 what details you need for the job
- K2 the principles of in line gathering-adhesive binding-trimming
- K3 the sequence of set up tasks for gathering-adhesive binding-trimming machinery
- K4 the common gathering-adhesive binding-trimming set-up faults, what causes them and how to prevent them
- K5 the risks associated with setting-up gathering-adhesive binding-trimming machinery, and how to avoid them
- K6 the emergency shut-down procedures
- K7 the purpose of collating marks and signature marks
- K8 how the grain direction of materials affect binding quality
- K9 the binding requirements of:
 - a unsewn and sewn sections
 - b covers with two and four scores
 - c coated and uncoated papers
 - d 2-up work
- K10 how to gather open and closed head sections, with and without laps
- K11 how to gather sections perforated along the line of a fold
- K12 the purpose of perforating sections on a folding machine
- K13 which types of material are most at risk of rub marking
- K14 which printed colours are most at risk of marking
- K15 the differences between binding with Hot Melt and Emulsion adhesives
- K16 how to securely clamp piles of uneven height for trimming.

Element 342.1 Set up in-line gathering-adhesive binding-trimming machinery

Performance evidence

You must show that you can set up in-line gathering-adhesive binding-trimming machinery consistently over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you set up for the following types of section:
 - a open head
 - b closed head
 - c lapped
 - d non-lapped
- R2 ... and these types of stock:
 - a coated paper
 - b uncoated paper
- R3 ... when the job style is:
 - a landscape
 - b portrait
- R4 ... and for jobs which include:
 - a outset/wraparound plates
 - b sections with insetted folded inserts
 - c single leaf tipped on plates
- R5 you test and adjust machinery by:
 - a visual inspection
 - b checking control settings
 - c producing a sample run.

Element 342.2 Run in-line gathering-adhesive binding-trimming machinery

Performance criteria

You must show that you:

- 1 run in-line gathering-adhesive binding machinery:
 - a at the required speed
 - b safely and efficiently
- 2 keep up the supply of materials throughout the run
- 3 regularly check that your company's quality standards are met
- 4 accurately identify the causes of production faults, which result in:
 - a sections not in the correct order
 - b cracking of the cover surface on front cover and spine
 - c rounding of spines
 - d too much and too little glue penetration
 - e poor page-pull strength
 - f covers not registering correctly with book blocks
 - g unacceptable cut size variation
 - h score marks on cut surfaces
 - i ragged cut on bottom pages
 - j book spines splitting at head and tail
 - k books not square
 - l spines creasing
- 5 correct faults which it is your job to remedy
- 6 promptly report faults which it is not your job to correct
- 7 check that the machine is safe to operate, once faults have been corrected
- 8 accurately record the production and quality assurance details
- 9 follow the correct procedures for the removal of waste
- 10 stack work safely using the approved method.

Element 342.2 Run in-line gathering-adhesive binding-trimming machinery

Knowledge and understanding

You must understand:

- K1 your company's quality standards
- K2 the risks associated with running in-line gathering-adhesive binding-trimming machinery and how to avoid them
- K3 the emergency shut-down procedures
- K4 the common in-line gathering-adhesive binding-trimming running faults, what causes them and how to correct them
- K5 what other faults can occur during gathering-adhesive binding-trimming production
- K6 how to recognise when you should correct faults and when you should ask for help
- K7 to whom you should report faults
- K8 where to find documents giving help in identifying the causes of faults
- K9 the procedures for the removal of waste from your machine
- K10 your company's methods for stacking finished work from your machine
- K11 what production and quality assurance details you are required to keep
- K12 why trimmer knives should be kept sharp and free from chips
- K13 the factors what will dictate the height of piles for trimming.

Element 342.2 Run in-line gathering-adhesive binding-trimming machinery

Performance evidence

You must show that you can run in-line gathering-adhesive binding-trimming machinery consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you run the machinery from sections which are:
 - a open head or closed head
 - b lapped or non-lapped
- R2 ... and these types of stock:
 - a coated paper and uncoated paper
- R3 and maintain the quality of:
 - a gathering, bond strength and trims
- R4 you decide on action to correct faults:
 - a to be taken by yourself
 - b to be taken by others.

Element 342.3 Plan and implement a programme of maintenance in-line gathering-adhesive binding-trimming machinery

Performance criteria

You must show that you:

- 1 obtain or prepare a complete schedule of maintenance for the in-line gathering adhesive binding-trimming machinery
- 2 identify the recommended intervals for maintenance and lubrication
- 3 ensure that the maintenance plan is implemented and kept up to date as far as is possible within the time allowed by your company for lubrication and maintenance
- 4 keep records of maintenance work undertaken
- 5 examine machinery for defective components or excessive wear at intervals required by your company
- 6 keep records of faults that occur or are developing and that appropriate action is taken to deal with them either:
 - a as part of the maintenance programme
 - b as an urgent repair by you (if it is your job to deal with it), or
 - c by reporting the problem to the relevant person in your organisation
- 7 are able to remove and replace faulty or worn components that are your responsibility
- 8 maintain a list of parts or consumables that are likely to require periodic replacement and identify those parts that may be required at short notice
- 9 ensure that any parts or consumables identified as being required to be kept 'in stock' are available in the required quantities.

Element 342.3 Plan and implement a programme of maintenance in-line gathering-adhesive binding-trimming machinery

Knowledge and understanding

You must understand:

- K1 why manufacturer's of in-line gathering-adhesive binding-trimming machinery specify a schedule of preventative maintenance
- K2 what kinds of components wear or become degraded over time on in-line gathering-adhesive binding-trimming machinery
- K3 what kinds of lubricants to use on the in-line gathering-adhesive binding-trimming machinery
- K4 the properties of different kinds of lubricants
- K5 how to replenish lubricants in dispensers and reservoirs
- K6 how to find part reference numbers and order replacement parts
- K7 the consequences of failing to maintain or inspect your machine in accordance with the manufacturer's specification or any relevant code of practice
- K8 legal requirements and industry guidelines for the safe handling, use and disposal of hazardous substances
- K9 the risks of handling lubricants
- K10 the personal protective equipment which should be worn when handling hazardous substances and lubricants.
- K11 where the principal lubrication points are on your in-line gathering-adhesive binding-trimming machinery
- K12 to whom you should report existing and developing faults
- K13 what is meant by the term 'safe system of work' and how it applies to maintenance and lubrication activities on an in-line gathering-adhesive binding-trimming machinery.

Element 342.3 Plan and implement a programme of maintenance in-line gathering-adhesive binding-trimming machinery

Performance evidence

You must show that you plan and implement maintenance of the in-line gathering adhesive binding-trimming machinery consistently, over a period of time.

Your evidence must show that:

- R1 you keep appropriate documents to enable the planning and implementation of maintenance, such as:
 - a the machine manufacturer's recommended maintenance schedules
 - b the machine manufacturer's operating manual and any other relevant documents
 - c any HSE/PIAC code of practice for in-line gathering-adhesive binding-trimming machinery
 - d lists of consumables and parts, including those normally kept 'in stock'
 - e maintenance records
 - f fault reports
- R2 you have a maintenance schedule for the machine, and take part in its implementation as far as your company's production schedules and policies allow
- R3 you identify defective or deteriorating components during:
 - a normal machine running
 - b planned maintenance work
- R4 you are able to diagnose actual or developing machine faults by:
 - a examining output from the machine
 - b examining the machine
- R5 you are able to change the trimming knives safely and correctly.

Element 342.4 Keep in-line gathering-adhesive binding-trimming machinery in a clean and safe operating condition

Performance criteria

You must show that you:

- 1 have a 'safe system of work' and a risk assessment in place before commencing any cleaning
- 2 use cleaning methods which are safe, avoid harm to the environment and which follow the manufacturer's instructions
- 3 dispose of used cleaning agents and waste materials safely and in accordance with environment/waste disposal legislation
- 4 prevent any build up of debris in or around the machine by regularly removing it and cleaning the machine
- 5 regularly check that the machine is clean enough to prevent marking or damage to the product during normal operation
- 6 after cleaning, check that the machine is safe to operate.

Element 342.4 Keep in-line gathering-adhesive binding-trimming machinery in a clean and safe operating condition

Knowledge and understanding

You must understand:

- K1 what 'safe systems of work' and 'risk assessments' are
- K2 the current legal requirements and industry guidelines for the safe handling and use of hazardous substances
- K3 the risks of handling cleaning materials
- K4 what the production schedule is and how this affects cleaning operations
- K5 why it is important to use cleaning methods which are safe, avoid harming the environment and meet manufacturers' requirements
- K6 what cleaning agents are suitable for use
- K7 your company's procedures for the safe disposal of waste
- K8 what you must do to comply with environmental and waste legislation
- K9 what records need to be kept.

Element 342.4 Keep in-line gathering-adhesive binding-trimming machinery in a clean and safe operating condition

Performance evidence

You must show that you keep the in-line gathering-adhesive binding-trimming machinery in a clean and safe operating condition consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that you:

- R1 work in a tidy and safe environment and prevent the build up of debris:
 - a inside or on the machine
 - b around the machine
- R2 keep the machine and surrounding area free from:
 - a scrap paper
 - b dust, including paper dust
 - c excessive lubricant
 - d spent adhesive
- R3 check that after cleaning the machine is safe to operate:
 - a all fixed guards are in place on the machine
 - b any interlocking guards are in place and working correctly
 - c any guards designed to give protection from the milling station and the glue tank are fitted and working correctly
- R4 dispose of the following waste materials properly:
 - a used cleaning agents
 - b solvents and lubricants
 - c production debris
 - d soiled materials.

Unit 343

Control in-line block feeding-forwarding- case binding machinery

Introduction

To achieve your unit certificate, you must show that you can:

- 1 Element 343.1 Set up in-line block feeding-forwarding- case binding machinery
- 2 Element 343.2 Run in-line block feeding-forwarding- case binding machinery
- 3 Element 343.3 Plan and implement a programme of maintenance for in- block feeding-forwarding- case binding machinery
- 4 Element 343.4 Keep in-line block feeding-forwarding- case binding machinery in a clean and safe operating condition

This involves:

- identifying the job requirements
- checking that the in-line block feeding-forwarding-binding machine is working properly
- checking that safety devices are working properly
- running in-line block feeding-forwarding-binding machinery safely
- adjusting settings, where necessary to maintain the required standard
- checking that work meets the required standard
- identifying faults and taking action to deal with them
- unloading and stacking the finished product.

Collecting the evidence for this unit

Your performance evidence must show that you have covered all of the statements in each element, and must be the result of real work activities in actual production situations. Simulation is **not** acceptable for this unit. Video recording evidence is ideal.

Your assessor will need to be satisfied that you have the necessary understanding specified in each 'K' list. Where this is not evident from your performance, you may be asked oral or written questions, or to write a short report.

You may need to provide other information to support your performance evidence or be able to point to where such evidence may be found within your company. Here are some examples:

- job instructions
- samples of finished jobs
- samples of finished jobs
- production records showing the time taken to produce the job and/or the quantity produced
- how you maintained the speed and quality of the throughput on the line.

Element 343.1 Set up in-line block feeding-forwarding-case binding machinery

Performance criteria

You must show that you:

- 1 check that you have all the details you need for the job
- 2 check that you have enough materials of the right type for the job
- 3 promptly report to your manager, if the materials provided are not correct or sufficient
- 4 set up the line correctly, so that:
 - a book blocks are fed into forwarding units squarely and without damage
 - b forwarding processes match the specification
 - c finished blocks are fed into the case binder squarely, and without damage
 - d cases are fed squarely, evenly and without distortion
 - e adhesive is applied evenly to the book joints and endpapers
 - f book blocks are securely and cleanly attached to cases
 - g the size of squares are equal all round
 - h books are delivered without damage or distortion
- 5 produce a sample from the machine and check that it matches the required standards
- 6 make adjustments if necessary, to enable the standards to be met
- 7 report promptly to your manager, if the standards cannot be met
- 8 check that your work area is safe and ready for production.

Element 343.1 Set up in-line block feeding-forwarding-case binding machinery

Knowledge and understanding

You must understand:

- K1 what details you need for the job
- K2 the principles of in line block feeding-forwarding-binding
- K3 the sequence of set up tasks for block feeding-forwarding-binding machinery
- K4 the different binding requirements of:
 - a square backed books
 - b rounded and backed books
- K5 which glues are suitable for forwarding and casing-in processes
- K6 how the grain direction of boards and book blocks affects binding quality
- K7 the degree of warping produced by gluing different types of boards and papers
- K8 the risks associated with setting up in line block feeding-forwarding-binding machinery, and how to avoid them
- K9 what the common in line block feeding-forwarding-binding machine faults are, what causes them and how to prevent them
- K10 the emergency shut down procedures.

Element 343.1 Set up in-line block feeding-forwarding-case binding machinery

Performance evidence

You must show that you can set up in-line block feeding-forwarding-case binding machinery consistently over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

- R1 you set up for:
 - a case bound rounded and backed, and square back books
- R2 ... for jobs including:
 - a multi book back linings
 - b head and tail bands
- R3 ... when the types of cases are:
 - a plastic or coated
 - b cloth and paper
- R4 ... and the following types of hollow lining are required:
 - a paper and board
- R5 you test and adjust machinery by:
 - a visual inspection
 - b checking control settings
 - c producing a sample run.

Element 343.2 Run in-line block feeding-forwarding-case binding machinery

Performance criteria

You must show that you:

- 1 run in-line block feeding-forwarding-binding machinery:
 - a at the required speed to produce the output
 - b safely and efficiently
- 2 keep up the supply of materials throughout the run
- 3 regularly check that quality standards are met
- 4 accurately identify the cause of production faults, which result in:
 - a out of square with case head and tail bands incorrectly positioned on the spine
 - b lining off-centre to the spine
 - c shape of spines distorted
 - d over and under penetration of glue
 - e shoulders of joints poorly formed
 - f book blocks
- 5 correct mechanical faults which it is your job to remedy
- 6 promptly report mechanical faults which it is not your job to correct
- 7 check that the machine is safe to operate, once faults are corrected
- 8 accurately record production and quality assurance details
- 9 follow the correct procedures for the removal of waste
- 10 stack work safely using the approved method.

Element 343.2 Run in-line block feeding-forwarding-case binding machinery

Knowledge and understanding

You must understand:

- K1 your company's quality standards
- K2 the principles of in line block feeding-forwarding-binding
- K3 the risks associated with running in line block feeding-forwarding-binding machinery and how to avoid them
- K4 the emergency shut down procedures
- K5 the common in line block feeding-forwarding-binding machine faults, what causes them and how to correct them
- K6 what other faults can occur during block feeding-forwarding-binding work
- K7 how to recognise when you should correct faults yourself and when you should ask for help
- K8 to whom you must report faults
- K9 where to find documents giving help in identifying the causes of faults
- K10 the procedures for the removal of waste from your machine
- K11 what production and quality assurance details you are required to keep.

Element 343.2 Run in-line block feeding-forwarding-case binding machinery

Performance evidence

You must show that you can run in-line block feeding-forwarding-case binding machinery consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that:

R1 you run the machine for jobs which include:

- a tape sewn sections
- b multi book back linings
- c head and tail bands

R2 ... when the types of cases are:

- a plastic or coated
- b cloth
- c paper

R3 ... and maintain the quality of:

- a case position
- b spine shape
- c bond strength

R4 you determine action to remedy faults:

- a to be taken by yourself
- b to be taken by others.

Element 343.3 Plan and implement a programme of maintenance for in-line block feeding-forwarding-case binding machinery

Performance criteria

You must show that you:

- 1 obtain or prepare a complete schedule of maintenance for the in-line block feeding-forwarding-case binding machinery
- 2 identify the recommended intervals for maintenance and lubrication
- 3 ensure that the maintenance plan is implemented and kept up to date as far as is possible within the time allowed by your company for lubrication and maintenance.
- 4 keep records of maintenance work undertaken
- 5 examine machinery for defective components or excessive wear at intervals required by your company
- 6 keep records of faults that occur or are developing and that appropriate action is taken to deal with them either:
 - a as part of the maintenance programme
 - b as an urgent repair by you (if it is your job to deal with it) or
 - c by reporting the problem to the relevant person in your organisation
- 7 are able to remove and replace faulty or worn components that are your responsibility
- 8 maintain a list of parts or consumables that are likely to require periodic replacement and identify those parts that may be required at short notice
- 9 ensure that any parts or consumables identified as being required to be kept 'in stock' are available in the required quantities.

Element 343.3 Plan and implement a programme of maintenance for in-line block feeding-forwarding-case binding machinery

Knowledge and understanding

You must understand:

- K1 why manufacturer's of in-line block feeding-forwarding-case binding machinery specify a schedule of preventative maintenance
- K2 what kinds of components wear or become degraded over time on in-line block feeding-forwarding-case binding machinery
- K3 what kinds of lubricants to use on the in-line block feeding-forwarding-case binding machinery
- K4 the properties of different kinds of lubricants
- K5 how to replenish lubricants in dispensers and reservoirs
- K6 how to find part reference numbers and order replacement parts
- K7 the consequences of failing to maintain or inspect your machine in accordance with the manufacturer's specification or any relevant code of practice
- K8 legal requirements and industry guidelines for the safe handling, use and disposal of hazardous substances
- K9 the risks of handling lubricants
- K10 the personal protective equipment which should be worn when handling hazardous substances and lubricants.
- K11 where the principal lubrication points are on your in-line block feeding-forwarding-case binding machinery
- K12 to whom you should report existing and developing faults
- K13 what is meant by the term 'safe system of work' and how it applies to maintenance and lubrication activities on an in-line block feeding-forwarding-case binding machinery.

Element 343.3 Plan and implement a programme of maintenance for in-line block feeding-forwarding-case binding machinery

Performance evidence

You must show that you plan and implement maintenance of the adhesive binder consistently, over a period of time. Your evidence must show that:

- R1 you keep appropriate documents to enable the planning and implementation of maintenance, such as:
 - a the machine manufacturer's recommended maintenance schedules
 - b the machine manufacturer's operating manual and any other relevant documents
 - c any HSE/PIAC code of practice for in-line block feeding-forwarding-case binding machinery
 - d lists of consumables and parts, including those normally kept 'in stock'
 - e maintenance records
 - f fault reports
- R2 you have a maintenance schedule for the machine, and take part in its implementation as far as your company's production schedules and policies allow
- R3 you identify defective or deteriorating components during:
 - a normal machine running
 - b planned maintenance work
- R4 you are able to diagnose actual or developing machine faults by:
 - a examining output from the machine
 - b examining the machine.

Element 343.4 Keep in-line block feeding-forwarding-case binding machinery in a clean and safe operating condition

Performance criteria

You must show that you:

- 1 have a 'safe system of work' and a risk assessment in place before commencing any cleaning
- 2 use cleaning methods which are safe, avoid harm to the environment and which follow the manufacturer's instructions
- 3 dispose of used cleaning agents and waste materials safely and in accordance with environment/waste disposal legislation
- 4 prevent any build up of debris in or around the machine by regularly removing it and cleaning the machine
- 5 regularly check that the machine is clean enough to prevent marking or damage to the product during normal operation
- 6 after cleaning, check that the machine is safe to operate.

Element 343.4 Keep in-line block feeding-forwarding-case binding machinery in a clean and safe operating condition

Knowledge and understanding

You must understand:

- K1 what 'safe systems of work' and 'risk assessments' are
- K2 the current legal requirements and industry guidelines for the safe handling and use of hazardous substances
- K3 the risks of handling cleaning materials
- K4 what the production schedule is and how this affects cleaning operations
- K5 why it is important to use cleaning methods which are safe, avoid harming the environment and meet manufacturers' requirements
- K6 what cleaning agents are suitable for use
- K7 your company's procedures for the safe disposal of waste
- K8 what you must do to comply with environmental and waste legislation
- K9 what records need to be kept.

Element 343.4 Keep in-line block feeding-forwarding-case binding machinery in a clean and safe operating condition

Performance evidence

You must show that you keep the in-line block feeding-forwarding-case binding machinery in a clean and safe operating condition consistently, over a period of time. Your performance will be observed on at least **four** occasions. Your evidence must show that you:

- R1 work in a tidy and safe environment and prevent the build up of debris:
 - a inside or on the machine
 - b around the machine
- R2 keep the machine and surrounding area free from:
 - a scrap paper
 - b dust, including paper dust
 - c excessive lubricant
 - d spent adhesive
- R3 check that after cleaning the machine is safe to operate:
 - a all fixed guards are in place on the machine
 - b any interlocking guards are in place and working correctly
- R4 dispose of the following waste materials properly:
 - a used cleaning agents
 - b solvents and lubricants
 - c production debris
 - d soiled materials.

Appendix 1 Accreditation, national frameworks and qualification level descriptors

Please visit the following websites to find information on accreditation, national frameworks and qualification level descriptors in each country.

Nation	Who to contact	Website
England	The Qualifications and Curriculum Authority	www.qca.org.uk
Scotland	The Scottish Qualifications Authority	www.sqa.org.uk
Wales	The Department for Education, Lifelong Learning and Skills Wales	www.new.wales.gov.uk
Northern Ireland	The Council for Curriculum, Examinations and Assessment	www.ccea.org.uk

Appendix 2 The qualification structure

This section of the document outlines the qualification structure for the full suite of Printing NVQs at Levels 2 and 3. Please refer to the tables on the following pages.

Qualification	Complex	QCA reference
Level 2 NVQ in Digital Print Production	5158-20 and -80	500/1488/2
Level 2 NVQ in Machine Printing	5158-21 and -81	500/1483/3
Level 2 NVQ in Mechanised Print Finishing and Binding	5158-22 and -82	500/1479/1
Level 2 NVQ in Envelope Manufacture	5158-23 and -83	500/1476/6
Level 3 NVQ in Digital Print Production	5158-30 and -90	500/1469/9
Level 3 NVQ in Machine Printing	5158-31 and -91	500/1491/2
Level 3 NVQ in Mechanised Print Finishing and Binding	5158-32 and -92	500/1475/4
Level 3 NVQ in Envelope Manufacture	5158-33 and -93	500/1487/0
Level 3 NVQ in Hand Binding	5158-34 and -94	500/1477/8
Level 3 NVQ in Carton Manufacture	5158-35 and -95	500/1478/X
Level 3 NVQ in Print Administration	5158-36 and -96	500/1472/9

Level 2 NVQ in Digital Print Production

Mandatory common units

201 Comply with Health and Safety Requirements in the Workplace

202 Improve your performance at work

203 Plan your work to meet production requirements

204 Capture images from specified sources

Mandatory Technical Units

Group A – Digital Artwork for Print

205 Create digital colour artwork for print

Group B – Pre-Press

206 Produce imposed separations for printing

Group C – Digital Printing

207 Operate digital printing machines

Level 2 NVQ in Machine Printing

Mandatory common units

201 Comply with Health and Safety Requirements in the Workplace

202 Improve your performance at work

208 Contribute to maintaining equipment in working order

Mandatory technical units (Groups A-G) – complete two units from same pathway

Group A - Lithography	Group B - Web Offset	Group C - Flexography	Group D - Screen	Group E - Gravure	Group F - Pad printing	Group G - Dye Stamping
209 Prepare machines for sheet fed lithographic printing	217 Prepare machines for web offset printing	221 Prepare machines for flexographic printing	226 Prepare equipment and machines for screen printing	229 Prepare machines for gravure printing	232 Prepare machines for pad printing	262 Prepare dye stamping machines for printing
210 Operate sheet fed lithographic printing machines	218 Operate web offset printing machines	222 Operate flexographic printing machines	227 Operate screen printing machines	230 Operate gravure printing machines	233 Operate pad printing machines	263 Operate dye stamping machines

Optional technical units – complete one unit from chosen pathway

211 Operate in-line converting equipment	211 Operate in-line converting equipment	211 Operate in-line converting equipment	211 Operate in-line converting equipment	211 Operate in-line converting equipment	212 Operate ink drying equipment	211 Operate in-line converting equipment
212 Operate ink drying equipment	212 Operate ink drying equipment	212 Operate ink drying equipment	212 Operate ink drying equipment	212 Operate ink drying equipment	213 Prepare inks	213 Prepare inks

Continued on next page

213 Prepare inks	214 Set up and operate auxiliary equipment	213 Prepare inks	213 Prepare inks	220 Operate reel handling equipment	234 Maintain the condition of consumables for printing	214 Set up and operate auxiliary equipment
214 Set up and operate auxiliary equipment	219 Operate in-line printing units	214 Set up and operate auxiliary equipment	228 Prepare stencils for printing	231 Mix, dry and cure inks		216 Prepare and produce wet proofs
215 Maintain the condition of plates for printing	220 Operate reel handling equipment	215 Maintain the condition of plates for printing				
216 Prepare and produce wet proofs		220 Operate reel handling equipment				
		223 Operate and monitor bar code printing				
		224 Control colour throughout the run				
		225 Maintain anilox roll conditions				

Level 2 NVQ in Mechanised Print Finishing and Binding

Mandatory common units

201 Comply with Health and Safety Requirements in the Workplace

202 Improve your performance at work

208 Contribute to maintaining equipment in working order

Optional technical units (Groups A-B) – complete two optional from chosen pathway

Group A – General Print

235 Run and monitor guillotines

236 Run and monitor adhesive binding machinery

237 Run and monitor case making machinery

238 Run and monitor casing-in machinery

239 Run and monitor folding machinery

240 Set and operate booklet-making machinery

241 Set and operate mail processing machinery

242 Set and operate multi-knife trimming machinery

243 Set and operate multiple hopper feeders

Group B – Newspapers and Periodicals

249 Operate automated inserting equipment for newspapers and periodicals production

250 Operate automated stitch and trim equipment for newspapers and periodicals production

251 Set up machines for automated newspapers and periodicals print finishing

252 Move materials for newspaper and periodical production

253 Repair and maintain feeder machinery

254 Control publishing equipment for newspaper and periodicals production

255 Control auto-palletising equipment for newspaper and periodicals production

Continued on next page

244 Set and operate auto-fed sewing machinery

245 Control auto punching and cutting machinery

246 Control foil blocking machinery

247 Control twin loop wire binding machinery

248 Control parallel folding

Level 2 NVQ in Envelope Manufacture

Mandatory common units

201 Comply with Health and Safety Requirements in the Workplace

202 Improve your performance at work

208 Contribute to maintaining equipment in working order

256 Monitor and run envelope manufacturing machines

Optional Technical units – complete one optional

257 Prepare and set printing units

258 Prepare and set window cutting and patching units for envelope manufacture

259 Prepare and set scoring, folding and gumming units for envelope manufacturing

260 Prepare and set profile cutting units for envelope manufacture

Level 3 NVQ in Digital Print Production

Mandatory Common Units

203	Plan work to meet production requirements
261	Send and receive digital files
301	Ensure your own actions reduce risks to health and safety in the workplace
302	Improve Individual and Organisational Performance
303	Plan and capture digital images
304	Maintain digital systems in working order
305	Design and produce creative digital colour artwork for print

Mandatory Technical Units (Groups A-B) – complete one units from chosen pathway

Group A - Digital Artwork for Print

206	Produce imposed separations for printing
207	Operate digital printing machines
306	Plan and produce edited images
307	Manage colour reproduction in digital pre-press
308	Produce approved proofs from digital artwork

Group B - Pre-press

228	Prepare stencils for printing
306	Plan and produce edited images
307	Manage colour reproduction in digital pre-press
308	Produce approved proofs from digital artwork
309	Produce computer generated image carriers
310	Make photopolymer plates for flexographic printing
311	Make plates for lithographic printing
312	Make gravure cylinders

Level 3 NVQ in Machine Printing

Mandatory common units

301	Ensure your own actions reduce risks to health and safety in the workplace
302	Improve Individual and Organisational Performance
348	Maintain equipment in working order

Mandatory technical units

Group A – Lithography	Group B – Web Offset	Group C – Flexography	Group D - Screen	Group E - Gravure	Group F - Pad Printing
315 Control sheet-fed multi unit lithographic printing machines	319 Control web offset printing machines	323 Control flexographic printing machines	325 Control screen printing machines	326 Control gravure printing machines	327 Control pad printing machines

Optional Technical Units (Groups A-F) – complete two units from chosen pathway

Group A – Lithography	Group B – Web Offset	Group C – Flexography	Group D - Screen	Group E - Gravure	Group F - Pad Printing
215 Maintain the condition of plates for printing	316 Control in-line converting machinery	215 Maintain the condition of plates for printing	213 Prepare inks	316 Control in-line converting machinery	213 Prepare inks
311 Make plates for lithographic printing	317 Control ink drying machinery	316 Control in-line converting machinery	228 Prepare stencils for printing	317 Control ink drying machinery	234 Maintain the condition of consumables for printing

Continued on next page

316 Control in-line converting machinery	318 Control auxiliary equipment	317 Control ink drying machinery	316 Control in-line converting machinery	318 Control auxiliary equipment	317 Control ink drying machinery
317 Control ink drying machinery	320 Control in-line printing units	318 Control auxiliary equipment	317 Control ink drying machinery	321 Control reel handling equipment	
318 Control auxiliary equipment	321 Control reel handling equipment	321 Control reel handling equipment		322 Control in-line folding units	
	322 Control in-line folding units	324 Test flexographic printing machines			

Level 3 NVQ in Mechanised Print Finishing and Binding

Mandatory common units

301 Ensure your own actions reduce risks to health and safety in the workplace

302 Improve Individual and Organisational Performance

Optional technical units (Groups A-B) – complete one optional from chosen pathway

Group A – General Print

Optional technical units – complete two units

328³ Control adhesive binding machinery

329 Control case making machinery

330 Control casing-in machinery

331 Control programmatic guillotines

332² Control folding machinery

333¹ Control in-line booklet making machinery

Optional Technical units complete one unit

Group B – Newspapers and Periodicals

Mandatory technical units – complete one unit

348 Maintain equipment in working order

Optional Technical units complete two units

253 Repair and maintain feeder machinery

344 Control automated inserting processes for newspapers and periodicals print

345 Control automated stitch and trim processes for newspaper and periodicals print

346 Control the set up of machines for newspaper and periodicals print finishing

347 Control materials handling for newspaper and periodicals print finishing

Continued on next page

- 246 Control foil blocking machinery
-
- 334 Control non-automatic finishing machines
-
- 335 Control multiple hopper feeders
-
- 336 Control auto-fed sewing machinery
-
- 337 Control multi-knife trimming machinery
-
- 338¹ Set and operate booklet-making machinery
-
- 339² Control parallel folding
-
- 340³ Run and monitor adhesive binding machinery
-
- 341 Control inline inseting-stitching-trimming machines
-
- 342 Control inline gathering-adhesive-binding-trimming machinery
-
- 343 Control inline block-feeding-forwarding-case binding machinery

Notes

¹Unit 338 may not be used in conjunction with Unit 333

²Unit 339 may not be used in conjunction with Unit 332

³Unit 340 may not be used in conjunction with Unit 328

Level 3 NVQ in Envelope Manufacture

Mandatory common Units

301 Ensure your own actions reduce risks to health and safety in the workplace

302 Improve Individual and Organisational Performance

314 Identify and organise the requirements for production

348 Maintain equipment in working order

349 Control envelope manufacturing machinery

Optional technical units – complete one optional

350 Support the efficient use of resources (MCI)

351 Manage yourself (MCI)

352 Contribute to the development of teams and individuals (MCI)

353 Lead the work of teams and individuals to achieve their objectives (MCI)

354 Train new operators

Level 3 NVQ in Hand Binding

Mandatory common units

301 Ensure your own actions reduce risks to health and safety in the workplace

302 Improve Individual and Organisational Performance

355 Prepare for hand binding operations

356 Bind books by hand

357 Cut page edges and binding materials by guillotine

Optional technical units – complete one optional

351 Manage yourself (MCI)

352 Contribute to the development of teams and individuals (MCI)

353 Lead the work of teams and individuals to achieve their objectives (MCI)

354 Train new operators

358 Decorate cases

Level 3 NVQ in Carton Manufacture

Mandatory common units

301 Ensure your own actions reduce risks to health and safety in the workplace

302 Improve Individual and Organisational Performance

348 Maintain equipment in working order

Optional technical units – complete one optional

359 Control cutting and creasing machinery

360 Control multi-folding and gluing machinery

361 Produce dies and tooling

Optional technical units – complete one optional

314 Identify and organise the requirements for production

350 Support the efficient use of resources (MCI)

351 Manage yourself (MCI)

352 Contribute to the development of teams and individuals (MCI)

353 Lead the work of teams and individuals to achieve their objectives (MCI)

354 Train new operators

Additional technical unit

362 Control carton enhancing machinery

Level 3 NVQ in Print Administration

Mandatory common units

301 Ensure your own actions reduce risks to health and safety in the workplace

302 Improve Individual and Organisational Performance

261 Send and receive digital files

Optional technical units – complete three optional

363 Produce estimates from customer requirements

364 Prepare job cost information and produce invoices

365 Agree job specification and prepare production schedules

366 Control Production

367 Purchase materials and services for production

368 Service customer accounts

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