



National Unit Specification: general information

UNIT Woodmachining: Local Exhaust Ventilation Maintenance
(SCQF level 6)

CODE F7GS 12

SUMMARY

This Unit is suitable for candidates working towards a Modern Apprenticeship in Woodmachining and will develop the candidate's skills in planning maintenance for local exhaust ventilation systems and defining wood waste extraction systems elements. This Unit is also designed to enable candidates to develop their knowledge and understanding of woodmachining terminology and the safe use, design, function and maintenance of wood waste extraction systems.

OUTCOMES

- 1 Demonstrate knowledge and understanding of maintenance schedules for machines.
- 2 Demonstrate knowledge and understanding of health and safety policies and procedures relating to the safe use of local exhaust ventilation systems.
- 3 Outline the design of wood waste extraction systems.

RECOMMENDED ENTRY

While entry is at the discretion of the centre, candidates undertaking the Professional Development Award in Woodmachining at SCQF level 6 must meet the requirements of the Modern Apprentices which include being employed in a relevant craft industry.

CREDIT VALUE

1 credit at SCQF level 6 (6 SCQF credit points at SCQF level 6*).

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

Administrative Information

Superclass: TG

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National Unit Specification: general information (cont)

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CORE SKILLS

While there is no automatic certification of Core Skills or Core Skill components in this Unit, opportunities for developing aspects of the following Core Skills are highlighted in Support Notes of this Unit:

- ◆ *Information and Communication Technology* at SCQF level 3
- ◆ *Numeracy* at SCQF level 4
- ◆ *Communication* at SCQF level 4

National Unit Specification: statement of standards

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Acceptable performance in this Unit will be the satisfactory achievement of the standards set out in this part of the Unit Specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

OUTCOME 1

Demonstrate knowledge and understanding of maintenance schedules for machines.

Performance Criteria

- (a) Identify terminology related to local exhaust ventilation systems and their maintenance.
- (b) Correctly compile a factory maintenance chart.
- (c) Correctly compile lubrication charts.
- (d) Correctly compile maintenance checklists.

OUTCOME 2

Demonstrate knowledge and understanding of health and safety policies and procedures relating to the safe use of local exhaust ventilation systems.

Performance Criteria

- (a) Compile a risk assessment for a given scenario.
- (b) Identify health risks associated with dust fumes.
- (c) Identify appropriate use of control measures.

OUTCOME 3

Outline the design of wood waste extraction systems.

Performance Criteria

- (a) Correctly describe the features of an extraction system.
- (b) Correctly specify ducting requirements.
- (c) Correctly describe the design features of an extraction unit.

National Unit Specification: statement of standards (cont)

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EVIDENCE REQUIREMENTS FOR THIS UNIT

Evidence is required to demonstrate that the candidates have achieved this Unit to the standard specified within all Outcomes and Performance Criteria. All working practices must be in line with relevant and current Health and Safety legislation and regulations.

For Outcome 1, written and/or oral evidence is required which demonstrates the candidate's knowledge and understanding of technical terminology relating to local exhaust ventilation systems maintenance and lubrication checklists, materials, lubricants, solvents and cleaning agents. Evidence for this will be obtained by a series of multiple choice questions under closed-book supervised conditions. Product evidence is also required in the form of completed pro-forma charts and checklists needed to show the candidate can draw up a maintenance schedules for at least **three** machines, lubrication charts for **two** machines and maintenance checklists for **two** machines.

Written and/or oral evidence is required for Outcome 2 which demonstrates the candidate's knowledge and understanding in identifying current health and safety legislation and adverse health risks associated with the improper use of local exhaust ventilation systems. Evidence for this will be obtained by a series of multiple choice questions under closed-book supervised conditions. Product evidence is also required in the form of a completed risk assessment to promote safe use of extraction equipment.

Written and/or oral evidence is required for Outcome 3 in the form of diagrams and specifications is required to show that the candidate can describe the extraction unit; capacity; connection points; blast gates; and sweep up points. Candidates must also evidence the operational requirements of LEV fans, filters, shakers, collectors, anti-explosion features and components including, ducting diameter, materials, radii, taper, connection angles that combine to form a viable system and specify ducting requirements.

Evidence for these Outcomes must be gathered under controlled supervised conditions.

These Evidence Requirements will be met by the completion of the Training and Assessment Programme (TAP) Woodmachining.

National Unit Specification: support notes

UNIT **Woodmachining: Local Exhaust Ventilation Maintenance** **(SCQF level 6)**

This part of the Unit Specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

GUIDANCE ON THE CONTENT AND CONTEXT FOR THIS UNIT

This Unit has been developed as a mandatory Unit in the PDA in Woodmachining at SCQF level 6 which is a mandatory component of the Modern Apprenticeship. The content and context of this Unit is aimed at candidates who are pursuing a career in the craft of Woodmachining.

The successful completion of this Unit will provide candidates with the required underpinning knowledge and skills relating to the necessary procedures and documentation required for the planned maintenance of plant and equipment and an understanding of the functional requirements of an effective wood waste extraction system.

This Unit would be offered to candidates from the construction and related industries. The skills are transferable within different working environments but the Unit is primarily aimed at candidates whose normal place of work would be a site, workshop, or similar environment.

The Unit deals with the theory and practice associated with the servicing and maintenance requirements of woodworking machines and the features of associated wood waste extraction plant which is an essential in the provision of a healthy working environment and is complemented by Units dealing with related work in machine woodworking.

Health and Safety and Sustainability are integral and key to the Construction Industry therefore throughout the Unit emphasis will be placed where appropriate on the application of Health and Safety and Sustainability. Safety working practices should be looked at in accordance with current safety codes of practice and regulations. Sustainability should include reference to criteria affecting sustainability, impact of not implementing sustainability on the environment and the legislation promoting sustainability.

GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

Opportunities should be taken throughout delivery of this Unit to meet the requirements of the generic Units of the Training and Assessment Programme including:

- ◆ Conform to Efficient Working Practices
- ◆ Conform to General Workplace Safety
- ◆ Move and Handle Resources
- ◆ Confirm Work Activities and Resources for the Work
- ◆ Develop and Maintain Good Working Relationships
- ◆ Confirm the Occupational Method of Work

The candidate should be introduced to all relevant local exhaust ventilation system components and equipment through classroom teaching with the use of visual aids, electronic presentations, DVDs e-learning, reference books, classroom exercises and group discussions.

National Unit Specification: support notes (cont)

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Outcome 1

The candidate should be introduced to the drawing up of the maintenance charts and schedules through hand outs, practical exercises, pro-forma documents, manufacturer's recommendations and lubricant specifications. In most educational establishments a maintenance requirement and recording system will be in place and this should be made available to candidates. Candidates should where possible carry out the maintenance requirements and complete the entries in the documentation for the machines selected.

Outcome 2

The candidate should be introduced to sourcing information for carrying out risk assessments relating to the safe operation and potential health hazards caused by inappropriate local exhaust ventilation (LEV) systems. The candidate should be encouraged to research current health and safety legislation that governs the safe use of LEV systems by use of information technology via the Health and Safety Executive website and LEV manufacturer specifications. Emphasis should also be placed on the high risk of explosions taking place due to fine dust and vapours.

Outcome 3

Candidates should have access to a work shop with an extraction system capable of coping with the requirements of at least six machines and ideally two sweep-up points. They should be made aware of the importance of the design elements which go to make an effective system and encouraged to remove inspection panels, filters etc from the extraction unit in order to understand the working of the component parts. The need to produce sketches and specifications which clearly define the requirements of an extraction system should be fully emphasised.

Candidates could use the existing workshops as basis for specifying ducting, with some re-arrangement of the layout (in projects) to enable a viable assessment of candidate's work.

At the time of writing the following safety requirements apply: HSW (Health and Safety at Work etc.) Act; COSHH (Control of Substances Hazardous to Health) Regulations; Abrasive Wheels Regulations; PUWER (Provision and Use of Work Equipment Regulations).

OPPORTUNITIES FOR CORE SKILL DEVELOPMENT

Opportunities also arise for candidates to develop the Core Skill of *Information and Communication Technology* at SCQF level 3 by the use of spreadsheets lubrication charts, maintenance checklists and risk assessment e-learning and e-assessment.

Numeracy skills at SCQF level 4 could be developed through the interpretation of information from 3 dimensional working drawings and diagrams within Outcome 3.

Candidates will have the opportunity to develop *Communication* skills at SCQF level 4 throughout, as they should be expected to communicate with others using the correct terminology, tone and style suited to the workplace.

National Unit Specification: support notes (cont)

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GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

The Woodmachining Training and Assessment Programme (TAP) section 7 provides detailed assessment material for this Unit. It is advised to use the TAP which has been developed centrally by SQA. Any other instrument of assessment used must be comparable to the TAP and have been through prior verification. It is expected that candidates will be given as much practise as possible, prior to being set the assessment tasks.

A suitable method of assessing the candidate's knowledge and understanding of local exhaust ventilation systems, health and safety and extraction systems for all Outcomes would be through a series of multiple choice and short answer question papers conducted under controlled, supervised conditions.

The candidates could be provided with shell maintenance and risk assessment documents to complete.

Opportunities for the use of e-assessment

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or e-checklists. Centres which wish to use e-assessment must ensure that the national standard is applied to all candidate evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. Further advice is available in *SQA Guidelines on Online Assessment for Further Education (AA1641, March 2003)*, *SQA Guidelines on e-assessment for Schools (BD2625, June 2005)*.

DISABLED CANDIDATES AND/OR THOSE WITH ADDITIONAL SUPPORT NEEDS

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website www.sqa.org.uk/assessmentarrangements