



National unit specification

General information

Unit title: Maintain a Chainsaw (SCQF level 6)

Unit code: HH4N 46

Superclass: SG

Publication date: December 2016

Source: Scottish Qualifications Authority

Version: 01

Unit purpose

This unit is designed to assess the learner's ability to effectively maintain a chainsaw in accordance with established working practices, manufacturer's instructions and health and safety requirements.

This unit is suitable for occasional chainsaw operators who need to demonstrate their ability to safely and effectively maintain a chainsaw. The unit forms part of the Highways and Construction Training Association (HCTA) Chainsaw Operators Registration Scheme.

The focus of this unit is on chainsaw maintenance not chainsaw operation.

Outcomes

On successful completion of the unit the learner will be able to:

- 1 Identify typical chainsaw components.
- 2 Undertake routine chainsaw maintenance.
- 3 Undertake specific chainsaw maintenance.
- 4 Complete chainsaw maintenance.

Credit points and level

0.5 National unit credits at SCQF level 6: (3 SCQF credit points at SCQF level 6)

National unit specification: General information (cont)

Unit title: Maintain a Chainsaw (SCQF level 6)

Recommended entry to the unit

Entry to this unit is at the discretion of the delivering centre. No prior experience is required to undertake this unit, however centres must ensure that they comply with all legal restrictions on who can operate and maintain a chainsaw.

Core Skills

Opportunities to develop aspects of Core Skills are highlighted in the Support Notes for this unit specification.

There is no automatic certification of Core Skills or Core Skill components in this unit.

Context for delivery

If this unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

This unit is intended for chainsaw users such as term maintenance contractors, local authority grounds maintenance staff and those involved in carrying out emergency work on highways.

Equality and inclusion

This unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence.

Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

National unit specification: Statement of standards

Unit title: Maintain a Chainsaw (SCQF level 6)

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

Identify typical chainsaw components.

Performance Criteria

- (a) Identify the main components of a typical chainsaw.
- (b) Identify the tools and safety equipment required for chainsaw maintenance.
- (c) Identify risks associated with chainsaw maintenance.

Outcome 2

Undertake routine chainsaw maintenance.

Performance Criteria

- (a) Strip down a chainsaw for end of day maintenance and cleaning operations.
- (b) Clean and confirm the working condition of the main chainsaw components.
- (c) Comply with all relevant Health and Safety requirements and environmental good practice.

Outcome 3

Undertake specific chainsaw maintenance.

Performance Criteria

- (a) Identify the main components of a chain.
- (b) Identify appropriate replacement chains.
- (c) Identify a minimum of three sizes of chain.
- (d) Carry out chain sharpening appropriate to the type of chain.
- (e) Identify the main components of a typical guide bar.
- (f) Carry out bar maintenance.
- (g) Comply with all relevant Health and Safety requirements and environmental good practice.

National unit specification: Statement of standards (cont)

Unit title: Maintain a Chainsaw (SCQF level 6)

Outcome 4

Complete chainsaw maintenance.

Performance Criteria

- (a) Re-assemble the chainsaw.
- (b) Fuel, oil and grease the chainsaw.
- (c) Tension the chain correctly.
- (d) Re-tension the starter chord.
- (e) Start a chainsaw in a safe and recognised manner to confirm operation.
- (f) Confirm operation of the chain brake.
- (g) Comply with all relevant Health and Safety requirements and environmental good practice.

Evidence Requirements for this unit

Evidence is required to demonstrate that learners have achieved all Outcomes and Performance Criteria.

For Outcome 1 evidence is required of the learner's ability to identify:

A minimum of 12 of the following chainsaw components:

- ◆ Air filter
- ◆ Bumper spike/dogs
- ◆ Chain
- ◆ Chain brake
- ◆ Chain catcher
- ◆ Chain cover
- ◆ Chain tensioning device
- ◆ Choke
- ◆ Guide bar
- ◆ Guide bar fixing studs
- ◆ On/Off switch
- ◆ Rear handle/hang guard
- ◆ Recoil starter
- ◆ Side cover/guard
- ◆ Throttle lock out device
- ◆ Throttle trigger and pistol grip
- ◆ Anti-vibration mountings
- ◆ Safety decals

National unit specification: Statement of standards (cont)

Unit title: Maintain a Chainsaw (SCQF level 6)

Each of the following tools or items of safety equipment required for chainsaw maintenance:

- ◆ Combination spanners
- ◆ Depth gauge
- ◆ File holder
- ◆ Flat file
- ◆ Groove cleaner
- ◆ Round file
- ◆ Screwdriver

A minimum of three risks associated with chainsaw maintenance

For Outcome 2 performance evidence is required of the learner's ability to:

- ◆ **Strip down a chainsaw**
- ◆ **Clean and confirm working condition of a minimum of 8 of the following components:**
 - air filters
 - bumper spikes/Dogs
 - chain brake/hand guard
 - chain catcher
 - chain cover
 - chain tensioning device
 - choke
 - drive sprocket
 - rear hand guard
 - throttle lock out device
 - throttle trigger
 - grease bearing
- ◆ **work safely at all times, in compliance with all relevant Health and Safety regulations and environmental good practice**

For Outcome 3 evidence is required of the learner's ability to identify:

- ◆ **Components of a chain including:**
 - Cutter/depth regulator/anti-kickback
 - Drive link
 - Tie strap
- ◆ **Appropriate replacement chains**
- ◆ **A minimum of three chain sizes**

National unit specification: Statement of standards (cont)

Unit title: Maintain a Chainsaw (SCQF level 6)

◆ **Components of a typical guide bar including:**

- Bar mount
- Body
- Grease point
- Groove
- Oil port
- Rails
- Solid nose
- Sprocket nose
- Tail

Performance evidence is also required of the learner's ability to:

◆ **Carry out chain sharpening appropriate to the type of chain**

◆ **Carry out bar maintenance including:**

- Checking for wear and damage
- De-burring
- Greasing (as applicable)

◆ **Work safely at all times, in compliance with all relevant Health and Safety regulations and environmental good practice**

For Outcome 4 performance evidence is required of the learner's ability to:

- ◆ **Re-assemble the chainsaw**
- ◆ **Fuel, oil and grease the chainsaw**
- ◆ **Tension the chain correctly**
- ◆ **Re-tension the starter cord**
- ◆ **Start the chainsaw in a safe and recognised manner to confirm operation**
- ◆ **Confirm operation of the chain break**
- ◆ **Work safely at all times, in compliance with all relevant Health and Safety regulations and environmental good practice**

Evidence could be generated for each Outcome as detailed above, alternatively a portfolio of evidence could be produced as part of a holistic assessment of the unit.



National unit Support Notes

Unit title: Maintain a Chainsaw (SCQF level 6)

Unit Support Notes are offered as guidance and are not mandatory.

While the exact time allocated to this unit is at the discretion of the centre, the notional design length is 20 hours.

Guidance on the content and context for this unit

This unit has been designed to cover the knowledge and skills required to safely maintain a chainsaw and to meet the requirements of the Chainsaw Operators Registration Scheme (CORS). This unit along with unit “*Clear Lying Timber*” form a key part of the CORS scheme, allowing holders to demonstrate their ability to safely maintain and use a chainsaw. This unit contributes underpinning knowledge and skills to any other unit within the CORS scheme where use of a chainsaw is required.

The key vocational knowledge and skills covered by this unit are:

- ◆ Dismantling saws to enable maintenance
- ◆ Key safety features of chainsaws
- ◆ Selecting appropriate tools and equipment to facilitate maintenance
- ◆ Range of chains in common use
- ◆ Typical chain defects
- ◆ Chain maintenance
- ◆ Appropriate personal protective equipment (PPE)
- ◆ Re-assembling saws
- ◆ Chain tensioning
- ◆ Adjusting & replacing starter cords
- ◆ Correct operation of saw
- ◆ Health and Safety

This unit has been mapped against the Performance Criteria and Knowledge and Skills of the National Occupational Standard (NOS) unit LANTw19 “Carry Out Routine Maintenance of Chainsaws and Cutting Systems”. Details of the mapping are available in the Group Award Specification for the suite of Group Awards this unit contributes to.

Guidance on approaches to delivery of this unit

This unit could be delivered in a work shop environment or in the field. Learners should have access to a chainsaw with a minimum guard length of 300mm and to the tools, equipment and Personal Protective Equipment (PPE) required to maintain the saw.

National unit Support Notes

Unit title: Maintain a Chainsaw (SCQF level 6)

Given the risks to the learner and others a particular emphasis should be placed on Health and Safety through delivery of this unit, risk assessments should be completed where relevant and delivery and/or assessment should be stopped immediately if it has become dangerous.

The learner should be given ample opportunities to develop their knowledge and skills prior to assessment.

Guidance on approaches to assessment of this unit

Evidence can be generated using different types of assessment. The following are suggestions only. There may be other methods that would be more suitable to learners.

Centres are reminded that prior verification of centre-devised assessments would help to ensure that the national standard is being met. Where learners experience a range of assessment methods, this helps them to develop different skills that should be transferable to work or further and higher education.

A mix of performance evidence and written and/or recorded oral evidence will be required to achieve this unit. The performance evidence could consist of an Observation Checklist completed by the assessor based on their observation of the learner's performance.

The assessment for this unit could be carried out on an Outcome by Outcome basis or as a combined assessment covering the unit as a whole. A single project where the learner is required to identify components while undertaking routine and specific maintenance could generate evidence for the unit as a whole.

Opportunities for 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 social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all learner evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. The most up-to-date guidance on the use of e-assessment to support SQA's qualifications is available at www.sqa.org.uk/e-assessment.

Opportunities for developing Core and other essential skills

There is no automatic certification of Core Skills or Core Skills components in this unit, however there may be opportunities to develop the Core Skills of *Problem Solving* at SCQF level 5.

History of changes to unit

| Version | Description of change | Date |
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General information for learners

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This section will help you decide whether this is the unit for you by explaining what the unit is about, what you should know or be able to do before you start, what you will need to do during the unit and opportunities for further learning and employment.

This unit will be suitable for you if you are required to maintain a chainsaw as part of your work. If you achieve this unit in conjunction with unit “*Clear Lying Timber*” you will be qualified to maintain and operate a chainsaw.

The unit is specifically designed to meet the requirements of the Chainsaw Operators Registration Scheme (CORS).

The assessment for this unit will be largely practical; you will be required to demonstrate your ability to safely carry out the routine maintenance of a chainsaw in addition to being able to identify the main components of the saw and the tools and equipment required to maintain it.