



City & Guilds Level 2 Certificate of Competence in Multi-tool Equipment

April 2022 Version 1.2

Qualification Handbook

Qualification at a glance

Industry area	Horticulture, Agriculture, Forestry and Arboriculture
City & Guilds number	0014-37
Age group	16-19, 19+
Entry requirements	Centres must ensure that any pre-requisites stated in the <i>What is this qualification about?</i> section are met.
Assessment	<p>To gain this qualification, candidates must successfully achieve the following assessments:</p> <p>Practical assessment with oral questioning by a City & Guilds NPTC approved assessor. The assessor can be the same individual who carried out the training or could be a different person. The assessor must be approved and registered with City & Guilds NPTC.</p> <p>The assessment must be a stand-alone process that is separate to the training, and cannot be spread out across the length of the training course i.e. the assessment is conducted at the end of the training course or on a separate day.</p>
Grading	Pass only
Approvals	Full centre approval Qualification approval
Support materials	n/a
Registration and certification	Registration and certification of this qualification is through the Walled Garden and is subject to end dates.

Title and level	Size (GLH)	TQT	City & Guilds qualification number	Ofqual accreditation number
Level 2 Certificate of Competence in Multi-tool Equipment	4	6	0014-37	603/5619/4

Version and date	Change detail	Section
1.0 December 2019	First version	
1.1 July 2020	Addition of certification modules	1. Introduction
1.2 April 2022	Ofqual accreditation number updated	Qualification at a glance; Introduction
	GLH and TQT clarified and highlighted	Qualification at a glance; Qualification structure

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1 Introduction

Purpose statement

The following purpose is for the **Level 2 Certificate of Competence in Multi-tool Equipment (603/5619/4)**

Area	Description
OVERVIEW	
Who is this qualification for?	Individuals who operate multi-tool equipment as part of their work in horticulture, forestry, landscaping or other industries. It will provide the individual with the knowledge, understanding and skills required to prepare and operate a multi-tool and its attachments safely and to industry standards in line with current legislation.
What does this qualification cover?	It covers preparing the power unit (petrol or battery) and safe use of the following attachments: brush cutter/ trimmer, power pole pruner, hedge cutter and leaf blower.
WHAT COULD THIS QUALIFICATION LEAD TO?	
Will the qualification lead to employment, and if so, in which job role and at what level?	This qualification will support progression into employment where safe operation of multi-tool equipment is part of the role. Safe operational skills are key to efficient use, good working practice and preventing accidents, leading to business benefits in terms of less machinery damage and down time.
Why choose this qualification over similar qualifications?	This is a specialist qualification demonstrating the individual is able to safely operate multi-tool equipment to a recognised level of competency.
Will the qualification lead to further learning?	Individuals who successfully complete this qualification could go on to increase their level of proficiency through consolidation practice within a working environment, or develop skills in safely operating other land-based machinery, e.g., Level 2 Certificate of Competence in the Safe Use of Tractor Mounted Hedge and Verge Cutters
WHO SUPPORTS THIS QUALIFICATION?	
Employer/Higher Education Institutions	British Association of Landscape Industries
FURTHER INFORMATION	Please refer to the Qualification Handbook, available on the City & Guilds NPTC website, for more

information on the structure of this qualification, the content of the units, and assessment.

Qualification structure

For the **Level 2 Certificate of Competence in Multi-tool Equipment** learners must be trained and assessed in a minimum of one of the units in group one and a minimum of one units in group two listed below. The qualification will be endorsed to the context of the units assessed.

Unit number	Unit title	GLH
Learners must achieve a minimum of one unit from Group 1.		
228	Preparing a petrol power unit in multi-tool equipment	4
229	Preparing a battery power unit in multi-tool equipment	2
Learners must achieve a minimum of one unit from Group 2.		
230	Operating a brushcutter/ trimmer attachment	4
231	Operating a Pole Pruner attachment	4
232	Operating a hedge cutter attachment	4
233	Operating a leaf blower attachment	2

Qualification Endorsement Certification Module numbers

Certification module number	Certification module title
928	Level 2 Certificate of Competence in Multi-tool Equipment (battery powered, brush cutter/ trimmer)
929	Level 2 Certificate of Competence in Multi-tool Equipment (Petrol powered, brush cutter/ trimmer)
930	Level 2 Certificate of Competence in Multi-tool Equipment (battery powered, pole pruner)
931	Level 2 Certificate of Competence in Multi-tool Equipment (petrol powered, pole pruner)
932	Level 2 Certificate of Competence in Multi-tool Equipment (battery powered, hedge cutter)

933	Level 2 Certificate of Competence in Multi-tool Equipment (petrol powered, hedge cutter)
934	Level 2 Certificate of Competence in Multi-tool Equipment (battery powered, leaf blower)
935	Level 2 Certificate of Competence in Multi-tool Equipment (petrol powered, leaf blower)

Total Qualification Time

Total Qualification Time (TQT) is the number of notional hours which represents an estimate of the total amount of time that could reasonably be expected for a learner to achieve and demonstrate the achievement of the level of attainment necessary for the award of a qualification.

TQT is comprised of the following two elements:

- 1) The number of hours which an awarding organisation has assigned to a qualification for Guided Learning, and

An estimate of the number of hours a Learner will reasonably be likely to spend in preparation, study or any other form of participation in education or training, including assessment, which takes place as directed by - but, unlike Guided Learning, not under the Immediate Guidance or Supervision of - a lecturer, supervisor, tutor or other, appropriate provider of education or training

Title and level	GLH	TQT
Level 2 Certificate of Competence in Multi-tool Equipment	4	6

2 Centre requirements

Approval

New centres will need to gain centre approval. Existing City & Guilds centres who do not currently offer this qualification must go through the Qualification Approval (QAP) process. Please email qasupport@cityandguilds.com for further information on the approval process

Centre staffing

Staff delivering these qualifications must be able to demonstrate that they meet the following requirements:

- be technically competent in the areas in which they are delivering
- be able to deliver across the breadth and depth of the content of the qualification being taught
- have recent relevant teaching and assessment experience in the specific area they will be teaching, or be working towards this
- demonstrate continuing CPD.

Physical resources

Centres must be able to demonstrate that they have access to the equipment and technical resources required to deliver this qualification and its assessments.

Assessment Guidance for the Assessor

Staff assessing these qualifications must be approved Certificate of Competence City & Guilds NPTC Assessors. They do not have to be independent, but can be, and can have been involved with the training of the Candidate. This qualification can only be assessed by an Assessor who is suitably qualified and meets the requirements of the awarding body.

Certificate of Competence City & Guilds NPTC Assessors must meet the following requirements:

- show competence and provide evidence of industry expertise in the qualification/s they wish to assess
- hold the qualification as a candidate and have been technically evaluated as an Assessor
- be up to date with their verification and relevant first aid
- demonstrate continuing technically relevant CPD

Compliance with these requirements is a pre-requisite for Assessors remaining on the list of approved Assessors.

Verification is a process of monitoring assessment; it is an essential check to confirm that the assessment procedures are being carried out in the way City & Guilds has laid down. The overall aim of verification is to establish a system of quality assurance that is acceptable in terms of both credibility and cost effectiveness and approved

Assessors will be subject to a regular visit by the Verifier at a time when assessments are being undertaken.

A selection of assessment reports completed by the Assessor will be evaluated by a City & Guilds approved Quality Consultant.

Safe Practice

Appropriate PPE must be worn at all times

All equipment must be operated in such a way that the Candidate, Assessor, other persons, animals or other equipment are not endangered.

If these conditions are not observed this will result in the Candidate not meeting the required standard.

Validation of Equipment

Additional information may be sought from the relevant manufacturer's instruction book, operators' manual, product label/database or any other Government/Government Agency publication.

Age restrictions

This qualification is approved for learners aged 16 – 19, 19+.

3 Administration

Approved centres must have effective quality assurance systems to ensure valid and reliable delivery and assessment of qualifications. Quality assurance includes initial centre registration by City & Guilds and the centre's own internal procedures for monitoring quality assurance procedures.

Consistent quality assurance requires City & Guilds and its associated centres to work together closely; our Quality Assurance Model encompasses both internal quality assurance (activities and processes undertaken within centres) and external quality assurance (activities and processes undertaken by City & Guilds).

External quality assurance

City & Guilds will undertake external moderation activities to ensure that the quality assurance criteria for this qualification are being met. Centres must ensure that they co-operate with City & Guilds staff and representatives when undertaking these activities.

City & Guilds requires the Head of Centre to

- facilitate any inspection of the centre which is undertaken on behalf of City & Guilds
- make secure arrangements to receive, check and keep assessment material secure at all times, maintain the security of City & Guilds confidential material from receipt to the time when it is no longer confidential and keep completed assignment work and examination scripts secure from the time they are collected from the candidates to their dispatch to City & Guilds.

Malpractice

Please refer to the City & Guilds guidance notes *Managing cases of suspected malpractice in examinations and assessments*. This document sets out the procedures to be followed in identifying and reporting malpractice by candidates and/or centre staff and the actions which City & Guilds may subsequently take. The document includes examples of candidate and centre malpractice and explains the responsibilities of centre staff to report actual or suspected malpractice. Centres can access this document on the City & Guilds website.

Examples of candidate malpractice are detailed below (please note that this is not an exhaustive list):

- falsification of assessment evidence or results documentation
- plagiarism of any nature
- collusion with others
- copying from another candidate (including the use of ICT to aid copying), or allowing work to be copied
- deliberate destruction of another's work
- false declaration of authenticity in relation to assessments
- impersonation.

These actions constitute malpractice, for which a penalty (eg disqualification from the assessment) will be applied.

Where suspected malpractice is identified by a centre after the candidate has signed the declaration of authentication, the Head of Centre must submit full details of the case to City & Guilds at the earliest opportunity. Please refer to the form in the document *Managing cases of suspected malpractice in examinations and assessments*. Alternatively please complete the form, JCQ/M1. Copies of this form can be found on the JCQ website: <http://www.jcq.org.uk>

Access arrangements and special consideration

We have taken note of the provisions of equalities legislation in developing and administering this specification.

We can make arrangements so that candidates with disabilities, special educational needs and temporary injuries can access the assessment. These arrangements must be made before assessment takes place.

It is the responsibility of the centre to ensure at the start of a programme of learning that candidates will be able to access the requirements of the qualification.

Please refer to the JCQ access arrangements and reasonable adjustments and Access arrangements - when and how applications need to be made to City & Guilds for more information. Both are available on the City & Guilds website:
<http://www.cityandguilds.com/delivering-our-qualifications/centre-development/centre-document-library/policies-and-procedures/access-arrangements-reasonable-adjustments>

Special consideration

We can give special consideration to candidates who have had a temporary illness, injury or indisposition at the time of the examination. Where we do this, it is given after the examination.

Applications for either access arrangements or special consideration should be submitted to City & Guilds by the Examinations Officer at the centre. For more information please consult the current version of the JCQ document, *A guide to the special consideration process*.

Language of examinations

City & Guilds has a responsibility to ensure that candidates can be assessed in the following languages only:

- English
- English in Northern Ireland
- English in Wales.

4 Units

Level:	2
GLH	4

What is this unit about?

The aim of this unit is to provide the learner with the knowledge, understanding and skills required to prepare a petrol power unit.

Learning outcomes

In this unit, learners will be able to

1. Prepare a petrol power unit in multi-tool equipment

Scope of content

This section gives details of the scope of content to be covered in the teaching of the unit to ensure that all the learning outcomes can be achieved.

Learning outcome:

1. Prepare a petrol power unit in multi-tool equipment

Topics:

- 1.1 Hazards and risks associated with the working area and the proposed work
- 1.2 Emergency planning procedures relevant to the working area
- 1.3 Health and safety legislation, and good industry practice
- 1.4 Tools, equipment and personal protective equipment (PPE)
- 1.5 Work in way which maintains health and safety is consistent with relevant legislation and industry good practice
- 1.6 Safety features fitted to a multi-tool
- 1.7 Safety feature checks
- 1.8 Function and maintenance of the individual components
- 1.9 Inspection and maintenance of the multi-tool drive tube and coupling
- 1.10 Dispose of waste in line with legislation
- 1.11 How environmental damage can be minimised
- 1.12 Fuelling the machine
- 1.13 Carry out work to minimise environmental damage

Topic 1.1

Identify hazards and risks relevant to:

- The work area
- The work to be done

Topic 1.2

Emergency/ planning and procedures for a site could include:

- Location name
- Grid reference
- Designated meeting place
- Site location name
- Nearest access point
- Street name/ district
- Type of access
- Suitable helicopter landing areas
- Phone number of doctor
- Location and phone number of nearest accident and emergency hospital
- Works manager contact details
- Your own contact number
- Other

Topic 1.3

Outline key points from the legislation and industry good practice listed below:

- Health and safety at Work etc Act (HSWA):
 - General duties for employers and employees
 - Maintain safe places of work
 - Other
- Provision and Use of Work Equipment Regulations (PUWER)
- Control of Vibration at Work Regulations 2005
- Arboriculture Forestry Advisory Group (AFAG)/ The Forest Industry Safety Accord (FISA) information:
 - Providers of industrial good practice
 - Other
- The appropriate safe working distance from other operators:
 - 15 metres

Topic 1.4

All tools, equipment and PPE used in line with industry good practice e.g. AFAG/INDG

Topic 1.5

All activities must be completed in a way which protect the operator and those around them.

Topic 1.6

Safety features are fitted to a multi-tool to:

- Meet legislation requirements

Topic 1.7

All features are present and not damaged:

- On/ off switch
- Exhaust
- Anti-vibration mounts
- Throttle trigger lockout
- Transport guard
- Hand/ eye/ ear defender symbols
- Harness attachment point
- Kick-back guard

Topic 1.8

Spark plug:

- Provides ignition, maintenance may include inspection, cleaning and checking of electrode gap, and colour of spark plug deposits
- Engine cover and spark plug removed
- Plug cleaned or replaced as necessary
- Wear/ damage assessed
- Gap size checked and set if necessary

Air filter:

- Prevents debris entering the carburettor and helps maintain the correct air/fuel ratio, maintenance of may include inspection and thorough cleaning
- Excess debris removed from around filter prior to removal
- Filter removed, protecting carburettor
- Filter inspected maintained and cleaned appropriate to condition
- Filter refitted correctly

Cooling system:

- Keeps the engine cool and prevents the engine from overheating. Maintenance may include inspection, and cleaning
- Remove covers where appropriate and remove excess debris from fins and cylinder

Exhaust system:

- Directs fumes away from the operator, maintenance may include inspection, security of nuts/ bolts and removal of residue
- Check all nuts and bolts for security
- Remove excess residue from the silencer

Starter mechanism:

- Engages the flywheel, maintenance may include cleaning, inspection.
- Starter cover removed and airways cleared
- Cord and coil spring released
- Cord inspected for wear
- Cord and coil spring re-tensioned
- Re-coil checked to ensure spring tension is correctly applied
- Pull toggle checked for security

Fuel filter:

- Prevent debris entering engine components, maintenance may include inspection or replacement.
- Fuel/ oil cap removed
- Filter located and removed where applicable from tank using appropriate tool
- Condition of filter determined and replaced if necessary as per manufacturer's instructions

Greasing/ lubrication (as appropriate):

- Greasing of component parts as appropriate

Topic 1.9

Drive tube:

- Connects the required tool to the power unit
- Maintenance may include dust cap removal, inspection of coupling sleeve assembly
- Check security of Tommy Screw

Topic 1.10

All waste produced from maintenance activities are disposed of in line with legislation, good practice and/ or requirements.

Topic 1.11

Environmental damage may be caused by:

- Incorrect storage of fuel and oil
- Defective machinery
- Poor work practices
- Noise - restrictions for petrol machinery
- Other

Environmental damage may be prevented by:

- Following principles of industry good practice
- Good housekeeping
- Appropriately trained operators
- Other

Topic 1.12

Appropriate fuelling site is selected taking into account:

- Safe distance from buildings, vehicles, sources of ignition
- In a shaded area away from work equipment

Topic 1.13

It is ensured that any possible environmental damage is minimised at all times during use.

Level:	2
GLH	2

What is this unit about?

The aim of this unit is to provide the learner with the knowledge, understanding and skills required to prepare a battery power unit for multi-tool equipment.

Learning outcomes

In this unit, learners will be able to

1. Prepare a battery power unit for a multi-tool

Scope of content

This section gives details of the scope of content to be covered in the teaching of the unit to ensure that all the learning outcomes can be achieved.

Learning outcome:

1. Prepare a battery power unit for multi-tool equipment

Topics:

- 1.1 Hazards and risks associated with the working area and the proposed work
- 1.2 Emergency planning procedures relevant to the working area
- 1.3 Health and safety legislation, and good industry practice
- 1.4 Tools, equipment and personal protective equipment (PPE)
- 1.5 Work in way which maintains health and safety is consistent with relevant legislation and industry good practice
- 1.6 Why safety features are fitted to a multi-tool
- 1.7 Checks all safety features on a multi-tool
- 1.8 Function and maintenance of the individual components
- 1.9 Inspection and maintenance of the multi-tool power unit
- 1.10 Requirements of battery storage
- 1.11 Battery disposal requirements
- 1.12 Minimising environmental damage
- 1.13 Disposal of waste in line with legislation
- 1.14 Installing battery to machine

Topic 1.1

Identify hazards and risks relevant to:

- The work area
- The work to be done

Topic 1.2

Emergency/ planning and procedures for a site could include:

- Location name
- Grid reference
- Designated meeting place
- Site location name
- Nearest access point
- Street name/ district
- Type of access
- Suitable helicopter landing areas
- Phone number of doctor
- Location and phone number of nearest accident and emergency hospital
- Works manager contact details
- Your own contact number
- Other

Topic 1.3

Outline key points from the legislation and industry good practice listed below:

- Health and safety at Work etc Act (HSWA):
 - General duties for employers and employees
 - Maintain safe places of work
 - Other
- Provision and Use of Work Equipment Regulations (PUWER)
- Arboriculture Forestry Advisory Group (AFAG)/ The Forest Industry Safety Accord (FISA) information:
 - Providers of industrial good practice
 - Other
- The appropriate safe working distance from other operators:
 - 15 metres

Topic 1.4

All tools, equipment and PPE used in line with industry good practice e.g. AFAG/ INDG

Topic 1.5

All activities must be completed in a way which protect the operator and those around them.

Topic 1.6

Safety features are fitted to a multi-tool to:

- Meet legislation requirements

Topic 1.7

All features are present and not damaged, these may include:

- On/ off switch
- Anti-vibration mounts
- Throttle trigger lockout
- Transport guard
- Hand/ eye/ ear defender symbols
- Harness attachment point
- Kick-back guard
- Low battery indicator
- Automatic switch off function

Topic 1.8

Power unit

- Power unit connection
- Connects battery to machine
- Inspect and clean

Air inlet:

- Prevents motor overheating, maintenance may include inspection and cleaning.

- The connecting cable plug must be pulled out of the socket before any maintenance is carried out (if appropriate).

Battery:

- Provides power to the motor, maintenance may include charging and cleaning guide tracks and terminals/ connections

Battery charger:

- Charges the battery
- Maintenance may include cleaning guide tracks and terminals/connections, inspect cable and plug
- PAT testing (if applicable)

Visual check

Clean air intake and battery connections as appropriate

Topic 1.9

Drive tube:

- Connects the required tool to the power unit
- Maintenance may include dust cap removal, inspection of coupling sleeve assembly

Topic 1.10

Remove from charger

Store in a container that is:

- Clean and dry
- Secure
- Non-metallic
- Away from heat source
- Appropriate temperature (as per manufacturers recommendations)
- Other

Topic 1.11

May include:

- Do not burn
- Do not open
- Not in general refuse
- Check with local authorities disposal instructions
- Other

Topic 1.12

It is ensured that any possible environmental damage is minimised at all times during use of machine.

Topic 1.13

All waste produced from maintenance activities are disposed of in line with legislation, good practice and/ or requirements.

Topic 1.14

- Test battery charge
- Align the battery with battery opening
- Lock battery into position
- Test connection

Level:	2
GLH	4

What is this unit about?

The aim of this unit is to provide the learner with the knowledge, understanding and skills required to communicate information within the workplace.

Learning outcomes

In this unit, learners will be able to

1. Operate a brush cutter/ trimmer attachment

Scope of content

This section gives details of the scope of content to be covered in the teaching of the unit to ensure that all the learning outcomes can be achieved.

Learning outcome:

1. Operate a brush cutter/ trimmer attachment

Topics:

- 1.1 Checking angle drive and gearbox
- 1.2 Procedure for maintain the cutting heads
- 1.3 Procedures for making adjustments to the trimmer/ brushcutter
- 1.4 Guarding requirements
- 1.5 Pre-operational checks that should be made to the trimmer/ brush cutter
- 1.6 Hazards and risks associated with the working area and the proposed work
- 1.7 Personal Protective Equipment (PPE)
- 1.8 Pre-cutting tests
- 1.9 Preparing the work site
- 1.10 The different operating techniques
- 1.11 Operating techniques for the site being cut
- 1.12 Storing and cleaning equipment appropriately and in accordance with manufacturer's guidelines

Topic 1.1

Angle and gear drive:

- Access plug removed
- Lubricant checked

Lubricant topped up (if appropriate)

Topic 1.2

Angle drive and gearbox:

- Access plug removed
- Lubricant checked
- Lubricant topped up (if appropriate)

Sharpen brushcutter blade (if appropriate):

- Gloves worn when handling brushcutter blade
- Remove blade guard
- Secure blade using appropriate method (locking pin, spanner etc)
- Loosen and remove retaining nut (L/H thread)
- Remove blade assembly
- Check the blade for length
- Secure the blade for filing (any acceptable method used)
- Blade balance checked
- Blade re-checked for cracks/damage
- Drive shaft and collar cleaned

- Blade refitted, washer and lock replaced securely

Remove trimmer head and refit new cord or nylon blades (if appropriate):

- Secure nylon head using an appropriate method
- Remove retaining nut

Remove casing and comment on the condition of (as appropriate):

- Casing
- Ferrules
- Retaining nut

- Check cord or blades for damage
- Refit existing or new cord blades (as appropriate)
- Refit nylon head
- Refit washer and nut and secure appropriately
- Nylon trimmed to recommended length

Topic 1.3

How to make adjustments to the engine of a brushcutter or trimmer may include:

- Adjusting the engine idling screw (if applicable)
- Adjusting the fuel mixture (if applicable)

Other adjustments that can be made to the machine, to include:

- Handle bar adjustment as necessary
- Moving/ adjusting harness connection point

How to adjust the harness correctly, to include:

- Length of shoulder straps
- Length of side straps
- Position of chest plate
- Position of hip guard
- Correct working height and balance achieved

Topic 1.4

Guarding requirements may include:

- Blade guard (brush cutter)
- Or
- Nylon guard and trimming knife (trimmer)

Topic 1.5

Pre-operational checks that should be made to the trimmer/ brush cutter, may include:

- All safety features present
- Inspecting the machine for damage (including the blade or nylon)
- Checking that there is sufficient nylon cord (trimmer only) and of the correct diameter
- Ensuring correct blade is fitted securely
- Inspecting the machine for loose components and fixings
- Checking the oil level (if applicable)

- Checking the fuel level
- Fuelling the machine (if required)

Topic 1.6

The hazards and risks associated with the working area and the proposed work, relevant to:

- The work area
- The work to be done

Topic 1.7

PPE may include subject to risk assessment:

- Eye protection
- Hearing protection
- Face protection
- Head protection
- Dust mask
- Hand protection
- Protective trousers
- Non-snag clothing
- High Vis clothing
- Safety footwear
- Personal first aid kit

All PPE should conform to applicable CE/EN standards where appropriate.

Topic 1.8

Pre-cutting tests to include:

To include:

- Remove and retain guard (brush cutter)
- Correct starting procedures for the machine (on the ground)
- Start machine, check controls are fully operational
- Ensure blade or head is stationary at idling speed
- Machine stopped using on/ off switch

Topic 1.9

As per risk assessment.

Topic 1.10

Operating techniques to include:

- Safe working distance maintained at all times
- Plan work efficiently
- Cutter speed appropriate whilst cutting
- Ergonomic operation
- Cut vegetation using swatting/ scything method
- Clear jammed cutting system safely (if occurs)
- Vegetation cleared to specification
- Importance of continual and regular monitoring of operator's hands and fingers

Level: 2**GLH** 4**What is this unit about?**

The aim of this unit is to provide the learner with the knowledge, understanding and skills required to operate a pole pruner attachment on a piece of multi-tool equipment.

Learning outcomes

In this unit, learners will be able to

1. Operate a pole pruner attachment

Scope of content

This section gives details of the scope of content to be covered in the teaching of the unit to ensure that all the learning outcomes can be achieved.

Learning outcome:

1. Operate a pole pruner attachment

Topics:

- 1.1 Maintaining a powered pole pruner attachment in accordance with operator's handbook using appropriate tools
- 1.2 Problems encountered when chain and guide bar are worn, damaged or poorly maintained
- 1.3 Different cutter types and cutting characteristics
- 1.4 Selecting the correct filing information for chain and why this is necessary
- 1.5 Maintaining cutting system in accordance with operator's handbook using appropriate tools
- 1.6 Reassembling the cutting system to functional/ operational standard
- 1.7 Hazards and risks associated with the working area and the proposed work
- 1.8 Preparing the work site
- 1.9 Pre-start checks and setting of the machine for use
- 1.10 Personal Protective Equipment (PPE)
- 1.11 Safe starting of the machine
- 1.12 Pruning methods
- 1.13 Tension and compression in a branch
- 1.14 Methods of reducing and pruning heavy and long branches
- 1.15 Reducing and removing branches using appropriate cuts
- 1.16 Ways to remove a pruner trapped in a cut
- 1.17 Methods for disposing waste
- 1.18 Cleaning and tidying working area
- 1.19 Processing arisings

Topic 1.1

Oil filter:

- Oil cap removed
- Condition of filter determined
- Cleaning procedures using non-flammable detergents followed by rinsing and drying or replacement as appropriate

Sprocket:

- Drives/pushes the chain along the guidebar, maintenance may include inspection and replacement due to wear exceeding manufacturers tolerances
- Remove side casing
- Sprocket checked for wear and condition

Topic 1.2

Problems that may be encountered when a guidebar is worn, damaged or poorly maintained may include:

- Powered pole pruner does not cut in a straight line
- Over-heating of the guidebar
- Poor lubrication of the chain
- Increased chain, bar and sprocket wear
- Other

Problems that may be encountered when a chain is worn, damaged or poorly maintained may include:

- Poor cutting performance/reduced efficiency
- Chain not cutting in straight line
- Increased risk of kick back
- Increased wear to chain, bar and sprocket
- Increased risk of chain breakage
- Increased vibration and thus the risk of 'white Finger'
- Other

Topic 1.3

Cutter types may include:

- Semi-chisel
- Chisel

Application may depend on experience of the operator, timber type and personal preference.

Topic 1.4

Explain how to select the correct file size and identify the required sharpening angles through use of chain charts, manufacturer's information, chain box etc. for the chain being sharpened.

Reasons for maintaining correct filing angles may include:

- Enhances cutting performance
- Ensures chain is sharpened as per manufacturers
- Recommendations
- Other

Equal cutter length prevents:

- Increased vibration
- Inaccurate cutting
- Increased risk of kick back
- Other

The correct depth gauge setting:

- Reduces the risk of kick back
- Reduces chain vibration
- Achieves optimum cutting speed
- Other

Topic 1.5

In accordance with the manufacturers recommendations guidebar maintenance should include:

- Identification of uneven and damaged rails and
- Maintain as appropriate
- Checking the straightness of bar
- Checking the bar groove depth
- Identification of any blueing, cracking and burring
- Removal of burrs
- Clearing the bar groove and oil holes
- Inspecting the sprocket nose for security and
- Condition
- Greasing the bar nose sprocket if applicable
- Turning the bar following maintenance to reduce wear

In accordance with the manufacturers recommendations chain maintenance should include:

- Checking cutters for damage and selecting the
- First cutter to sharpen
- Having the chain secured in a chain vice or on bar
- In a bench vice or timber vice
- Selecting and using a file of the correct size with a
- Handle fitted to sharpen all of the cutters
- Maintenance of top and side plate angles
- Throughout sharpening of the whole chain
- Ensuring a consistent cutter length is maintained
- Removing burrs when applicable
- Maintaining the height and profile of depth gauges

Topic 1.6

Reassemble cutting system:

- Chain/bar
- Side casing
- Chain tension

Topic 1.7

Identify the hazards and risks associated with the working area and the proposed work.

Topic 1.8

As per risk assessment.

Topic 1.9

Pre-start checks and setting of the machine to include:

- Chain tension and condition checked for safe and effective use
- Safety features checked for condition and function
- External nuts and bolts checked for security
- Powered pole pruner contains sufficient fuel and chain oil for operations

Topic 1.10

Personal protective equipment should include:

- Safety boots
- Gloves
- Head, ear and eye protection
- Non-snag outer clothing
- Personal first aid kit
- Harness
- All PPE should conform to applicable CE/EN standards where appropriate

Topic 1.11

The safe starting procedure of a machine should include:

- Ensuring appropriate safe working distances from the fuel and other operators is maintained
- Correct PPE worn
- Remove guidebar cover
- Place powered pole pruner in a secure position, where appropriate, ensuring no debris can catch the chain
- Controls set as recommended by manufacturer
- Adopt safe stance
- Start machine

Post starting checks of a powered pole pruner should include:

- Cutting attachment stationary on idle
- Ensuring the stop switch works correctly
- Chain lubrication checked

Topic 1.12

Appropriate pruning methods may include:

Through cut:

- Small diameter timber cut straight through.

Step cut (inboard):

- Small undercut with an overlapping top cut on the trunk side to reduce risk of severed section pulling on the cutting system

Natural target pruning:

- Pruning cut made to the outer edge of the branch bark ridge/ collar.

Topic 1.13

Tension:

- Found on the outside edge of strained timber and when cut, the kerf opens

Compression:

- Found on the inside edge of strained timber and when cut, the kerf closes

Topic 1.14

Reducing long or heavy branches may include:

- Small sections
- Use of alternative work methods
- Other

Topic 1.15

Branch sections should be removed taking the following points into account:

- Order of cuts planned
- Characteristics and properties of the wood allowed for suitable sized sections removed
- Side or reducing cuts used where appropriate
- Position of cuts
- Complete overlap of cuts achieved
- Cut pieces fall into a safe/ clear area
- The branch collar and/or branch bark ridge is identified when pruning
- The pruning cut is left as smooth as possible

Topic 1.16

- Switch off engine
- Work partner lifts end of branch to open the cut
- Withdraw the machine

or

- Switch off engine
- Use of second machine or pole saw to release trapped machine minimum of 300mm (12") away

Topic 1.17

Disposal of waste from workplace activities may include:

- Use of designated waste/recycle bins
- Empty containers removed from site e.g. Oil
- Litter taken home with operators
- Other

Topic 1.18

Store and clean equipment appropriately and in accordance with manufacturer's guidelines.

Topic 1.19

A clean and tidy working area should be left ensuring:

- No branches are left on fences, paths, roads, timber stacks, young trees etc or in ditches, ponds, waterways etc
- Brash left as per site specification

Topic 1.20

Clear/stack timber appropriate to site requirements.

Level:	2
GLH	4

What is this unit about?

The aim of this unit is to provide the learner with the knowledge, understanding and skills required to operate a hedge cutter attachment on a piece of multi-tool equipment.

Learning outcomes

In this unit, learners will be able to

1. Operate a hedge cutter attachment

Scope of content

This section gives details of the scope of content to be covered in the teaching of the unit to ensure that all the learning outcomes can be achieved.

Learning outcome:

1. Operate a hedge cutter attachment

Topics:

- 1.1 Checking the angle drive and gearbox
- 1.2 Procedures for maintaining the cutting blade of the hedge cutter
- 1.3 Guarding requirements
- 1.4 Pre-operational checks that should be made to the machine
- 1.5 Hazards and risks associated with the working area and the proposed work
- 1.6 Personal Protective Equipment (PPE)
- 1.7 Pre-cutting tests
- 1.8 Preparing the work site
- 1.9 Work Method
- 1.10 Operating the machine
- 1.11 Storing and cleaning equipment appropriately and in accordance with manufacturer's guidelines
- 1.12 Leaving the site clean and tidy

Topic 1.1

Angle and gear drive:

- Access plug removed
- Lubricant checked

Lubricant topped up (if appropriate)

Topic 1.2

Cleaning the hedge cutter:

- Spray cutters with recommended cleaner (if applicable)

Sharpening the hedge cutter May include:

- Removal of battery (if applicable)
- Gloves worn when handling blades
- Remove cutter guard
- Loosen and remove retaining nuts
- Remove blade assembly
- Check the blade for damage
- Secure the blade for filing/ grinding (using a mini grinder is acceptable)
- Blade sharpened correctly
- Blades re-assembled, washers and lock nuts replaced/ secured

Topic 1.3

Transport guard to be fitted when not in use.

Topic 1.4

These may include:

- Inspecting the machine for damage (including the blades)
- Inspecting the machine for loose components and fixings
- Checking the oil level (if applicable)
- Checking the fuel level (if applicable)
- Fuelling the machine (if required)

Topic 1.5

Identify hazards and risks relevant to:

- The work area
- The work to be done

Topic 1.6

May include subject to risk assessment:

- Eye protection
- Hearing protection
- Head protection
- Dust mask
- Hand protection
- Protective trousers
- Non-snag clothing
- High Vis clothing
- Safety footwear
- Personal first aid kit

All PPE should conform to applicable CE/EN standards where appropriate.

Topic 1.7

Pre-cutting test to include:

- Remove transport guard
- Correct starting procedures for the machine (on the ground) if applicable
- Start machine, check controls are fully operational
- Ensure blade or head is stationary at idling speed
- Machine stopped using on/ off switch

Topic 1.8

As per risk assessment.

Topic 1.9

As per job specification

Topic 1.10

Operate the machine, to include (as appropriate):

- Hedge cutter moved to an appropriate start point
- Hedge cutter started safely

- Quality of work checked after the initial 'cuts' and adjustments made if necessary (e.g. cutter head angle)
- Use appropriate cutting techniques for the site
- Safe and efficient working practice maintained throughout the operation
- Hedge cutter stopped and guard replaced

Topic 1.11

Advantages of regularly cleaning the machine after use, may include to:

- Prevent corrosion
- Facilitate maintenance and adjustments
- Prevent personal contamination
- Bio-security measures

Cleaning attachment, may include:

- Using appropriate PPE
- Removing unwanted residues using an appropriate method, which may include:
 - Compressed air
 - Hose and water
 - Brush
- Waste disposed in line with company policy, environmental good practice and any legislative requirements

Inspecting the machine after use, may include:

- Machine inspected to establish if there are any missing, damaged or worn components
- Ensure that defects can be rectified before machine is required for use

Topic 1.12

Site left in condition required

Level:	2
GLH	2

What is this unit about?

The aim of this unit is to provide the learner with the knowledge, understanding and skills required to communicate information within the workplace.

Learning outcomes

In this unit, learners will be able to

1. Operate a leaf blower attachment

Scope of content

This section gives details of the scope of content to be covered in the teaching of the unit to ensure that all the learning outcomes can be achieved.

Learning outcome:

1. Operate a leaf blower attachment

Topics:

- 1.1 Hazards and risks associated with the working area and the proposed work
- 1.2 Personal Protective Equipment (PPE)
- 1.3 Preparing the work site
- 1.4 Test starting the machine and ensuring that it is operating correctly
- 1.5 Work method
- 1.6 Operating the machine
- 1.7 Storing and clean equipment appropriately and in accordance with manufacturer's guidelines
- 1.8 Leave site clean and tidy

Topic 1.1

Identify hazards and risks relevant to:

- The work area
- The work to be done

Topic 1.2

May include subject to risk assessment:

- Eye protection
- Hearing protection
- Head protection
- Dust mask
- Hand protection
- Protective trousers
- Non-snag clothing
- High Vis clothing
- Safety footwear
- Personal first aid kit

All PPE should conform to applicable CE/EN standards where appropriate.

Topic 1.3

As per risk assessment.

Topic 1.4

Check for signs of damage:

- Worn/ damaged blower housing
- Air intakes

- Air filter

Test start the machine to include

- Safe starting procedure for the machine
- Start the machine
- Check controls are fully operational
- Machine stopped using on/ off switch

Topic 1.5

As per job specification.

Topic 1.6

Safe operation of the machine to include:

- Safe starting
- PPE worn at all times
- Efficient use of the machine
- Debris blown to appropriate location
- Working safe distances from others (5m minimum)

Topic 1.7

Advantages of regularly cleaning the machine after use may include to:

- Prevent corrosion
- Facilitate maintenance and adjustments
- Prevent personal contamination
- Bio-security measures

Clean attachment as required, may include:

- Using appropriate PPE
- Removing unwanted residues using an appropriate method, which may include:
 - Compressed air
 - Hose and water
 - Brush
- Waste disposed in line with company policy, environmental good practice and any legislative requirements

Topic 1.8

Site left in condition required.

Appendix 1 Sources of general information

The following documents contain essential information for centres delivering City & Guilds qualifications. They should be referred to in conjunction with this handbook. To download the documents and to find other useful documents, go to the **Centres and Training Providers homepage** on www.cityandguilds.com.

City & Guilds Centre Manual

This document provides guidance for organisations wishing to become City & Guilds approved centres, as well as information for approved centres delivering City & Guilds qualifications. It covers the centre and qualification approval process as well as providing guidance on delivery, assessment and quality assurance for approved centres.

It also details the City & Guilds requirements for ongoing centre and qualification approval, and provides examples of best practice for centres. Specifically, the document includes sections on:

- the centre and qualification approval process
- assessment, internal quality assurance and examination roles at the centre
- registration and certification of candidates
- non-compliance and malpractice
- complaints and appeals
- equal opportunities
- data protection
- management systems
- maintaining records
- internal quality assurance
- external quality assurance.

Our Quality Assurance Requirements

This document explains the requirements for the delivery, assessment and awarding of our qualifications. All centres working with City & Guilds must adopt and implement these requirements across all of their qualification provision. Specifically, this document:

- specifies the quality assurance and control requirements that apply to all centres
- sets out the basis for securing high standards, for all our qualifications and/or assessments
- details the impact on centres of non-compliance

Our Quality Assurance Requirements document encompasses the relevant regulatory requirements of the following documents, which apply to all UK centres working with City & Guilds:

- Ofqual's General Conditions of Recognition

The **centre homepage** section of the City & Guilds website also contains useful information on

- **Walled Garden:** how to register and certificate candidates on line
- **Events:** dates and information on the latest Centre events
- **Online assessment:** how to register for e-assessments.

Useful contacts

UK learners

General qualification information

E:
learnersupport@cityandguilds.com

International learners

General qualification information

E: intcg@cityandguilds.com

Centres

Exam entries, Certificates,
Registrations/enrolment, Invoices, Missing or
late exam materials, Nominal roll reports,
Results

E: information@cityandguilds.com

Single subject qualifications

Exam entries, Results, Certification, Missing or
late exam materials, Incorrect exam papers,
Forms request (BB, results entry), Exam date
and time change

E: singlesubjects@cityandguilds.com

International awards

Results, Entries, Enrolments, Invoices, Missing or
late exam materials, Nominal roll reports

E: intops@cityandguilds.com

Walled Garden

Re-issue of password or username, Technical
problems, Entries, Results, e-assessment,
Navigation, User/menu option, Problems

E: walledgarden@cityandguilds.com

Employer

Employer solutions, Mapping, Accreditation,
Development Skills, Consultancy

T: +44 (0)121 503 8993

E: business@cityandguilds.com

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About City & Guilds

As the UK's leading vocational education organisation, City & Guilds is leading the talent revolution by inspiring people to unlock their potential and develop their skills. City & Guilds is recognised and respected by employers across the world as a sign of quality and exceptional training.

City & Guilds Group

The City & Guilds Group operates from three major hubs: London (servicing Europe, the Caribbean and Americas), Johannesburg (servicing Africa), and Singapore (servicing Asia, Australia and New Zealand). The Group also includes the Institute of Leadership & Management (management and leadership qualifications), City & Guilds Licence to Practice (land-based qualifications) and Learning Assistant (an online e-portfolio).

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