City & Guilds Level 2 Certificate of Competence in Powered Pole Pruner Maintenance and Operation (0039-26)

September 2022 Version 1.1

Assessment Pack – Centre and Candidate Version

Version and date	Change detail	Section
1.0	First version	
1.1 September 2022	Formatting changes Updated logo Updated ‘Sources of general information’	Throughout Front cover Appendix 2

Contents

Introduction

This assessment relates to the unit in the Qualification handbook. The assessment can be achieved at pass only. If any task is not yet met the candidate is unsuccessful.

This assessment is for unit 207 Powered Pole Pruner Maintenance and Operation covering the following learning outcomes:

1. Carry out powered pole pruner maintenance and operation

General guidance on the requirements for assessment can be found in the Assessor Guidance document available on the City & Guilds web site **www.cityandguilds.com**.

The assessor must complete the Practical Table mark sheet for each candidate which should be kept by the assessor for a minimum period of twelve months.

Record of assessment (ROA)
A prepopulated record of assessment must be completed by the assessor following an assessment. The number of outcomes is listed above, these must be ticked into the relevant met or not met sections of the ROA.

ARAS Forms
An Assessment Result Advice Slip (ARAS form) must be completed by the assessor following an assessment. The ARAS is not a certificate but, based on the evidence of the candidate's performance, is a recommendation to City & Guilds that the candidate is either met or not met the assessment criteria. All feedback is to be recorded by the assessor on the feedback section of the ARAS form.

Assessment Time
The expected assessment time for this qualification is 2.5 - 3 hours.

Site/workshop requirements:
Sufficient workspace to accommodate the machine
Work bench with vice
Hand cleaning facilities
Outside area for fuelling and starting the pole pruner
Trees for pruning with branch material within reach of the machine

Equipment/Machinery:
Powered pole pruner
Suitable and sufficient range of maintenance tools
Relevant operator's manual
Waste disposal facilities
First aid kit

Consumables:
Fuel and chainsaw oil
Cleaning materials

This is not an open book assessment however additional technical information may be sought from the relevant manufacturer's operator manuals or any other appropriate training or safety publication.

Practical observation descriptor table

207 – Powered Pole Pruner Maintenance and Operation

Activity number and description from check list		Assessment criteria
1.	Explain the risk assessment process	The risk assessment process may contain the following five steps: • identify the hazards • decide who might be harmed and how • evaluate the risks and decide on precautions • record the findings and implement them • review and update the assessment as necessary
2.	Identify the hazards, risks and controls associated with the site, task and machine	Identify hazards, risks and controls relevant to the site task and machine
3.	Outline key emergency information relevant to the site	Emergency procedures relevant to a work site may include: • site location • grid reference • what three words • designated meeting place • nearest access point • street name/district • type of access (public road/light vehicles, four-wheel drive) • suitable helicopter landing area • phone number of nearest doctor • location of nearest accident and emergency hospital and phone number • works manager contact details • your own contact number/mobile number • other
4.	Outline your responsibility as an operator under the following Health and safety at work act Provision and use of work equipment regulations (PUWER)	Outline key points from the legislation and industry good practice listed below: Health and Safety at Work Act (HASWA): • follow training received • take reasonable care of their own and other people's safety • other Provision and Use of Work Equipment Regulations (PUWER): • equipment is maintained • equipment is fit for purpose

5.	State providers of industry good practice	Providers of industry best practice may be: • Forest Industry Safety Accord (FISA) • Regional forestry bodies • Arboricultural Forestry Advisory Group (AFAG) • Arboricultural Association (AA) • Other
6.	Explain why it is important to maintain powered pole pruners to manufacturers recommendations	The importance of maintaining powered pole pruners to manufacturers recommendations may include: • machine is safe to use • reduces machinery repair downtime • other
7.	Identify and explain the function of all the key safety features	Explain the function of all powered pole pruner safety features: Guide bar cover: • protects and covers the bar and chain Chain with low kick back characteristics: • reduces kickback Exhaust: • noise reduction and reduces emissions Anti-vibration mounts: • reduces vibration On/off switch: • stops engine Safety decals-hand/eye/ear defender symbols: • provides mandatory information Throttle trigger lockout: • stops accidental throttle operation
8.	Select appropriate maintenance tools for the power unit and cutting systems in accordance with operator's handbook	Appropriate tools for the maintenance of both the power unit and guidebar/chain are selected

9.	State hazards associated with battery powered equipment	Hazards and risks associated with battery powered equipment may be: • incorrect compatibility of battery/machine • machine being live when the battery is in place • machine may not have an on/off switch • battery misalignment • battery storage • battery disposal • battery dislodging and falling from the machine • risk of electric shock • risk of short circuiting and combustion when charging • malfunction due to water contamination • lack of power • charge time and charging requirements • other
10.	Explain battery power unit maintenance and checks	Battery power unit maintenance and checks should include: • battery guide tracks are inspected and cleaned • battery is not damaged, cracked or deformed • battery has sufficient charge • machine air intake and cooling system cleaned and inspected for damage • keypad is inspected for damage and cleaned (if applicable) • battery compartment is inspected and inspected for damage • other
11.	State the benefits associated with the use of battery powered machines	Benefits associated with the use of battery powered machines maybe: • reduced weight • reduced vibration • reduced noise • no emissions • clearer communication with others on site • less maintenance requirements • more accurate operation due to due to no engine torque • no need for the transportation of fuel • no risk of fuel spillages • other

12.	Explain the function and maintenance requirements of individual components Maintain power unit in accordance with operator's handbook using appropriate tools	Spark plug: • provides ignition, maintenance may include inspection, cleaning and checking of electrode gap. Maintenance: • 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 may include inspection and thorough cleaning Maintenance: • 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: • Prevents the engine from overheating, maintenance may include inspection and cleaning Maintenance: • remove covers where appropriate and remove excess debris from fins and cylinder Exhaust system: • reduces noise and emissions, maintenance may include inspection, security of nuts/bolts, spark arrestor and removal of residue Maintenance: • check all nuts and bolts for security • remove excess residue from the silencer • check condition and security of spark arrestor Sprocket: • drives/pushes the chain along the guidebar, maintenance may include inspection and replacement due to wear exceeding manufacturers tolerances Maintenance: • sprocket checked for wear and condition

		Starter mechanism: • engages the flywheel, maintenance may include cleaning, inspection Maintenance: • starter cover removed and air ways cleared • cord and coil spring tension 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 Greasing/lubrication: • may help prevent excessive wear of components Maintenance: • greasing of component parts as appropriate Fuel filter: • prevent debris entering engine components, maintenance may include cleaning as appropriate or replacement Maintenance: • fuel cap removed • filter located and removed where applicable from tank using appropriate tool • condition of filter determined • replacement as appropriate Oil filter: • prevent debris entering guide bar, maintenance may include cleaning as appropriate or replacement Maintenance: • oil cap removed • filter located and removed where applicable from tank using appropriate tool • condition of filter determined • cleaning procedures using non-flammable detergents followed by rinsing and drying or replacement as appropriate

13.	Explain the function and maintenance requirements of the guidebar Maintain the guidebar in accordance with operator's handbook using appropriate tools	Guidebar: • holds and carries the chain to enable the cutting of timber Maintenance: • 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
14.	Describe the problems encountered when chain and guide bar are worn, damaged or poorly maintained	Problems that may be encountered when a chain and guidebar are worn, damaged or poorly maintained may include: • Pole pruner does not cut efficiently • over-heating of the guidebar • poor lubrication of the chain • increased chain, bar and sprocket wear • other
15.	State the information required to replace the pole pruner chain	The information required to replace the chainsaw chain maybe: • pitch • gauge • length of guidebar • number of drive links • cutter type
16.	Identify different chain types and their application	Cutter types may include: • chisel chain • semi-chisel chain • other • application may depend on experience of the operator, timber type and personal preference

17.	Explain how to select the correct filing information for the chain and why this is necessary	Select the correct file size and identify the required sharpening angles through use of chain charts, manufactures information, chain box etc Reasons for maintaining correct filing angles and cutter lengths may include: • ensures chain is sharpened as per manufacturers recommendations • enhances cutting performance • decreased vibration • accurate cutting • decreased risk of kick back • other The correct depth gauge setting: • achieves optimum cutting speed as per manufacturers recommendations • reduces the risk of kick back • reduces chain vibration • other
18.	Explain the function and maintenance requirements of the chain Maintain the chain in accordance with operator's handbook using appropriate tools	Function of the chain: • carries the cutting components to enable the cutting of timber Maintenance of the chain: • 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
19.	Reassemble powered pole pruner and cutting system to functional and operational standard	Upon completion of maintenance activities, the powered pole pruner including the bar and chain is reassembled in line with the operator's handbook
20.	State steps to be taken when a powered pole pruner is not repairable, faulty or non-operational	Steps to take when a powered pole pruner is not repairable, faulty or non-operational may include: • labelling of the powered pole pruner and removing from service • operator maintenance • arranging for repair of the powered pole pruner • other

21.	Clean and tidy working area	Maintenance area is left in a clean and tidy state with tools and equipment appropriately cleared away
22.	Describe the correct methods for disposing of waste	Disposal of waste from maintenance activities may include: • use of designated waste/recycle bins • waste oils placed in approved containers for disposal • other
23.	Dispose of waste safely in line with legislation	All waste produced from maintenance activities is disposed of in line with legislation, good practice and/or site requirements
24.	Select appropriate personal protective equipment	Personal protective equipment should include: • safety boots • gloves • head, ear and eye protection • non snag outer clothing • harness • all PPE must conform to applicable CE/EN standards where appropriate
25.	Identify the hazards, risks and controls associated with the site, task and machine	Identify hazards, risks and controls relevant to the site task and machine
26.	State the emergency procedures relevant to the site	Emergency procedures relevant to the work site
27.	State the appropriate safe working distances	Safe working distance: • Minimum of fifteen metres
28.	Explain bio-security considerations	Bio-security considerations may include: • cross contamination • disinfection/cleaning of equipment • cleaning/disposal of PPE • other
29.	State environmental considerations specific to powered pole pruner use	Environmental considerations may include: • fuelling site • type of fuel/oil • use of battery powered saws • other

30.	State how condition of trees and time of year affect approach to pruning	Condition of tree and time of year may affect the work owing to: Condition: • dead – loss of control, safety compromised • diseased – biosecurity measures • other Time of year: • some species bleed heavily if pruned at certain times of year • promotion of subsequent disease or infection • other
31.	Describe appropriate branch removal and pruning methods	Appropriate pruning methods may include: Through cut: • small diameter timber cut straight through with one cut Step cut: • two over lapping cuts used on free fall sections Natural target pruning: • pruning cut made to the outer edge of the branch bark collar/ridge
32.	Explain the basic principles of target pruning and the effect on tree pruning operations	Basic principles of target pruning are to: • simulate the tree's natural ability to shed branches • leaves the branch bark ridge and collar intact • allow complete doughnut of callus wood to form • allow protection boundary to develop inside collar • cuts carried out in accordance with industry standard and job • specification • other
33.	Describe tension and compression in branches	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

34.	Explain ways to remove a powered pole pruner trapped in a cut	Procedure for removing a trapped powered pole pruner may include: Method one: • switch off engine • operator and work partner stand side by side • work partner lifts end of branch with suitable aid to open the cut • withdraw the machine Method two: • switch off engine • prop engine on the ground • lift and prop branch with a trimmed branch or pole • withdraw the machine Method three: • switch off engine • use of second machine or pole saw to release trapped machine minimum of 300mm (12”) away
35.	Reduce and remove branches using appropriate cuts	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 • operator is not directly below falling branches • angle of powered pole pruner does not exceed 60 degrees when cutting
36.	Check debris is in an appropriate and safe position	All debris should be left in a safe, stable condition and appropriate position
37.	Dispose of waste safely in line with legislation	All waste produced is disposed of in line with legislation, good practice, and site requirements

38.	Used appropriate tools, equipment and personal protective equipment (PPE)	All tools, equipment and personal protective equipment is used in line with industry good practice
39.	Carried out work to minimise environmental damage	It is ensured that any possible environmental damage is minimised at all times
40.	Worked in a way which maintains health and safety and is consistent with relevant legislation and industry good practice	All activities must be completed in a way which protects the operator and those around them

Appendix 1 Practical Table

207 – Powered Pole Pruner Maintenance and Operation

All criteria must be achieved.

Activity number and description	Achieved
1. Explain the risk assessment process	
2. Identify the hazards, risks and controls associated with the site, task and machine	
3. Outline key emergency information relevant to the site	
4. Outline your responsibility as an operator under the Health and Safety at Work Act and Provision and use of work equipment regulations (PUWER)	
5. State providers of industry good practice	
6. Explain why it is important to maintain powered pole pruners to manufacturers recommendations	
7. Identify and explain the function of all the key safety features	
8. Select appropriate maintenance tools for the power unit and cutting systems in accordance with operator's handbook	
9. State hazards and risks associated with battery powered equipment	
10. Explain battery power unit maintenance and checks	
11. State the benefits associated with the use of battery powered machines	
12. Explain the function and maintenance requirements of individual components Maintain power unit in accordance with operator's handbook using appropriate tools	
13. Explain the function and maintenance requirements of the guidebar Maintain the guidebar in accordance with operator's handbook using appropriate tools	
14. Describe the problems encountered when chain and guide bar are worn, damaged or poorly maintained	
15. State the information required to replace the pole pruner chain	
16. Identify different chain types and their application	
17. Explain how to select the correct filing information for the chain and why this is necessary	
18. Explain the function and maintenance requirements of the chain Maintain the chain in accordance with operator's handbook using appropriate tools	
19. Reassemble powered pole pruner and cutting system to functional and operational standard	
20. State steps to be taken when a powered pole pruner is not repairable, faulty or non-operational	

21. Clean and tidy working area	
22. Describe the correct methods for disposing of waste	
23. Dispose of waste safely in line with legislation	
24. Select appropriate personal protective equipment	
25. Identify the hazards, risks and controls associated with the site, task and machine	
26. State the emergency procedures relevant to the site	
27. State the appropriate safe working distances	
28. Explain bio-security considerations	
29. State environmental considerations specific to powered pole pruner use	
30. State how condition of trees and time of year affect approach to pruning	
31. Describe appropriate branch removal and pruning methods	
32. Explain the basic principles of target pruning and the effect on tree pruning operations	
33. Describe tension and compression in branches	
34. Explain ways to remove a powered pole pruner trapped in a cut	
35. Reduce and remove branches using appropriate cuts	
36. Check debris is in an appropriate and safe position	
37. Dispose of waste safely in line with legislation	
38. Used appropriate tools, equipment and personal protective equipment (PPE)	
39. Carried out work to minimise environmental damage	
40. Worked in a way which maintains health and safety and is consistent with relevant legislation and industry good practice	

Appendix 2 Sources of general information

The following documents contain essential information for centres delivering City & Guilds qualifications. To download the documents and to find other useful documents, go to the *Centre Document Library* on *www.cityandguilds.com* or click on the links below:

Quality Assurance Standards: Centre Handbook
This document is for all approved centres and provides guidance to support their delivery of our qualifications. It includes information on

- Centre quality assurance criteria and monitoring activities
- Administration and assessment systems
- Centre-facing support teams at City & Guilds / ILM
- Centre quality assurance roles and responsibilities.

The Centre Handbook should be used to ensure compliance with the terms and conditions of the Centre Contract.

Quality Assurance Standards: Centre Assessment
This document sets out the minimum common quality assurance requirements for our regulated and non-regulated qualifications that feature centre assessed components. Specific guidance will also be included in relevant qualification handbooks and/or assessment documentation.

It incorporates our expectations for centre internal quality assurance and the external quality assurance methods we use to ensure that assessment standards are met and upheld. It also details the range of sanctions that may be put in place when centres do not comply with our requirements, or actions that will be taken to align centre marking/assessment to required standards. Additionally, it provides detailed guidance on the secure and valid administration of centre-assessments.

Access arrangements - When and how applications need to be made to City & Guilds provides full details of the arrangements that may be made to facilitate access to assessments and qualifications for candidates who are eligible for adjustments in assessment.

The *Centre Document Library* also contains useful information on such things as:

- Conducting examinations
- Registering learners
- Appeals and malpractice

Useful contacts
Please visit the Contact Us section of the City & Guilds website, *Contact us*

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. We offer over 500 qualifications across 28 industries through 8500 centres worldwide and award around two million certificates every year. 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 is a leader in global skills development. Our purpose is to help people, organisations and economies develop their skills for growth. We work with education providers, employers and governments in over 100 countries across the world to help people, businesses and economies grow by shaping skills systems and supporting skills development.

The Group is made up of City & Guilds, ILM, Kineo, The Oxford Group, Gen2, and Intertrain. Together we set the standard for professional and technical education and corporate learning and development around the world.

Copyright

Published by City & Guilds, a registered charity established to promote education and training

City & Guilds of London Institute
Giltspur House
5-6 Giltspur Street
London
EC1A 9DE

cityandguildsgroup.com