

City & Guilds NPTC Level 2 Award in the Safe use of a Forestry Clearing Saw (0020-60)

Version 1.0 (October 2024)

Assessment Pack – Candidate Version

Version and date	Change detail	Section
1.0 October 2024	First version	All

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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 221 Prepare and operate a clearing saw covering the following learning outcomes:

1. Know the health and safety requirements for operating a clearing saw
2. Be able to carry out a risk assessment on a site
3. Be able to prepare the equipment and site for clearing saw operations
4. Be able to operate a clearing saw
5. Carry out maintenance on a clearing saw

General guidance on the requirements for assessment can be found in the Assessor Guidance General guidance on the requirements for assessment can be found in the Assessor Guidance document available on the City & Guilds web site www.nptc.org.uk

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 1.5 – 3 hours.

Site/workshop requirements:

Trees or relevant height and diameter for the use of a clearing saw, a minimum of 30m² for each candidate must be available. Trees available should allow the demonstration of single cut (up to 50mm) overlap cut (50mm to 120mm) sink cut (over 120mm)

Equipment/Machinery:

Clearing saw and harness relevant for the operation, all fit for purpose and suitably maintained. Any tools which may be needed to carry out any maintenance which may be required.

Consumables:

Fuels, oils and grease as may be required. PPE required as per site and machine, operators manual and/or training materials should be available if needed. Spares may need to include – air filter, spark plug, fuel filter, starter cord, cleaning materials (brush), angle head grease, relevant blades and tools for sharpening. Vice or other suitable means of holding the blade whilst sharpening.

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

221 - Prepare and operate a clearing saw

Activity number and description from check list		Assessment criteria
1.1	State legislation covering clearing saw operations	<p>May include the following:</p> <ul style="list-style-type: none"> • The Health & Safety at Work Act 1974 – specified duties under the act as an employee • The Management of Health and Safety at Work Regulations 1999 – a risk assessment must be carried for all activities • Personal Protective Equipment Regulations 1992 – PPE must be supplied and worn • Manual Handling Operations Regulations 1992 – not to manually handle, use safe lifting techniques • The Control of Vibration at Work Regulations 2005 – to reduce the risk to health from vibrations • Provision and Use of Work Equipment Regulations (PUWER) 1998 – requires that regular checks are made • Noise at Work Regulations 2005 – hearing protection must be worn over 85db • COSHH - hazard awareness of toxic vegetation/chemicals • Countryside and Wildlife Act 1981 – operation carried out at times to minimise the impact on wildlife • RIDDOR - reporting of dangerous occurrences and accidents
1.2	Explain the risk assessment process	<p>The risk assessment process may contain the following five steps:</p> <ul style="list-style-type: none"> • 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

1.3	State emergency planning procedures relevant to the work area	<p>Emergency procedures relevant to a work site may include:</p> <ul style="list-style-type: none"> • location name • grid reference • designated meeting place • site location name • 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
2.1	Identify hazards and risks associated with the working area and the proposed work	<p>Identify hazards (anything with the potential to cause harm) and risks (who might be harmed and how), relevant to:</p> <ul style="list-style-type: none"> • The work area • The work to be done
2.2	Identify safety features of the clearing saw	<p>Safety features may include:</p> <ul style="list-style-type: none"> • clearly marked on/off switch • safety throttle • hand, eye, ear defender symbol • safe working distance symbol • guards • anti vibration system • exhaust fumes directed away from the operator • harness attachment points
2.3	Carry out site inspection	<p>Ensure that:</p> <ul style="list-style-type: none"> • walk the site and remove or mark hazards • confirm the condition of the site as acceptable for the operation to take place • report to the appropriate person if the site condition is unsuitable • set out warning signs and barriers (if appropriate) to advise or exclude public/animals • implement suitable controls to protect operator

3.1	Carry out pre start checks on the clearing saw	<p>Pre-start checks may include:</p> <ul style="list-style-type: none"> • all safety features are present and properly adjusted • all controls are working correctly and are identified • there are no loose or broken parts • the fuel tank is filled with the correct fuel mixture
3.2	Carry out safe starting and operational checks	<p>Safe starting may include:</p> <ul style="list-style-type: none"> • remove and retain guard • machine placed in a secure position on the ground <p>Procedure if blade is not stationary at idle:</p> <ul style="list-style-type: none"> • set the controls as per manufacturers recommendations • start engine • check that blade is stationary at idling speed • adjust the idle speed according to manufacturers recommendations
3.3	Use Personal Protective Equipment (PPE) and machine safety features for clearing saw operations	<p>As per manufacturers recommendations, PPE should include appropriate:</p> <ul style="list-style-type: none"> • safety helmet • eye protection • ear defenders • gloves • non snag clothing • trousers to protect from flying debris • safety boots with protective toecaps • personal first aid kits should be available • additional PPE as required by the risk assessment <p>Harness fitting and adjustment</p> <ul style="list-style-type: none"> • length of shoulder straps • length of side straps • position of chest plate • position of hip guard • machine well balanced • working height achieved • handle bar set
4.1	Carry out the operation using a clearing saw	<p>Operation of the clearing saw to include the following:</p> <ul style="list-style-type: none"> • select appropriate method(s) • use of throttle • ensure blade speed when cutting is appropriate

		<ul style="list-style-type: none"> • use hips and legs to work machine • assessment of stem lean • use of blade sector (left and right) • use of blade rotation • identify kick out sector • clear jammed blade • clear vegetation • insert sink cut • insert felling cut • stump height • Must include: <ul style="list-style-type: none"> • Single cut – up to 50mm • Over lap cut – 50mm – 120mm • Sink cut – over 120mm • stop engine and replace guard immediately after use
4.2	Carry out post operational checks	<p>Ensure that:</p> <ul style="list-style-type: none"> • site is safe and secure • debris cleared according to site specification • breakdown the site • inspect and clean clearing saw
5.1	Explain the function and maintenance requirements of individual components	<p>Air filter</p> <ul style="list-style-type: none"> • filter prevents debris entering carburettor and needs to be clean to maintain air/fuel ratio and therefore performance • excess debris removed from around filter prior to removal • filter removed, protecting carburettor • filter cleaned, appropriate to condition • filter refitted correctly <p>Spark plug</p> <ul style="list-style-type: none"> • engine cover and spark plug removed • plug cleaned or replaced as necessary • wear/damage assessed visually • gap size checked and set if necessary • if fuel rich, dark brown to black • if fuel starved, light brown to white <p>Cooling system</p> <ul style="list-style-type: none"> • 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 <p>Exhaust system</p>

		<ul style="list-style-type: none"> • 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 <p>Recoil starter</p> <ul style="list-style-type: none"> • starter cover removed and ventilation slots cleared • cord inspected for wear • cord and coil spring released and re-tensioned • pull toggle checked for security • slack spring cord does not fully retract • over tight spring binds before cord fully extended <p>Cord wears at</p> <ul style="list-style-type: none"> • base of toggle • attachment to pulley wheel <p>Fuel filter</p> <ul style="list-style-type: none"> • fuel cap removed • filter located and removed from tank using appropriate tool • condition of filter determined • cleaning procedures using non flammable detergents followed by rinsing and drying or replacement as appropriate <p>Power unit/covers</p> <ul style="list-style-type: none"> • debris removed from fins/air intake • external screws, nuts and bolts present and secure • security of muffler <p>Angle drive</p> <ul style="list-style-type: none"> • in accordance with manufacturers recommendations • access plug removed (where applicable) • lubricant checked (where applicable) <p>Blade</p> <ul style="list-style-type: none"> • secure blade using appropriate method (locking pin, spanner etc) • remove retaining nut (l/h thread) and blade assembly <ul style="list-style-type: none"> • check: <ul style="list-style-type: none"> • length of teeth • damage to teeth
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		<ul style="list-style-type: none"> • select shortest tooth and sharpen to manufacturers specification • select and set callipers to obtain even filing size of all teeth <ul style="list-style-type: none"> • check: <ul style="list-style-type: none"> • angle and shape of tooth is acceptable • sharpness of cutting edge • gullet depth • use of setting tool <p>Re-check and adjust teeth (if necessary)</p> <ul style="list-style-type: none"> • inspect blade for cracks and other damage • clean shaft • re-fit blade, washer and lock nut • replaced according to manufacturer's recommendations • remove locking pin (if used) <p>Blade sharpening on site to include:</p> <ul style="list-style-type: none"> • cut a vertical slot in a standing stem that has been cut off with an angled cut, approximately 1.1 metre from the ground. be aware of kickback making sure you have a firm grip at all times while cutting the slot • begin the vertical notch cut • complete the vertical notch cut up to the gearbox housing • turn the saw to the side a little to create tension on the blade. the blade should be secure but still be able to turn to carry out the sharpening of the teeth • sharpen the blade to manufacturers recommendations
5.2	State the safety requirements for operating a clearing saw	<p>Safety requirements may include:</p> <ul style="list-style-type: none"> • wear protective clothing at all times • ensure personal safety • ensure safety of bystanders • maintain minimum safe working distance of twice the length of the longest product or a minimum of 15m at all times
5.3	Carry out the maintenance on the clearing saw	<p>Air filter</p> <ul style="list-style-type: none"> • filter prevents debris entering carburettor and needs to be clean to maintain air/fuel ratio and therefore performance • excess debris removed from around filter prior to removal

		<ul style="list-style-type: none"> • filter removed, protecting carburettor • filter cleaned, appropriate to condition • filter refitted correctly <p>Spark plug</p> <ul style="list-style-type: none"> • engine cover and spark plug removed • plug cleaned or replaced as necessary • wear/damage assessed visually • gap size checked and set if necessary • if fuel rich, dark brown to black • if fuel starved, light brown to white <p>Cooling system</p> <ul style="list-style-type: none"> • 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 <p>Exhaust system</p> <ul style="list-style-type: none"> • 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 <p>Recoil starter</p> <ul style="list-style-type: none"> • starter cover removed and ventilation slots cleared • cord inspected for wear • cord and coil spring released and re-tensioned • pull toggle checked for security • slack spring cord does not fully retract • over tight spring binds before cord fully extended <p>Cord wears at</p> <ul style="list-style-type: none"> • base of toggle • attachment to pulley wheel <p>Fuel filter</p> <ul style="list-style-type: none"> • fuel cap removed • filter located and removed from tank using appropriate tool • condition of filter determined • cleaning procedures using non flammable detergents followed by rinsing and drying or replacement as appropriate <p>Power unit/covers</p> <ul style="list-style-type: none"> • debris removed from fins/air intake
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		<ul style="list-style-type: none"> • external screws, nuts and bolts present and secure • security of muffler <p>Angle drive</p> <ul style="list-style-type: none"> • in accordance with manufacturers recommendations • access plug removed (where applicable) • lubricant checked (where applicable) <p>Blade</p> <ul style="list-style-type: none"> • secure blade using appropriate method (locking pin, spanner etc) • remove retaining nut (l/h thread) and blade assembly <ul style="list-style-type: none"> • check: <ul style="list-style-type: none"> • length of teeth • damage to teeth • select shortest tooth and sharpen to manufacturers specification • select and set callipers to obtain even filing size of all teeth <ul style="list-style-type: none"> • check: <ul style="list-style-type: none"> • angle and shape of tooth is acceptable • sharpness of cutting edge • gullet depth • use of setting tool <p>Re-check and adjust teeth (if necessary)</p> <ul style="list-style-type: none"> • inspect blade for cracks and other damage • clean shaft • re-fit blade, washer and lock nut • replaced according to manufacturer's recommendations • remove locking pin (if used) <p>Blade sharpening on site to include:</p> <ul style="list-style-type: none"> • cut a vertical slot in a standing stem that has been cut off with an angled cut, approximately 1.1 metre from the ground. be aware of kickback making sure you have a firm grip at all times while cutting the slot • begin the vertical notch cut • complete the vertical notch cut up to the gearbox housing • turn the saw to the side a little to create tension on the blade. the blade should be secure but still be able to turn to carry out the sharpening of the teeth
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		<ul style="list-style-type: none"> sharpen the blade to manufacturers recommendations
5.4	Reassemble the clearing saw to a functional and operational standard	<ul style="list-style-type: none"> upon completion of maintenance activities the clearing saw is reassembled in line with the operators handbook

Appendix 1 Practical table

221 Prepare and operate a clearing saw

All criteria must be achieved.

Activity number and description	Achieved
1.1 State legislation covering clearing saw operations	
1.2 Explain the risk assessment process	
1.3 State emergency planning procedures relevant to the work area	
2.1 Identify hazards and risks associated with the working area and the proposed work	
2.2 Identify safety features of the clearing saw	
2.3 Carry out site inspection	
3.1 Carry out pre start checks on the clearing saw	
3.2 Carry out safe starting and operational checks	
3.3 Use Personal Protective Equipment (PPE) and machine safety features for clearing saw operations	
4.1 Carry out the operation using a clearing saw	
4.2 Carry out post operational checks	
5.1 Explain the function and maintenance requirements of individual components	
5.2 State the safety requirements for operating a clearing saw	
5.3 Carry out the maintenance on the clearing saw	
5.4 Reassemble the clearing saw to a functional and operational standard	

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 www.cityandguilds.com or click on the links below:

Centre handbook: quality assurance standards

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.

Centre assessment: quality assurance standards

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**.

City & Guilds

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