



BUILDING 500, ABBEY PARK, STARTETON, WARWICKSHIRE, CV8 2LY
Tel: 024 7685 7300 Fax: 024 7669 6128
Email: information@cityandguilds.com

**LEVEL 2 AWARD
IN
CHAINSAW AND RELATED OPERATIONS (QCF)
CS 30 – PREPARE AND MAINTAIN THE CHAINSAW**

ASSESSMENT SCHEDULE

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CHAINSAW AND RELATED OPERATIONS (QCF)

CS30 – Prepare & Maintain The Chainsaw

Introduction

The scheme is administered by NPTC.

NPTC will:

- Publish
 - scheme regulations
 - assessment schedule
 - assessment material
- Approve centres to co-ordinate and administer the scheme
- Set standards for the training of Verifiers and Assessors
- Recruit, train and deploy Verifiers
- Manage verification
- Issue certificates to successful Learners

The Certificate of Competence/ ID Card

Certificates of Competence/ ID Cards will be awarded to Learners who achieve the required level of competence in the Units to which their Certificate relates.

Instruction

Attendance at a course of instruction is not a pre-requisite to an application for an assessment but potential Learners are strongly advised to ensure that they are up to the standard that will be expected of them when they are assessed.

NPTC does **not** hold a register of instructors; however instruction will normally be available from recognised training providers and/or centres of further or higher education active in the areas covered by this certificate. Further information on training may be obtained from the local Assessment Centre.

Access to Assessment

Assessment Centres will be responsible for arranging assessment on behalf of a Learner. Assessment may only be carried out by an Assessor approved by NPTC for that scheme. Under no circumstances can either instructors involved in the preparation of learners, or the learners work place supervisors, or anyone else who might have a vested interest in the outcome, carry out the assessment.

The minimum age limit for Learners taking certificates of competence is 16 years. There is no upper age limit.

Assessment

Assessment is a process by which it is confirmed that the Learner is competent in the Units within the award to which the assessment relates. It is a process of collecting evidence about his/her capabilities and judging whether that evidence is sufficient to attribute competence.

The learner must be registered through an NPTC approved Assessment Centre for this qualification prior to assessment.

The schedule of assessment contains the criteria relating to:

- Observation of practical performance
- Assessment of knowledge and understanding

When all the criteria within the Units for which assessment has been sought have been completed the result(s) will be recorded on the Learner Assessment Report Form(s).

Performance Evaluation

The result of each assessment activity is evaluated against the following criteria:

- 4 = Meets or exceeds the assessment criteria by displaying a level of practical performance and/or underpinning knowledge, with no 'minor' or 'critical' faults. (Competent).
- 3 = Meets the requirements of the assessment criteria for both the practical performance and the underpinning knowledge, with some 'minor' faults but no 'critical' faults. (Competent).
- 2 = Does not fully satisfy the requirements of the assessment criteria, being unable to perform the practical task satisfactorily or being deficient in underpinning knowledge leading to the recording of minor faults. (Not yet competent).
- 1 = Does not satisfy the requirements of the assessment criteria, being unable to perform the practical task satisfactorily or safely or being deficient in underpinning knowledge leading to the recording of a critical fault. (Not yet competent).

A list of registered Assessment Centres is available from NPTC. (www.nptc.org.uk)

Verification

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 that NPTC 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.

Approved Assessors will be subject to a 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 NPTC.

Compliance with the verification requirements is a pre-requisite for Assessors remaining on NPTC's list of approved assessors.

Safe Practice

At all times during the assessment, the chainsaw and other equipment must be operated in a safe manner in accordance with industry good practice, whatever the task being carried out.

1. Assessors must hold a current 'First Aid at Work' Certificate.
2. It is strongly recommended that learners hold at least a recent, recognised 'Emergency First Aid at Work (EFAW)' Certificate.
3. All chainsaws used in the assessments must comply with Arboriculture and Forestry Advisory Group (AFAG) Safety Guide 301, HSE Chainsaws at Work INDG317(rev1), in terms of safety features, and be a model and size suited to the task(s) required.
4. Recommended guidebar lengths should be observed, although variations may be accepted at the discretion of the Assessor where this is appropriate to the task.
5. Learners should be familiar with the saw, associated machinery and appropriate tools that they are going to use.
6. A spare working chainsaw must be available.
7. Appropriate Personal Protective Equipment (PPE) must be worn at all times by both the learner and the assessor. All PPE used must comply with AFAG Safety Guide 301, HSE Chainsaws at Work INDG317 (rev1), Health and Safety Executive publications and current legal requirements in terms of specification and use.
8. A First Aid kit meeting current regulations, of the appropriate size for the number of persons on site, must be available (AFAG 802), along with appropriate fire fighting and suitable welfare facilities e.g. Hand cleansing wipes.
9. The learner **must** be equipped with a personal first aid kit in accordance with AFAG802.
10. The Assessor **must** ensure a Risk Assessment has been carried out, and sufficient control measures implemented. In particular, the location of the site and weather conditions should be assessed, details of access, etc, which may be required by emergency services must be noted, as well as the nearest Accident and Emergency Hospital Unit. The means of contacting the emergency services must be established. All recorded risk assessment information should be clearly legible and accessible to all operators and completed for all locations where assessment activities are scheduled to take place.
11. Manual handling techniques must comply with current legislation.
12. Any necessary permission must have been granted, and notifications made as appropriate: (e.g. Local Planning Authority, Forestry Commission, Forest Enterprise, Highways Authority, Private owners, statutory undertakers, Police, etc).
13. All equipment being used for this assessment must comply with relevant requirements of the Provision and Use of Work Equipment Regulations (PUWER) 1998.
14. Information may be sought from the relevant operator manuals or any other appropriate training or safety publication. This **would not** include the NPTC schedule of assessment for the duration of the assessment activity.
15. The current Regulations for transport, handling and storage of fuel and oils must be complied with.
16. Provision must be made to avoid the risk of environmental pollution.
17. It is the responsibility of the Assessor and the Learner to ensure that any additional requirements and provisions are met as relevant to this qualification.
18. At all times during the felling operation, learners must act in a way so as not to endanger themselves, the assessor or any other person or equipment. Work must be carried out to achieve the requirements of the assessment criteria in accordance with all relevant and current legislation and good practice guidance (e.g. INDG317, Chainsaws at Work, AFAG Guides 302, 303, 304 and 307).
19. If required, relevant records must be accurately kept.
20. Appropriate steps should be taken to maintain effective teamwork in respect of other persons on site during the assessment. This may include taking steps to ensure effective communication and safety precautions.
21. Assessors must ensure that they are within their verification time periods for the assessments they wish to undertake as per NPTC Assessor Code of Practice.

If these conditions are not observed this may result in the Learner not meeting the required standard.

Complaints and Appeals

NPTC and its Assessment Centres have a formal Complaints and Appeals procedure. In the event of any dissatisfaction with the arrangements and conditions of assessment, the learner should first contact the Assessment Centre through whom the assessment was arranged and submit the complaint in writing.

For further information on NPTC's Equal Opportunities Policy and Complaints and Appeals Procedures, please refer to www.nptc.org.uk

Learning Outcomes

The learner will be able to:

1. Understand operator safety during chainsaw maintenance
2. Be able to carry out routine and periodic maintenance to a chainsaw
3. Be able to start and check a chainsaw
4. Understand operator safety during chainsaw use
5. Be able to safely crosscut timber that is less than guidebar length in diameter
6. Stack crosscut timber

The assessment is made up of two units:

- Unit 30.1 Maintenance of the Chainsaw
- Unit 30.2 Crosscut and stack small diameter timber using a chainsaw

All activities within the assessment are mandatory unless otherwise indicated in the text.

Learners must successfully achieve all Assessment Activities unless otherwise specified.

Qualifications and Credit Framework (QCF) – Unit value

The Award to Prepare and Maintain a Chainsaw has a credit value of 2 credits on the QCF:

Assessment and site requirements:

- The assessment for unit 30.1 should ideally be undertaken under workshop conditions. Maintenance of the saw can be completed at the work site, if the saw can be held securely for sharpening and the assessment can be conducted effectively without compromising other site work activities.
- The learner should be equipped with a chainsaw appropriate to their normal working environment in good condition with a maximum recommended guidebar length of 380mm (15") for Unit 30.1/30.2
- The learner should be equipped with the correct tools, equipment, product and maintenance manuals appropriate to the model of the saw to enable the chainsaw to be maintained and used in accordance with the manufacturers guidance.
- The learner should be equipped with sufficient fuel and oil, appropriate to the make and model of the chainsaws, for the assessment for unit 30.1/30.2
- Warning signs must be erected as appropriate to risk assessment.
- Sufficient timber of suitable dimensions (200mm-380mm/8-15" diameter) and finish appropriate to the learners' normal working environment should be available to allow cuts to be completed safely and the cut produce stacked accordingly.
- The length and weight of the timber must be sufficient to exert tension and compression forces, which has the potential to trap the saw requiring the use of hand tools to release the trapped saw.
- Demonstrate knowledge sections of the assessment activities can include practical operations to part satisfy the criteria.
- Maintain sections of the assessment activities can include maintenance on parts from other saws if required, E.g. Re-coil starter systems, spark plug removal. Where alternative machinery or parts are utilised it should be of a similar make, model and size to that of the learners own.
- Sufficient working space must be provided to each learner to allow the assessment to be conducted effectively without comprising other work site or assessment activities. E.g. multiple assessments being completed at one time.
- Assessors should complete a pre-use inspection of all work equipment intended to be used during the course of the assessment. Ensuring equipment meets the requirements of suitability in terms of size, condition, safety features etc.
- For cross cutting there **must** be sufficient timber on site for cross cutting and one piece of timber must have a diameter of 200-380mm to accommodate 2 boring cuts to sever log
- Learners will need to do a minimum of 10 cuts for cross cutting

ASSESSMENT ACTIVITIES	ASSESSMENT CRITERIA
<p>1. Observe safety precautions and wear appropriate PPE</p>	<p>Unless otherwise stated in manufacturers handbook, operator manual or risk assessment, PPE should include:</p> <ul style="list-style-type: none"> - Safety boots Footwear with toe protection is sufficient - Appropriate work gloves Risk assessment should determine whether gloves are necessary when sharpening taking into account the method and approach to the job, and the experience of the operator - Mandatory eye protection if an airline is used If airlines are to be used they must be low pressure systems with vented nozzles
<p>2. Identify, check and explain the function of the safety features of the chainsaw</p>	<p>Check that at least the following are undamaged and functional</p> <ul style="list-style-type: none"> - Positive clearly marked on/off switch - Front hand guard/chain brake lever - Mandatory symbol: Head/eye/ear defender - Throttle lock: the throttle opens only when the interlock is depressed - Chain catcher in place and secure - Rear hand guard undamaged - Anti-vibration mounts are in good order - Exhaust system/silencer are in good order - Chain/Bar cover - Chain with low-kickback characteristics
<p>3. Identify component parts of the chain, stating their function and potential problems from wear or damage.</p>	<p>Component parts of the chain may include:</p> <ul style="list-style-type: none"> - Left and Right hand cutters inc. Depth Gauge - Tie Strap and preset Tie-Strap inc. Rivets - Drive Link - Guard Links <p>Drive link</p> <ul style="list-style-type: none"> - Straight back of link driven by sprocket - Shape and profile clears bar groove of debris and carry oil along the bar - The gauge of the drive link must match the thickness of the bar groove <p>Inspection points</p> <ul style="list-style-type: none"> - Straight back of tang to allow smooth drive from sprocket - Battered and broken tang bottoms from incorrect chain tension - Wear to front and back of tang from worn sprocket <p>Tie Strap and Rivets</p> <ul style="list-style-type: none"> - Hold chain components together <p>Inspection point</p> <ul style="list-style-type: none"> - Rivets not showing signs of excessive wear. <p>Cutters and Depth Gauge</p> <ul style="list-style-type: none"> - Can be obtained in a variety of shapes for different applications - Depth gauge regulates the amount of wood the cutter contacts <p>Guard links</p> <ul style="list-style-type: none"> - Allow smooth out cutting action of the chain by being ramped allowing timber to flow into the cutter - Reduce potential for kick back - Reduce vibration

Unit 30.1: Maintenance of the chainsaw	
ASSESSMENT ACTIVITIES	ASSESSMENT CRITERIA
4. Demonstrate knowledge of information required to select a replacement chain for a given saw	Information required to select a replacement chain may include: <ul style="list-style-type: none"> - Chain pitch - Gauge/thickness of drive links - Number of drive links/chain/bar length - Cutter type
5. Sharpen chain in accordance with manufacturers information	<ul style="list-style-type: none"> - Identify correct sharpening angles and file size through use of chain charts, manufactures information, chain box etc - Check cutters for damage and select 1st cutter to sharpen - Chain secured in chain vice or on bar in bench vice(ensuring correct chain tension) or timber vice - Cutters sharpened using file of correct size with handle fitted - Top and side plate angles maintained - Consistent length of cutters maintained - Burrs removed if applicable - Height and profile of depth gauges maintained - Chain is sharp on completion
6. Demonstrate knowledge of the reasons for sharpening taking into account: Correct filing angles	<ul style="list-style-type: none"> - Enhances cutting performance - Working corner must be properly sharpened - Top and/or side plate angles too high causes vibration, poor cutting and wear.
Consistent cutter length	<ul style="list-style-type: none"> - Cutter length directly affects cutter height <p>Variations in cutter length can lead to:</p> <ul style="list-style-type: none"> - Increased vibration - Reduced efficiency - Saw not cutting in straight line - Increased risk of kick back - Uneven wear of bar rails
Correct depth gauge setting	<ul style="list-style-type: none"> - Reduces risk of kick back - Reduces risk of chain breakage - Reduces chain vibration and thus the risk of 'White Finger' - Reduces excessive wear on chain components - Achieves optimum cutting speed
7. Demonstrate knowledge of symptoms associated with poor cutting performance	<ul style="list-style-type: none"> - Wood dust being produced by blunt saw - Fine chips produced if depth gauges not lowered - Saw may cut in a curve if teeth are different lengths or blunt on one side - Vibration (or kick back) during cutting because of poor sharpening angles and/or too low depth gauge setting
8. Maintain guidebar	<ul style="list-style-type: none"> - Identify uneven and damaged rails and correct as appropriate (e.g. dress bar) - Straightness of bar checked and commented on - Bar groove depth checked - Blueing and cracking identified and commented on - Burrs removed correctly - Groove and oil holes cleared correctly - Nose sprocket greased if applicable - Bar turned to reduce wear
9. Demonstrate knowledge of reasons for maintaining guidebar	<ul style="list-style-type: none"> - Reduce vibration and allow straight cutting - To prevent damage resulting from burr formation - Prevent over-heating - Allow lubrication of chain - Reduce chain and sprocket wear - Bar turned to maintain even wear

Unit 30.1: Maintenance of the chainsaw	
ASSESSMENT ACTIVITIES	ASSESSMENT CRITERIA
10. Clean air filter and compartment	<p>Air filter is a key area for routine cleaning as the filter prevents debris entering carburettor and needs to be clean to maintain air/fuel ratio and therefore performance</p> <p>Filter cleaned:</p> <ul style="list-style-type: none"> - Excess debris removed from around filter prior to removal - Filter removed, protecting carburettor - Filter inspected maintained and cleaned appropriate to condition - Filter refitted correctly
11. Chain brake mechanism cleaned, inspected and commented on	<p>Chain Brake Maintenance</p> <ul style="list-style-type: none"> - Clear debris from chain brake mechanism /clutch housing - Chain brake band checked for wear and commented on <p>Demonstrate knowledge of action to take if chain brake components are worn</p> <ul style="list-style-type: none"> - Replace the whole unit or band in accordance with manufacturers instruction - If damaged and repair not possible label saw 'not to be used defective chain brake'
12. Demonstrate knowledge of sprocket replacement procedure for relevant saw type	<p>In board clutch:</p> <ul style="list-style-type: none"> - Remove retaining clip - Dismantle sprocket assembly - Sprocket checked for wear and comment made on condition - Clean crankshaft stub and grease needle cage where appropriate - Re-assemble <p>Outboard clutch:</p> <ul style="list-style-type: none"> - Remove spark plug - If appropriate piston locked as per manufactures guidance - Unscrew clutch weights according to manufacturers guidance - Sprocket checked for wear and comment made on condition - Clean crankshaft stub and grease needle cage where appropriate - Re-assemble <ul style="list-style-type: none"> - Sprocket wear limits as per manufacturers handbook - Ideal chain to sprocket ratio: 1 sprocket to 2/3 chains
13. Reassemble chain, bar and side plate and comment on chain tension	<ul style="list-style-type: none"> - Chain and bar refitted to power unit - Ensure tensioning mechanism is correctly located - Side plate fitted and nuts hand tightened - 'Cold' tension confirmed - Side nuts tightened <p>Chain too tight:</p> <ul style="list-style-type: none"> - Wear on bottom of tie straps and cutter body - Slow pick-up on acceleration - Power loss on small engine saws - Damage to sprocket and bearings - Over heating bar and chain - Excessive wear on bar and rails <p>Chain too slack:</p> <ul style="list-style-type: none"> - Wrong cutting angle - Excessive vibration - Increased risk of chain derailing - Wear on rivets and heel - Excessive wear between bar rails - Increased wear at topside of bar on entry and underside of bar at nose sprocket - Chain creep at tickover

Unit 30.1: Maintenance of the chainsaw	
ASSESSMENT ACTIVITIES	ASSESSMENT CRITERIA
14. Check and/or change spark plug as appropriate and comment on condition	<ul style="list-style-type: none"> - Engine cover and spark plug removed - Plug cleaned or replaced as necessary - Wear/damage visually assessed - Gap size checked and set if necessary <p>Colour of deposits on spark plug may indicate:</p> <ul style="list-style-type: none"> - Fuel rich, dark brown to black - Fuel starved, light brown to white
15. Service recoil starter mechanism and comment on cord condition and replacement	<ul style="list-style-type: none"> - Starter cover removed and air ways 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 <ul style="list-style-type: none"> - Over tensioned: cord fully extended, still allowing for a half turn of the coil spring - Housing/spring binds before cord fully extended <ul style="list-style-type: none"> - Under tensioned: Recoil pull toggle does not move back into housing when pushed over - Cord does not fully retract <p>Cord wears at:</p> <ul style="list-style-type: none"> - Base of toggle - At attachment to pulley wheel
16. Clean power unit and covers and inspect for damage	<ul style="list-style-type: none"> - Debris removed from fins/air intake - External screws, nuts and bolts present and secure - Removal of side casings to clean and check components - All damaged, missing or worn components replaced as necessary or defects reported as appropriate
17. Demonstrate knowledge of fuel filter maintenance	<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
18. Demonstrate knowledge of the correct fuel mix required for the operators chainsaw	<ul style="list-style-type: none"> - Information relating to ratio of fuel to two stroke oil obtained - Understand meaning of ratios used
19. Demonstrate knowledge of the safety clothing to wear when using the chainsaw	<p>PPE in accordance with health and safety requirements and Risk Assessment e.g.</p> <ul style="list-style-type: none"> - Chainsaw safety trousers - Chainsaw safety boots - Safety helmet - Eye and ear protection - Gloves appropriate for the task - Non-snag outer clothing - Personal First Aid Kit <p>All PPE should conform to applicable CE/EN standards where appropriate</p>

Unit 30.1: Maintenance of the chainsaw	
ASSESSMENT ACTIVITIES	ASSESSMENT CRITERIA
20. Start chainsaw from cold	<p>Appropriate fuelling site is selected taking into account</p> <ul style="list-style-type: none"> - A safe distance from buildings - In a shaded area away from work and equipment - A safe distance from any source of ignition - Away from a main fuel store - A position selected to minimise damage to the environment <p>Appropriate starting site selected taking into account</p> <ul style="list-style-type: none"> - Chainsaw being clear of obstructions - Chainsaw to be clear of people by 5 metres - Selection of level area free of objects which could catch the chain - Chainsaw being a safe distance from fuelling point <p>Starting procedure</p> <ul style="list-style-type: none"> - Remove chain/bar cover - Place saw on ground - Ensure no debris can catch chain - Secure rear handle - Engage half throttle - Engage choke - Apply decompressor (if appropriate to saw) - Switch saw on - Ensure chain brake set according to manufacturers instructions - Adopt safe stance ensuring: <ul style="list-style-type: none"> • Legs and feet are clear of the chain • Chainsaw is stable/secure during the starting procedure • Minimal risk of muscular/skeletal injury - Find compression - Pull starter cord sharply and firmly - Choke released when engine fires. - Half throttle released when engine runs
21. Check chainsaw for condition and operational safety	<p>Operational safety checks of the chainsaw</p> <ul style="list-style-type: none"> - Ensure chain lubrication functioning - Ensure chain brake functions by completing chain brake test in accordance with manufacturers instruction - Chain stationary at tick over (chain creep) - On/off switch functions
22. Demonstrate knowledge of actions to take if safety checks indicate incorrect saw preparation/maintenance	<p>Chain creep</p> <ul style="list-style-type: none"> - Tension chain - Adjust tick over - Check clutch <p>Inadequate lubrication</p> <ul style="list-style-type: none"> - Check the tank has oil - Remove the bar and check the oil holes and guidebar groove are clear of debris - Adjust the oil flow if appropriate <p>Inoperable on/off switch</p> <ul style="list-style-type: none"> - Apply the chain brake - Close the choke <p>Worn or damaged clutch components</p> <ul style="list-style-type: none"> - May cause permanent chain drive - May contribute to no chain drive - Increased wear on clutch drum - Increased wear on clutch component parts
23. Demonstrate knowledge of reasons for maintaining a correct stance during chainsaw starting procedures	<ul style="list-style-type: none"> - Reduce the risk of overbalancing - Ensure legs and feet are clear of the chain - Ensure the chainsaw is stable/secure during the starting procedure - Reduces the risk of muscular/skeletal injury

Leaners Name:	Date:	Start Time:	Duration:	hrs
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Unit 30.2: Crosscut and stack small diameter timber using a chainsaw	
ASSESSMENT ACTIVITES	ASSESSMENT CRITERIA
1. Explain how to identify hazards and comply with the control procedures within a risk assessment	<p>Hazards may be identified noting:</p> <ul style="list-style-type: none"> - Sites: Information from walking the site and a site specific risk assessment - Tasks: Information from a work specification, method statement or industry good practice information - Machines: Information from manufacturers guidance - Operators: Level of experience, training received <p>Within a risk assessment for practical activities the following to be understood:</p> <ul style="list-style-type: none"> - Significant hazards relevant to site - Those at risk - Control measures - Emergency contingencies
2. Summarise emergency planning and procedures for a site	<p>Emergency planning and procedures for a site could 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 - Suitable helicopter landing area - Phone number of nearest doctor - Location and phone number of nearest Accident and Emergency hospital - Works manager contact details - Your own contact number
3. Explain why it is important to maintain effective communication with others	<ul style="list-style-type: none"> - Relevant authorities informed about work in progress - Individuals understand roles within the workplace - Develop teamwork - Creation of a safe work environment
4. Describe the causes of and how to prevent pollution and environmental damage	<p>Causes may include:</p> <ul style="list-style-type: none"> - Incorrect storage of fuel and oil - Defective machinery - Poor work practices <p>Prevention may include:</p> <ul style="list-style-type: none"> - Following principles of industry good practice - Good housekeeping - Appropriately trained operators
5. Check and prepare chainsaw for chainsaw operations	<ul style="list-style-type: none"> - Chain tension and condition checked for safe and effective use - Safety features checked for condition and function - External nuts and bolts checked for security - Chainsaw contains sufficient fuel and oil for operations

Unit 30.2: Crosscut and stack small diameter timber using a chainsaw	
ASSESSMENT ACTIVITIES	ASSESSMENT CRITERIA
6. Demonstrate knowledge of the safety Considerations required during crosscutting.	<ul style="list-style-type: none"> - The minimum safe working distance from other people is 5 metres or twice the length of the longest produce, whichever is the greater - Appropriate PPE is worn by operators - A safe stance is adopted when using the chainsaw - The chain brake is used appropriately during cross cutting operations - The chainsaw is switched off and/or chainbrake applied prior to removing a trapped saw - Avoid chainsaw bar coming into contact with ground or obstruction causing kick back injury or saw damage - Plan sequence of work so that an escape route is available at all times - Only one person to work on the timber - Never work below timber on a slope - Ensure timber is in a stable condition before any cutting commences
7. Identify and explain tension and compression in relation to timber under moderate strain on the work site	<ul style="list-style-type: none"> - 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 - Important in crosscutting because the sequence of cuts should always result in the final cut being made from the tension side so that the saw does not become trapped in the kerf
8. Crosscut timber under guidebar length to a given specification	<ul style="list-style-type: none"> - Correct use of PPE during chainsaw operations - Safe starting procedure adopted - Safe stance including: <ul style="list-style-type: none"> • Legs and feet are clear of the chain • Chainsaw is stable/secure/supported during crosscutting • Minimal risk of muscular/skeletal injury - Bar aligned to maintain accuracy - Head out of line of chain - Use of throttle to cut safely and efficiently - Cutting techniques employed to complete severance of timber - Appropriate boring technique - Sequence of cuts to prevent saw becoming trapped - Appropriate aids used for lifting, rolling or levering - Tension and compression cuts should meet - Chain brake used appropriately - Saw switched off and left in safe position, bar cover replaced -
9. Demonstrate knowledge of the risks associated with using long chainsaw bars to cut small diameter timber	<ul style="list-style-type: none"> - Greater risk of the guidebar hitting the ground - Increased risk of kickback - Increased risk of muscular/skeletal injuries - Increased risk of loss of balance
10. Demonstrate knowledge of how to crosscut small diameter timber under severe tension	<ul style="list-style-type: none"> - Use of multiple tension and or compression cuts
11. Demonstrate knowledge of methods used for crosscutting timber of greater diameter than the chainsaw bar length	<ul style="list-style-type: none"> - Use of reduction cuts - Change to a larger chainsaw/guidebar - Roll timber over - Cut from both sides

Unit 30.2: Crosscut and stack small diameter timber using a chainsaw	
ASSESSMENT ACTIVITIES	ASSESSMENT CRITERIA
12. Demonstrate knowledge of the procedure for removing trapped saw	<ul style="list-style-type: none"> - First switch off engine and/or apply chain brake - Lever the timber to open the cut - Drive a wedge into the closed kerf - Withdraw the saw - Use another saw to free the trapped saw cutting the timber at least 300mm (12") from the trapped saw
13. Demonstrate knowledge of safe lifting and handling practices	<ul style="list-style-type: none"> - Use aid tools correctly and when appropriate e.g. timber tongs - Use safe lifting techniques - Pivot loads rather than carry them - Move the lightest pieces to the heavy pieces - Drag, roll, move end over end - Use of efficient and ergonomic work methods
14. Stack produce for subsequent handling	<ul style="list-style-type: none"> - Use of appropriate aids to handle / move products - Correct stance during lifting - Avoiding excessive lifting by levering, sliding, rolling - Quality of stacking must be to an agreed job specification - Position of stack appropriate to method of extraction - Manually constructed stacks are limited to 1 metre high - Stacks should be left in a safe, stable condition - Roads, footpaths, etc. clear of debris and waste materials
15. Demonstrate knowledge of reasons for tidy stacking	<ul style="list-style-type: none"> - Facilitates subsequent handling - Cut lengths easily checked for size - Stacks can be estimated for volume - Stacks are safer as no lengths sticking out - Stacks are safer as timber more stable