

**LEVEL 2 AWARD  
IN  
CHAINSAW AND RELATED OPERATIONS (QCF)  
CS39 - USE OF A CHAINSAW FROM A ROPE AND  
HARNESS**

(Pre-requisite: CS30, CS31 + CS38)

Maximum recommended guide bar length: 380mm (15")

This unit covers the use of the chainsaw in the tree to carry out a range of cutting techniques

**ASSESSMENT SCHEDULE**

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## NPTC LEVEL 2 AWRD IN CHAINSAW AND RELATED OPERATIONS

### CS39 - USE OF A CHAINSAW FROM A ROPE AND HARNESS

#### 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 Candidates

The Certificate of Competence/ID Card

Certificates of Competence/ID Cards will be awarded to Candidates 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 Candidates 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 Candidate. 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 candidates, or the candidates work place supervisors, or anyone else who might have a vested interest in the outcome, carry out the assessment.

The minimum age limit for Candidates 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 Candidate 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 candidate 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 Candidate 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](http://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 best practice, whatever the task being carried out.**

1. Assessors must hold a current 'First Aid at Work' Certificate.
2. It is strongly recommended that Candidates hold at least a recent, recognised 'Emergency First Aid' Training 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) and AFAG 308 (for top handled chainsaws), in terms of safety features, and be a model and size suited to the task(s) required.
4. Recommended guide bar lengths should be observed, although variations may be accepted at the discretion of the Assessor where this is appropriate to the task.
5. Candidates 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 candidate and the assessor. All PPE used must comply with AFAG Safety Guide 301, 308, 401, 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 candidate **must** be equipped with a personal first aid kit in accordance with AFAG802, 308
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, Land 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, any ancillary equipment used for this assessment must also comply with relevant requirements of the Lifting Operations and Lifting Equipment Regulations (LOLER) 1998 where applicable.
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 Candidate to ensure that any additional requirements and provisions are met as relevant to this qualification.
18. Candidates must ensure they are complying with relevant legislative requirements applicable to the work being carried out.
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 Candidate 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 candidate 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](http://www.nptc.org.uk)

### Learning Outcomes

The candidate will be able to:

1. Identify, inspect and comment upon key parts of the equipment to be used.
2. Prepare the equipment for use ensuring the safety of themselves, other people and the environment.
3. Operate a chainsaw whilst maintaining a working position within the crown of a tree using a rope and harness.

CS39: Use of a Chainsaw from a Rope and Harness.

**The candidate will be the climber and will be referred to as either the candidate or the climber in the following guidance.**

Candidates must successfully achieve all Assessment Activities unless otherwise specified.

### Qualifications and Credit Framework (QCF) – credit values

The Award in Use of a Chainsaw from a rope and harness has a credit value of 2 credits on the QCF.

**Assessment and site requirements:**

- The Assessor must be able and equipped to carry out an aerial tree rescue.
- An experienced ground person must work under the direction of the candidate (the Assessor may act as the ground person).
- The assessment should be undertaken on a medium sized open grown tree(s), with sufficient vertical and horizontal branches.
- Limbs or limb sections for removal are required to be of around 100mm (4") diameter
- The candidate should be equipped with a top or rear handled chainsaw in good condition with a maximum recommended guide bar length of 380mm (15")..
- The candidate should be equipped with sufficient fuel and oil, appropriate to the make and model of the chainsaws, for the assessment.
- The candidate should ensure that the worksite is signed as appropriate.

**CS39: Use of a chainsaw from a rope and harness**

ASSESSMENT ACTIVITIES	ASSESSMENT CRITERIA
1. Demonstrate knowledge of operations that a TPO prohibits	The principle effect of a TPO is to prohibit the: <ul style="list-style-type: none"> <li>- Cutting down</li> <li>- Uprooting</li> <li>- Topping</li> <li>- Lopping</li> <li>- Wilful damage</li> <li>- Wilful destruction of trees.</li> </ul>
2. Carry out a hazard assessment of the tree(s) to be worked upon.	The pre-climb inspection should look for: <ul style="list-style-type: none"> <li>- Root plate movement/ heave</li> <li>- Evidence of cavities, decay or decay fungi</li> <li>- Deadwood and broken branches/ Hangers</li> <li>- Dead or flaking bark</li> <li>- V shaped unions</li> <li>- Cracks</li> <li>- Nesting insects/ birds</li> <li>- The presence of power lines, telephone lines or other utilities</li> <li>- Previous tree management e.g. Bracing</li> <li>- Targets and obstacles underneath the tree</li> </ul>
3. Brief the ground staff.	The climber should brief the ground staff about the following topics: <ul style="list-style-type: none"> <li>- The risk assessment.</li> <li>- The tree hazard evaluation.</li> <li>- The planned method and sequence of work.</li> <li>- Individual responsibilities.</li> <li>- Method of communication.</li> <li>- Emergency procedures and rescue plan</li> </ul>
4. Demonstrate knowledge of the risk hierarchy for load bearing supplementary anchor points and use of tools in the tree	<ul style="list-style-type: none"> <li>- Handsaw use is preferable to chainsaw use</li> <li>- Wherever possible use load bearing supplementary anchor points to achieve a good work positioning</li> <li>- When using a chainsaw or handsaw a work position must be achieved where there is no risk to the climbers ropes</li> <li>- Where there is a risk of cutting the climbers ropes a load bearing supplementary anchor point must be achieved</li> <li>- If there is a risk of cutting the climbers ropes with a chainsaw and no second load bearing supplementary anchor can be achieved, another system of work must be used e.g. MEWP, pole saw</li> </ul>
5. Check and prepare the chainsaw for intended operation(s)	<ul style="list-style-type: none"> <li>- Chainsaw maintained in accordance with manufacturers recommendations</li> <li>- External nuts and bolts checked for security</li> <li>- Chainsaw strop condition and security of attachment point</li> <li>- Chainsaw contains sufficient fuel and oil for operation</li> <li>- Safety features checked for condition and function</li> <li>- Chain tension and condition checked for safe and effective use</li> <li>- Start chainsaw from cold</li> <li>- Ensure chain lubrication functioning</li> <li>- Ensure chain brake functions by completing chain brake test in accordance with manufacturers instruction</li> <li>- Chain stationary at tick over (chain creep)</li> <li>- On/off switch functions</li> </ul>
6. Demonstrate ways to send a chainsaw aloft to the climber	<ul style="list-style-type: none"> <li>- Marlin spike hitch tied into climbers line/ separate tool line, with saw supported off the ground</li> <li>- Figure of eight tied around top or front handle of chainsaw using climbers rope/separate tool line</li> <li>- Climber sends a loop of rope from the climbing hitch system down to the ground</li> <li>- Other</li> </ul>

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<b>ASSESSMENT ACTIVITIES</b>	<b>ASSESSMENT CRITERIA</b>
7. Demonstrate the use of a sewn tape sling to aid the removal of hand held sections	<ul style="list-style-type: none"> <li>- Tape sling selected is fit for use, appropriate to task in hand, suitably rated and LOLER compliant</li> <li>- Tape sling used on end of limb to act as lever/ hand hold for hand held sink cut</li> <li>- Tape sling used on end of limb to act as lever/hand hold for step cut hand held sections</li> <li>- Sling positioned correctly so not to collide with chainsaw</li> <li>- Sling fastened securely preventing loss of cut section</li> <li>- Clear warnings given to ground crew before sections are cast</li> </ul>
8. Achieve a working position and receive the chainsaw.	<p>Position achieved to receive the chainsaw:</p> <ul style="list-style-type: none"> <li>- Anchor point established.</li> <li>- Supplementary anchor point established.</li> <li>- Proximity to work position achieved.</li> <li>- The climber directs the ground staff.</li> </ul>
9. Start the warm (or cooled) saw in the tree.	<p>One of the following methods should be used:</p> <p>Top handled saw only</p> <ul style="list-style-type: none"> <li>- Controls are set.</li> <li>- The bar and chain clear of obstructions and the operator.</li> <li>- The chain brake should be applied.</li> <li>- Top handle held with the right hand.</li> <li>- Starter mechanism engaged.</li> <li>- Starter cord pulled firmly and evenly.</li> </ul>
	<p>Top or rear handled saw</p> <ul style="list-style-type: none"> <li>- Controls are set.</li> <li>- Bar and chain clear of obstructions and operator.</li> <li>- The chain brake should be applied.</li> <li>- Front handle secured.</li> <li>- Starter mechanism engaged.</li> <li>- Starter cord pulled firmly and evenly.</li> </ul>
	<p>Top or rear handled saw</p> <ul style="list-style-type: none"> <li>- Controls are set.</li> <li>- Bar and chain clear of obstructions and operator.</li> <li>- The chain brake should be applied.</li> <li>- Rear handle / rear of saw gripped firmly by the legs.</li> <li>- Front handle firmly held.</li> <li>- Starter mechanism engaged.</li> <li>- Starter cord pulled firmly and evenly.</li> </ul>
10. Change work position for cutting.	<p>Work position for cutting attained:</p> <ul style="list-style-type: none"> <li>- Chain brake applied or saw switched off whilst position attained.</li> <li>- Saw released from stop if applicable and attached to a supplementary anchor point.</li> <li>- Climber in a balanced and stable position to use the saw.</li> <li>- Climber maintains awareness of activity below.</li> <li>- A supplementary anchor point is established.</li> </ul>
11. Remove limbs using a chainsaw.	<p>Limbs and limb sections should be removed taking the following points into account:</p> <ul style="list-style-type: none"> <li>- Appropriate working position attained.</li> <li>- Characteristics and properties of the wood allowed for.</li> <li>- Manageable sections selected.</li> <li>- Climber holding the saw using both the front and top/rear handles of the saw.</li> <li>- Side or reducing cuts used where appropriate.</li> <li>- Appropriate hinge left on sink cut sections.</li> <li>- Position of cuts on step cut sections and a complete overlap of cuts achieved.</li> <li>- Chain brake applied or saw switched off whilst breaking and casting sections.</li> <li>- Hand held sections are cast into a predetermined area.</li> <li>- The branch collar and/or branch bark ridge is identified when pruning.</li> <li>- The pruning cut is left as smooth as possible.</li> </ul>

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<b>ASSESSMENT ACTIVITIES</b>	<b>ASSESSMENT CRITERIA</b>
12. Demonstrate knowledge of chain saw handling in exceptional circumstances.	<p>It may be necessary to use a top handled chainsaw in the tree one-handed:</p> <ul style="list-style-type: none"> <li>- When working at the extremity of limbs and cutting is required while the other hand is needed to maintain the work position.</li> <li>- When normal working position cannot be achieved.</li> </ul> <p>The procedure for releasing a trapped saw when working in the crown should be:</p> <ul style="list-style-type: none"> <li>- Switch of the engine.</li> <li>- Release the saw from the climbing harness where the risk exists of the saw being taken with the cut section</li> <li>- Attach the saw to the tree inboard of the cut or to a separate branch or tool line.</li> <li>- Pull the saw from the kerf, lifting the branch as necessary.</li> <li>- If necessary, use a second saw to release the trapped saw, cutting a minimum of 300mm (12") away from the trapped saw.</li> </ul> <p>The options available to a climber if they think the chainsaw may be "taken" with the cut section are:</p> <ul style="list-style-type: none"> <li>- Remove end weight of section</li> <li>- Remove smaller sections</li> <li>- Incorporate the use of 'ears' or compression cuts</li> <li>- Use of alternative cutting technique e.g. Inboard as oppose to outboard, matching top and bottom cuts</li> <li>- Attachment of chainsaw lanyard inboard of cuts to be made</li> <li>- Attachment of chainsaw lanyard to separate tool line</li> <li>- Use of handsaw to make final severing cuts</li> </ul>
13. Demonstrate knowledge of the reasons for correct natural target pruning	<p>Correct natural target pruning</p> <ul style="list-style-type: none"> <li>- Leaves the branch bark ridge and collar intact</li> <li>- Complete doughnut of callus wood is able to form</li> <li>- Protection boundary allowed to develop inside collar</li> </ul> <p>Incorrect natural target pruning may have the effect of:</p> <ul style="list-style-type: none"> <li>- Allowing cavities to form</li> <li>- Allowing pathogen infection into wounds</li> <li>- Removal of trees protection boundaries</li> <li>- Potential to allow development of ribs of woundwood and rot</li> <li>- Reduction of potential energy reserves</li> <li>- Potential for insect infestation, development of cracks and dead spots</li> <li>- Development of excessive sprouting</li> </ul>