



NPTC

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LEVEL 2
CERTIFICATE OF COMPETENCE
IN
FOREST MACHINE OPERATIONS

ASSESSMENT SCHEDULE

FMO5 CABLE CRANING

NPTC

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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

At the Assessment the Assessor will evaluate each activity against the following criteria:

- 4 = Exceeds the requirements of the assessment criteria for both the practical performance and the underpinning knowledge, with no 'critical' faults. Delivering a safe, polished, efficient, unsupervised performance of the practical skill.
- 3 = Satisfies the requirements of the assessment criteria for both the practical performance and the underpinning knowledge, with no 'critical' faults. Candidate has sufficient fluency to perform the task safely, unaided and unsupervised.
- 2 = Does not fully satisfy the requirements of the assessment criteria. Candidate required some support or excessive time to perform the task satisfactorily and/or potentially causes a "critical fault". Weaknesses in performance exceed strengths.
- 1 = Does not satisfy the requirements of the assessment criteria. Candidate is unable to demonstrate sufficient skill or underpinning knowledge and weaknesses in performance substantially exceed strengths and/or causes a "critical fault".

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.

Level 2 Certificate Of Competence In Forest Machine Operations Assessor Guidance

FMO5 CABLECRANING

- Note 1:** The pre-requisite for this assessment is that candidates must hold relevant FMO 1 and evidence of competency in the use of climbing equipment
- Note 2:** This unit includes assessment of the chokerperson. Persons requiring assessment for setting up and chokering only, can be assessed in Parts 1 and 3 and the certificate will be endorsed accordingly. Pre requisites are not required.
- Note 3:** Cablecraning is a two-person operation. Bearing this in mind, it may prove more convenient to assess two Candidates simultaneously.

The assessment consists of three parts:

- Part 1 – Set up Cable Crane System
- Part 2 – Operation of Cable Crane System
- Part 3 – Chokering Operations

- Note : a) Candidate seeking assessment in Cable Crane Operation are required to complete all Parts (1, 2 and 3)
- b) Candidates seeking assessment in Setting up and Chokering only are required to complete Parts 1 and 3 (the certificate will be endorsed as Unit 5 – chokerperson and will not qualify the person to operate the winch).

Learning outcomes:

Candidates will be able to:

1. Carry out Risk Assessment for the site
2. Carry out pre-start checks and routine maintenance to all fixed plant and running rigging
3. Carry out routine maintenance to rope and cable based systems
3. Operate a cable crane system (only applicable to Winch Operator)
4. Choker and extract a range of product types

Safe Practice:

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 machines used in the assessments must comply with relevant Arboriculture and Forestry Advisory Group (AFAG) Safety Guides
4. Candidates should be familiar with the machine that they are going to operate.
5. Appropriate Personal Protective Equipment (PPE) must be worn at all times.
6. A First Aid kit meeting current regulations, of the appropriate size for the number of persons on site, must be available.
7. The candidate must be equipped with a personal first aid kit.
8. 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. Manual handling techniques must comply with current legislation.
9. Any necessary permissions must have been granted, and notifications made as appropriate: (e.g. Forestry Commission, Forest Enterprise, Private owners etc).
10. All equipment being used for this assessment must comply with relevant requirements of the Provision and Use of Work Equipment Regulations (PUWER) 1998 and Lifting Operations and Lifting Equipment Regulations (LOLER) 1998.
11. Information may be sought from the relevant operator manuals or any other appropriate training or safety publication.
12. The current Regulations for transport, handling and storage of fuel and oils must be complied with.
13. Provision must be made to avoid the risk of environmental pollution.
14. 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.
15. Whenever the Candidate leaves the operators cab, the processor must be safely parked and the parking brake must be applied.
16. When the machine is parked and left unattended, it must be immobilised and all doors secured.
17. The machine must be operated in such a way that the Candidate, Assessor, other persons or equipment are not endangered.
18. All ancillary equipment, when detached must be safely parked.

19. Candidates must comply with current regulations when working at heights of greater than 2 metres.
20. The assessment is carried out in accordance with the safety guidelines laid down in Arboriculture and Forestry Advisory Group (AFAG) Safety Guides, Health and Safety publications and current legal requirements.

Type of machine - mounted or trailed with integral tower for high lead and skyline:-

Certificates will be endorsed either:

Unit 5.1 - Static Skyline (e.g. Chapel Hall or Alp or Timber Master)

Unit 5.2 - Static High Lead (e.g. Chapel Hall or Alp or Timber Master)

Unit 5.3 - Multi Function Cable Crane (e.g. Syncrofault)

Additional information

- Chokering in such a way as to put the candidate, Assessor or the environment at risk will cause the candidate to fail
- Candidates must demonstrate an awareness of the risks involved working with cables under tension at all times
- Equipment is required to demonstrate splicing

The work site should be typical of the terrain where it would be deemed necessary to operate such a system and should provide a suitably sized landing and equipment to clear landing as required.

Part 1 - SET UP CABLE CRANE SYSTEM

Assessment Activity	Assessment Criteria:
1. Demonstrate knowledge of legal requirements and safety regulations	<ul style="list-style-type: none"> - Awareness of any safety implications imposed by Risk Assessment on the machine and the operation - Awareness of statutory guarding requirements - Awareness of statutory regulations when in operation or in transport on public highway - Braking requirements for machine and equipment - Lifting Operations and Lifting Equipment Regulations (LOLER) - Provision and Use of Work Equipment Regulations (PUWER)
2. Identify components	<ul style="list-style-type: none"> - The Candidate should be able to explain the purpose and comment on condition of all components used in the operation. - Components should be stamped with the Safe Working Load (SWL)
<p>3. Carry out site survey on assessment site</p> <p>Demonstrate knowledge of operation on different site types</p> <p>Demonstrate knowledge of circumstances where off set winching should be used</p> <p>Demonstrate methods to be employed to keep landing area clear</p>	<p>The Candidate should be able to:</p> <ul style="list-style-type: none"> - Survey a straight rack - Identify suitable supports - Identify suitable anchors - Identify overhead hazards - Uphill - Downhill - Convex - Concave <p>The Candidate should, with the assistance of another worker, demonstrate and discuss:</p> <ul style="list-style-type: none"> - Restricted access - Steep banks - Obstructions - Topography - Prevent build up of produce - Knowledge of equipment
4. Erect the Tower (only operators taking Part 2 need undertake this item).	<ul style="list-style-type: none"> - Erect, stabilise and true up the main tower - Correct angle - Winch drum horizontal - Secure locking devices - Maximum fairlead/fleet angle is stated - Risks involved using incompatible sheaves and cables - Premature cable wear - Damage and fatigue - Consequent reduction in safe working load - Correct locking procedure if applicable
<p>5. Rig tail spar tree</p> <p>Demonstrate knowledge of rigging artificial spar system</p>	<ul style="list-style-type: none"> - Select suitable spar tree/erect artificial spar system. - Tree must be climbed using approved methods - Spikes may be used if tree is going to be removed - Anchor spar tree - Stable for all directions of loading - Suitable size materials - Sound material - Recognised appropriate method of assembly - Anchor system for all directions of loading

Assessment Activity		Assessment Criteria:
6.	Rig straw line	<ul style="list-style-type: none"> - Use straw line run through haul back blocks to install haul back line - Stow straw line correctly
7.	Identify suitable anchor points	<ul style="list-style-type: none"> - Select suitable anchor points - Install appropriate ground anchors (if appropriate) - Effectiveness of different ground anchors
8.	Rig haul-back line or cable	<ul style="list-style-type: none"> - Connect, using approved method
9.	Install intermediate supports	<ul style="list-style-type: none"> - Assess number and install - Safe tree climbing practice
10.	Demonstrate knowledge of installing artificial supports	<ul style="list-style-type: none"> - Any acceptable safe method
11.	Haul-in line	<ul style="list-style-type: none"> - Correct angle of tail block anchor in relation to angle of haul-back line
12.	Install skyline	<ul style="list-style-type: none"> - Skyline is connected to haul-back line installed and anchored
13.	Connect haul-in line to carriage	<ul style="list-style-type: none"> - Correct connection of haul-in line through - Carriage
14.	Install carriage	<ul style="list-style-type: none"> - Skyline tensioned - Suitable working height - Carriage operation described - Maintenance routine stated - Locking/safety features outlined - Fitments or release stops fitted (if applicable) - Skyline re-tensioned
15.	Carry out splicing	<ul style="list-style-type: none"> - The Candidate to start a soft eye\loop (flemish), until asked to stop by the Assessor. - Splice cable - Ppe as appropriate (eye protection) - When splicing is acceptable

Part 2 - OPERATION OF CABLE CRANE SYSTEM

	Assessment Activity	Assessment Criteria:
16.	Carry out pre-start checks and routine maintenance	<ul style="list-style-type: none"> - Walk rig, inspect anchor points, intermediate supports, spar trees - Inspect and comment on condition of : <ul style="list-style-type: none"> - All shackles - Pulleys - Sheaves - Saddles - Clamps - Safety hooks - Sacrificial strops - Links and the carriage - Inspect all wire and synthetic rope in the system and comment on condition
17.	Demonstrate knowledge of and discuss, construction breaking strain, safe working load and test requirements for the system being used	<ul style="list-style-type: none"> - Testing methods - Breaking strains and relationship with - Safe working loads - Check winch assembly and tower for signs of stress and fatigue. - Check oil levels and power transmission systems for wear and/or fluid levels
18.	OPERATION Communications	<ul style="list-style-type: none"> - Communication system is in operational condition and in accordance with Risk Assessment - Communication with chokerman should be clear and decisive if hand signals are being used. They should be those outlined in - FSC 504 (all unclear commands should be interpreted as stop)
19.	Haul back	<ul style="list-style-type: none"> - Correct commands given - Appropriate use of clutch and brake - Haul back - Haul in - Appropriate speed - Correct control - Chokering pulled back to carriage after last load
20.	Haul-in	<ul style="list-style-type: none"> - Carriage/haul-back should be braked while cross-hauling takes place using the haul-in winch - Side or cross-hauling should only be carried out at minimum engine r.p.m. - Pull on the haul-in cable should be balanced against the brake on the haul-back line to keep at least one end of the load suspended. (in the case of a locking carriage, this may not be necessary) but the candidate must ensure that the locking mechanism has locked before extraction of the load takes place and that any slack in the haul-back cable will not foul or snag.
21.	Releasing the load at the landing	<ul style="list-style-type: none"> - The load should be lowered to the ground and positioned accurately for secondary handling. - The load should not be allowed to free fall to the ground. - Normal safety precautions should be observed while moving on stacked logs whilst unchokering

Assessment Activity		Assessment Criteria:
22.	COMPLETION Plant and equipment left in a safe and well maintained condition	<ul style="list-style-type: none"> - - Overhead hydraulic or tensioned cable supported - Equipment lowered (where appropriate) and immobilised - Chokers returned to base in clean condition damaged equipment reported and taken out of service

Part 3 – CHOKERING OPERATIONS

Assessment Activity		Assessment Criteria:
23.	Chokering operations	<ul style="list-style-type: none"> - The carriage should be halted at the correct position on the command of the choker person - The load should be choked. - The choker person must not operate in the bight of any ropes or cables or stand under any supports or operate within 20m of the tail block, unless protected by other trees. - The Candidate will demonstrate knowledge of a range of chokering techniques suitable for sawlogs, butt or tip, short wood, whole tree and tree sections.
24.	Establish Communications	<ul style="list-style-type: none"> - Communications with the chokerperson should be clear, decisive and understood if hand signals are being used - Approved recognised signals acceptable
25.	Chokering Demonstrate knowledge of operation involving different product types	<ul style="list-style-type: none"> - Whole tree - Pole length - Short wood
Either 26.	Choker butt end first Demonstrate knowledge of when to unchoker	<ul style="list-style-type: none"> - Choker attached 220mm -300mm (8"-12") from butt end when ground skidding - Appropriate distance from butt when skylining - If hooked choker is used, the opening should face away from the direction of pull - Surplus slack in chokers adjusted using approved method to maintain ground clearance - Concise instructions to winch operator - Safe procedures for un-chokering - When the load gets stuck
And 27.	Demonstrate knowledge of chokering tip first Report on condition of polypropylene chokers for use	<ul style="list-style-type: none"> - - Importance of leaving sprags on the end of poles - Relationship between average pole diameter and choker length - Attach chokers and fit sliders and terminal pins where applicable - Appropriate sequence - Concise instructions to winch operator - Safe procedure for unchokering

Assessment Activity		Assessment Criteria:
OR		
28.	Choker tip first Report on condition of polypropylene chokers for use Demonstrate knowledge of when to unchoker	<ul style="list-style-type: none"> - Importance of leaving sprags on the end of poles - Relationship between average pole diameter and choker length - Attach chokers and fit sliders and terminal pins where applicable - Appropriate sequence - Concise instructions to winch operator - Safe procedure for unchoking - When the load gets stuck
And		
29.	Demonstrate knowledge of chokering butt end first	<ul style="list-style-type: none"> - Choker attached 220mm -300mm (8"-12") from butt end when ground skidding - Appropriate distance from butt when skylining - If hooked choker is used, the opening should face away from the direction of pull - Surplus slack in chokers adjusted using approved method to maintain ground clearance. - Concise instructions to winch operator - Safe procedures for un-chokering
30.	Choker multiple pieces	<ul style="list-style-type: none"> - The candidate should demonstrate knowledge of presentation and chokering stacks of produce - Presentation - Personal safety - Risk zone(s)
COMPLETION		
31.	Plant and equipment left in a safe and well maintained condition	<ul style="list-style-type: none"> - Overhead hydraulic or tensioned cable supported - Equipment lowered (where appropriate) and immobilised - Chokers returned to base in clean condition damaged equipment reported and taken out of service