

Preface

This document contains the European Standard for Chainsaw use at Height. The European Arboricultural Council (EAC) and the European Forestry and Environmental Skills Council (EFESC), 2 European professional organisations in arboriculture and forestry, have collaborated in order to write and share these standards with the European arboricultural and forestry industry.

Ground base chainsaw use and rope access (climbing techniques) have both been extensively documented. In contrast very little information is available regarding the use of chainsaws at height. Industry guidance and standards in the use of chainsaw at height are well developed and documented in the UK (City and Guilds, HSE) and Germany (SKT), however little harmonisation of standards currently exists in other European countries.

Why do we need good standards?

Firstly, standards and guidelines have to be based on realistic day-to-day work situations. Only then can they be used, reinforced, enhanced and further developed. Guidelines need to be practical and workable with the end goal being to develop a safer more efficient workplace.

Secondly, as a tool to support and guide future arborists, students and schools, to apply these standards in their educational programs and promote safe working practices. As a consequence these standards will establish the basis for assessment criteria for exams and certifications such as the European Tree Worker or the European Chainsaw Certificates.

These standards are not legislation; they are a set of minimum standards that can be considered as being 'good practice' in professional chainsaw use at height. A chainsaw user at height remains responsible for (risk) assessing every specific work situation and for planning and executing work according to that (risk) assessment. It is essential that the described techniques are only used by sufficiently trained professionals. Work in trees and forestry can be dangerous and must only be performed by trained and competent workers using appropriate and safe work techniques and equipment or by trainees under supervision, who are competent using a chainsaw on the ground. It is possible that national legislation imposes higher standards or a mandatory national certificate. Adhering to this European Chainsaw Standard will ensure that only little additional effort is needed in order to reach mandatory national standards or certificates.

Since this is a standard for chainsaw use and not a pruning standard, the main focus is the technical safety aspects of chainsaw use at height and not on how tree work should be executed e.g. best arboricultural practice (angle of cuts, position of pruning wounds, etc.). Best arboricultural practice is already widely covered in current guidelines and literature. Industry standards endorse that tree workers should have an appropriate level of arboricultural knowledge before working on trees or be supervised by a knowledgeable arborist when working.

All your comments and suggestions are welcome as we aim to write a document that can be improved with the help of all European arborists and chainsaw users. The standards will be updated and amended regularly by EAC and EFESC.

Feedback on this document can be sent to tom.joye@vlaanderen.be

The authors gratefully remember Christian Nellen, active member of the working group, for his presence and input. This note is in his commemoration.

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To include in all translations:

This is a translation of the original English version of the EFESC handbook and its appendices.

This translated version is subordinate to the original English version.

EUROPEAN CHAINSAW STANDARDS version 2018

ECS: Chainsaw work at height

The chainsaw operator must be able to do and have a working knowledge of: branch and/or tree section removal using a chainsaw at height (either using tree climbing techniques, spurs/spikes or a MEWP).

WARNING: tree work requiring the use of a chainsaw should only be carried out by a trained and competent climber or MEWP user who has experience in chainsaw use on the ground, or by a trainee under supervision who is competent using a chainsaw on the ground. When using a chainsaw in a tree for pruning operations, good arboricultural practice must be maintained.

Take care of yourself and others around you at work

Plan the work including what to do if there is an emergency – chainsaw operator must identify hazards relevant to the site and tree to be cut and implement control measures to reduce those hazards (both preventively and during the tree work operations), in cooperation with the ground crew:

Perform Visual Tree Inspection, Risk Assessment (RA), work planning and emergency planning (including safety protocol in case of a chainsaw injury)

It is highly recommendable that both chainsaw operator and ground crew are trained in aerial rescue and first aid.

Chainsaw operator must maintain a constant communication with the ground crew to identify and control hazards, especially prior to any cut.

When using a chainsaw from ropes: the chainsaw operator must ensure an adequate access method for quick access to the tree in case of an emergency is available (e.g. ladder for smaller trees, installed access line for big trees, MEWP, ...)

PERSONAL PROTECTIVE EQUIPMENT – chainsaw operator must wear appropriate PPE according to risk assessment:

Chainsaw safety trousers (EN 381-5) are mandatory. Type C (all round protection) is recommended, but other types might be appropriate according to risk assessment, for example when working in hot weather. When wearing type A or B (front leg protection), the trousers must have the appropriate size and fitting to keep the protecting part in front at all times.

Safety helmet, in date according to manufacturer's instructions, are mandatory. (EN 12492 - helmets for mountaineers or EN 397/EN 14052 - industrial helmets, only if equipped with appropriate chin strap according to norm)

Hearing protection (EN 352) is mandatory. For battery driven chainsaws hearing protection is recommended or mandatory according to manufacturer's instructions.

Face protection, mesh visor (EN 1731) or safety glasses (EN 166) are mandatory.

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| Chainsaw safety boots (EN ISO 17249) are mandatory |
| Gloves appropriate to task (EN 420) are recommendable, but not mandatory. According to risk assessment these might be gloves with chainsaw protection (EN 381-7). |
| Non-sag outer clothing; the use of high-visibility clothing may also be appropriate or mandatory according to national legislation. |
| Whistle/mobile/2-way walkie-talkie as appropriate to task is mandatory for emergency signalling. |
| Personal first aid kit on climber or MEWP operator (easily accessible large wound dressing (EN 14079-1) and pressure bandage or tourniquet if allowed according to national regulations). A more extensive first aid kit has to be available at the site. |
| When using a chainsaw from ropes or from spurs/spikes: use appropriate positioning harness (EN 361, 358, 813) and equipment. |
| When using a chainsaw from a MEWP: use appropriate fall arrest harness including shock absorber (EN 361, 363). |
| OPERATIONAL SAFETY CHECKS – chainsaw operator must make sure operational safety checks have been performed (either by chainsaw operator or groundsman) |
| Pre-work safety checks: |
| · chain catcher and anti-vibration mounts are undamaged and functional |
| · throttle opens only when the throttle lock is depressed |
| · correct guide bar and chain according to manufacturer's instructions, fitted with reduced kickback chain, sharp and undamaged and in a well maintained condition |
| · exhaust system and silencer are in good order |
| · ring seals on fuel and oil caps are in good condition |
| · all nuts, bolts, screws, etc. are sufficiently tightened (! side casing bolts) |
| · chain brake is functioning |
| Cold/warm start on the ground = chain brake engaged and ground/leg 'lock' |
| Cold/warm start working from a rope and harness = chain brake engaged and fingers off throttle. The top handle chainsaw can be started without ground/leg 'lock', but only when held away from the ropes. |
| Cold/warm start working from a MEWP = chain brake engaged and chainsaw bar outside of bucket |
| Safe start distance from fuel (min.1m) |
| Chain brake tested with saw running |
| Saw checked for oiling (e.g. oil throw test) |
| Chain not moving when throttle released (no chain creep) |
| On/off switch is working (pull choke to stop if not, then label not to be used) |
| Chain tension re-checked when 'warm' with engine switched off |
| When working from a rope and harness: a suitably rated or tear-away lanyard is attached to the rear of the saw, long enough to keep the chainsaw below the feet of the climber in case the saw has been dropped. |
| When working from a MEWP: chainsaw attachment is not mandatory. |

MEET LEGAL & SITE SPECIFIC REQUIREMENTS IN ACCORDANCE WITH NATIONAL STANDARDS – chainsaw operator must check specifications:

Comply with environmental requirements: protection of fauna, flora, waterways, site specifications regarding pollution/damage, selection/storage of fuels and oil, etc.

Comply with road traffic safety regulations.

USE SAFE PRUNING/DISMANTLING METHODS – **Note:** poor work position is not an excuse for unsafe practice.

Ensure that a minimum of two people with similar skills and knowledge are present during all tree work operations. A member of the team must be available on site, competent and equipped to perform an aerial rescue with minimal delay

Maintain a safe, ergonomic and well balanced work position

Maintain a work position where the body and head are out of line of the kickback of the saw. Any deviation from this should be unavoidable and fully risk assessed.

Use of throttle to cut safely and efficiently

When working at height, the chainsaw can only run idle for a short period between 2 cuts being made in the same working position. When repositioning, the chainsaw has to be shut off.

Top handled chainsaws must only be used for chainsaw work at heights.

Every chainsaw, including top handled saws, must always be operated with 2 hands.

Maintain good grip, with left hand thumb around handle bar.

Use appropriate method (free fall, hand held or rigging) when cutting, according to the timber diameter, length and weight to be removed

Identify potential/desired drop zone(s)

Use appropriate cutting technique depending on species, size and orientation of timber (e.g. standard/sink cut (inboard, out board); horizontal step cut; vertical step cut; V-cut; holding cut; or any other appropriate cut). All cuts must be performed accurately

Body position must be stable and location of ropes must be appropriate before using bore cut techniques.

Chain brake must be engaged at any time, except during a cutting operation (also when repositioning and before taking a hand off the saw)

Chain must be stationary before removing chain from the cut

Warning and groundsman response prior to any action in the tree

Use appropriate secondary anchor point when working with chainsaw from ropes.

When working with a chainsaw on stems (e.g. working from spurs/spikes, pruning of palm trees, ...), the lanyard used must have a steel core.

Maintain taut ropes during all chainsaw operations

When working from a MEWP, chainsaws can only be used outside of the MEWP basket

If there is more than 1 person in the MEWP bucket, this must be fully risk assessed and appropriate control/safety measures must be implemented, according to national regulations. All persons assisting the chainsaw operator must wear chainsaw protective gloves and a chainsaw safety jacket, additional to other appropriate PPE.