



Chainsaw Operations

Statement of intent

Provides guidance on the safe use and maintenance of chainsaws during training and operations.

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1. Interpretation

Terms/Acronyms	Interpretation
Challenge test	A practical assessment for the required skill demonstration performed when a firefighter has a qualification or training certificate from another agency or organisation to determine if they are competent to use or perform specific tasks relating to that skill.
Chainsaw Assistant	A NTFRS firefighter qualified as a chainsaw operator, who provides safety and assistance to the primary operator during chainsaw operations.
Chainsaw Operator	A NTFRS firefighter, who has completed an approved chainsaw course and has been assessed as competent in chainsaw operations.
Continuation training	Ongoing regular skills maintenance training that is not necessarily programmed.
Drop start	The practice of starting the saw by pushing the saw away from the body with one hand while simultaneously pulling on the starter cord handle with the other.
Dynamic risk assessment	The process of identifying hazards, assessing risks and implementing appropriate controls to ensure a safe working environment.
Fell and fallen tree	A tree that has been cut or knocked down.
Hazard	A source or a situation with the potential for harm in terms of human injury or ill-health, damage to property, damage to the environment, or a combination of these.
Instructor	A qualified and experienced chainsaw operator that has completed a minimum of 20 hours continuation training in chainsaw operations, is able to demonstrate consistent detailed knowledge of chainsaw operations and has been observed and assessed as competent, and formally endorsed by NTFRS Training and Development to instruct a chainsaw course.
NTFRS	Northern Territory Fire and Rescue Service
OIC	Officer In Charge
PPE	Personal Protective Clothing and Equipment
Run In	A condition of the saw once it has been started and warmed up to operating temperature.
Safety zone	An area that is free from any hazards or danger and may include escape routes.
Warm Start "Leg Lock"	A method of starting a chain saw where the saw is secured between your thighs in a standing position.

2. Purpose

The purpose of this guideline is to provide guidance on the safe use and maintenance of chainsaws during training and operations.

3. Application

The guideline applies to all NTFRS members.

4. Related References

- NT Fire and Emergency Act 1996;
- Work Health and Safety (National Uniform Legislation) Act 2011;
- Work Health and Safety (National Uniform Legislation) Regulations 2011;
- Territory Emergency Plan;
- NTPFES Work Health and Safety Policy, Instructions and Procedures;
- NTFRS Instruction – Uniform and Personal Protective Clothing;
- Training Resource - Participant Training Manual;
- Training Resource - Chainsaw Participant Guide;
- Chainsaw Kit Equipment List (located in chainsaw kit);
- NTES Standard Operating Procedure Chainsaw 2023;
- [Training.gov.au - FWPCOT3348 - Fell trees manually \(advanced\)](https://www.training.gov.au/courses/FWPCOT3348);
- [Guide to Managing Risks - Tree Trimming Removal](#).

5. Statements

A chainsaw is a wood cutting piece of equipment with sharp, high speed moving parts that requires to be operated and maintained in line with the manufacturer's recommendations and in line with the NTFRS and NTES procedures.

Northern Territory Fire and Rescue Service (NTFRS) personnel may at times be required to remove fallen trees and debris as part of their duties. Members with current qualifications in use of chainsaw are permitted to use chainsaws in the course of their duties.

NTFRS may be requested to assist Northern Territory Emergency Service (NTES) in the provision of chainsaw qualified personnel for the support of ongoing chainsaw operations.

All NTFRS members are required to successfully complete an approved chainsaw operator's course prior to operating a chainsaw. The current approved NTPFES units are:

- PUASES001 Assess Trees at Emergency Incidents;
- PUASES002 Develop work plan for tree stabilisation and removal;
- PUASES003 Stabilise and remove trees during emergency incidents.

NOTE: *The previous competency (FWPCOT2239 Trim and Cut Felled Trees) will be phased out as currency expires.*

6. Procedure

6.1. Emergency Notification

Notification for a response requiring Chainsaw operations may be received in the following situations:

- Joint Emergency Communications Centre (JESCC);
- Emergency Operations Centre (EOC);
- Other Emergency Services;
- Direct from General Public;
- As determined by the OIC.

6.2. Response

General Chainsaw operations are managed through the JESCC. NTFRS may be required to assist NTES during significant storm cleanup and potentially deployed along side, or in addition to NTES teams in remote locations throughout the Northern Territory.

Responses outside of the ERA will be at the discretion of the Territory Duty Officer or a relevant District Officer by delegation. Considerations will take into account:

- Nature and purpose of the response;
- Skills and qualifications of the operators;
- Availability of NTFRS personnel and assets to be released from the local capability;
- Likely benefit to the community that the NTFRS deployment will contribute.

A response will include teams of 2 fully qualified Chainsaw Operators. All operations requires the operator and assistant to wear required approved PPC as outlined below.

Appropriate first aid equipment must be available and an agreed safety system in place, i.e. a whistle, air horn, the bar cover thrown into the view of the operator or a tap on the shoulder, to alert the operator that there is a safety issue.

Chainsaw operation and training are to be carried out as follows:

- The chainsaw operator and assistant are to wear appropriate minimum PPC as listed in this document;
- The chainsaw operator is to complete a pre-start inspection, this will include:
 - a. Chainsaw is in good condition and operational;
 - b. Chain is at the correct tension, adjust as necessary;
 - c. Chainsaw has been refueled and the bar oil reservoir is full;
 - d. The chain brake operates correctly, rotate chain by hand with chain brake off and then apply the chain brake. The chain should not move after the chain brake is applied;
- Faulty equipment must be tagged out and reported to the OIC, for repair by an approved service agent;

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- Maintain a safety zone of at least two and half lengths of the chainsaw bar, or 5m when using a pole saw;
- When operating a chainsaw the powerhead is not to be lifted above shoulder height;
- When carrying a chainsaw, always have the chain bar facing backwards with the bar cover on;
- If carrying the chainsaw over a distance of 5m or more, apply the chain brake or stop saw;
- Ensure equipment is cleaned and reconditioned, including chain sharpening, after use and a function test completed;
- There is to be a fire extinguisher located in the vicinity of any chainsaw refuelling area, which is to be a minimum of 3 metres away from the chainsaw operation area;
- Flammable fluids are to be stored in an appropriate container and storage area;
- Saws are to be emptied of fluids if they are to be stored for an extended period of time, i.e. greater than 4 weeks;
- Do not store premixed fuel for greater than 3 months.

When the chainsaw operator has completed cutting a section, they are to:

- Apply the chain brake;
- Take a few steps out of the way;
- Indicate for the chainsaw assistant to move into the area and clear away any debris.

The chainsaw assistant is to clear debris away from the operation area and to remove trip hazards and maintain site safety.

6.3. Use of chainsaw on a roof

NTFRS members are not qualified to use chainsaws at heights.

In the event that a chainsaw is required to be used from a roof or at height, specifically trained professionals should be engaged to complete the task.

If the risk assessment determines that it is unsafe to use a chainsaw, the chainsaw team is to:

- Stabilise the tree, if possible;
- Advise the owner or occupier to request a contractor to remove the tree at their own cost.

If a chainsaw operation is unable to be completed it is to be reported through the chain of command.

6.4. Equipment

Only NT Government issued equipment is to be used for chainsaw operations. Equipment checks must be conducted on a regular basis, i.e. monthly, this includes prior to use and after field maintenance.

Any damaged or faulty equipment is to be tagged as “unserviceable”, removed from the equipment cache for repair/replacement and reported to the responsible agency manager for repair by an approved service agent.

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6.5. Starting chainsaws

There are two authorised starting procedures: a cold start (on ground) and a warm start (leg lock).

Both procedures are to be completed in accordance with the training.

CAUTION: Chainsaws are not to be 'drop started'.

Once the chainsaw has been started, allow the saw to run for approximately 30 to 60 seconds, dependent on air temperature, to warm up the saw.



Cold Start



Warm Start

Once the saw has warmed up, complete a function test in accordance with the training guide.

Operate the chainsaw in accordance with the training guide and manufacturer's instructions.

6.6. Chainsaw assistant

Chainsaw assistants are to wear the same PPE as the chainsaw operator as listed in this document. The chainsaw assistant has the following responsibilities:

- Hold the required units of competency as listed in this document;
- Observe all safety aspects within the area and providing prompt warnings. To warn a chainsaw operator, they are to use a whistle or other agreed suitable means to communicate;
- Keeping the working area clear to maintain a safe working environment and to keep an escape route unobstructed;
- The assistant must always maintain the safety zone and stay clear of the operator's escape route. Communication is vital to ensure this occurs.

The chainsaw assistant should ideally stand at the 4 o'clock position in the first instance, where the chainsaw operator is facing the 12 o'clock position. This should allow the assistant to be on the chosen safe side of the tree and can see the cutting attachment. From this spot they also monitor movement of the tree, ensure the operators head does not shift over the top of the bar, alert any persons that may wander into the area and maintain safety of the site.

The next preferred location is at the 2 o'clock position, though this positions them on the opposite side of the tree. Positioning of the assistant is heavily influenced by the risk assessment and determined escape routes.



6.7. Maintenance

Chainsaws are to be regularly maintained in accordance with the manufacturer's instructions and any issues reported immediately to the OIC.

There are two types of maintenance, daily and periodic:

- Daily maintenance will be performed during operations in accordance with the training guide and manufacturer's instructions;
- Periodic maintenance is carried out after 80 hours of use, or annually, by an authorised service agent.

If chainsaws are going to be stored for long periods of time, i.e. 4 weeks or longer, they are to be drained of oil and fuel.

Two stroke fuel mix should not be kept for longer than 3 months in storage.

6.8. Safety

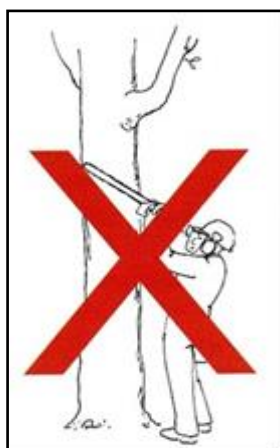
A dynamic risk assessment is to be undertaken prior to any operations, in accordance with NTFRS standard practice.

A formal training risk assessment is to be conducted prior to a training course and firefighters are to report any emergent hazards to their OIC.

The powerhead is not to be lifted above shoulder height.

All other firefighters are to be located outside areas where they are exposed to hazards (e.g. excessive noise, moving parts of the tree(s) etc.).

There is a fire extinguisher suitable for fire class A and B to be located in the vicinity of any chainsaw refueling area, which is to be a minimum of 3m away from the chainsaw operation area.



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Always carry the chainsaw with the cover on and the tip facing behind you.

Where power is involved, always check that the power has been turned off, use an electrical field detector, i.e. Modiewark or hot stick (if available), to ensure there is no risk of electrocution. If power is still present, then advise Power and Water to have it turned off. When advised that the area is safe check the area again to confirm.

6.9. Personal Protective Clothing and Equipment

The following minimum PPE is to be worn by NTFRS member during chainsaw operations:

- Steel toe boots;
- Wildlands pants;
- Chaps (located in kit);
- NTFRS T-Shirt / Light Weight turn out coat (optional);
- Gloves – wildfire;
- Hearing protection;
- Helmet with visor;
- Safety glasses (in addition to visor).

IMPORTANT: PPE must consider effects of heat exhaustion.



6.10. Stabilise and removal of trees

To stabilise or remove trees during an emergency, the circumstance must include:

- Trees or limbs of a tree that have fully or partially fallen down across roadways presenting a public safety hazard – The responsibility of clearing roads is with the local council or the local government, however, where NTFRS members are requested to assist or encountering the hazard when transiting to another task, NTFRS members may decide to clear the hazard to prevent injury or damage to public property;
- Onto structures and presenting a hazard to public or teams during emergency operations - owners are responsible for clearing fallen trees from their buildings;

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- Onto vehicles - Vehicle owners are responsible for clearing fallen trees from their vehicle. NTFRS members may decide to clear the tree if the tree presents as a hazard or the tree is encountered during emergency operations;
- Across power lines - Power and Water has the responsibility for clearing and maintaining power lines. Ensure that the power has been turned off before commencing operations;
- In a public area and are presenting a risk to safety - It is the responsibility of the local council to clear parks and recreational areas, however, NTFRS members may be requested to assist;
- Limbs that are preventing the rescue of a person, i.e. a motor vehicle crash involving a tree - *refer to table page 11.*

NTFRS members will not undertake the following activities:

- Felling trees, except where a partially fallen tree is preventing the rescue of a person or presents an immediate threat to life;
- Provide advice where the owner, occupier or other representative is requesting a qualified assessment of the health of a tree;
- Clearing of tree debris away from incident site after the tree has been made safe;
- Stabilise or remove a tree that is not preventing access, is not on a structure or vehicle, and/or there is no threat of further danger to property, e.g. tree is down in a backyard;
- Stabilise or remove a tree that is located on public property, e.g. is in a park, or on a nature strip, and not causing a traffic hazard, and there is no risk to life or property and can be passed onto the relevant agency/authority;
- Assessing, marking or treating standing fire damaged trees. These trees are classified as dangerous trees and must not be felled by NTFRS members. Dangerous trees are to be isolated and reported to your supervisor.

If the task is determined to be within the guidelines for NTFRS to undertake, a dynamic risk assessment is to be conducted before, during and after the incident. A dynamic risk assessment is the quick assessment of the hazards and risks that may pose a threat to the safety of a person.

When assessing fallen trees the priority should be given in the following order:

- Person has become entrapped and requires extrication;
- A tree that is preventing response access;
- Tree that is presenting a traffic hazard on a roadway;
- Tree that is likely to cause further damage to property;
- Tree that is preventing access in or out of a property.

Where a fallen tree is encountered but there is no emergency response required, the IC should utilise the following guidelines to assist in assessing the suitability of the task for NTFRS members to undertake:

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Type of tree damage	Who is responsible
Fallen on house / building, shed, garage, carport, vehicle	NTES
Fallen on access / drive and preventing access	NTES
Threatening house	NTES to secure and establish safety cordon
Fallen tree across fence outside property	Owners responsibility, unless life threatening
Fallen on roadway, highway	Council (local roads / Local Government (main roads) / Commonwealth Government (highways) and NTES
Damaged / fallen / uprooted power lines	Power Water Corporation and NTES
Fallen in yard – not threatening house	Owners responsibility, unless life threatening or is a threat to public safety
Damaged / fallen / uprooted TV cable	Cable company and NTES
Damaged / fallen / uprooted telephone cable	Telephone company and NTES
Damaged / Fallen tree preventing access for firefighters during a response	NTFRS responding members

In the event of a 'tree down' or a 'tree down traffic hazard' event being assessed as being beyond the capability of the chainsaw team, the team must render the scene safe and where possible cordon off the area. Depending on the circumstances, the OIC should advise the property owner to engage a contractor or the owner of the roadway to manage the situation.

If the task is determined to be beyond the capability of the chainsaw team to undertake, but there is threat to life and property, then the following is to be completed:

- Undertake all reasonable steps to establish a safety cordon to protect the scene;
- Recommend to residents/occupiers of buildings in the threat zone to evacuate, if necessary. If people decline, contact police;
- Contact your supervisor and request the services of specialist tree contractors.

If residents are unable to return to their homes until the scene is made safe, residents are responsible for making their own arrangements for temporary accommodation.

Chainsaw teams are not to recommend specific tree contractors.

7. Document control

Governance

Owner	Deputy Chief Fire Officer – Territory Operations
Authority	Issued pursuant to s17 of the <i>Fire and Emergency Act 1996</i>
Scope	Applies to all NTFRS members
Review date	To be reviewed within 3 years
Suitable for public disclosure	Yes
Parent policy	N/A

Version history

Date	Version	Author	Summary of changes	Notification
October 2021	0.1	LFF Keith Hutton	Draft version	
February 2024	1.0	Inna Bruce	First version	