



## Chain Saw Safety ACLP Safety & Tools Workshop

Three areas of concern regarding safety when using trimmers and brushcutters:

- 1) Operator safety
- 2) Proper use of equipment
- 3) Startup and operation
- 4) Transportation and storage

### Overview:

**Carelessness or not following the recommended safety practices is the most common cause of an accident when using power equipment. Most important safety device when using a chain saw is COMMON SENSE.**

**Before using a chain saw, become familiar with the cutting situation and the cutting environment. Never modify equipment. Always read the safety and operator's manuals before using a chain saw.**

### 1) Operator Safety

- a. User should be focused and alert at all times
- b. Never use saw when fatigued or under the influence of alcohol or drugs
- c. User should be in good physical and mental health
- d. All other humans and/or animals should be far away, twice the distance of the height of the tree
- e. Make certain surrounding area is free from obstructions
- f. Wear appropriate clothing:
  - i. Eye protection – ANSI Z-87
  - ii. Hard hat
  - iii. Hearing protection
  - iv. Heavy duty gloves
  - v. Safety tip boots with non-slip soles
  - vi. Clothing should be snug fitting but roomy enough for freedom of movement
  - vii. Chaps are recommended, can reduce severity of injury

### 2) Proper Use of Equipment

- a. Safety Steps
  - i. Proper bar and chain maintenance is important. Normal wear will degrade performance
  - ii. Inadequate lubrication can cause hazards
  - iii. Always complete routine maintenance



- b. When throttle control trigger is released, chain saw should stop
- c. **Always refer to operator's manual**
- d. Always disconnect and move spark plug wire away from spark plug
- e. When transporting saw, use appropriate scabbard
- f. Make certain spark plug arrester screen is in good repair
- g. Fuel
  - i. Carry fuel supply in approved container
  - ii. Fuel tank may be under pressure, loosen cap slowly
  - iii. Follow operator's manual when adding fuel
  - iv. Add fuel outdoors, never indoors
  - v. Do not over tighten cap
  - vi. Promptly wipe up spills
  - vii. Before starting, move saw at least 10 feet away from refueling area
  - viii. Do not smoke or bring sparks or flame near fuel supply
  - ix. Never refuel when engine is hot
  - x. Never add fuel to running engine
  - xi. When cutting, always be aware of where fire protection equipment and first aid kit are located

### 3) Startup and Operation

- a. Proper Cutting techniques
  - i. **Kickback** – the most fundamental safety hazard when using a chain saw, the operator loses control of the saw
  - ii. *Kickback* occurs when material touches the chain or nose at the tip of the guide bar in an area known as the kickback quadrant
  - iii. *Rotational kickback* refers to kickback that is lightning fast reverse reaction pushing the saw up and back toward the operator
  - iv. *Linear kickback* occurs when the saw chain is pinched at the top of the guide bar and the bar is pushed back towards the operator
  - v. Use a kickguard to eliminate kickback
- b. Evaluate each cutting situation
  - i. Always use a *kickguard* if:
    - 1. A novice or beginner is using a chain saw
    - 2. In any situation where the tip of the saw may come in contact with something
    - 3. There may be limited situations in which a kickguard cannot be used, take extra care and precautions
- c. To avoid kickback:
  - i. Never use a grip where the thumb and finger do not encircle the saw handle, one may lose control
  - ii. Hold saw firmly with both hands using a wrap-around grip
  - iii. Proper stance, balance and cutting position are important
  - iv. Always start with both feet on the ground
  - v. Adjust stance so you are away from the saw chain and the line of cutting
  - vi. Generally, cutting at high speed will reduce kickback
  - vii. Evaluate cutting situation, always use kickguard if possible
- d. Always wear protective clothing



- e. Make certain that thumb is on the underside to the front handle, never on top
- f. Use correct grip on handles at all times
- g. Hold chain saw firmly with both hands
- h. Position body properly and maintain a balanced position at all times
- i. Keep left arm straight
- j. Never bend over or crowd guide bar
- k. Cut only one piece of wood at a time when limbing and pruning
- l. Shut off saw engine when moving more than a few steps or setting the saw down
- m. Limit cutting to within range of control, never overextend. Do not cut above chest height.
- n. Do not use a chain saw when standing on a ladder
- o. Do not attempt to plunge cut or bore with the saw unless you are highly experienced
- p. Stand on the opposite side of the trunk when cutting limbs
- q. Felling a tree is a very complicated process. Operator must plan the cuts, determine the tree fall path and tree lean, look for above hazards and establish the escape route.
- r. Do not work on a tree if any branches are in contact with power lines
  - i. If a tree hits a power line, do not go near the tree, notify the power company
- s. Never cut a tree in order to drop a tree that is against it; have lodged trees pulled down
- t. Carefully inspect the tree before doing anything
- u. Plan two exit paths; each should be at a 45° angle to the line of fall
- v. Prepare working area; clear escape routes, keep others away at least distance of two times the height of the tree
- w. Use wedge or tether line to control fall
- x. Only one person should be working on the tree
- y. Never walk on a trunk or cut while standing on a trunk
- z. For all limbing, use kickguard device, properly installed
- aa. Cut from perimeters
- bb. Weather Conditions
  - i. Extreme heat can increase operator fatigue
  - ii. Cold conditions: dexterity is decreased; more difficult to move freely
  - iii. Operator should monitor activity and take breaks
  - iv. Saw should be held with both hands, keeping the wrists straight
- cc. Use sound judgment, evaluate each situation

#### 4) **Transportation and Storage**

- a. Shut down engine
- b. Keep fingers away from all chains
- c. Drain all fuel completely
- d. Never store unit with fuel in the tank



**Summary: Safety always begins with the operator**

- Always use extreme care when mixing or draining fuel
- Always wear recommended safety gear
- Keep bystanders away
- Be aware of hazards