

NC DEQ Safety Toolbox Talk Safe Operation of Chainsaws



The CDC estimates that 36,000 Americans are treated in emergency rooms each year for chainsaw-related injuries. Common injuries include cuts and other injuries caused by kickback, flying debris, falling from height, and falling limbs.

Proper use of PPE (personal protective equipment) and safe operating procedures are the best ways to prevent chainsaw-related injuries.

PPE: Wear the proper personal protective equipment when operating the chainsaw, including hand, foot, leg, eye, face, hearing, and head protection. PPE can include hard hat, safety glasses, leather gloves, steel toe shoes, hearing protection, and chaps.

Training: Employees should receive training on each type of chainsaw they will operate.

Operator's Manual: Review the Operator's Manual to understand the inspection requirements and operating procedures. The operators should also familiarize themselves with the chainsaw's controls and safety decals.

Inspections: Inspect your equipment prior to use, and periodically throughout use:

- **Controls:** check the chain tensioner, brake, bolts, and both handles
- **Lubrication Device:** make sure it's functioning properly so the chain and bar don't overheat
- **Clutch Cover:** be sure it's not broken so the chain and sprocket are not exposed
- **Chain:** make sure it's sharp, properly tensioned, and free of sawdust, dirt, and excess oil

Safe Operating Procedures:

- **Work Area:**
 - Make sure it's free of any obstacles
 - Look for nails, spikes, or other metal objects in the tree prior to cutting
 - Look above for any loose limbs that may fall during cutting
- **Starting:**
 - Start the saw in a stable position, braced on the ground or against your leg, with the chain brake engaged and at least 10' from fuel cans
 - Never "drop start" a chainsaw. This means holding the saw in one hand while pulling the starter rope. This method only leaves one hand to control the running saw
- **Handles:** Keep hands on both handles
- **Footing:**
 - Maintain secure footing at all times
 - Stand to the side of the cutting path
- **Attendance:** Never leave a running chainsaw unattended
- **Avoiding Kickback:** Kickback is the sudden, upward motion of the chainsaw guide bar, and it can be very dangerous. It's a common cause of chainsaw injuries and often the result of improper techniques.

- Do not cut with the tip of the blade and always be aware of where the tip is
- Do not cut overhead or between your legs
- Use low kickback chains and reduced kickback guide bars when possible
- Only cut with the blade moving at full speed to prevent binding
- Cut one piece of wood at a time
- Avoid re-entering prior cuts when possible
- Never start the saw when it's in contact with wood

- **Miscellaneous:**
 - Turn off the saw or apply the chain brake when carrying the saw
 - Carry the saw by its front handle. Keep the hot muffler away from your body and the guide bar pointing to the rear
 - Never carry a saw on your shoulder. If you fall the blade will be close to your neck and arteries
 - Communicate with your co-workers
 - Always know where your co-workers are
 - Work at a safe distance from others (twice the height of trees being felled)

Safe Fueling Procedures:

- All gasoline should be transported in safety cans. A safety can is “an approved container, of not more than 5 gallons capacity, having a spring-closing lid and spout cover and so designed that it will safely relieve internal pressure when subjected to fire exposure.”
- Safety cans can be up to 5 gallons in size, but gasoline safety cans should not be larger than 2 gallons. Cans shall be labeled to say they are OSHA/DOT approved.
- All refueling should take place at least 10 feet from any ignition source.
- Always use a funnel or flexible spout to refuel a chainsaw.
- Never refuel a chainsaw while it is hot or running.
- Never smoke while dispensing gasoline.
- Keep your gasoline can at least 10 feet away from the sawing area.

NC DEQ Safety Toolbox Talk Quiz
Safe Operation of Chainsaws



- 1) Name some common injuries while using chainsaws:
- 2) What parts of your body should be protected while using a chainsaw?
- 3) Name some common PPE used with chainsaws:
- 4) Name some important things to inspect on the chainsaw before use?
- 5) What should you look for in the tree prior to cutting:
- 6) How far must a hot or running saw be kept from fuel sources?
- 7) Describe how to safely start a chainsaw:
- 8) Describe kickback and some ways to avoid it:
- 9) Describe the safe way to carry a chainsaw:
- 10) Describe how to safely transport gasoline for a chainsaw:
- 11) Describe a safe chainsaw blade:

12) Describe how to safely refill a chainsaw with gasoline:

NC DEQ Safety Toolbox Talk Quiz

Safe Operation of Chainsaws



- 1) Name some common injuries while using chainsaws: cuts and other injuries caused by kickback, flying debris, falling from height, and falling limbs.
- 2) What parts of your body should be protected while using a chainsaw? Hands, feet, legs, eyes, head, and hearing
- 3) Name some common PPE used with chainsaws: hard hat, leather gloves, safety glasses, steel toe shoes, hearing protection, and chaps.
- 4) Name some important things to inspect on the chainsaw before use
 - Controls: check the chain tensioner, brake, bolts, and both handles
 - Lubrication Device: make sure it's functioning properly so the chain and bar don't overheat
 - Clutch Cover: be sure it's not broken so the chain and sprocket are not exposed
 - Chain: make sure it's sharp, properly tensioned, and free of sawdust, dirt, and excess oil
- 5) What should you look for in the tree prior to cutting: sources of metal (nails, spikes) and loose branches above
- 6) How far must a hot or running saw be kept from fuel sources? 10 feet
- 7) Describe how to safely start a chainsaw? Brace it against the ground or your leg, have the chain brake engaged, and be at least 10 feet from any fuel cans
- 8) Describe kickback and some ways to avoid it: Kickback is the sudden, upward motion of the chainsaw guide bar, and it can be very dangerous. It's a common cause of chainsaw injuries and often the result of improper techniques.

- Do not cut with the tip of the blade and always be aware of where the tip is
- Do not cut overhead or between your legs
- Use low kickback chains and reduced kickback guide bars when possible
- Only cut with the blade moving at full speed to prevent binding
- Cut one piece of wood at a time
- Avoid re-entering prior cuts when possible
- Never start the saw when it's in contact with wood

9) Describe the safe way to carry a chainsaw:

- Turn off the saw or apply the chain brake when carrying the saw
- Carry the saw by its front handle. Keep the hot muffler away from your body and the guide bar pointing to the rear
- Never carry a saw on your shoulder. If you fall the blade will be close to your neck and arteries
- Communicate with your co-workers
- Always know where your co-workers are
- Work at a safe distance from others (twice the height of trees being felled)

10) Describe how to safely transport gasoline for a chainsaw: In a container approved by OSHA or DOT that is no larger than 2 gallons and has a spring-loaded lid to relieve internal pressure.

11) Describe a safe chainsaw blade: properly tensioned, sharp, properly lubricated, and free of dirt or other debris

12) Describe how to safely refill a chainsaw with gasoline:

- At least 10 feet from any ignition source.
- Always use a funnel or flexible spout to refuel a chainsaw.
- Never refuel a chainsaw while it is hot or running.
- Never smoke while dispensing gasoline.
- Keep your gasoline can at least 10 feet away from the sawing area.

