

Chain Saw Operation and Maintenance

Chain saws are a valuable, and dangerous, tool used by highway agencies. Crews must operate and maintain chain saws properly. This article describes proper operation, maintenance, refueling, and storage.

Operation

Crews should operate only chain saws that are undamaged, properly adjusted, and completely and securely assembled. They should wear close fitting and protective clothing, goggles, gloves, and hearing protection.

When starting a chain saw, operators should hold it firmly on the ground or on a stump. They should **never start it on a leg or knee!** Once started, they should be sure the chain stops moving when they release the throttle trigger and when the engine idles.

Firm footing and balanced positions are imperative. Operators should hold the saw firmly with both hands, and with thumbs and fingers encircling the handles. When cutting a limb under tension, they should be alert for anything that might snap back.

Kickback is the main cause of serious injury. It can occur

- When the chain on top of the guide bar becomes pinched in a cut.
- If the chain comes into contact with another branch or log.
- When cutting brush or small saplings, because they often catch the saw and whip it back.
- When the chain is dull or loose, or the engine is running slowly.

Obviously, operators must avoid all these situations. Chain saws should also have anti-kickback devices, including an automatic chain brake, low kickback chain, or a kickback bar.

Operators should shut off the engine when moving to another location. They should carry the saw with the guide bar, and with the saw pointed to the rear and the muffler away from the body.

Maintenance

To maintain chainsaws properly operators must keep dirt, fuel, and sawdust from building up on the engine or the saw. They have to keep spark plugs and wire connections tight and clean, and handles dry, clean, and free of oil or fuel.

A dull chain is dangerous. It puts a strain on all working parts of the saw and adds work for the operator. A chain is dull when normally easy-to-cut wood becomes hard to cut and burn marks appear on the wood. Operators should frequently sharpen, tension, and lubricate the chain.

Operators maintain proper tension by tightening all nuts, bolts, and screws (except the carburetor adjustment screw) after each use. Replace worn parts, such as the sprockets and chains.

Refueling

Operators should refuel frequently, to avoid running out of fuel in the middle of a cut. They should refuel away from work areas, so fuel is a safe distance from running engines. Before refueling, they must shut off the engine. They release pressure in the fuel tank by slowly opening the fuel cap. Before restarting, they should wipe the saw to insure spilled fuel is thoroughly dried.

Storage

Before storing chain saws, operators should clean and maintain it as described above. They should store them a dry location, away from other tools.

These simple guidelines will prevent chain-saw injuries and enable efficient operation. ●

Source
"Operating a Chain Saw." *Illinois Interchange*, Summer 2002, p. 4.