



CUT-OFF SAWS BEST PRACTICES

Cut-off saws are powerful tools commonly used by public agencies to cut asphalt, concrete, ductile pipe, and rebar. Despite their utility, improper use can result in serious injury, including burns, eye trauma, lacerations, hearing damage, exposure to hazardous dust, and even fatalities. This bulletin highlights essential safety practices to prevent incidents.

Before Using Any Gasoline-Powered Cut-Off Saw:

- Conduct a visual inspection of the machine, cutting wheel, fuel tank, and safety guard.
- Confirm that the wheel guard is properly adjusted to deflect sparks and debris.
- Check that the cutting wheel is rated for the saw's RPM and the material being cut.
- Ensure all controls (throttle, stop switch) operate smoothly.
- Inspect the spark arrester screen and clean if needed.
- Check belt tension after one hour of operation.

Personal Protective Equipment (PPE)

Always wear employer-approved personal protective equipment, including:

- ANSI-rated hard hat
- Safety goggles with side shields
- Ear muffs or plugs (ANSI-rated)
- Cut-resistant gloves (leather recommended)
- Flame-resistant clothing (e.g., treated cotton or denim)
- Steel-toed boots with slip-resistant soles
- NIOSH-approved respiratory protection if dry cutting



Safe Cutting Techniques

- Never operate the saw with one hand. Use both hands to control reactive forces.
- Do not cut above shoulder height or from a ladder.
- Use wet cutting when possible to reduce dust and wheel temperature.
- Have fire extinguishing equipment nearby when cutting metal.
- Avoid enclosed spaces—exhaust fumes contain toxic gases. Ensure ventilation.

Preventing Kickback

To avoid kickback—a sudden and dangerous reverse force:

- Support the workpiece to prevent pinching.
- Avoid cutting with the upper quadrant of the wheel.
- Do not sideload or twist the saw during the cut.
- Use wet cutting to help lubricate the kerf.
- If the wheel binds, release the throttle immediately.

Maintenance & Storage

- Clean the dust from the saw after each shift.
- Drain fuel before storing for extended periods.
- Store cutting wheels flat, dry, and away from frost or direct sun.
- Transport with engine off and cutting wheel removed.

Alternate Equipment

A belly saw may be used as an alternative to a cut-off saw when cutting pipe in wet conditions. The guard on the saw completely covers the blade and the saw straps to the pipe to prevent kickback. These types of saws are typically powered by air or hydraulic power.

Resources

A [Job Hazard Analysis \(JHA\)](#) is a technique that focuses on job tasks as a way to identify hazards before they occur. It focuses on the relationship between the worker, the task, the tools, and the work environment. Ideally, after you identify uncontrolled hazards, you will take steps to eliminate or reduce them to an acceptable risk level. A model [JHA for Cut-Off Saws](#) is available on the [MSI Forms and Checklists](#) webpage.

The MSI Shift Briefing: [Cut-Off Saws Shift Briefing](#) can be used as a training tool for employees who operate cut-off saws.



