



AutoROPS is designed to prevent tractor and riding-mower rollovers

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As you head out into the suburbs and beyond, it's not uncommon to see homeowners—perhaps the occasional [ruralpolitan](#)—using a commercial-grade lawn or garden tractor to tend to their vast yards.

[Lawn tractors and zero-turn radius mowers](#) can help make quicker work at big properties, but they also [pose some injury risk, including rollovers](#). If you use a riding mower and your yard has slopes and hills, a device developed for lawn-care pros could be right up your alley—even if it never makes its way to the consumer market for tractors and zero-turn mowers. (Read our [latest report on mowers and tractors](#); story and ratings available to [subscribers](#).)

A safety device called a rollover protective structure, or ROPS, is standard on commercial tractors and riding mowers. It's intended to keep an overturned tractor from crushing the operator so long as that person is wearing a safety belt.

Operators of commercial machines sometimes fold down or remove the ROPS since they might often have to pass beneath low branches and through other confined spaces and the ROPS can get in the way. As you might imagine, such a move eliminates the protection the ROPS would provide.

This is where the [AutoROPS](#) comes in. Invented at the [National Institute for Occupational Safety and Health](#) and used on the Mercedes-Benz SL and other cars, the AutoROPS is a passive roll bar that generally sits behind the operator at roughly that person's shoulder height and allows passage beneath any low-hanging obstacle (it's shown in a undeployed position). Circuitry in the AutoROPS base monitors for a rollover and telescopes the vertical risers to their full upright, protective position when a rollover occurs. The most recent version of the design uses a latch-and-release mechanism; the [American Society of Agricultural and Biological Engineers](#) is considering it as a standard.

The typically retracted position of the AutoROPS and its relatively lightweight composite material also address an inherent irony of roll bars: Their height and weight can raise the center of gravity of a tractor or zero-turn rider and make a rollover more likely. The AutoROPS, however, won't extend to its full height unless the equipment is rolling over.

[FEMCO](#) and [Scag Power Equipment](#), have partnered with NIOSH to develop the AutoROPS and might have first crack. The product may never become cost-effective enough for it to migrate to consumer machines, but even if you hire a lawn service to work on your property, you might eventually see it first-hand.—*Ed Perratore* | [e-mail](#) | [Twitter](#) | [Forums](#) | [Facebook](#)

Essential information: Follow these [rollover-prevention tips](#). If your property has dips, slopes, and other hazards of concern, your lawn tractor or zero-turn rider might accommodate a retrofit roll bar.



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