

## SOLVENT SYSTEMS



# Cleaning oily parts gets easier, quicker and a lot cheaper

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*Business Reporter*

Anyone who's ever cleaned a paintbrush knows how nasty mineral spirits can be.

Workers who clean oily parts at auto shops and factories often use mineral spirits, and breathe in its noxious fumes. Machine shops must pay for the disposal of dirty cleaning solution, as well as paying to continually renew the supply.

The Grease Gator — invented by University of Illinois researchers and Steve Rundell, president of Solvent Systems International in Elk Grove Village — addresses both the fume problem and the need for frequent fluid replacement for parts washing machines. The solution is so successful that Solvent Systems was honored with a 2005 Chicago Innovation Award.

By using a water-based cleaner and a device that separates the solution from oil, the Grease Gator saves on cleaner, protects the environment and provides a source of recycled oil that can be resold for fuel.

"This is no more dangerous than washing dishes over the sink," said Tim Lindsey, co-inventor of the Grease Gator and manager of the pollution prevention program at the University of Illinois' Waste Management and Research Center.

About one million parts-washing machines operate in the United States in garages, factories and anywhere else where metal parts must be cleaned before a repair is made. About 90 percent use a paint thinner type cleaner, Rundell said.

One problem with using more



**Steve Rundell, president of Solvent Systems International, shows how a spigot on the side of the Grease Gator releases oil that has been separated from other ingredients after the Gator is used to clean dirty machine parts. The company buys the waste oil back from its customers.**

environmentally friendly cleaners is that detergents use emulsifiers, a key ingredient in laundry soap. The detergent mixes with the oil and grease from the parts, and bacteria eats the carbon, which makes a smelly mess.

The Grease Gator cleaning solution is a slow emulsifying cleaner, so the machine has time to split the oil from the cleaning solution, which can then be used again and again.

A spigot on the side of the Grease Gator releases the recycled oil into a bucket.

This would be like doing the

laundry, and then being able to re-use both the soapy water and return the dirt to the garden.

All of this saves money, because instead of renting a parts-cleaning machine from a company like Solvent Systems that supplies solvents and replaces them as they get dirty, shops can buy their own Grease Gators and keep them clean, Rundell said.

"Now we're selling the machines, and they're buying our chemicals," Rundell said. Solvent Systems will also buy waste oil from its 260 clients.

Rundell said one client cut parts-cleaning costs by 85 percent.

The oil-stripping component of the machine was the design of the University of Illinois researchers, Lindsey said. Rundell perfected the cleaner, including adding an anti-rust agent.

In a letter to Grease Gator, Tim Hargrove of Pauly Toyota in Crystal Lake said his workers were "blown away" by the performance of Grease Gator, which he said cleans better and faster than mineral spirits.

"I was skeptical about this cleaning innovation," Hargrove wrote. "Not any more."