

# Magnet Traps Metal Inside Oil Filter

You can capture even the tiniest particles in any engine or hydraulic system with this new oil filter magnet.

The Magna-Guard Oil Filter magnet is designed to be inserted through the center hole of any spin-on filter with a metal core. The magnets are disposable so for best results use fresh magnets at every oil change. It attracts up to 40 times more grit than the filter alone, without restricting oil flow, says the company and independent test reports.

"The magnets catch particles that are too small for an oil filter to trap, generally particles less than 30 microns," says James Friend of Kleen Lube, Blue Springs, Mo. "By removing tiny particles there is less friction between the moving parts of your engine. The engine therefore runs cooler, cleaner, and more efficiently. It results in five percent or more increase in fuel mileage and eight to fourteen times less engine wear. Cleaner oil results in longer oil drain intervals, testing shows oil can be used up to twice as long.

He says Magna-Guard has been on the market since 1999 but has primarily been used in the heavy equipment and truck industry. "With prices for fuel and lubricants on the rise, we feel it's a good time to introduce the product to farmers," he told FARM SHOW.

According to Friend, Magna-Guard works better than wrap-around oil filter



**Magnet catches particles too small for an oil filter to stop. It's designed to be dropped into the center hole of any spin-on oil filter with a metal core.**

magnets "which are only up to 70 percent efficient because they're on the outside of the oil flow. Our magnets go inside the filter and are in direct contact with the fluid, so they're able to remove many times more contaminants." They work somewhat like cow magnets in livestock feed that are designed to pick up metal parts in the cow's stomach. Some farmers have tried using such magnets in their vehicles but with bad results because those magnets can either dissolve or lose their magnetic abilities under high temperatures. Magna-Guard magnets are 100 percent ceramic so they'll survive temperatures up to 842 degrees and the caustic environment of an engine."

The number of magnets needed depends on the capacity of the filter. The company

recommends using one standard size magnet per 16 oz. of filter fluid capacity. Most auto filters are less than one quart, so you just need one magnet. Quart-sized filters found on some pickups require two magnets. Tractor trailer rigs with 1-gal. primary filters should use eight standard size magnets.

Magna-Guard is available in two standard sizes to keep the applications simple and the costs low. The standard size magnets are about 1/4 by 3/8 by 1-1/2 in. and the mini size are 3/16 by 3/8 by 3/4 in. The mini size is for small equipment, motorcycles, and some automotive filters which are too short for the standard size Magna-Guard magnet. Two "minis" are the equivalent of one standard magnet. Use the minis by the pair.

Magna-Guard magnets can be purchased at [www.kleenlube.com](http://www.kleenlube.com) for as little as \$2.22 each in the Farmer's Friend package.

The Kleen Lube website also has the exciting patented Fluid Rx diagnostic tools including Ford approved ATF test which helps you control maintenance costs and improve environmental impacts by reducing unnecessary fluids changes.

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Reader Inquiry No. 41

## Wind-Generated Compressed Air

Instead of creating electricity, Win-Pressor turbines produce compressed air. Ervin Hochstetler has been working on the design for 4 years as an improvement on past designs that used conventional blades which weren't fast enough to get oil to pistons and tended to burn out compressors.

"The key is in the blades when powering oil-lubricated compressors," he explains. The Win-Pressor has three high-speed, lightweight fiberglass wind turbine blades.

"We had to customize our blades to get the start-up torque," Hochstetler says. The turbine is designed to start up the compressor in relatively low winds, but not exceed the normal operating rpm in high winds. The Win-Pressor system allows energy from the wind to be stored for use on days when there is no wind.

"We have a customer with 14,000 gal. of storage," Hochstetler says, noting that customers (many Amish) use pneumatic tools and air equipment in their businesses. Others use compressed air for pumping water or aerating ponds.

The Win-Pressor comes in two sizes. The

JKU 1 1/2 hp model (\$2,995) has an 11-ft. rotor diameter. Hochstetler recommends a minimum of 3,000 gal. storage for it. The JWU 5 hp model (\$4,250) has a 16-ft. rotor diameter, with recommended storage of at least 5,000 gal.

They come with condenser tanks and Jenny air compressors that have been customized to work with the turbines and have manual and automatic shutdown features.

"They come with everything but the tower," Hochstetler says, adding that he can arrange to put up towers if the customer lives near his Unity, Maine, company. Towers need to be at least 50 ft. tall.

"I tell potential customers that if the average wind speed is less than 10 mph I don't recommend this unit," Hochstetler says.

Even where there is good wind, customers need a backup unit if they use an air compressor on a regular basis.

"We use our unit for pneumatic tools, for fans in the greenhouses, to pump water and to run an air motor under a washing machine, but we still have a standby compressor (diesel powered)," Hochstetler says.



**Win-Pressor turbines are designed to produce compressed air instead of electricity. Photo upper left shows unit in gear. Photo lower left shows unit furling and out of gear.**

While most customers are Amish, he notes that the Win-Pressor has attracted worldwide interest for a variety of uses. A California customer is looking into using it for separating salt from seawater.

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