

Centrifuge Gets Sludge Out Of Used Oil

Don't burn or throw out dirty oil when you can clean it and use it to safely run diesel motors. You can clean a gallon of old oil at a time or clean old oil continuously 24/7 with centrifuges from US Filtermaxx.

"We've powered our shops for 18 months straight burning used oil in our diesel generator," says Steve Chastain, US Filtermaxx. "We have 4,000 hrs. run time without a problem."

Chastain first got involved with waste oil about 10 years ago when his house was without power for a week. "To save money we started blending used motor oil with diesel, but realized it needed to be clean."

The answer was a centrifuge. He tried different commercial products before deciding to build his own. "I feel we have them perfected now with a very high gravity force and cleaning to submicron particles," says Chastain. "We build them like a tank, heavy and nearly indestructible. The motors are designed to run at only 1,800 rpm's for longer life."

His centrifuge can clean from 10 to 40 gal. per hour, depending on the weight of the fluid and how dirty it is. It can be filled a batch at a time with a stop to clean the sludge out every hour and a half. Set one up with pumps, preheaters and automation, and it will clean oil continuously and dump the sludge by itself.

While the basic centrifuge bowl is the same in all the standard models, with a capacity of slightly less than a gallon, the drive units vary. The speeds and resulting

G-force changes from one model to another. The company offers 2,400G, 3,000G and variable speed 6,000G models.

Chastain is offering the 3,000G centrifuge with a 1 1/2 hp motor for \$1,500. Prices go up with the complexity and G rating of the system. A 6,000G with variable speed programmable controller and in-line oil heater is priced at \$3,339. Options include pumps, heaters and more. Automatic controllers allow the units to cycle and drain sludge, cleaning up to 1,000 gal. per day.

"We will be introducing a 10,000G unit by the end of the year," says Chastain. "It will have a variable frequency drive with a new heater system that can take up to 4,000 watts."

The centrifuges are designed to fit over a 55-gal. drum or can be placed inline between dirty oil tanks and clean storage tanks in an automated system. Systems vary depending on the need.

"We have shipped centrifuges around the world," says Chastain. "They are being used on-board ocean-going ships to clean bunker oil before it fuels the engines. They are also in use processing oil at fleet oil change services, and around the world with the oil being blended into taxicab fuel. In many lesser developed countries, oil is going through our centrifuges instead of being dumped on the ground."

Chastain suggests blending cleaned oil and gas 80:20. Diesel fuel can be blended at 80:20 to 50:50 rates.

"FARM SHOW readers can receive a



Centrifuge cleans dirty oil so you can use it to safely run diesel engines. It can clean from 10 to 40 gal. per hour.



\$200 discount on the basic and programmable 3,000G centrifuges," says Chastain. "Just use the code 'FARM SHOW' when you order."

Contact: FARM SHOW Followup, US Filtermaxx, 2925 Mandarin Meadows Dr., Jacksonville, Fla. 32223 (ph 904 334-2838; steve.chastain@usfiltermaxx.com; www.usfiltermaxx.com).

Reader Inquiry No. 39

"Powerstep" Lifts Farmer Into Combine

Scott Perisho couldn't have picked a worse time to break his leg. A falling feed auger smashed his right femur and, as he recuperated, the soybeans on his Zearing, Iowa farm got ripe and had to be harvested. He needed a way to get into his combine without needing help from anyone else. Fortunately, Clayton Bjustrom's "automated step" invention gave Perisho a lift, both physically and mentally.

The Powerstep is designed to lift anyone smoothly and safely into the combine cab. The bolt-on device uses electrical controls at the top and bottom of the lift to winch the rider to cab height. A battery pack or the combine's electrical system can be used to operate the unit. A safety harness, hand rails, and 400-lb. weight capacity provide rider safety. The bottom step folds upward for manual entry.

Bjustrom, a high school senior, built the Powerstep at the request of his grandfather.

"Climbing those steps into the combine gets harder every year," he said. "Why don't you design a way to make it easier for me to help with the harvest?"

So Bjustrom built and installed the first Powerstep to surprise his grandfather. His grandmother, who hadn't been in a combine cab for years, was equally thankful for giving their lives a lift.

"Right then and there, I could see the potential to help hundreds of farmers with disabilities and health problems," says Bjustrom. "We decided to begin producing the unit for commercial use."

He's now showing it at fairs, combine clinics, and farm equipment dealerships. The Powerstep is designed for combines of various sizes and colors. Rentals are also available for farmers like Scott Perisho who just need a temporary lift.

"The Powerstep provides peace of mind and a safe harvest," says Perisho.



Bolt-on Powerstep lift uses electrical controls at the top and bottom to winch the rider to cab height.

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Reader Inquiry No. 40