

Repairing Hydros Is His Lifelong Business

"There's always a sense of urgency when repairing broken down hydros," says Jeff Stoen of Glenwood, Minn., "so that's why the headline on our website and on our invoices says 'Your problem is no problem at Stoen's Hydrostatic.'" Jeff started his hydro repair business 23 years ago and true to his company headline, he even offers on-site service and 24-hour emergency service.

"Whether it's a custom harvester, a grain or dairy farmer, or a commercial business with a skid steer hydro problem, we're set up to repair or replace a hydro usually in 24 hours or less," Stoen says. He serves customers across the Midwest and around the country from a 10,000 sq. ft. facility in the Central Minnesota town of Glenwood. It has 5 hydro rebuilding stations, test stands, machining equipment, welding stations and a hydraulic hose production area. Stoen's rebuilds hydraulic cylinders ranging from small ones for lawn mower power steering to large telescopic cylinders for trucks and construction equipment. They also install and repair wet kits on semi-tractors and design hydraulic systems for commercial material handling businesses such as gravel mining.

"For most hydro jobs we have rebuilt units in stock," Jeff says. "People with problems want them fixed as soon as possible, and

we carry rebuilt units for several brands of combines, choppers, sprayers, skid steers, swathers and many types of construction equipment, including conveyors."

Stoen says many hydro problems are caused by contaminated oil, overheating and machine abuse, but some parts just wear out from use. "If oil somehow gets contaminated with dust or metal particles, the extreme high pressure in the hydro starts scoring internal parts," Stoen says. "Scoring causes oil to blow by the intricate internal parts, the system loses pressure and in turn it begins losing power. If the equipment feels sluggish, chances are the oil is contaminated and there's already internal part damage." Stoen will swap out a damaged hydro with a rebuilt unit on a combine for about \$3,500 on average. They carry hydros for most Deere, Case IH, Massey and Gleaner combines. Rebuilt hydros are also in stock for most brands of skid steers.

"Preventative maintenance can go a long way toward maintaining a good working hydro," says Stoen. "Whether it's a small hydro on a lawn tractor or a large hydro on a 500 hp combine, the rules are the same. Check the oil level regularly, change the oil and filter every 500 hrs., and keep the oil cooler free of dust and dirt." He says farmers who run huge combines these days assume the hydro is

sized to provide extra power. "The design of hydro hasn't changed much over the years, but internal pressure has increased from 5,200 psi on combines 25 years ago to about 6,700 psi on new models," Stoen says. The higher pressure produces more power to move the heavier machines, and that puts more stress on the components. A small problem can cause oil to overheat quickly and the hydro can send metal fragments, brass or steel through the whole hydraulic system. "Those problems can easily cost an additional \$6,000 to \$7,000 to repair," Stoen says.

Hydros for farm and construction equipment account for most of Stoen's work, but they also repair lawn mower and garden tractor hydros at prices ranging from \$350 to \$1,000. "The concept of the hydro is the same, regardless of the size," says Stoen.

"We have certified technicians who use special tools and equipment for troubleshooting, repairs and testing. We examine the 100 or so parts in each unit, rebuild them if we can or replace them if we have to. The tolerances for our work are very precise, and we test every rebuilt unit for volumetric efficiencies and set it for the required pressures. When a rebuilt hydro goes out the door it's about 97 to 98 percent as effective as a brand new one," Stoen says.

Repairing hydros is a very precise job

that requires schooling, patience, a good temperament and experience. "It takes about 2 years to effectively train a new employee," says Stoen. "They need to be capable of locating problems, pay attention to detail, and not be afraid to get dirty. They have to understand how the part works in every detail to know how to fix it.

"There are only a few shops in the country that do this type of work, so all of us have to be darn good at what we do," says Stoen.

Contact: FARM SHOW Followup, Stoen's Hydrostatic Service, 16084 State Hwy. 29, Glenwood, Minn. 56334 (ph 320 634-4360; www.Stoens.com).

Other well-known hydro repair shops:

Paul's Repair Service, 6167 Merrill Rd., Byron, New York 14422 (ph 585 548-2641).

Hydro Service, 202 North Main St., Roland, Iowa 50236 (ph 515 388-4096).

Herrs Machine, 1745 Prospect Blvd., Washington, Kan. 66968 (ph 785 325-2875).

Loader-Mounted Weed Wiper

"Our new loader-mounted weed wiper lets you apply Roundup or other herbicides to weeds that outgrow the crop, whether it's row crops or pastures. It's simple to use and doesn't require any pumps, external tanks, or drive systems," says Ron Lubke, Quality Metal Works, Sanford, Ill.

The weed wiper comes in sections 6 to 10 ft. wide that clamp onto the loader bucket. They can be used in combination up to 20 ft. wide.

A hose runs from the end of each wick to a control valve that can be mounted near the operator. "It's a gravity feed system with the herbicide contained inside the wick," says Lubke. "When the valve is shut off, a vacuum forms inside the wick which keeps the herbicide from flowing too fast. Opening the valve releases the vacuum and lets more herbicide come out. To refill, simply unscrew

the hose at the end of the wick."

He says a loader-mounted weed wiper has several advantages. "The wiper is out in front where you can easily see it. The loader lets you quickly adjust the height, and the wiper has a lot of clearance so you can use it later in the season. It's also convenient for transport because you can raise the loader to go through narrow gates."

The smallest 6-ft. 9-in. wick will cover up to 20 acres before it has to be refilled, while a 20-ft. wick can cover up to 80 acres.

The company also makes mounting brackets for ATV's that will accept wicks up to 13 ft. 6 in.; and carts that will accept wicks 10, 20, 30, and 46 ft. wide.

A 6-ft. 9-in. wick with loader mount sells for \$277 plus S&H; a 10-ft. wick sells for \$327 plus S&H.

Contact: FARM SHOW Followup, Quality



Weed wiper comes in sections 6 to 10 ft. wide that clamp onto loader bucket.

Metal Works, Sanford, Ill. (ph 309 379-5311; ron@qualitymetalworks.com; www.qualitymetalworks.com).

"Blaster" Kills Weeds With Corn Grit

Crop producers may eventually use a "grit blaster" to eliminate in-row weeds. Developed by USDA and university researchers, the sandblaster-like air-powered nozzles shoot corn grit at 6-in. tall plants, shredding young weeds in the row.

"We were able to get 80 to 90 percent season long control with 2 treatments on young weeds," says Frank Forcella, agronomist, USDA-ARS, Morris, Minn. "We initially tested it with cob grit, but organic farmers suggested corn gluten meal."

He notes that they were already testing corn gluten meal, with its 9 to 10 percent nitrogen, as a fertilizer source and for weed suppression. While Forcella didn't see any weed suppression, the corn gluten worked to shred leaves.

Forcella admits the prototype with its grit tank, compressor and sandblaster-type cones looks like a Rube Goldberg invention. Forcella started out using a handheld nozzle with a compressor and tank mounted on an ATV. With the help of a South Dakota State University engineering professor and a graduate student, the effort progressed to a 4-row system. It includes 8 nozzles, 2 large

grit tanks and a large compressor.

Two nozzles are aimed at each row, one on each side of the row. Powered by 100-psi air pressure, they lay down a cone-shaped pattern of 0.5-mm sized grit particles at a rate of about 300 lbs. per acre.

The system is intended for use with between-row cultivators. Forcella says it works great to control annual weeds when used in corn at the 1 to 3-leaf stage and again at the 3 to 5-leaf stage.

"It probably wouldn't work on Canada thistle," he says. "It doesn't affect the corn plant when used up to the 6-in. stage because the growing point is still underground or protected by the stalk."

Forcella sees the greatest potential for the machine with organic growers initially. He notes that in most areas herbicides work well for corn growers. However, that may be changing as resistance by certain weeds grows.

Contact: FARM SHOW Followup, Frank Forcella, USDA-ARS North Central Soil Conservation Research Laboratory, 803 Iowa Ave., Morris, Minn. 56267 (ph 320 589-3411 ext. 127; Frank.Forcella@ars.usda.gov).



Air-powered nozzles shoot corn grit at 6-in. tall plants, shredding young weeds in the row.



Researchers were able to get 80 to 90 percent season-long control with 2 treatments of corn grit on young weeds.