

GOING AGAINST THE TIDE

Equipment Technologies unveils new sprayer line;
machines incorporate mechanical drive systems

By Dawn M. Geske

Over the last decade or so, hydrostatic drives have found their way into a greater variety of equipment and some markets, such as ag and forestry, have embraced it more thoroughly than others. Yet there is one company that has decided to swim against the hydrostatic tide and most recently introduced a new range of ag sprayers with mechanical drive systems.

Introducing its first machine in 1997, Equipment Technologies Inc. (ET) has redesigned its entire product line, a range of 500 to 1200 gal. ag sprayers. Unlike most sprayers on the market, the four models comprising the Apache series feature mechanical drives.

"All the majors use the same technology to propel their sprayers — hydrostatics," said Matt Hays, CEO of the Mooresville, Ind., company. "It puts a big drain on the engine to push the wheel motors and requires a lot of parts. More can go wrong and it adds a lot of weight.

"We realized there was another way to make a sprayer. It means a lower cost per acre for the farmer and translates into a very efficient sprayer."

Using this focus, the company introduced its first sprayer, the 500 gal. Apache, followed by a 750 gal. unit in '99. The AS500 is now the smallest sprayer in the Apache line, while the 750 gal. model evolved into the larger 850 gal. AS850 sprayer which is ET's primary seller making up just over 50%



Unlike hydrostatic sprayers which are prevalent in the market, ET's Apache sprayer line is mechanically driven, utilizing ITL and Funk transmissions.

of the company's sales. Both models are powered by John Deere PowerTech engines rated 140 hp and 170 hp at 2400 and 2500 rpm, respectively. The AS500 features the 4.5 L four-cylinder 4045 diesel while the AS850 includes the 6068 PowerTech, a 6.8 L, six-cylinder turbocharged engine.

ET added a 1000 and 1200 gal. option to the series in 2000 with the AS1000 and AS1200. These two models are equipped with 5.9 L, six-cylinder Cummins QSB engines rated 205 and 275 hp at 2500 rpm.

Both Tier 2 engine series are fitted with Donaldson air cleaners and sited on a one-piece formed engine bolster, one of several components fabricated by ET. A redesigned hood houses the Radiator Specialties cooling package, a

bar-and-plate radiator design in a stacked configuration with the oil cooler, charge-air cooler and ac compressor.

The engines are paired with International Transmission Ltd. (ITL) four-speed PS750 powershift transmissions with Eaton Vickers valving in the AS500 and AS850 and a six-speed Funk powershift in the two larger machines. Both transmissions are mated with torque converters for smooth takeoff in any speed range. The sprayers are two-wheel drive, which Hays explained benefits from the 30/70 weight allocation. "By using a 70% weight distribution in the rear of the machine, we don't have to incur the cost of a four-wheel drive machine."

Adjustable-width ET axles, ranging from 88 to 144 in, are fitted on the



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three larger sprayers. The axle width is adjustable through a manual adjustment system or an “on the go” hydraulic option. Variable wheel spacing allows the sprayer to accommodate various row and road widths.

ITL outboard planetaries are used on the AS500 sprayer, along with the AS850 and AS1000 machines when equipped with the 36 in. crop clearance option. At the 48 in. clearance, the AS850 and AS1000 use a Fairfield drop box, which is standard on the AS1200 sprayer. An Eaton steering motor helps provide an 18 ft. turning radius. Stopping power is provided by ITL wet disc brakes, with a MICO master cylinder housed in the differential.

An Eaton gear pump provides flow to the steering circuit and charge pressure to an Eaton pressure-compensated piston pump which supplies all the machine functions including the rear hydraulic suspension and load leveling system. The rear suspension incorporates Parker actuators, Columbus Hydraulics cylinders and an Allen Bradley limit switch. The front suspension has an accumulator/cylinder assembly from Indiana Fluid Power.

This open center hydraulic system also powers the Ace Pumps 200F centrifugal product pump and the Precision Industries boom, placing it within 10 in. of the ground. Banjo boom valves and the Ace Roto-Mold polyurethane tank are standard on the spray-

ers, with the exception of the AS1200 sprayer, which is equipped with a stainless steel tank. The steel tank is also offered as an option, along with a Hypro chemical inductor.

The sprayer operator cab is also new, jointly developed by ET and Angus-Palm. It has a Sears Manufacturing six-position air seat and an ergonomic console, also engineered by ET.

With the four sprayers sharing an approximate 80% commonality among the 574 components supplied by 93 different vendors, ET uses what it calls “low inventory, high throughput” to assemble the sprayers at its Mooresville facility. “We don’t carry a lot of inventory so it helps us to keep our costs down,” said Hays. “We select components and vendors who will supply the parts we need exactly when we need them to make the sprayers.”

The four models are built on the same assembly line at the 103,000 sq.ft. company-owned facility, which supplies the U.S. and Canada through 25 dealers. ET is seeing its highest growth in Kentucky, Kansas and Arkansas and according to Hays, the overall growth of ET from '02 to '03 has been 60%. Today the company has more than 800 sprayers in 30 states and four Canadian providences. ★

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