

# First-Of-Its-Kind Hybrid Tractor Debuts In China

Zoomlion, a Chinese manufacturing company, recently rolled out the DV4004, a 400-hp hybrid tractor.

Rushan Aymetdinov, chief operating officer of Zoomlion Agriculture Machinery Co., comments, "This will be a new-generation tractor that fully replaces similar models from European manufacturers while achieving greater fuel efficiency."

The hybrid's diesel engine works with Zoomlion's intelligent MIDD (Meshed Intelligent Direct Drive) hybrid system. The company isn't sharing too many details but hints that using an electric power boost lowers the tractor's fuel consumption by approximately 8%. Variable speeds from 1 to 40 kph are available.

Pressurized operator cabins feature built-in navigation systems and 360-degree camera

views. The hydraulic system can hold up to 250 liters per minute. The tractor's height is 3.4 m, while its length is 6.4 m. Due to the large 600/70R30 (front) and 710/70R42 (rear) tires, ground clearance is 440 mm.

It's unknown when Zoomlion will expand its agricultural equipment into Europe, but recent presentations have pointed to big plans for the European market.

At the company's 2025 business conference, assistant Zoomlion president Lu Qing said, "I'm confident we can achieve greater growth in the global agricultural machinery industry." He pointed to Zoomlion's strong research and development, production process, and manufacturing capabilities as evidence of its strength.

Contact: FARM SHOW Followup, Zoomlion Agriculture Machinery Co.,



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No.16 Exi Rd., Sanshan District, Wuhu City, Anhui Province, China (ph +86 553-5631723; e-sales@zoomlion-hm.com; www.zoomlion-ag.com).

## Nebraska Museum Acquires 1919 Holt Combine

In 2014, FARM SHOW ran a story (Vol. 38, No. 2) about Bob Grimm of Rapid City, S.D., restoring a 1919 Holt combine to immaculate running condition. Grimm demonstrated the machine at various events over the years and, in 2024, donated it to the Legacy of Plains Museum in Gering, Neb.

Museum director Bob Wolf says having the Holt in their collection is important because its permanent home is now very close to where its original owner, Ole Olson, used it for several years.

Ole's son Arthur says his dad bought the Holt from its California manufacturer in the early 1900s and had it shipped by rail to Bushnell, Neb. From there, his dad drove the machine 17 miles at about 2 mph to their farm near Harrisburg. Arthur says the machine was state-of-the-art, with a 24-ft. grain-cutting platform. However, Ole didn't

think the header was large enough, so he rebuilt it 4 ft. wider.

Olson used the machine for several years before it sat idle and was eventually sold to a new owner in Alliance, Neb. Grimm discovered it there in 1974 and bought it for just \$400. The platform had disintegrated—its wood was gone, and most of the metal parts had been sold for scrap.

Grimm's son Mike says he and his dad made a few repairs and then parked it in a shed that his dad built for it. It sat for 10 years until Bob Grimm retired and decided it was time to restore the combine. They needed reference materials to rebuild the machine, so Bob and Mike visited an antique club in Bird City, Kan., to see a restored Holt displayed there. They took photos and measurements of the header to use when making parts for their machine.

Bob spent one winter building the header and another working on the harvester and chassis. The restored machine was demonstrated at Nebraska's Central States Fair in 2002 and 2003. Mike says that even though the machine was 90 years old, it did a decent job, and visitors were impressed.

One of those visitors was Bob Mueller, a board member of the Legacy Museum. Mueller asked Grimm if the harvester might someday be for sale and, if so, if the museum could buy it. They eventually reached an agreement, and now the 106-year-old machine has a permanent new home.



1919 Holt combine, once owned by the Olson family of Harrisburg, Neb., has been restored and is now in the machinery collection at the Legacy of Plains Museum in Gering, Neb.

Wolf says the Holt combine is a valuable addition to the museum because it's close to where it used to work and where descendants of the Olson family live. The museum hopes to have it working each summer to demonstrate how mechanical threshing was done more than 100 years ago.

Legacy of the Plains is an impressive Museum with an 80-acre working farm, historic farmstead structures and an extensive collection of artifacts, antique tractors and farm implements. The combine will help

them preserve their area's history, including the Panhandle of Nebraska, portions of eastern Wyoming and northern Kansas. Mike Grimm says he'll be happy to be there to operate the machine his father spent many hours restoring.

Contact: FARM SHOW Followup, Legacy of the Plains Museum, 2930 Old Oregon Trail, Gering, Neb. 69341 (ph 308-436-1689; info@legacyoftheplains.org; www.legacyoftheplains.org).



Holt was hauled to Gering from South Dakota. Header was on a separate trailer.



Bertalotto used three 40-volt Craftsman electric lawn mower motors when converting a belly mount mower to front-mount.

## Front-Mounted E-Mower

After Roy Bertalotto repowered a Deere 214 gas garden tractor with an electric motor, he needed a mower to match.

"When I converted my Deere 214 to a 13-hp electric motor, I knew I had plenty of power to run a belly-mounted mower deck," says Bertalotto. "However, my lawn is small with lots of nooks and crannies. I

thought a front-mounted deck would be more advantageous."

Bertalotto's first electric repower was a Toro lawn tractor with a small belly-mounted three-blade mower deck. When he repowered the 214, he picked the Toro deck as the base for his front-mount mower. He stripped it down and added three 40-volt Craftsman

electric lawn mower motors.

"I picked them up on eBay for \$40 each and also replaced the old 16-in. blades with a three-pack of Oregon blades for \$35," recalls Bertalotto. "The blades weren't an exact fit, so I turned some adapters on my lathe."

Bertalotto used a few pieces of angle iron and some square tubing to fabricate a deck carriage. He added two connecting ears to the above-deck carriage and two ears to the deck itself, as well as a clevis hitch to the deck. He also added four swivel casters with adjustable supports.

"I had previously installed a receiver hitch on the front of the 214," explains Bertalotto. "To mount the mower, I slipped an upright support into the receiver hitch and hung a linear actuator from it. The ram end was hooked to the clevis hitch on the mower deck."

He fabricated four lift arms from bar stock and attached them to existing mounting points on the tractor frame. When bolted to the ears on the deck carriage and the deck, the deck remains parallel to the ground when lifted.

After painting the deck Deere yellow,

Bertalotto mounted a heavy-duty golf cart solenoid to the deck along with other electrical components.

"Power from the tractor to the mower motors runs through a heavy-duty Anderson connector," says Bertalotto. "A smaller, light-duty Anderson connector starts the motors."

"It was a fun project, but I discovered it got very little use," says Bertalotto. "Even mounted to the front end, it was less efficient than my push mower for mowing my small yard."

Contact: FARM SHOW Followup, Roy Bertalotto, Dartmouth, Mass. (www.rvbprecision.com; YouTube: roybertalotto6355).



Mower deck stays parallel to the ground when lifted.