Restored 1912 Mack Jr. pickup.

Mack Trucks Had Junior Versions

Mack Trucks, the bulldog of big trucks, twice introduced smaller versions as they attempted to crack the pickup market. Mack first introduced the Mack Jr. in 1905, building 1,361 between then and 1916. It was a 1 1/2-ton, 4-cyl. gas engine with three forward speeds and a reverse. It had a chain drive jackshaft and a top speed of 18 mph.

Iowa 80 Trucking Museum has a restored 1912 Mack Jr. on display. It was made in the Mack factory, Allentown, Penn., and is reported to be one of only three left in existence.

In 1935, Mack Trucks made another attempt at reaching the small truck market. They contracted with REO (originally R.E. Olds Motor Car Company) to brand their basic pickup truck with the Mack Jr. name.

The newly named truck was built to Mack specifications based on the REO Speed Wagon. Mack sold Mack Jr. trucks from 1936 until 1938 in 1/2-ton, 1-ton, 2-ton and 3-ton models.

Eilers Brothers Trucking & Excavating has one of the few remaining of the 4,974 Mack Jr. chassis built during this period. The 1/2-ton model is a 1937 version and one of three older Macks the company owns, according to Raymond Eilers.

"My dad was at an antique truck show in 1994 when he bumped into a guy who asked him if he was interested in a Mack Jr.," says Eilers. "It was stored nearby, and after looking at it, Dad bought it on the spot."

Eilers' dad had the Mack Jr restored, as it was in poor condition at the time. In 2008, it underwent a second restoration.

"The building it was stored in collapsed and damaged the truck," says Eilers. "We had it completely restored after finding a lot of imperfections from the earlier restoration."

This past season Eilers took it to its first antique truck show since 2020. He drove it 14 miles to and from the show.

"It drives excellent," says Eilers. "It's a pretty light-duty truck."

The Eilers brothers also own a 1941 Mack ED and a 1952 L2L semi-tractor with a Cummins 290 motor.

The '41 ED isn't quite as rare as the Mack Jr. It's one of only 2,686 EDs built between 1938 and 1944. Unlike the Mack Jr., it was actually built by Mack as part of their E-series of trucks. Less than 50 are thought to still exist. It was rated at 1 1/2 to 2 tons but could carry more.

Eilers Brothers 1937 Mack Jr. pickup

At one time, the Eilers had two EDs, however, one was not all original and it was sold. The one remaining was damaged in the same building collapse as the Mack Jr. but didn't require as much restoration.

While he is unsure of how many Mack Jr. pickups from the 1930's remain, he knows they are few and far between. He has heard of some reproductions showing up. He has loaned parts to collectors needing a sample when fabricating a part. Interest remains high.

"The Mack Jr. and the ED attract a lot of interest," says Eilers. "People really gather around."

Contact: FARM SHOW Followup, Eilers Brothers Trucking & Excavating, Inc., P.O. Box 216, Readsboro, Vt. 05350 (ph 802-423-5413 or 802-430-2417); or Iowa 80 Trucking Museum, 505 Sterling Dr, Walcott, Iowa 52773 (ph 563-468-5500; www.iowa80truckingmuseum.com).

Laser weeder can tell what weeds are found and in what percentage, and where the most weed pressure is in a field.

Zapping Weeds With Lasers

Carbon Robotics is zapping weeds with lasers, saving high-value crop farmers time and money. The rear-mounted platforms carry eight laser modules. The simultaneously operating laser can kill more than 200,000 weed seedlings per hour while leaving desired seedlings untouched. First introduced in February 2022, production is sold out through the end of 2023.

"We are shipping them as fast as we can build them," says Paul Mikesell, cofounder and CEO. "Our customers are mostly high-value crop producers on the East and West Coast, as well as some organic corn and soybean producers. We have sold, but not yet delivered, some in the Midwest."

Mikesell and key staff have extensive backgrounds in computer vision, machine learning, robotics and other computer-based technologies. Their knowledge of currently available technologies that could be applied to agriculture allowed them to move rapidly from start-up in 2018 to a commercial product 4 years later.

"Everything we use in our laser weeder has a life in another industry," says Mikesell. "We had to reapply circuits and well-commoditized components for use in a farm field. We had to figure out how to make them rugged. We learned new ways to break things every day. The wind and dust were a real challenge."

The first prototype was a cart they pushed through a field. They had to ground truth not only the lasers but also the cameras and computers needed to do the job, not to mention the supercomputer that instantly analyzes gathered data and decides which plants to zap.

"We started buying higher and higher-powered lasers to burn the weeds," recalls Mikesell. "We went from 40-watt lasers to 150 watts."

Prototypes quickly progressed to the initial product. Their 2022 LaserWeeder Implement is a 20-ft. wide, 3-pt. mounted system that kills up to 99 percent of weed seedlings with sub-millimeter accuracy. It travels at 1 mph, covering 2 acres per hr., 24 hrs. a day. Tracking cameras identify the weeds with the help of LED light bars. Deep learning systems and precision computer vision software used in the onboard supercomputer direct the lasers. The lasers and computer system are powered by a front-mounted, pto-driven generator.

With its 2 1/2-ft. clearance, the system is designed to kill weeds at the seedling stage and continue doing so as needed. Mikesell notes that the type of weed can affect the need for return trips. Grass weeds that spread underground continue to send up shoots, and multi-head weeds like purslane require each flower to be zapped.

"It takes less power and time to kill a weed at the cotyledon stage, but the computer vision module in the control system adapts the time and power to larger weeds," says Mikesell. "As the crop grows, the cameras can see in and between the foliage. It only takes a 5 mm space for the beam. Once a crop canopies, we don't have to come back. However, a crop like onions requires more trips through the field."

Along the way, the company took a step back from an end goal of an autonomous machine. While they have an autonomous design, Mikesell explains that it is not practical at this time.

"We found that with irrigation systems and other equipment in the field, it was much simpler to introduce the LaserWeeder on a tractor with an operator," he says. "For automation, it needs to be more plugged into a total farm central nervous system."

Mikesell recommends at least a 120-hp. tractor with a 9,000-lb. lift capacity for the LaserWeeder Implement.

A list price for the system has not been made public. Each unit is sold directly to the customer by the company versus a leasing or service-based program.

"The farmers we talked with prefer to own their equipment," says Mikesell. "That way, they capture all the benefits from the equipment."

To provide weed control, the LaserWeeder Implement is constantly collecting data. It can tell the operator what weeds are found, in what percentage, and where the most weed pressure is in the field. It also tracks the health of the crop and its canopy stage. These data points are likely just the beginning.

"We haven't finished with what we can get with our cameras," says Mikesell. "We can already spot some disease vectors with our cameras. We are working with different manufacturers on other sensors. Over time we will be adding more."

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Laser beam zapping weed seedlings amidst crops.