

Accessories Help ATVs Do More Work

The original Quadcrate was designed and built by a farmer in Northern Ireland who wanted an easier and more efficient way to move sheep. The enclosed metal cage, which folds flat and is fitted to the receiver and frame of his 4-wheeler, has sprouted other ideas, including crates for a UTV, a Bubble Cab, rollbar systems, toolboxes, and versatile storage cubbies.

The designers say, "We've always known that Quadcrate equipment can be like a Swiss Army Knife." A recent addition is a wire unroller that handles barbed wire or smooth sheep wire. There's also a wire tensioner for pulling woven or individual wires snug to a post.

The Postholder accessory carries posts behind the driver in a sturdy compartment so they don't roll off or slide off. The Lambox kit fits on the back of the Postholder and provides a sturdy enclosed compartment to carry small lambs. A front Postholder mounts on the platform in front of the driver. All of these holders have rounded tubular frames and are fitted with pigtail holders to secure posts, a sledgehammer, a crowbar, or other tools.

The solid metal parts of Quadcrate accessories are made of sturdy checkplate aluminum, lighter than similar steel parts.

Quadcrate offers an animal Transport Cage that mounts to the receiver of an ATV and connects to the support frame above the fenders. It's large enough to move a full-size sheep, a newborn calf, or even carry a dog when it's too tired to run.

Enclosing an ATV for inclement weather is easy with the Bubble Cab, which allows see-through visibility on all sides and even has front glass and a wiper. Coupled with LED



Quadcrate, which began producing crates to move small animals with an ATV, now makes other accessories for ATVs and UTVs.

clearance and road lights, it makes ATVs and UTVs workhorses even in tough weather.

The company has received numerous testimonials praising the excellent design, durability, and ease of installation. Morgan Fahy says, "We use it many times a day, and it's a life changer. It carries everything from mineral buckets to meal troughs to animals themselves."

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Retrofit Kenworth battery modules to side of frame rails.

E-Truck Built By Truckers For Truckers

Chase Barber and his trucking partner Eric Little wanted a heavy-duty truck with high torque and low fuel costs that was also easy to repair, so they built one. It's all-electric, with an auxiliary genset to recharge batteries on the go for unlimited range and an e-motor on the drive shaft. It's so efficient at times that energy harvested from regenerative braking has to be bled off or it will overload the battery pack.

"We've been saying for a long time that four or five good mechanics can build a truck faster than 40 or 50 tech bros," says Barber. "We have a diesel engine, but it only runs when the batteries need to be recharged. Everything else is electric."

Barber and Little proved out their concept by retrofitting a 1962 Kenworth. Like the Tesla Cybertruck, it has a battery pack. Unlike the Tesla, it also has a 450-hp. CAT

C9 industrial diesel genset that acts as a 600V, Level 4 fast charger.

The two men founded Edison Motors about a year ago with a concept. The first step was completing the retrofit. The end goal is to build new, electric, heavy-duty trucks and retrofit older ones. Crowdfunding, largely from other truckers, is financing the effort.

"About 95 percent of our investors are truck drivers or trucking company owners," says Barber. "They invested because they want us to build a good truck that is reliable and fuel efficient."

Building a truck for truckers means one they can fix or repair themselves. "We get most of the parts off the shelf at local parts stores," says Barber. "At every step, we ask our mechanics and engineers to select components easy to find and fix."

The two partners got their start with a used



FJDynamics makes an economical autosteer system for tractors and combines.

Lower Cost Guidance System

"FJ Dynamics autosteer is a very affordable complete RTK unit for any tractor regardless of age," says Steve Henry, an FJ dealer in Texas. "We have it on different tractors, including a 38-year-old Deere 4440, and love the precision."

Henry says the FJDynamics system includes satellite receivers, a monitor, a portable base station, a powered steering wheel, and all the connectors and wiring harnesses needed for operation. The system uses GPS satellites for WAAS guidance, and when used with the portable RTK base station, the signal provides sub-1-in. accuracy up to two miles. A more powerful RTK base station for tower or grain leg mounting provides a signal up to 10 miles. The WAAS signal without either station provides sub-4-in. accuracy.

Henry says the FJDynamics system is easy to install and provides excellent precision operation and working stability. The system compensates for uneven terrain with an attitude sensor to provide straight line or contour guidance no matter what slope the vehicle is on. The wheel angle

sensor monitors wheel rotation and tells the control terminal which direction the vehicle is headed. Touchscreen controls and operation status are on a 10-in. monitor in the cab. The GNSS antennas provide accuracy from GPS, Glonass and BeiDou constellation satellites. One antenna is for positioning, and one is for orientation. Field information can be edited and imported in the FJD device and transferred to other devices.

Another unique feature of the FJ system is auto turn, which allows the vehicle to make a U-turn at the end of a field without manual operation. The operator just needs to step on the vehicle brake at the turning point.

The FJD Autosteering complete kit is \$6,799. The tripod RTK receiver is \$1,000, and the FJD base station for long distances is \$2,499. There's no annual signal fee, and system pricing includes unlimited software updates.

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logging truck. To them, building a heavy-duty truck means focusing on tandem and triple-drive axle trucks. The key to meeting their goal on new and future retrofits is the E-Axle.

Each E-Axle has a 540V, 3-phase electric motor mounted to the differential. The motor produces 335 hp. at the axle, giving a tri-drive truck 1,005 hp. Torque is impressive as well, with each axle producing 34,200 ft. lbs. Each axle is also rated for 28,700 lbs. gross weight.

Battery modules are heated and cooled for extreme weather. The heater is a simple diesel engine heater hooked up to the standard battery pack cooling system. Battery modules are 35kwh and weigh 490 lbs. The twin-axle trucks will carry five modules, while the triple-axle trucks will carry eight modules. The all-electric version replaces the genset with more battery modules.

"We can put in a 2,000-lb. diesel genset that puts out almost 5 megawatts of power," says Barber. "With a battery pack, the diesel only runs half-time."

Edison Motors is now building its first production truck. Once finished, it will go through extensive regulatory testing.

In the meantime, they are working on retrofitting logging trucks, a snowplow, and a hydrovac for several strategic partners. Unlike an OEM truck, a retrofit only needs to be tested at a mechanic's shop to be sure it is safe, gets its sticker, and is ready for work.

"We'll be doing 6 mos. of testing with the retrofits, and then we want still more time on the road to gather data," says Barber.

He hopes the road time will help establish miles per gallon with the diesel-electric system. "It would be easier if we were going down the road with an 80,000-lb. load," says Barber. "We're talking about vocational



Edison Motors plans to sell retrofit and new trucks using all electric or a combination of electric and diesel technology.

trucks. What they do and where they go will make a difference in mileage."

Barber expects it'll be about a year and a half before the company starts taking orders on new trucks. Retrofits will be earlier. They will vary from replacing just the drive train to everything but the cab and body.

"We're still working out pricing," says Barber. "We expect our new trucks to run about 20 percent more than diesel-only equipment."

One of many things that sets this company apart is the desire to share every step of the journey. There are more than 250 TikTok videos and more than 20 YouTube videos about their process.

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