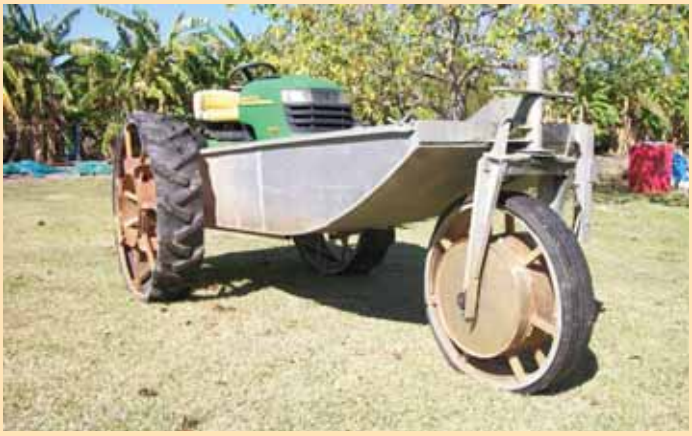
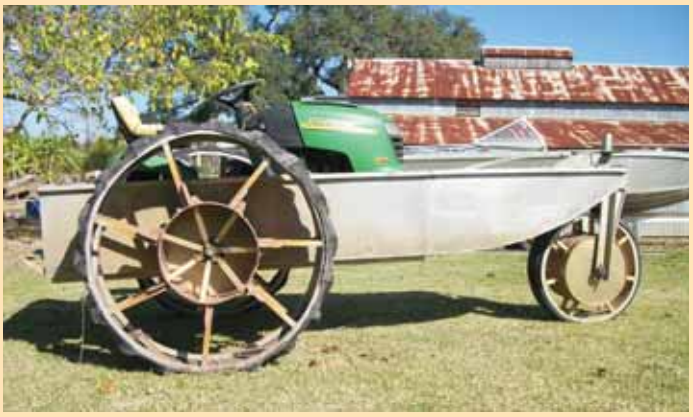


Jesse LeBlanc's 3-wheeled amphibious "ATV" is powered by a Deere L100 garden tractor that rides inside a homemade, 10-ft. long aluminum boat.



Rig's 4-ft. high aluminum rear wheels are lined with rubber lug treads. Inner hubs support a series of 8-in. long metal paddles that help propel boat through water.

By Bill Gergen, Senior Editor

Amphibious "ATV" Powered By Deere Garden Tractor

When folks around Gibson, La., see Jesse LeBlanc riding his home-built "amphibious ATV" into the water, they're often startled.

After all, it isn't every day you see a Deere garden tractor looming above a 10-ft. long aluminum boat, churning through the water on big lugged rubber wheels. Nor will you often see a boat running on rubber wheels over dry ground.

LeBlanc's 3-wheeled rig rides on a pair of 4-ft. high aluminum wheels lined with rubber lug treads on back, and a single 32-in. high aluminum caster wheel on front that's lined with smooth rubber. The entire tractor fits inside the homemade aluminum boat, secured by just 6 bolts.

The tractor's original rear axle is used to chain-drive a set of shafts, which extend through both sides of the boat and are used to drive the big rear wheels. The wheels are equipped with inner hubs that support a series of 8-in. long metal paddles, which help propel the boat through the water.

A steering arm extends forward from one of the steering spindles on the tractor's front axle to a vertical steering spindle located above the front wheel. An aluminum frame surrounds the wheel to keep it from turning too short and bogging down in deep mud. The wheel is built with a single hollow, 20-in. dia. waterproof drum that aids in flotation.

"It's a really awesome piece of equipment that can go just about anywhere. Yet it drives and steers just like an ordinary garden tractor," says LeBlanc. "The shifting and throttle on the tractor were not modified.

"I built it so I could go into boggy areas with standing water. It's particularly handy when I go into swampy woods to cut firewood. The trees I cut are often growing in standing water, which makes access difficult. I use the boat to haul chainsaws, wedges, and other tools up close to the trees so I can cut them down. If I think the boat might get too heavy with stuff, I can distribute the weight by pulling another boat behind me."

He started with a 2001 Deere L100 garden tractor equipped with a 17 hp engine and manual transmission. He removed the tractor's 4 wheels, then used a die grinder to keyway both sides of the rear axle – which consists of two independent shafts – and installed a pair of no. 60 sprockets. He also mounted two larger sprockets on a pair of 1 1/4-in. dia. stainless steel shafts that are located 8 in. in front of the rear axle.

"Each axle works independent of the other, just like on the original garden tractor," says LeBlanc. "The big chain sprockets on the rear axle result in a 3:1 gear ratio that compensates for the big 4-ft. wheels. As a result, the tractor travels at the same speed as it did out of the factory. If I want I can remove the sprockets and put the tractor's rear wheels back on.

"All the sprockets are mounted on sealed pillowblock bearings, and I applied silicone around the bearings where the shafts go through the boat to make everything waterproof."

To line the wheels with rubber, LeBlanc used a sharp knife and a rubber mallet to remove the tread from a pair of old rear tractor tires. "I cut along the edge of the tire's tread by pounding on a large sharp knife with a mallet. Then I used self-tapping screws to attach the rubber to the wheels," says LeBlanc.

He says he thinks his amphibious ATV would work great for duck hunters. "With the big wheels, the tractor and boat ride high enough that I can go through 8-ft. high cattails with no problem. The rig can go through both shallow and deep water, although it works best in water that's 2 1/2 ft. deep or less. That way the rear wheels can touch the lake bottom, providing all the traction I need."

A steering arm extends forward from one of the steering spindles on tractor's front axle to a vertical steering spindle located above the front wheel.

Contact: FARM SHOW Followup, Jesse LeBlanc, 248 Old Spanish Trail, Gibson, La. 70356 (ph 225 287-0679; jesseleblanc33@yahoo.com).

Modified Pickup Accommodates Wheelchairs

Instead of being limited to minivans, wheelchair-bound drivers now have the option of driving a 2-WD or 4-WD pickup while sitting in a wheelchair, thanks to a new design by GoShichi LLC.

The door of a GM extended cab or crew cab truck slides out 36 in. and is attached to a platform that lowers with an electric actuator. The wheelchair locks in place on the platform, which raises and then moves horizontally to place the chair and person behind the steering wheel. Between the wheelchair lock and the truck's seatbelt, the driver is as safe or safer than if he were sitting on a regular seat. GoShichi-adapted trucks were tested, and passed U.S. crash tests before they were cleared to go on the market.

The first truck, owned by Steve Kitchin, one of GoShichi's owners, was modified in a barn. The Fort Wayne mechanical engineer advertising executive had been an active young man until a 1999 car accident left him a quadriplegic. He wasn't excited about the available options.

"A minivan is not the most stylish vehicle," Kitchin laughs. "That was my biggest thing – my driving force. I always drove a 4WD before."

After a decade of driving minivans, he and a friend who was also an engineer, decided to modify a truck that could pass crash tests – something that had never been done before. Kitchin's team worked on a design for a couple of weeks, applied for a patent and modified a truck for Kitchin. When he posted it on the internet, he discovered there were many other people in wheelchairs who wanted pickups.

Trucks especially make sense for ranchers and farmers, outdoors people and certain regions of the country. Military people usually prefer them.

Though it's completely a U.S. company, Kitchin named his business GoShichi – Go is Japanese for five and Shichi is Japanese for seven – after the numbers he and his fellow designer wore while playing softball. They were also in martial arts together, where they spoke numbers in Japanese. The Indiana company started production in March 2010, and modified more than 200 vehicles by the end of 2011.

"We use GM (extended and crew cab) trucks because the chassis is good, and it's a solid-built truck," Kitchin says. "We use over 250 parts, and we save costs by building on the same thing. There are no surprises."

To maintain the truck's original clearance, GoShichi lifts the truck 3 in. with a standard lift kit, and then cuts into the frame on the side the wheelchair platform is installed. That lowers the floor to accommodate the chair, and the cut frame is reinforced with steel. Lift capacity is 750 lbs. so it can handle manual and power wheelchairs.

"We use an electric actuator," Kitchin says. "It has powerful pick-up for a lot of weight. It's also very precise to stop in the right spot every time." That's important for the door to close tight.

Wheelchair-bound drivers now have the option of driving a 2 or 4-WD pickup while sitting in a wheelchair, thanks to a new design by GoShichi LLC.

Since everything is in the cab, it's not exposed to the weather. Inside, there is still room for a passenger in the front and passengers in back. Kitchin notes that the passenger side can also be modified.

The system is designed and built with quality parts to last longer than the truck. So far, GoShichi sells its modification package through 157 mobility dealerships across the U.S. and Canada. In addition to the price of the truck, modification costs range from $24,000 to $35,000. Contact GoShichi to find a dealer in your area.

Contact: FARM SHOW Followup, GoShichi LLC, 505 Avenue of Autos, Fort Wayne, Ind. 46804 (ph 260 434-4777; www.goshichi.com).