

One-Of-A-Kind Sprayer Modeled After Big Bud Tractor

Bob Welker and his sons Nick and Scott produced a Big Brute self-propelled sprayer patterned after a Series 3 Big Bud tractor.

It was only natural that when they tired of using a pull-type sprayer, the Welkers thought well outside the box. Says Nick, "We're good at cutting, welding, inventing, fixing, and painting, so this was an adventure." The chassis for Big Brute is a 2001 Case IH Titan 4375 Floater Truck. Nick Welker says they chose that rig because the Cat 3176 425-hp. engine was strong, and the Allison 6-speed transmission provided the speed ranges they wanted.

The project required a massive amount of planning, cutting, welding, replacing parts, and configuring the rig for liquid rather than dry fertilizer. Big Brute has the physical appearance of a Big Bud tractor because they replaced the Case Cab and hood with a salvaged hood from a 1981 Big Bud Series 3 tractor.

The tank cradle is configured from a 1988 1,600 gal. Ag Chem Terragator. The center

section is from a 2009 New Holland S1070 pull-type sprayer. The 120-ft. Specialty Enterprise Millennium booms are 2022 models the Welkers adapted to the back of the Big Brute. State-of-the-art electronics sense weed growth and activate spray nozzles as the sprayer moves through a field.

Unlike many projects that are built and photographed a few times when the rig is clean, the Big Brute was documented with thousands of photos and video clips during all phases of manufacturing. Those photos and videos were edited into a 13-min. time-lapse video that's been viewed thousands of times on their YouTube channel.

Nick Welker says that even though Big Brute is an "only child," it's done more and traveled several thousand miles during its short life, including a trip to the 2023 Farm Progress Show in Decatur, Ill. where it was displayed next to its distant cousin, the new Big Bud 700 tractor.

Entertaining dialogue and information on how Big Brute was built, modified, rebuilt



Big Brute was modeled after a Big Bud tractor.

again, and then put to work in the field can be found on the Welker Farms YouTube channel.

Contact: FARM SHOW Followup, Welker

Farms, 275 Benjamin Rd., Shelby, Mont. 59474 (YouTube: Welker Farms).

Justin Lutz designed and built a custom grapple fork for a 2 1/2-yd., heavy-duty bucket.



He Built A Massive Homemade Grapple

"The grapple fork we wanted for our 2 1/2-yd. bucket was going to cost nearly \$13,000 Canadian with a 12 to 16-week wait time for delivery, so I decided to build one myself. My savings was nearly \$4,500," says Justin Lutz, a rancher near Irvine, Alberta, and a heavy-duty mechanic in the oil and gas industry.

Although he's not a welder or fabricator by trade, Lutz knew what he wanted. He penciled out his bucket idea on paper and turned it over to Jordan Thomson of JD Designs. Thomson created CAD files so Lutz

could make sure the grapple would work before he started fabricating CNC parts.

"The first priority was to build a really strong grapple because it was for a Case 721 industrial wheel loader rather than an ag tractor," Lutz says. "It needed to handle all types of jobs in all types of weather. In the summer, we'd use it for cleaning corrals, moving big bales, loading dirt and rock, and in the winter, it would fill the feed wagon, move bales, and push snow."

Lutz says he researched several designs

and found that some forks were made out of thinner materials that weren't properly reinforced, so they wouldn't last. His grapple mounting brackets and teeth are made of 3/4-in. thick steel. He reinforced the back of the bucket where the brackets mount with 1/2-in. plate steel for added strength.

Lutz made the tooth bar out of 4-in. square by 3/8-in. thick tubing. Teeth mount on 1/2-in. thick plates, and the tooth bar bolts to the main grapple arms with 5/8-in. Grade 8 bolts. All of the pins are bolted in to prevent them from rotating and wearing.

The cylinders to operate the massive grapple have a 3-in. bore and a 20-in. stroke operating under 3000 psi working pressure. He disassembled the cylinders and had a machine shop build 2-in. stroke limiters to meet his design specifications.

Lutz says the bucket lifts 2,500 lbs. of dry material just over 12 ft., which is high enough to dump silage and forage into their 700T vertical mix wagon. The grapples can grab and easily handle two 1,300 to 1,600 lb. large round bales.

"I didn't keep track of the time it took to build the grapple because I built it in steps at night after work on my main job," Lutz says. "I'm a self-taught welder and did all the work with an old Miller pipe pro that I bought from a pipe welding professional. It worked great using 7018 sticks with different rod diameters and lots of multi-pass welding because of the material thickness."

Lutz says his grapple does exactly what they want it to do and can take the breakaway lift and carry capacity of a high horsepower wheel loader. "I built it out of heavy-duty, high-quality materials, and it's finished with bolted-in lift pins and reinforced hoses that should wear well for a long time," Lutz adds.

Contact: FARM SHOW Followup, Justin Lutz, Rusty Rose Mechanical, Box 258, Irvine, Alberta, Canada T0J 1V0.



Mounting brackets for the grapple arms are 3/4-in. thick steel welded to the back of the bucket, reinforced with 1/2-in. plate steel.

Family Moves Bridge To Connect Their Properties

Wyoming ranchers Keith and Laura Galloway and their son Ethan have adjoining property. Unfortunately, it's across a 70-ft. wide creek with high banks and no connecting road. Ethan says that dilemma turns what should be a 2-min. trip into a 5-mile drive several times a day, through the town of Ten Sleep. The trip's been made with pickups, farm machinery, and trucks hauling hay or silage. Cattle going from one property to the other have been herded down the roads and right through town, interrupting traffic for locals.

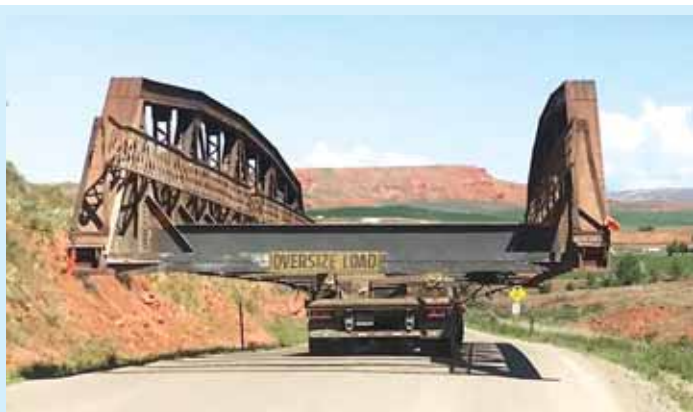
Laura Galloway says they looked at several ways to connect the property, including using old flatbed rail cars to make a bridge. She says it would've required two cars and new decking to support heavy loads, a project that would've been very costly.

In the winter of 2023, they happened onto

another solution when Laura saw an ad in the local paper for a 100-year-old bridge for sale by a nearby county. The Galloway men went to look at it and decided it would work well. Their bid of \$1,100 was accepted with the understanding they needed to move the structure by the end of May.

Laura says it's not every day a ranch family needs to find someone to move a 40-ton bridge that's 25 ft. wide and 60 ft. long. Eventually, they located Danny Bertsch of Swing Trucking in Worland, Wyo., a heavy equipment company with 75 years of experience. Danny took one look at the bridge and said they could do the job. They used a huge crane to lift the 40-ton structure onto a large flatbed truck, then used a powerful semi-tractor, three pilot cars, and a lot of flashing lights to haul it 40 miles, through the town of Ten Sleep to the ranch.

During the summer, the Galloways



The Galloway family in Wyoming moved a 25-ft. wide, 100-year-old, 40-ton bridge 40 miles down public highways to their ranch.

installed concrete footings into both sides of the creek bank to support both ends of the bridge. Bertsch returned to lift the bridge in place. The Galloways replaced the crumbling concrete on the bridge with new decking to

provide a smooth and strong surface to support machinery, trucks, and livestock.

Contact: FARM SHOW Followup, Galloway Ranch, 201 Road 47, Ten Sleep, Wyo. 82442.