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Dent behind hydraulic lift.

Fixing Bent Augers Is Good Business

Every day brings new challenges for Roger Gutschmidt at Gutschmidt Manufacturing, his on-farm repair and fabrication business. He has shared nearly 70 past projects with FARM SHOW readers. That said, auger repair is becoming a lucrative side job. Two years ago (Vol. 48, No. 1), he bought a bent Brandt auger from an insurance company for \$2,750 and restored it to a \$50,000 value. This past year, he did it again.

"I bought a 13-in. by 110-ft. Brandt auger from a dealer for \$300," says Gutschmidt. "He wanted \$500, but I negotiated it down. When I was done with repairs, I sold it to a neighbor for \$30,000."

The auger was totaled when the owner smacked the end into a tree. The impact bent the tube near the hydraulic lift frame and severely creased the metal. When Gutschmidt brought it back to his shop, he found the

damage wasn't as bad as he'd feared. The fighting was undamaged.

"Because the tubing was crinkled, the auger wasn't able to run smoothly," says Gutschmidt. "I could've repaired the damage, but the bottom of the tubing was wearing thin. I bought a new section of tube from Brandt for \$3,300 and replaced the crinkled portion."

Gutschmidt straightened the end of the tube where the auger had hit the tree. He removed that section and inserted a modified scissor jack. Instead of the usual flat plates, he attached curved steel plates that matched the tube.

"I attached a long rod and slid the jack inside the tube to the dent," he says. "I made an extension with a 1/2-in. drive on one end and a female on the other for a socket. When I cranked it, the jack pushed the dent out."

Working on long augers can be tricky,

but Gutschmidt has found a way to make it easier. He pulls the auger wheels into a shallow drainage ditch that runs through his farmyard. Once the wheels have settled in place, he lifts the hitch end of the auger and rests it on a 5 to 6-ft. hay bale.

"The hay bale is like a soft sawhorse," he says. "The auger indents the hay so it won't move side to side. The rest of the auger is perfectly level, and the discharge end is closer to the ground. It works really well, with the auger accessible from both sides."

Gutschmidt makes sure to mow the grass under the auger close to the ground.

"It makes dropped tools and parts easy to find," he adds.

After Gutschmidt replaced the damaged 33-ft. section of the auger tube, he noticed the bottom section had already been replaced. He cut the section he removed in half lengthwise and placed the halves against the underside of the remaining original tube sections, using pipe clamps to secure them.

"Auger tube bottoms experience flight wear, while the top side of the tubes stays good," says Gutschmidt. "I stitch-welded the half-pipes in place to reinforce those weakened sections."

Gutschmidt's goal for the repairs was to make the auger dependable again.

"I don't like to cut corners," he says. "Once I heard it run, I knew there wouldn't be problems. It ran like a dream with no vibration."

When his neighbor heard it run, knowing what Gutschmidt had done, he didn't hesitate to buy it.

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The team prioritized using off-the-shelf parts to ensure future repairs could be handled anywhere.

How The First Big Bud Tractor Came To Life

By Bruce Derksen, Contributing Editor

Tony Hicks, like many young trade students in the 1960s, navigated a demanding schedule of working night shifts (at a body shop) while attending classes by day. After earning a diploma in diesel and auto mechanics in 1968, Hicks' journey led him to the Wagner Equipment Co. in Havre, Mont., for the initial design and planning stages of the earliest Big Bud tractor. In the fall of 1968, the tractor was still a vision; it wasn't until the following March that ground was broken on what would become an icon of agricultural innovation.

At the time, John Deere had recently acquired Wagner's patents and decided to engineer its own tractors. The Montana shop's foreman and engineer, Bud Nelson, took the lead on the tractor's design, eventually lending his name to the project.

During the initial prototype build, Hicks handled all the ironwork, including cutting,

welding and fitting.

"Our tools were really basic," he explains. "To shape the front of the cab, we used chains, come-alongs, vise grips and sledgehammers to get it looking right. It was a crude operation, but our five-man crew was a dedicated bunch, and we built that tractor from the ground up."

The team prioritized off-the-shelf parts to ensure future repairs could be handled anywhere. The engine was a Cummins, delivering roughly 325 hp. The axles were Eaton, and a Fuller 10-speed truck transmission powered the machine. It rode on single, wide, squatty wheels nearly 4 ft. across.

"The shop was especially noisy and smoky, and the hours were long, starting and ending in darkness," Hicks says.

By the fall of 1969, it was clear that the team's hard work was worth it, as the finished

prototype rolled out the shop doors.

"I was fortunate to be the one to test the prototype in the field," Hicks says. "On the first attempt, it easily pulled a 52-ft. cultivator."

A persistent challenge with early tractors was their tendency to jerk and lunge when cornering at the end of a field. Nelson and the team resolved this by ensuring the pivot point to the U-joint matched on both ends, a solution they incorporated into the Big Bud's design.

"The tractor turned smoothly, with no jerking or jarring motions," Hicks says.

The first Big Bud tractor performed well and didn't require any major modifications. After it was completed, the crew scaled up production, and Hicks' role shifted to building cabs for the tractors that followed.

"I'm really proud to have had a part in this one-of-a-kind tractor," Hicks says. "It helped shape a new era of agricultural machinery."

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