

Tractor Restoration Business Is Booming

When the pandemic hit, Luke Olson figured his tractor restoration business would dry up. Instead, it boomed. He used to be four to six mos. out on work...now he's two years out.

"I was worried I would be out of a job; instead, I'm overwhelmed," says Olson. "I've done work for people from N. Y. to Colo. and have one on the list from Calif. I never dreamt I would have customers from so far away."

The grandson of an Allis Chalmers dealer, Olson is best known for working on that brand, in part because he collects them himself. However, he works on all colors and all sizes. His biggest restoration was an 8030 Allis Chalmers. His smallest was a child's wheelbarrow.

"A customer asked me to restore a 560 Farmall pedal tractor," says Olson. "Then he brought over a wheelbarrow he'd had as a kid."

Olson doesn't have much time for wheelbarrows or pedal tractors anymore. In the past five years, he has restored around 60 full-size tractors, including some rare ones.

"I did an Allis WC grader tractor," says Olson. "It was called a speed patrol, and only 175 were made. It had had a rough life. Everything was frozen up and rusted solid with lots of broken parts. I took parts from three tractors to restore it."

Most of the tractors Olson works on are newer and less rare. In fact, he says they are getting newer, with more and more from the 1960's and 1970's. For younger customers,



Allis Chalmers WC grader tractor before restoration at Olson Tractor Restoration.

these are the tractors they remember from their youth. The older the tractor, the harder the restoration usually is and the more mechanical problems there often are.

Old or new, Olson starts with an estimate of what is going to be required to complete the restoration. If additional problems appear during the process, he notifies the customer with a recommendation and an estimated cost to fix the problem.

Depending on the extent of work required, the tractor or equipment is disassembled. If a part can't be completely painted in place, it is removed and painted separately, likewise if it is blocking access to another component. Of course, that is after sandblasting to remove not only paint, but grease, grime and rust.

Olson always spends a lot of time on the sheet metal. He notes that dents and dings are inevitable on an old tractor. Even one that looks perfect with the old, dull paint will

show dents once a new paint job is completed.

"We go over the entire tractor looking for dents and dings," says Olson. "It is not uncommon to spend 30 to 40 hrs. on fenders and hoods."

Dings can be more time-consuming than rusted-out sheet metal. In the latter case, Olson will fabricate steel patches and weld them in.

"Once the welds are ground down and the piece is finished, the patch is undetectable," says Olson. "On some tractors, the dents are less subtle."

Irreplaceable broken cast parts are a real challenge. In those cases, Olson has a foundry he works with. In the case of a 1919 Altman Taylor, the foundry used the broken parts for a pattern and then cast new ones.

Once repairs and replacements are done and the tractor has been sandblasted, the bare metal is primed. Different primers are used for different applications. In the case of sheet



Restored Allis Chalmers WC took parts from three tractors to complete.

metal that requires an extremely smooth finish, two primers are used, an etching primer and a high build, sandable primer.

Getting the paint right is a real point of pride for Olson. He knows that color is one of the biggest arguments at tractor shows. He prefers to use single-stage automotive paint. "The paint we apply has a hardener added that gives it a better shine. It will be more durable than the OEM paint originally used," says Olson. "We do use the original colors for all restoration jobs. The research on this is part of every restoration. I'm always happy to share paint codes with anyone restoring a tractor. The more information we share, the better."

Olson is also willing to share the secret to successful restorations. "The biggest thing is to have a list of resources that never ends," he says. "The more people you know, the better off you are."

Olson admits he has restored some that shouldn't have been. "It would have cost less to find a different one, but about 90 percent of the tractors I do were Dad's tractor or one the customer grew up with," he says. "That's why almost every restored tractor has more in it than it is worth on the market."

A job well done by an expert like Olson is more than a restoration. "The tractor will look better than it did when it came off the assembly line," he says. "The modern chemicals and processes we use will help to keep it that way for years and years."

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He Teaches How To Do Cable Tool Well Drilling

Mark Crush doesn't have dissatisfied customers with his well drilling business. He drills wells with cable tool rigs, buys and sells the equipment to do so, and offers hands-on training in how to use the rigs.

"I charge from \$700 to \$1,200 per person for training," says Crush. "Training is done on a real well as it's being drilled. It can take from two to three days up to three weeks, depending on the well being drilled."

The price varies based on the type of student, adds Crush. "Some get right in and do the work, and they pay less," he says. "If they want to sit back and watch and ask questions, they pay more."

The main reason he charges for the training is he has to slow down the drilling process when working with beginners. "I'm trying to make a living doing well drilling, but this is about helping people, especially younger people, learn a trade."

Crush describes a young man and his dad from New York state who came to Wyoming to take the training. The son couldn't go to college because of COVID.

"The dad suggested getting training in well drilling instead of taking out \$250,000 in student loans," recalls Crush. "They bought a rig in Canada and went into business."

A big advantage to cable tool drilling is the cost of getting into business. Crush notes that a rotary drilling system requires a backhoe, water truck, gooseneck trailer, and the rotary drill. Total costs can run up to a million dollars and require multiple crew members.

"I can buy a used cable tool drilling rig for \$20,000 to \$60,000 and run it by myself with no overhead," says Crush.

Crush says cable tool well drilling can be a good business. "Once word gets out that you never hit dry holes, you keep busy,"



Cable drilling can be done year-round. The equipment costs less than rotary systems.

he says. "However, it is harder to do and requires more labor and time, which makes it more expensive than drilling wells with a rotary drilling rig."

He notes that a rotary rig can drill a 500-ft. deep well in a day, while a cable tool rig will drill from 30 to 50 ft. a day.

"I've had folks go with the rotary drilled well and come up dry. Then they call me to drill a well that produces water," says Crush. "It would have cost them less to have a sure thing the first time."

Crush started out in the well drilling

business with a rotary rig. It involves injecting drilling fluid, which is clay mixed with water, into the hole while drilling.

"Drilling a well is nothing more than digging a hole in the ground and inserting casing and a screen before the hole caves in," explains Crush. "The drilling fluid keeps the hole from caving in until the casing is put in place, but it also holds back the water. We use water instead of drilling fluid, so we don't seal the water off."

Cable tool well drilling consists of dropping a heavy hammer/bit into the hole to smash through layers of dirt, sand, and rock to reach water. Each time the bit is lifted out, it is turned slightly and dropped again.

Periodically, a bailer (bucket with a trapdoor bottom) is dropped in to remove mud, water, and crushed rock. The amount of water removed with the bailer is key.

"If you only added 5 gal. of water, but the bailer removes 15, you know you have hit water," says Crush. "If the hole is real straight, you can look in with a mirror and see the water coming in."

The technique is especially well suited to formations in western states, where it is common to encounter loose rock formations like a bowl of marbles, caves, and more that are impossible for rotary well drilling.

Crush and his son Andrew buy and sell books, manuals, old parts, and old rigs. He also sells drilling additives, diesel conversion



Cable well drilling works well with loose rock formations often found in western states.

power units, drill bits, bailers and more.

"We would like to hear from people who have old drilling rigs in their yard and don't know what to do with them," says Crush. "We will buy them and refurbish them for missionaries and water relief groups that drill for water in Africa and South America."

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