

Ramsden used channel iron to extend the frame by 30 in.



## He Built A Farmall Grader

Scott Ramsden is justifiably proud of the job his father, Dave, did creating a Farmall Cub grader. He restored the old Cub with new paint, decals, and badges and fabricated a grader attachment to OEM style.

"He took it to an antique tractor show, and everyone thought it was factory built," says Ramsden.

With many years of operating a road grader under his belt, the senior Ramsden knew what he needed for his 1/3-mile driveway. He also understood every component of a full-size grader. After looking for a small Huber or something like it, he decided to build his own. A Farmall Cub just down the road seemed like a good candidate.

"It had been used with a brush hog to clear a horse pasture, but then, for 2 years, it just sat," recalls Ramsden. "It was a 1941 A with an offset frame."

The owner said it wouldn't turn over, and Ramsden got it for only \$500. He tried a few

things to free up the engine and finally got three cylinders to fire. When he removed the valve cover, he could see the problem.

"The number one lifter had fallen off," says Ramsden. "I tapped the rocker arm, and it popped right back on. I turned the crank, and it was running on all four cylinders."

To make room for the blade to swing back and forth, Ramsden used channel iron to extend the frame by 30 in. To make a blade that would roll the gravel, he had an 8-ft. long, 8-in. wide piece of steel bent every inch.

The turntable is mounted to a turntable made from 1/2-in. thick, round steel plate. The turntable rotates on a pin welded to the underside of a push bar that extends forward from the tractor's rear end. Ramsden used a length of steel from an old dump truck frame for the push bar.

At the rear, the push bar is welded to an 8 in. long, 2 1/2-in. bolt mounted on the end of the push bar. It's inserted through a

length of channel iron bolted to the frame. A heavy spring from a snowplow wing sits between the push bar and the channel iron on the frame. Like similar springs on a full-size grader, it absorbs the shock when the blade hits objects.

A length of channel iron, about 2 ft. wider than the tractor frame, is welded across the front end of the push bar. A shorter length of channel iron is welded across the underside of the rear end of the push bar.

Two cylinders mounted vertically to the tractor frame attach to the forward crossbar. They support the front end of the push bar and give Ramsden blade depth control. Two cylinders salvaged from a snowplow mount horizontally to the rear crossbar on the push bar and to tie rod ends from a Mack truck mounted on the underside of the turntable. They control the swivel of the blade.

To give his grader similar blade control to a full-size grader, Ramsden mounted a fifth cylinder between the tractor frame and the front crossbar. It can move the entire front end of the push bar and the blade, extending the reach of the blade a foot to either the left or right side of the tractor.

To power the five cylinders, Ramsden took the generator off the A and replaced it with a hydraulic pump that came out of a 10-ton roller. He found that a 12V car battery was more than sufficient to start the tractor many times without recharging.

"I was told the grader was too light to do the work," says Ramsden. "It works fine. I put a Fisher cutting edge on it. It lets me keep a good crown on my driveway."

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Cylinder between tractor frame and front crossbar controls blade movement.



Air Seeder Parts stainless-steel components are laser machined in North Dakota.

## Stainless-Steel Manifolds For Air Seeders

The boost that propelled the demand for Air Seeder Part's C-Series lower shoot kits was customers' insistence on stainless-steel components rather than what the bigger dealers were offering.

"In 2019, a large dealership group called us saying they'd sold some new air seeders, but the buyers would only complete the sales if the lower shoots were made from stainless steel components like previously offered in older models," says Daniel Baker, Air Seeder Parts owner. "We got to work and developed a stainless-steel manifold that would fit these air cart tanks."

The prototypes became test models for the first John Deere C650 and C850 tanks.

"We put plenty of design into our system, actually purchasing some of the plastic parts from John Deere and offering them together as a kit," Baker says. "We have a working agreement with them that works well, giving me free rein to introduce new ideas and designs for any area we can improve on. Of course, they always have first rights to any of these parts."

The stainless-steel C-Series lower shoot kits are available at any John Deere or A&I Parts dealerships, which are aftermarket divisions owned by John Deere.

All kit components are lasered and machined from start to finish in Grand Forks. The C-Series lower shoot kits sell for about \$2,500 USD plus S&H.

"I think we make a great product because it's made with stainless steel, plus our design has been constantly changing for the better," Baker says.

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## Oil Loss Problem Fixed With A Pickle Jar

By Lorn Manthey, Contributing Editor



Dolejs owned a silver 1980's model Volkswagen Diesel Rabbit like this and drove it more than 250,000 miles. His "pickle jar" repair captured oil that was spewing out the breather tube.

*Editor's note: This is an unusual "fix-it-yourself" story that would've been in FARM SHOW 40 years ago had we known of it then. "Guys fix all sorts of stuff with everything from baling wire to duct tape or zip ties, but I might be the only guy who's ever fixed anything with a pickle jar," says Minnesota retiree Joe Dolejs. Dolejs made the unusual repair in the mid-1980's using a 1/2-gal. glass jar to capture oil leaking from the engine of his diesel-powered Volkswagen Rabbit. At the time, he was driving it 150 to 200 miles a day for work.*

"I really valued its 40-mpg fuel efficiency," Dolejs says. "However, at 200,000 miles, it started really using oil, almost a quart every day."

Dolejs says friends who didn't know much about car repair jokingly told him a piston was probably bent, the engine might just be tired, the oil pan had a hole in it, or maybe he was just using cheap and lousy oil. One guy even bet Dolejs that he couldn't find out what was causing the problem.

"I was stubborn enough not to take it to a repair shop, and there wasn't internet back then," Dolejs says, "but I finally figured out

that the glow plug had gone bad, probably scored a cylinder, and oil was going out the breather tube into the air cleaner. The filter was saturated with oil. Rather than fixing it, I put in a new air filter and came up with the wild idea of collecting the oil in a pickle jar and reusing it."

Dolejs cut two holes the size of the breather tube in the metal cover of a 1/2-gal. glass pickle jar. He inserted the breather tube from the engine in one hole, so it touched the bottom of the jar. He secured the other tube a couple of inches below the lid and connected the opposite end to the air cleaner. "The large engine compartment had plenty of room to hold the jar so it wouldn't tip over, so I shut the hood and headed off to work."

Dolejs says, "After my first 60-mile trip, I cracked the hood and was pleased to see at least a cup of oil in the jar. After I drove home, there was twice that much, so I got out my little funnel and dumped the oil back into the engine."

Dolejs says the jar fix worked great for almost 2 weeks. Every couple of days, he poured oil from the jar back into the engine. Then one afternoon, while driving up a long hill on the way home, he saw a big cloud of black smoke behind him. "I took my foot off the gas pedal and pushed in the clutch, but the engine red-lined, so I let out the clutch, and soon I was going 70, then almost 80. Luckily, I was on a four-lane road because I was passing cars like a race driver," Dolejs says. "I turned the key off, but the engine continued to rev, so I shifted down and used the brake to kill the engine."

He cracked the hood to find a very hot engine and his glass pickle jar nearly full of oil. "That's when I realized I'd forgotten to empty the jar," he says. The breather line to the air intake was submerged in oil. When he removed the air filter cover, the container

and filter were soaked in oil.

"The engine was running on scavenged crankcase oil and spewing out black smoke like crazy, and I'm not sure why it was over-revving," Dolejs says. "So, on the side of the road, still wearing my dress shirt and tie, I took out my little funnel and emptied the oil into the engine. After letting the engine cool, I turned the key, and it started. I babied that Rabbit all the way home, then took it to a repair shop the next morning on strong advice from my wife."

Dolejs says the mechanics just shook their heads and laughed when they saw the pickle jar. Later, they told him a piston was badly scored when the glow plug failed, so oil was blowing out the breather line. "I had them put in a rebuilt engine, which was inexpensive at the time, and gave the car to my son, who drove it another 50,000 miles."

Dolejs has enjoyed telling his pickle jar story many times over 40 years, usually after someone asks his opinion about why their car or truck isn't running right. His reply, always a prelude to the story, is, "I think a 1/2 gal. pickle jar might fix your problem."

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Dolejs VW Rabbit was using so much oil he started to capture and recycle it.