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756 Farmall repowered with DT360 engine from an International school bus.



IH Tractor Repowered With Bus Engine

“When I found out it’d cost more than \$6,000 to overhaul the engine on a 756 Farmall that I’d bought very reasonably, my buddy Barry Schimke and I decided to repower the tractor with an old school bus engine,” says Wisconsin farmer Mitch Fenske. The adventuresome mechanics pulled a DT360 engine from a 1990 International school bus. Even though the bus engine at 180 rated flywheel hp. is a full 100 hp. more powerful than the original tractor engine, no major modifications were needed for the install.

“Neither of us had done something like this before, so we just got after it bolt by bolt,” Fenske says. After about 200 hrs. on the project, Schimke and Fenske fired up the repowered tractor to enjoy the sweet sound of success.

“With a straight pipe on its original exhaust manifold coupled with the turbo, the 360 has a lot stronger sound than the original D310 that was in the tractor,” Fenske says. “We’ll use it around the farm to cut, rake, and bale

hay, maybe even take it to a few tractor pulls and turn some heads,” he adds.

Fenske says they used the original 756 frame rails and other than enlarging a few holes and using a 666 front cover, the install didn’t require any special modifications, mainly because they swapped an International tractor engine for an International bus/truck engine. They used the tractor’s radiator, fuel tank, starter, and electrical system for the repower engine. No special parts were needed to bolt the engine to the rear end of the tractor other than a 66 or 86 plate. They left the turbo manifold outside the frame rails and ran the stack up outside the head. They did away with the original air system and plumbed a new K&N filter under the hood.

Fenske grew up on a farm and says, “I always thought repowering was interesting, and I’ve modified other equipment, but nothing this extreme. When I was younger, I thought it would be cool to put a Detroit 6-71 in a Farmall. My dad told me that if I put

anything other than an International engine in this tractor, he’d disown me. I’ll have to make a few modifications to the hood of this one and then get everything cleaned and painted this winter.”

Other than his and his friend’s time, Fenske says he spent very little out-of-pocket. “I paid \$1,400 for the school bus and sold enough parts that the engine was basically free. I recently found another International bus and will use that engine to repower an 856 with a twin-turbo. On this project, I learned that the company changed bell housings on IH tractors built after 1994, and a swap like mine using a truck engine won’t work.”

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No major modifications were needed to the Farmall to accommodate the bus engine.

Bortner and Meyers completed their restoration over nearly 2 years.



FFA Students Tackle F20 Restoration

Charlie Bortner of McCook, Neb., may only be a teenager, but he has already racked up an impressive portfolio of tractor restoration projects. An active member of FFA and 4-H, Bortner has been collecting antique tractors since 2019 when he inherited two International Super MTAs from his great-grandfather.

“In 2020, after I finished getting those MTAs operational, I put out the word I was looking for a new challenge,” says Bortner. “The President of the McCook Antique Tractor Club at the time told me he had an F20 that he would sell to me. I bought it from him for \$800.”

As he researched the history of different tractors, Bortner stumbled upon a tractor

restoration competition for FFA chapters. Deciding the project was too large to tackle alone, Bortner teamed up with his friend and fellow FFA member, Wyatt Meyers. “No one in the history of my family has ever been very mechanically minded, and no one has even attempted to start any type of restoration,” says Bortner. “Wyatt contributed his mechanical experience and helped me with every part of the restoration.”

The pair began slowly taking apart the F20 and replacing its seals. They started small, removing, repairing, and reinstalling the steering as they went. Some parts were sent out to area experts for extra attention. The process wasn’t always smooth. “We found that the clutch was in terrible shape,

and we were shocked that it still worked,” says Bortner. “The original manifold used a valve to allow the exhaust gas to warm up the intake gasses before it went into the head. We attempted to free up the valve using different solvents and eventually attempted to use a torch to heat the manifold and break the valve loose. Unfortunately, we couldn’t heat the manifold equally, which led to cracking and forced me to replace it.”

By the end of 2021, the two had successfully disassembled most of the tractor’s engine, frame, and small parts. Early 2022 saw several more roadblocks, including carburetor problems, a lack of tools, and limited workspace. Eventually, an ag mechanic friend let them use his shop, provided access to tools, and shared recommendations for the restoration.

The duo’s hard work paid off. Eleven days short of the second anniversary of starting the restoration, Bortner successfully drove the F20 for the first time. A few more weeks of final assembly and touch-ups were needed before the restoration was officially finished on December 10, 2022.

The project was a rewarding lesson in patience and follow-through for both students. “Throughout this restoration, I learned multiple priceless lessons, including project management, time management, material and money management, and the importance of building and maintaining relationships,” says Bortner. “This restoration also helped me with my college decision to study Agricultural Engineering at the University of Nebraska Lincoln to design and test the next generation of Agricultural Equipment.”

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