

How To Rebuild, Or Repair, An IH Cub

Few antique tractors are as popular as the IH Cub. With so many still in use or being restored, there's a good market for parts.

"We offer more than 100 remanufactured parts for Cubs," says Dan Steiner of Steiner Tractor Parts. "We try to build parts as close to the original as we can."

Newly available Cub parts include a clutch throwout bearing, a padded seat with springs in the base, original design carburetors, two-terminal starter switches, and front grill panels with screens.

"Collectors want parts to look like factory-installed parts," says Steiner. "There are very few parts we build that don't sell really well."

Steiner cites the Cub radiator cap the company offers as an example of the search for authenticity. "The cap available from dealers wasn't the original design," he recalls. "We found a dusty, old, original cap on a dealer's shelf and copied it. Our orders went

from 10 a month to more than 100."

In all, Steiner now carries more than 4,000 parts for older model American-made tractors. The Farmall list alone goes back to the early 1930's models, starting with the F12.

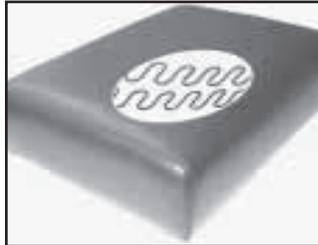
In some cases, new is better than old. Such was the case with the clutch throwout bearing for the Cub. "The original factory throwout bearing had a fixed graphite center," explains Steiner. "We designed a true bearing in the middle, not graphite, and offered it at the same price."

The new Cub carburetor goes for \$225, while the two-terminal starter switch sells for just \$19.95 and the front grill with screen sells for \$248.

Contact: FARM SHOW Followup, Steiner Tractor Parts, Inc., P.O. Box 449, 1660 South M-13, Lennon, Mich. 48449 (ph 810 621-3000 or 800 234-3280; fax 810 621-3099; sales@steinertractorparts.com; www.steinertractor.com).



Available Cub parts from Steiner Tractor include carburetor (left), front grill (right), bottom cushion (below left) and throwout bearing..



It took quite a bit of fabrication work, but Jim Ward was able to replace the engine in a Belarus 1790 4-WD tractor with a 466 DDT International.

IH Engine Keeps Belarus Going

The Belarus 1790 4-WD tractor is built like a tank with features that set it apart from many of its day, says Jim Ward. But one problem with the old workhorse is its engine. Obsolete and with few parts available, it is a problem for owners. That's where a machinist like Ward can help.

"I had a customer with a blown engine in a Belarus 1790," says Ward. "He wanted to replace it with a 466 DDT International, but the bell housing and engine block face are completely different."

Ward's first step was to extend the frame by close to a foot to make room for the inline IH 6-cylinder. He then fabricated an adapter ring to fit the bell housing to the engine.

When Ward pulled the Belarus engine out, he discovered another problem. Unlike North American tractor brands, there were no indicator marks for lining up the bell housing with the center of the new engine shaft.

"If you don't get it lined up just right, the clutch will hang up and not release," explains Ward. "It is important that the clutch plates are free when the clutch is disengaged."

Ward fabricated a temporary shaft and, with the aid of shims, marked his own indicator lines. He also had to fabricate a new throwout bearing assembly to engage the clutch.

"The double clutch on the Belarus is a monstrosity with huge splines that wouldn't fit on the 466," says Ward. "We made our own splines for the clutch plate and used a

splined coupler off a ready mix truck. We then made our own input shaft to fit the splines."

Once he had the engine matched up and bolted up, he made engine mounts to fit the frame. A new loader custom built for the 1790 rounded out the remake. Ward built it with 4 by 6 by 3/8-in. steel tubing. While he built a bucket for the loader, the main use is for pushing snow with a large blade fashioned from an old grader blade.

"The frame had to be built tough to handle the manhole covers it hits," explains Ward. "We put support wheels on the blade for transit. To lighten it up, we cut out sections of steel and lined the front with plastic."

Ward's customer pushes a lot of snow in and around Missauga, Ontario. Though he has two other large tractor-powered snow blades, the Belarus was ideal for the job. That's one reason he invested the \$10,000 or so in shop time to replace the engine. That was partially offset by \$2,500 he got selling the old engine for parts.

"It looks ugly, but it does the job," explains Ward. "The 1790 has two air seats, with the operator's seat on the right hand side that lets him watch the curb as he is plowing snow. The tractor was ahead of its time in many ways with its air seats and the original air-activated clutch and brakes."

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1955 Deere 420C "Track-Tor" Gets Big-Time Tune-Up

When the rockershaft casting broke on his 1955 Deere 420C track-type tractor, Frank Ziegelmann of Colfax, Calif., replaced it with a welded-up angle iron framework.

He also made several other key modifications to the tractor, including adding a hydraulic multi-outlet block that allows him to perform multiple functions on both front and back of the tractor.

"This is a popular tractor - anyone who owns one doesn't want to part with it. The changes I've made converted it into a much more versatile working tractor," says Ziegelmann.

The rockershaft had already broken twice, and Ziegelmann got tired of welding it back together. "The only replacement rockershaft I could find was one that had been repaired. They wanted almost \$2,000 for just the casting alone."

His solution was to use 4-in. angle iron to build an upside down U-shaped frame, which he bolted on in place of the original casting. Then he unbolted the original rockershaft assembly from the tractor's final drive and differential housing, pulled the shaft out of the casting, and installed the rockershaft in the new frame. Both ends of the rockershaft bolt to the tractor's original outrigger yoke arms and run through a pair of bearings made up by a local machinist.

"It looks exactly like the original but is built much stronger. It should last a lifetime," says Ziegelmann.

The bottom part of the tractor's 3-pt. is equipped with a ball hitch, allowing Ziegelmann to pull a scraper or even a small disk. A vertical cylinder that he added to the right side of the 3-pt. linkage is used to change the angle of the blade. Extending the cylinder causes one side of the blade to go down, which sets the blade at an angle. "It works great for cleaning out ditches," says Ziegelmann.

A big cylinder on the left side of the tractor is used to raise or lower the 3-pt.'s lower lift arms.

Three levers mounted on the tractor's right fender are used to control all hydraulic operations. One hose goes to a hydraulic cylinder



Frank Ziegelmann made several key modifications to his 1955 Deere 420C track-type tractor. "It's now a much more versatile working tractor," he says.

der that he mounted on the center link of the tractor's 3-pt. hitch. "The center link connector is used to adjust the angle of the 3-pt.'s top link. Originally, you had to turn a crank up or down to adjust it. Now all I do is pull a hydraulic lever," says Ziegelmann.

The front of the tractor is equipped with 6-ft. wide blade fabricated by a local shop. The blade can be raised or lowered by a hydraulic cylinder that he added on front of the tractor. The top part of the blade bolts onto mechanical linkage that also bolts to the tractor. Blade angle is adjusted by changing the position of a steel pin in the linkage.

The blade is supported by a steel frame that goes all the way back to the tractor's main frame between the tracks.

The blade can be replaced with a 4 1/2-ft. wide, 2-ft. high bucket. To dump the bucket, Ziegelmann removes the mechanical link and replaces it with another hydraulic cylinder. "I've moved a ton of dirt with the bucket," says Ziegelmann. "I can raise it only about 1 ft. high. But by driving up a ramp I can get high enough to dump into a truck."

The last change Ziegelmann made was for comfort. He replaced the tractor's original metal and leather seat with a large, comfortable one that he bought at an office warehouse. He also made a frame to fit the 4-bolt pattern that had secured the original seat. "The seat can be slid forward or backward on a homemade hinge, and secured in place with a pin," notes Ziegelmann.

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