

EQUIPPED WITH 500-GAL. TANK AND 60-FT. SELF-LEVELING BOOM

Military Aircraft Tug Makes A Rugged 4-WD

"It took some imagination to figure out the conversion but I'm very happy with the results," says Joel Anderson, Finley, N. Dak., about the military surplus aircraft tug he converted into a 4-WD, 4-wheel steer sprayer that's equipped with a 500-gal. spray tank and 60-ft. self-leveling boom.

The rig comes complete with a 30-gal. chemical injection tank and dual nozzles for applying broadleaf and grass herbicides separately or together.

"It has three things going for it - low cost, high capacity, and a rugged build," says Anderson, who made the conversion two years ago. "I bought the tug at a surplus auction for \$700 and spent about \$1,500 for new sprayer components. My total cost was about \$3,500. Used 4-WD 3/4-ton pickups sell for \$2,500 to \$4,000 but aren't built nearly as heavy as my rig."

The tug had been used at the Grand Forks (N. Dak.) Air Force base to tow airplanes and ammunition trailers. It came with a Chrysler industrial V-8 318 cu. in. gas engine and an Allison 4-speed automatic transmission and with steering axles on both ends supported by 1100 by 20 military tires. It originally had an 86-in. long wheelbase which he lengthened to 126 in. by adding onto the frame. He also lengthened the driveshaft and installed longer springs, rated at 1 1/2 tons, on the front

axle to soften the ride.

The tank and 60-ft. boom mounted directly behind the cab, with the tank mounted on a homemade subframe. He used 3/4 to 1 1/2-in. sq. steel tubing to build the 6-section, triple-fold boom which is supported by a mid-mounted floating suspension system. The boom is equipped with two sets of nozzles - one that applies 10 gpa and the other 5 gpa - that are turned on or off by electronic boom controls. A 30-gal. chemical injection tank mounts next to the 500-gal. tank.

"It works much like a conventional pickup sprayer, but very few pickups can haul 500 gal. at a time," says Anderson. "I use it to spray wheat, barley, and edible beans. It works great for spraying chemicals on edible beans which require up to 20 gpa. It looks somewhat like a truck except for the way the engine sticks out from the cab. Being a military truck it has low mileage on it, and the engine is new. With 4-wheel steering it can turn in a short 30-ft. diameter. Top speed is 28 mph. One nice feature is that the wheels are exactly 60 in. apart, compared to the 64 to 68-in. spacing on pickups. It really works well in my 30-in. rows. The wheels are about as wide as fat pickup tires but they're taller so they roll easier and don't leave ruts. They only need about 20 lbs. pressure which helps with flotation. The rig originally had 6,000-



Sprayer features a 6-section, triple-fold boom which is supported by mid-mounted suspension system.

lb. cast iron weights on front and back which I removed to reduce compaction.

"I really like the steps on back that lead up to the deck because they provide safe and easy access to the tank. The deck goes around both sides of the tank and has railings on it.

"The two sets of nozzles give me a lot of options for applying broadleaf and grass chemicals. I can spray one chemical in the 10 gpa nozzles and another kind in the 5-gpa nozzles. To apply 15 gpa I turn on both sets of nozzles. If I'm applying broadleaf herbicides and come to an area with a lot of grass weeds I just turn one set of nozzles on and the other off. I mounted the transparent chemical injection hose next to the side window so that I can make sure the Dos-A-Tron chemical injection pump I use is operating

properly. This simple, trouble-free pump is made in France. I bought mine from a local supplier. I like it a lot because it automatically adjusts the amount of chemical pumped out of the chemical injection tank according to the flow of water going to the boom. As a result I can shut off part of the boom without worrying that the spray mixture is too concentrated.

"I adjust the boom height mechanically. However, I plan to use the rig's air compressor - which was originally used to operate the ammunition trailer's brakes - to raise or lower the booms."

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The latch is made from strap iron and bolts to both sides of a squared off fence post.

Teen Invents Spring-Loaded Latch For "Mom"

When teenager Shane Sroka of Bluffton, Alberta, got tired of listening to his mother complain about the hassle of opening and closing ranch gates, he decided to come up with a better design.

The result is a clever spring-loaded, hinged gate latch that you can open or close with one hand. The latch is made from strap iron and bolts to both sides of a squared-off fence post. It's hinged on one side and equipped with a V-shaped slot at one end. To shut the gate you simply push the gate post into the slot until it locks into place.

A one-handed tug on the hinged side of the latch easily releases the gate post.

Sroka sells the units for \$24.95 (Canadian) plus tax and S&H.

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You can open and close the gate with one hand.

He Rebuilt 32-Ft. Disk To "Like New" Condition

Guy Klosterman, Wahpeton, N. Dak., completely rebuilt his Bush Hog 32-ft. disk and added remote leveling.

Klosterman bought the 20-year-old disk used four years ago equipped with a manually-operated leveling system. The disk had new blades but the frame was broken. Another problem was that the hitch was built too light. He removed the original hitch and used 4 by 6-in., 3/8-in. thick rectangular steel tubing to build a new hitch that's much wider than the original one. He used more 4 by 6-in. tubing to make new frame members that run from the front of the disk to the back.

The remote leveling system is controlled by a 4-in. hydraulic cylinder that acts on a pair of springs - a big one off a railroad hopper car on the outside and a smaller one underneath it. The cylinder is attached to the rock shaft on the disk. A 1 1/4-in. dia. threaded rod runs through the assembly and is attached to the end of the cylinder. Spring tension is controlled by adjusting a nut at the end of the rod. To raise or lower the front end of the disk Klosterman simply flips a switch in the cab which raises or lowers the hitch.

"I saved a lot of money because a new disk of comparable size sells for about \$30,000," says Klosterman, who paid just \$2,500 for the used disk. "The remote leveling feature really works nice because when I come to hard gumbo soil, for example, I can transfer weight to the front of the disk. The new springs are twice as long as the original one so there's twice as much up and down stroke in the hitch. The remote level feature is a \$1,600 option on new Deere disks. I spent about \$500 on materials. I spent about six



The disc features a home-built self-leveling system controlled by a 4-in. hydraulic cylinder.



Klosterman beefed up the disk by using 4 by 6-in. tubing to make new frame members.

weeks working on it, but if I did it again it wouldn't take as long because I wouldn't have to do as much measuring and head scratching."

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