Farm-Built High Clearance Sprayer Uses Combine Drive

Bernie Denis of Vonda, Sask., likes his home-built field sprayer because it works so well and saved him many thousands of dollars as compared to a commercial high-clearance sprayer.

He built the unit himself using a combine drive and a 1981 Chevy half-ton with a 350 automatic. He has used it for 6 years to cover 2,400 acres two to three times per year.

Denis built the sprayer’s frame from scratch, using 4 by 6-in. tubing. He mounted the truck on the frame.

“To drive the rigs hydraulics, the engine’s crankshaft has a gear belt pulley on it, that drops down to drive a jackshaft just under the bump,” he explains. “From there, we have another jackshaft for the sprayer pump. The hydraulic pump is mounted right in front of that shaft.”

The sprayer’s hydraulic steering and boom lift control valves were salvaged from a Grain King combine, while the back wheels are driven by the final drive off a white 5542 combine.

In order to make his system work, Denis flipped the truck rear end over to reverse the drive.

Closeup shows steering mechanism and hydraulic pump.

“Because of the way the final drive gears met up, the back wheels would have turned backward when you drove forward, if I hadn’t flipped the rear end,” he says.

The 600-gal. imperial tank and cradle came from an old pull-type sprayer he had on the farm. Denis installed air bag shocks between the tank cradle and the sprayer frame.

The 80-ft. boom frame is 4 by 4-in. light wall tubing, with 2 by 2-in. tube bracing on top. Thanks to 18.4 by 26 tires, there’s 48 in. of clearance under the sprayer frame. Independent hydraulic cylinders on each side mean that Denis can lift either boom to avoid obstructions. A parallel link system provides height adjustment from 18 in. to 6 ft. The booms are each equipped with 10-ft. break-aways and springs for cushioning.

Although he also uses a Peacock foamer for a backup marking system, Denis points out that he’s usually able to follow his 40-ft. drill tracks because they line up nicely with each pass of his 80-ft. booms.

The rig works well at 9 to 12 mph per hr.

Contact: FARM SHOW Followup, Bernie Denis, Box 88, Vonda, Sask., Canada S0K 4N0 (ph 306-258-4502).

“Poor Man’s” Automatic Bale Kicker

Bernie Denis built this sprayer using a combine drive and a 1981 Chevy 1/2-ton pickup, which he mounted on a home-built frame. It’s equipped with an 80-ft. boom.

“The secret to this machine’s success is the use of the springs. The entire upper part of the machine vibrates, but the legs almost float, thanks to the springs. Power to vibrate the screen is supplied by a 2 hp electric motor, which belt-drives a horizontal shaft.”

Cusack says the most expensive part of the project was the screens, which have to be specially made. “They’re very expensive but they’re designed to last a long time,” he says.

Cusack says he’s willing to build separators for a backup marking system, Denis points out that he’s usually able to follow his 40-ft. drill tracks because they line up nicely with each pass of his 80-ft. booms.

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