



Starting with a 1975 Chevy 1-ton truck chassis, Carl Larson built his own self-propelled sprayer. It's powered by a Perkins diesel engine.



Sprayer has a 500-gal. tank and 3-section, 60-ft. boom on back.

By Jim Ruen, Contributing Editor

Self-Propelled Sprayer Does 40 On The Road

Carl Larson loses no time between fields with his shop built self-propelled sprayer, that speeds down the road at up to 40 mph. Fuel economy is good, too, since he replaced the initial Chevy gas engine with a Perkins diesel. Now he can spray 150 acres on 18 gal. of fuel, triple what he could do with the original Chevy engine.

"I couldn't maintain good ground speed with the Chevy either," says Larson, a Leonardville, Kan. area farmer. "I put the Perkins in gear, set the throttle and it stays where I set it."

He started out with a 1975 1-ton Chevy truck chassis. Its 4-speed transmission with 2-speed transfer case gives him the low-range gears needed for spraying. Although it has front wheel drive, he never uses it, pointing out that if he needs it, conditions aren't right for spraying anyway.

After stripping away the body and cab, he reinforced the frame, boxing in the back end to strengthen it to carry a 500-gal. tank.

"If I was doing it again, I would make the whole frame from rectangular tubular steel," says Larson. "I would also raise the tank a little higher at one end or put a sump on it for better clean out."

While the chassis had a good set of springs under it, Larson added air bags to help carry the weight. He increased crop clearance to 24 in. by replacing the truck wheels with rear wheels from a John Deere combine. He had to re-dish the rims and weld in new centers to fit the Chevy axles.

The cab came off a 1460 International Harvester combine and is rubber mounted to the chassis. The flip hood was made by cutting down the rear section of a 715 International Harvester combine. Air is drawn from a sal-

vaged combine preclean filter mounted to the cab roof. The 354 cu. in. Perkins engine came out of a Massey Ferguson combine by way of a neighbor's Chevy Suburban.

"J.C. Whitney had an adapter kit that let him bolt the Perkins to the Chevy transmission," explains Larson. "He sold it to us with the kit, ready to go."

Matching the truck front axle to the combine steering system required replacing the truck's drag link with a hydraulic cylinder. The hydraulics handle the torque of turning the loaded rig on soft soil, while torsion bars added in front stop front axle twisting.

Larson also installed a catwalk around the tank and a centrifugal pump with electric clutch for the spray unit. A fresh water tank allows him to clean out the spray tank in the field.

He built 3-section booms from 1 1/4-in.

tubing on the bottom side with 2-in. rectangular tubing on the top, with gussets in a V shape and all nylon tubing for hoses. The outside 12 ft. on the 60-ft. booms are able to "break away. The mast is all that remains of the original booms.

"I added hydraulic valves to raise and lower the boom from 3 ft. off the ground up to 4 1/2 to 5 ft. high," says Larson

When he first built the sprayer, Larson hooked up a 12-volt foam marker. Later he adapted an air pump off a truck with air brakes to deliver foam. Last year, he added a satellite guidance system.

"That takes the guesswork out of it," he says. "I still use the foam as backup for turning at the end rows."

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Weight Distributing Hitch Boosts Towing Capacity

Kent Sundling of Denver, Colorado is a huge advocate of weight distributing hitches for bumper-type trailers. Sundling is an automotive journalist who tests a wide range of truck products and posts his descriptions, explanations and recommendations at his popular website, www.mrtruck.com. He sells some of the products he thinks are best.

According to Sundling:

"Being able to adjust where the weight is distributed on your truck and trailer can give you the capacity of a gooseneck or 5th wheel with a bumper-type trailer. Weight distributing hitches also reduce trailer sway and improve safety.

"Because they create a more level, stable rig, weight distributing hitches also provide better steering control and braking. They can do more to safely level your sagging vehicle rear end than all the springs, shocks and air bags combined. They also place the trailer a few inches back to give you more room for tight turns.

"I know that for most folks who know the benefits of using a weight distributing hitch, but who still don't use one, it's because of the hassle of hooking them up. It does take a few extra minutes," Sundling explains.

"I'm against hassles myself, and that's why I can recommend Equal-i-zer hitches. They have the anti-sway device built right into them at two points - at the hitch head, and at the back, on the trailer bracket. This makes Equal-i-zers easier and quicker to hook up than other hitches. Other types require that you separately attach and adjust

an anti-sway friction device, and it needs re-adjusting every time it snows or rains."

Sundling says the Equal-i-zer weight-distributing hitch doesn't require you to drill holes on your trailer hitch. Everything bolts on so it's easier to position, he says. It also works very well on boats because the spring bars can slide backwards with the surge brake.

"Weight distributing hitches are widely used on travel trailers but vastly under-used by horse trailer people," says Sundling. "It's more critical on horse trailers because of the tall center of gravity and the movement of the animals."

Sundling's website includes a detailed article and numerous photos that explain and show how various weight distributing hitches work.

He sells three models of Equal-i-zer Weight Distributing Hitches, and each one offers three choices in shank length.

The model 1216B is for a maximum trailer weight of 6,000 lbs. and is priced at \$470. Model 1722B is for a maximum 10,000-lb. trailer weight and costs \$510, and the model 2332B is for 12,000 lbs. maximum trailer weight, with a price of \$520.

There is a \$60 shipping charge for any hitch (continental U.S. only).

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Equal-i-zer hitch is easier and quicker to hook up than other weight distributing hitches, according to Keith Sundling.

Some of the best new ideas we hear about are "made it myself" inventions born in farmers' workshops. If you've got a new idea or favorite gadget you're proud of, we'd like to hear about it. Send along a photo or two, and a description of what it is and how it works. Is it being manufactured commercially? If so where can interested farmers buy it? Are you looking for manufacturers, dealers or distributors? Send to FARM SHOW, P.O. Box 1029, Lakeville, Minn. 55044 or call toll-free 800 834-9665. Or you can submit an idea at our Website at www.farmshow.com.

Mark Newhall, Editor

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