

## Chemical Tote Manlift Mounts On Backhoe

By repurposing an empty chemical tote and a couple of bucket forks, Harley Willmart made a handy manlift for his Deere backhoe.

"I use it all over the farm. It's handy and far safer than using a ladder," says the Iowa farmer. "The beauty of this manlift design is that it can be adapted to fit any bucket. The forks slip through the tote just like a pallet, so putting it on and taking it off doesn't take much time."

He mounted forks on back of the backhoe bucket by drilling holes on either side to insert a 2-in. dia. steel shaft to hold them. The tote bucket is held in place by a single pin.

Willmart says the manlift can be raised about 25 ft. high. "It comes in handy for trimming trees, cleaning out eave troughs, working on buildings, and so forth. I always

use a safety harness around my waist so I can't fall out."

Willmart notes that his manlift is on a Deere 710 backhoe, the largest model made by the company. "I use the backhoe to take out a lot of trees and tree stumps for myself and a few neighbors. Anyone building something similar should remember that any time something is extended, equipment can become tippy and unsafe. So it's important to have big enough equipment to handle the job."

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Harley Willmart uses his chemical tote manlift to work on buildings, trim trees, and other jobs. It's mounted on a Deere 710 backhoe.

## "Bucket Truck" Turned Into Pull-Type Manlift

Michael Peterson, Bellingham, Wash., turned a 1990 Chevrolet 1-ton bucket truck into a pull-type manlift designed to be towed like a trailer. The boom can be raised up to 40 ft. high and swivels 360 degrees. The bucket can be tilted 90 degrees to drain rainwater. There's a pintle hitch and surge brakes on front.

"I was able to buy most of the components cheap so it didn't cost much to build. My total expense was only about \$1,500," says Peterson. "It's licensed as a trailer so it's covered by my pickup's insurance policy, instead of needing separate coverage. Also, it requires much less maintenance than a bucket truck."

Peterson bought the bucket truck at a local wrecking yard. It had been used by a railroad company to drive alongside railroad tracks where workers performed maintenance work on power lines paralleling the tracks. The manlift, located just behind the cab, used a pto off the truck's transmission to power a hydraulic pump that operated the manlift.

He cut the truck's frame off just ahead of the cab firewall, keeping only the service box

and a 4 1/2-ft. section of frame that extends out front. He welded on lengths of 5-in. channel iron to box in the frame, then bolted on an industrial Wisconsin 4-cyl. engine with 3-speed transmission. The transmission drives a big hydraulic pump that operates the manlift. The manlift has 2 sets of controls - one on the bucket and one on the service box.

"I use it to do everything from cleaning gutters to pruning trees - anywhere a stepladder can't reach high enough," says Peterson. "One time I even drove it to a Ford dealership that needed some security cameras replaced. People ask me all the time if they can borrow it, and some even want to paint their house with it. I tell them I'm okay with that, as long as they don't splash paint all over everything."

The tongue with engine weighs about 1,800 lbs., and the entire unit weighs about 4,000 lbs. so it's very stable, says Peterson. "With all that weight I can run the boom straight out to the side almost 40 ft. without any problems. The boom may rock back and forth a little, but it won't tip over. I used 3-in. square tubing to make outriggers at each end



Michael Peterson converted an old Chevrolet 1-ton bucket truck into this pull-type manlift. Power is provided by a Wisconsin 4-cyl. engine.

of the service box, but I've never had to use them."

He paid only \$200 for the bucket truck. "It had spent years running over railroad ties alongside the tracks and the front suspension was fatigued, which is why I got such a good deal on it," says Peterson. Since the unit is so heavy, Peterson welded mechanical surge brakes on it to keep the trailer from

ever jackknifing. "The surge brakes use the trailer's natural momentum to actuate the brakes. Applying the brakes on the towing vehicle automatically activates them."

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## "Made It Myself" Portable Crane

Kurt Carlson, Oak Hills, Calif., can easily load a trailer or pickup bed using his home-built portable crane. The 2-wheeled crane hooks up to a pickup or golf cart equipped with a ball hitch.

He started with an old Venturo truck-mounted crane that he bought at an auction. "The crane was decommissioned from service because it had been welded on, and the insurance carrier wouldn't certify it," says Carlson. "The axle and hitch came from a trailer that had been destroyed, and all the gusset material I used came from scrap metal I already had. I welded a 42-in. long piece onto a 10-ft. length of 7-in. square tubing, and cut a mounting plate for the crane out of an old pickup bed-mounted, fifth wheel plate. I also mounted a Group Size 4D battery

on front of the crane's tongue to offset the weight of the crane on back. I used 5,000-lb. bulldog trailer jacks to fabricate a couple of removable stabilizer legs."

Carlson says one limitation is the crane has only about a 120-degree swing, but that hasn't been a problem. "I plan to replace the 2-in. ball coupler with a pintle hitch, which I think will be much safer when lifting a heavy load."

His only expense was for the bulldog jacks, which cost \$350. "I could have bought less expensive jacks at Harbor Freight, but I figured it would be best to use good quality jacks for safety," he notes.

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Kurt Carlson converted an old Venturo truck-mounted crane into a 2-wheeled model that hooks up to a pickup or ATV.

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