



"It's handy for doing a variety of farm work," says Andrew Lee, who converted a New Idea pto-powered, 7-ft. sicklebar mower to hydraulic-drive for use on his Bobcat skid loader.

Skid Loader-Mounted Sickle Mower

Andrew Lee of Hartford, Wis., converted an old New Idea pto-powered, 7-ft. sicklebar mower to a hydraulic-drive for use on his Bobcat skid loader. It's painted Allis Chalmers orange.

Lee mounted the mower on his 2008 Bobcat S160. He stripped the mower down to the sicklebar and then used 1/4-in. thick steel to build a housing and frame with brackets that quick-tach to the skid loader. He bolted a 7.2 cu. in. hydraulic motor onto the housing and designed a crank and connecting rod for it out of steel components, adding grease fittings for longevity.

A 20-in. long, 2-in. dia. hydraulic cylinder is used to raise or lower the sicklebar. A closed center electronic solenoid valve controls the flow to the cylinder in either direction.

The mower folds up vertically for transport or storage and also downward for roadside clearing. Lee can raise and lower the mower from inside the cab via rocker switches on the skid loader's in-cab joystick controls.

"I use it on my small farm to trim shrubs and tree branches along fence lines and to open up hiking trails on my property, as well as to cut roadside ditches. The front-mount mower makes it easy to see what I'm cutting," says Lee. "I bought the mower from a local farmer for \$100 and spent a little more than \$1,000 to make the conversion to hydraulic power and skid loader use. Most of that was for hydraulic components. I bought the quick-tach plates from an online retailer.

"My dad has been giving me FARM SHOW as a Christmas gift for the last 5 years. Viewing all the projects other readers have shared gave me the inspiration to build it. Many people who see it for the first time are impressed because it looks so professional and works so well."

Lee used CAD (computer aided design) to design and lay out all the systems and to verify everything before he started cutting steel. "I have about 6 hrs. in computer time



Mower folds up vertically for transport and downward for roadside clearing.

and spent about 40 hrs. in the manufacturing, welding, plumbing, wiring, and painting of it," says Lee.

He says the most difficult part of the conversion was getting the Bobcat's joystick controls to "talk" to a 12-volt solenoid valve that's used to control the hydraulic cylinder. "Unlike other manufacturers, Bobcat uses a CAN BUS signal to send an electric pulse to its attachments in order to control solenoids. I found a company called 'Skid Steer Genius' that makes adapters designed to convert an electric pulse to a constant 12-volt signal (ph 360 386-5841; www.skidsteergenius.com). Their adapter allowed me to seamlessly integrate the angle adjustment of the sicklebar from the comfort of my cab."

Contact: FARM SHOW Followup, Andrew Lee, Hartford, Wis. 53027.

"Grab Handle" For Propane Tanks

"I'm 87 years young and got tired of lifting 40-lb. propane tanks using the built-in handle on top. It's uncomfortable and awkward. So I made an easier-to-use handle by removing the bail from a 5-gal. plastic bucket and reshaping it to hook onto the tank handle," says Lyle Qualley, Tekamah, Neb. "Makes it easier to carry or move the tank."

He straightened out both sides of the bail and bent the bottom ends into hooks that snap into slots on the tank handle.

"The length of the bend depends on your height. I'm 5 ft. 9 in. so I bent the hook about 5 1/2 in. from the roller," says Qualley. "The hook itself is about 1 1/2 in. long. The bail is springy so the hooks will snap right onto the



Reshaped bail from 5-gal. plastic bucket hooks onto propane tank handle, making tank easier to carry.

slots on the tank handle. If the roller happens to be missing on the bail, a short length of rubber hose makes a good substitute."

Contact: FARM SHOW Followup, Lyle Qualley, 1710 L St., Tekamah, Neb. 68061.



Murray 42-in. riding mower is flanked by matching side decks, which overlap the middle deck by 3 in. and can flex up and down.

Old Riding Mower Cuts A 10-Ft. Swath

Mowing a 10-ft. wide swath with a 19 hp. lawn tractor isn't something that original manufacturers advise or recommend, but Iowa handyman Virgil Davis says the 10-ft. rig he built from 3 mowers works just fine.

"It's not made for hills, but it sure works great on my flat lawn and road ditches because those outside decks flex to the lay of the land," Davis says. His Murray tractor is still fitted with its original 42-in. deck. Davis says a friend gave it to him because it didn't run, but he remedied that with a few hours of repairs.

The side decks on his rig are matching 42-in. decks from other old mowers. He built a frame so the 2 decks overlap the middle deck by 3 in. and can flex up and down several inches. He bolted pulleys on the spindles of the outside decks and ran belts from each one to the center mower. A long idler spring on each belt holds them tight. He made poly shields to go over the drive belts from a plastic tank. Davis says the machine works

especially well for mowing around and under trees.

"This mower cuts grass just as smooth as any roller mower on a golf course, never any scraping or deep cuts," Davis says. "I learned through trial and error that the secret is having rollers on the front and back, not wheels. Wheels fall in a hole and twist, but the rollers glide over everything."

Davis made his rollers from 3-in. pvc pipe cut into 30-in. lengths. He cut pieces from wooden stairway spindles for plugs in each end of the pvc, drilled a 3/4-in. hole in the plugs for a metal sleeve, then ran a 1/2-in. bolt the full length of the roller. Threaded vertical bolts slide into mounting brackets that he welded on the top of the deck. He adjusts the cutting height using lock nuts on the threaded bolts.

Contact: FARM SHOW Followup, Virgil Davis, 2686 250th St., Humboldt, Iowa 50548 (ph 515 378-3344).



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